Action Plan for the Prevention and Control of Deforestation in the Legal Amazon (PPCDAm)

Fifth phase (2023-2027)

Anavilhanas National Park - Photo: ICMBio

GOVERNO FEDERAL

BRASIL

UNIÃO E RECONSTRUÇÃO

Dados Internacionais de Catalogação na Publicação - CIP

B823p Brasil. Ministério do Meio Ambiente e Mudança do Clima.
Plano de Ação para a Prevenção e Controle do Desmatamento na Amazônia Legal (PPCDAm) : 5ª fase (2023 a 2027) [recurso eletrônico] / Subcomissão Executiva do PPCDAm. Brasília, DF: MMA, 2023.
119 p. : il. ; color.

Modo de acesso: World Wide Web
ISBN 978-65-88265-34-5
(on-line)

1. Plano de ação. 2. Desmatamento. 3. Amazônia Legal. I. Ministério do Meio Ambiente. Subcomissão Executiva do PPCDAm. II. Título.
CDU 2.ed. 630.4(811)

Biblioteca Nacional do Meio Ambiente
Ana Lúcia C. Alves CRB1/2017

LUIZ INÁCIO LULA DA SILVA
President of the Republic

GERALDO ALCKMIN
Vice-President of the Republic and Minister of Development, Industry, Trade and Services – MDIC

RUI COSTA
Chief of Staff of the Presidency of the Republic – CCPR

MARINA SILVA
Minister of the Environment and Climate Change - MMA

GERALDO ALCKMIN
Vice-President of the Republic and Minister of Development, Industry, Trade and Services – MDIC

CARLOS FÁVARO
Minister of Agriculture and Livestock – Mapa

LUCIANA SANTOS
Minister of Science, Technology, and Innovation – MCTI

FLÁVIO DINO
Minister of Justice and Public Security – MJSP

WALDEZ GÓES
Minister of Integration and Regional Development – MIDR

MAURO VIEIRA
Minister of Foreign Affairs – MRE

JOSÉ MÚCIO MONTEIRO
Minister of Defense – MD

FERNANDO HADDAD
Minister of Finance – MF

SIMONE TEBET
Minister of Planning and Budget – MPO

ALEXANDRE SILVEIRA
Minister of Mines and Energy – MME

PAULO TEIXEIRA
Minister of Agrarian Development and Family Farming – MDA

ANDRÉ DE PAULA
Minister of Fishing and Aquaculture – MPA

MARCOS ANTONIO AMARO DOS SANTOS
Minister of Institutional Security of the Presidency of the Republic – GSIPR

LUIZ MARINHO
Minister of Labor and Employment – MTE

ESTHER DWECK
Minister of Management and Innovation in Public Services – MGI

RENAN FILHO
Minister of Transportation – MT

SÔNIA GUAJAJARA
Minister of Indigenous Peoples – MPI

EXECUTIVE SUBCOMMITTEE OF THE PPCDAm

Ministry of the Environment and Climate Change – MMA
Representative: André Rodolfo Lima
Alternate Representative: Raoni Guerra Lucas Rajão

Office of the Chief of Staff of the Presidency of the Republic – CCPR
Representative: Gabriel Henrique Luiz
Alternate Representative: Karen de Oliveira Silverwood-Cope

Ministry of Agriculture and Livestock – Mapa
Representative: Renata Bueno Miranda
Alternate Representative: Pedro Alves Corrêa Neto

Ministry of Science, Technology, and Innovation – MCTI
Representative: Luiz Henrique Mourão do Canto Pereira
Alternate Representative: Claudia Morosi Czarneski

Ministry of Defense – MD
Representative: Paulo André Santos Silva
Alternate Representative: Christiano Pereira Haag

Ministry of Justice and Public Security – MJSP
Representative: Marcelo Salvio Rezende Vieira
Alternate Representative: Renato Madsen Arruda

Ministry of Agrarian Development and Family Farming – MDA
Representative: Moises Savian
Alternate Representative: Shirley Anny Abreu do Nascimento

Ministry of Development, Industry, Trade and Services – MDIC
Representative: Manuela Kirschner do Amaral
Alternate Representative: Ana Heloísa Viana Silva Moreno

Ministry of Integration and Regional Development – MIDR
Representative: Vitarque Lucas Paes Coelho
Alternate Representative: Simone Leite Noronha Martins

Institutional Security Office of the Presidency of the Republic – GSIPR
Representative: Luís Antônio Correia Lima
Alternate Representative: Régis Rodrigues Nunes

Ministry of Planning and Budget – MPO
Representative: Luís Fernando Magnani de Oliveira
Alternate Representative: José Eduardo Gonçalves

Ministry of Finance – MF
Representative: Matias Rebello Cardomingo
Alternate Representative: Ricardo José Macedo dos Santos

Ministry of Indigenous Peoples – MPI
Representative: Suliete Gervasio Monteiro
Alternate Representative: Leosmar Antônio

Ministries and Guest Institutions of the PPCDAm Executive Subcommittee
Ministry of Mines and Energy – MME

Ministry of Labor and Employment – MT

Ministry of Management and Innovation in Public Services – MGI

Ministry of Tourism – MTUR

Ministry of Education – MEC

National Agency of Technical Assistance and Rural Extension – Anater

National Mining Agency – ANM

Brazilian Intelligence Agency – Abin

Central Bank of Brazil – BCB

Brazilian Development Bank – BNDES

Amazon Protection System Management and Operational Center – Censipam

Brazilian Agricultural Research Corporation – Embrapa

National Public Security Force – FNSP

National Indigenous Foundation – Funai

National Institute for Space Research – Inpe

Brazilian Institute of Environment and Renewable Natural Resources – Ibama

Brazilian Institute of Tourism – Embratur

Chico Mendes Institute of Biodiversity Conservation – ICMBio

National Institute of Colonization and Agrarian Reform – Incra

Federal Police – PF

Federal Highway Police – PRF

Brazilian Revenue Service – RFB

Executive Coordination

Miriam Belchior – Deputy Chief of Staff of the Presidency of the Republic (CCPR)

João Paulo Capobianco – Deputy Minister of the Environment and Climate Change (MMA)

André Rodolfo Lima – Extraordinary Secretary for Deforestation Control and Territorial Environmental Planning (SECD/MMA)

Technical Coordination of the Office of the Chief of Staff of the Presidency of the Republic (CCPR)

Gabriel Henrique Lui – Deputy Secretary of Environment, Climate, Agriculture, and Foreign Affairs of the Department of CCPR Special Coordination and Monitoring

Karen de Oliveira Silverwood-Cope – Advisor of the Special Department CCPR Governmental Analysis

Technical Coordination of the Ministry of Environment and Climate Change (MMA)

Raoni Guerra Lucas Rajão – Director of the Department of Policies to Control Deforestation and Forest Fires (DPCD/SECD/MMA)

Márcia Catarina David – General Coordinator of REDD+ and Economic Instruments (DPCD/ SECD/MMA)

Renê Luiz de Oliveira – General Coordinator for Deforestation Combat (DPCD/SECD/MMA)

Marcelo Mateus Trevisan – Director of the Department of Territorial Environmental Planning (DOT/SECD/MMA)

Bruno Siqueira Abe Saber Miguel – General Coordinator of Economic Ecological Zoning (DOT/ SECD/MMA)

João Paulo Sotero de Vasconcelos – Chief of Staff of SECD/MMA

Technical Staff

Alexandre Santos Avelino (SECD/MMA)

Ana Luísa Teixeira de Campos (SECD/MMA)

Antônio Carlos Martinez Sanches (SECD/MMA)

Daniela Soares Nascimento (SECD/MMA)

Diego Henrique Costa Pereira (SECD/MMA)

Daniel Barbosa da Silva (SECD/MMA)

Felipe Lima Ramos Barbosa (SECD/MMA)

Hugo do Valle Mendes (SECD/MMA)

Jaime Camps Saiz Júnior (SECD/MMA)

Larissa Carolina Loureiro Villarroel (SECD/MMA)

Lívia Marques Borges (CCPR)

Lidiane Rocha de Oliveira Melo (CCPR)

Luiz Felippe Salemi (CCPR)

Luciana Ferrari Maistro (SECD/MMA)

Luciana de Oliveira Rosa Machado (SECD/MMA)

Maurício dos Santos Pompeu (SECD/MMA)

Mônica de Faria Franco Negrão (SECD/MMA)

The English version of this publication was supported by the Project Partnerships for Innovation for Rainforest Protection in the Brazilian Amazon, under a cooperation between the Brazilian Ministry of the Environment and Climate Change, and the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH, with funds provided by the Federal Ministry for Economic Cooperation and Development (BMZ).

List of Acronyms	
ABC	Low Carbon Agriculture
Abin	Brazilian Intelligence Agency
Amas	Amazon: Security and Sovereignty
Arpa	Amazon Protected Areas Program
Ater	Technical Assistance and Rural Extension
ASV	Vegetation Suppression Authorization
BCB	Central Bank of Brazil
BNDES	Brazilian Development Bank
CAR	Rural Environmental Registry
CC/PR	Office of the Chief of Staff of the Presidency of the Republic
Censipam	Amazon Protection System Management and Operational Center
CIMV	Interministerial Committee on Climate Change and Green Growth
CNUC	National Register of Conservation Units
COFA	Amazon Fund Guidance Committee
Conaredd+	National Committee for REDD+
COP	Conference of the Parties
CTFA	Technical Committee of the Amazon Fund
Deter	Real-Time Deforestation Detection System
Detex	Detection of Selective Logging
DOF	Forest Source Document
DOT	Territorial Environmental Planning Department
DPCD	Department of Policies for the Control of Deforestation and Forest Fires
DTVM	Dealership of Bonds and Securities
Embrapa	Brazilian Agricultural Research Corporation
Embratur	Brazilian Institute of Tourism
ENREDD+	Brazilian National Strategy for Reducing Emissions of Greenhouse Gases from Deforestation and Forest Degradation, Forest Carbon Stocking, Sustainable Forest Management and Forest Carbon Stock Enhancement (ENREDD+).
FNDD	National Fund for Diffuse Rights
FNSP	National Public Security Force
FNDCT	National Council for Scientific and Technological Development

List of Acronyms	
FNDF	National Fund for Forestry Development
FNMA	National Environmental Fund
FNO	Constitutional Financing Fund of the North
FNRB	National Benefit Sharing Fund
FPND	Undesignated Public Forests
FREL	Forest Reference Emissions Levels
Funai	National Indigenous Foundation
GCF	Green Climate Fund
GEE	Greenhouse gases
GPTI	Permanent Interministerial Working Group
GSI	Institutional Security Office
GTA	Animal Transit Guide
ICS	Climate and Society Institute
Ibama	Brazilian Institute of Environment and Renewable Natural Resources
ICMBio	Chico Mendes Institute of Biodiversity Conservation
Incra	National Institute of Colonization and Agrarian Reform
Inpe	National Institute of Space Research
MacroZEE	Ecological-Economic Macrozoning
Mapa	Ministry of Agriculture and Livestock
MCTI	Ministry of Science, Technology, and Innovation
MD	Ministry of Defense
MDAF	Ministry of Agrarian Development and Family Farming
MDIC	Ministry of Development, Industry, Trade, and Services
MIDR	Ministry of Integration and Regional Development
MF	Ministry of Finance
MGI	Ministry of Management and Innovation in Public Services
MJSP	Ministry of Justice and Public Security
MMA	Ministry of Environment and Climate Change
MME	Ministry of Mines and Energy
MPA	Ministry of Fishing and Aquaculture
MPI	Ministry of Indigenous Peoples

List of Acronyms	
MPO	Ministry of Planning and Budget
MRE	Ministry of Foreign Affairs
MT	Ministry of Transportation
MTE	Ministry of Labor and Employment
Namas	Nationally Appropriate Mitigation Actions
NDC	Nationally Determined Contribution
PA	Settlement Project
PAA	Food Acquisition Program
PAD	Managed Settlement Project
PAF	Forest Settlement Project
PDRS Xingu	Xingu Regional Sustainable Development Plan
PCT	Traditional Peoples and Communities
PDS	Sustainable Development Project
PEAA	Amazon Now State Plan 2021-2023
PF	Federal Police
PGPM-Bio	Minimum Price Guarantee Policy for Sociobiodiversity Products
PGTA	Environmental Territorial Management Plan
ABC Plan	Low Carbon Agriculture Plan
PMFC	Federal Community and Family Forest Management Program
PNA	National Adaptation Plan
PNAE	National School Feeding Program
PNGATI	National Policy for Territorial and Environmental Management of Indigenous Lands
PNMC	National Policy on Climate Change
PNPSA	National Payment Policy for Environmental Services
PNPSB	National Plan for the Promotion of Sociobiodiversity Production Chains
UNDP	United Nations Development Programme
PPA	Multi-Year Plan
PPCASD-RO	Plan for Prevention, Control and Promotion of Sustainable Alternatives to Deforestation and Burning in the State of Rondônia
PPCDAm	Action Plan for Deforestation Prevention and Control in the Legal Amazon
PPCDAP	Plan for Deforestation, Burning and Forest Fires Prevention and Control in the State of Amapá

List of Acronyms	
PPCDIF-MT	Action Plan for Deforestation and Forest Fires Prevention and Control in the State of Mato Grosso
PPCDIF-TO	Plan for Deforestation and Forest Fires Prevention and Combat of the State of Tocantins
PPCD-MA	Action Plan for Deforestation and Burning Prevention and Control in the State of Maranhão
PPCDQ	State Plans for Deforestation and Burning Prevention and Control
PRA	Environmental Regularization Programs
PRF	Federal Highway Police
Prodes	Satellite Monitoring of Deforestation in the Brazilian Amazon Forest
PRV	Green Recovery Plan
Bolsa Verde Program	Environmental Conservation Support Program
Pronaf	National Program for Strengthening Family Agriculture
PSA	Payment for Environmental Services
REDD+	Reducing greenhouse gas emissions from deforestation and forest degradation, considering the role of conserving forest carbon stocks, sustainably managing forests and increasing forest carbon stocks
RPPN	Private Natural Heritage Reserve
SBF	Department of Biodiversity and Forests
SECD	Extraordinary Department for Deforestation Control and Territorial Environmental Planning
Sicar	National Rural Environmental Registry System
Sinaflor	National System for Controlling the Source of Forest Products
SipamSAR	Integrated Deforestation Alert System
Sisbin	Brazilian Intelligence System
Sisfogo	National Fire Information System
TI	Indigenous land
TAC	Conduct Adjustment Agreement
UC	Nature Conservation Unit
UEPA	State University of Pará
UNFCCC	United Nations Framework Convention on Climate Change
ZEE	Ecological-Economic Zoning

Action Plan for the Prevention and Control of Deforestation in the Legal Amazon (PPCDAm)

Fifth phase (2023-2027)

List of Figures

List of Tables

SUMMARY

1. Executive Summary

Deforestation causes much damage to both society and biodiversity, since it causes intense imbalance of ecosystems. Controlling deforestation and promoting sustainable forest use in a developing country the size of Brazil are complex tasks. It is even less so in the Legal Amazon, which corresponds to about 60% of the national territory[1], has several ethnic groups of indigenous populations with extensive traditional knowledge and in-depth balanced and sustainable use of the biome, in addition to being an environmental heritage with economic potential not yet well known and exploited. Brazil, under the new administration, is seeking to regain international leadership in climate change mitigation and control of deforestation. To this end, on January 1, 2023, Decree 11367 established the Permanent Interministerial Commission for Deforestation Prevention and Control, a joint commission under the Office of the Chief of Staff of the Presidency of the Republic (CC/PR), responsible for defining and coordinating actions from several ministries to reduce deforestation rates in the national territory, in which the Ministry of Environment and Climate Change (MMA) acts as steering office. The Decree also instituted the Executive Subcommittee responsible for the Action Plan for Deforestation Prevention and Control in the Legal Amazon (PPCDAm), composed of 13 ministries and coordinated by the MMA.

This is the context surrounding the fifth phase of the PPCDAm (2023-2027), which consolidates the guidelines defined by the Environment Technical Group of the 2022 Presidential Transition Team and the contributions of the different ministries that are part of the Interministerial Commission and the Executive Subcommittee of the PPCDAm. It was drawn from the experience accumulated by the federal administration in the previous four phases and the success achieved in reducing deforestation by 83% between 2004 and 2012, according to data from the Prodes system of the National Institute for Space Research (Inpe). The development of the plan also benefited from dialogue with civil society and academia during the 10th Technical-Scientific Seminar on Data Analysis of Deforestation in the Legal Amazon, the public consultation process and regular meetings with representatives of the states of the Legal Amazon and members of organized civil society.

1 https://www.ibge.gov.br/geociencias/informacoes-ambientais/vegetacao/15819-amazonia-legal.html?=&t=o-que-e

This Action Plan has been structured in four parts, in addition to this executive summary. The first part presents the political and institutional context, the legal basis and governance that demonstrates the institutional framework in place for the implementation and monitoring of the Plan's actions, with emphasis on resuming the civil society involvement and the innovations introduced in this new phase. The second part introduces a brief account of Brazilian public policy for deforestation prevention and control in the Amazon, highlighting the results obtained in the four phases of the PPCDAm (2004-2020) and the activities carried out by the states of the Legal Amazon. The third part briefly describes the recent dynamics of deforestation in the Amazon, focusing on the transformations in the region since 2004. Finally, the structure of the plan is presented, divided into four main thematic areas: i) sustainable production activities; ii) environmental monitoring and control; iii) land and territorial planning; and iv) rules and economic instruments, aimed at reducing deforestation and implementing the measures addressed by the other areas. Also, as an integral part of this Action Plan, included after the public consultation phase, we have the Targets and Indicators Framework, which details and specifies, based on expected results, the targets, indicators, baselines, deadlines and key actors, for monitoring and evaluation.

Aerial view of the Pirititi Indigenous Land. Photo: Felipe Werneck

2. POLITICAL AND INSTITUTIONAL CONTEXT OF THE FIFTH PHASE OF PPCDAm (2023-2027)

2.1. Environmental commitments

The fifth phase of the PPCDAm implementation takes place in a context where tackling climate change is gaining the spotlight in Brazil and around the world. In 2009, during the Conference of the Parties to the United Nations Framework Convention on Climate Change (COP-15) in Copenhagen/Denmark, Brazil presented a set of Nationally Appropriate Mitigation Actions (Namas) to reduce the country's greenhouse gas emissions. To fulfill this commitment, the National Policy on Climate Change (PNMC) was established by Law 12187, 29 December 2009, with a voluntary commitment to mitigate greenhouse gas emissions of 36.1% to 38.9% reduction of projected emissions by 2020. Moreover, it is relevant to highlight the development of national mitigation plans for various sectors, such as electricity generation and distribution, urban public transportation, industry, health services, and agriculture. The most relevant targets of the PNMC include an 80% reduction of deforestation in the Amazon by 2020 compared to the average of 1996-2005, which would correspond to 3,925 km^2.

With the adoption of the Paris Agreement at COP 21 in 2015, the commitments of Brazil and other signatory countries became solidified in the form of a Nationally Determined Contribution (NDC). In its NDC, Brazil proposed to achieve a 37% reduction in greenhouse gas emissions in 2025 compared to 2005 levels, and an even more ambitious target for 2030. Therefore, reducing deforestation is fundamental for resuming the path of lowering greenhouse gas emissions and complying with international commitments.

In 2023, the new federal administration proposed a new pledge to reduce the loss of native vegetation in the Amazon and achieve zero deforestation by 2030. Under the PPCDAm, zero deforestation is defined as the elimination of illegal deforestation and compensation for legal suppression of native vegetation and related greenhouse gas emissions, by strengthening the implementation of forestry legislation and the recovery and increase of the stock of native vegetation through economic incentives for conservation and sustainable forest management.

2.2. Governance of the Fifth Phase of the PPCDAm

Considering that Brazil is the fifth largest emitter of greenhouse gases[2], and that, at the same time, due to the great diversity of animal and plant species, it tops the group of megadiverse countries, it is vital that Brazil restores its privileged place in the global discussion on socio-environmental and climate issues to regain the confidence of the international community and national economic and social agents. The federal administration is committed to promoting the restoration of the environmental agenda as fundamental for the implementation of development policies in a transversal and participatory manner. Considering the increasing deforestation rates over the last four years, the federal administration established, through Decree 11367, 1 January 2023, the Permanent Interministerial Commission for Deforestation Prevention and Control and reinstated the Action Plan for Deforestation Prevention and Control in the Amazon (PPCDAm), which is entering its fifth phase.

The PPCDAm is one of the key instruments for implementing the PNMC, with a focus on mitigating greenhouse gas (GHG) emissions related to land use, land use change and forests. The Plan also contributes to the implementation of the Brazilian National Strategy for Reducing Emissions of Greenhouse Gases from Deforestation and Forest Degradation, and the role of conservation, sustainable forest management and enhancement of forest carbon stocks (ENREDD+). It also establishes the basis for the implementation of the National Integrated Fire Management Policy, which is currently being discussed in the National Congress. The fifth phase of the PPCDAm will be implemented in five years (between 2023 and 2027), one year longer than the previous phases, to synchronize its activities with the execution of the Multi-Year Plan (PPA, acronym in Portuguese). The PPA is the main medium-term budget planning instrument of the federal administration and will be implemented from 2024 to 2027. The main goal of the fifth phase of the PPCDAm is to establish solid foundations for achieving zero deforestation by 2030.

Institutional arrangement and governance model

The governance model of the fifth Phase of the PPCDAm repeats, to a certain extent, the model established in the previous phases and encompasses three spheres of coordination: ministerial, managerial and mechanisms/instruments of transparency and social participation (Figure 1).

In the ministerial coordination, the Permanent Interministerial Commission for Deforestation Prevention and Control, created by Decree 11367/2023, is the deliberative and decision-making forum and proposes strategic measures for the new Action Plans. The Interministerial Commission includes representatives from 17 other ministries, with the CC/PR as its chair, and MMA as its steering office.

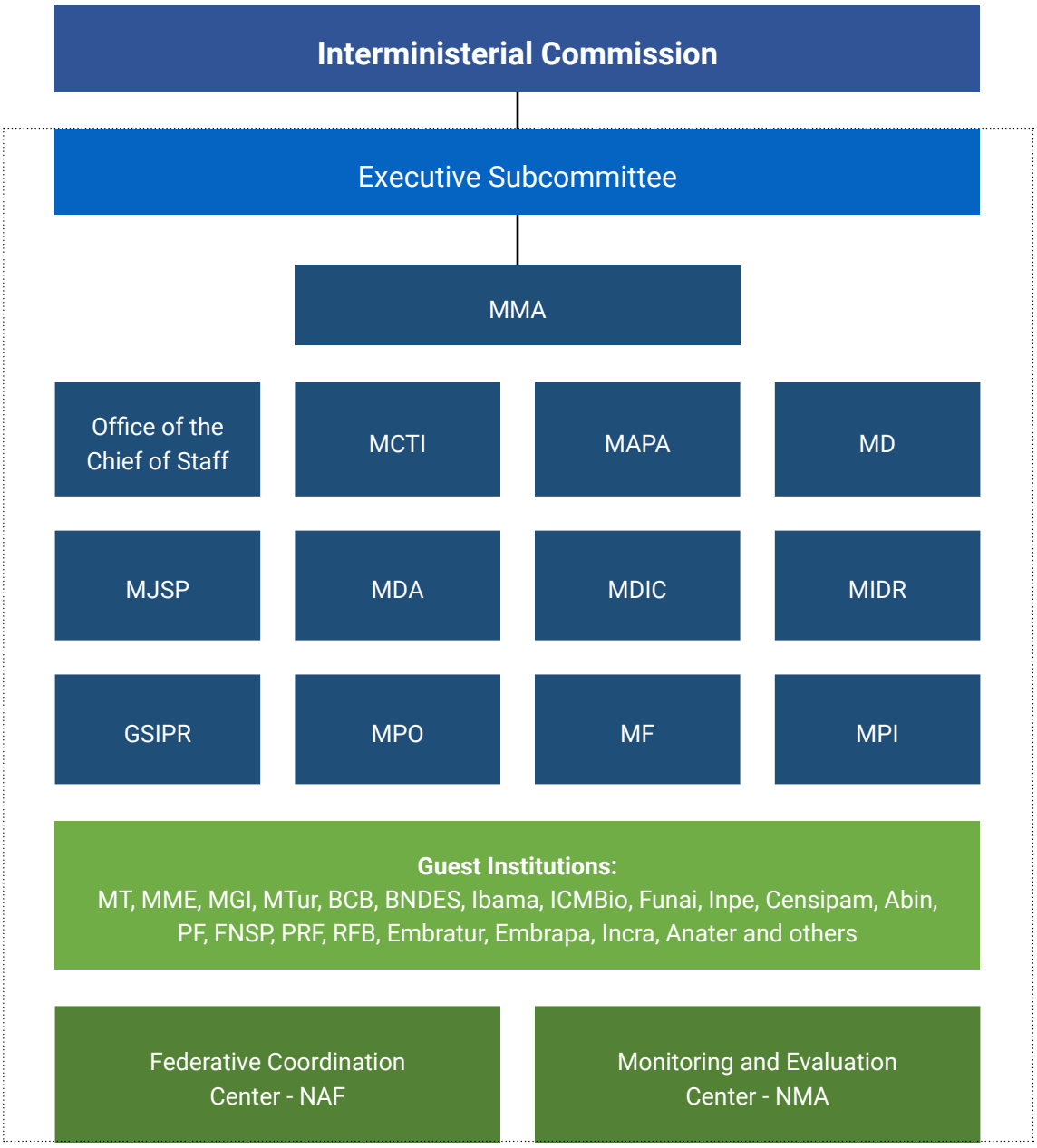
The responsibilities assigned to the Interministerial Commission include the definition and coordination of actions to reduce deforestation rates throughout the national territory, the evaluation, approval and monitoring of the implementation of the Action Plans for Deforestation Prevention and Control (both for the Amazon and for all Brazilian biomes), and the establishment of measures to overcome any difficulties in their implementation. The Interministerial Commission is also responsible for ensuring that the actions elaborated in the Plans promote the development

2 Data related to 2016 emissions available for Brazil at http://sirene.mctic.gov.br and other countries at https://www.climatewatchdata.org/ .

and integration of environmental protection systems and contribute to the conservation of biodiversity and the reduction of GHG emissions from deforestation, forest degradation and fires. For this reason, it is also the role of the Interministerial Commission to monitor the elaboration and implementation of public policies that affect the Action Plans, through coordinated actions with the states, the Federal District, and Municipalities.

In addition to the political-strategic scope represented by the Interministerial Commission, Decree 11367;2023 also provided for a second level of governance, which is the Executive Subcommittee of the PPCDAm, composed of representatives from 13 ministries under the coordination of the MMA. Its task is to prepare the Action Plans for Deforestation Prevention and Control and submit them to the Interministerial Commission for approval.

Figure1. PPCDAm governance framework



The Executive Subcommittee also serves as a forum for technical discussions among the ministries and agencies invited and aims to analyze in depth the characteristics, challenges and opportunities of each thematic axis of the PPCDAm to generate input and define the goals, expected results, activities, targets and indicators that will be part of the Plan. The Executive Subcommittee is another instance for dialogue between federal institutions with other stakeholders related to specific outcomes. To enable the integrated implementation of the PPCDAm with the states, the Federative Coordination Center (NAF) will be established, with regular meetings between the MMA and the state departments of the environment.

Finally, the scope of transparency and social participation was designed to disclose and give transparency to the actions of the Plan as well as expand and strengthen the channels of participation of the states, private sector and organized civil society in order to expand partnerships and unite efforts to reduce deforestation. Decree 11367/2023 provides for instruments of social participation such as public consultation, technical-scientific seminars and the preparation of annual follow-up and monitoring reports on the implementation of actions, to be released and shared with the public and within the government. The Technical-Scientific Seminar annually brings together technical experts from governmental and non-governmental institutions, scientists and researchers involved with the problem of deforestation to discuss the dynamics of deforestation, its causes and possible forms of prevention and control. The Seminar enables the exchange of knowledge and in-depth debate on methodologies and monitoring and alternatives for their effective control. The Seminar also allows for the analysis of intraregional social and economic dynamics to anticipate the planning of preventive actions against the emergence of new deforestation frontiers in the Amazon.

This proposal for the fifth Phase of the PPCDAm built on the analysis of the plans and evaluations of the previous phases and the reports of the presidential transition working groups in the areas of environment, agriculture, justice, and indigenous peoples. Moreover, the 10th Technical-Scientific Seminar on Deforestation Data Analysis in the Legal Amazon was held on March 2 and 3, 2023, in Brasilia, relaunching the dialogue on the subject with civil society and academia. The Seminar held 22 presentations by experts from seven federal agencies, two research centers, two universities, and seven non-governmental organizations. Based on the documents listed and the data presented, the team of the Extraordinary Department for Deforestation Control and Territorial Environmental Planning (SECD/MMA) presented to the members and guests of the Executive Subcommittee of the PPCDAm a diagnosis of deforestation and an initial proposal of goals, expected results and actions to be discussed by the group. These goals, expected results and actions were discussed in six in-person meetings with the members of the Executive Subcommittee of the PPCDAm and invited institutions as well as two dozen bilateral meetings under the coordination of the MMA and the CC/PR. Four meetings were also held with the State Secretaries of the Environment of the Legal Amazon and with the President of the Interstate Consortium for Sustainable Development of the Legal Amazon.

