

Mato Grosso, Brazil



Jurisdictional indicators brief

State area:	903,378 km ² (10.61% of Brazil)
Original forest area:	520,033 km ²
Current forest area (2019):	314,770 km ² (34.8% of Mato Grosso)
Yearly deforestation (2019)	1,702 km ²
Yearly deforestation rate (2019)	0.54%
Interannual deforestation change (2018-2019)	+14%
Accumulated deforestation (2001-2019):	69,082 km ²
Protected conservation areas:	40,464 km ² (4.5% of Mato Grosso)
Carbon stocks (2015):	3,095 millions tons (above ground biomass)
Representative crops (2018):	Soybean (31,608,562 tons); Maize (26,172,540 tons); Sugarcane (20,433,828 tons)
Value of agricultural production (2016):	\$7,989,997,431 USD
More on jurisdictional sustainability	State of jurisdictional sustainability

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Forest and people

In 2019, the estimated area of tropical forest in the state of Mato Grosso was 314,770 km², equivalent to 34.8% of the state's total area, and to 9.9% of the tropical forest remaining in the nine states of the Brazilian legal Amazon. The total accumulated forest lost during the period 2001-2019 was 69,082 km², equivalent to 17.6% of the forest area remaining in 2001. Mato Grosso concentrated about 8.3% of the carbon reserves stored in the biomass of the Brazilian tropical forest (about 3,095 mt C as of 2019).

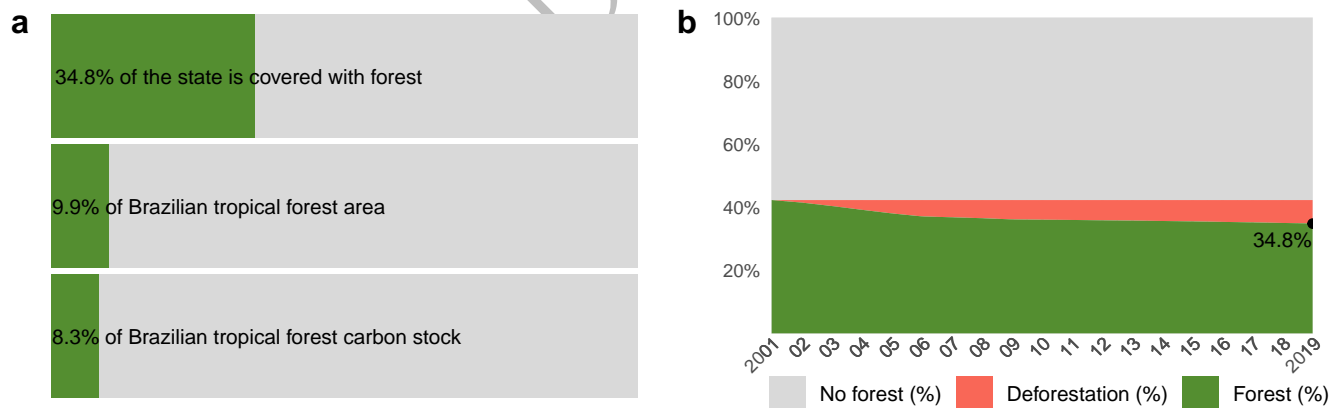


Figure 1: a) forest share and b) transition of forest to deforestation over the last years

There were 3.5 million people living in Mato Grosso as of 2020, distributed in 19 municipalities, with 0.6 million people living in the capital city of Cuiabá. The state has formally designated conservation areas and indigenous territories, which respectively represent 4% and 16% of the state. There were an estimated 43,226 indigenous people living in the state in 2010 (see Figure 2).

