

Deforestation Analysis in Mato Grosso (Prodes/2017)

Between August 2016 and July 2017, the deforestation rate of the Amazonian forest, mapped by the Project for Monitoring Deforestation in the Legal Amazon by Satellite (Prodes), of the National Institute for Space Research (INPE), was 6,624 km². Mato Grosso accounted for 20% of all deforestation detected in the Amazon, which meant more than 1,341 km² of clear-cut deforestation (Figure 1).

With these rates, 2017 deforestation rate was reduced 16% in the Amazon as a whole and 10% in Mato Grosso. In 2015, at COP21, Mato Grosso committed to eliminating illegal deforestation by 2020 and to achieve a rate below 571 km² by 2030. In this context, the 1,193 km² of illegal deforestation and 1,341 km² of total deforestation still represent very high rates for the state to be able fulfill its commitment.

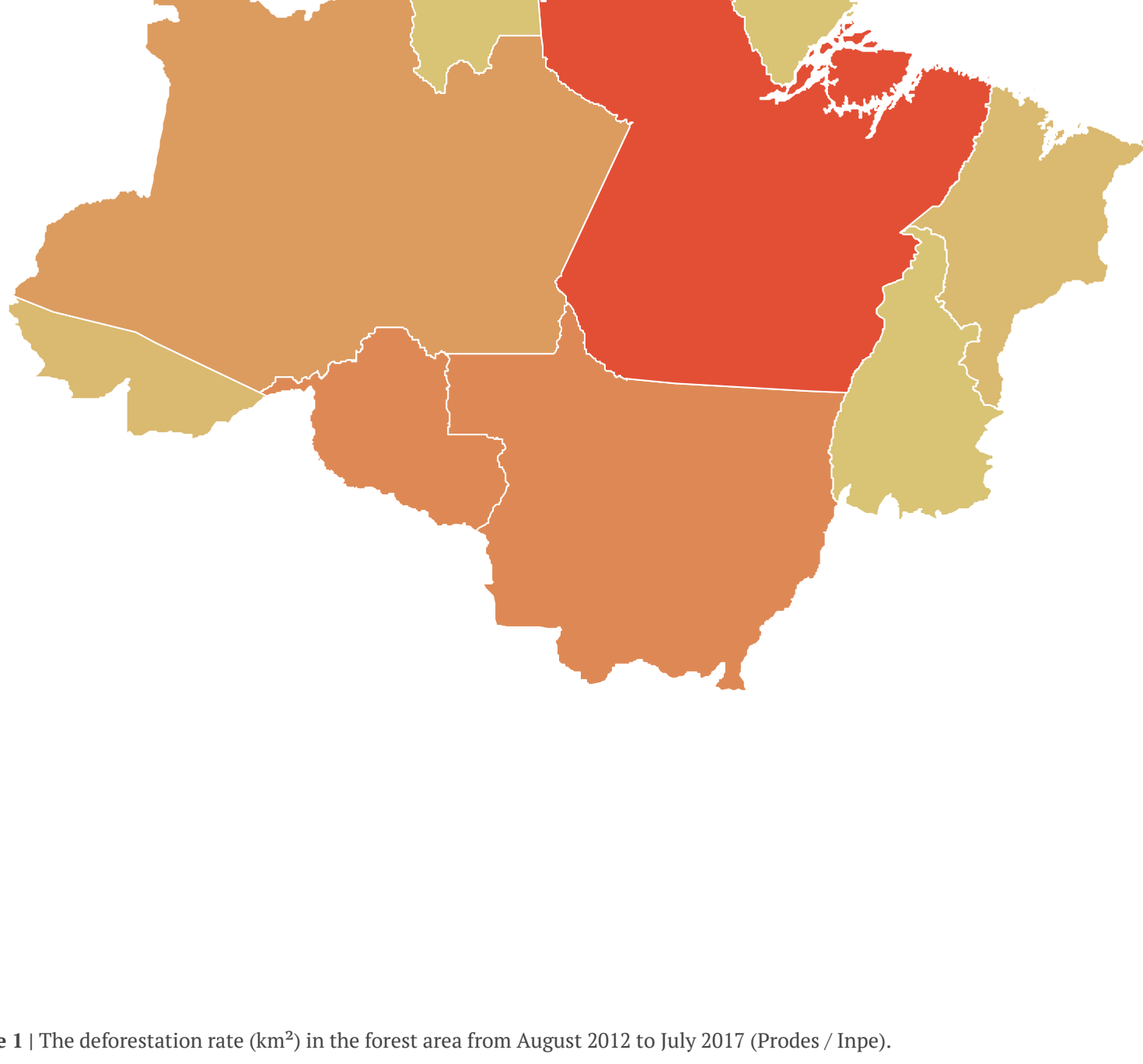


Figure 1 | The deforestation rate (km²) in the forest area from August 2012 to July 2017 (Prodes / Inpe).

