

Pastaza, Ecuador

Jurisdictional indicators brief



| | |
|--|---|
| State area: | 29,629 km ² (10.45% of Ecuador) |
| Original forest area: | 29,368 km ² |
| Current forest area (2018): | 27,883 km ² (94.1% of Pastaza) |
| Yearly deforestation (2018) | 26 km ² |
| Yearly deforestation rate (2018) | 0.09% |
| Accumulated deforestation (2001-2018): | 700 km ² |
| Protected conservation areas: | 3,570 km ² (12% of Pastaza) |
| Carbon stocks (2018): | 435 millions tons (above ground biomass) |
| Representative crops (2016): | Bananas and plantains (5,487 tons); Maize (357 tons); Groundnut (50 tons) |
| Value of agricultural production (2016): | \$28,304,056 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 Pastaza was 27,883 km², equivalent to 94.1% of the province's total area, and to 22.3% of the forest remaining in Ecuador. The total accumulated forest lost during the period 2001-2018 was 700 km², equivalent to 1.8% of the forest area remaining in 2001. Pastaza concentrated about 26.4% of the carbon reserves stored in the biomass of the Ecuadorian tropical forest (about 435 mt C as of 2018)

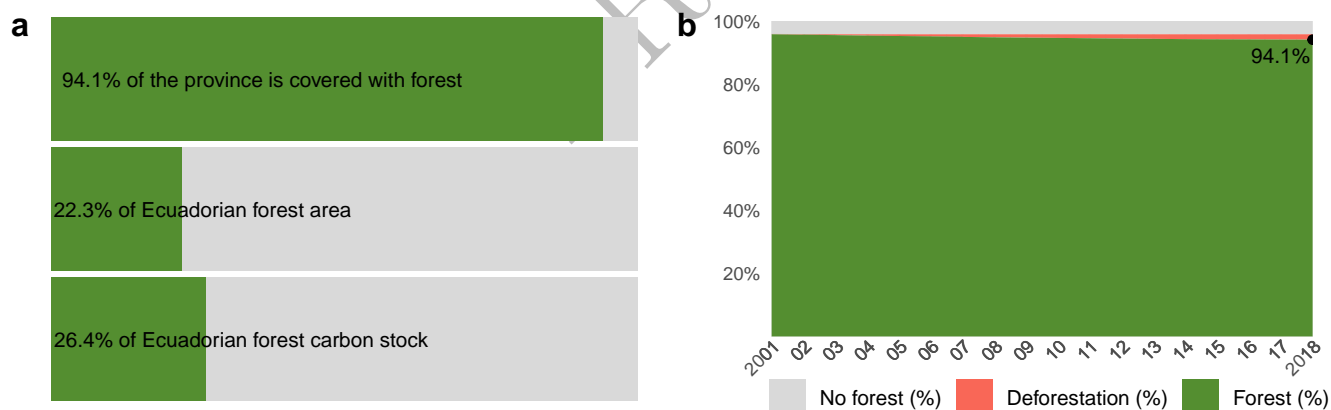


Figure 1: a) forest share and b) transition of forest to deforestation over the last years

There were 0.1 million people living in Pastaza as of 2020, distributed in 18 cantons, with 0.1 million people living in the capital city of Puyo. The province has formally designated conservation areas and indigenous territories, which respectively represent 12% and 90% of the province. There were an estimated 33,399 indigenous people living in the province in 2010 (see Figure 2).

