

APRIL
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RESTORING THE CAATINGA IN AGRARIAN REFORM SETTLEMENTS: more vegetation, food and jobs in Pernambuco

With 83% of its territory covered by the Caatinga¹, Pernambuco is vulnerable to the risk of desertification in Brazil's semi-arid region and, consequently, faces threats to water availability and food production. The state is also home to important remnants of the Atlantic Forest, a biodiversity hotspot — a region with a high diversity of species, many of them endemic, that is under intense threat of destruction.

In a new study in its series on the benefits of productive restoration of deforested areas, Instituto Escolhas shows that, in agrarian reform settlements in Pernambuco, implementing agroforestry systems (AFSs) in permanent preservation areas (PPAs)² can help address these challenges.

Restoring PPAs through agroforestry systems helps protect water resources, as most of the areas suitable for restoration are located around water sources. At the same time, it enables the diversified production of healthy food, including a variety of fruits and vegetables, while creating jobs and income for settlement residents and restoring native vegetation.

PPAs IN AGRARIAN REFORM SETTLEMENTS IN PERNAMBUCO

A TOTAL OF

602

SETTLEMENTS³

HOUSING

33,051

FAMILIES.

THE AREA OF THESE
SETTLEMENTS COMPRISES

574,560

(5.9% OF
THE TOTAL AREA
OF THE STATE), WITH

36,324

HECTARES BEING PPAs.

57%

OF THE
PPAs ARE
DEFORESTED

(20,745 HECTARES)
AND CAN BE
RESTORED THROUGH
PRODUCTIVE
USE, THROUGH
AGROFORESTRY
SYSTEMS (AFS).

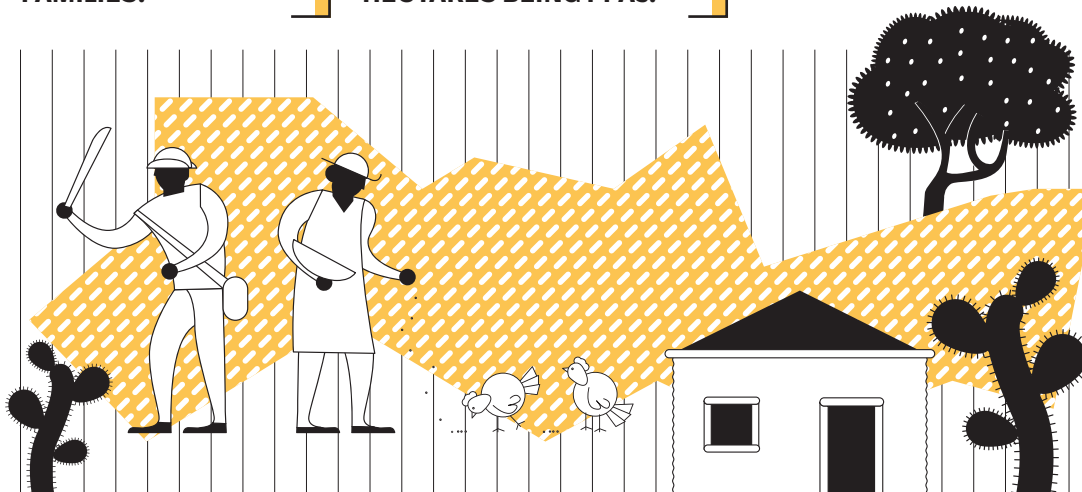
THE TOTAL VEGETATION
DEFICIT IN PPAs INCLUDES

OF CAATINGA

52.6%

47.4%

OF ATLANTIC
FOREST



RESTORING
THESE AREAS
THROUGH
AFs HAS THE
POTENTIAL TO:

Generate

**91.3
THOUSAND
JOBS**



Remove

**2.1
MILLION**

tons of CO₂ from the
atmosphere, equivalent
to **8%** of gross GGE
emissions of the state of
Pernambuco in 2023⁴.



Produce

**5.51
MILLION**

tons of food.



PRODUCTIVE
RESTORATION OF 20.7
THOUSAND HECTARES
OF PPAs

USD 1.04 BILLION
NET REVENUE
(**3.1 X** THE AMOUNT
INVESTED)

USD 87.15 MILLION
IS THE INVESTMENT
REQUIRED IN THE
FIRST **3** YEARS

USD 339 MILLION
IS THE TOTAL
INVESTMENT NEEDED
DURING THE **30**
YEARS OF THE
PROJECT

1. According to data from the Brazilian Institute of Geography and Statistics (IBGE). Available at: <https://brasilensintese.ibge.gov.br/territorio.html> 2. The Forest Code (Law 12.651/2012) allows the restoration of PPAs using agroforestry systems combined with natural regeneration on small properties, including agrarian reform settlements. In this study, the minimum buffer widths required by Article 4 of the Forest Code were adopted to delineate and analyze land cover in riparian PPAs, even when these exceeded the minimum widths required for mandatory vegetation restoration in consolidated areas, as set provided in Article 61-A. (the "staircase rule"). 3. According to a survey based on data from the National Institute for Colonization and Agrarian Reform (INCRA, 2023), the sample includes 567 federal settlements, 32 state settlements, one Sustainable Development Project, one Integrated Colonization Project and one Extractive Reserve. 4. According to the System for Estimating Emissions and Removals of Greenhouse Gases (SEEG), the state of Pernambuco released 26.6 million tCO₂ in 2023. Available at: https://plataforma.seeg.eco.br/?_gl=1*170zukt*_ga*MjI2MjQ2NTcuMTc0MjU2MDg0OA..._ga_XZWSWEJDWQ*MTc0NDZzNzQ4NS4zLjAuMTc0NDZzNzQ4NS4wLjAuMA.

TECHNICAL EXECUTION

REALIZATION