From April 10 to 26, the draft plan (preliminary version) was submitted to public consultation and received more than 500 contributions from citizens, public and private institutions, including universities, research centers, representatives from producers and civil society organizations. Many of these valuable contributions and suggestions were incorporated into the Plan, thereby representing the views of civil society and allowing further discussions in searching for the best solutions to the Amazon's deforestation problem. Several studies, analyses and scientific publications presented during the public consultation will also support the plan implementation

process and its annual update. In summary, the new PPCDAm is the result of a collective effort to re-establish the transversality of environmental policies across the different sectors of the federal and state administrations, and the civil society.

Under the provisions of Article 11 of Decree 11367/2023, an annual monitoring report of the plan must be published with information on the implementation of the courses of action for each member and invited institution of the Executive Subcommittee. To this end, the Monitoring and Evaluation Center (NMA) will be established, which will be coordinated by the MMA and will include the participation of civil society and academia. The NMA may also propose adjustments to targets and indicators to improve the measurement of the effectiveness of the Plan's actions.

In addition, to maintain a constant and effective dialogue with the states and municipalities of the Legal Amazon, the plan establishes the Federative Coordination Center (NAF), which will serve as a forum for sharing information, identifying any difficulties and opportunities for joint action involving federal, state and municipal authorities.

Both centers will generate input for future reviews as provided for in Article 2 of Decree 11367/2023, to establish a routine for generating information that enables the continued improvement of the Plan.

Aerial view of the Amazon. Photo: Felipe Werneck

3. POLICIES FOR DEFORESTATION CONTROL IN THE AMAZON

3.1. Policies of the federal administration for deforestation control in the Amazon

Since the late 1980s, deforestation in the Amazon has become a major issue in terms of public policy across different administrations. In 1990, in response to alarming numbers, the federal administration, in partnership with the international community, established the Pilot Program to Conserve the Brazilian Rain Forest (PPG7), focusing on deforestation prevention and control in the Amazon rainforest and the Atlantic Forest.

Despite the important initiatives, deforestation rates responded more directly to the economic and political context than to specific governmental actions. In this regard, Reis and Guzman (2015) indicated that the rate of deforestation in the late 1980s and early 1990s was more directly linked to population increase, cattle herd expansion, proximity to paved roads and municipal agricultural production.

Similarly, it is also true that political crises and presidential elections with more significant changes in the federal administration can lead to major increases in deforestation in the Amazon, as in 1993 (after the lowest rate observed so far, in 1990) and the historical record in 1995. In response to the increase in deforestation, the Brazilian government issued Provisional Measure 1511 on 25 July 1996, which amended Federal Law 4771/1965 (the Brazilian Forest Code) to prohibit deforestation of at least 80% of the existing forest on rural private properties.

The early 2000s were no different. The announcement of the construction and paving of highways in the Amazon through the Avança Brasil plan stimulated population migration and, with it, increased occupation in areas of native forest (COSTA et al., 2019). Another significant aspect of this period is that actions directed to deforestation control practically fell under the responsibility of the MMA, with the Brazilian Institute of Environment and Renewable Natural Resources (Ibama) as the executing agency. With a new administration in 2003, deforestation reached 27,000 km^2, the second highest in the historical series.

To provide a structural response to deforestation in the Amazon, the first phase of the PPCDAm was launched in 2004. One of the major innovations of the PPCDAm compared with previous plans was its transversal approach (GRAF, 2005), represented in the establishment of the Permanent Interministerial Working Group (GPTI) under the coordination of the CC/PR and 11 other ministries and the greater involvement of non-governmental organizations and researchers.

As such, the coordination of the PPCDAm by the core of the Executive Branch ensured greater alignment of sectorial agencies with the plan's objectives. In particular, these efforts include: the authorization of competitive civil-service examinations for admission of environmental analysts; the increase in funding to Ibama and Inpe for the development of a new monitoring system; the coordination with other ministries for the allocation of areas for the creation of conservation units (UCs) and recognition of indigenous lands (TIs); and the integrated strategic action of environmental and public security agencies, led by the Federal Police and the Federal Highway Police, which were responsible for dozens of operations that were successful in dismantling criminal organizations involved in environmental crimes. The coordination through the GPTI was also important to mitigate the already known negative environmental impacts of the construction and paving of highways in the Amazon, with plans such as Sustainable BR-163, with the establishment of more comprehensive environmental compensation (RAMOS, 2020; WEST, FEARNSIDE, 2021). The plan consisted of four main axes: 1) promotion of sustainable production activities; 2) environmental monitoring and control; 3) land and territorial planning; and 4) environmentally sustainable infrastructure, the latter of which can be considered an extension of territorial planning. During the first phase of the PPCDAm (2004-2008), a 53% decrease in annual deforestation rates measured by Prodes was reported.

In the second (2009-2011) and third phases (2012-2015) of the PPCDAm, additional reductions in deforestation were achieved, reaching an annual deforestation of 4.5 thousand km^2 in 2012, the lowest in the historical series. From then on, the plan gradually lost its central role in the agenda of the administration and, in 2013, the coordination of the GPTI was transferred from the CC/PR to the MMA.

Following that change, policy agendas involving several ministries – such as infrastructure, rural credit and the creation of conservation units – lost priority. However, monitoring and control actions continued to be improved, contributing to an 83% reduction in deforestation in 2012 compared to 2004 levels. It is important to emphasize that this result was only possible due to the strengthening of Ibama and ICMBio (which was established in 2007) through competitive civil-service examinations focused on hiring more qualified environmental analysts, access to new geoprocessing and satellite monitoring technologies, new strategies to enforce land use embargoes and rural and agrarian land registration, and significant participation of Incra, the Ministry of Agrarian Development and the Ministry of Finance (Central Bank of Brazil - BCB). Nevertheless, there was a reorientation of the emphasis of the "land and territorial planning" axis from the creation of UCs to the land tenure regularization of rural properties, with incipient territorial planning as a strategy to avoid the expansion of deforestation. The plan also ceased to have a specific axis for environmentally sustainable infrastructure. As a result, deforestation rates rose again, reaching 6.2 thousand km2 in 2015.

The fourth phase of the PPCDAm (2016-2020) brought new elements, most notably a more refined system for managing indicators and results and clearer planning. At the same time, however, the plan was not fully implemented and did not achieve its goals. While the first phases of the PPCDAm were marked by the creation of UCs, during the fourth phase many of these areas were reduced or had their level of protection downgraded. In this phase, the PPCDAm introduced as an innovation the axis of "rules and economic instruments", aimed at the implementation of the Environmental Reserve Quotas (CRA) market and the establishment of payment programs for environmental services (PSA), although these instruments existed in regulation only. In this regard, it is worth highlighting the publication of the decree that regulates the CRA: due to the non-definition of the concept of "ecological identity", following a decision of the Federal Supreme Court in a constitutional review case, the mechanism was not implemented. The PSA progressed with the approval by the Green Climate Fund (GCF) of the Floresta+ project, yet remain in the early stages of implementation.

Despite being included in all phases of the PPCDAm, the promotion of sustainable activities was the axis that was given less focus during the implementation and that was less successful, as acknowledged by the evaluation of the plan carried out in partnership with international cooperation (BRASIL, 2008; MMA, 2019).

Tapajós National Forest collection. Photo: Danúbia Melo/ICMBio

Table 1. Main results of phases I, II, III and IV of the PPCDAm (2004-2020), categorized by the axes of the fifth phase.

MAIN HISTORICAL OUTCOMES OF THE PPCDAm
Axis I: Sustainable production
Reinforcement of forest concessions and expansion of the area of managed forests by 1.05 million hectares
Definition of criteria for sustainable procurement by the government and acquisition of timber from sustainably managed forests or reforested areas
Implementation of the Bolsa Verde Program, with more than 70 thousand beneficiaries/year
Axis II: Environmental monitoring and control
Improvement and increase of transparency of deforestation and fires monitoring systems: Prodes, Deter, Detex, TerraClass, SIPAMSar, Queimadas Program, Fire Panel
Strengthening inspection with integrated actions between Ibama, ICMBio, Federal Police, Armed Forces, Federal Highway Police, National Public Security Force, and other agencies
Development of the National Integrated Fire Management Policy and implementation of integrated fire management in selected areas
Implementation of the National System for Controlling the Origin of Forest Products and improving the control of timber forest products
Creation and consolidation of the Rural Environmental Registry, with 7 million registered properties
Axis III: Land and territorial planning
Creation of 50 million hectares of conservation units and institution of the Amazon Protected Areas Program (Arpa)
Approval of 10 million hectares of indigenous lands
Georeferencing of about 150 thousand properties and titling of 40 thousand by the Legal Land Program
Development of the Ecological-Economic Macrozoning of the Legal Amazon
Implementation of the Sustainable BR-163 Plan to mitigate the impacts of paving on deforestation
Axis IV: Rules and economic instruments
Defining a policy for action in priority municipalities for deforestation prevention, monitoring and control
Restriction of public credit to enterprises linked to illegal deforestation
Publishing of the National REDD+ Strategy and approval of the REDD+ pilot project for the Amazon.
Establishment of the Amazon Fund and support for more than 100 projects, amounting to BRL 1.5 billion
Fundraising, through REDD+ results, of USD 96 million to foster innovation, support community projects and payment for environmental services and forest restoration for small rural producers
Passing of Law 11284 on 2 March 2006 – management of public forests and implementation of the Brazilian Forest Service
Passing of Law 11132 on 4 July 2005 – adds art. 22-A in Law 9985/2000, and regulates art. 225 of the Federal Constitution

In 2019, through Decree 10142/2019, the government discontinued the PPCDAm, revoking the Decree of 2003 that established the GPTI and created the Executive Committee for Illegal Deforestation Control and Recovery of Native Vegetation. The following year, through Decree 10239/2020, the interministerial coordination of the deforestation control policy was transferred to the National Council of the Legal Amazon, chaired by the Vice-President of the Republic.

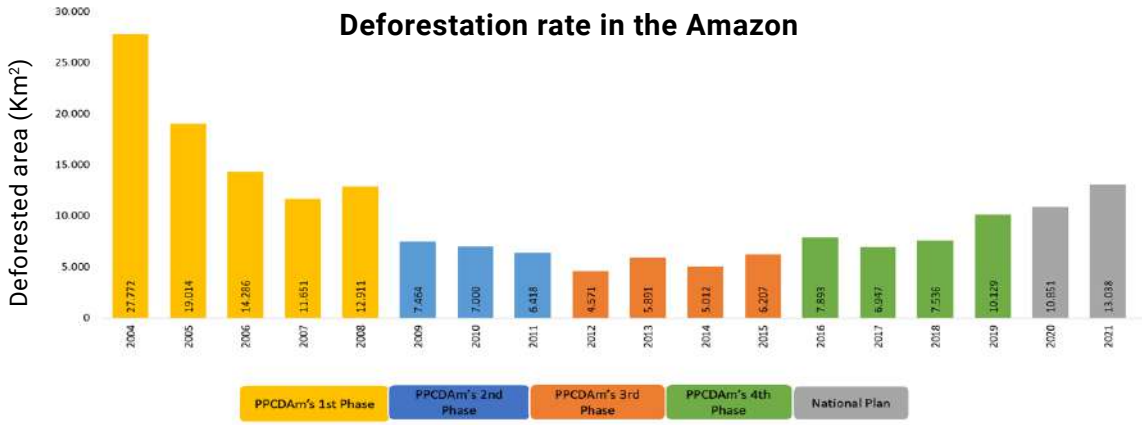
The federal policy replacing the PPCDAm was formally introduced in 2020, under the coordination of the MMA, titled the National Plan for Illegal Deforestation Control and Recovery of Native Vegetation (2020-2023) (BRASIL, MMA, 2020). Among the actions implemented to combat deforestation, the most notably include the creation of Operation Green Brazil I and II - two major operations based on the use of the Armed Forces in Law and Order Operations (GLO) to carry out preventive and repressive measures against environmental crimes, directed at illegal deforestation and combating fires - and Operation Guardians of the Biome, coordinated by the Ministry of Justice and Public Security (MJSP), for permanent actions to combat illegal deforestation, burn-offs and forest fires, protect indigenous lands and dismantle criminal organizations in an integrated way.

Despite these actions, however, the implementation of the plan has lost priority in the last four years, especially in the “environmental monitoring and control” and “land and territorial planning” axes. Between 2018 and 2020, there was a 37% and 44% reduction in the number of forest-related notices of violation and embargoes issued by Ibama in the Amazon, respectively. This gap in inspection efforts was partly mitigated in 2021 and 2022, when the number of notices and embargoes returned to a number equivalent to 2018, although they are still much lower than the average of the previous periods of the PPCDAm. During the same period, the proceedings involving creation of conservation units and approval of indigenous lands in the region were halted, while there was a proliferation of bills at the federal and state levels aimed at reducing these areas and legislative proposals introduced or backed by government supporters with a significant impact on the prospect of impunity for environmental crimes and infractions.

It is also important to mention the reduction in the capacity of environmental agencies to act in recent years, with budget and staff cuts. In 2010, Ibama and ICMBio had 4,420 and 2,832 permanent civil servants, respectively, while Ibama had 1,311 inspectors. With the suspension of almost all civil-service admission processes in the agency, the number of civil servants in the two agencies reached 3,585 and 1,792 civil servants in 2016, respectively, which represents a 25% reduction in the total number (BRASIL, MMA, ICMBio, 2011; BRASIL, MMA, IBAMA, 2011; BRASIL, MMA, ICMBio, 2017; JARDIM et al., 2017). In the following years, the situation became even more dire. At Ibama, for instance, the number of permanent civil servants dropped to 2,675 in 2020. The total number of civil servants acting as inspectors has also been reduced from 965 in 2016 to 691 in 2020 nationwide in Brazil (a 64% reduction compared to 2010). This substantial decrease in the number of inspectors is explained not only by the lack of replacement of retired civil servants, but also by the assignment of the existing ones to other functions in different sectors.

As a result, between 2018 and 2022, deforestation increased from 7.5 thousand km^2 to 11.5 thousand km^2 per year, with 13 thousand km^2 in 2021, the highest since 2006 (Figure 2).

Figure 2. Record of deforestation rate registered by Prodes/Inpe.



Source: Graph prepared by the MMA based on the Prodes deforestation rate calculated by Inpe.

3.2. Deforestation control plans in the states of the Legal Amazon

The expansion of dialogue between federal, state and municipal authorities has created windows of opportunity for greater public engagement, contributing to the empowerment of Brazilian society in structuring public policies for the common good. Considering the joint responsibility of the federal, state and municipal administrations, and the mutual interest in deforestation control and prevention in the biome, the involvement of state and municipal actors is mandatory. Under the current legal framework, as defined by Complementary Law 140/2011, states are responsible for issuing forest removal authorizations on rural properties located in their territories and, therefore, are required to monitor forest removal. Federal and municipal authorities are responsible for issuing authorizations for the areas under their jurisdiction, such as UCs and licensed enterprises. Despite the legal framework of the distribution of federal authority, it is still necessary to improve forest growth control processes in certain states and municipalities.

Since 2006, to contain the increase in deforestation rates, the nine states that compose the Legal Amazon have prepared, updated and implemented their State Plans for Deforestation and Fires Prevention and Control (PPCDQ). The contribution of the states, complementing the federal PPCDAm, aims to implement measures to ensure significant reductions in deforestation rates in the region. One of the essential milestones in building partnerships between federal and state authorities was the signing of the Terms of Commitment for Zero Illegal Deforestation during the 21st Conference of the Parties (COP 21), in Paris in December 2015. The signatories to this agreement have committed to striving towards zero illegal deforestation by 2020.

Currently, five states in Brazil have a state-level Plan for Deforestation and Fires Prevention and Control (PPCDQ) in place and the others are preparing new plans (Table 2). Regarding the thematic axes that make up the plans, it is possible to observe an alignment between the axes of the state plans and the axes of the PPCDAm (environmental command and control, land and territorial planning and sustainable production/bioeconomy). However, each state focuses and prioritizes its actions considering its local circumstances.

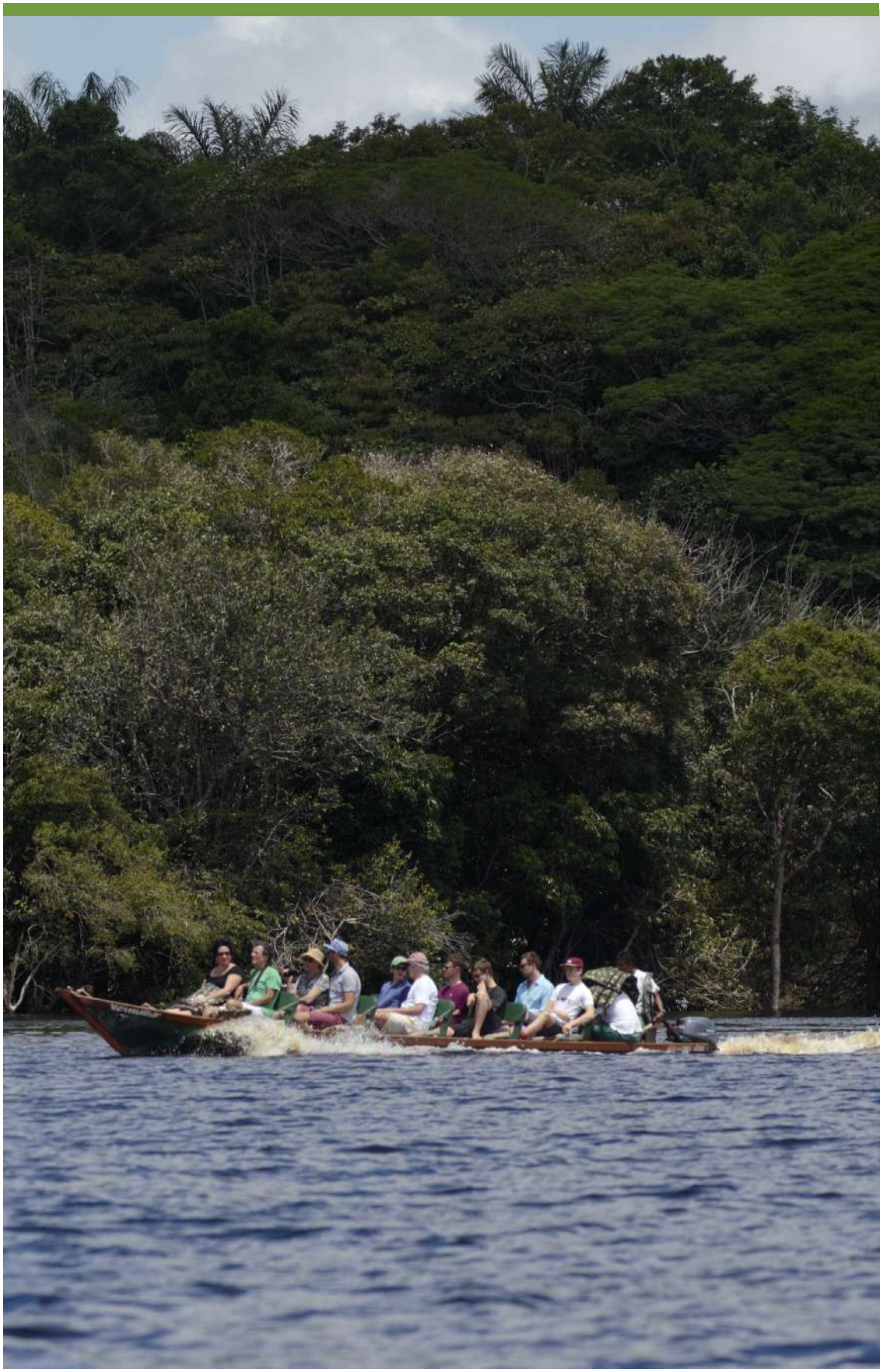
Table 2. Overview of State Plans for Deforestation and Fires Prevention and Control.

State	Plan Name	Term	Baseline (km^2)	Reduction Target	Status*
Acre	State Plan for Deforestation and Fires Prevention and Control – PPCDQ/Acre	2017 – 2020	602 (Prodes/Inpe 1996 to 2005)	80%	Under review
Amapá	Plan for Deforestation, Burn-offs and Forest Fires Prevention and Control in the State of Amapá – PPCDAP	2022 – 2025	24.25 (Prodes/Inpe 2018 to 2021)	36% (until 2025)	In effect
Amazonas	Plan for Deforestation Prevention and Combat in the State of Amazonas – PPCDQ/ AM	2020 – 2022	1,421 (Prodes/Inpe 2019)	15%	Plan in public consultation
Maranhão	Action Plan for Deforestation and Fires Prevention and Control in the State of Maranhão – PPCD – MA	2011 – 2015	950 (Prodes/Inpe 1996 to 2005)	42%	Plan being updated
Mato Grosso	Action Plan Deforestation and Forest Fires Prevention and Control in the State of Mato Grosso – PPCDIF/MT	2021 – 2024	1,602 (Prodes/Inpe 2016 to 2020)	15% a.a.	In effect
			5,715 (Prodes/Inpe 2001 to 2010)	85%	
Pará	Amazon Now State Plan – PEAA	2021 – 2023	2,442 (Prodes/Inpe 2014 to 2018)	37% (until 2030)	In effect
				43% (until 2035)	
Rondônia	Plan for Prevention, Control and Promotion of Sustainable Alternatives to Deforestation and Fires in the State of Rondônia – PPCASD/RO	2023 – 2026	1581 (Prodes/Inpe 2021)	75%	Being updated
Roraima	Plan for Deforestation and Fires Prevention and Control in the State of Roraima – PPCDQ/RR	2021 – 2024	543 (Prodes/Inpe 2019)	10% a.a.	In effect
Tocantins	Plan for Deforestation and Forest Fires Prevention and Combat in the State of Tocantins – PPCDIF/TO	2021 – 2025	28.2 (Prodes/Inpe 2017-2021)	100%	In effect

* updated as of 17/MAY/2023

The Interstate Consortium for the Sustainable Development of the Legal Amazon was established in 2017 and is now an important forum for the coordination of regional policies resulting from dialogue conducted between the state authorities, specifically by the Secretaries of Environment of the Legal Amazon within the framework of the Governors' Task Force on Climate and Forests. The first guiding instrument of the Regional Development Policies was the Strategic Plan of the Interstate Consortium 2019-2030 which was structured in four axes: I) Green Economy, Competitiveness and Innovation; II) Regional Integration; III) Territorial and Environmental Governance; and IV) Management, Public Governance, and Priority Public Services. The states approved in 2021 the Green Recovery Plan (PRV) as a tool to support the transition process towards a green economy in the Amazon, which was structured in four axes: 1) Halting illegal deforestation; 2) Sustainable Production Development; 3) Green Technology and Capacity Building; and 4) Green Infrastructure. Combating illegal deforestation is a priority in both instruments. It is worth highlighting the progress made in the regional dialogue on bioeconomy carried out by the states within the framework of the GCF Task Force that made it possible to approve in 2022 the Manaus Action Plan, which defines as key components for the transition to a low emission economy: a) People and Communities; b) Knowledge, Technology, and Innovation; c) Finance, Investment and Private Sector; and d) Government and Public Policies. The Manaus Action Plan defines the structuring axes of governmental initiatives aimed at the development of the bioeconomy, focusing on production activities that value standing forests and that are sustainable in the long term.

The approval of this plan, and the approval of specific state plans, expresses the regional consensus that combating illegal deforestation in the long term will only be possible through a change of the current economic development model towards a model that values maintaining standing forests, that is inclusive and that is capable of meeting the job creation, income generation and well-being demands of the Amazonian population. The regional dialogue to combat illegal deforestation and other environmental illegalities enabled the development of two proposals for structuring projects: the first focused on the monitoring and accountability of illegal deforestation and forest fires and on measures known as the science of generation and management of strategic information, which was developed within the framework of the Forum of Secretaries of the Environment/GCF Task Force; the second focused on supporting the reinforcement of environmental management systems, the development of integrated territorial intelligence mechanisms, a regulatory platform and integration of procedures, and combating environmental crimes. The latter proposal also contains key elements for regional efforts to combat illegal deforestation, these actions being oriented to: a) coordination for the environmental territorial intelligence force to act in a network; b) establishing interstate bases in critical areas; and c) logistical, equipment and service support, with assistance in carrying out actions in critical areas.

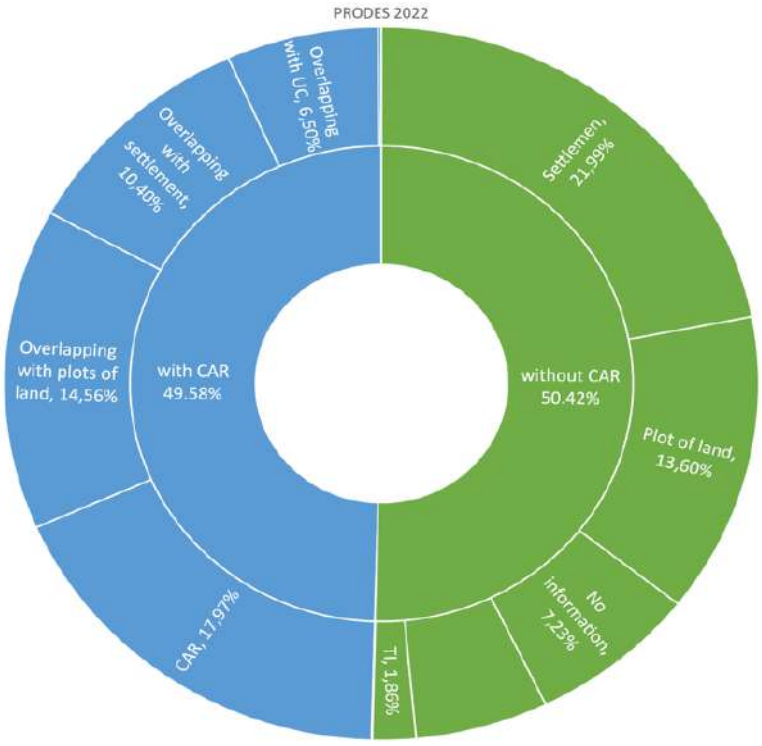


Anavilhanas National Park collection. Photo: ICMBio

4. CURRENT DYNAMICS OF DEFORESTATION IN THE AMAZON

In 2022, deforestation in the Amazon heterogeneously affected the different land categories. At the same time, these may be registered as rural properties in the Rural Environmental Registry (CAR)in spite being considered federal or state land. In particular, half of the deforestation registered by Prodes occurred within rural properties registered in the CAR. These properties, in turn, overlap with private areas or without land information (18%), undesignated public lands (15%), settlements (10%) and UCs (6%). On the other hand, deforestation in areas outside the CAR occurred in settlements (22%), undesignated public lands (14%), in private areas or without land information (7%) and in conservation units (6%) (Figure 3). In terms of ownership, 64% and 11% of deforestation occurred in federal and state land, respectively, considering both designated areas (e.g., UCs, TIs) and non-designated areas (Table 4).

Figure 3. Percentage of deforestation in areas with and without CAR, superimposed with other land categories.



Source: Chart prepared by the MMA based on increase of deforestation data in the Legal Amazon (Prodes/ Inpe), TI (Funai), UC (CNUC/MMA), Quilombos, Settlements and Glebas (Incra), and CAR (Sicar/IRU/SBF / MMA).

This distribution pattern, with a large percentage of deforested areas on undesignated public lands, recurs in most states. However, only two of the nine states that compose the Legal Amazon have a larger area of deforestation on undesignated public lands (states of Amazonas and Rondônia) (Table 3).

Regarding deforestation in settlements, 53% and 40% occurred in the states of Roraima and Pará, respectively. On the other hand, in the states of Acre, Maranhão, Mato Grosso and Tocantins, most deforestation was recorded in private areas with CAR - 40%, 44%, 86% and 44%, respectively (Tables 3 and 4).

Table 3. Distribution of deforestation in each state of the Legal Amazon, divided by ownership category

	Deforestation by land category					
State	Quilombola Territory	Indigenous Land	Conservation Unit*	Settlement	Undesignated Public Land**	Private Areas or Without Information
AC		0,30%	18,64%	33,29%	7,58%	40,19%
AM	0,01%	1,08%	2,12%	37,35%	49,27%	10,17%
AP		10,24%	31,61%	18,35%	30,85%	8,94%
MA	0,19%	0,94%	2,97%	37,80%	13,89%	44,22%
MT		1,09%	0,80%	9,44%	2,59%	86,15%
PA	0,10%	3,10%	17,96%	39,51%	27,79%	11,54%
RO	0,01%	1,95%	29,08%	20,78%	32,78%	15,40%
RR		7,01%	0,25%	52,94%	39,74%	0,07%
TO			5,47%	28,63%	21,63%	44,26%
Category Contribution (%)	0,04%	2%	12%	32%	28%	25%

* Including Environmental Protection Area
** Federal and state plots of land

Table 4. Distribution of deforestation in each state of the Legal Amazon by ownership of land

	Ownership of Deforested Land		
State	Federal Land	State Land*	Private land or without information
AC	56,37%	3,44%	40,19%
AM	81,20%	8,63%	10,17%
AP	73,36%	17,70%	8,94%
MA	54,15%	1,63%	44,22%
MT	13,09%	0,76%	86,15%
PA	77,29%	11,16%	11,54%
RO	56,48%	28,12%	15,40%
RR	60,13%	39,78%	0,07%
TO	50,26%	5,47%	44,26%
Category Contribution (%)	64%	11%	25%

*Included Quilombola Territory, Conservation Unit and state plot of land

In recent decades there have been significant changes in the pattern of deforestation in the Amazon, which requires the development of new strategies and restarting efforts that have proven effective in the past. In particular, it is possible to note:

a) internalization of deforestation, with encroachment of public land;

b) reconcentration of deforestation in large contiguous areas;

c) reduced governance capacity in protected areas and settlements;

d) persistence of illegal deforestation in production chains; and

e) increase of forest degradation.