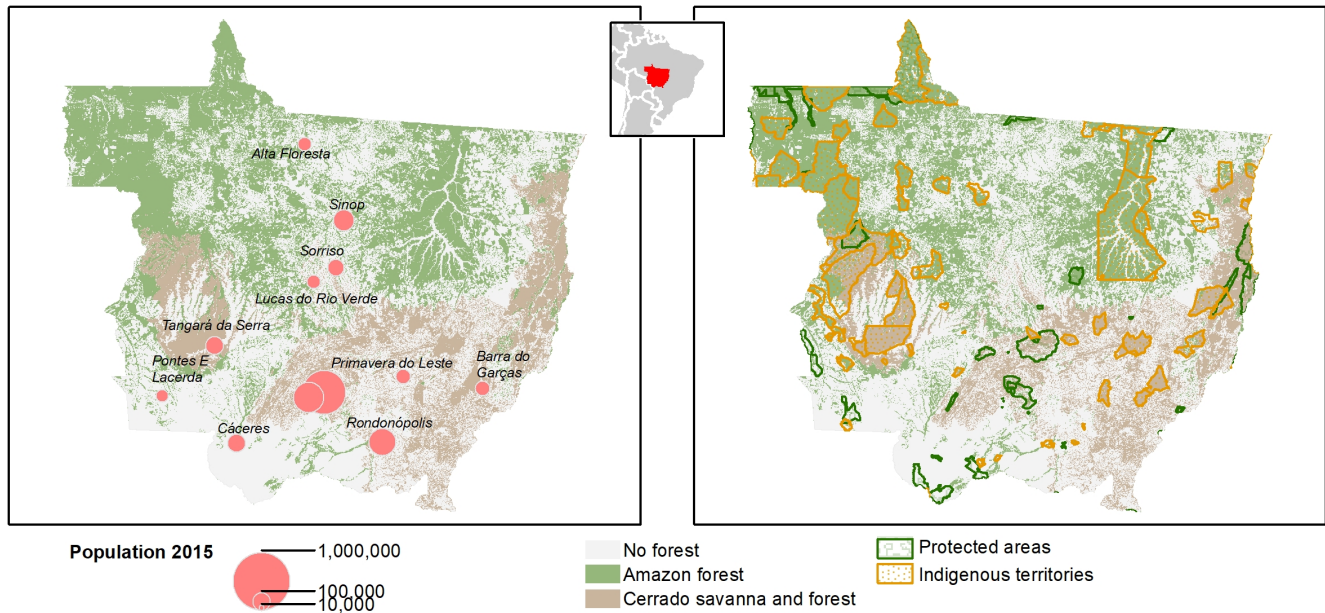


Figure 2: Map of most populated places (> 40,000 people) and indigenous and protected areas in Mato Grosso

Deforestation

Mato Grosso reduced its yearly deforestation rate rapidly after the maximum of 2004 (11,814 km²). Deforestation decreased rapidly till 2012 when it reached 757 km² and has remained more or less stable after 2015 with an average yearly deforestation of 1,568.6km². The deforestation in the state of Mato Grosso in 2019 was 1,702 km². While deforestation in the Brazilian legal Amazon in 2019 saw the largest interannual increase in the last decade (34%), the deforestation in Mato Grosso increased at a slower rate (14%). Mato Grosso continued having the second largest deforestation area among Brazilian states and concentrating 17% of the total deforestation in the legal Amazon in 2019. The deforestation rate in the state in 2019 was 0.54%, larger than the average of the legal Amazon states in 2019 (0.43%). The analysis of deforestation in Cerrado (2018), which represents 28% of the state area (see Figure 3).

The state's current deforestation is 78% below the reference baseline 1996-2005, and 64% below the reference baseline 1996-2015.

39% of the deforestation is located in the top 5 most affected municipalities in the state (see Figure 4). The municipality of Colniza have consistently registered the largest loss of tropical forest, reaching a maximum of 566 km² in 2004. In 2019 the municipality of Colniza continued being the municipality with the largest yearly deforestation.

