

Loreto, Peru



Jurisdictional indicators brief

State area:	368,852 km ² (28.7% of Peru)
Original forest area:	363,677 km ²
Current forest area (2019):	350,244 km ² (95% of Loreto)
Yearly deforestation (2019)	235 km ²
Yearly deforestation rate (2019)	0.07%
Interannual deforestation change (2018-2019)	-10%
Accumulated deforestation (2001-2019):	4,388 km ²
Protected conservation areas:	88,766 km ² (24.1% of Loreto)
Carbon stocks (2017):	4,453 millions tons (above ground biomass)
Representative crops (2017):	Cassava (405,320 tons); Bananas and plantains (274,666 tons); Sugarcane (163,031 tons)
Value of agricultural production (2016):	\$252,374,403 USD
More on jurisdictional sustainability	State of jurisdictional sustainability

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Forest and people

In 2019, the estimated area of forest in the department of Loreto was 350,244 km², equivalent to 95% of the department's total area, and to 51.3% of the forest remaining in Peru. The total accumulated forest lost during the period 2002-2019 was 4,388 km², equivalent to 1.2% of the forest area remaining in 2002. Loreto concentrated about 51.2% of the carbon reserves stored in the biomass of the Peruvian tropical forest (about 4,453 mt C as of 2019)

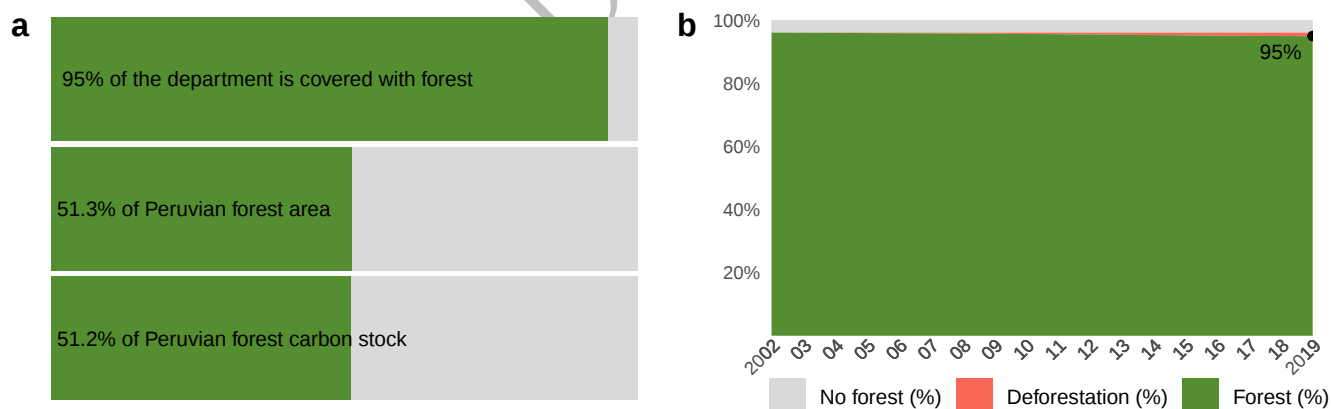


Figure 1: a) forest share and b) transition of forest to deforestation over the last years

There were 1.1 million people living in Loreto as of 2020, distributed in 18 districts, with 0.2 million people living in the capital city of Iquitos. The department has formally designated conservation areas and indigenous territories, which respectively represent 24% and 16% of the department. There were an estimated 51,722 indigenous people living in the department in 2017 (see Figure 2).