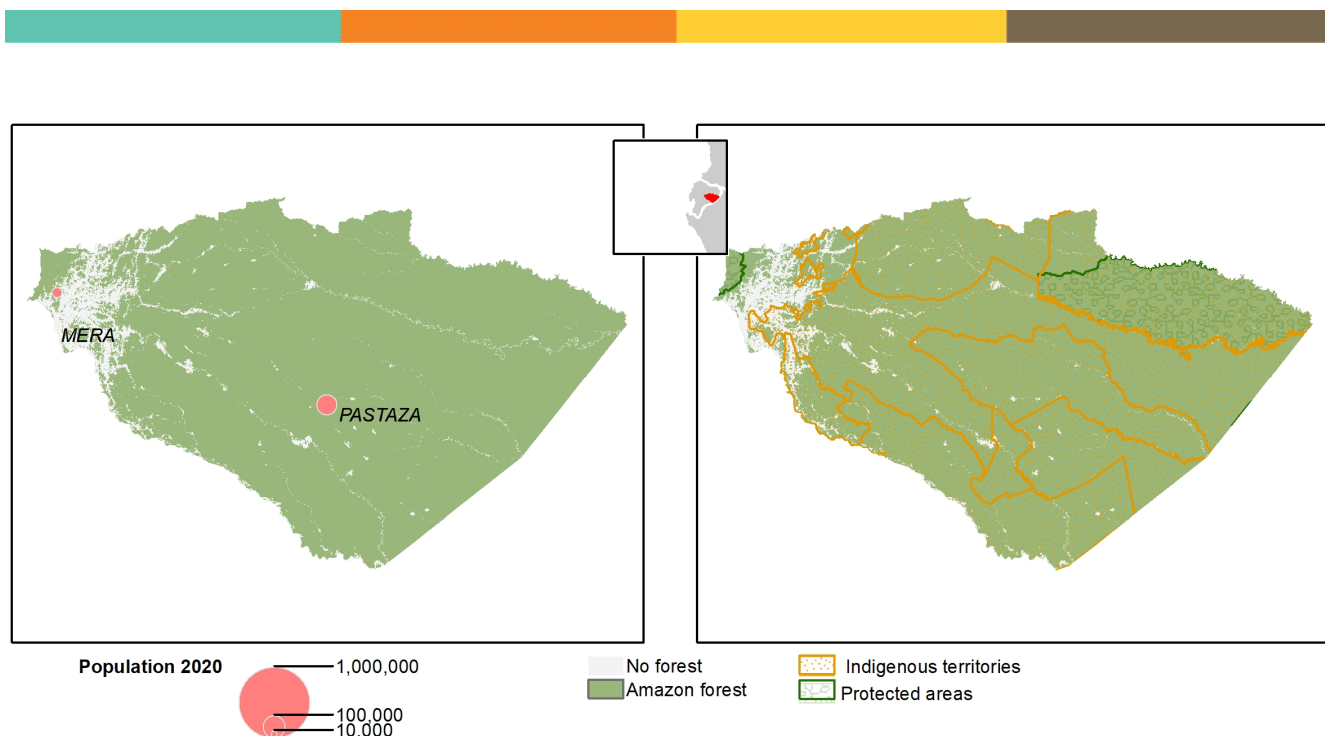


Figure 2: Map of most populated places (> 10,000 people) and indigenous and protected areas in Pastaza

Deforestation

The yearly deforestation in Pastaza has remained more or less stable after 2001, ranging between a yearly maximum of 45 km² and a minimum of 18 km² in 2015. The reported deforestation in Pastaza in 2018 was 26 km², signaling a slight increase with respect to the 2015-2016 years.

The annual deforestation rate of Pastaza in 2018 was 0.09%, the lowest among the six Ecuadorian Provinces in Ecuador. This represented 3.5% of the total deforestation in Ecuador that year and set the canton's deforestation 44% below the reference deforestation baseline (see Figure 3).

96% of the deforestation is located in the five most affected cantons in the province (see Figure 4). In 2018 the canton of PASTAZA represented of the canton's deforestation with 16 km².