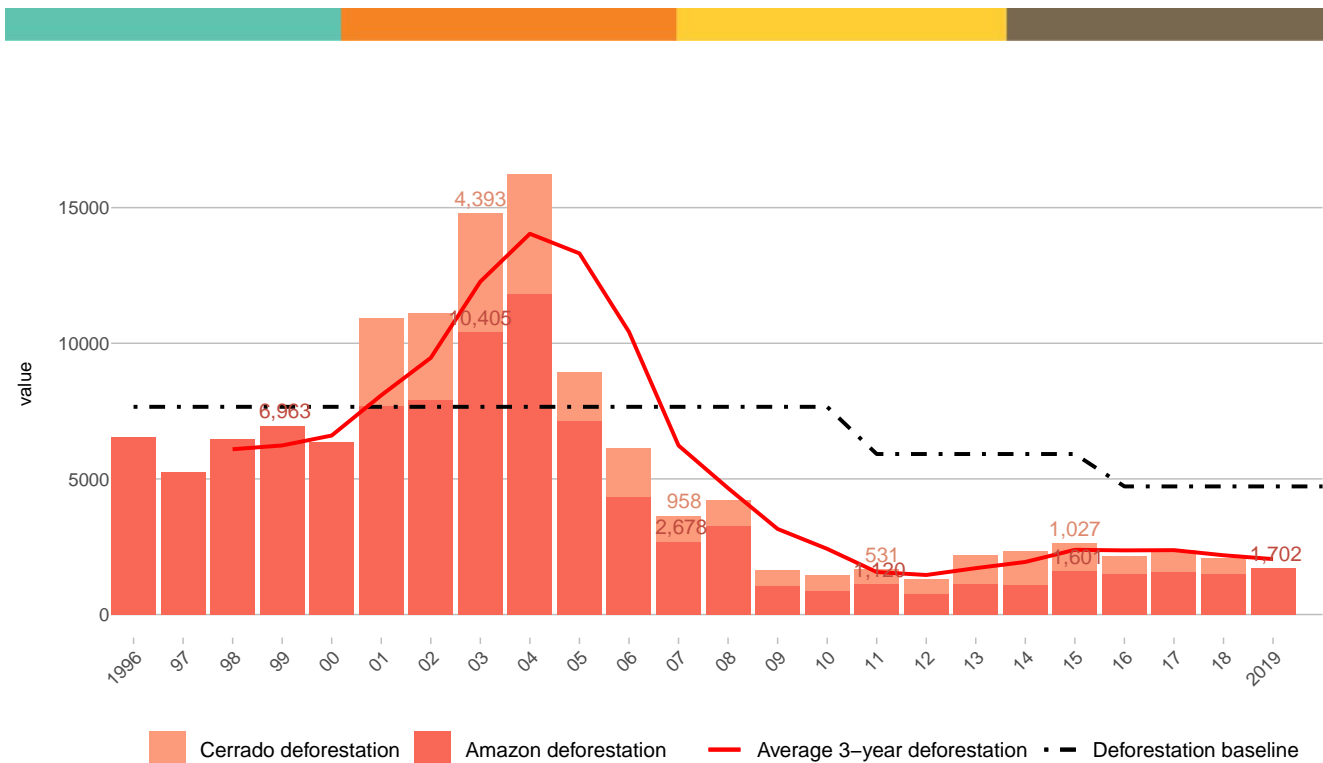


Figure 3: Yearly deforestation (km^2) and deforestation baseline

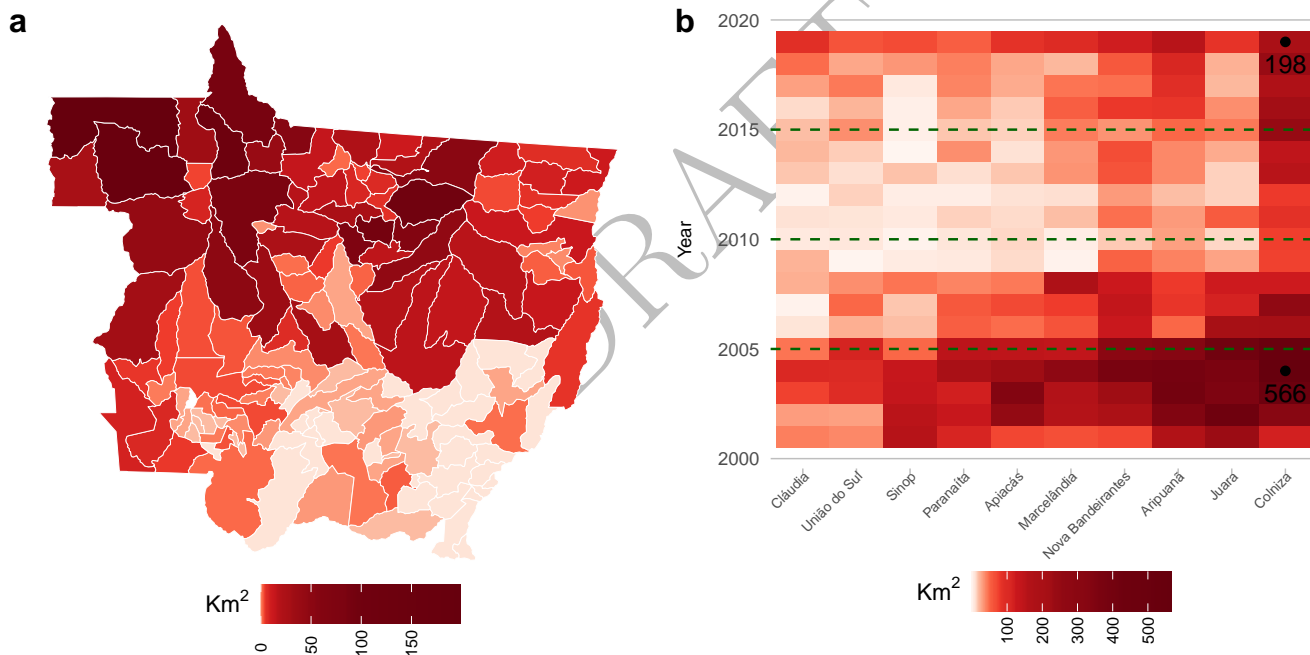
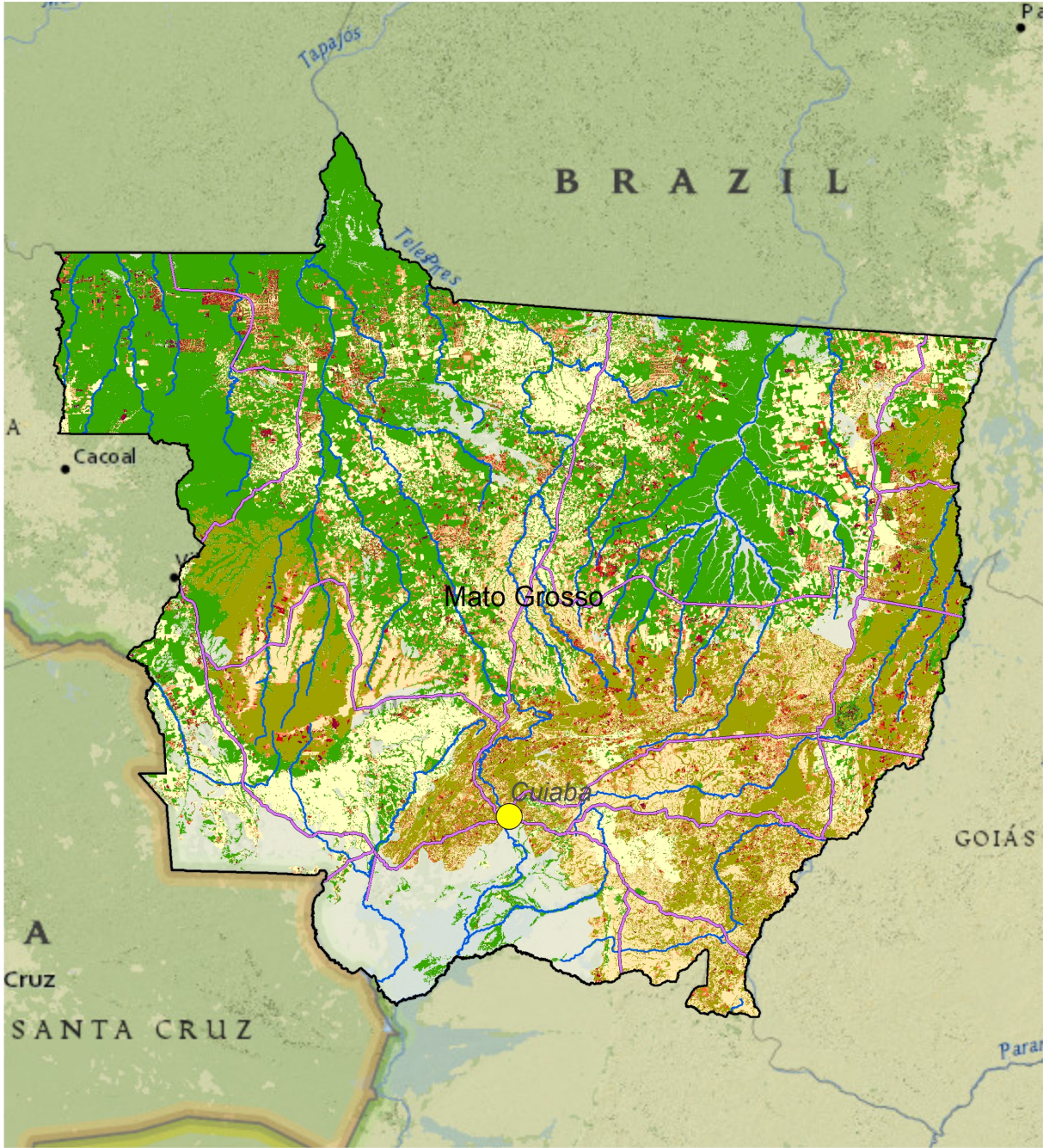