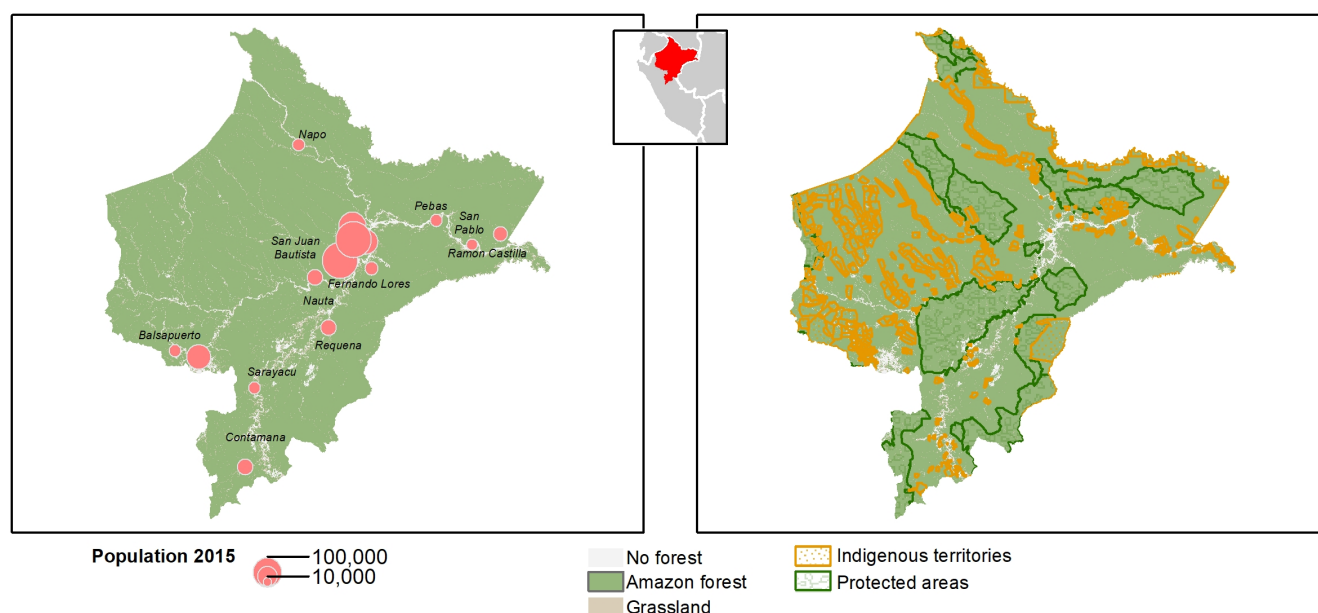


Figure 2: Map of most populated places (> 16,000 people) and indigenous and protected areas in Loreto

Deforestation

The deforestation in the department of Loreto increased almost linearly since it was first measured in 2001, reaching a maximum peak in 2014 with 376 km². In a contrasting direction, deforestation decreased in 2017 and 2019 with interannual reductions of -48.64% and -10.33%, respectively. The preliminary estimated deforestation in Loreto in 2019 was 235 km², representing 15.9% of the total deforestation in Peru and a deforestation rate of 0.07%. The deforestation rate in the region was below than the national average of 2019 (0.07% and 0.22% respectively).

With the 2019 figures on deforestation, Loreto ranked as 2/15 in terms of absolute area of deforestation and 15/15 in terms of deforestation rate among the Peruvian regions with tropical forest. Loreto has traditionally contributed with a large share of the total deforestation area of Peru, a figure that is, however, expected, given that it concentrates more than 50% of the forest of the country.

With the latest official figure of 2018, the department's deforestation is 33% below the reference deforestation baseline 2001-2014 (see Figure 3).

34% of the deforestation is located in the five most affected districts in the department (see Figure 4). The district of Yavari consistently registered the largest loss of tropical forest over the last years, reaching a maximum of 19 km² lost in 2018. In 2018 the deforestation in Yavari was 19 km².