Since 2012, Mato Grosso has maintained a rate of over 1,000 km² of deforestation per year (Figure 2). The state has the second highest Amazonian deforestation rate in the country, behind just the state of Pará.

Forest conversion in the state has a high degree of illegality. Of all the deforestation identified, only 10% was carried out in areas with valid deforestation or vegetation suppression permits issued by the state environmental agency². The study of the deforestation sites in the reservoir areas of the licensed hydroelectric plants, shows that 16 km² are attributable to hydroelectric power generation, which represented just over 1% of the total area. Thus, deforestation, authorized by both federal and state agencies, amounts to 11% of the deforested area in 2017. The result is better than in 2016, which presented an illegality rate of about 95%, but shows that there is an urgent need for the adoption of drastic measures against illegality if Mato Grosso wants to reach the established goal of zeroing illegal deforestation by 2020.

89% of all deforestation in Mato Grosso is illegal.

Deforestation characteristics in the Mato Grosso Amazon in 2017¹

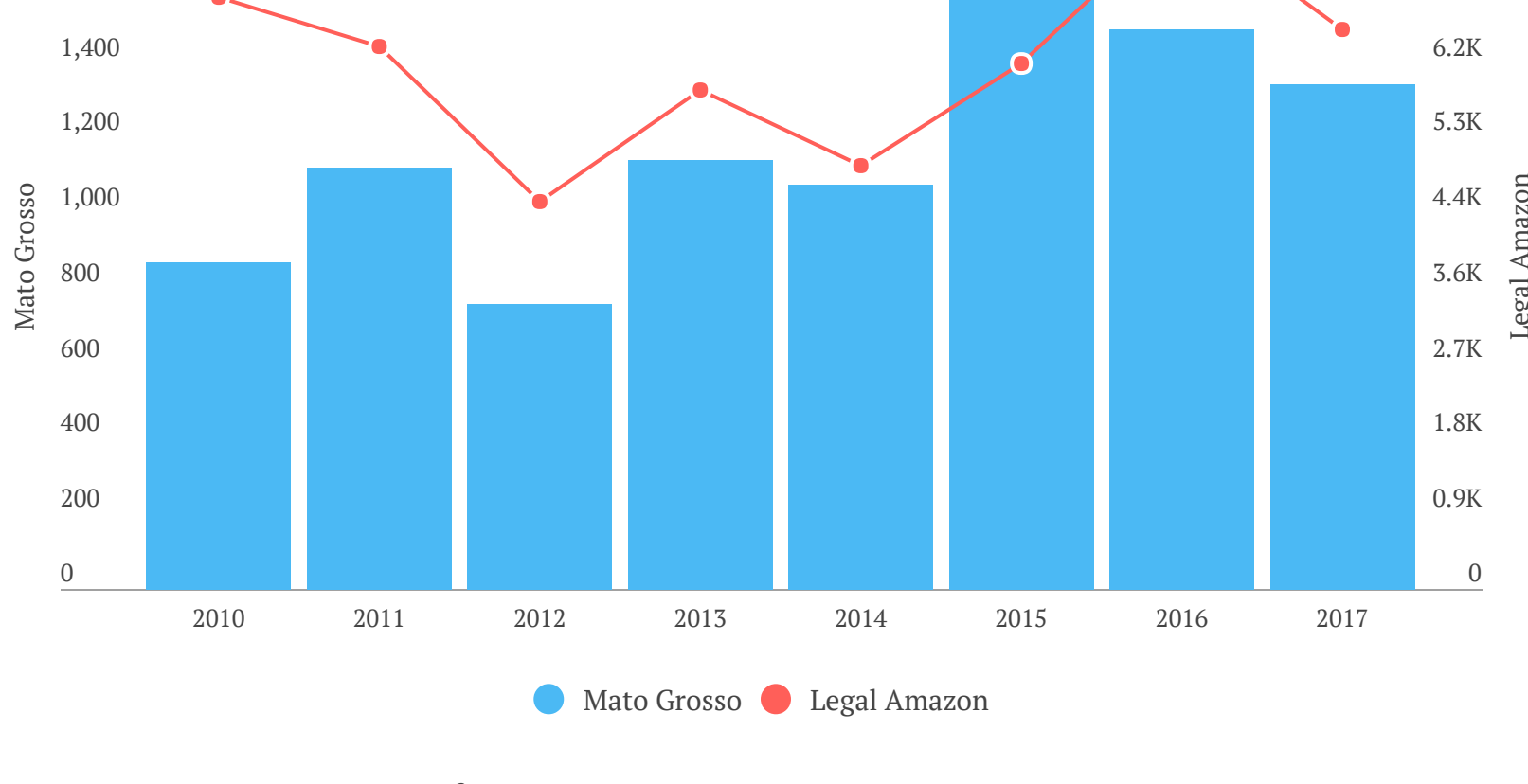


Figure 2 | The deforestation pattern (km²) in the forest area from August 2012 to July 2017 (Prodes / Inpe).

The concentration of deforested areas in certain regions of the state demonstrates the existence of active deforestation frontiers. In 2017, 10 municipalities were responsible for 48% of the clear-cut areas (Figure 3). In this context, the Northwest region also stands out as being responsible for 33% of all deforestation seen during the period (430 km²). Colniza, alone, had 41% of deforestation detected in this region (174.7 km²), most of which occurred in areas of an unidentified land category (67%).



Figure 3 | Deforestation Distribution (km²) by municipality from August 2016 to July 2017 (Prodes / Inpe).