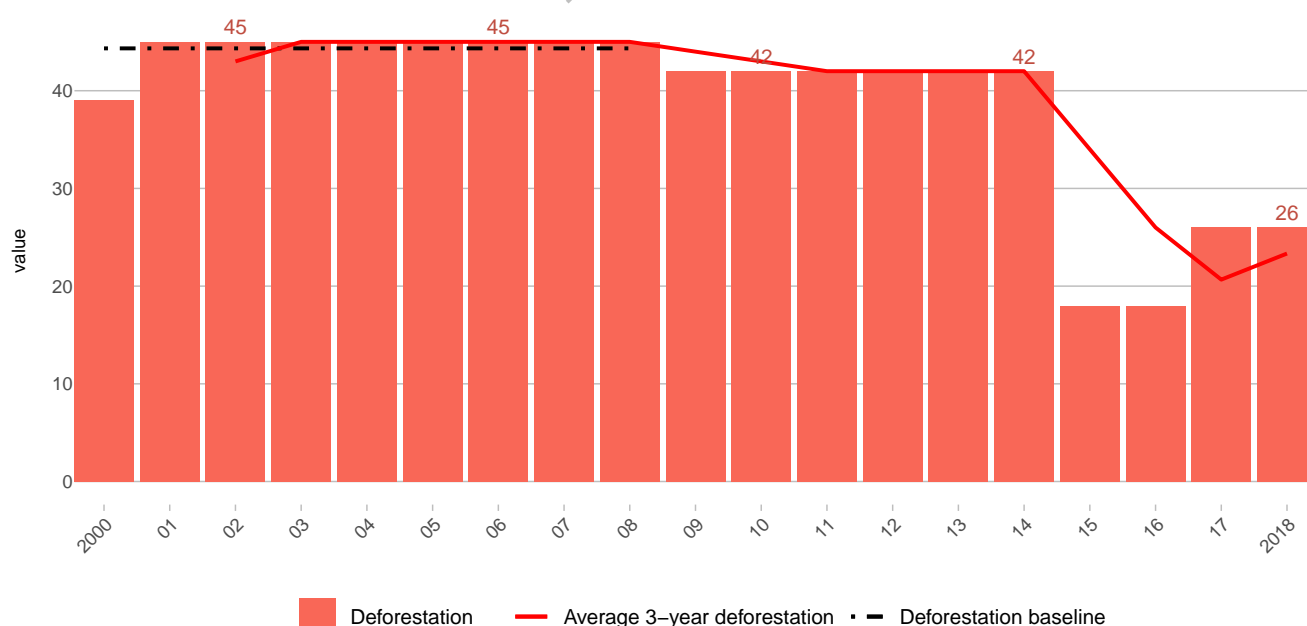


Figure 3: Yearly deforestation (km²) and deforestation baseline

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

| Year | Forest (km ²) | Deforestation | Deforestation rate (%) |
|------|---------------------------|---------------|------------------------|
| 2001 | 28,388 | 45.23 | 0.16 |
| 2002 | 28,347 | 45.23 | 0.16 |
| 2003 | 28,306 | 45.23 | 0.16 |
| 2004 | 28,265 | 45.23 | 0.16 |
| 2005 | 28,224 | 45.23 | 0.16 |
| 2006 | 28,183 | 45.23 | 0.16 |
| 2007 | 28,142 | 45.23 | 0.16 |
| 2008 | 28,102 | 45.23 | 0.16 |
| 2009 | 28,073 | 41.81 | 0.15 |
| 2010 | 28,045 | 41.81 | 0.15 |
| 2011 | 28,016 | 41.81 | 0.15 |
| 2012 | 27,988 | 41.81 | 0.15 |
| 2013 | 27,959 | 41.81 | 0.15 |
| 2014 | 27,931 | 41.81 | 0.15 |
| 2015 | 27,919 | 18.27 | 0.07 |
| 2016 | 27,908 | 18.27 | 0.07 |
| 2017 | 27,895 | 25.54 | 0.09 |
| 2018 | 27,883 | 25.54 | 0.09 |