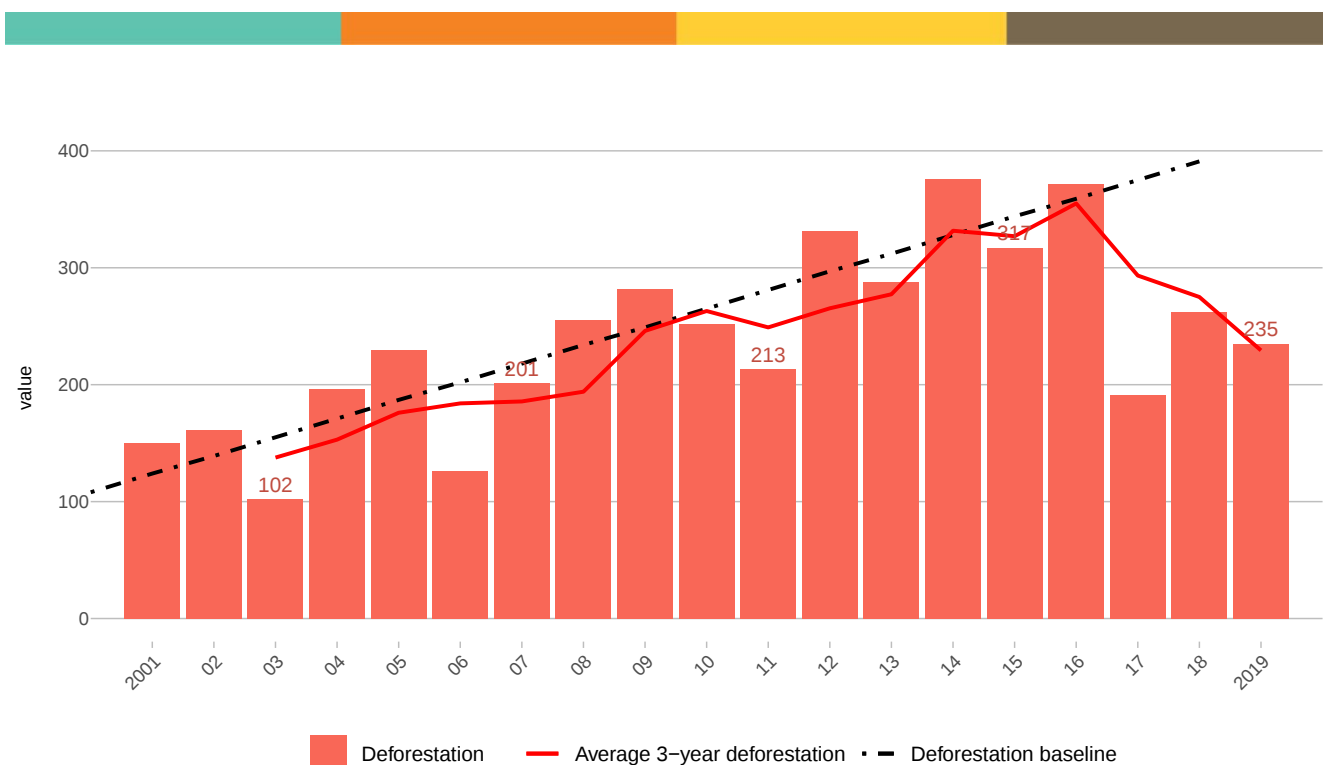


Figure 3: Yearly deforestation (km^2) and deforestation baseline

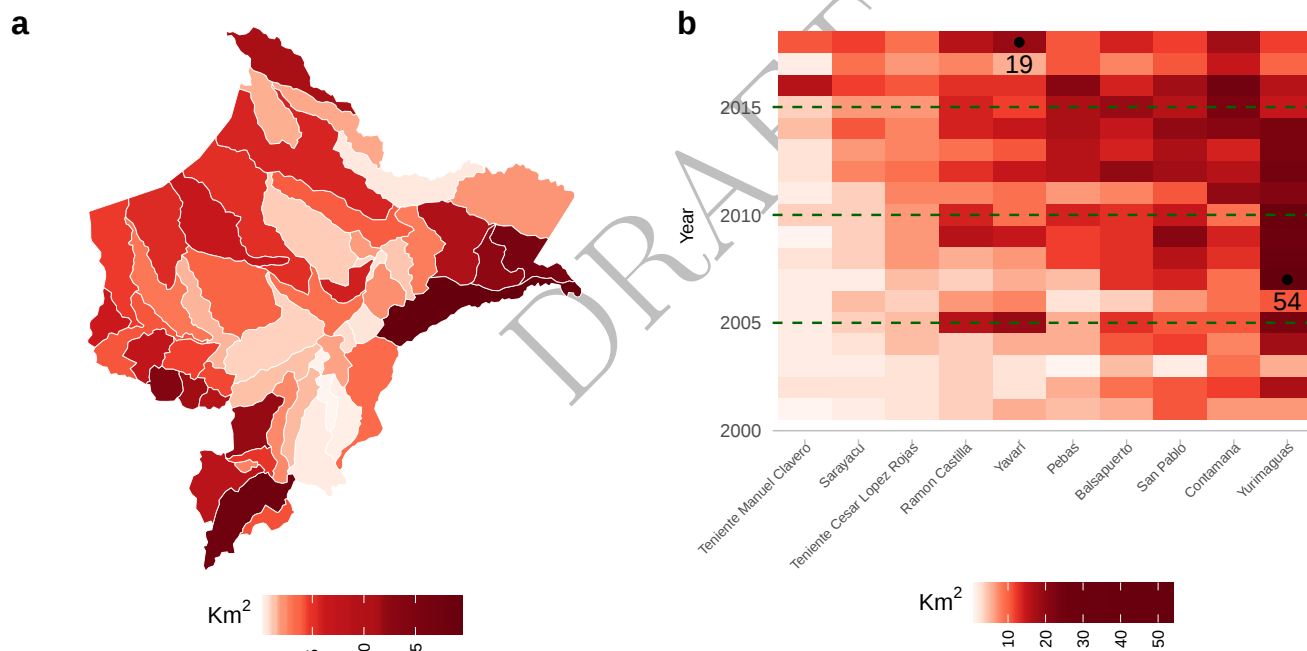
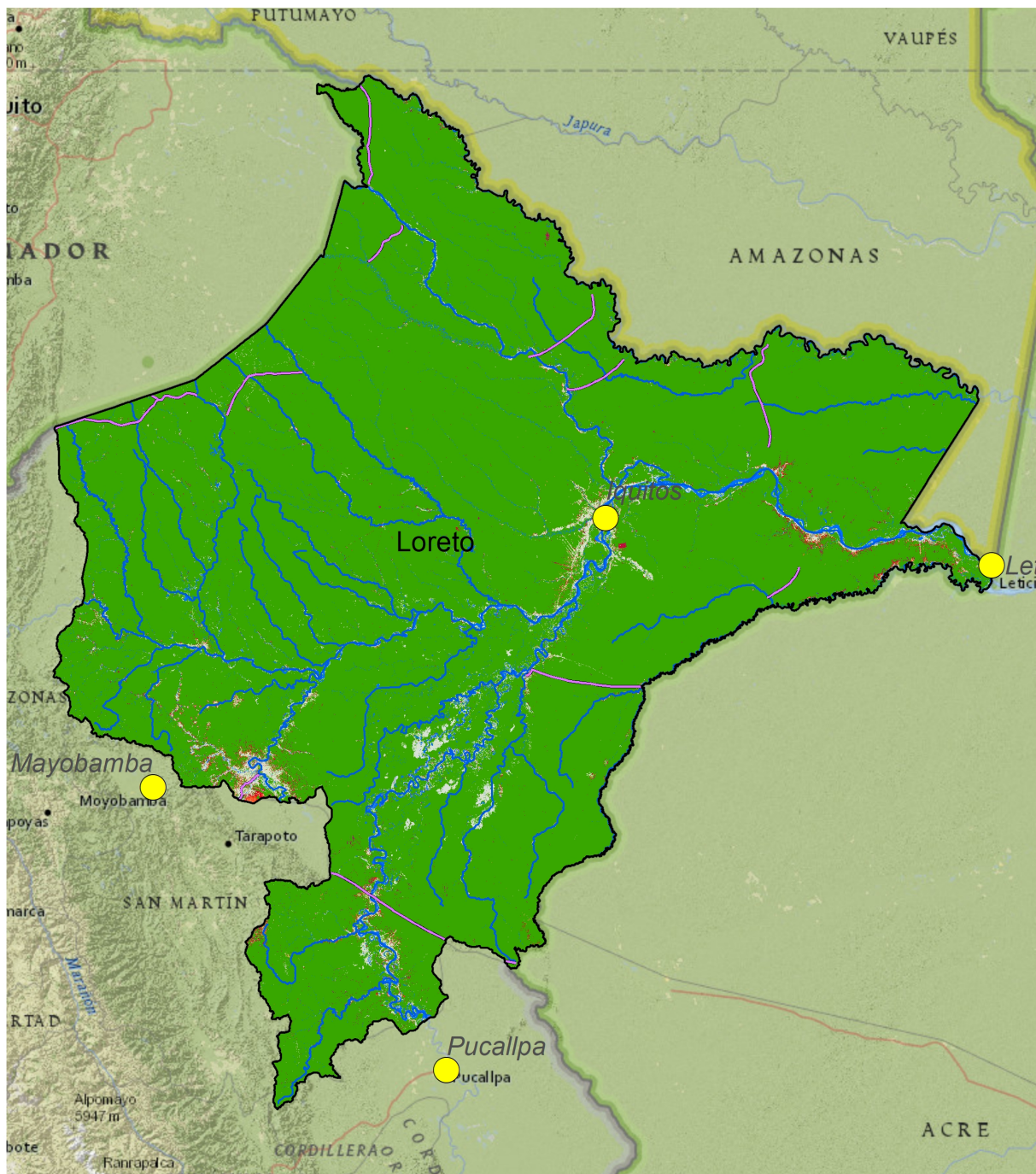


Figure 4: a) Yearly deforestation by districts in 2018 b) Yearly deforestation in top 10 most affected districts (km^2)



Table 1: Forest and deforestation indicators in the department of Loreto

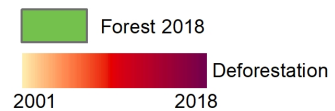
Year	Forest (km ²)	Deforestation	Deforestation rate (%)	Annual variation (%)
2002	354,472	160.51	0.05	7.1
2003	354,370	101.81	0.03	-36.6
2004	354,174	195.94	0.06	92.5
2005	353,944	230.10	0.07	17.4
2006	353,818	126.37	0.04	-45.1
2007	353,617	200.56	0.06	58.7
2008	353,362	255.16	0.07	27.2
2009	353,080	282.22	0.08	10.6
2010	352,828	251.97	0.07	-10.7
2011	352,615	212.87	0.06	-15.5
2012	352,284	330.55	0.09	55.3
2013	351,996	288.21	0.08	-12.8
2014	351,620	375.64	0.11	30.3
2015	351,304	316.68	0.09	-15.7
2016	350,932	371.51	0.11	17.3
2017	350,741	190.82	0.05	-48.6
2018	350,479	262.03	0.08	37.3
2019	350,244	234.96	0.07	-10.3



Loreto, Peru Forest and accumulated deforestation

The map shows the most recent forest cover and yearly deforestation mapped by BOSQUES, Peru. 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 Loreto was 22 km² for the period 2010-2019. This figure includes burned areas due to fires in forest, savannahs and opened agricultural areas. The burned area in 2019 was 14 km² and the worst year in the last decade was 2010 with 75 km² burned. In most years, the months of January and August represented the peak of the fire season (see Figure 5).