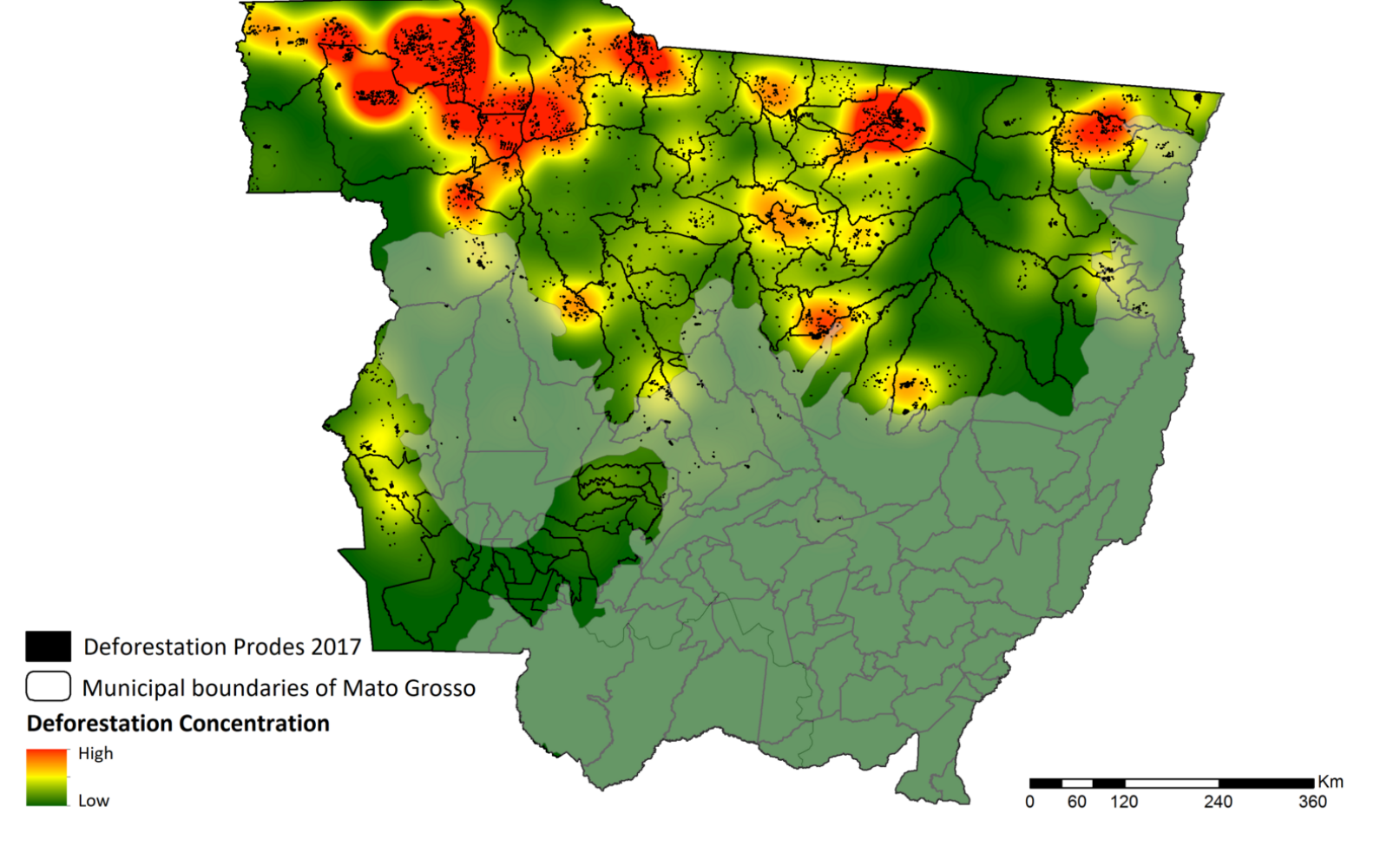


Figure 4 | Regions of deforestation concentration detected between August 2016 and July 2017 in Mato Grosso (Prodes / Inpe).