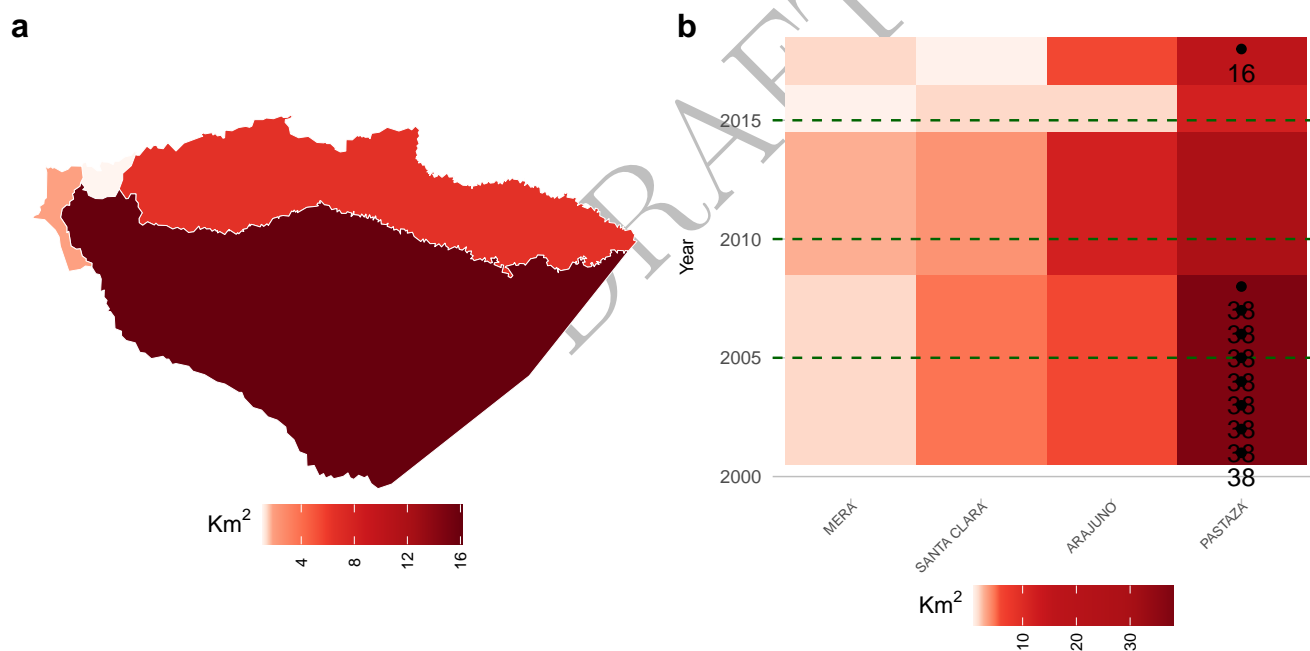
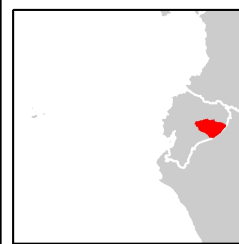