Another factor that should be emphasized concerning the change in the dynamics of occupation of native forest areas in recent years is the association between deforestation, the intensification of conflicts over land tenure and violence, enhanced by the increasingly prominent presence of organized crime associated with drug trafficking in the Amazon and its role of dominance in the territory (FNSP, 2022; INSTITUTO IGARAPÉ, 2022).

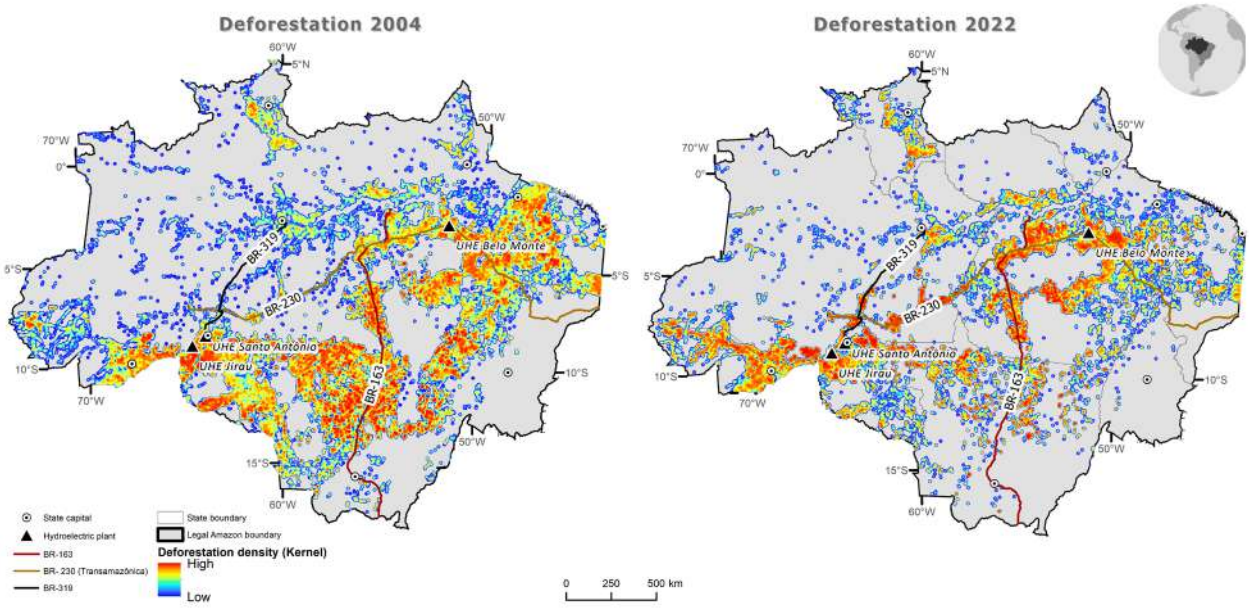
In the remainder of this chapter, we will analyze the public policies and socioeconomic factors that explain the current dynamics of deforestation, focusing on each of these processes.

Aerial view of the Amazon. Photo: Ibama

4.1. Internalization of deforestation, with public land encroachment

Since the start of large-scale colonization in the Amazon, which began in the 1960s, the deforestation process in the region has been concentrated in a strip that advances towards the northern and western region of the biome. In 2004, the first year of the PPCDAm, deforestation was concentrated in the transition areas between the Amazon and Cerrado biomes, mainly in the southeastern region of the state of Pará, along the BR-163 highway in the states of Mato Grosso and Rondônia. In recent years, however, there has been an advance of the frontier known as the arc of deforestation into the interior of the Amazon, entering the states of Pará, Acre and Amazonas, especially along the federal highways that run through these states, such as BR-163, BR-230, BR-319 and BR-364 (Figure 4).

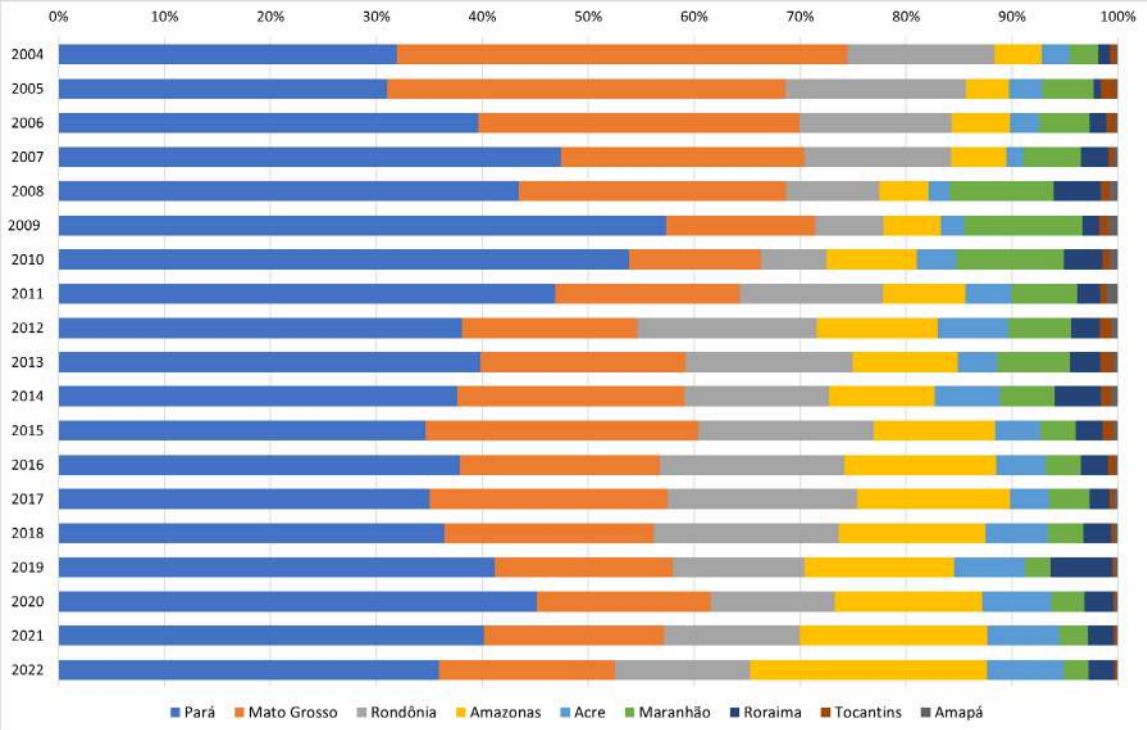
Figure 4. Kernel map indicating the locations with concentration of deforestation in 2004 and 2022.



Source: Prodes/Inpe.

This dynamic is clear when considering the states that concentrate the largest deforested area. Until 2005, the states of Mato Grosso and Pará took turns as deforestation leaders; since then, Pará has had the most of deforested areas. However, the state of Amazonas, historically with low deforestation rates, surpassed Mato Grosso in 2021 with the second highest rate (Figure 5).

Figure 5. Historical contribution of each state in the Legal Amazon to total annual deforestation (%).



Source: Graph prepared by the MMA based on data on the increase in deforestation in the Legal Amazon (Prodes/Inpe).

The process of interiorization of deforestation can be explained by three main factors: the indirect impact of large infrastructure construction projects, the consolidation of the agricultural frontier in the state of Mato Grosso and the expectation of gain from public land encroachment. It is noticeable that, since the paving of the BR-163 highway, the deforestation front has shifted from the northern region of the state of Mato Grosso to the southern region of the state of Pará. Similarly, the stimulus to population migration and the valuation of land caused by the construction of the hydroelectric plants of Belo Monte in the state of Pará, and Jirau and Santo Antônio in the state of Rondônia are related to the increase in deforestation in the region around the cities of Altamira and Porto Velho, respectively. The same occurs in the area near the BR-319 road between Porto Velho and Manaus, where the announcement of the paving work is contributing to increased deforestation in the southern region of the state of Amazonas.

Deforestation rates are also declining due to the consolidation of the agricultural frontier. In 2004, 30% of the areas of the Amazon biome in the state of Mato Grosso outside publicly owned UCs and TIs were covered by primary forests. In 2022, this percentage dropped to 23%. In comparison, in the states of Pará and Amazonas, the area of forest outside UCs and TIs in 2022 is still 45% and 69%, respectively. With more forest areas available, there are also more opportunities to profit from low-priced land purchases, illegal logging, and land grabbing.

The economic return from deforestation is even greater when linked to the process of land grabbing. (AZEVEDO-RAMOS, MOUTINHO, 2018; BRITO et al., 2019). The Amazon has 101 million hectares[3] of undesignated public land; in 2022, 32.5% of deforestation occurred in these areas. In 2022, 30.5% of deforestation on undesignated public lands occurred in areas under the responsibility of the federal administration. However, of the 101 million undesignated public lands, 40 million are state areas, mainly concentrated in the state of Amazonas (90% of the total).

In municipalities with a predominance of undesignated public land, prices for forest areas are significantly lower, considering that these areas lack titles and legal certainty. For example, while in the state of Mato Grosso a hectare of area with native vegetation cover has an average price of BRL 1,783 per hectare, in the state of Amazonas the price drops to BRL 642, on average (AGRIANUAL, 2020). In these areas, deforestation increases the value of the land in two ways: by allowing the cultivation of crops and livestock, and as proof of ownership, which is necessary to obtain a land title through fraud or landholding regularization from federal and state agencies. A clear example of this process is occurring in the municipalities of the southern region of the state of Amazonas, the northern region of the State Rondônia, and the southern region of the state of Pará, where the ten most deforested federal undesignated public lands in the last four years are located (Figure 6). In these areas, annual deforestation increased more than threefold between 2019 and 2022, following the general trend of a 33% increase in deforestation in federal lands over the same period.

Figure 6. Deforestation data over the last four years in the ten most deforested federal public lands in the Prodes 2022 period.

		Annual Deforestation (km²)					
Plot of Land Name	State	2019	2020	2021	2022	Contribution	Trend
Plot of Land João Bento	RO	145.24	164.97	229.19	265.53	6%	
Sucuriju land	AM	75.96	43.67	60.58	125.06	3%	
M2	AM	52.91	45.27	77.82	121.00	3%	
Curuaés	PA	59.61	148.54	146.28	117.52	3%	
Curuqueté	AM	39.95	48.79	74.27	110.22	3%	
Sumauma	PA	27.01	38.04	54.59	102.55	2%	
Piraquara	AM	12.52	34.67	14.17	100.14	2%	
Gorotire	PA	69.44	242.83	178.93	97.09	2%	
Autaz Mirim*	AM	40.31	32.51	68.77	84.82	2%	
Engenho	PA	88.38	95.91	96.68	81.15	2%	
Sum of the 10 most deforested areas		522.95	799.30	904.60	1,123.94	27%	
Grand Total		3,099.06	3,525.56	4,072.32	4,156.86		

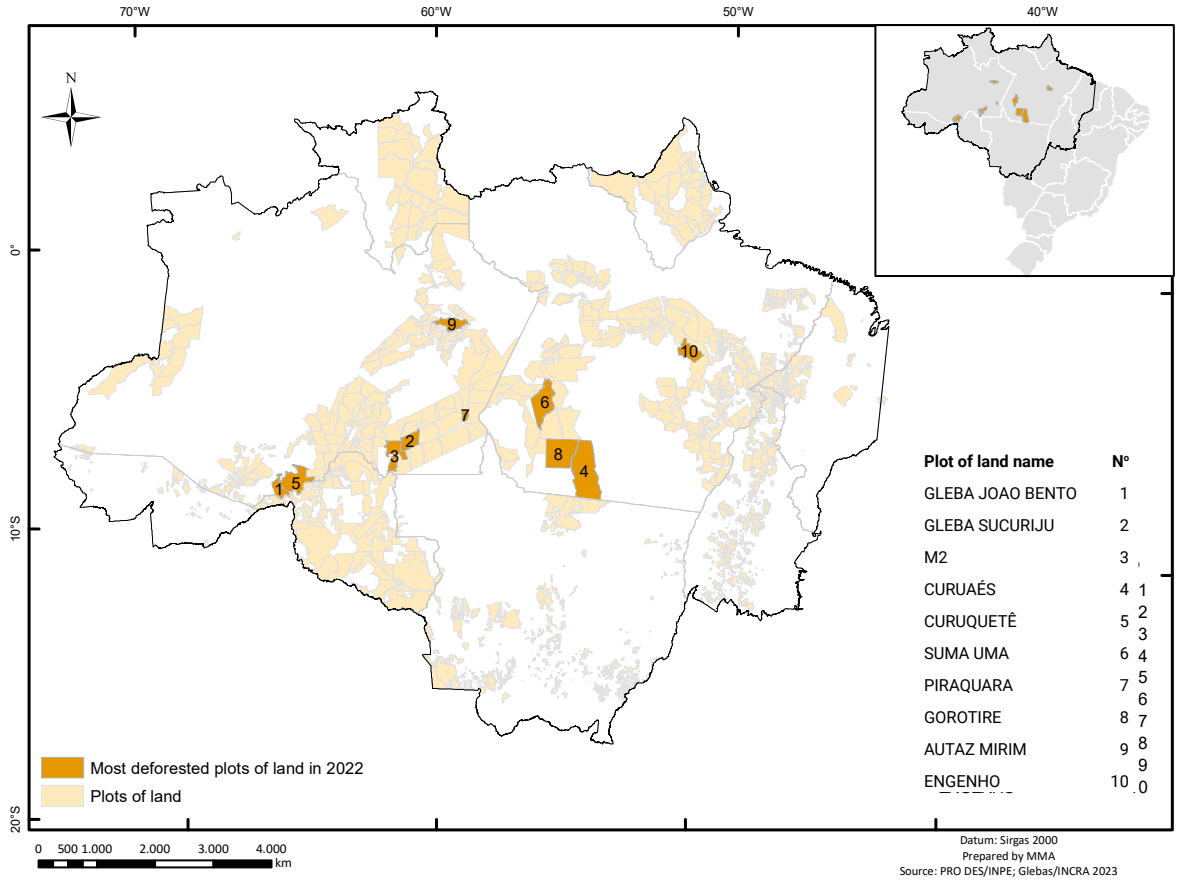
* State Plot of Land

Source: Table prepared by the MMA based on data on the increase in deforestation in the Legal Amazon (Prodes/Inpe) and federal public lands (Technical Chamber for the Allocation of Public Lands/Legal Land Program - data from November 2018).

3 The area of undesignated public land was calculated from the polygons of state and federal land provided by Incra and updated with data from the state of Roraima, until March 2023. For the calculation, the areas of public lands overlapping with Indigenous Land, Conservation Units, Quilombola Territories and Settlements were disregarded.

The ten most deforested tracts of land in 2022 are concentrated in the states of Amazonas, Pará and Rondônia, following the advance of deforestation into the interior of the Amazon rainforest. The map of the most deforested tracts, and the map of municipalities and UCs, also coincide with the map of large polygons (Figure 7).

Figure 7. Location of the ten most deforested federal public lands in the Prodes 2022 period.

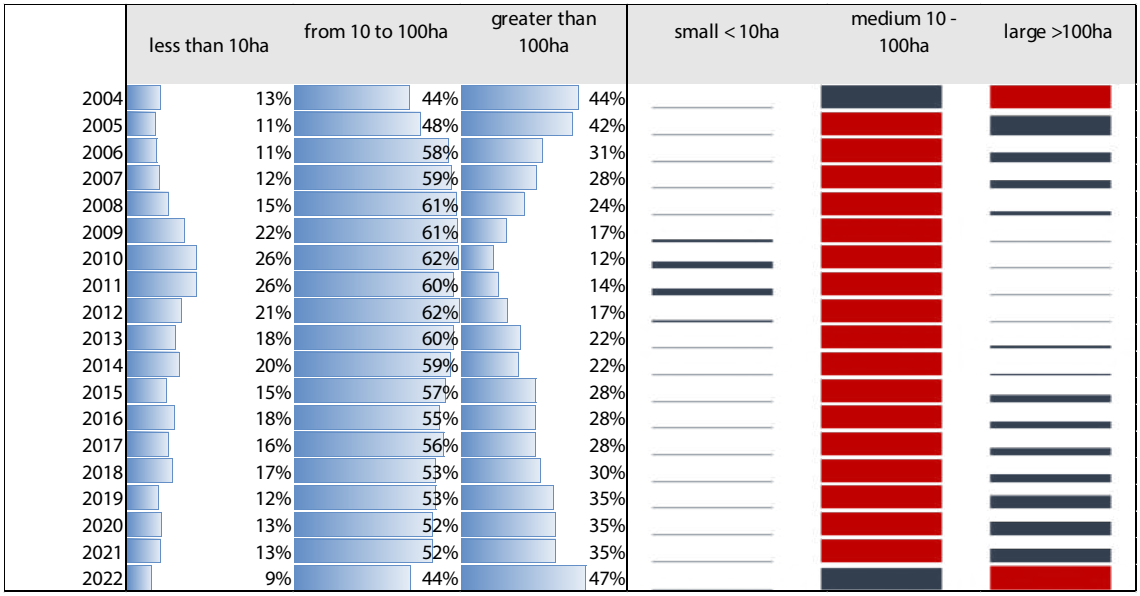


Deforestation linked to land speculation is also intensified by the expectation of amnesty for illegal invasions of public lands. The Legal Land Program, established by Law 11952/2009, provided that only areas occupied in a tame and peaceful manner until 2004 would have the right to landholding regularization, and that those producing in land that had been illegally deforested would lose the titles already granted. With the passing of Law 13465/ 2017, all public land encroachments that occurred illegally between 2004 and 2011 are now entitled to obtain a land title. With the Provisional Measure 910/2019, an attempt was made to provide a new amnesty for encroachments up to 2018. With these frequent changes in legislation, there is an expectation that investments in grabbing and deforestation of public lands will pay off in the future with the legalization of ownership through a land title.

4.2. Reconcentration of deforestation in large contiguous areas

Analyses of deforestation dynamics also make it possible to identify changes in the size of deforested areas. At the beginning of the implementation of the PPCDAm, in 2004, large deforestation areas, i.e. those with polygons larger than 100 hectares, accounted for 44% of the area converted in the Amazon. In the following years, there was a reduction in deforestation rates and in the size of polygons, with those smaller than 100 hectares representing most of the deforested area. More significantly, deforestation carried out in larger blocks reduced its share of the total deforested area from 44% in 2004 to 17% in 2012. In terms of area, while these large deforested areas totaled 13,903 km² in 2004, in 2012 only 761 km² were cleared in contiguous blocks larger than 100 hectares (Figure 8).

Figure 8. Changes in the occurrence profile of the size of deforestation polygons detected by Prodes/Inpe over the years.



Source: Graph prepared by the MMA based on data on the increase in deforestation in the Legal Amazon (Prodes/Inpe).

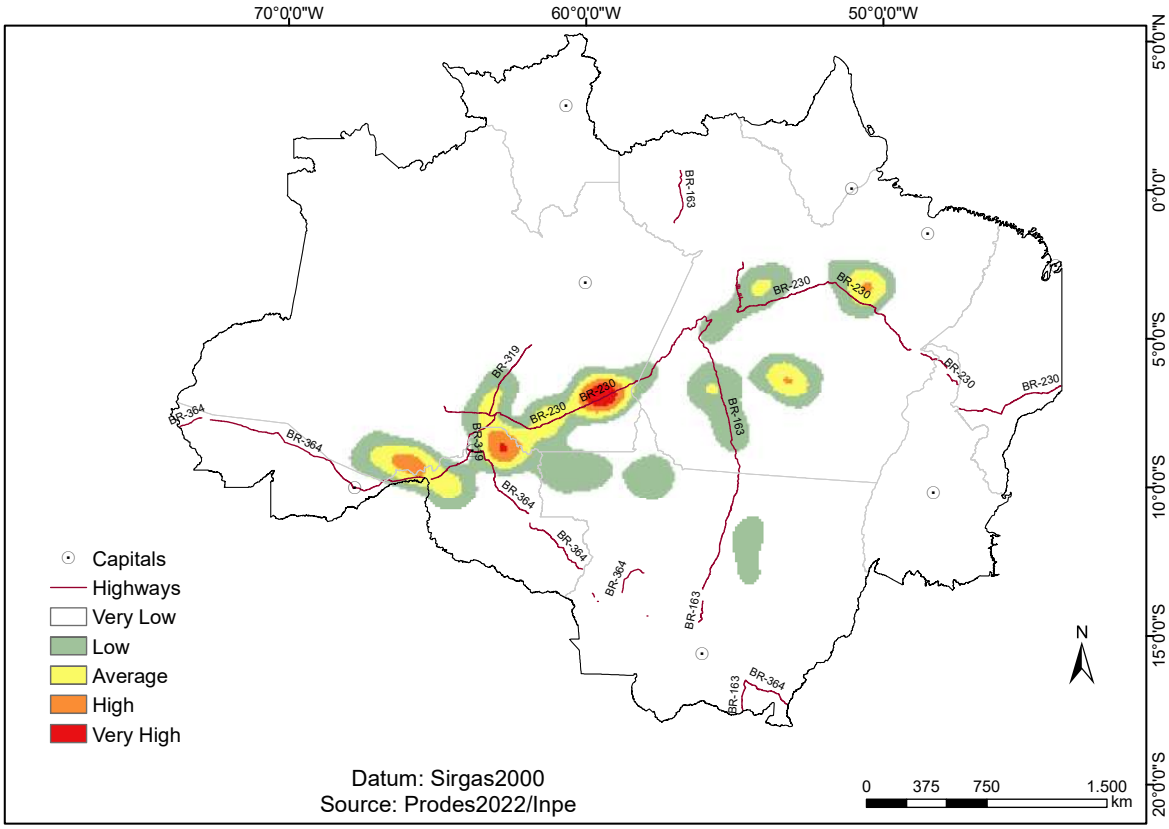
This result reflects the strategy of the "environmental monitoring and control" axis - of the first and second phase of the PPCDAm - to focus inspection efforts on the largest deforested areas, with the application of the respective precautionary embargo measures in joint actions of Ibama and the Federal Police. These actions, in turn, were only possible due to the development of the Real-Time Deforestation Detection System (Deter/Inpe), in 2004, to support Ibama's inspection (ASSUNÇÃO et al., 2015). Deter worked with MODIS images (spatial resolution of 250 meters), which detect deforested areas larger than 25 hectares. Currently, Deter works with images from WFI sensors, whose spatial resolution of 64 meters allows detecting deforested areas larger than three hectares.

In addition to inspection, it is worth mentioning other measures that have contributed to the reduction of deforestation in large blocks, such as: (i) the Soy Moratorium - an agreement between civil society organizations and companies associated with the Brazilian Association of Vegetable Oil Industries and the National Association of Grain Exporters that prohibits the cultivation of soybeans in areas from the conversion of native forests after July 2008 (GIBBS et al., 2015); and (ii) the list of priority municipalities for control of deforestation measures and the prohibition of rural credit for properties with embargoed areas in the region after 2008, also contributed to the reduction of deforestation in large blocks (Federal Decree 6321/ 2007).

It is important to note that deforestation is an intensive activity in terms of capital investment, which may, depending on the type of techniques and machinery applied, require between 1,000 and 3,000 reais per hectare for soil exposure (clearing the area) and pasture establishment. Therefore, investments of between 100 and 300 thousand reais may be required to deforest and consolidate an area of 100 hectares. This limits the activity to rural producers and land speculators with capital. Thus, the risk of investment loss caused by environmental inspection actions has made environmental crime less attractive from an economic point of view.

From 2012, and more intensely after 2018, there is a reinstitution of the deforestation patterns observed in the early 2000s. While in 2012 only 17% of the deforested area was registered in blocks larger than 100 hectares, in 2022 these large deforested areas added up to 47% of the total area. When observing the distribution of large polygons (larger than 100 hectares or even larger than 1,000 hectares), it appears that deforestation of this category is concentrated in the southern region of the state of Amazonas (especially in the municipalities of Apuí, Humaitá and Manicoré), in the central and northern region of the state of Mato Grosso, heading towards the southern and central region of the state of Pará, and at the confluence of the borders between the states of Acre, Amazonas and Rondônia (Figure 9).

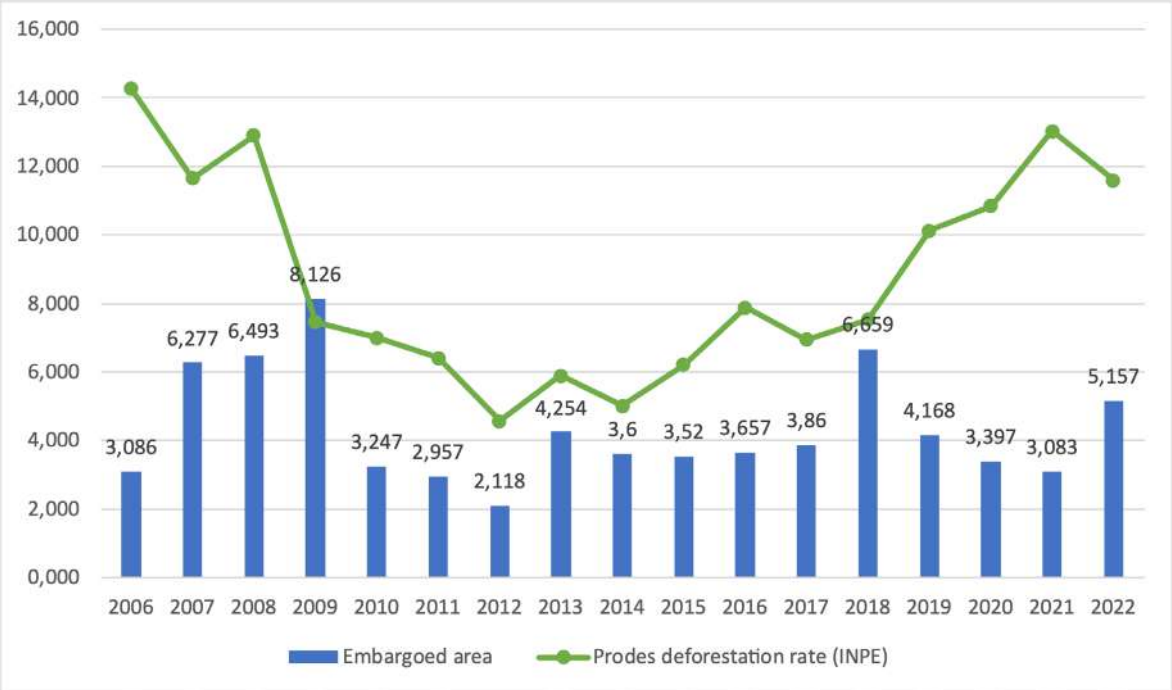
Figure 9: Kernel map indicating the concentration of deforestation polygons larger than 100 hectares in 2022.



Source: Map prepared by MMA based on Prodes 2022 incremental data.

The increase in deforestation polygons is directly linked to two main factors: (i) a reduction in environmental inspections and (ii) the expectation of legalization of illegal deforestation. Strengthening Ibama's activities in the context of the first phases of the PPCDAm allowed the agency to act more effectively against illegal deforestation. The increase in inspection efforts by the agency between 2004 and 2009, measured in embargoed areas, number of notices and operations, was followed by a strong reduction in deforestation rates in the Amazon (Figure 10). Similarly, the reduction in areas embargoed by IBAMA after 2018 indicates that environmental inspection has lost priority. There has also been a significant decrease in the number of Ibama inspectors due to the lack of competitive civil-service examinations and an aging workforce. While in 2010 Ibama had more than 1,300 inspectors for all of Brazil, in 2023 there are only 723. The weakening of command-and-control actions, in turn, is related to the increase in deforestation rates in the last decade. The absence of a precautionary action or environmental sanctions fosters a sense of impunity, which in turn encourages further deforestation.

Figure 10. Area embargoed in the Legal Amazon by Ibama and deforestation rate in the Amazon measured by Prodes between 2004-2022



The increase in deforestation after 2012 can also be linked to the expectation of new environmental amnesties. The approval of Law 12651/2012, replacing the 1965 Forest Code, led to the suspension of all fines, the amnesty of 58% of deforestation that occurred illegally until 2008 and the offer of 20 years for the environmental regularization of the remaining areas (PFAFF et al., 2015; AMIN et al., 2019). Although the new legislation was presented as a way to ensure more legal certainty, since its approval in 2012 142 bills and provisional measures have been introduced in Congress to amend Law 12651/2012. Only five provisional measures and two bills were approved, and the changes made had a relatively limited legislative impact (e.g. extension of deadlines for registration in the Rural Environmental Registry). However, the expectation that some of the projects with the greatest impact may be enacted, such as those that aim to extinguish the legal reserve or grant amnesty for recent deforestation, is an important stimulus for attracting investments in illegal activities.

4.3. Reduced governance capacity in protected areas and settlements

Public areas destined for UCs, indigenous lands, quilombola territories and agrarian reform through settlements have been significantly impacted by the increase in deforestation over the last ten years. In 2012, 2,458 km^2 of deforestation (47% of the total) occurred in these categories, while in 2022 this total reached 5,738 km^2 (almost 50% of the total) (Figure 11). The increase in deforestation in these areas is linked to different types of illegal activities, but all cases indicate an inability of public authorities to establish effective governance of these areas.