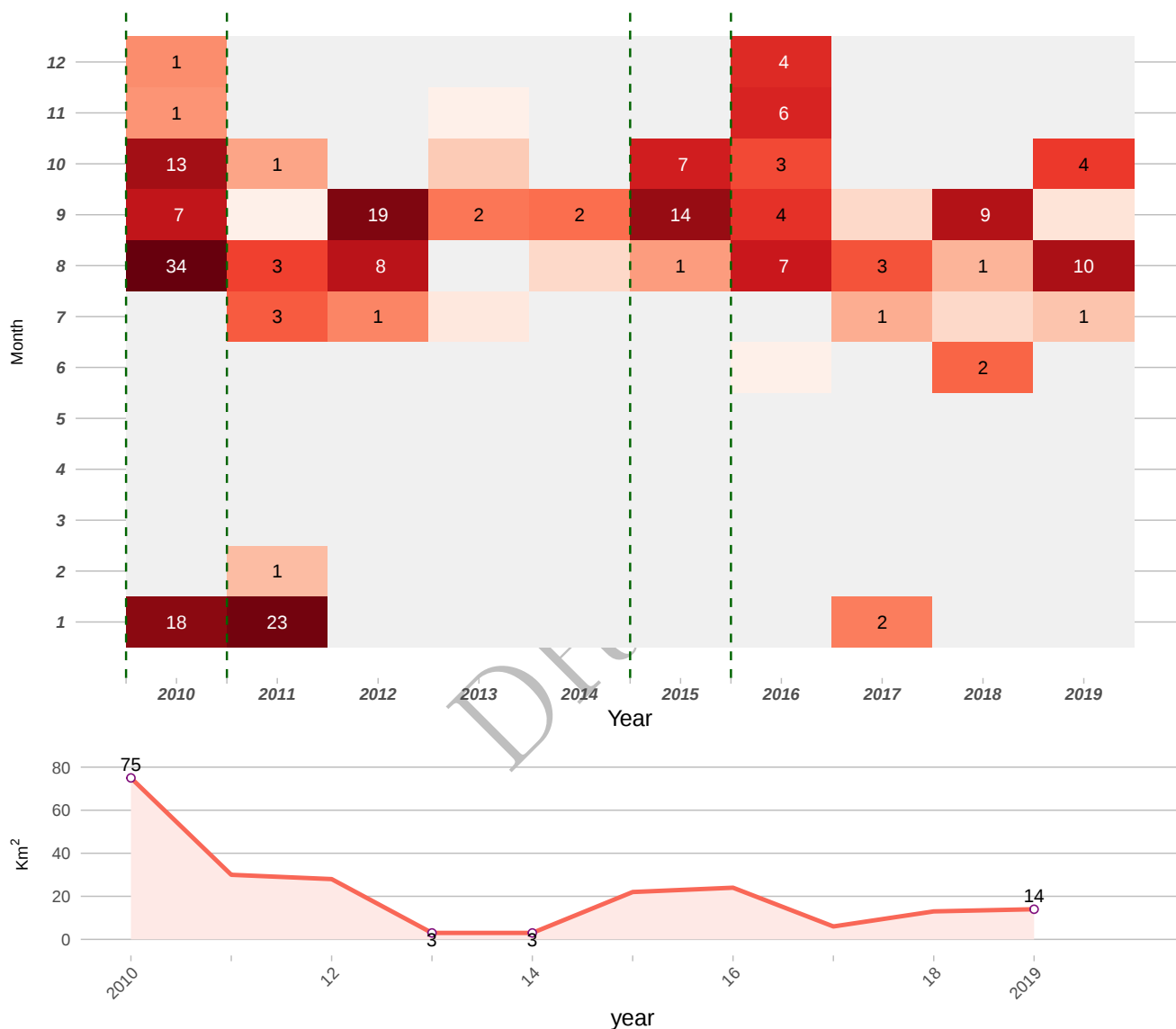


Figure 5: Monthly burned area since 2010 (km²). Source: EII analysis of MODIS-MCD64

Emissions from deforestation

The accumulated emissions from deforestation in the department of Loreto between 2001 and 2018 amount to 203 million tons of CO₂eq, which was equivalent to xx% of the total emissions from deforestation in Peru during this period. Considering the observed yearly deforestation, the mean carbon density of the department forest and the business as usual deforestation baseline, the accumulated gross avoided emissions from deforestation during the period from 2015 to 2018 was 15 million tons of CO₂eq. This results from summing avoided emissions during the period from 2015 to 2018 in which the deforestation was lower than the business as usual deforestation baseline