Figure 4: a) Yearly deforestation by municipalities in 2019 b) Yearly deforestation in top 10 most affected municipalities (km^2)

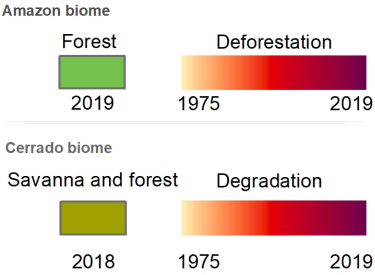
Table 1: Forest and deforestation indicators in the state of Mato Grosso

Year	Forest (km ²)	Deforestation	Deforestation rate (%)	Annual variation (%)
2001	381,786	7,703	2.02	20.9
2002	374,638	7,892	2.11	2.5
2003	364,731	10,405	2.85	31.8
2004	353,926	11,814	3.34	13.5
2005	343,579	7,145	2.08	-39.5
2006	335,056	4,333	1.29	-39.4
2007	332,464	2,678	0.81	-38.2
2008	329,883	3,258	0.99	21.7
2009	326,434	1,049	0.32	-67.8
2010	325,605	871	0.27	-17
2011	324,824	1,120	0.35	28.6
2012	323,757	757	0.23	-32.4
2013	322,962	1,139	0.35	50.5
2014	321,856	1,075	0.33	-5.6
2015	320,751	1,601	0.50	48.9
2016	319,259	1,489	0.47	-7
2017	317,876	1,561	0.49	4.8
2018	316,261	1,490	0.47	-4.5
2019	314,770	1,702	0.54	14.2



Mato Grosso, Brazil
Forest and accumulated deforestation

The map shows the most recent forest cover and yearly deforestation mapped by PRODES, Brazil. Intense red colors represent the most recent deforestation whereas light orange colors earlier deforestation as noted in the legend



Prepared by Earth Innovation Institute



Burned area

According to the NASA-USGS analysis of MODIS satellite observations, the average yearly burned area in Mato Grosso was 38,623 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 47,486 km² and the worst year in the last decade was 2010 with 100,690 km² burned. In most years, the months of September and August represented the peak of the fire season (see Figure 5).