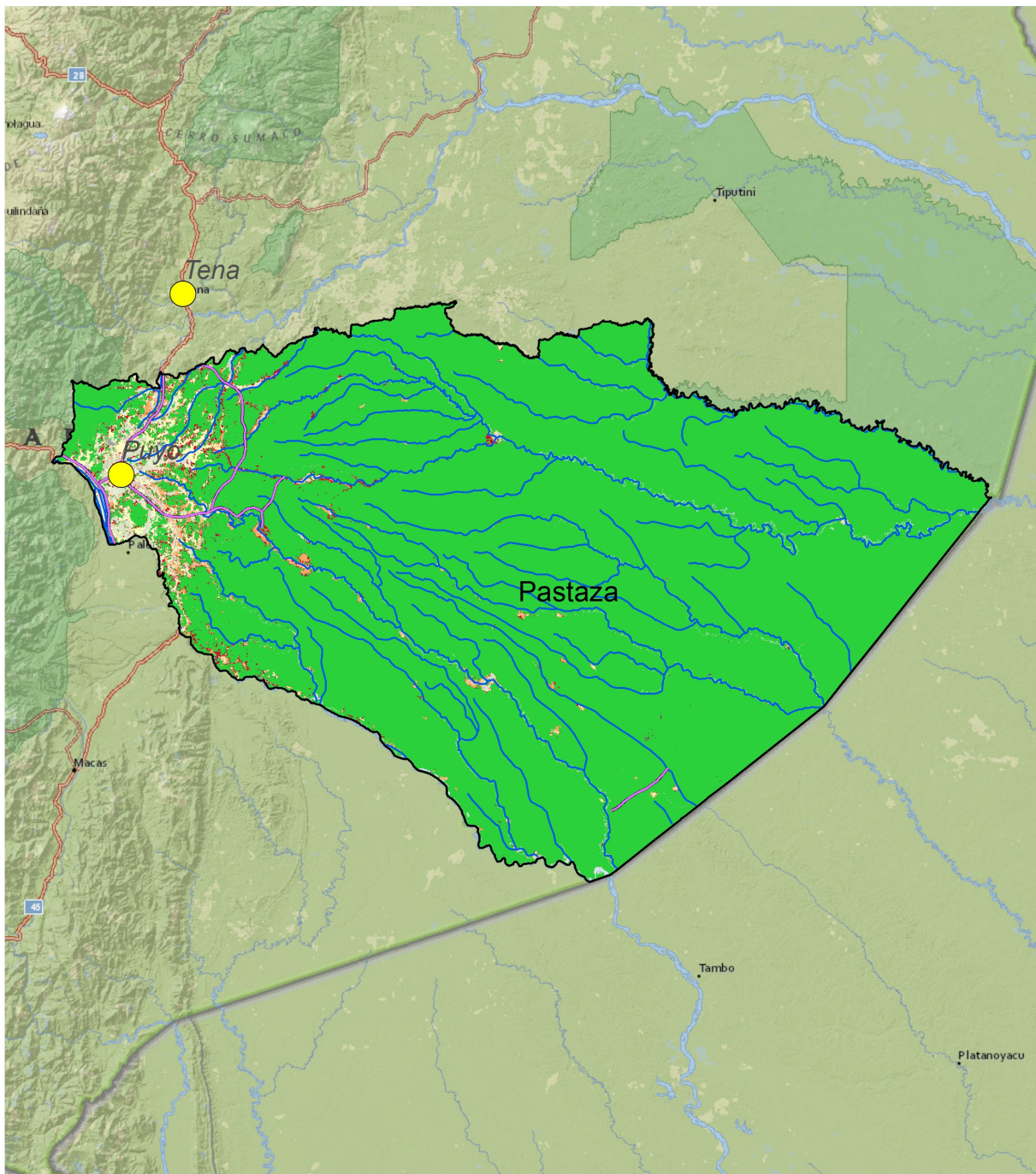