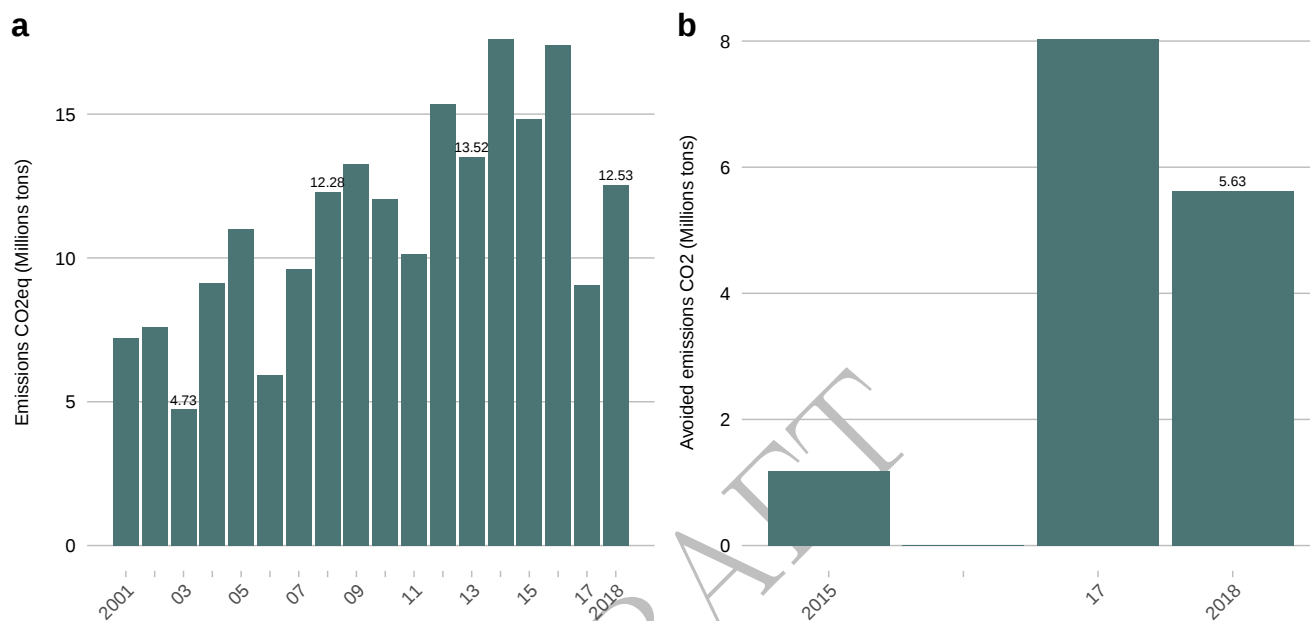
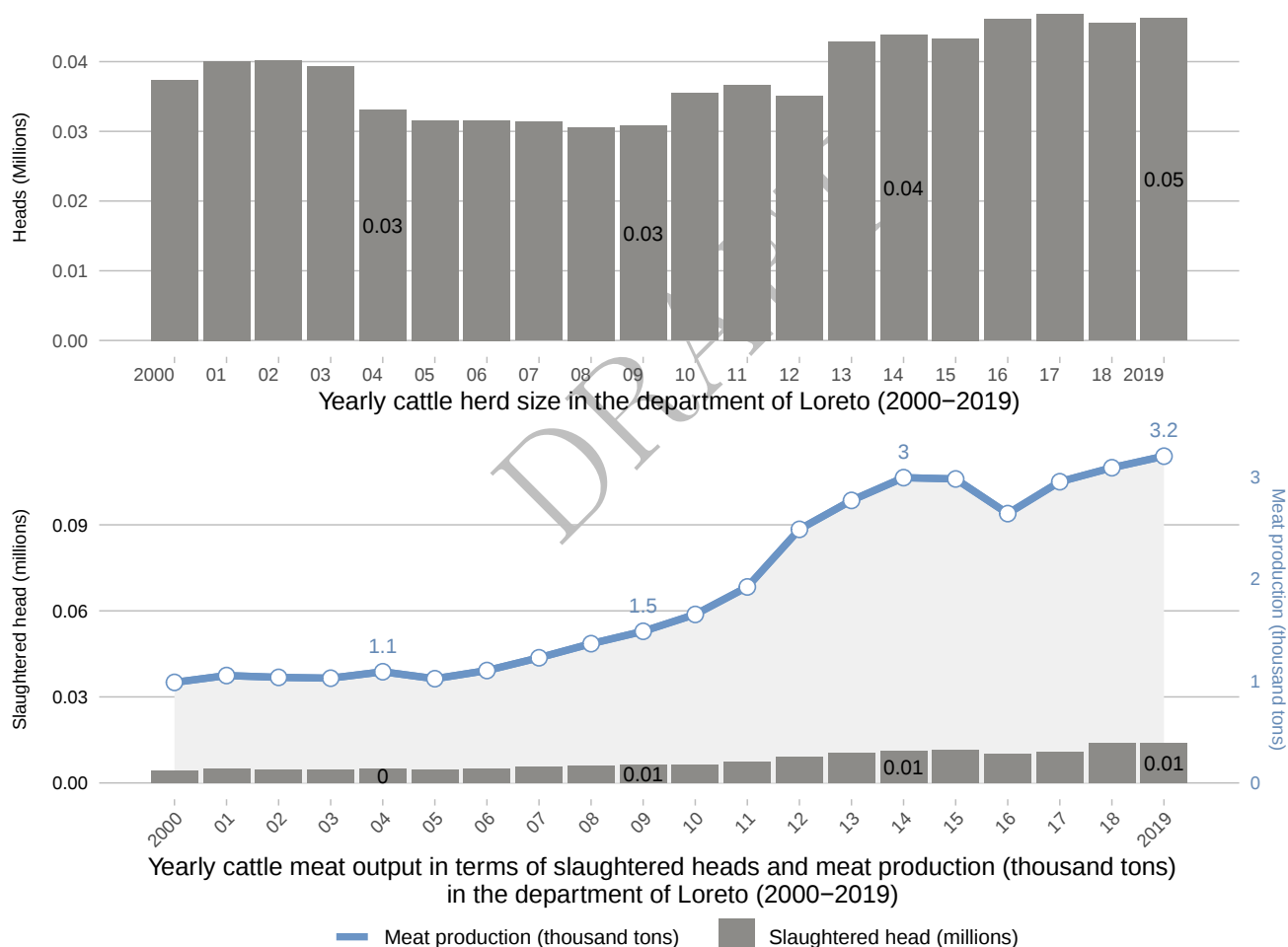