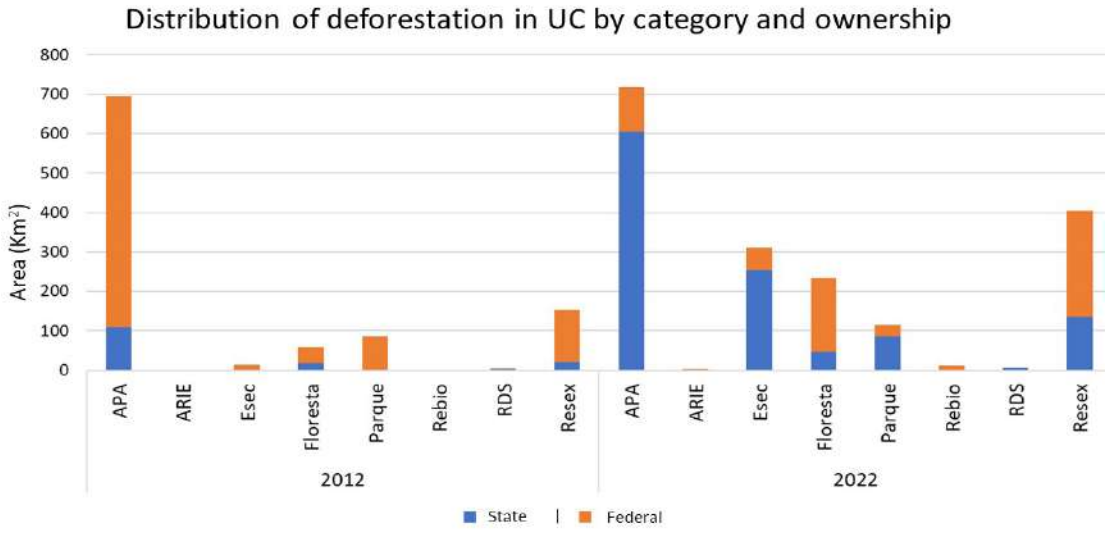
Parks, Ecological Stations and Biological Reserves are the categories of full protection that do not allow human occupation (SNUC, 2000). However, they accounted for 13% of the deforestation recorded in conservation units in 2022. Even with a higher level of restriction, there was a 56% increase in deforestation in this category of UCs between 2012 and 2022.

Of the total area deforested within protected areas in 2022, 43% occurred in federal areas and 57% in state PAs. The highest percentage of deforestation in UCs (57%) occurred in Environmental Protection Areas (APA), which is a less restrictive category in which several uses are allowed and private areas are possible. APAs are UCs that allow the existence of private properties, but should be subject to zoning and more restrictive rules to guide the use of the area and the management of natural resources. However, most of the APAs in the Amazon lack management plans, which makes this type of UC ineffective in practice. The Triunfo do Xingu State APA alone, located in the state of Pará, concentrated 35% of deforestation in UCs in the Amazon last year.

Extractive Reserves, National and State Forests and Sustainable Development Reserves are public UCs, and it is up to the State to carry out expropriations and grant communities the real collective right of use in these UCs. These categories concentrated 41% of deforestation within UCs in 2022, with Extractive Reserves and Forests representing 26% and 15%, respectively, of the total. These categories of UCs were originally designed to protect the territories and ways of life of traditional peoples and communities (PCT) and family farmers, developing sustainable production activities, such as community forest management, in accordance with the management plan of each UC. Yet, there has been a gradual takeover of these areas by medium and large rural properties owned by external actors.

In some cases, the absence of landholding regularization and insufficient environmental management and monitoring allow the entry and permanence of other social groups that develop impactful activities such as cattle ranching, mining and illegal logging. The low social visibility of PCT families in conservation units means that these groups have little access to social and production inclusion public policies, many of them needing access to energy, drinking water, sanitation and appropriate technical assistance for traditional production systems. In this scenario, more impactful activities integrate certain groups that get involved for the income generated in the short term.

Figure 11. Distribution of deforestation between categories of federal and state conservation units.

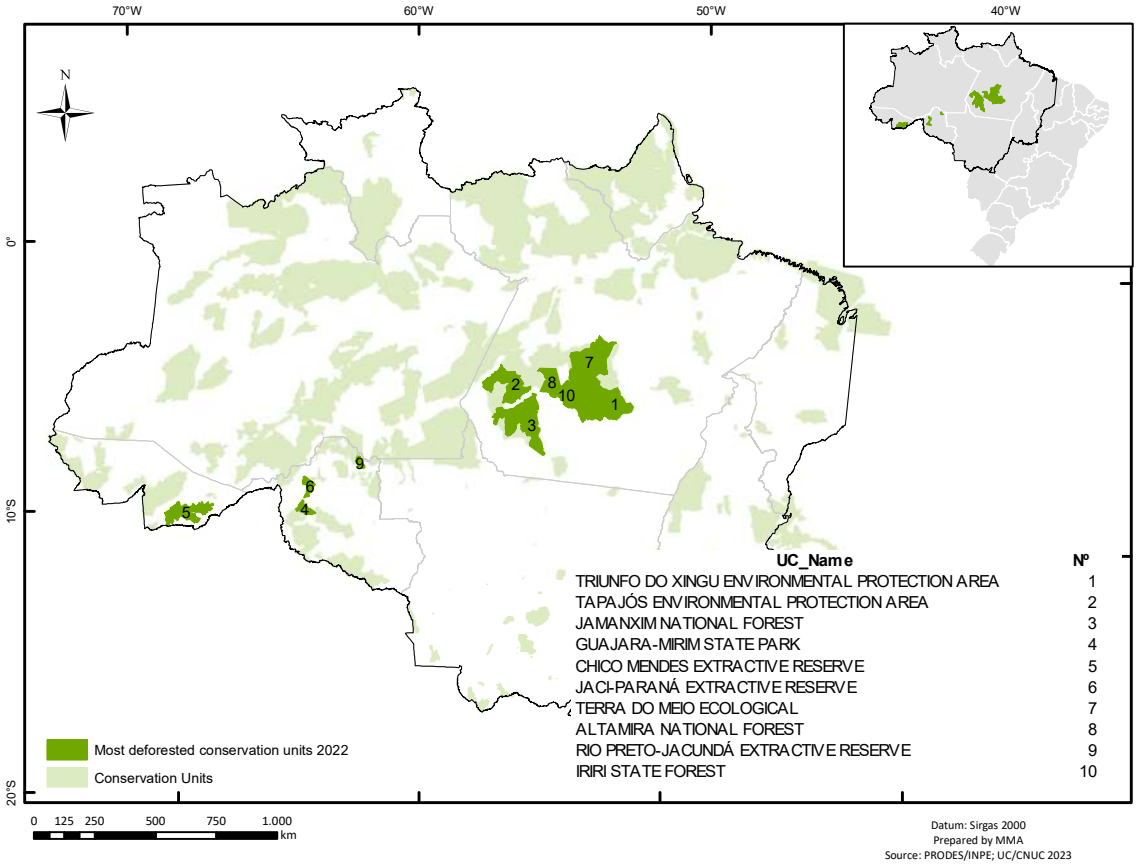


Acronyms of the categories of conservation units:

APA – Environmental Protection Area,
ARIE – Area of Relevant Ecological Interest,
Esec – Ecological Station,
Forest – National or State Forest,
Park – National or State Park,
Rebio – Biological Reserve,
RDS – Sustainable Development Reserve,
Resex – Extractive Reserve.

The ten most deforested UCs in the 2022 Prodes period concentrate 82% of total deforestation in UCs. These UCs are distributed in the states of Pará, Rondônia and Acre (Figure 12). The most deforested unit was the Triunfo do Xingu Environmental Protection Area, located in the state of Pará, which contributed 40% of deforestation in the category, followed by the Tapajós Environmental Protection Area, also in Pará. The high level of deforestation in these and other UCs in the Amazon may be related to the expectation generated by the proposal of bills and provisional measures that aim to reduce these areas or decrease the level of restriction on their use. Even where projects have not been approved, the political indication that a given area may be reduced or reclassified significantly increases deforestation for land speculation. The prevalence of large polygons of deforestation in these UCs also indicates that financial groups are carrying out invasions of these territories.

Figure 12. Location of the ten most deforested public Conservation Units in the Prodes 2022 period.

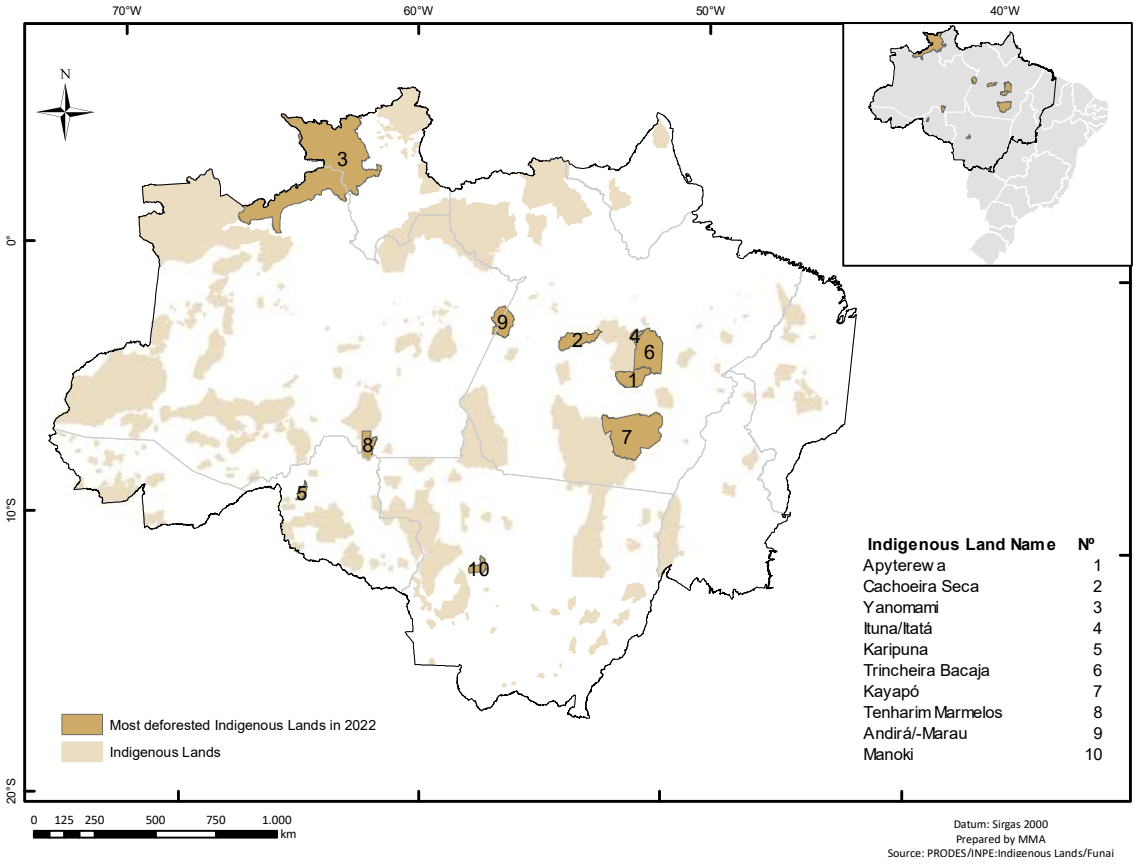


Only 2% of deforestation in the Amazon in 2022 was recorded in indigenous lands, even though this land category corresponds to 23% of the total area of the Legal Amazon. This demonstrates the capacity of indigenous peoples to act as effective forest protectors. Although relatively small, deforestation in TIs is cause for concern due to its enormous social impact.

The list of the ten most deforested TIs in 2022 aggregates 70% of the total deforested in this category. Six of these are located in the state of Pará, while the others are in the states of Amazonas, Mato Grosso, Rondônia and Roraima (Figure 13). The Apyterewa, Cachoeira Seca and Ituna-Itatá TIs, in the state of Pará, concentrate 44% of deforestation, carried out primarily for land grabbing and cattle ranching. In the specific case of Apyterewa TI, the municipality of São Felix do Xingu - PA and an association of producers in the region filed a writ of mandamus with a request for an injunction against the approval of the indigenous land, which took place in 2007. During the previous administration, the issue was resumed after a mediation conducted by the Office of the Attorney General seeking to reduce the Apyterewa TI by 392,000 hectares, which denotes more than half of its total area. In 2021, the Federal Supreme Court declared conciliation attempts concluded, but the expectation of eventual regularization was enough to encourage a substantial increase in deforestation in this indigenous land (Writ of Mandamus 26853-DF).

The Tenharim Marmelos TI, located in the area of influence of the BR-319 highway in the state of Amazonas, is also worth mentioning for having shown a 335-fold increase in deforestation in the period between 2019 and 2022, linked to the formation of pasture areas. The deforestation that occurs in the Yanomami, Kayapó and Munduruku TIs, on the other hand, presents different characteristics because it is mainly linked to the expansion of illegal gold mining in the region. In addition to the damage linked to the loss of native vegetation, mining is accompanied by mercury contamination that directly affects the health of indigenous and riverine populations.

Figure 13. Location of the ten most deforested Indigenous Lands in the Prodes 2022 period.



Settlements are a group of agricultural units set up by Incra or state land institutes to promote agrarian reform by guaranteeing access to land for small rural producers. Forestry and agro-extractivist settlement projects (PAF and PAE) and sustainable development projects (PDS) have differentiated environmental rules, including in some cases the definition of collective legal reserve areas, in addition to the obligation to comply with environmental legislation for the renewal of use concessions and land titling. Despite these safeguards, rural settlements have been subject to intense illegal deforestation. Although this land category covers only 8% of the region, they concentrated 32% of the deforestation that occurred in 2022.

In this category, the ten largest deforestation records in 2022 are particularly noteworthy. Together, these settlements concentrated 36% of the total deforestation recorded in this category, distributed among the states of Amazonas (three), Pará (five), Rondônia (one) and Roraima (one) (Table 5 and Figure 14). The settlement that leads the list is Rio Juma PA, in the proximity of the Transamazon Highway (BR-230) in the state of Amazonas. This settlement alone was responsible for 16% of deforestation in this category in 2022. Moreover, in the last four years the deforested area has tripled, while the growth in deforestation in the category has been 66%.

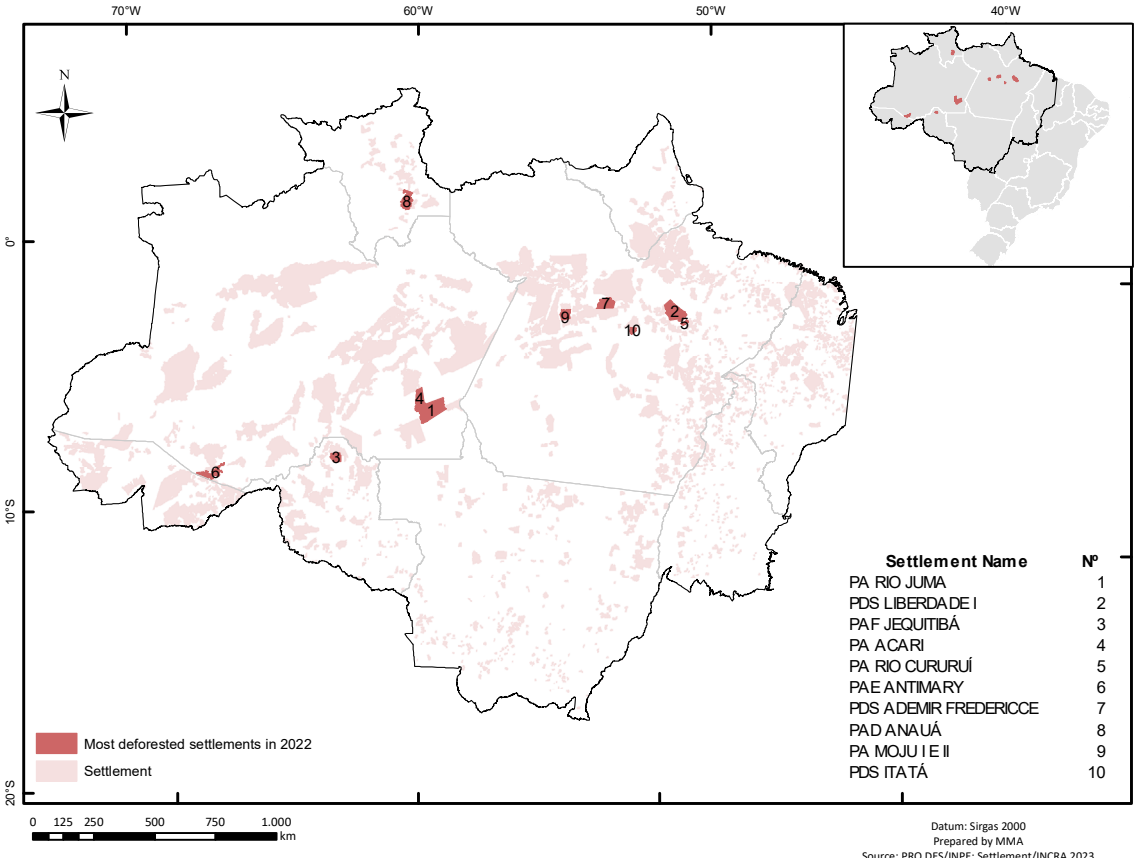
Table 5. Deforestation in the last four years in the ten most deforested settlements in the Prodes 2022 period.

		Annual Deforestation (km²)					
Settlement Name	State	2019	2020	2021	2022	Contribution	Trend
PA Rio Juma	AM	244.60	206.37	246.07	783.68	16%	
PDS Liberdade I	PA	107.49	96.63	152.38	240.14	5%	
PAF Jequitibá	RO	49.60	105.94	161.93	120.22	3%	
PA Acari	AM	60.82	29,52	46.78	103.54	2%	
PA Rio Cururuí	PA	12.39	26.75	32.84	87.86	2%	
PAE Antimary	AM	50.99	52.45	71.05	84.84	2%	
PDS Ademir Fredericce	PA	48.09	22.19	57.00	77.63	2%	
PAD Anauá	RR	57.78	54.81	64.59	76.54	2%	
PA Moju I e II	PA	21.02	28.29	68.76	72.33%	2%	
PDS Itatá	PA	40.69	42.63	41.20	64.84	1%	
Sum of the 10 most deforested areas		693.48	665.56	942.60	1,711.63	36%	
Grand Total		2,877.09	3,356.72	3.954,53	4.780,65		

Source: Table prepared by the MMA based on data on the increase in deforestation in the Legal Amazon (Prodes/Inpe) and settlements (Incra).

Aerial view of the Amazon. Photo: Felipe Werneck

Figure 14. Location of the ten most deforested settlements in the Prodes period.



Although settlements are areas dedicated to the agricultural activity of small producers, it is important to note that deforestation is not always carried out directly by the settlers (CARRERO et al., 2020). In the settlements of the Amazon, there is a process of land reconcentration in which large rural properties are established from the invasion or purchase of tracts sold, usually irregularly, by the settlers. This practice has also been encouraged in recent years with bills that facilitate the regularization of these invasions, and greater emphasis on individual titling at the expense of the concept of settlements as collectively managed territories. The Prodes polygon size analysis in settlements shows that, in 2022, 91% of the deforested area was in blocks larger than 10 hectares, which requires an investment that is beyond most settlers' financial capacity.

The weakening of Incra and the state land institutes was also a decisive factor in the lack of environmental control in the settlements. Between 2016 and 2022, Incra's initial budget allocation for final activities fell from BRL 883 to 310 million, a reduction of 75%. There was also a decrease in the number of public servants of 39%. Therefore, in 2023, Incra has only 2,711 permanent public servants, responsible for inspection and surveying for land titling, among other activities.

4.4. Illegal deforestation in production chains

The CAR is a tool for environmental monitoring and control of private properties and, pursuant to Law 12651/2012, it became mandatory for all rural properties. The CAR was established to become the "database for control, monitoring, environmental and economic planning and combating deforestation" (art. 29). Contrary to these goals, however, there was a trend of increased deforestation after the registration of properties in the CAR (AZEVEDO et al., 2017). In 2022, 54% of deforestation in the Amazon occurred within rural properties registered in the CAR, and different estimates indicate that between 82 and 98% of vegetation removal occurs illegally (RAJÃO et al., 2020; VALDIONES et al., 2021; AZEVEDO et al., 2022). 24.47% of deforestation in CAR properties overlaps with settlements and 5.59% with conservation units. In addition, 14.53% of the deforestation in areas registered in the CAR occurred on undesignated federal public lands and therefore provides strong evidence of being linked to processes of misappropriation of public assets (land grabbing).

There are different legal mechanisms, commitments with public authorities and private agreements that aim to prevent properties with illegal deforestation from supplying agricultural products to production chains. These include the Legal Meat Conduct Adjustment Agreement (TAC) and the Green Grain Protocol, led by the Federal Prosecution Service; the Soy Moratorium; and the environmental commitments signed by the Consumer Goods Forum, a group that brings together more than 400 supermarkets, industries and service providers (RODRIGUES, et al., 2017). In implementing these agreements, major companies in the sector have contracted private monitoring services to ensure the environmental compliance of suppliers, which, in the case of private agreements, goes beyond the requirements of environmental legislation.

Despite this, different studies point to gaps in the capacity of supply chains to avoid purchasing products linked to illegal deforestation (KLINGER et al., 2018; SKIDMORE et al., 2022; COSTA et al., 2019; SKIDMORE et al., 2021). Within the biome, an estimated 20% of soy produced in the Amazon is still grown on rural properties with evidence of illegal deforestation. Similarly, about 12% of cattle sold directly to meatpackers in the states of Mato Grosso and Pará come from properties with evidence of illegal deforestation. The problem becomes even more serious when cattle related to illegal deforestation at indirect suppliers are also considered. That said, it is important to note that only 15% of rural properties in the Amazon deforested after 2008, and 2% of properties concentrated 62% of deforestation with signs of illegal activities in the biome (RAJÃO et al., 2020).

The presence of products linked to illegal deforestation in the chains indicates that irregular producers have found mechanisms to avoid buyers' environmental controls. One of the most used strategies is "cattle laundering", in which animals from irregular properties are passed on to regular properties before reaching the slaughterhouse (PEREIRA et al., 2020). In the case of soy, it is also common to use cooperatives that purchase products linked to deforestation and, after mixing them with the production of compliant properties, pass the grains on to the final buyers. In both cases, illegal deforesters benefit from the absence of a national traceability system that can monitor direct and indirect suppliers.

Illegal deforestation. Photo: IBAMA

4.5. Increase of forest degradation

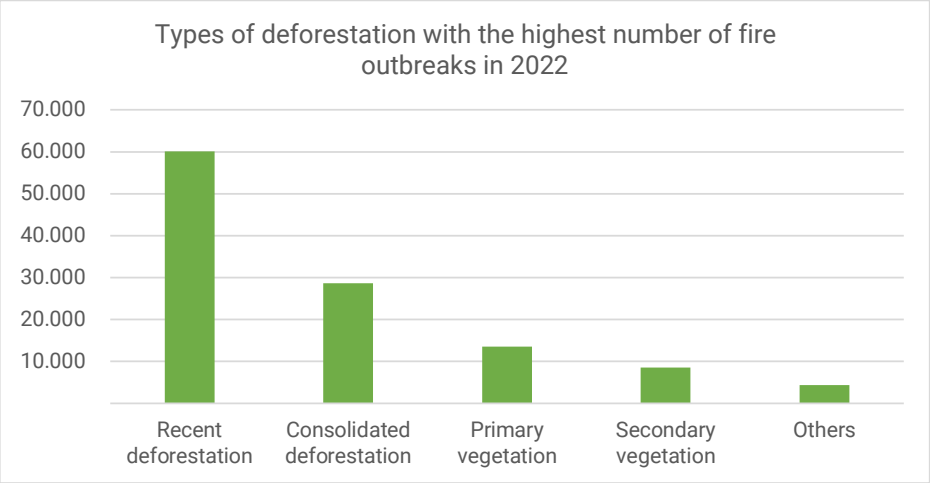
In addition to deforestation, another problem affecting the Amazon is forest degradation, mainly through fires. Between 2001 and 2018, the deforested area in the Amazon reached 326 thousand km^2, while the area degraded by fires, selective logging and edge effects was 365 thousand km^2. Including data on extreme droughts renders even higher estimates of the total degraded area (LAPOLA et al., 2023). This loss, however, is more silent. Unlike deforestation, which involves the removal of vegetation, forest degradation retains the vegetation, albeit in states that lead to the loss of biodiversity and are detrimental for ecosystem services provision by forest areas. In addition to biodiversity, these changes directly affect the income, quality of life, food and culture of those living in the region. Degradation by fire, specifically, in addition to being a direct vector of deforestation, also affects energy transportation and distribution systems, causing damage to the grid and unwanted blackouts, interfering with land and air transportation systems, with possible closures of roads and airports, and severely compromising air quality and the health of populations exposed to air pollutants and gases from biomass burning or forest fires.

The analysis of forest degradation caused by fire should consider the different uses of fire in the Amazon, related to area clearing and agricultural management techniques, as a conservation practice or even for hunting and religious rituals performed by indigenous peoples and traditional communities. These fires, known as controlled or prescribed fires, are generally restricted to small areas and are quite different in terms of extent and impact from those that occur at the height of the dry season and can give rise to large forest fires. In this context, the concept of integrated fire management emerges, which is an approach that has been used to demonstrate that fire can have two sides, depending on the circumstances in which it occurs.

Despite the various uses and dimensions of fire, part of the hotspots detected in the Amazon are related to deforestation. This can be seen when analyzing the total number of hotspots in the region: in 2022, for example, 52% of hotspots occurred in areas of recent deforestation (last five years) as part of the process of forest conversion into pasture or agricultural areas. Hotspots in areas of primary and secondary vegetation, usually linked to the process of deforestation, accounted for 12% and 7% of the total, respectively. Only 29% of hotspots occurred in areas with consolidated deforestation and other uses, and which are therefore linked predominantly to agricultural practices.

The distribution of hotspots in different area size classes declared in the CAR is also worth noting, which shows that fires can present different patterns, affecting both small areas and large portions of land. This picture reflects that the dynamics of fire are not homogeneous throughout the Amazon. On the one hand, there may be controlled, prescribed and traditional fires, among others, affecting small areas, and, on the other hand, forest fires of great extent and impact on the region's socio-biodiversity, which may be related to extensive deforestation (Figure 15).

Figure 15. Deforestation categories with the highest number of active hotspots.



Source: TerraBrasilis and BD Queimadas/Inpe.

In 2022, the ten municipalities with the highest incidence of active hotspots are also on the list of priority municipalities with the highest deforestation rates, and four of them are located in the state of Pará. Among the indigenous lands with the highest number of hotspots, five also coincide with the list of indigenous lands with the highest rates of deforestation, all located in the state of Pará. This correlation also applies to federal protected areas, except that in this case there are four units coinciding with high rates of deforestation, three of which are in the state of Pará (Table 6).

Table 6. Municipalities, indigenous lands and federal conservation units with the highest concentrations of active wildfire hotspots in 2022.

Municipalities	Total number of hotspots	Indigenous Lands	Total number of hotspots	Federal UCs	Total number of hotspots
São Felix do Xingu (PA)	5,249	Apyterewa (PA)	769	Flona do Jamanxim (PA)	1,142
Altamira (PA)	5,041	Xingu Park (MT)	602	Resex Chico Mendes (AC)	1,141
Porto Velho (RO)	4,464	Kayapó (PA)	465	APA do Tapajós (PA)	656
Lábrea (AM)	4,324	Capoto/Jarina (MT)	299	Esec Terra do Meio (PA)	322
Novo Progresso (PA)	3,174	Raposa Serra do Sol (RR)	279	Rebio Nascentes Serra do Cachimbo (PA)	208
Apuí (AM)	3,155	Tumucumaque Park (PA)	246	Resex Alto Juruá (AC)	204
Coliniza (MT)	3,046	Urubu-Branco (MT)	201	Flona de Altamira (PA)	167
Feijó (AC)	2,417	Cachoeira Seca (PA)	183	Resex Verde para Sempres (PA)	103
Boca do Acre (AM)	2,112	Andirá-Marau (AM/PA)	161	PN Serra do Divisor (AC)	102
Itaituba (PA)	2,044	Munduruku (PA)	149	PN Campos Amazônicos (AM/MT/RO)	100
Total	35,026		3,354		4,145

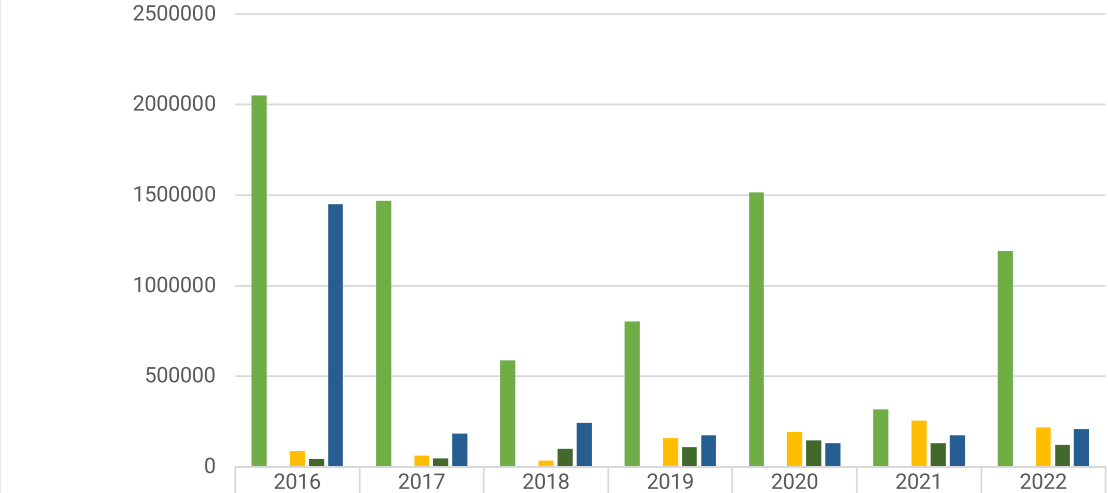
Source: BD Queimadas/Inpe.