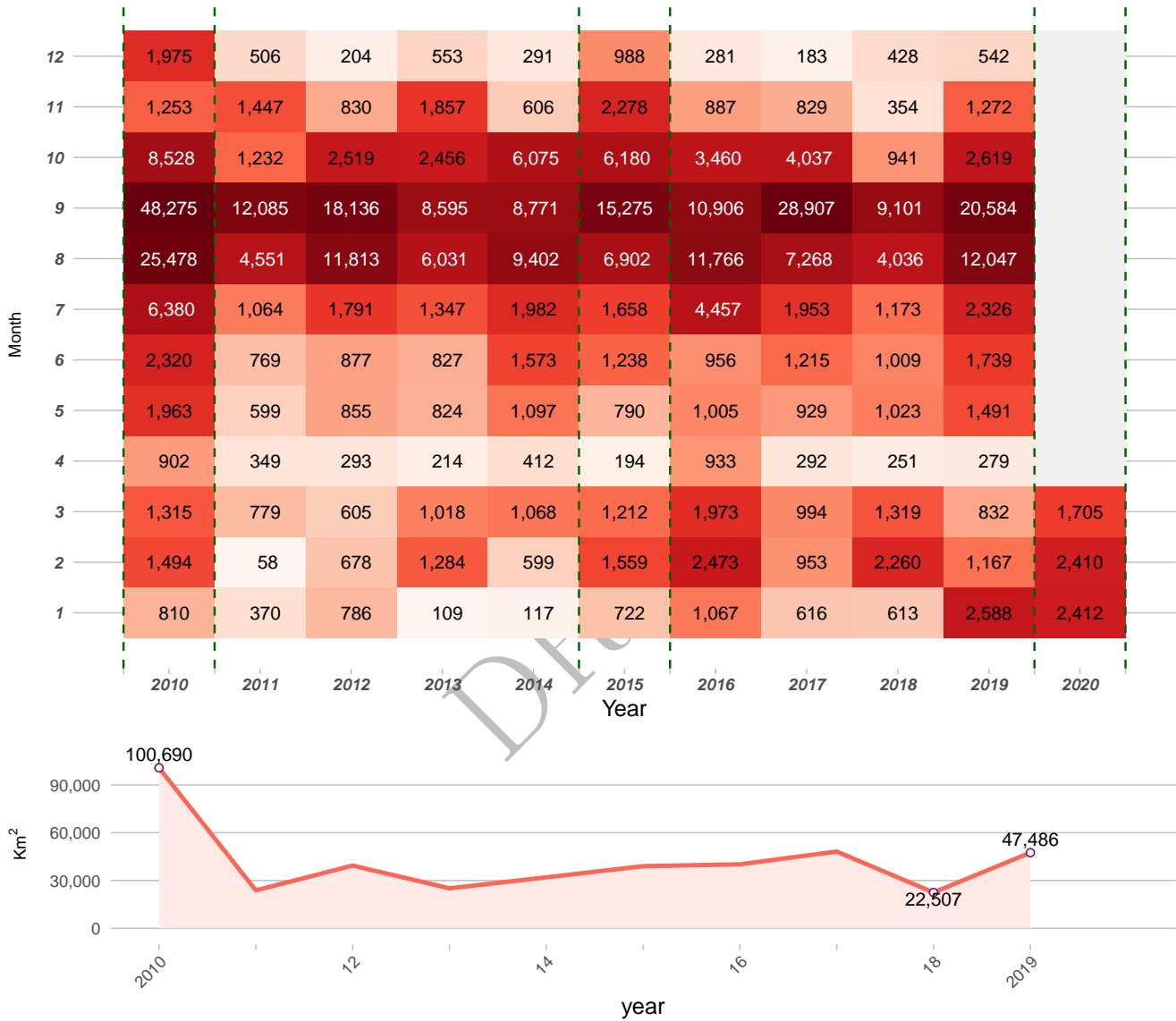


Figure 5: Monthly burned area since 2010 (km²). Source: EII analysis of MODIS-MCD64



Emissions from deforestation

The accumulated emissions from deforestation in the state of Mato Grosso between 2000 and 2019 amount to 3,235 million tons of CO₂eq, which was equivalent to 25.1% of the total emissions from deforestation in the legal Amazon during this period. Considering the observed yearly deforestation, the mean carbon density of the state's forest and the business as usual deforestation baseline, the accumulated gross avoided emissions from deforestation during the period from 2006 to 2019 was 3,018 million tons of CO₂eq. This results from summing avoided emissions during the period from 2006 to 2019 in which the deforestation was lower than the business as usual deforestation baseline.