Figure 6: Emissions from deforestation (left) and avoided emissions (right) (CO₂eq Millions tons)

Livestock

Table 2: Livestock indicators in Loreto

				
	Cattle	Pig	Poultry	Fish
Year	2019	2019	2019	NA
Herd size:	46,190	84,515	4,183,526	
Slaughtered heads:	13,923	60,322	12,043,022	
Meat production (tons):	3,198	3,624	32,772	
Value (thousands):				S/NA PEN



Agriculture

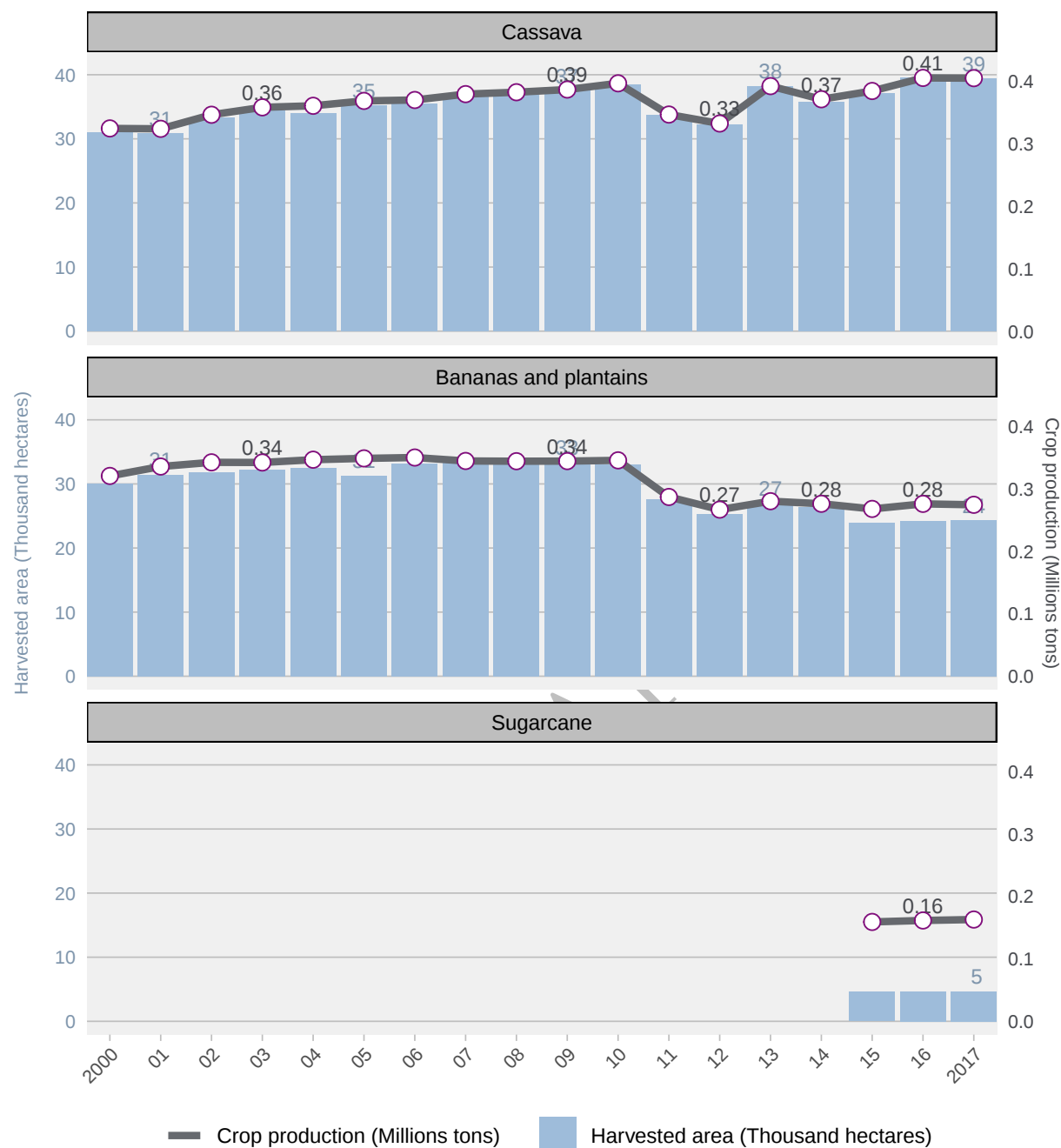


Figure 7: Harvested area and production of the three crops most produced in Loreto