The degradation analysis is complex, as climatic phenomena such as El Niño cause reduced rainfall, making the forest more prone to fire. For this reason, to understand the increase or decrease in the area with fire scars, it is important to consider socioeconomic factors and climate variables in the analysis of public policy.

In the last seven years, the Amazon has been impacted by a significant drought, a consequence of the occurrence of El Niño in 2015 and 2016, with a 29% reduction in rainfall between August and October compared to the average for the decade. This explains the relatively lower deforestation compared to the levels of forest degradation observed in the Prodes and Deter/Inpe systems in

2015 and 2016. In 2020 there was a moderate climate anomaly, with a 10% reduction in rainfall between August and October compared to the average between 2010-2020, which contributed to the increase in fire scar areas in 2020. On the other hand, 2021 and 2022 were years with the occurrence of La Niña, i.e. with above-average rainfall. Even so, the areas of fire scar and degradation were comparable to drought years (GATTI et al., 2021; NOAA, 2023[4]; INPE, 2023). The 2023 situation is particularly worrying in view of the likelihood of a new El Niño occurrence.

Figure 16. Area in hectares with forest degradation alerts in the Amazon between 2016 and 2022, by degradation typology.



	2016	2017	2018	2019	2020	2021	2022
Burn scar	2051870	1468476	587653	804312	1515203	318046	1192555
Selective cut (SC)		231					
Disorderly SC	88479	62918	33205	159487	192604	255985	216668
Geometric SC	43625	48383	98191	108183	147505	131606	120381
Degradation	1451261	182411	243187	175875	129995	175728	209682

Source: Deter/Inpe

The large-scale deforestation process in the Amazon is also contributing indirectly to forest degradation. The Amazon biome is characterized by the predominance of dense ombrophilous forest, with relatively little variability in temperature and rainfall throughout the year. Forest loss in recent decades has contributed to an increase in average temperature and a reduction in rainfall, particularly between August and October. As a result of the loss of 28% of the forest located in the southeastern region of Amazon, there was a 24% reduction in the volume of rain accumulated in these months over the period of four decades, between 1979 and 2018, and an increase of 2.5 ˚C in temperature over the same period (GATTI et al., 2021). There was also a delay, on average, of 28 days at the onset of the rainy season in the southern region of the biome (LEITE-FILHO et al., 2021).

4 https://origin.cpc.ncep.noaa.gov/products/analysis_monitoring/ensostuff/ONI_v5.php

These changes have a direct impact on agricultural production. The second crop will become unfeasible in the long term, and forest survival will be at risk even in areas not affected by fire and selective logging. Thus, there is evidence that the forest is approaching a tipping point, especially in the southern and southeastern regions of the Amazon.

Aerial view of the Munduruku Indigenous Land. Photo: Vinícius Mendonça

5. ACTION PLAN FOR DEFORESTATION PREVENTION AND CONTROL IN THE LEGAL AMAZON (2023-2027)

According to Article 23 of the 1988 Constitution of the Federative Republic of Brazil, the federal, state, and municipal administrations share the duty of protecting the environment, including deforestation, forest degradation and fire control.

Analyzing the previous phases of the PPCDAm and observing the advances and setbacks in national public policies, it appears that the dynamics of deforestation are intrinsically related to opportunities for economic return and the reduction of the risk of possible administrative, criminal and civil penalties for environmental offenses. Such analysis catalyzes the conduct of the public policy-making process towards the transversality and integration of activities of different ministries and agents so that the vision directed towards the prevention and control of deforestation is present in all governmental processes.

In this regard, through the analysis of the dynamics of deforestation, the guidelines set by Decree 11367/2023, and by the Technical Group on the Environment of the 2022 Presidential Transition Team, the analysis of the other phases of the PPCDAm and after aggregating the contributions of the various ministries that make up the Interministerial Commission and the Executive Subcommittee of the PPCDAm, it was possible to establish the Strategic Goals, the Expected Results and the Action Guidelines to achieve them, according to Annex I - Summary Table of the Fifth Phase of the PPCDAm. These parameters not only make up the matrix structure of the PPCDAm, but also provide overall interoperability and direct public policies to reduce deforestation in the Amazon. The established strategic goals are set out in Table 7.

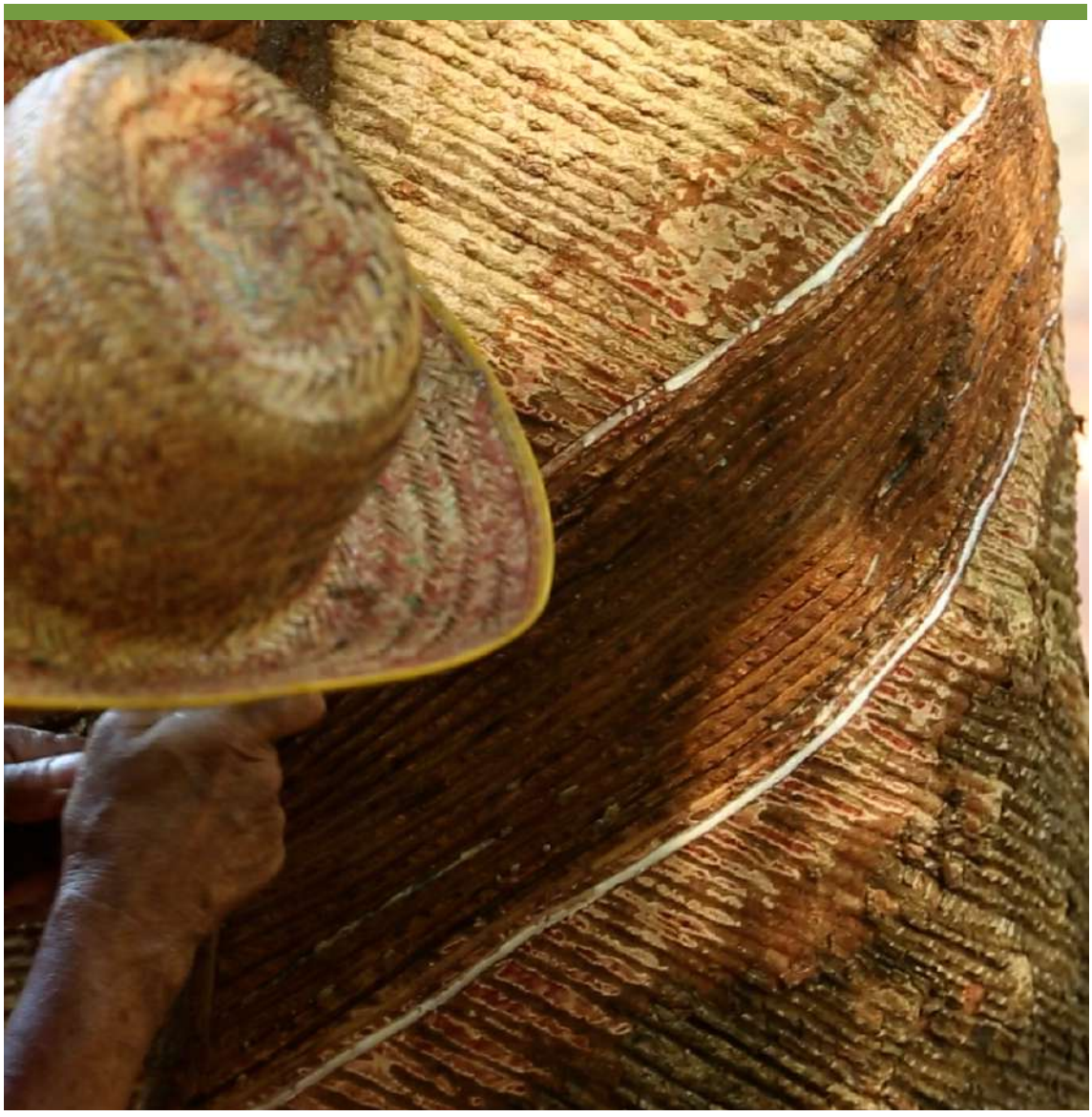
Table 7. Axes and Strategic Goals of the Fifth Phase of the PPCDAm.

Axes	Strategic Goals
Axis I. Sustainable production	**Goal 1.** Stimulate sustainable production
	Goal 2. Promote sustainable forest management and recovery of deforested or degraded areas
	Goal 3. Strengthen the coordination with the states of the Legal Amazon in efforts to promote sustainable activities
Axis II. Environmental monitoring and control	**Goal 4.** Ensure accountability for environmental crimes and administrative infractions linked to deforestation and forest degradation
	Goal 5. Improve the capacity to monitor deforestation, fires, degradation and supply chains
	Goal 6. Prevent and combat the occurrence of forest fires
	Goal 7. Make progress in environmental regularization with the improvement of the National Rural Environmental Registry System.
	Goal 8. Strengthen the coordination with the states of the Legal Amazon in environmental inspection efforts and the full integration of data on authorizations and notices of violation and embargoes
Axis III. Land and territorial planning	**Goal 9.** Ensure the distribution and protection of undesignated public land
	Goal 10. Expand and strengthen the management of protected areas
	Goal 11. Align the planning of large infrastructure projects with national targets for reducing deforestation
Axis IV. Rules and economic instruments	**Goal 12.** Create, improve and implement rules and economic instruments for deforestation control

After the brief presentation of the general structure, the basic principles of each axis are presented with the main action guidelines (the numbering in brackets corresponds to the classification shown in Annex I) that underpin the plan.

Several initiatives are related to the development of technological solutions involving the generation, processing and availability of data, which will take into account the relevant provisions to ensure transparency and disclosure of data, in accordance with the obligations provided for in relevant legislation and with the guidelines of the Brazilian General Data Protection Law - LGPD (Law 13709, 2018).

Based on the proposals for expected results and the established action guidelines, the Framework of Targets and Indicators in Annex II was prepared, which should be used by all ministries and related agencies as guidelines for internal planning, with targets, indicators, baselines and actors duly identified. It should be noted that in Annex II, some parameters that will be used for monitoring and evaluation have been presented as targets and indicators. During the implementation of the plan, mainly in the scope of the Monitoring and Evaluation Center, new indicators and targets will be developed and presented, which will be subject to evaluation and incorporation during the annual update of the plan, as set forth in Article 2 of Decree 11367/2023.



Sustainable production. Photo: Ibama

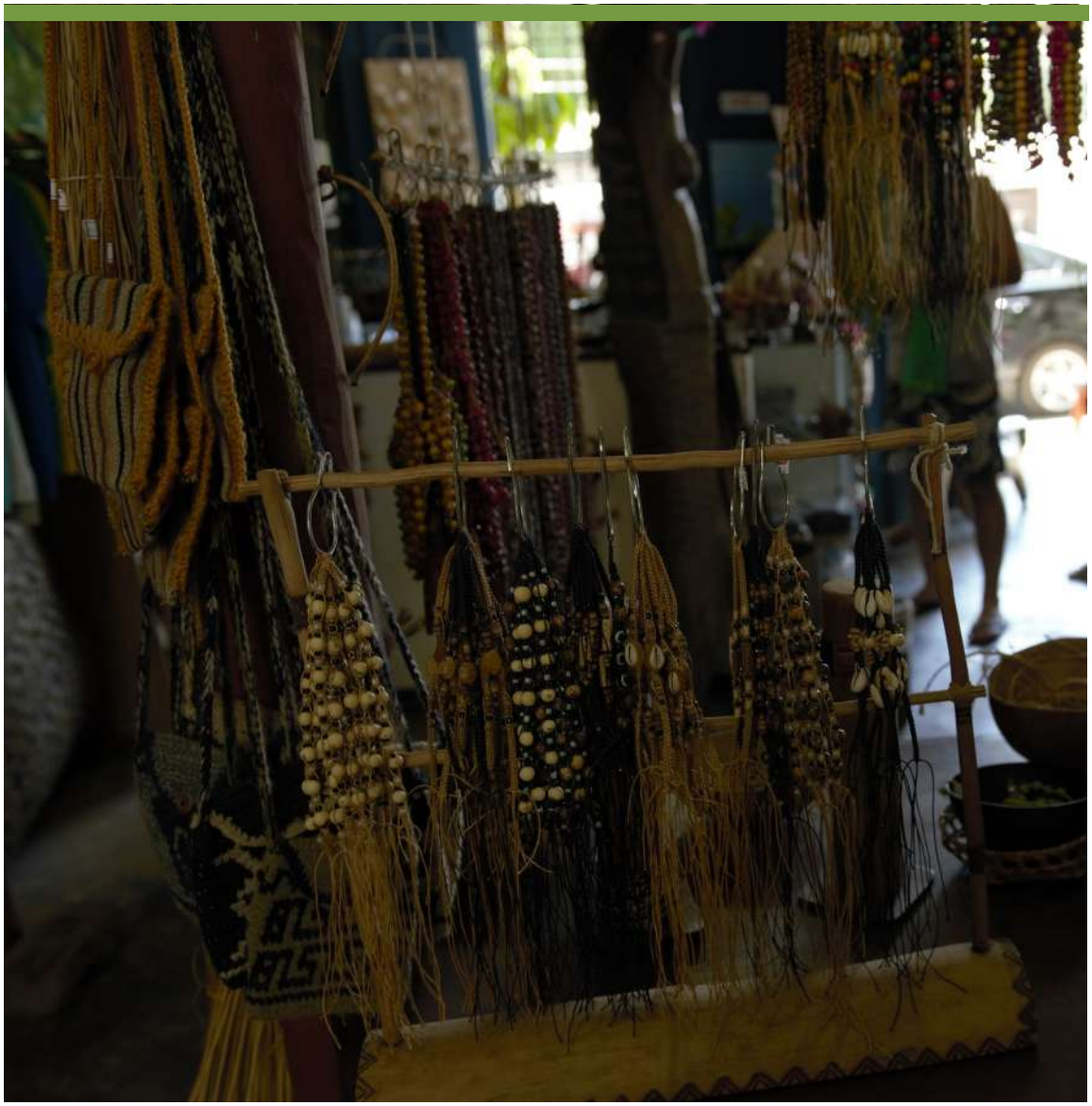
5.1. Axis I - Sustainable production

One of the main challenges of the fifth phase of the PPCDAm is the consolidation of the axis of sustainable productive activities as a vector for reducing deforestation and changing the Amazon reality. In this phase of the PPCDAm, the axis has three goals:

- **Goal 1.** Stimulate sustainable production;
- **Goal 2.** Promote Sustainable Forest Management and the recovery and restoration of deforested or degraded areas; and
- **Goal 3.** Strengthen the coordination with the states of the Legal Amazon in efforts to promote sustainable production.

To achieve objective 1, the bioeconomy is perceived as strategic for development in the Amazon, with support for local production chains and socio-biodiversity economies as requirement for forest conservation and social inclusion of populations that survive from it. The structure of economic incentives for sustainable production in the Amazon should pursue goals of reducing deforestation, with the strengthening of public policies aimed at the inclusion of family farming, indigenous peoples and traditional peoples and communities, as well as agricultural activities in the region.

Cazumbá-Iracema Extractive Reserve. Photo: Luciano Malanski/ICMBio



Anavilhana National Park collection, biojewelry. Photo: ICMBio

Budget reestablishment, federative agreement and assistance that consider regional specificities may expand access to positive economic policies - such as the Minimum Price Guarantee Policy for Sociobiodiversity Products (PGPM-Bio) – and institutional procurement programs - such as the Food Acquisition Program (PAA) and the National School Feeding Program (PNAE) (1.1.6). In addition, the definition of rules for the expansion of government procurement with sustainability guidelines is a strategic guideline for the axis, given the dimension of government consumption and procurement at the federal, state, and municipal levels.

Innovation and technical assistance appropriate to the regional realities of the peoples of the Amazon are pillars for endogenous development, forest, field, water and biodiversity conservation and the reduction of regional inequalities (1.1.5, 1.1.8, 1.1.18) with emphasis on the specific forms of organization of traditional peoples and communities and family farmers who defend the environmental integrity of their territories. Innovations in production processes must be accompanied by institutional innovation with the creation of regulatory conditions that encourage the production and trade of goods and services from the bioeconomy and sociobiodiversity

and strengthen local production arrangements, use agreements and organizational forms with fair production and marketing relations (1.1.19, 1.1.20). Institutional innovation should also contribute to the structuring of research and technological development (R&D) networks, technical assistance, facilitators and local leaders to produce forest and agroforestry goods, and support for community-based production. Institutional innovation should also support the building of youth networks as a strategy for training local actors in multiple issues to become agents of local transformation (1.1.22). The construction of the National Bioeconomy Development Plan, in its Amazon component, is an opportunity for technological and institutional innovation with environmental conservation and social inclusion goals (1.1.1).

In addition, implementing sustainable use-oriented infrastructure is a fundamental requirement for structuring production. Lack of access to drinking water, energy, transportation and communication systems (telephone and internet) are problems that prevent the advancement of production and access to markets, increase population vulnerability and intensify conflicts over land. One of the most important tasks of axis I is the coordination of intersectoral actions for the implementation of green infrastructure, to promote socioeconomic and environmental benefits for the Amazonian population.

Implementing infrastructure for sustainable use can support the region's tourism, which is distinguished by both its diversity and uniqueness, with an emphasis on experiences with nature and communities. This tourism is still partly underexploited; however, even with existing shortcomings, the Amazon guarantees advantageous conditions for better positioning in national and international markets. The current global trend of travel consumption indicates the Amazon's high attractiveness, provided that, as a destination, the region manages to make a qualitative leap in terms of image and requalification of its tourism. This is an opportunity to contribute to the control of deforestation, given the possibility of adopting innovative policies to organize the use of natural resources - with the involvement of indigenous peoples, as well as traditional peoples and communities -, the creation of employment and income opportunities, and increasing social inclusion. As a proposal for the sector, axis I foresees stimulating tourism segments associated with nature, such as ecotourism, community-based tourism and ethnotourism. The action guidelines have as a strategy recognizing the value of traditional and local culture, and regenerative tourism, which operates systemically in the landscape, including prevention, mitigation, compensation and conservation actions (1.3.1 and 1.3.2).

Also, for the implementation of goal 1, axis I proposes the acceleration of the technification of sustainable livestock production in the Amazon and the expansion of this economic activity to areas already opened. In parallel to this, measures to increase the value of the standing forest are to be included as a strategy to increase efficiency and raise the sustainability standard of the sector. On the one hand, the axis proposes the systematization, monitoring and dissemination of sustainable practices such as integrated fire management, the implementation of agroforestry systems with sociobiodiversity species and the expansion of the use of low carbon technologies[5], mainly the recovery of pastures (1.3.1, 1.3.2 and 1.3.3). According to data from Embrapa[6], it is estimated that, in the Amazon, there are approximately 15 million hectares of degraded pastures that can be subject to recovery programs for the expansion of livestock, avoiding the suppression

5 In addition to the adoption of soil conservation techniques and productive integration.

6 https://www.embrapa.br/busca-de-noticias/-/noticia/58663565/forrageiras-adaptadas-evitam-desmatamento-de-23-milhoes-de-hectares-na-amazonia#:~:text=Degrada%C3%A7%C3%A3o%20de%20pastagens,-A%20pecu%C3%A1ria%-20bovina&text=nas%20diferentes%20regi%C3%B5es.-,Pesquisas%20da%20Embrapa%20indicam%20que%20no%20contexto%20amaz%C3%B4nico%20existem%2C%20aproximadamente,de%20hectares%20de%20pastagens%20degradadas.

of native vegetation in the biome. On the other hand, the engagement of rural producers to continue the process of environmental regularization with Sicar brings opportunities for the recovery and management of forest areas with the provision of environmental services potentially remunerated by public policy and market instruments (1.3.5).

To meet goal 2, it is essential to expand sustainable forest management and strengthen the management of public forests through forest concessions as a mechanism for expanding forest governance and generating employment and income opportunities (2.1.5). In addition to the challenge of scalability of forest concession for timber purposes, the expansion of community-based initiatives should also be a guideline for strengthening organizations and their territories (2.1.4). Another important initiative is the establishment of new forms of contracts that encourage the provision of environmental services associated with the recovery of native vegetation, the reduction of forest fires and greenhouse gas emissions, the conservation of biodiversity and the valuation of sociobiodiversity economies (2.1.6). It is also worth highlighting the importance of encouraging the expansion of forestry with native species in degraded areas in the Amazon with the construction of a plan in partnership with the private sector (2.1.7).

Promoting sustainable production is not an exclusive task of the federal government. For the fulfillment of goal 3 of axis I, the coordination with the states and municipalities of the Amazon and governance structures such as the Interstate Consortium for Sustainable Development of the Legal Amazon are indispensable for good governance and efficient operationalization of the PPCDAm action guidelines (3.1.1). Integrated federative action is also essential in the field of environmental education to stimulate the creation and strengthening of social and environmental education centers and the development of awareness programs with basic and higher education institutions (3.1.2 - 3.1.3). Equally important is the encouragement of private sector participation through strategic investments geared towards the deployment of green infrastructure and large-scale sustainable businesses. Similarly, partnerships with civil society organizations should be strengthened and expanded, particularly with regard to the implementation of support networks for access to public policies and the development of community solutions for production, trade, employment and income generation.

Sustainable Amazon. Photo: João Paulo Sotero

5.2. Axis II – Environmental monitoring and control

The absence of an effective presence of the state in the field, the fragility in the implementation of regulatory instruments and inaction on certain issues are some of the main factors that facilitate the occurrence of illegal acts of deforestation, land grabbing, logging, mining, etc. In this context, environmental control through the planning and implementation of repressive actions becomes a fundamental step to prevent, curb and discourage illegal fires and deforestation. It is worth mentioning that environmental control is not centralized; on the contrary, it is diffuse and involves several institutions and levels of government, being the responsibility of federal environmental agencies, the Federal Police, the Armed Forces, state and municipal agencies, etc. Therefore, coordination and integration of efforts are necessary to optimize the use of the scarce material and human resources available. Therefore, the "environmental monitoring and control" axis of the fifth phase of the PPCDAm includes four goals:

- **Goal 4.** Ensure accountability for crimes and environmental administrative infractions related to deforestation and forest degradation;
- **Goal 5.** Improve the ability to monitor deforestation, fires, degradation and production chains;
- **Goal 6.** Prevent and combat the occurrence of forest fires;
- **Goal 7.** Make progress in environmental regularization with the improvement of the National Rural Environmental Registry System; and
- **Goal 8.** Strengthen the coordination with the states of the Legal Amazon in environmental inspection efforts and the full integration of data on authorizations and notices of violation and embargoes

Environmental inspection in the Legal Amazon. Photo: Ibama

To ensure greater accountability for environmental crimes and infractions linked to deforestation and degradation, there are efforts underway to strengthen and integrate actions between different agencies. Among these efforts, it is worth mentioning the improvement and expansion of the remote operation of federal environmental inspection (4.1.1), the increase in the resolution rate of administrative investigations and proceedings (4.1.4), the establishment of a permanent task force to hold the largest deforesters accountable through civil lawsuits for the enforcement of collective rights (4.1.3) and buyers of illegal products (4.1.10).

An innovation of the fifth phase of the PPCDAm compared with the previous phases is the greater emphasis on the integration of intelligence actions and accountability for illegal deforestation (4.1.7 and 4.1.8). Law 9605/1998 – also known as the Environmental Crimes Law – provides for criminal and administrative sanctions arising from conduct and activities harmful to the environment. However, environmental damage is often accompanied by other types of crime, including money laundering, land grabbing and tax evasion. Therefore, in addition to involving the MMA and MJSP in efforts focused directly on deforestation, the plan also includes integrative actions aimed at illegal mining (4.1.11) and encroachment on public lands (4.1.9). For the first time, the PPCDAm will also explicitly integrate fiscal, financial, mineral, land and animal health inspection activities, to expand the range of sanctions against illegal deforesters. To this end, there will be an interagency coordination framework to strengthen joint action to combat environmental crimes and infractions (4.1.2) and another to produce intelligence (4.1.7). In this context, it is also worth mentioning the alignment of the measures included in Axis II, which emphasize combating environmental crimes in the Amazon, in close coordination with the "Amazon: Security and Sovereignty" (Amas) plan, directed by the MJSP and the MD.

The Federal Police and Ibama in integrated action to combat environmental crimes. Photo: Felipe Werneck

For the goals of the “environmental monitoring and control” axis to be met, it is essential that human, technological, organizational and logistical resources be made available for combating illegal deforestation. To this end, one of the most important actions of the entire PPCDAm is holding competitive civil-service examinations to hire civil servants to monitor and work in critical regions to combat illegal deforestation in the Amazon (4.2.1), and providing courses and events to train civil servants (4.2.3). In addition, strategic interagency physical bases will be structured, taking advantage of existing equipment (e.g. police stations, battalions, checkpoints) (4.2.2). With greater interaction between different government agencies, integrating the data produced becomes urgent. Therefore, a system will be implemented to ensure access and interoperability of data on administrative and criminal proceedings (4.2.5). Lastly, the plan will coordinate the acquisition of vehicles, aircraft, weapons and other equipment for the adequate performance of deforestation control teams (4.2.4).

Monitoring and control of illegal deforestation. Photo: MMA

Combatting a forest fire. Photo: Ibama

To better subsidize intelligence, inspection and criminal investigation activities, the fifth phase of the PPCDAm also aims to improve the capacity to monitor deforestation, fires, degradation and production chains. To this end, the deforestation alerts currently generated by Inpe's Deter System, the Brazil M.A.I.S. Program, managed by the Federal Police, Censipam's SIPAMSar, and other federal government initiatives will be improved and integrated into a single database (5.1.1). There will also be investments in detecting deforestation and forest degradation through radar imagery (5.1.2). The National Fire Information System will also be improved, integrating data generated by different institutions and implementing a fire spread prediction system to support integrated fire management and combating forest fires (5.1.4). In this new phase of PPCDAm, progress will also be made in predicting deforestation to support preventive actions (5.1.3). To this end, in addition to using spatial analysis of remote sensing data, aggregated fiscal and financial information will be integrated, with the purpose of detecting preparatory actions for large deforestation (e.g. purchase of fuel and chainsaws, atypical cash withdrawals or transfers to pay per diems for dozens of workers, etc.), in addition to forest degradation data that also indicates probabilities and risks of deforestation.