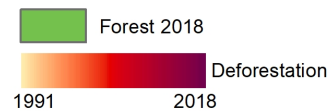
Figure 4: a) Yearly deforestation by cantons in 2018 b) Yearly deforestation in top 10 most affected cantons (km^2)



Pastaza, Ecuador Forest and accumulated deforestation

The map shows the most recent forest cover and yearly deforestation mapped by SUIA. 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

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

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Emissions from deforestation

The accumulated emissions from deforestation in the province of Pastaza between 2000 and 2018 amount to 36 million tons of CO₂eq, which was equivalent to xx% of the total emissions from deforestation in Ecuador 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 2009 to 2018 was 9 million tons of CO₂eq. This results from summing avoided emissions during the period from 2009 to 2018 in which the deforestation was lower than the business as usual deforestation baseline

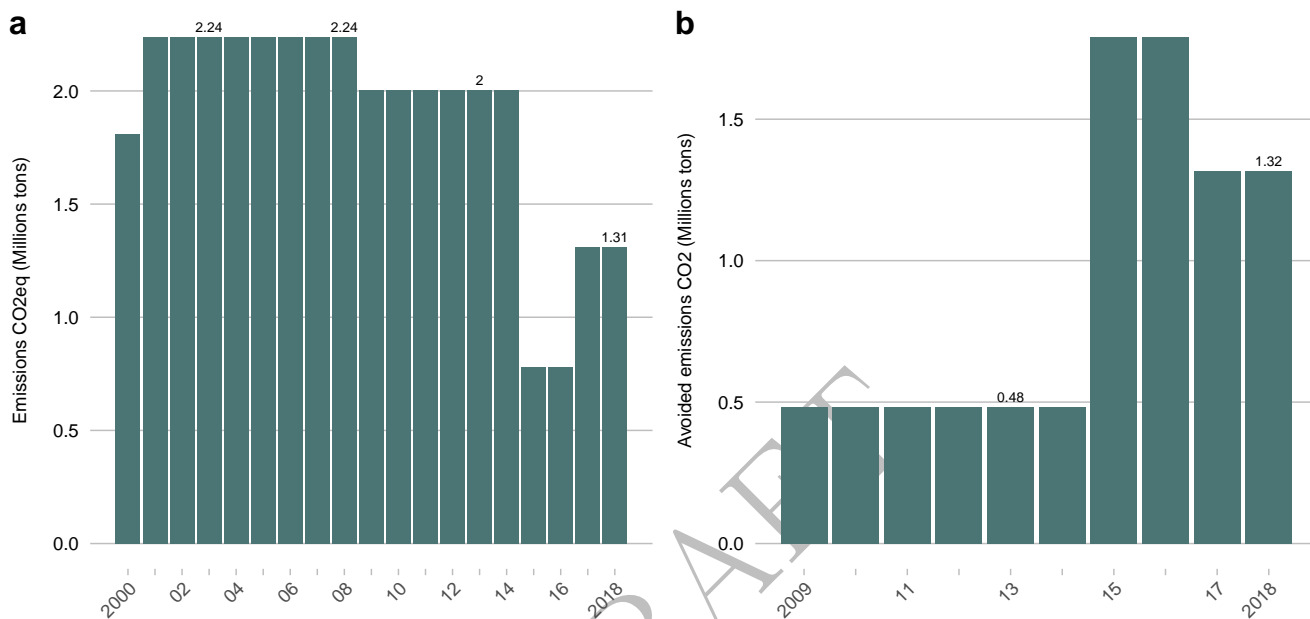






Figure 6: Emissions from deforestation (left) and avoided emissions (right) (CO₂eq Millions tons)



Livestock

Table 2: Livestock indicators in Pastaza

| |  |  |  |  |
|--------------------|---|---|---|---|
| | <i>Cattle</i> | <i>Pig</i> | <i>Poultry</i> | <i>Fish</i> |
| Year | NA | NA | NA | NA |
| Herd size: | NA | NA | NA | |
| Slaughtered heads: | NA | NA | NA | |
| Meat production | NA | NA | NA | |
| (tons): | | | | |
| Value (thousands): | | | | \$NA USD |