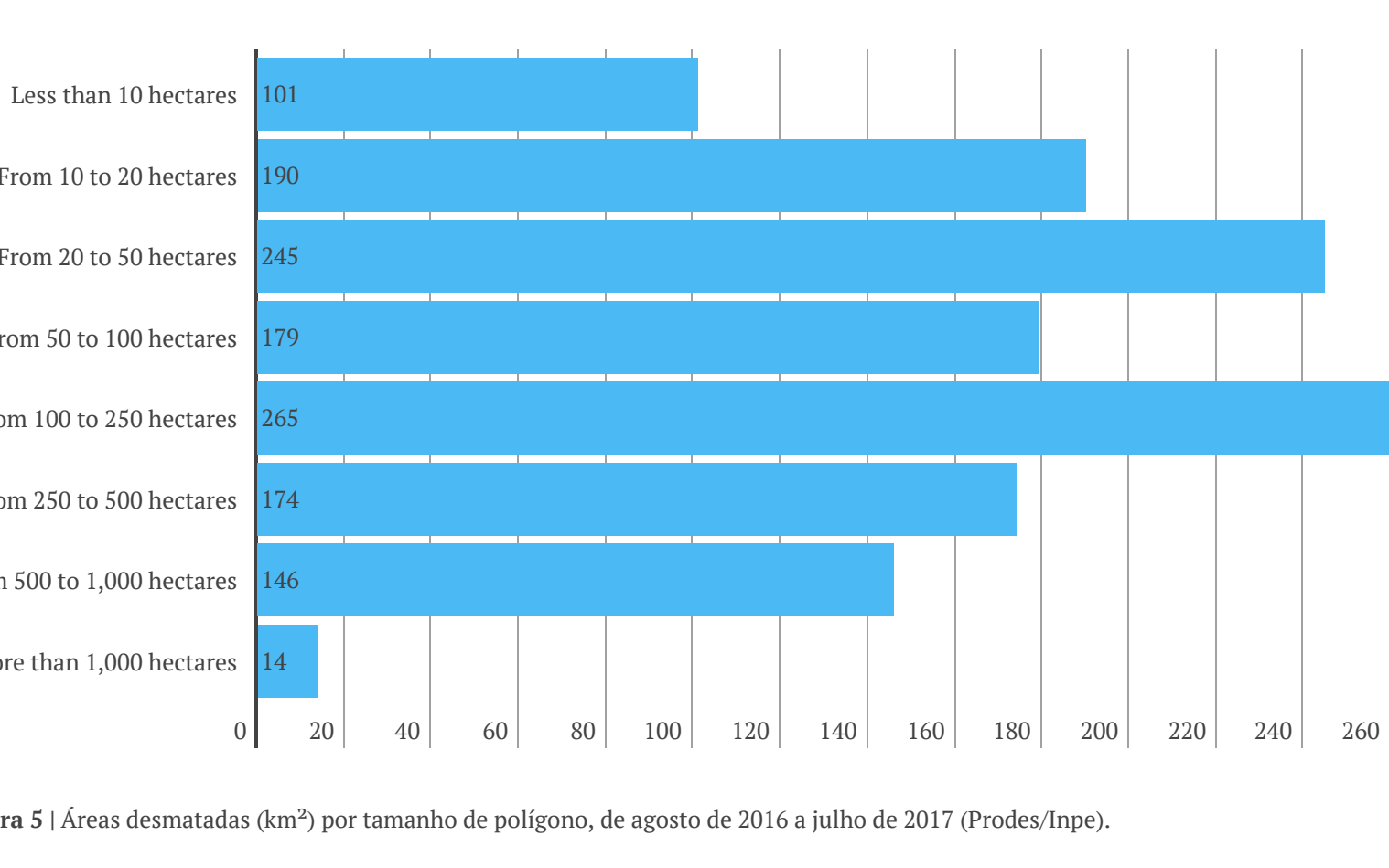


Figure 5 | Áreas desmatadas (km²) por tamanho de polígono, de agosto de 2016 a julho de 2017 (Prodes/Inpe).

Prodes detection has shown an increase in the size of deforested areas. In 2017, polygons larger than 50 hectares accounted for 56% of deforestation (Figure 5). Deforestation areas larger than 100 hectares increased by 37% between 2016 and 2017.

Analysis by land category showed that 47.5% (623 km²) of deforestation occurred in deforested rural properties registered in the National System of Rural Environmental Registry (Sicar). Another 463 km² of deforestation occurred in areas with an unknown land category (Figure 6). The agrarian reform settlements projects, in turn, account for 15.4% of the deforested area, which means a 20% reduction in relation to the previous year.