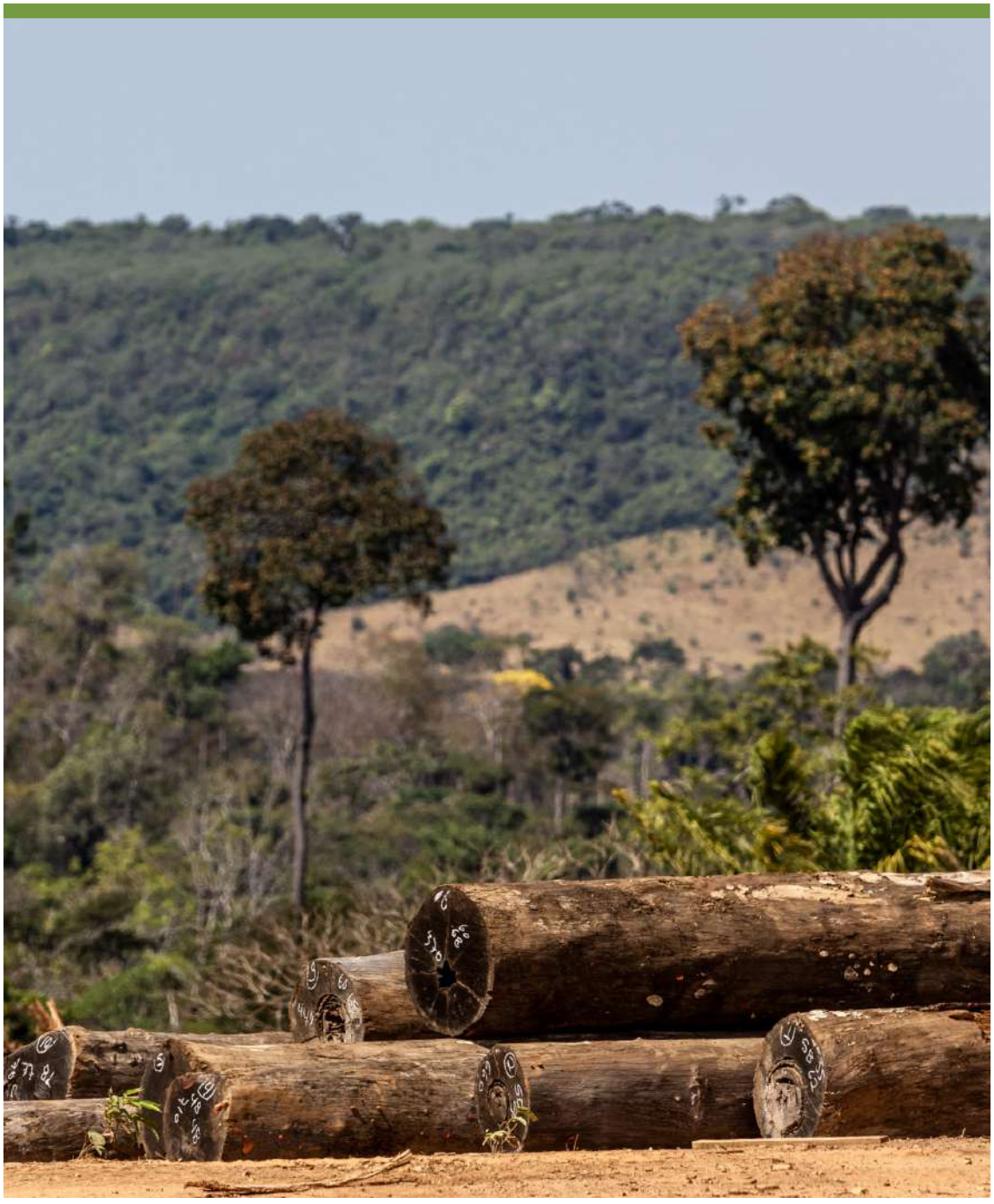
In addition to enhancing existing monitoring systems to support inspection activities, transparent systems will be developed for the monitoring of supply chains by buyers of products at risk of being involved in illegal deforestation. To this end, a traceability system for agricultural products in the Amazon will be developed (5.2.1) and the wood traceability module of the National System for Controlling the Source of Forest Products (Sinaflor) will be implemented (5.2.5), which will be public, universal and transparent considering the guidelines of the General Data Protection Law - LGPD (Law 13709, 2018). The databases of CAR, Sinaflor, tax documents (e.g. NF-e) and sanitary documents (e.g. Animal Transit Guide) will also be integrated to reduce the risk of fraud in the respective systems. Lastly, a system will be set up to automatically monitor compliance with

rural property embargoes using high-resolution satellite imagery and data intelligence (5.2.3). This axis will also support community initiatives for monitoring, management and environmental protection of the territories (5.3.1) and establish community monitoring networks through economic incentives (5.3.2). The maximum possible integration of data from the Amazon states with federal data on authorization for vegetation suppression and land use notices and embargoes within the scope of SICAR and SINAFLOR will be fundamental for meeting the goals and targets of the PPCDAm.

This axis also provides for the development of specific systems for preventing and fighting forest fires. To this end, a Federal Brigades Program will be created (6.1.1), the National Integrated Fire Management Policy will be implemented with a focus on forest fire prevention (6.1.2) and aerial means will be provided for the prevention and combating of fires in remote areas (6.1.5). To punish those responsible for arson, the investigation of the causes and origins of fires will be reinforced (6.1.3) and the Integrated Multi-Agency Center for Operational and Federal Coordination (Ciman) will be strengthened (6.1.4).

It is also important that there is greater control and that environmental information on rural properties is improved, enabling better verification of compliance with the requirements of the Forest Code and the application of possible sanctions to those responsible. In fact, although all states are well advanced in the stage of registration of rural properties in the CAR, with more than 6.8 million properties registered throughout the country, the stage of analysis and validation of registrations, fundamental for the verification of environmental liabilities that will require regularization - either through the Environmental Regularization Programs or otherwise -, needs to progress at a faster pace. As a result, it is necessary to direct efforts to suspend and/or cancel CAR registrations overlapping with these areas (currently, more than 140 thousand registrations overlapping with FPND are currently active, totaling an area with strong evidence of land grabbing of more than 27 million hectares) and protected areas and to expand inspection and punish irregularities (7.1.1 and 7.1.2). In this context, improvement of the dynamic analysis is also planned, based on the production of base maps with high-resolution images that allow the automation of processes (7.2.4 and 7.2.5). In addition, the integration of Sicar with other databases - such as GTAs, Forest Origin Documents (DOF), vegetation suppression authorizations (ASV), alternative land use authorizations (AUS) and authorizations for sustainable forest management - will be promoted to improve the transparency of production chains (7.2.3).

In the process of implementing the PPCDAm, the federal government will seek to work in a more integrated manner with the states of the Legal Amazon. To do so, the plan will work with state land institutes, health defense agencies and state environmental agencies to promote data integration (8.1.1), support the review, implementation and monitoring of state deforestation control plans (8.1.2), promote coordination with states and municipalities to support the fight against forest fires and burn-offs (8.1.3) and participate in informational and educational campaigns on air pollution from forest fires and burn-offs (8.1.4).



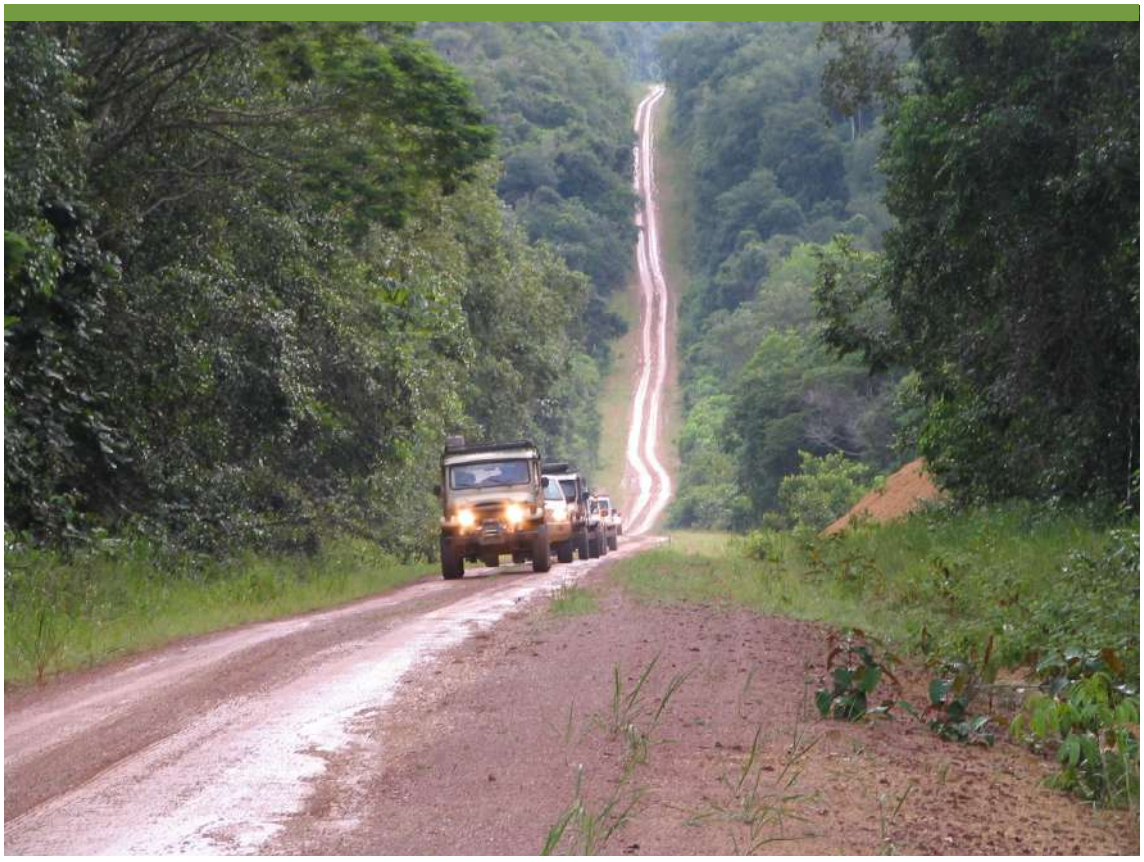
Illegal deforestation. Photo: Ibama

5.3. Axis III - Land and territorial planning

The land and territorial planning of the Amazon, by defining and promoting the rights of access to land and proposing guidelines for the occupation and use of the territory on a sustainable basis, has strong potential to contain the dynamics of deforestation in the region, strengthening the presence of the State to curb still persistent practices of land grabbing of public land, disorderly exploitation of natural resources and impunity for environmental crimes in the region.

With this context in mind, the PPCDAm will strengthen, in its new phase, land and territorial planning efforts in the Amazon, especially in parts of the region that concentrate the highest rates of deforestation, based on the achievement of three goals:

- **Goal 9.** Ensuring the distribution and protection of undesignated public land;
- **Goal 10.** Expanding and strengthening the management of protected areas;
- **Goal 11.** Aligning the planning of large infrastructure projects and development with national deforestation reduction targets;



Amazon National Park. Photo: ICMBio

First, it is necessary to make progress in identifying vacant lands still existing in the Legal Amazon and listing them as Union's property (9.1.1) and in qualifying information on land ownership and possession, structuring an integrated system to overcome the dispersion of existing databases, which makes it difficult to make decisions regarding compliance with the legal requirements for legitimizing rights (9.1.2 and 9.1.3).

At the same time, the persistence of a significant contingent of more than 60 million hectares of undesignated public forests (FPND) in the Amazon has hampered the management of these spaces, opening opportunities for irregular occupation of public assets. Thus, it is essential to resume the procedures for the distribution of FPND (9.2.3) within the Technical Chamber for the Distribution and Land Regularization of Federal Rural Public Lands (9.2.1).

In addition, the fifth phase of the PPCDAm will seek to strengthen the important role of protected areas in containing deforestation - combined with their primary function of recognizing the rights of indigenous peoples and traditional communities over the lands they traditionally occupy and protecting and conserving biodiversity. In the case of nature conservation units, in addition to the creation of areas representative of regional ecosystems, especially in places under pressure due to the advance of the agricultural frontier (10.1.2), the main challenge lies in territorial consolidation and strengthening their management, implementing the instruments listed in the National System of Nature Conservation Units (SNUC), provided for in Law 9985/2000 (10.1.1, 10.1.3 and 10.1.4).

The recent creation of the Ministry of Indigenous Peoples (MPI) demonstrates the need to resume the processes of identification, delimitation, demarcation, confirmation and regularization of indigenous lands (10.2.1), concomitantly with the withdrawal of irregular occupations (with special attention to the Yanomami TIs, in the states of Roraima and Amazonas, and Kayapó, Munduruku and Sawré Muybu, in the state of Pará) (10. 2.3) and strengthening the management, protection and territorial control of these areas, through the preparation and implementation of the Plans for Territorial and Environmental Management in Indigenous Lands provided for in the National Policy for Territorial and Environmental Management in Indigenous Lands (PNGATI), established by Decree 7747/2012 (10.2.5).

In addition to land use planning and the strengthening of protected areas, it is essential to understand that the occupation and use of the territory and its natural resources must take place in a planned manner, making socioeconomic development compatible with the protection and conservation of ecosystems and the services they provide. It is necessary that the initiatives to elaborate and review the Ecological-Economic Macrozoning (MacroZEE) of the Legal Amazon (10.3.1) and the ecological-economic zoning of the states of the Legal Amazon (10.3.2) are able to provide guidelines and criteria to support decision-making processes based on the vulnerabilities and aptitudes of the territory, especially in the case of environmental licensing of large infrastructure projects in the Amazon with the potential to increase illegal deforestation and land grabbing. These instruments must be integrated with other initiatives and public policies to contribute to preventing and mitigating the impacts resulting from the disorderly occupation of significant parts of the Amazon region, especially those resulting from the advance of the agricultural frontier and the implementation of large infrastructure projects and enterprises.

Regarding the latter aspect, considering also the national commitments to reduce deforestation, the objective is to improve decision-making on major infrastructure projects affecting the region, strengthening the prior assessment of the economic and environmental viability of these projects (11.1.1) and implementing a territorial governance strategy capable of preventing and mitigating deforestation and greenhouse gas emissions resulting from changes in territorial dynamics in the area of influence of major infrastructure projects and enterprises (11.1.4).

Tucuruí/PA Hydroelectric Plant. Photo: Diego Pereira

5.4. Axis IV - Rules and economic instruments

In 2016, the federal government began discussions with civil society and other government sectors to develop the PPCDAm's rules and economic instruments axis. The goal was, on the one hand, to create a space for institutional discussion for the improvement and compatibility of use and conservation rules applicable to the context of the Legal Amazon and, on the other hand, to expand the agenda of positive incentives to reduce deforestation.

Axis IV is derived from PPCDAm's Goal 12, which is to create, improve and implement rules and economic instruments for deforestation control and implement the action guidelines of the other axes of the plan.

In the matter of regulation, one of the first challenges is to review and update Decree 6321/2007, which provides for the policy of priority municipalities for deforestation prevention, monitoring and control in the Amazon biome (12.14.1 and 12.14.2). In addition to reviewing the criteria for entry and exit from the list, other measures can be improved, such as (i) new restrictive measures in highly critical municipalities and the publication of the positive list of rural properties with monitored vegetation cover and (ii) the regulation of economic and fiscal incentives linked to achieving results in reducing deforestation.

Another important measure is the coordination for the approval of the Bill that establishes the National Policy for Integrated Fire Management, which is in the final stage of processing in the National Congress (12.11.1). The proposal aims to reduce the incidence and damage of forest fires in the country and restore the ecological and cultural role of fire. Through interinstitutional coordination for integrated fire management, the project foresees actions that go beyond preventing and fighting forest fires, such as environmental education, the use of fire through prescribed and controlled fires, the dissemination of alternatives to the use of fire, accountability for the inappropriate use of fire and the recovery of areas affected by fires. The proposal under discussion considers the fact that tackling forest fires requires structuring and preparing local, regional and national institutions, as well as cooperation and coordination between federal agencies, civil society organizations and private entities for the implementation of integrated fire management.

Other regulatory improvements should be proposed to make the work of inspection agencies more efficient, regulate the socio-environmental impacts of economic activities, encourage and guarantee sustainable production in the territories of indigenous peoples and traditional communities, and contribute to achieving the goal of zero deforestation by 2030.

Regarding economic incentives, it is important to advance in the effective remuneration of the provision of environmental services and attribution of economic value to the country's environmental assets as a strategic measure to accelerate the reduction of deforestation. The regulation of Law 14119, 13 January 2021, which establishes the National Policy for Environmental Services - PNPSA (12.12.1), should contribute to this process by establishing an implementation arrangement with participatory governance, management mechanisms and transparency of information on projects and socio-environmental safeguards. In addition, progress in the regulation of the Brazilian carbon market (12.13.1 and 12.13.2) could generate opportunities for the country, stimulating economic sectors and strengthening society's commitments to environmental protection and climate change mitigation.

Another strategic course of action is to raise the sustainability standard of rural credit. The Crop Plan for Family Agriculture and the Crop Plan are the most important financing instruments for rural producers and should contribute to the objectives of deforestation prevention and control. It is necessary, on the one hand, a course of action that strengthens the restriction of credit by those who adopt illegal practices such as unauthorized deforestation (12.4.3); on the other hand, robust and additional incentives should be created for producers engaged in the environmental regularization process, which should be understood as a journey, in which the progress made in stages is supported and compensated (12.4.2). In addition, along with the recognition of environmental regularization and sustainable practices on the property, such as low carbon agriculture practices (ABC), it is also necessary to make progress towards rewarding initiatives in the landscape and in production chains.

In relation to economic instruments, one of the main challenges for sustainable production is the establishment of an incentive structure that recognizes implementation costs and values positive externalities. Sectors such as the bioeconomy and activities such as sustainable forest management, which have innovative characteristics and high sustainability standards, require a set of tax, credit and marketing incentives for scale gains that prevent unfair competition from sectors that do not internalize or only partially internalize their environmental costs. In this sense, it is necessary to advance in the design of policies and programs, in the regulation and review of rules that stimulate the economic sectors that protect the forest (12.3.1 - 12.3.6).

This axis also proposes the coordination of incentives and instruments. One of the main goals of the PPCDAm is to promote coordination and synergy between public policy instruments to expand their reach and territorial benefit. As an example, in the context of forest policy, the Amazon Fund is the main mechanism for financing structuring projects and actions (12.1.1-12.1.2). Nevertheless, other funds - such as the National Fund for Climate Change , the National Fund for Forest Development (FNDF), the National Fund for Benefit Sharing (FNRB), the National Environment Fund (FNMA), the Fund for the Defense of Diffuse Rights (FDD), the National Fund for Scientific and Technological Development (FNDCT) and the Northeast Financing Constitutional Fund (FNO) - can also provide resources to enable initiatives to protect natural ecosystems, foster sustainable economic activities and promote environment and social justice (12.1.4). As such, coordinated actions between financing funds, initiatives with combinations of resources and instruments (12.3.5) and other innovations that expand the scope of the action guidelines in the axes and contribute to more effective results in reducing deforestation will be encouraged.

Aerial view of Manaus. Photo: MMA

6. LITERATURE

AMIN, A. et al. Neighborhood effects in the Brazilian Amazônia: Protected areas and deforestation, **Journal of Environmental Economics and Management**, vol. 93, 2019, p. 272-288, ISSN 0095-0696, 2019. Available at: https://doi.org/10.1016/j.jeem.2018.11.006. Access on: 15 Apr. 2023.

ASSUNÇÃO, J.; GANDOUR, C.; ROCHA, R. Deforestation slowdown in the Brazilian Amazon: prices or policies? **Environment and Development Economics**, 20, no. 6, 2015, p. 697-722.

AZEVEDO, Andrea et al. Limits of Brazil's Forest Code as a means to end illegal deforestationº **Proc. Natl. Acad. Sci U S A.**, 114, 2017, p. 7653–7658. doi: 10.1073/pnas.1604768114

AZEVEDO, T.; ROSA, et al. **RAD 2021**: Relatório Anual do Desmatamento no Brasil. São Paulo: Mapbiomas, 2022. 126p. Available at http://alerta.mapbiomas.org. Access on: 20 Mar. 2023.

AZEVEDO-RAMOS, Claudia; MOUTINHO, Paulo. No man's land in the Brazilian Amazon: Could undesignated public forests slow Amazon deforestation? **Land use policy**, 73, p. 125-127, 2018.

BRITO, Brenda et al. Stimulus for land grabbing and deforestation in the Brazilian Amazonº **Environmental Research Letters**, 14, nº 6, 2019.

CARRERO, G. C. et al. **Deforestation trajectories on a development frontier in the Brazilian Amazon: 35 years of settlement colonization, policy and economic shifts, and land accumulationº Environmental management**, v. 66, nº 6, p. 966-984, 2020.

COSTA, F. G., CAIXETA-FILHO, J. V., & ARIMA, E. Influência do transporte no uso da terra: o potencial de viabilização da produção de soja na Amazônia Legal devido ao desenvolvimento da infra-estrutura de transportes. **Revista de Economia e Sociologia Rural**, 39(2), p. 27-50, 2019.

GATTI, L. V. et al. Amazonia as a carbon source linked to deforestation and climate change. **Nature**, 595, p. 388–393, p. 2021.

GIBBS, H. K. et al. Brazil's soy moratorium. **Science**, 347(6220), p. 377-378, 2015.

GRAF, R. **Política Ambiental Transversal:** Experiências na Amazônia Brasileira. Campinas: Unicamp, 2005.

JARDIM, T. et al. **Relatório de avaliação da execução de programas de governo nº 69**. Ações relativas à fiscalização ambiental sob responsabilidade do Ibama. Brasília: CGU, 2017. 91p.

KLINGLER, Michael; RICHARDS, Peter D.; ROSSNER, Romanº Cattle vaccination records question the impact of recent zero-deforestation agreements in the Amazonº R**egional Environmental Change**, 18, p. 33-46, 2018.

LAPOLA, D. et al. 2023. The drivers and impacts of Amazon forest degradationº **Science**, 379. eabp8622. Available at: https://doi.org/10.1126/science.abp8622. Access on: 8 Mar. 2023.

LEITE-FILHO, A.T. et al. Deforestation reduces rainfall and agricultural revenues in the Brazilian Amazonº **Nat Commun**, 12, 2591, 2021. Available at: https://doi.org/10.1038/s41467-021-22840-7. Access on: 20 Feb. 2023.

PEREIRA, R.; RAUSCH, L. L.; CARRARA, A.; GIBBS, H. K. Extensive Production Practices and Incomplete implementation hinder Brazil's zero-deforestation cattle agreements in Para. **Tropical Conservation Science**, 2020, Jul;13:1940082920942014.

PFAFF, A.; ROBALINO, J.; HERRERA, D.; SANDOVAL, C. Protected Areas' Impacts on Brazilian Amazon Deforestation: Examining Conservation – Development Interactions to Inform Planning. **Plos One**, 10(7), 2015. Available at: https://doi.org/10.1371/journal.pone.0129460. Access on: 12 Feb. 2023.

RAJÃO, R. et al. **The rotten apples of Brazil's agribusiness**. *Science*, v. 369: 6501, pp. 246-248. DOI: 10.1126/science.aba6646. 2020. Available at https://www.science.org/ doi/10.1126/science.aba6646. Access on: 16 Jan. 2023.

RAMOS, A. Influência do PPCDAm no combate ao desmatamento na Amazônia Legal brasileira. **Innovation and Technological Development**, v. 1, nº 1, p. 99-122, 2020.

REIS, E. J.; GUZMAN, R. M. **An Econometric Model of Amazon Deforestation**º Brasília: Ipea, 2015. 38 p.

RODRIGUES, Marcos; CORREIA-SILVA, David Costa; CAMPOS, Índio; FARIA, Alexandre Magno de Melo. The role of market institutions in reducing Amazon deforestation: the case of the soy moratorium. **Economic Analysis of Law Review**, 8, nº 1, 2017, p. 248-263.

SKIDMORE, Marin Elisabeth et al. Cattle ranchers and deforestation in the Brazilian Amazon: Production, location, and policies. **Global Environmental Change**, 68, 2021.

VALDIONES, A. P; BERNASCONI, P.; SILGUEIRO, V. et al. **Desmatamento Ilegal na Amazônia e no Matopiba**: falta transparência e acesso à informação. Março de 2021. Publicação eletrônica. Available at: https://wwfbrnew.awsassets.panda.org/downloads/desmatamento_ilegal_na_amazonia_e_no_matopiba___estudo_completo.pdf. Access on: 13 Apr. 2023.

WEST, T. A. P.; FEARNSIDE, P. M. Brazil's conservation reform and the reduction of deforestation in Amazonia. **Land Use Policy**, v. 100, p. 105072, 2021.

Other documents referred to

AGRIANUAL. **Anuário da agricultura brasileira**. São Paulo: FNP, 2020.

BRASIL. Ministério do Meio Ambiente (MMA). **Plano de Ação para Prevenção e Controle do Desmatamento na Amazônia Legal (PPCDAm)**. Brasília: MMA, 2004. 156 p.

BRASIL. Ministério do Meio Ambiente (MMA). **Plano de Ação para Prevenção e Controle do Desmatamento na Amazônia Legal (PPCDAm)**: 2ª fase (2009-2011) Rumo ao Desmatamento Ilegal Zero. Brasília: MMA, 2009. 165p.

BRASIL. Ministério do Meio Ambiente (MMA). **Plano de Ação para prevenção e controle do desmatamento na Amazônia Legal (PPCDAm)**: 3ª fase (2012-2015) Pelo Uso Sustentável e Conservação da Floresta. Brasília: MMA, 2013. 174p.

BRASIL. Ministério do Meio Ambiente (MMA). **Plano de Ação para Prevenção e Controle do Desmatamento na Amazônia Legal (PPCDAm)**: 3ª fase (2012-2015) Pelo Uso Sustentável e Conservação da Floresta. Brasília: MMA, 2013. 174p.

BRASIL. Ministério do Meio Ambiente (MMA). **Plano Nacional de Adaptação à Mudança do Clima**: estratégia geral, volume 1: Brasília: MMA, 2016. 44p.

BRASIL. Ministério do Meio Ambiente (MMA). **Plano de Ação para Prevenção e Controle do Desmatamento e das Queimadas no Cerrado (PPCerrado) e Plano de Ação para prevenção e controle do Desmatamento na Amazônia Legal (PPCDAm): fase 2016-2020**. Brasília: MMA, 2018. 3v.

BRASIL. Ministério do Meio Ambiente (MMA). **Balanço de Execução 2018 – PPCDAm e PPCerrado 2016-2020**. Brasília: MMA, 2019. 101p.

Brasil. Ministério do Meio Ambiente (MMA). **Plano Nacional para o Controle do Desmatamento Ilegal e Recuperação da Vegetação Nativa (2020-2023)**. Brasília. MMA, 2020, 29p.

BRASIL. Ministério do Meio Ambiente (MMA). **Balanço de Execução 2019 – PPCDAm e PPCerrado 2016-2020**. Brasília: MMA, 2020b. 107p.

BRASIL. Ministério do Meio Ambiente (MMA). Ibama. **Relatório de Gestão do Exercício de 2010**. Brasília: MMA, 2011. 229p.

BRASIL. Ministério do Meio Ambiente (MMA). ICMBio. **Relatório de Gestão do Exercício de 2010**. Brasília: MMA, 2011. 147p.

BRASIL. Ministério do Meio Ambiente (MMA). ICMBio. **Relatório de Gestão do Exercício de 2016**. Brasília: MMA, 2017, 88p.

FÓRUM NACIONAL DE SEGURANÇA PÚBLICA **Cartografias das Violências na Região Amazônica: Relatório Final**. Fórum Nacional de Segurança Pública – FNSP, Instituto Clima e Sociedade – ICS e Universidade Estadual do Pará – UEPA. 2022. Available at: https://forumseguranca.org.br/wp-content/uploads/2022/03/violencia-amazonica-relatorio-final-web.pdf. Access on: 18 Feb. 2023.

INSTITUTO IGARAPÉ. Amazônia no Alvo. **Instituto Igarapé**, 2023. Available at: https://igarape.org.br/amazonia-no-alvo-aumento-do-numero-de-armas-de-fogo-e-mortes-e-mais-intenso-na-amazonia-legal-do-que-no-resto-do-pais-revela-estudo-do-instituto-igarape/. Access on: 15 Apr. 2023.

INSTITUTO IGARAPÉ. O ecossistema do crime ambiental na Amazônia: uma análise das

economias ilícitas da floresta. **Instituto Igarapé**, 2022. Available at: https://igarape.org.br/wp-content/uploads/2022/02/AE-54-O-ecossistema-do-crime-ambiental-na-Amazonia.pdf. Access on: 9 Feb. 2023.

INSTITUTO IGARAPÉ. Territórios e caminhos do crime ambiental na Amazônia Brasileira: da floresta às demais cidades do país. **Instituto Igarapé**, 2022. Available at: https://igarape.org.br/wp-content/uploads/2022/07/2022-07-AE-territorios-e-caminho-do-crime-ambiental-amazonia-brasileira.pdf . Access on: 30 Jan. 2023.

INSTITUTO IGARAPÉ; INSTITUTO SOBERANIA E CLIMA; FÓRUM BRASILEIRO DE SEGURANÇA PÚBLICA. Governar para não entregar: uma agenda de segurança multidimensional para a Amazônia brasileira. **Instituto Igarapé**, 2022. Available at: https://igarape.org.br/wp-content/uploads/2022/09/Agenda-de-Seguranca-Multidimensional-para-a-Amazonia.pdf. Access on: 23 Mar. 2023.

LEGISLATIVE DOCUMENTS

Standard Law and Complementary Law

BRASIL. **Lei nº 11.952, de 25 de junho de 2009. Dispõe sobre a regularização fundiária das ocupações incidentes em terras situadas em áreas da União, no âmbito da Amazônia Legal; altera as Leis nos 8.666, de 21 de junho de 1993, e 6.015, de 31 de dezembro de 1973; e dá outras providências**. Brasília: Diário Oficial da União, 26 de junho de 2009. Available at https://www.planalto.gov.br/ccivil_03/ _ato2007-2010/2009/lei/L11952 complilado.htm. Access on: 28 Dec. 2022.

BRASIL. **Lei nº 12.187, de 29 de dezembro de 2009. Institui a Política Nacional sobre Mudança do Clima – PNMC e dá outras providências**. Brasília: Diário Oficial da União, 30 de dezembro de 2009 – Edição extra. Brasília: Diário Oficial da União, 30 de dezembro de 2009. Available at https://www.planalto.gov.br /ccivil_03/_ato2007-2010/2009/lei/l12187.htm. Access on: 13 Apr. 2023.

BRASIL. **Lei nº 12.651, de 25 de maio de 2012. Dispõe sobre a proteção da vegetação nativa; altera as Leis n.s 6.938, de 31 de agosto de 1981, 9.393, de 19 de dezembro de 1996, e 11.428, de 22 de dezembro de 2006; revoga as Leis n.s 4.771, de 15 de setembro de 1965, e 7.754, de 14 de abril de 1989, e a Medida Provisória nº 2.166-67, de 24 de agosto de 2001; e dá outras providências**. Brasília: Diário Oficial da União, 28 de maio de 2012. Available at http://www.planalto.gov.br/ ccivil_03/_ato2011-2014/2012/lei/l12651.htm. Access on: 14 May 2023.