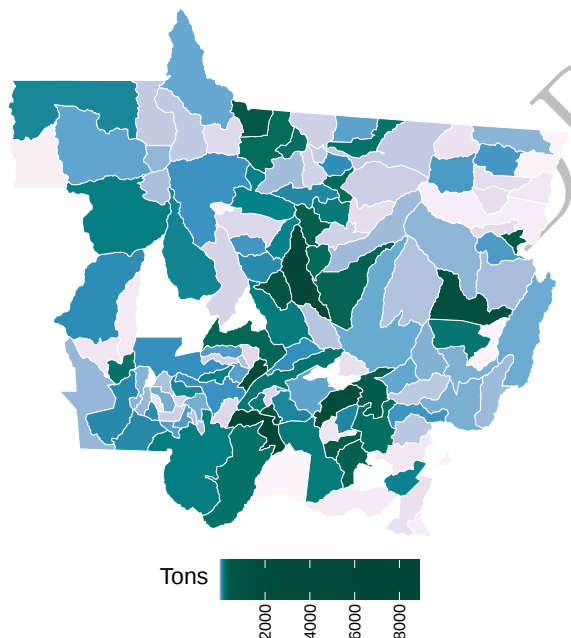
Aquaculture

The plot shows the aquaculture production in the department of Loreto 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 8: Yearly aquaculture production (tons) and value of production (Reales) in Loreto

a



b

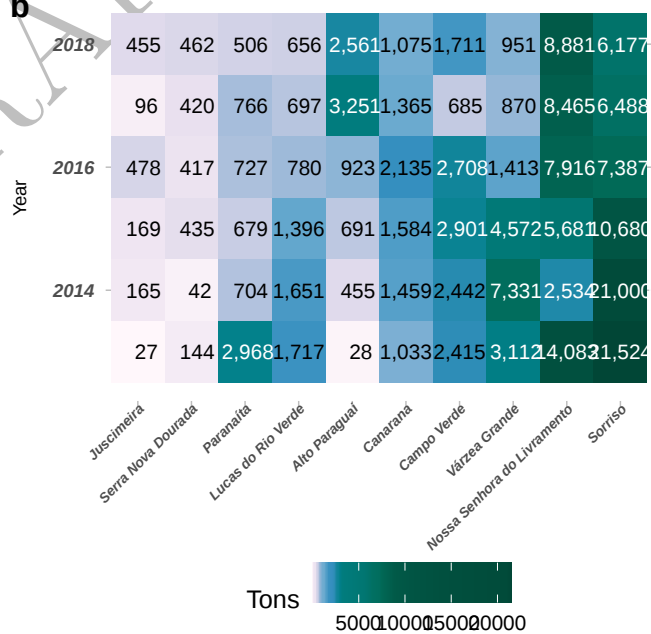


Figure 9: a) Yearly aquaculture production (tons) in districts of Loreto in 2018. b) Yearly aquaculture production by districts (Tons)

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.