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Agriculture

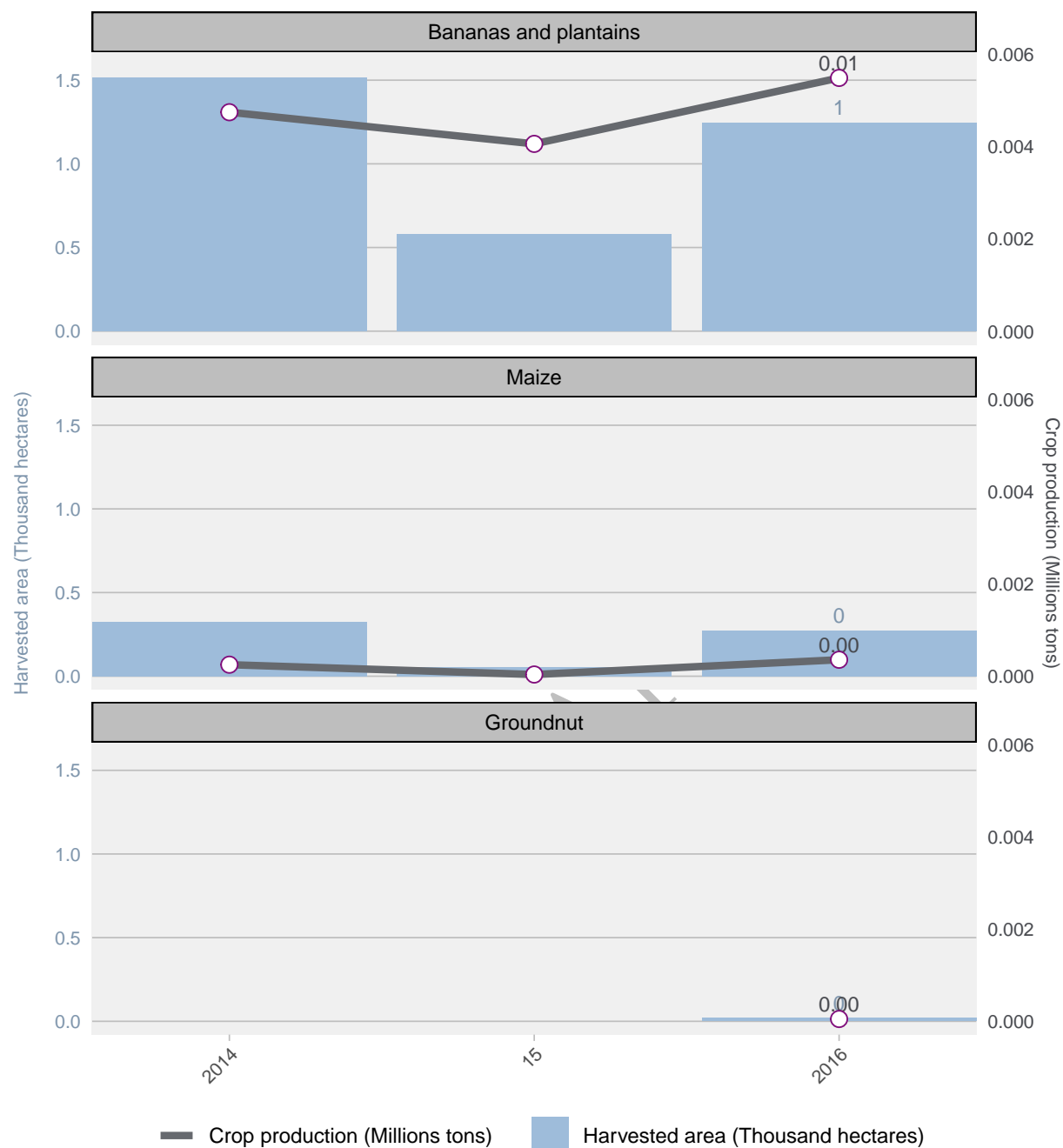


Figure 7: Harvested area and production of the three crops most produced in Pastaza



Aquaculture

The plot shows the aquaculture production in the province of Pastaza 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