BRASIL. **Lei nº 13.465, de 11 de julho de 2017. Dispõe sobre a regularização fundiária rural e urbana, sobre a liquidação de créditos concedidos aos assentados da reforma agrária e sobre a regularização fundiária no âmbito da Amazônia Legal; institui mecanismos para aprimorar a eficiência dos procedimentos de alienação de imóveis da União; altera as Leis n os 8.629, de 25 de fevereiro de 1993 , 13.001, de 20 de junho de 2014 , 11.952, de 25 de junho de 2009, 13.340, de 28 de setembro de 2016, 8.666, de 21 de junho de 1993, 6.015, de 31 de dezembro de 1973, 12.512, de 14 de outubro de 2011, 10.406, de 10 de janeiro de 2002 (Código Civil), 13.105, de 16 de março de 2015 (Código de Processo Civil), 11.977, de 7 de julho de 2009, 9.514, de 20 de novembro de 1997, 11.124, de 16 de junho de 2005, 6.766, de 19 de dezembro de 1979, 10.257, de 10 de julho de 2001, 12.651, de 25 de maio de 2012, 13.240, de 30 de dezembro de 2015, 9.636, de 15 de maio de 1998, 8.036, de 11 de maio de 1990, 13.139, de 26 de junho de 2015, 11.483, de 31 de maio de 2007, e a 12.712, de 30 de agosto de 2012, a Medida Provisória nº 2.220, de 4 de setembro de 2001, e os Decretos-Leis n º 2.398, de 21 de dezembro de 1987, 1.876, de 15 de julho de 1981, 9.760, de 5 de setembro de 1946, e 3.365, de 21 de junho de 1941; revoga dispositivos da Lei Complementar nº 76, de 6 de julho de 1993, e da Lei nº 13.347, de 10 de outubro de 2016; e dá outras providências**. Brasília: Diário Oficial da União,

12 de julho de 2017, consolidado em 8 de setembro de 2017. Available at https://www.planalto.gov.br/ccivil_03/ _ato2015-2018/2017/lei/l13465.htm. Access on: 19 Mar. 2023.

BRASIL. **Lei nº 14.119, de 13 de janeiro de 2021. Institui a Política Nacional de Pagamento por Serviços Ambientais; e altera as Leis nº 8.212, de 24 de julho de 1991, 8.629, de 25 de fevereiro de 1993, e 6.015, de 31 de dezembro de 1973, para adequá-las à nova política**. Brasília: Diário Oficial da União, 14 de janeiro de 2021. Available at https://www.in.gov.br/en/web/dou/-/lei-n-14.119-de-13-de-janeiro-de-2021-298899394. Access on: 7 Feb. 2023.

Brasil. **Lei nº 4.771, de 15 de setembro de 1965**. Institui o novo Código Florestal (REVOGADA). Brasília: Diário Oficial da União, 16 de setembro de 1965, retificado em 28 de setembro de 1965. Available at https://www.planalto.gov.br/ccivil_03/ leis/l4771.htm. Access on: 29 Apr. 2023.

BRASIL. **Lei nº 9.605, de 12 de fevereiro de 1998. Dispõe sobre as sanções penais e administrativas derivadas de condutas e atividades lesivas ao meio ambiente e dá outras providências**. Brasília: Diário Oficial da União, 13 de fevereiro de 1998 e retificado em 17 de fevereiro de 1998. Available at https://www.planalto.gov.br/ccivil_03/leis/ l9605.htm. Access on: 11 May 2023.

BRASIL. **Lei nº 9.985, de 18 de julho de 2000. Regulamenta o art. 225, § 1o, incisos I, II, III e VII da Constituição Federal, institui o Sistema Nacional de Unidades de Conservação da Natureza e dá outras providências**. Brasília: Diário Oficial da União, 19 de julho de 2000. Available at http://www.planalto.gov.br/ccivil_03/leis/l9985.htm. Access on: 2 Mar. 2023.

BRASIL. **Lei Complementar nº 140, de dezembro de 2011. Fixa normas, nos termos dos incisos III, VI e VII do caput e do parágrafo único do art. 23 da Constituição Federal, para a cooperação entre a União, os Estados, o Distrito Federal e os Municípios nas ações administrativas decorrentes do exercício da competência comum relativas à proteção das paisagens naturais notáveis, à proteção do meio ambiente, ao combate à poluição em qualquer de suas formas e à preservação das florestas, da fauna e da flora; e altera a Lei nº 6.938, de 31 de agosto de 1981**. Brasília: Diário Oficial da União, 9 de dezembro de 2012. Available at http://www.planalto.gov.br/ccivil_03/leis/LCP/Lcp140.htm. Access on: 30 Apr. 2023.

Decrees

BRASIL. **Decreto s/n de 2003, que instituiu o GPTI e transferiu em 2020 o papel de articulador interministerial da política de controle ao desmatamento ao Conselho da Amazônia presidido pela Vice-Presidência da República** (REVOGADO). Brasília: Diário Oficial da União, 7 de julho de 2003. Available at http://www.planalto.gov.br/ ccivil_03/dnn/2003/dnn9922.htm. Access on: 11 Janº 2023.

BRASIL. **Decreto nº 6.321, de 21 de dezembro de 2007. dispõe sobre a política de municípios prioritários para a prevenção, monitoramento e controle do desmatamento no bioma Amazônia. Brasília: Diário Oficial da União, 21 de dezembro de 2007 – Edição Extra**. Available at http://www.planalto.gov.br/ccivil_03/_ato2007-010/2007/ decreto/d6321.htm. Access on: 26 Feb. 2023.

BRASIL. **Decreto nº 10.142, de 28 de novembro de 2019. Institui a Comissão Executiva para Controle do Desmatamento Ilegal e Recuperação da Vegetação Nativa** (REVOGADO). Brasília: Diário Oficial da União, 29 de novembro de 2019. Available at http://www.planalto.gov.br/ccivil_03/_ato2019-2022/2019/decreto/D10142.htm. Access on: 15 Dec. 2022.

BRASIL. **Decreto nº 10.239, de 11 de fevereiro de 2020. Dispõe sobre o Conselho Nacional da Amazônia Legal** (REVOGADO). Brasília: Diário Oficial da União, 2 de fevereiro de 2020. Available at http://www.planalto.gov.br/ccivil_03/_ato2019-2022/2020/decreto/d10239.htm. Access on: 3 Janº 2023.

BRASIL. **Decreto nº 10.341, de 6 de maio de 2020. Autoriza o emprego das Forças Armadas na Garantia da Lei e da Ordem e em ações subsidiárias na faixa de fronteira, nas terras indígenas, nas unidades federais de conservação ambiental e em outras áreas federais nos Estados da Amazônia Legal** (REVOGADO). Brasília: Diário Oficial da União, 7 de maio de 2020. Available at http://www.planalto.gov.br/ccivil_03/_ato2019-2022/2020/decreto/d10341.htm. Access on: 6 May 2023.

BRASIL. **Decreto nº 11.367, de 1.º de janeiro de 2023. Institui a Comissão Interministerial Permanente de Prevenção e Controle do Desmatamento, restabelece o Plano de Ação para a Prevenção e Controle do Desmatamento na Amazônia Legal – PPCDAm, e dispõe sobre os Planos de Ação para a Prevenção e Controle do Desmatamento no Cerrado, na Mata Atlântica, na Caatinga, no Pampa e no Pantanal**. Brasília: Diário Oficial da União, 2 de janeiro de 2023 – Edição extra. Available at http://www.planalto.gov.br/ccivil_03/_ato2023-2026/2023/decreto/D11367.htm. Access on: 12 Mar. 2023.

BRASIL. **Projeto de Lei nº 1.818, de 2022. Institui a Política Nacional de Manejo Integrado do Fogo; e altera as Leis n.s 7.735, de 22 de fevereiro de 1989, 12.651, de 25 de maio de 2012 (Código Florestal), e 9.605, de 12 de fevereiro de 1998**. Available at https://www25.senado.leg.br/ web/atividade/materias/-/materia/153865. Access on: 8 Feb. 2023.

Other rules and regulations

BRASIL. **Medida Provisória nº 910, de 10 de dezembro de 2019. Altera a Lei nº 11.952, de 25 de junho de 2009, que dispõe sobre a regularização fundiária das ocupações incidentes em terras situadas em áreas da União, a Lei nº 8.666, de 21 de junho de 1993, que institui normas para licitações e contratos da administração pública, e a Lei nº 6.015, de 31 de dezembro de 1973, que dispõe sobre os registros públicos**. Brasília: Diário Oficial da União, 11 de dezembro de 2019. (NO LONGER EFFECTIVE). Available at https://www.planalto.gov.br/ccivil_03/_ato2019-2022/2019/mpv/mpv910.htm. Access on: 9 Dec. 2022.

BRASIL. **Medida Provisória nº 1.511, de 25 de julho de 1996. Dá nova redação ao art. 44 da Lei nº 4.771, de 15 de setembro de 1965, e dispõe sobre a proibição do incremento da conversão de áreas florestais em áreas agrícolas na região Norte e na parte Norte da região Centro-Oeste, e dá outras providências**. Brasília: Diário Oficial da União, 26 de julho de 1996 (NO LONGER EFFECTIVE). Available at https://www.planalto.gov.br/ccivil_03/mpv/antigas/1511.htm#:~:text=1511&text=MEDIDA%20PROVIS%C3%93RIA%20No%201.511%2C%20DE%2025%20DE%20JULHO%20DE%201996.&text=D%C3%A1%20nova%20reda%C3%A7%C3%A3o%20ao%20art,Oeste%2C%20e%20d%C3%A1%20outras%20provid%C3%AAncias. Access on: 4 Apr. 2023.

BRASIL. Ministério do Meio Ambiente (MMA). **Resolução nº 4, de 23 de junho de 2020. Aprova o Relatório do Plano de Ação para Prevenção e Controle do Desmatamento na Amazônia Legal (PPCDAm) e o Plano de Ação para Prevenção e Controle do Desmatamento e das Queimadas no Cerrado (PPCerrado) 2019, o encerramento do PPCDAm e do PPCerrado e o Plano Nacional para Controle do Desmatamento Ilegal e Recuperação da Vegetação Nativa**.

BRASIL. Ministério do Meio Ambiente (MMA). **Resolução nº 5, de 18 de novembro de 2020. Aprova o Plano Operativo para Controle do Desmatamento Ilegal e Recuperação da Vegetação Nativa (2020-2023)**.

ANNEX I - Summary Table of strategic goals, expected results and action guidelines

Summary Table Axis I – Sustainable Production		
Strategic Goals	**Expected results**	**Action Guidelines**
Goal 1. Stimulate sustainable production	1.1 Expanding and strengthening the bioeconomy, sociobiodiversity, agroecology and agroecological transition in the Amazon	1.1.1. Design and implement the National Bioeconomy Development Plan linked to existing instruments (e.g. Biodiversity Law, National Biofuel Policy - Renovabio, Biosafety Law) (MMA/MDA/MDIC) 1.1.2. Develop Bioeconomy and Regional Development Program (MIDR/MMA/MCTI/MDIC/Censipam – MD) 1.1.3. Support sustainable socio-productive inclusion projects for indigenous peoples, traditional peoples and communities, family and rural agriculture and community enterprises, valuing socio-biodiversity product chains (MMA/MDA/MAPA/MPI/MD/MDIC/Censipam – MD/MEC) 1.1.4. Develop and implement programs to support micro and small business and community-based enterprises and enable access to technological development applied to sustainable business (MMA/MDIC/MAPA/MCTI/MDIC/Censipam – MD/MEC) 1.1.5. Promote and strengthen research networks for the development and application of new technologies and social technologies aimed at socio-biodiversity chains and agroecological products with a focus on native species (MMA/MAPA/MCTI/MDA/MDIC/Censipam – MD/MEC) 1.1.6. Adapt and strengthen government procurement policies and programs (PAA, PNAE, PGPM, PGPM-Bio and Family Farming Seal), increasing purchases of agroecological and socio-biodiversity products and expanding access for indigenous peoples, traditional peoples and communities, family and rural farming and community enterprises (MDA/MDS/MPI/MMA/MDIC/MEC) 1.1.7. Recreate the management committee and strengthen and expand the Minimum Price Guarantee Policy for Sociobiodiversity Products (PGPM-Bio) (MMA/MDA/MF) 1.1.8. Implement environment and social technical assistance and rural extension (ATER) programs and production certification for indigenous peoples, traditional peoples and communities, family and rural farming and community enterprises, valuing traditional knowledge, adapting and strengthening the Extractivist Pronatec (MDA/MMA/MPI/MEC) 1.1.9. Create economic instruments and/or adapt existing ones (e.g. fiscal stimuli, payment for environmental services) to foster community-based bioeconomy (MF/MMA/MDIC/MEC) 1.1.10. Improve the CafWeb system to expand enrollment in the Family Farming Registry (CAF) with integration to CAR and Incra land systems (MDA/MMA)

Summary Table Axis I – Sustainable Production		
Strategic Goals	**Expected results**	**Action Guidelines**
Goal 1. Stimulate sustainable production	1.1 Expanding and strengthening the bioeconomy, sociobiodiversity, agroecology and agroecological transition in the Amazon	1.1.11. Propose a new classification of bioeconomy activities in research instruments (CNAE, COD, etc.) and map public and civil organizations focused on RD&I and technical training (Ecorregional Centers, Rural Family House, etc.) (MF/MMA/MDIC) 1.1.12. Strengthen community-based organizations for the improvement, designing and implementation of public policies and related projects (MMA) 1.1.13. Create a program of work fronts, hubs and reforestation districts in the Amazon (MMA/MDIC/MTE) 1.1.14. Develop National Integration Routes based on agroforestry systems (SAFs) (Cocoa, Acai Berry, Biodiversity) (MIDR/MAPA/MDIC/Censipam – MD) 1.1.15. Promote sustainable fishing management, in particular the management of pirarucu, focusing on the production of a protein source for self-consumption, income generation, monitoring and territorial management (MPI/MMA/MDIC) 1.1.16. Launch a public notice to accelerate social impact businesses focused on environmental conservation and green economy in Brazilian biomes (Enimpacto) (MDIC). 1.1.17. Establish the Empreender na Trilha Program to encourage sustainable economic development along trails in protected areas (MDIC/MMA). 1.1.18. Incentivize the bioeconomy and biodiversity economies in the Amazon through the Amazon Biobusiness Center (CBA) (MDIC/MMA/Censipam – MD). 1.1.19. Institutionalize the National Bioeconomy Program for Sociobiodiversity (MDA/MMA) 1.1.20. Create the “Amazon Brand” for sustainable green, environmental and social production certification (MDIC/MMA) 1.1.21. Create the “Amazon Seal” for certification of bioeconomy products made with materials from the region and in a socially, environmentally and economically sustainable manner (MDIC/MMA) 1.1.22. Create the “Green Seal” related to the analysis of the life cycle of products regarding the generation of solid waste, water use and carbon footprint to promote environmental sustainability (MDIC/MMA) 1.1.23. Create and offer outreach courses and Professional and Technological Education (EPT) on an alternating or regular basis and with scholarships, for young people, native and traditional peoples to act as environmental agents in the promotion of environmental education actions and sustainable production in the different territories of the Legal Amazon (MMA//MEC)

Summary Table Axis I – Sustainable Production		
Strategic Goals	**Expected results**	**Action Guidelines**
Goal 1. Stimulate sustainable production	1.2 Training and capacity building of personnel and Infrastructure for improved socio-biodiversity chains and sustainable family farming	1.2.1. Expand local transportation (MDS/MIDR), sanitation (MMA/MDS), connectivity (MMA/GSIPR/MCOM/MAPA/MEC) and renewable energy (MME) infrastructure needed to stimulate sociobiodiversity and agroecological product chains 1.2.2. Implement infrastructure of aerodromes and river ports suitable for the flow of higher value-added materials and that concentrate inspection and public security bodies (e.g. PPIF member agencies) and promote interstate trade activity. (MIDR/MPA/GSIPR/MAPA/MJSP/MF/MD) 1.2.3. Improve and make available local research infrastructure (floating and land-based laboratories) to generate knowledge for sustainable development (MCTI/MAPA/MDIC/MEC) 1.2.4. Develop financing and attract investors for sustainable infrastructure according to the definition of priorities of the Sustainable Infrastructure Plan for the Amazon (MIDR) 1.2.5. Train, capacity-build and stimulate the establishment of human resources for sustainable production, forest management and restoration of native vegetation (MCTI/MEC/MDA/MAPA/MMA/MDIC)
	1.3. Promote and increase nature tourism, ethnotourism and regenerative tourism in the Amazon	1.3.1. Promote ecotourism and regenerative tourism as a strategy for regional development with environmental conservation, sustainable use and landscape recovery, promoting the generation of employment and income for local populations (MMA/MTur/MDIC) 1.3.2. Implement a community-based tourism and ethnotourism program, contributing to the recognition of socio-biodiversity, safeguarding history and culture, and promoting social equity and local development in the territories of traditional peoples and communities, and indigenous peoples (MMA /MTur/MDIC/MPI)
	1.4 Adoption of sustainable practices in expanded agriculture and livestock farming	1.4.1. Disseminate sustainable and biodiverse production systems, through rural credit and other instruments (fiscal and financial), with incentives for the recovery of degraded pastures, extractivism and implementation of agroforestry systems (MAPA/MDA/MMA/MF) 1.4.2. Establish the Amazônia Mais Sustentável program (MAPA) 1.4.3. Promote the development and diffusion of new products, technologies and social technologies aimed at sustainable agriculture, socio-biodiversity chains, protection of water sources and adaptation to climate change (MAPA/MCTI/MDA/MMA/Censipam – MD/MEC) 1.4.4. Promote the diffusion of preventive practices of integrated fire management with the substitution of the use of fire for agricultural purposes (MAPA/MDA/MCTI/MMA) 1.4.5. Implement a Productive Reintegration Program for irregular rural producers excluded from production chains with the promotion of the intensification of agriculture and livestock farming and environmental regularization (MAPA/MDA/MMA)

Summary Table Axis I – Sustainable Production		
Strategic Goals	**Expected results**	**Action Guidelines**
Goal 2. Promote Sustainable Forest Management and the recovery and restoration of deforested or degraded areas	2.1 Increased timber and non-timber production through Sustainable Forest Management, Forest Concessions and forestry of native species	2.1.1. Assess the feasibility and potential for implementing community-based sustainable forest management of timber and non-timber products in collective territories. (SNPCT – MMA/Incra – MDA/Funai – MPI/Censipam – MD/MDIC) 2.1.2. Implement economic incentive programs and support for productive organization and technical assistance for forestry and agroforestry enterprises, including community-based enterprises (MMA/MDA/MEC/MF/MAPA/MDIC) 2.1.3. Stimulate the intensive use of forest biomass from sustainable forest management for energy generation and cogeneration (SFB – MMA/MME/MDIC) 2.1.4. Establish a federal program to support community and family forest management (MMA/MDA) 2.1.5. Expand the area of federal public forest under forest concession, including forest restoration and forestry of native species (MMA) 2.1.6. Implement forest concessions, apply conversion of fines and other mechanisms for forest and agroforestry recovery, considering payment for environmental services (MMA/MDIC) 2.1.7. Stimulate forestry with native species, development of a plan in partnership with the private sector (MMA/MAPA)
	2.2 Stimulation of recovery of native vegetation in public and private areas	2.2.1. Support and strengthen the national policy for the recovery of native vegetation (PROVEG), through the implementation of PLANAVEG, based on studies of the environmental recovery production chain in the Amazon (MMA/MAPA) 2.2.2. Promote the market to produce seeds and seedlings and other materials, with a focus on family farmers and traditional communities. (MMA/MDA/MAPA) 2.2.3. Develop and disseminate technical and scientific guidelines for large-scale recovery actions and activities in the Amazon (MCTI/MMA/MAPA/MEC) 2.2.4. Expand the supply of indirect fine conversion projects in the Amazon (MMA/AGU) 2.2.5. Offer technical assistance and economic incentives for the implementation of forest recovery models (timber and non-timber forest products, fruit growing) (Incra – MDA/MAPA/MF) 2.2.6. Promote inclusive community-based forest restoration on a large scale, adding value to protected areas and collective territories (MMA/MDA/MCTI) 2.2.7. Hire, train and invest in public and private ATER organizations for technical assistance and rural extension services to family farming, rural women and youth and traditional communities, aimed at the production of healthy food, sustainable development and environmental preservation in the Legal Amazon (MDA) 2.2.8. Hire ATER organizations for technical assistance and rural extension services to rural women, focused on healthy food production, sustainable development and environmental preservation in the Legal Amazon (MDA)

Summary Table Axis I – Sustainable Production		
Strategic Goals	**Expected results**	**Action Guidelines**
Goal 3. Strengthen the coordination with the states and municipalities of the Legal Amazon in efforts to promote sustainable activities	3.1 Strengthened coordination with states and municipalities in the Legal Amazon in efforts to promote sustainable production activities	3.1.1. Monitor and support the implementation of the Green Recovery Plan (PRV) of the Interstate Consortium for Sustainable Development of the Legal Amazon in alignment with PPCDAm guidelines (MF/MAPA/MMA) 3.1.2. Establish and/or strengthen integrating and integrated environment and social education centers in the Legal Amazon (MMA/MEC) 3.1.3. Develop and implement an environmental education program with basic and higher education institutions aimed at preventing and fighting deforestation in the Legal Amazon (MMA/MEC)
Summary Table Axis II – Environmental Monitoring and Control		
Goal 4. Ensure accountability for environmental crimes and administrative infractions linked to deforestation and forest degradation	4.1 Achieve a high level of administrative, civil and criminal resolution and accountability for illegal deforestation and forest degradation	4.1.1. Improve and expand the off-site performance of federal environmental inspection (MMA) 4.1.2. Create an interagency coordination framework to combat environmental crimes and infractions (MMA/MJSP/MD/GSIPR/Funai – MPI) 4.1.3. Establish a permanent task force to hold accountable (in civil and criminal proceedings) for environmental crimes and infractions the largest deforesters and companies that acquire minerals and agricultural products from these areas, through civil lawsuits for the enforcement of collective rights (AGU/MMA) 4.1.4. Increase the resolution rate of inquiries and administrative proceedings initiated regarding crimes and infractions against the Amazon flora (MJSP/MMA) 4.1.5. Integrate inspection and criminal investigation efforts with a focus on decapitalization and accountability for environmental crimes, sanitary infractions, money laundering, tax fraud and related land fraud (BCB/MF/MJSP/MMA/MAPA/MDA/PF/COAF/Censipam - MD) 4.1.6. Integrate environmental and property inspection efforts with investigations into crimes of fraud and invasion of federal land (MGISP/MMA/MJSP/MDA) 4.1.7. Structure a governance framework in environmental intelligence to combat deforestation and forest degradation in the Amazon (MMA/CCPR-Abin/MJSP/MD/MMA/Censipam – MD) 4.1.8. Expand intelligence activities on environmental crimes with a focus on identifying financing mechanisms for deforestation and illegal mining (MMA/CCPR/MJSP/BCB/MD/MDA/Censipam – MD) 4.1.9. Develop actions to combat crimes that impact the environment, with a specific focus on land fraud, corruption and encroachment on public lands, and through decapitalization and economic disincentives to criminal activities (MJSP/MMA/MDA/MGI/CCPR/BCB/MF/Censipam – MD) 4.1.10. Expand the inspection of deforestation with joint administrative and civil liability of the production chain that acquires products from illegal deforestation from direct and indirect suppliers, including through the signing of Conduct Adjustment Agreements (MMA/AGU/Censipam – MD) 4.1.11. Expand control over the mining production chain by integrating criminal investigation procedures and mining, fiscal, financial and environmental inspection procedures (MMA/MME/CCPR/BCB/MF/MJSP/GSIPR/Censipam – MD)

Summary Table Axis II – Environmental Monitoring and Control		
Strategic Goals	**Expected results**	**Action Guidelines**
Goal 4. Ensure accountability for environmental crimes and administrative infractions linked to deforestation and forest degradation	4.2 Make available human, technological and logistical resources to effectively tackle environmental crimes and illicit activities	4.2.1. Hold specific competitive civil-service examinations to hire staff to monitor and operate in critical regions and to combat illegal deforestation in the Amazon (MGI/MPO/MMA/MJSP/MCTI/CCPRI/Censipam – MD/MPI/MDA) 4.2.2. Structure strategic physical bases (police stations, posts, battalions, etc.) necessary for government agencies to operate in the Amazon region in coordination with states and municipalities (MJSP/MMA/MGI/MPI) 4.2.3. Design and implement in-person and distance learning courses and events for training in the prevention and repression of environmental crimes and offenses against indigenous peoples in the Legal Amazon (MJSP/MMA/MD/MCTI/MEC/CCPR) 4.2.4. Acquire vehicles, aircraft, weaponry and other equipment for the adequate operation of the teams of the various institutions for monitoring and control of deforestation in the Amazon (MJSP/MMA/MD/MPI/CCPR) 4.2.5. Implement a system to ensure access and interoperability of data on administrative, civil and criminal proceedings necessary for the execution and integration of efforts to prevent, hold accountable and repress environmental crimes and infractions in the Amazon (MMA/MJSP/GSIPR/MCTI/CCPR)

Summary Table Axis II – Environmental Monitoring and Control		
Strategic Goals	**Expected results**	**Action Guidelines**
Goal 5. Improve the ability to control and monitor deforestation, fires, degradation and production chains	5.1 Increased capacity to monitor deforestation, fires and forest degradation	5.1.1. Improve, integrate and ensure the transparency of deforestation, degradation and forest fire alert systems to support the inspection and investigation of environmental crimes (MCTI/MJSP/Censipam – MD/MMA/MPI) 5.1.2. Improve the system for warning of deforestation, selective logging and other forms of forest degradation through radar imagery (MMA/MCTI/Censipam – MD) 5.1.3. Develop and implement a deforestation prediction system based on remote sensing (MCTI/MJSP/Censipam - MD/MMA), fiscal (MF) and financial (BCB) data to guide preventive actions to combat deforestation. 5.1.4. Improve the Fire Information System (Sisfogo) with data integration of fire permits, firefighting actions, qualification of data from hot spots, burned area and prediction of fire spread in support of integrated fire management and combat to fires (Ibama, ICMBio and SECD – MMA/Inpe – MCTI/Censipam – MD) 5.1.5. Improve the annual monitoring system for deforestation and land use, in alignment with the national GEE inventory and the national REDD+ strategy (MCTI/MMA/MAPA) 5.1.6. Support the preparation of inventories and State Plans for the Control of Atmospheric Emissions in the states of the Legal Amazon and promote awareness campaigns against forest fires and burn-offs (MMA) 5.1.7. Develop and implement air pollution monitoring in the Legal Amazon (MMA)
	5.2 Improve the monitoring of production chains	5.2.1. Develop traceability systems for agricultural products in the Amazon (MMA/MAPA/MCTI) 5.2.2. Integrate the bases of the Rural Environmental Registry, Sinaflor/DOF (MMA), tax documents (MF) and animal health (MAPA) to improve efforts to combat environmental, health and tax illicit activities 5.2.3. Implement a system to automate remote monitoring of embargoed areas to support administrative notices and intelligence analysis (MMA/MAPA/MF/MCTI) 5.2.4. Implement and improve control and monitoring in the wood production chain (control mechanisms such as digital certification and tracking for vehicles and vessels transporting wood, monitoring of roads and ports, control and tracking of machinery and tractors for forestry use and mining, etc.) (MMA/MT/MJSP) 5.2.5. Implement SINAFLOR wood traceability module with integration of monitoring systems for forest concessions and forest management plans and the wood chain of custody, linking remote sensing data (MCTI/MD/MJSP/MMA), forest origin documents (MMA/OEMAs) and tax documents (MF)

Summary Table Axis II – Environmental Monitoring and Control		
Strategic Goals	**Expected results**	**Action Guidelines**
Goal 5. Improve the ability to control and monitor deforestation, fires, degradation and production chains	5.3 Disseminated and strengthened community initiatives for monitoring and cooperation in the environmental protection of territories	5.3.1. Support community initiatives for monitoring, management and environmental protection of territories, with exchange and dissemination of experiences between initiatives (MMA/MPI/MDA) 5.3.2. Creation of community networks for monitoring and cooperation in the environmental protection of territories with economic incentives via PSA and other instruments (MMA/MPI/MDA) 5.3.3 Ensure the protection of social and environmental leaders, environmental agents and public managers from ICMBio and Ibama and state and municipal environmental institutions in areas under deforestation pressure (MMA/MPI/MDA/MJSP)
Goal 6. Prevent and combat the occurrence of forest fires	6.1 Reducing the area affected by forest fires	6.1.1. Implement and equip the Federal Brigades Program, aiming to reduce the number of forest fires in priority federal areas (MMA/MDA) 6.1.2. Implement the National Integrated Fire Management Policy (MMA/MDA) 6.1.3. Strengthen the investigation of the causes and origin of forest fires and hold the owner/landowner/manager of the area of origin of the fire accountable (Ibama and ICMBio – MMA/PF – MJSP/Censipam – MD/Inpe – MCTI) 6.1.4. Strengthen the Integrated Multiagency Center for Operational and Federal Coordination (MMA/MPI/MJSP/MDA/MD/MCTI) 6.1.5. Provide aerial means for fire prevention and firefighting activities in remote or difficult to access areas (MMA)
Goal 7. Advance in environmental control and regularization with the improvement of the National Rural Environmental Registry System	7.1. Environmental bases with improved controls	7.1.1. Suspend/Cancel the Rural Environmental Registry registration of properties overlapping with Indigenous Lands and prohibit new registrations (MMA/MPI). 7.1.2. Block new registrations in the National Rural Environmental Registry System and suspend/deactivate registrations of individual rural properties overlapping federal Conservation Units (except Environmental Protection Areas and Private Natural Heritage Reserves), quilombola territories and public lands of the Union without proof of ownership (MMA/MDA/MinC).

