

## **NATIVE FOREST AREA**

### **Definition of KPI-2 Indicator:**

Maintenance percentage of native forest area (in hectares) in year t, with respect to year 2012.

Reference year and value: native forest area in 2012 (849,960 ha.).

Latest available value of native forest area: 835,349 ha (2016).

Latest available percentage value of maintenance: 98% (2016).

### **Sustainable Performance Targets (SPT) until 2025:**

Performance Target 2.1: maintain 100% of the native forest area with respect to its value in 2012 (849,960 ha.).

Performance Target 2.2: 103% of the native forest area compared to its value in 2012 (875,459 ha.). That is, to increase the area of native forest by 3% with respect to the reference value.

**Indicator Unit:** percentage (%).

### **Indicator Formula:**

% maintenance of the area of native forest compared to 2012 =

$$\left( \frac{\text{Native Forest Area in year } t}{\text{Native Forest Area in base year, 2012}} \right) * 100$$

For the purposes of calculating the KPI-2 value and comparing it to the values of the performance targets, the result of the formula will be rounded (up or down) to the nearest integer, consistent with the way the numerical targets were expressed in the 2017 NDC.

### **Indicator Variables:**

*Native Forest Area in year t:* Area of native forest in the national territory in year t, measured in hectares from the cartography implemented in t+1.

*Native Forest Area in base year, 2012:* Area of native forest in the national territory in 2012, measured in hectares from the cartography implemented for 2012 (849,960 hectares).

**Indicator Methodology:**

The estimation of the area is made through a Native Forest Cartography prepared by the General Forestry Directorate (DGF) of the MGAP for the corresponding year, applying remote sensing techniques, in line with the relevant provisions of the 2006 Intergovernmental Panel on Climate Change (IPCC) Guidelines for National Greenhouse Gas Inventories (NGHGI) and the 2003 IPCC Good Practice Guidance. For this purpose, the satellite images obtained by Sentinel 2 for the period of interest are classified. From the product obtained (Shapefile), the point value of the polygon area corresponding to the native forest class is determined.

As a final step of the process, a validation of the native forest cover map is carried out, based on the review of a simple stratified sample by class of the segments that contribute to the coverage map. This validation results in an estimation uncertainty for the native forest area defined by a 95% confidence interval, as a margin of accuracy. This allows for greater precision of the results of the native forest area and provides the methodological strength necessary for transparent processes.

**Data Frequency:**

Indicator Estimate: every four years

Estimate of the Native Forest Area: every four years

**Data Collection Process:**

Based on satellite images and using the analysis of spectral responses, a supervised classification is performed, allowing the differentiation of different vegetation cover modalities. For this purpose, a "training sample" is used to develop an algorithm that is used to classify the different vegetation covers at the national level, obtaining a map with the occupied surface of each class.

**Data Sources:**

The data used for this indicator comes from the official native forest cartographies available at the national level. In the case of the latest available value, it corresponds to the Native Forest Cartography of the year 2016, developed by the DGF and which was prepared by the technical team of the REDD+ Project (MA – MGAP).

**Responsible Party for the Indicator's Estimate/Development:** DGF and OPYPA-MGAP.

**Comments:**

- Given the advances in the methodological adjustment developed in the last cartography of 2016, the accuracy margin obtained, defined within a confidence interval, is within the conventional limits established for cartographies based on satellite images. From the most recent cartography, the latest estimate of the native forest area is 835,349 ha. Given that the difference with respect to the 2012 estimate (849,960 ha) falls within the accuracy margin of the 2016 estimate (+/- 6%), for the sole purpose of assessing the evolution of the indicator under the 2017 NDC, it is considered that, statistically, as of 2016 100% of the 2012 native forest area had been maintained.

- Beginning in 2022, Uruguay is considering a process of generating native forest cartography on a regular basis, every four years, which will provide information on native forest area on a regular basis and with a uniform and comparable methodology over time.