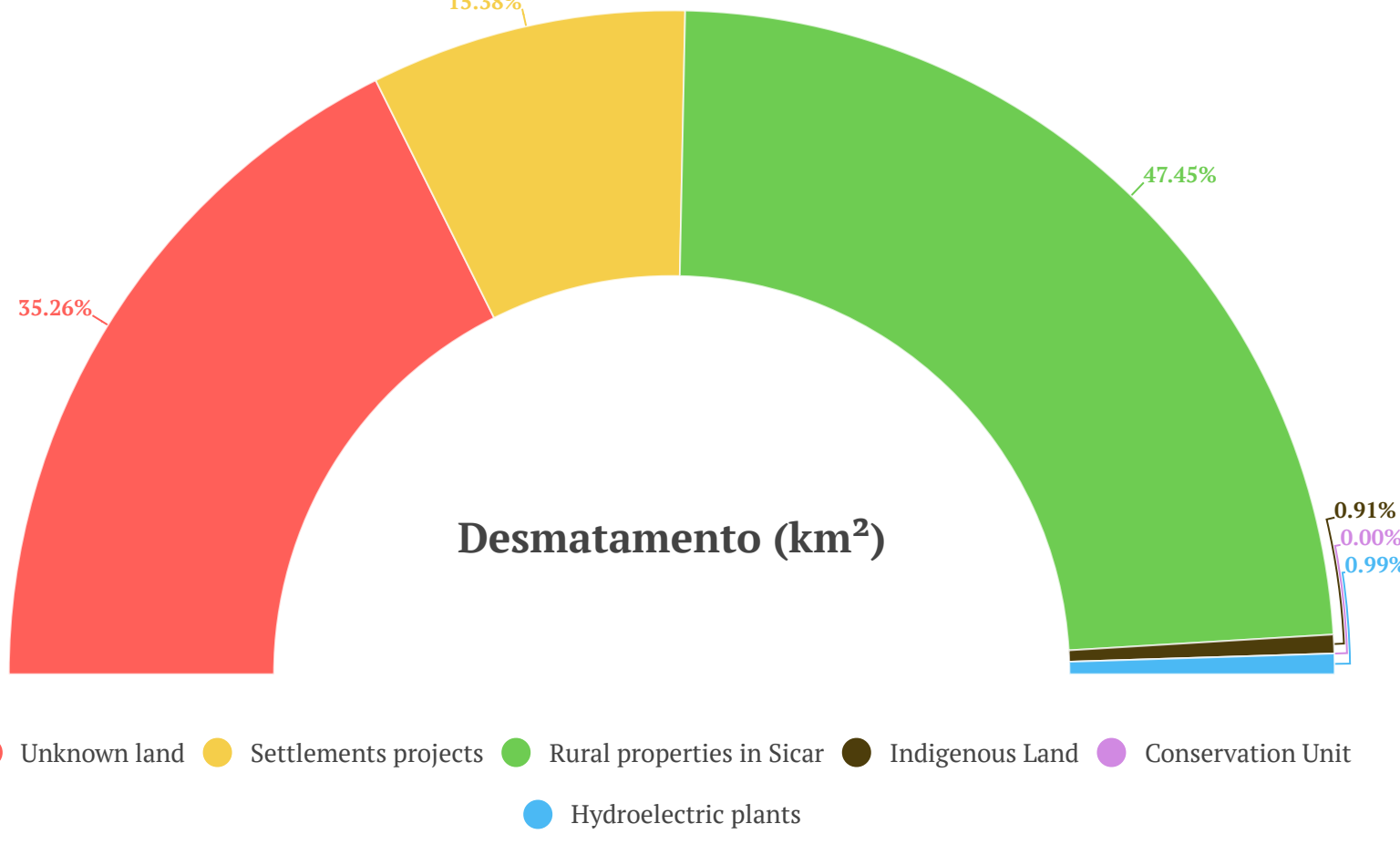


Figure 6 | Deforested areas (km²) by land category, from August 2016 to July 2017 (Prodes / Inpe).

Of the deforested areas on private properties, 58% occurred in properties with areas greater than 1,500 hectares. Of these, 86% of the polygons were larger than 100 hectares (Table 1). Thus, it can be observed that 26% of the total deforestation was related to the areas of more than 100 hectares on large properties.

1/4 of the deforested areas are of more than 100 hectares in size and occur on large private properties

Size	Less than 10 ha	From 10 to 20 ha	From 20 to 50 ha	From 50 to 100 ha	From 100 to 500 ha	More than 500 ha	Total
Less than 400 hectares	2,254	1,826	2,493	2,253	2,057	0	10,883
From 400 to 1,500 hectares	808	924	2,076	2,451	11,677	684	18,620
More than 1,500 hectares	548	809	1,690	2,565	11,945	22,541	40,098
Total	3,610	3,560	6,259	7,269	25,679	23,225	69,601

Table 1 | Deforested areas (hectares) on private rural properties registered according to the size of the property and the deforestation polygons, from August 2016 to July 2017 (Prodes / Inpe).

Data collected from the State Secretariat for the Environment (Sema) show the increase in enforcement efforts in recent years. Between 2013 and 2016, the number of embargoes applied by the state body increased by about 20 times (Figure 7). However, in 2017, the embargoed area was 82% less than in the previous year³. Of the 815 km² embargoed between 2016 and 2017, only 62 km² were in areas with Prodes 2017 detection.

Ibama enforcement in Mato Grosso maintains higher rates than the state agency. From 2013 to 2017, an annual average of 653 embargoes due to illegal deforestation were drafted, covering a little more than 1 thousand km² per year. In 2017, there was also a significant reduction in the enforcement efforts - 46% less. 12% of the areas with federal embargoes between 2016 and 2017 coincided with deforestation detected by Prodes 2017.