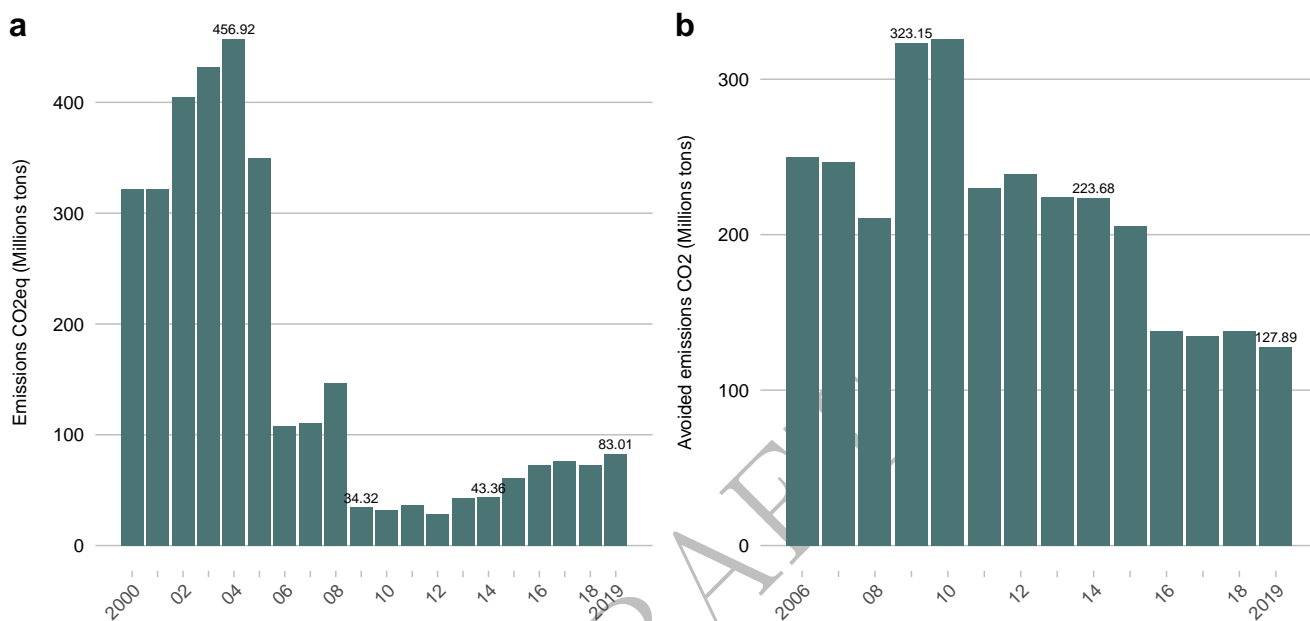




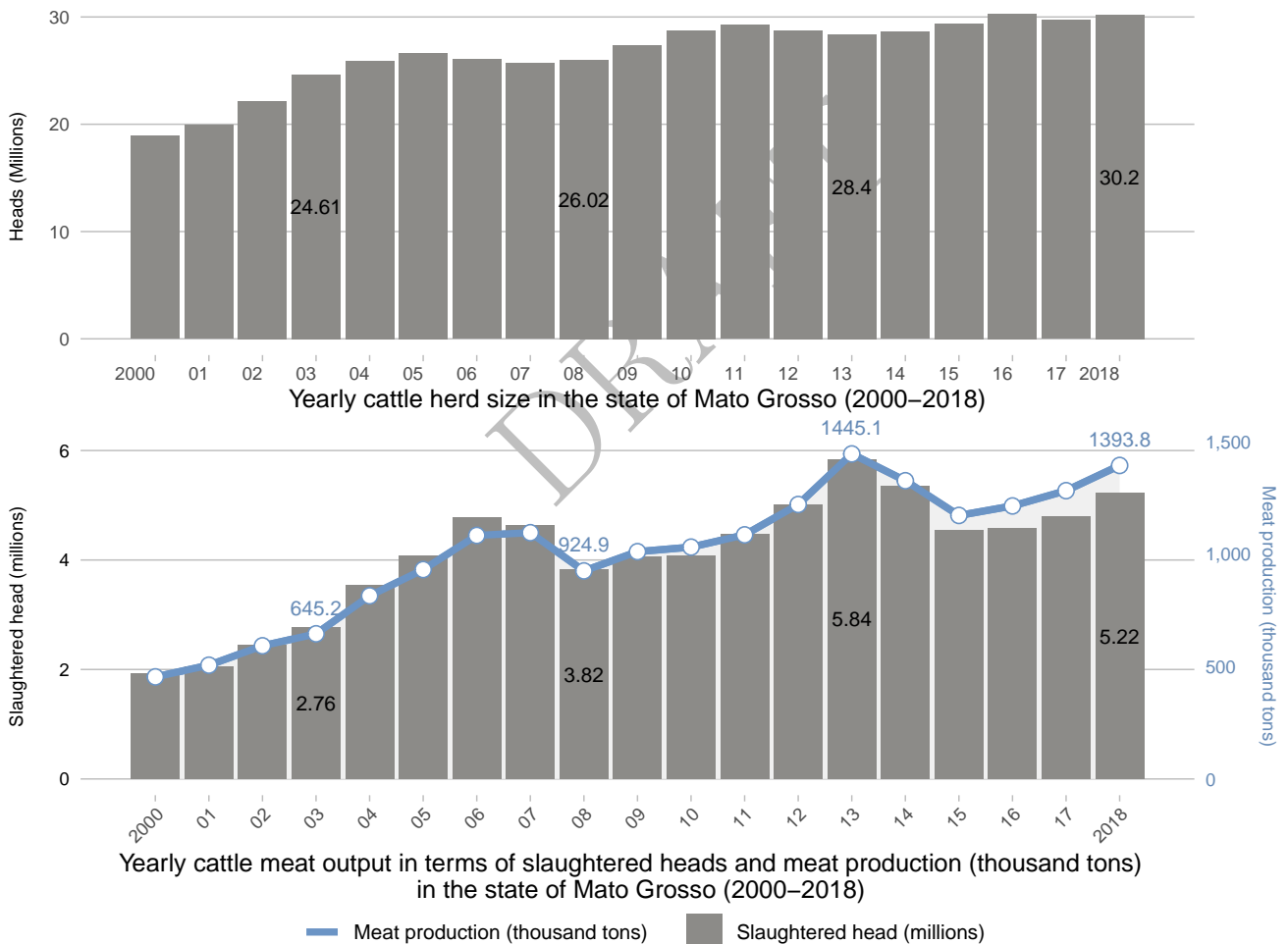


Figure 6: Emissions from deforestation (left) and avoided emissions (right) (CO₂eq Millions tons)