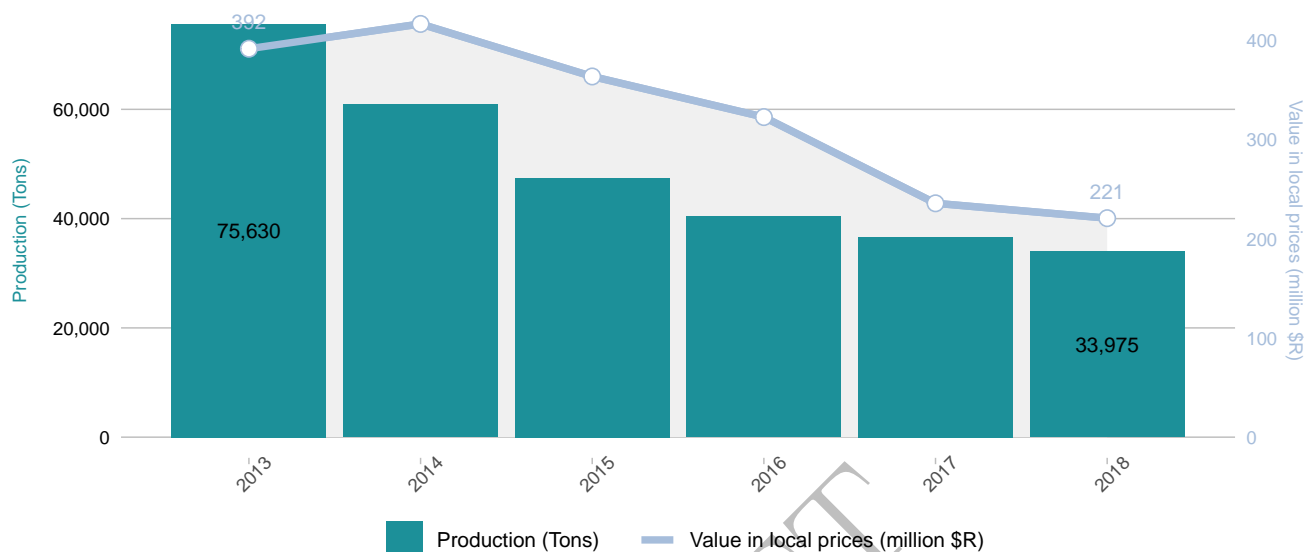


Figure 8: Yearly aquaculture production (tons) and value of production (Reales) in Pastaza

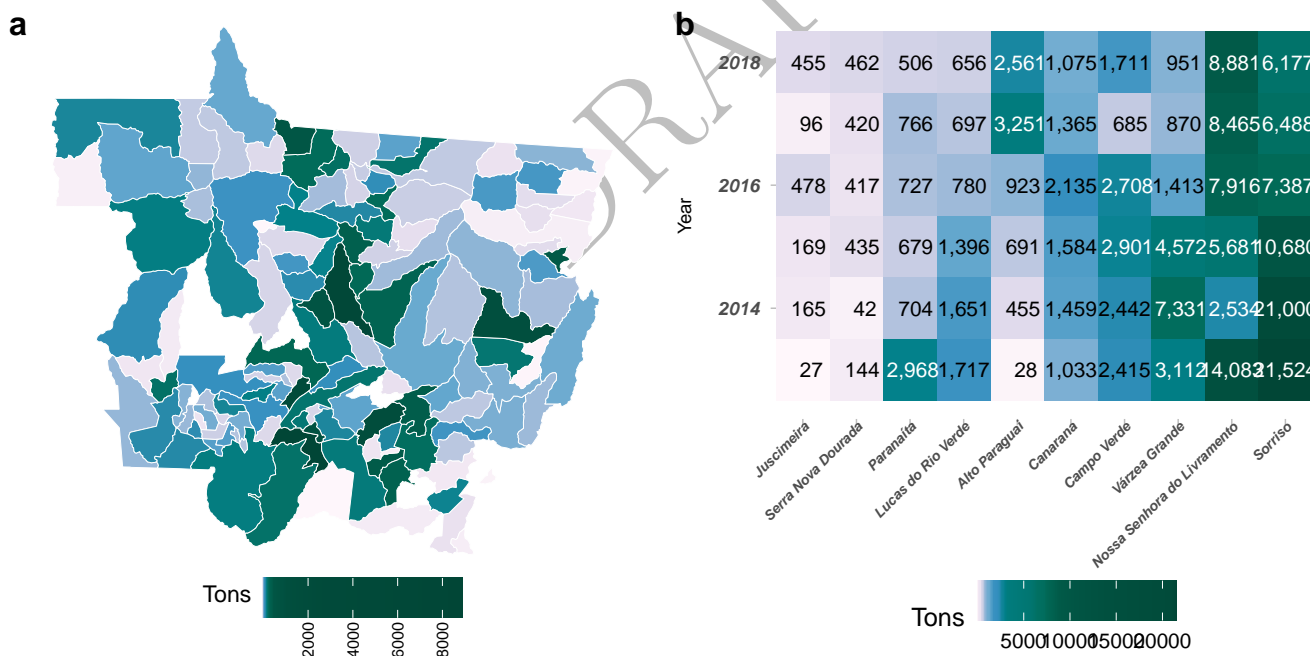


Figure 9: a) Yearly aquaculture production (tons) in cantons of Pastaza in 2018. b) Yearly aquaculture production by cantons (Tons)

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.