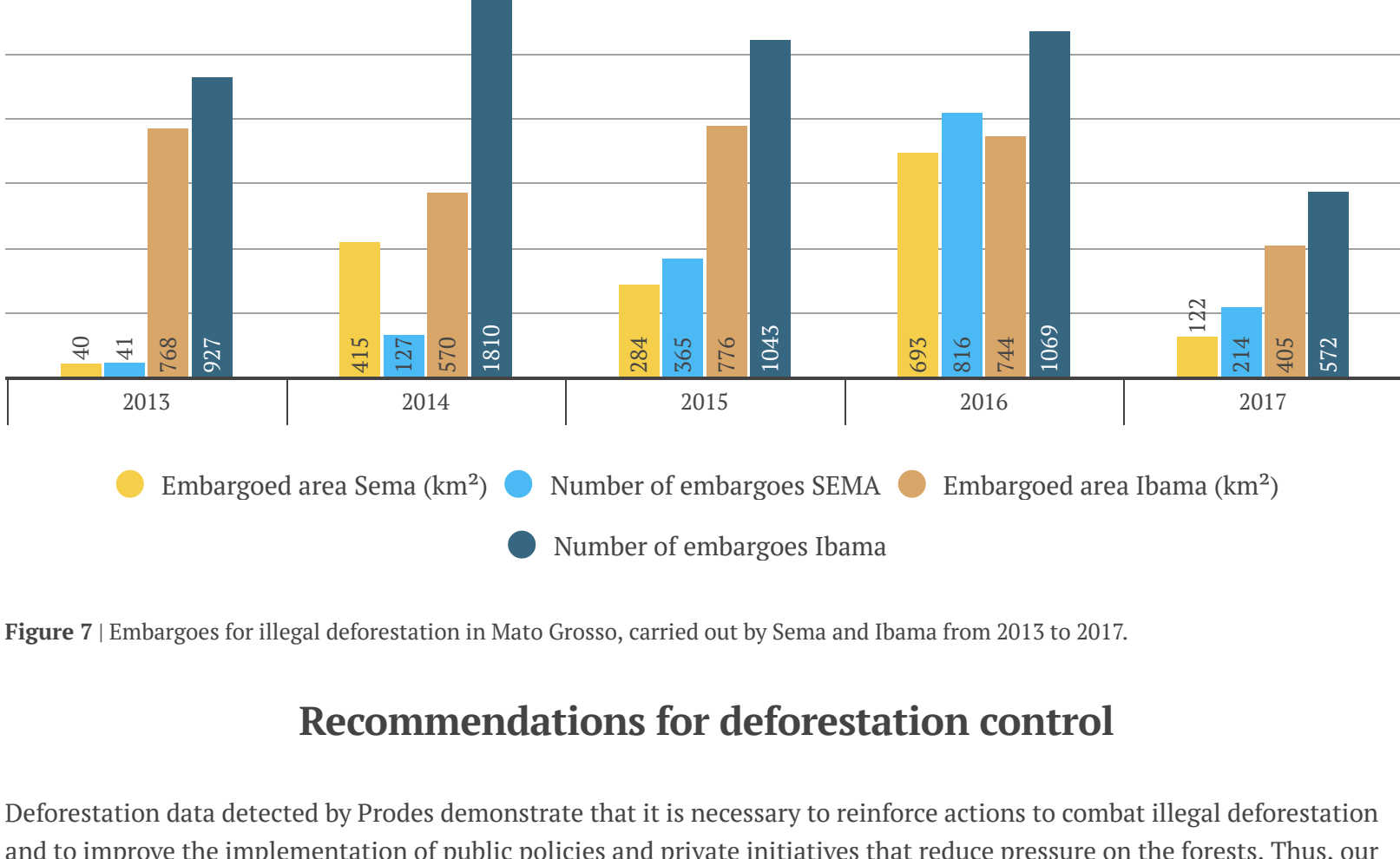


Figure 7 | Embargoes for illegal deforestation in Mato Grosso, carried out by Sema and Ibama from 2013 to 2017.

Recommendations for deforestation control

Deforestation data detected by Prodes demonstrate that it is necessary to reinforce actions to combat illegal deforestation and to improve the implementation of public policies and private initiatives that reduce pressure on the forests. Thus, our recommendations are:

- 1. Intensify monitoring and enforcement action:** a significant part of the deforestation occurs in private properties and in polygons over 100 ha. Remote assessment action can help the state government act in a more agile way in the identification and accountability of the offenders. In addition, the implementation of an Environmental Operations Center in the Northwest may be decisive in the fight against almost 1/3 of the deforestation in the state.
- 2. Implement the Forest Code:** make progress in registration analysis and environmental regularization of rural properties, with incentives for the recovery of areas and forest maintenance and bringing to account those who carried out illegal deforestation.
- 3. Provide environmental information:** Transparency of CAR data, licensing, authorizations and monitoring is essential for society, public agencies and the private sector to monitor the actions of violators, as well as monitoring the actions of public authorities so as to increase environmental control.

¹ The analyses were made using Prodes deforestation polygons registered in Mato Grosso, obtained directly from the Inpe website. According to this database, the state was responsible for 1,314 km² in 2017. The official rate reported by Prodes is 1,341 km². This difference occurs because Inpe adds up the deforested areas of previous years that were covered by clouds when the mapping was carried out.

² Sema's deforestation permit data for the year 2017 refer to the months from January to September.

³ The embargo data issued by Sema for the year 2017 refer to the months of January to September. The Ibama data, for the year 2017, refer to embargoes from January to October.