Livestock

Table 2: Livestock indicators in Mato Grosso

	 <i>Cattle</i>	 <i>Pig</i>	 <i>Poultry</i>	 <i>Fish</i>
Year	2018	2018	2018	2015
Herd size:	30,199,598	2,945,416	60,394,411	
Slaughtered heads:	5,219,350	2,497,715	215,717,180	
Meat production (tons):	1,393,786	224,400	522,938	
Value (thousands):				R\$379,284 BRL



Agriculture

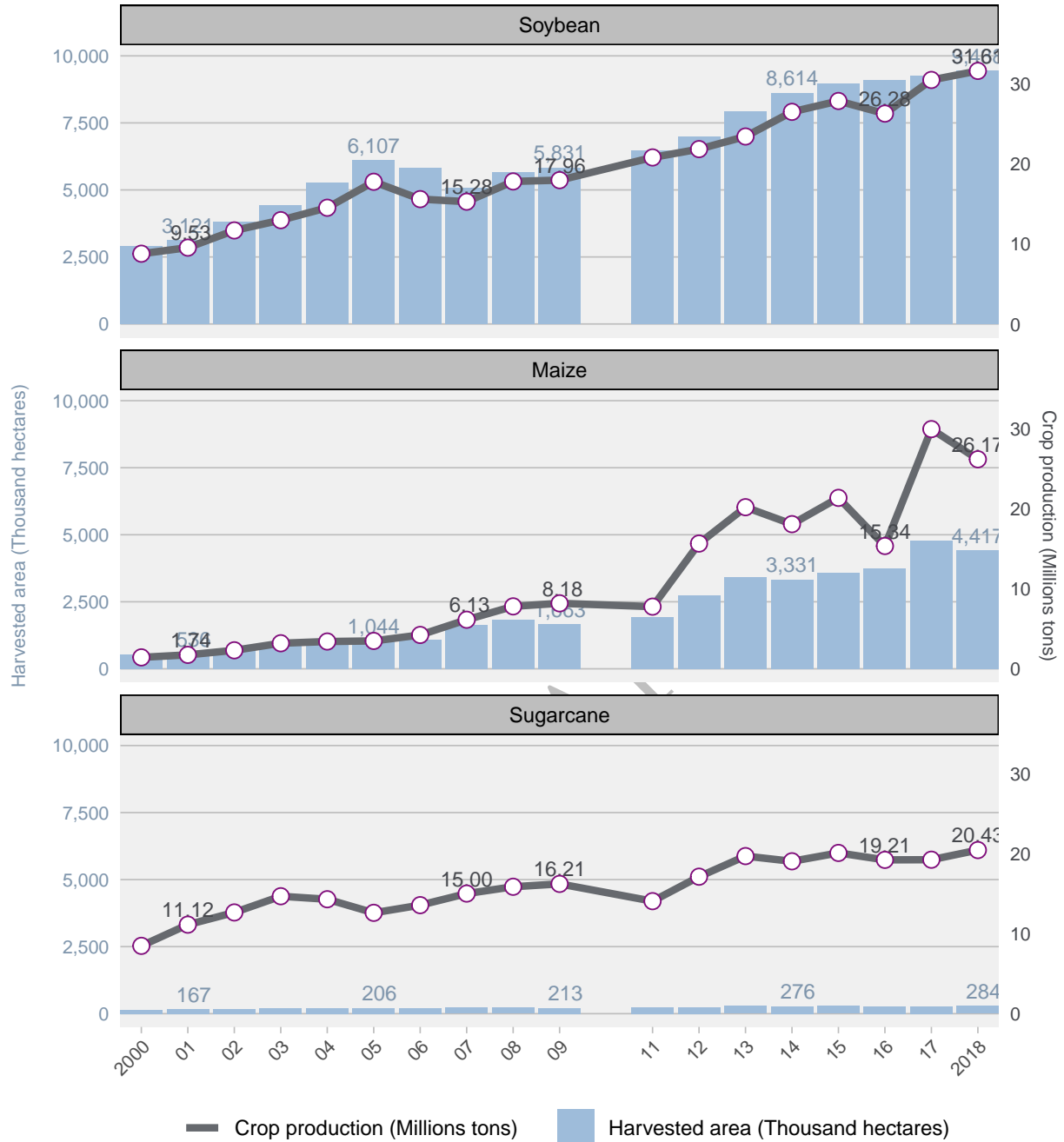


Figure 7: Harvested area and production of the three crops most produced in Mato Grosso



Aquaculture

The plot shows the aquaculture production in the state of Mato Grosso 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

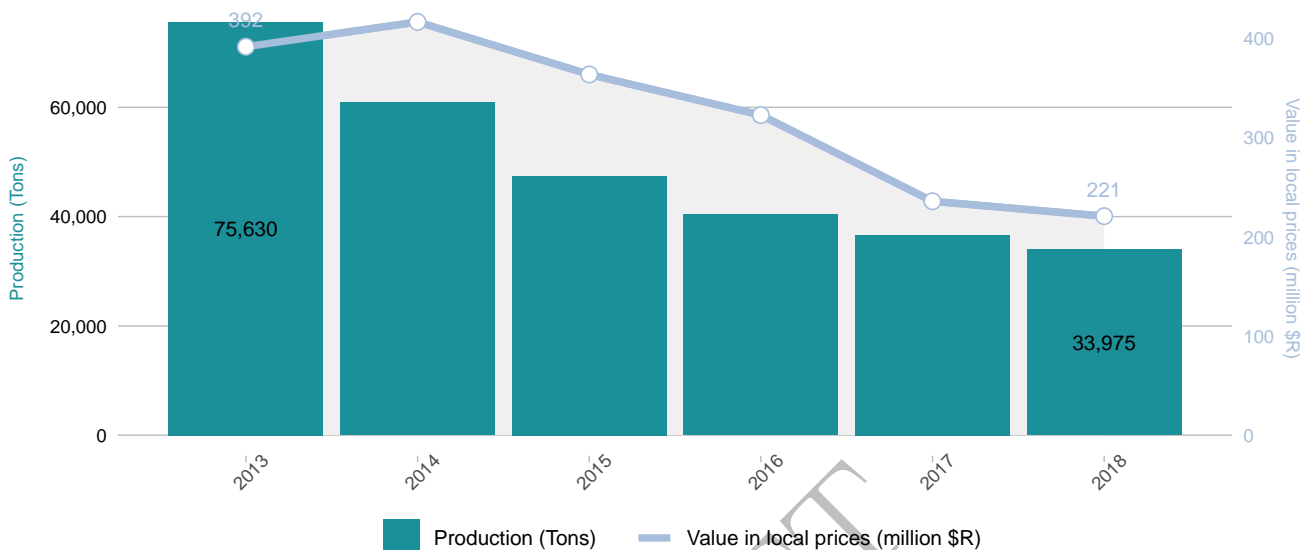


Figure 8: Yearly aquaculture production (tons) and value of production (Reales) in Mato Grosso

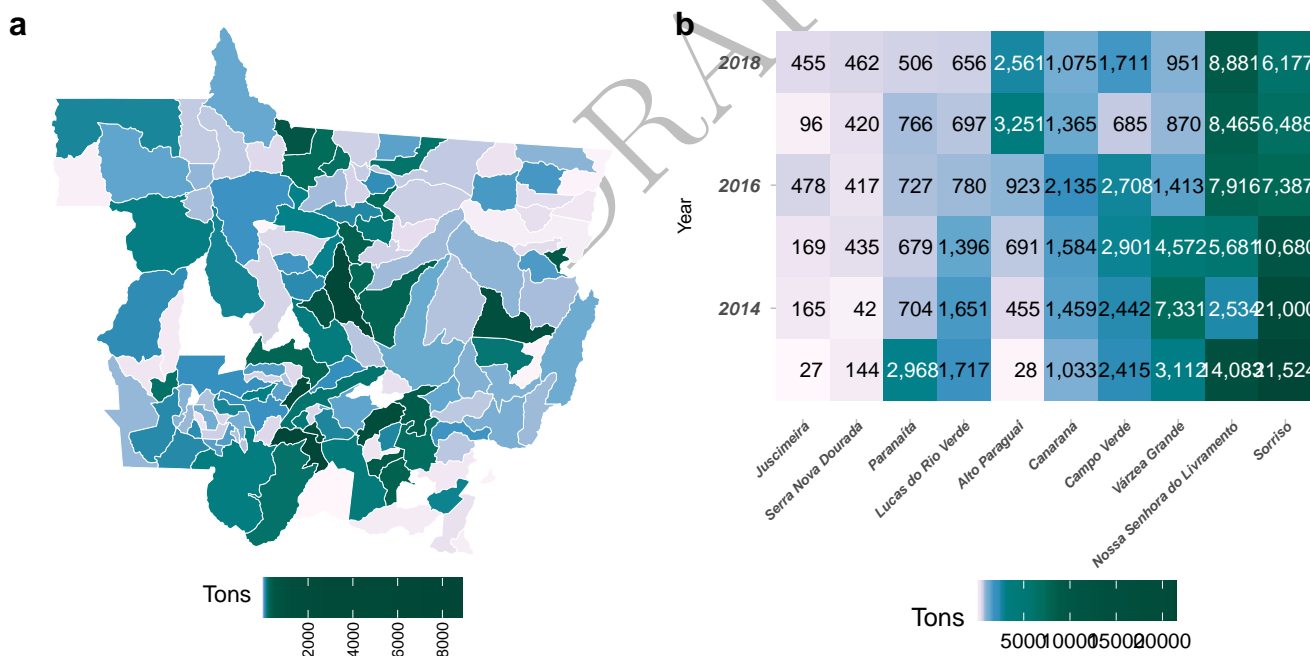


Figure 9: a) Yearly aquaculture production (tons) in municipalities of Mato Grosso in 2018. b) Yearly aquaculture production by municipalities (Tons)

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.