Summary Table Axis II – Environmental Monitoring and Control		
Strategic Goals	**Expected results**	**Action Guidelines**
Goal 7. Advance in environmental control and regularization with the improvement of the National Rural Environmental Registry System	7.2 Implement the National Rural Environmental Registry System as an effective instrument for environmental regularization	7.2.1. Produce hydrographic base at a minimum scale of 1:50,000 and updated land use maps from high resolution images, to provide an official basis for the analysis of the Rural Environmental Registry and monitoring of the Environmental Regularization Program (MMA/MCTI/MAPA). 7.2.2. Improve the integration of the National Rural Environmental Registry System with state systems, to ensure the integrity of the database and automatic compliance with federal rules, in addition to increasing the transparency of Sicar and PRA data (MMA). 7.2.3. Integrate the National Rural Environmental Registry System with the National System for the Control of the Origin of Forest Products, with the Agricultural Management Platform and with satellite monitoring systems, to improve the transparency of production chains (MMA/MAPA/MCTI). 7.2.4. Improve the system of streamlined analysis of the Rural Environmental Registry to enable the completion of the analysis process without requiring the intervention of the rural producer, to reduce costs and increase the effectiveness of the tool (MMA/MCTI). 7.2.5. Implement and make available to the states a system with automatic proposal of alternatives for environmental regularization, based on modeling at the landscape level (e.g., locational proposal of legal reserve for the formation of ecological corridors) (MMA/MCTI). 7.2.6. Create an advisory board of the Rural Environmental Registry to align the improvement of the Rural Environmental Registry between the Ministry of Environment and Climate Change and other ministries and state environmental agencies involved (MMA/MAPA/MDA/MGI/MPI).
Goal 8. Strengthen the coordination with the states of the Legal Amazon in environmental inspection efforts	8.1 Activities of the states of the Legal Amazon aligned with the PPCDAm	8.1.1. Engage with state land institutes, sanitary defense agencies and state environmental agencies (OEMAs) to integrate with Sicar the databases with land data, environmental licenses, infraction notices, embargoes, forest management, deforestation and fire permits (MMA/MDA) 8.1.2. Support the review/update of the PPCDs of the Amazon states in an integrated manner with the PPCDAm and jointly monitor indicators and targets (MMA) 8.1.3. Promote coordination with state and municipal agencies in the capitals of the states of the Legal Amazon that work to prevent and respond to forest fires (MMA) 8.1.4. Elaborate informative and educational campaigns in the capitals and critical municipalities of the Amazon on the need to reduce burn-offs and forest fires to improve air quality (MMA/MCTI)

Summary Table Axis III – Territorial and Land Planning		
Strategic Goals	**Expected results**	**Action Guidelines**
Goal 9. Ensure the designation of undesignated federal public lands for protection and sustainable use, especially for indigenous peoples and traditional communities	9.1 Reduce land insecurity	9.1.1. Identify, demarcate and incorporate vacant lands in the Legal Amazon into the Union's property (MDA). 9.1.2. Structure a basic real estate registry (observing the standards established by ISO 19152), integrated with territorial information and providing data and metadata to the National Spatial Data Infrastructure (MDA/MGI/MPO/Censipam – MD/MAPA). 9.1.3. Establish an information flow between the land agencies of different levels, to promote agility in the consultations and validation of real estate documents arising from the detachment of public property (MDA/MGI/MPI/MMA/GSI-PR).
	9.2 Designated and protected public forests	9.2.1. Restructure and restore the Technical Chamber for Land Designation and Landholding Regularization of Federal Rural Public Lands (MDA/MGI/MPI/MMA/GSI-PR). 9.2.2. Identify marginal lands owned by the Union, areas occupied by indigenous peoples and traditional peoples and communities, priority areas for conservation, sustainable use and development, and areas with potential for forest concessions (MDA/MGI/MPI/MMA). 9.2.3. Redefine prioritization criteria and propose the designation, for protection, conservation and sustainable use, of undesignated public forests (MDA/MGI/MPI/MMA/GSI-PR). 9.2.4. Review the designation of federal public lands made in the past few years based on the new criteria and the review of the interests and responsibilities of federal agencies (MDA/MGI/MPI/MMA/GSI-PR).
	9.3 Land bases with improved controls	9.3.2. Establish a permanent task force to identify and investigate fraud in requests for landholding regularization, legal reserve compensation and titling in cooperation with the National Council of Justice, states and registry offices in the Legal Amazon (MDA/MGI/MMA/Censipam – MD). 9.3.3. Implement a system for automatic verification of compliance with the environmental clauses of landholding regularization titles and settlements, with the loss of the benefit provided for in the legislation if illegal deforestation is detected and application of the automatic embargo of irregularly deforested areas (MMA/MDA). 9.3.4. Improve, in coordination with the National Council of Justice, with the states and registry offices, a national repository of land titles with a digital copy of private real estate registries and federal and state public land, to avoid fraudulent alterations of documents (MDA/MGI). 9.3.5. Include, in rural property registries, the number of the respective Rural Environmental Registry, ensuring legal certainty to the declarations made by the owners or holders (MMA/MDA/CNJ).

Summary Table Axis III – Territorial and Land Planning		
Strategic Goals	**Expected results**	**Action Guidelines**
Goal 10. Expand and strengthen the management of protected areas	10.1 Creation, consolidation and strengthened management of Conservation Units	10.1.1. Consolidate the National System of Protected Areas and its instruments, in coordination with federal, state and municipal management agencies (MMA). 10.1.2. Propose and create Conservation Units, focusing on critical areas of deforestation (MMA/MDA/GSIPR). 10.1.3. Develop and implement a plan for territorial consolidation and strengthening of management, contemplating landholding regularization and proper signaling of Conservation Units (MMA/MGI). 10.1.4. Recognize and implement instruments for integrated territorial management and governance of protected areas (such as mosaics, ecological corridors, biosphere reserves and Ramsar sites) (MMA). 10.1.5. Include environmentally differentiated settlement project modalities in the National Protected Areas Plan (MDA/MMA).
	10.2 Identified, delimited, demarcated, confirmed, regularized and strengthened management of Indigenous Lands and Quilombola Territories	10.2.1. Identify, delimit, demarcate, confirm and regularize Indigenous Lands and Quilombola Territories, to guarantee the recognition of their territories (MPI/MinC/MDA/MGI). 10.2.2. Analyze and counter challenges to the identification and delimitation of Indigenous Lands and Quilombola Territories (MPI/MinC/MDA). 10.2.3. Facilitate the removal of invaders from Indigenous Lands (MPI/MJSP). 10.2.4. Locate isolated indigenous peoples and ensure the recognition, removal of intruders and permanent protection of their territories (MPI). 10.2.5. Elaborate and implement plans for territorial and environmental management in indigenous lands, with technological and economic incentives and technical assistance for sustainable activities (MPI/MMA). 10.2.6. Promote the territorial management of Quilombola Territories, Traditional Peoples and Communities (MDA/MIDR)
	10.3 Establish sustainable use and occupancy guidelines	10.3.1. Review the Ecological-Economic Macrozoning of the Legal Amazon, expanding and increasing the effectiveness of instruments to stimulate and restrict land use focusing on zero deforestation by 2030 (MMA). 10.3.2. Support the preparation and review of the ecological-economic zoning of the states of the Legal Amazon, focusing on zero deforestation by 2030 and on the national strategy for Reducing Emissions from Deforestation and Forest Degradation (REDD) (MMA). 10.3.3. Promote the use of ecological-economic zoning as an input for transportation infrastructure planning, preventive territorial governance actions and other public policy instruments (MMA/MT). 10.3.4. Develop an information management system on human occupation in protected areas, aiming at territorial consolidation and implementation of public policies (MMA/MPI/MDA/MCTI) 10.3.5. Elaborate and review the agro-ecological zoning of crops for bioenergy production, such as sugarcane, soybean, oil palm and corn (MAPA/MMA).

Summary Table Axis III – Territorial and Land Planning		
Strategic Goals	**Expected results**	**Action Guidelines**
Goal 11. Coordinate and/or align the planning of major infrastructure projects with the goal of zero deforestation by 2030	11.1 Improved planning and decision-making processes for the implementation of large infrastructure projects that meet Brazil's environmental and development goals	11.1.1. Improve the decision-making process on large infrastructure projects, by developing and using tools such as Technical, Economic and Environmental Feasibility Studies (MT/MME/MMA/CCPR/MPO/MF). 11.1.2. Include in the guidelines of the Multi-Year Plan the obligation to prepare a Technical, Economic and Environmental Feasibility Study for large infrastructure projects (MPO/CCPR/MF/MT/MMA/MF/GSI-PR). 11.1.3. Develop a methodology to assess the potential direct and indirect impacts of large infrastructure projects on the goal of zero deforestation by 2030 and carbon neutrality by 2050 (GEE from land use change) to support planning and guidelines for environmental licensing (MMA/MT/MME/MF/MPO). 11.1.4. Develop and implement instruments to, in a preventive manner, contribute to territorial governance for the control of deforestation, actions to repair deforested areas and actions to mitigate GEE emissions resulting from land use change in the area of influence of large infrastructure projects (MMA/MT/MME/MF/CCPR). 11.1.5 Integrate existing national sectoral plans to make them compatible with national commitments to reduce deforestation (MT/MME/MMA/MF/CCPR). 11.1.6. Regulate and implement the Strategic Environmental Assessment as a planning tool, focusing on large infrastructure projects (MMA/MT/MME/CCPR/MPO/MF). 11.1.7 Implement the Capacity Development Program for Integration and Regional Development in the territories affected by large infrastructure projects (PCDR) (MIDR)

Summary Table Axis IV - Rules and economic instruments		
Strategic Goals	**Expected results**	**Action Guidelines**
Goal 12. Create, improve and implement rules and economic instruments for deforestation control	12.1. Established and expanded funds in support of control of deforestation policies	12.1.1. Resume the operationalization of the Amazon Fund and support the Amazon Fund Steering Committee and the BNDES in the development of new guidelines aligned with the fifth phase of the PPCDAm (MMA/MDIC) 12.1.2. Create an emergency support mechanism for the States with resources from the Amazon Fund (MMA/MDIC) 12.1.3. Seek additional sources of funding to strengthen the Amazon Fund (MMA/MDIC) 12.1.4. Establish inter-fund coordination and governance actions and special projects (Climate Fund, FNMA, FNDF, FNRB, FNO, FDD, etc.) to enable the implementation of programs and projects arising from the PPCDAM action guidelines (MMA/MDIC) 12.1.5. Stimulate the alignment of the states with the objectives of the PPCDAm through economic incentives (MMA/MF)
	12.2. Implementation of instruments to stimulate mitigation and adaptation activities	12.2.1. Building green markers of the Union budget linked to the National Treasury's sustainable bond issuance strategy (MF/MPO) 12.2.2. Build the taxonomy of activities that integrate the mitigation and adaptation strategy for climate change to guide government and private sector activities (MF/MDIC/MMA) 12.2.3. Define economic subsidies to stimulate the aggregation of value of bioeconomy products in the Manaus Free Trade Zone (ZFM), in the context of the tax reform (MF/MMA/MDIC) 12.2.4. Propose legislation to require companies to measure and publicize social and environmental impacts and act to offset them (MDIC)
	12.3. Create and implement tax incentives, grants and funding for sustainable biodiversity business and production	12.3.1. Strengthen, simplify and review rules for access to credit in the National Program for Strengthening Family Farming (Pronaf) for financing the sustainable use of natural resources and socio-biodiversity chains (MDA/MMA/MF) 12.3.2. Promote tax and credit incentives for bioeconomy products, especially those from indigenous lands, territories of traditional peoples and communities and family farming (MMA/MPI/MF/MAPA/MDA) 12.3.3. Stimulate the creation or expansion of public and/or private financing mechanisms for bioeconomy businesses (MMA/MDIC) 12.3.4. Restructure the sustainable public procurement program to guarantee the acquisition of wood from forest concessions (MMA/MF/MGI) 12.3.5. Mobilizing blended finance capital for bioeconomy and bioindustry social impact businesses (MDIC) 12.3.6. Establish a program to stimulate the export of certified products from the Brazilian Amazon rainforest (MDIC). 12.3.7. Creation of a specific law on indigenous bioeconomy

Summary Table Axis IV - Rules and economic instruments		
Strategic Goals	**Expected results**	**Action Guidelines**
Goal 12. Create, improve and implement rules and economic instruments for deforestation control	12.4. Improve rural credit	12.4.1. Progressively align rural credit to contribute to the goal of zero deforestation by 2030 (MMA/MAPA/MDA/MF) 12.4.2. Introduce incentives in the Crop Plan for Family Farming and Crop Plan to reward sustainable production with lower interest rates and other incentives (MAPA/MDA/MF/MMA) 12.4.3. Review rules of the rural credit manual to veto credit for producers with environmental and land irregularities (MMA/ MDA/MAPA/MF/BACEN)
	12.5. Ensure ENREDD+ is aligned with current challenges of climate change mitigation through forest policies	12.5.1. Review the National Strategy for REDD+ (ENREDD+) (MMA) 12.5.2. Implement the Floresta+ project, in relation to REDD+ results achieved by Brazil (MMA)
	12.6 Strengthen technical assistance and rural extension for sustainable activities of family farming and traditional peoples and communities	12.6.1. Strengthen the National Program for Technical Assistance and Rural Extension (Pronater) in an institutional and budgetary manner to meet the demands of family farming and traditional peoples and communities, with support for sustainable activity and improvement of family income (MDA/ MMA)
	12.7. Implement the Environmental Reserve Quota (CRA) for compensation and payment of PSA	12.7.1. Review the decree that regulates the Environmental Reserve Quota to ensure the environmental integrity of the instrument (MMA/CCPR)

Summary Table Axis IV - Rules and economic instruments		
Strategic Goals	**Expected results**	**Action Guidelines**
Goal 12. Create, improve and implement rules and economic instruments for deforestation control	12.8. Improve the inspection of irregular mining processes and of the gold supply chain	12.8.1. Improve and automate ANM's area control system to prevent the entry and promote the withdrawal of mining processes overlapping with protected areas (MME) 12.8.2. Establish guidelines for blocking primary processes in mining restricted areas (MME) 12.8.3. Define new procedures for the analysis of mining processes on public lands where the research authorization and mining authorization are conditioned to the manifestation of the responsible agency (MME/MMA/MDA/MGI/MPI/CCPR) 12.8.4. Improve inspection and sanctions for Securities Distributors (DTVM) that buy gold of illegal origin (MF/BCB/MMA)
	12.9. Improved sustainable use in federal protected areas and strengthened community and family forest management	12.9.1. Regulate articles of Law 9985, 2000, establishing the SNUC and improve related decrees and administrative rules on sustainable production and timber production (MMA/CCPR) 12.9.2. Propose regulation to consolidate the technical assistance policy to strengthen community and family forest management and other sustainable production (MMA/MDA/CCPR) 12.9.3. Regulate Law 14590, 24 May 2023 (MMA)
	12.10. Propose legal amendments to improve inspection of Securities Dealers (DTVMs) that buy gold	12.10.1. Improve regulations for the supervision of Securities Distributors (DTVM) that buy gold (MF/BCB/MMA/MDA/CCPR) 12.10.2. Improve regulations to ensure the involvement of the Union's management agency in the authorization of mining processes on public lands (MF/BCB/MMA/MDA)

Summary Table Axis IV - Rules and economic instruments		
Strategic Goals	**Expected results**	**Action Guidelines**
Goal 12. Create, improve and implement rules and economic instruments for deforestation control	12.11. Regulate and implement Integrated fire management (IFM), and present bills or other relevant acts for zero deforestation	12.11.1. Coordinate the approval of the Federal Senate Bill 1818, 2022, which addresses the National Policy for Integrated Fire Management, and improve regulation related to Integrated Fire Management (MMA/CCPR/SRI-PR) 12.11.2. Propose innovations and amendments to laws, decrees and other regulations to improve the effectiveness of law enforcement agencies (MMA/MJSP) 12.11.3. Review provisions of the Environmental Crimes Law and the Forest Code and Decree 6514, 2008, to increase penalties and punishability related to environmental crimes against flora, including forest fires (MMA/CCPR/MJSP/SRI-PR) 12.11.4. Prepare analysis and present bills related to zero deforestation through economic incentives (CCPR/MMA/MDA) 12.11.5. Elaborate analysis and coordinate with the National Congress to improve bills with the potential to impact the goal of zero deforestation (CCPR/MMA) 12.11.6. Propose innovations and amendments to laws, decrees and other regulations to improve the effectiveness of law enforcement agencies in relation to crimes and infractions against flora (MMA/MJSP/CCPR) 12.11.7. Redesign the federal environmental sanctioning process and improve information management (MMA/CCPR) 12.11.8. Propose innovations and amendments to laws, decrees and other regulations to increase penalties and sanctions for encroachment on public lands (land grabbing) (MMA/MDA/MJSP/CCPR) 12.11.9. Propose innovations and amendments to laws, decrees and other regulations to increase penalties and sanctions for the illegal exploitation of minerals (MMA/MDA/MJSP/MME/CCPR) 12.11.10. Enhance the prosecution of illicit activities in Indigenous Lands through the regulation of Funai's administrative police power (MPI/CCPR) 12.11.11. Regulate the Environmental Declaratory Act (ADA) (Law 6938, 1981) and establish rules on linkage to the CAR for environmental regularization purposes and correlation with the ITR (MMA/MF)

Summary Table Axis IV - Rules and economic instruments		
Strategic Goals	**Expected results**	**Action Guidelines**
Goal 12. Create, improve and implement rules and economic instruments for deforestation control	12.12. Regulation of Law 14119, 2021, and creation of review of new economic instruments and mechanisms for Payment for Environmental Services (PES)	12.12.1. Prepare and submit a proposal for a regulatory decree to the Presidency of the Republic, on the regulation of the Federal PSA Program for priority assistance to family farming, indigenous peoples and traditional peoples and communities (MMA/MDA/MAPA/MF) 12.12.2. Create mechanisms and instruments to operate PSA in government programs to be created or improved (e.g. Proambiente and Bolsa Verde) (MDA/MMA) 12.12.3. Review contracts for the transfer of private resources, carbon credit and other payment mechanisms for environmental services on public lands and collective territories carried out without the prior authorization and evaluation of the competent federal agency and free, prior and informed consent of the affected populations (MDA/MPI/MMA/CCPR) 12.12.4. Relaunch and strengthen the Environmental Conservation Support Program (Bolsa Verde Program) on new terms, with emphasis on the collective management of territories and their traditional systems in protected areas, and as a mechanism to stimulate sustainable use and support local socio-economic development projects (MMA) 12.12.5. Create a methodology for assessing the monetary value of biodiversity in preserved areas, to stimulate the issuance of certified titles for products originating from native forest conservation activities (MDIC/MMA). 12.12.6. Review Decree 10282, 2021, which creates the Green Rural Production Certificate, and encourage public banks to use this financial instrument as a credit operation (MDIC/MMA/MF/MAPA); 12.12.7. Work to pass Bill 7578, 2017, which institutes the Patrimônio Verde (Green Asset) (MDIC/MMA/CCPR/SRI-PR) 12.12.8. Negotiate with international organizations for the recognition of preserved biodiversity property as a marketable product (MDIC/MMA/MRE). 12.12.9. Elaborate a Green Taxonomy proposal in coordination with government partners (MDIC/MMA/CCPR/BCB/MF).
	12.13. Regulate the Brazilian Emission Reduction Market (MBRE)	12.13.1. Prepare studies and analyses, propose rules and monitor legislative proposals on the Brazilian market for the reduction of emissions (MMA/MF/MDIC/MCTI/CCPR) 12.13.2. Regulate the carbon market in Brazil, defining operating rules and standards (MMA/MF/MDIC/MCTI/CCPR)

Summary Table Axis IV - Rules and economic instruments		
Strategic Goals	**Expected results**	**Action Guidelines**
Goal 12. Create, improve and implement rules and economic instruments for deforestation control	12.14. Improve the Priority Municipality List Policy	12.14.1 Define entry and exit criteria for the negative and positive lists (MMA/MDA/CCPR) 12.14.2. Define benefits and sanctions for the negative and positive lists (MMA/MDA/Casa Civil)
	12.15. Landholding regularization of Quilombola Territories	12.15.1. Review Decree 9191, 2017, and Incra Administrative Rule 128, 2022 (MDA) 12.15.2. Regulate the identification, recognition and regularization of traditional peoples and communities (MDA)

ANNEX II - Table of Goals and Indicators

Axis I - Sustainable production					
Goal 1. Stimulate sustainable production					
Expected Result	**Target**	**Indicators**	**Deadline**	**Key actor**	**Partners**
1.1. Expanded and strengthened bioeconomy, agroecology and agroecological transition in the Amazon	Elaborate the National Bioeconomy Plan	No. of stages completed for the preparation and implementation of plans/Plan prepared	2024	MIDR/SBC – MMA/MCTI/ MDIC/MAPA/ Conab/MF/MDS	MDA
	Increase support for sustainable production inclusive projects for indigenous peoples, traditional peoples and communities, family and peasant farming and community enterprises by 50%, adding value to socio-biodiversity product chains, compared to the average of the last 4 years.	No. of projects supported/No. of territories and families assisted	2027	SNPCT - MMA/ MDIC/MAPA/ MCTI/MD/MDIC/ SFDT and Conab - MDA	Funai – MPI
	30 socio-productive inclusion projects made possible during the PPCDAM period.	No. of supported projects	2027	ICMBio/MMA	
	Support 10 innovation and sustainable production inclusion projects for traditional peoples and communities and family farmers, in partnership with ICTs and companies, adding value to the production chains of the regional bioeconomy – BioRegio	No. of projects supported/No. of enterprises created/ No. of territories and families assisted	2023 1	MIDR	MAPA/ MDIC/MCTI/ MMA/State Governments/ ICTs/Banco da Amazônia/ Accelerators/ Companies/ NGOs/ International Cooperation
	20% increase in commercialization actions through government procurement policies and programs (PAA, PNAE, PGPM, PGPM-Bio), in comparison to 2022 values	Number of sociobiodiversity products sold/ Number of program beneficiaries/Total value sold (BRL)	2024: 2	Seab and Conab – MDA/MDS/MPI/ MMA/MDIC	Funai, Emater/ GIZ

	Launch a public call for strengthening research networks for the development and application of new technologies and social technologies aimed at socio-biodiversity chains and agroecological products with a focus on native species	No. of technologies and social technologies aimed at sociobiodiversity chains applied/No. of sociobiodiversity chains assisted	2024	MCTI/MMA/ MAPA/MDA/MD/ MDIC	Conab – MDA
	Launch a public call for the development and implementation of programs to support micro and small business and community-based enterprises, with a focus on technological development applied to sustainable business	No. of micro and small business and community-based enterprise projects supported	2025	MCTI/SBC – MMA/MAPA/ MDIC	
	Adapt and strengthen Pronatec Extrativista	No. of Ater beneficiaries from indigenous peoples, traditional peoples and communities, family and rural farming	2024	Seteq – MDA/ SNPCT – MMA/ MPI/MEC	Conab
	Improve the CafWeb system to expand registration in the Family Farming Registry (CAF), and integrate with Sicar and Incra's land systems	No. of registrations in the CAF/No. of achieved stages for the integration of CafWeb to Sicar	2024	SAF – MDA/ MMA	
	Develop 5 National Integration Routes based on agroforestry systems (SAFs) (Cocoa, Acai Berry, Biodiversity, honey and fruit growing)	No. of routes implemented/No. of hubs created/No. of families assisted/ Enterprises created/ Income generated (BRL)/No. of hectares conserved in SAFs/No. of hectares created in SAFs	2026	MIDR/MAPA/ MDIC/SBC – MMA	MAPA/ MDIC/MCTI/ MMA/State Governments/ ICTs/Banco da Amazônia/ Accelerators/ Companies/ NGOs/ International Cooperation/ Conab
	Strengthen 100 community-based organizations in Federal UCs for the improvement, designing and implementation of public policies and related projects	Number of supported community-based organizations	2027	ICMBio, SNPCT – MMA	Conab, MDA, Incra

	Launch a public notice to accelerate 50 businesses/ year, focused on environmental conservation and the green economy in Brazilian biomes	No. of business accelerated/Income generated(BRL)	2024	MDIC/SBC – MMA	
	Develop biobusinesses and biotechnologies within the scope of the CBA	No. of new products, services and production arrangements supported by CBA	2027	MDIC/MMA	
	Support and strengthen research institutions in the Amazon	No. of projects from institutions assisted/ No. of supported research	2024	MDIC/MCTI	
	Establish the Empreender na Trilha Program to encourage the sustainable economic development of municipalities related to trails in protected areas	No. of steps taken to implement the program/Value of income generated in municipalities (BRL)/ No. of trails included in the program/% increase in municipal GDP	2024	MDIC/SBC – MMA	
	Create the "Amazon Seal" for certification of bioeconomy products	No. of completed stages to create the Amazon Seal/No. of certified products and services	2024	MDIC/SBC – MMA	MMA
	Create the "Green Seal" for product lifecycle analysis	No. of completed stages for the creation of the Green Seal/No. of certified products and services	2024	MDIC/SBC – MMA	MMA
	Monitor the production of 17 sociobiodiversity products supported by PGPM-Bio	No. of products with monitored and/or qualified data	2026	Conab and SFDT – MDA/MMA	IBGE – MPO
	Create the "Amazon Brand" to certify green production and increase the commercialization of products native to the Amazon	No. of completed stages for the brand creation/No. of certified products and services	continuous	MDIC/SBC – MMA	MMA/Mapa

	Implement 4 routes of the Program of Productive Chains of Sociobiodiversity of the Amazon and Bioindustry	No. of productive chain routes for socio-biodiversity products and services implemented	2027 (1 route/ year)	MDIC/SBC – MMA	MPI/MMA/ MTur/MINC
	Restructure the National Bioeconomy Program for Sociobiodiversity (current in the MDA)	no. of completed stages for the restructuring and launching of the program	2023	SFDT – MDA	MDS/MCTI/ MIDR/MMA
	Support for small businesses of the socio-biodiversity of the Amazon	No. of supported businesses	2027	MDIC	SBC – MMA
1.2. Formação e capacitação de pessoal e Infraestrutura para as cadeias da sociobiodiversidade e agricultura familiar sustentável aprimoradas	Implement 55 projects to stimulate socio-biodiversity chains and agro-ecological products, through production stimulus and/or the expansion of local transportation, sanitation, connectivity and renewable energy infrastructure	No. of completed stages to implement projects/Quantity of implemented enterprises/Total amount invested (BRL)	2027	Mapa (15 projects) / MIDR (10 projects) / SAF and SFDT – MDA (30 projects)	ANA, ICMBio and SNPCT - MMA/MD/MDS/ SBC - MMA/ SNPCT, SBC - MMA/GSIPR/ MCOM/MAPA/ MME/Conab – MDA
	Provide 120,000 consumer units with access to the public electricity distribution service, including socio-productive projects to stimulate socio-biodiversity chains in the Legal Amazon.	Number of consumer units served/Service target	2027	MME	MMA/ICMBio/ FUNAI/INCRA
	Improve and make available 20 floating and land-based laboratories to generate knowledge for sustainable development	No. of laboratories available	2026	MCTI/MAPA/ MDIC	INPA/MPEG/ IDSM/FINEP
	Provide 1500 scholarships for training, capacity building and stimulating the establishment of human resources, focused on sustainable production, forest management and restoration of native vegetation	No. of scholarships available/No. of trained people	2027	MCTI/MEC/MDA/ MAPA/MMA/ MDIC/MDA	CNPQ

1.3. Promote and increase nature tourism, ethnotourism and regenerative tourism in the Amazon	Institute 3 pilot projects to promote ecotourism and regenerative tourism/year	No. of pilot projects instituted/year	2024	MTur/Embratur/ SBC – MMA/ MDIC	
	Institute a community-based ethnotourism program in the Amazon	No. of completed stages for the establishment of the program/ Program developed and established/ No. of communities reached	2025	MTur/Embratur/ SBC – MMA/ MDIC/	MPI – Funai
1.4. Adoption of sustainable practices in expanded agriculture and livestock farming	Implement project/program to disseminate sustainable and biodiverse production systems, through rural credit and other instruments, with incentives for the recovery of degraded pastures, extractivism and implementation of agroforestry systems	No. of completed stages for implementation of projects/program/ Area of restored pasture and other low carbon technologies (ha) / AFS area (ha)	2027	MAPA/SAF – MDA/SBC – MMA/MF	
	Implement the Amazônia Mais Sustentável program	No. of completed stages to implement the program		MAPA	MMA
	Implement a public call for proposals to promote the development and dissemination of new products, technologies and social technologies aimed at sustainable agriculture, protection of water sources and adaptation to climate change	No. of completed stages to implement the public call for proposals/No. of projects contracted and supported	2024	MAPA/MCTI/ MDA/MMA/ Censipam – MD/ Anater	MMA
	Implement a project/program to disseminate preventive practices of integrated fire management, replacing the use of fire for agricultural purposes	No. of completed stages for project/program implementation/ Implementation of predictive model of fire spread in the biome/Area with preventive integrated fire management practices (ha)	2024	MAPA/MDA/ MCTI/MMA/ Anater	MMA

Goal 2. Promote Sustainable Forest Management and recovery of deforested or degraded areas.					
Expected Result	**Target**	**Indicators**	**Deadline**	**Key actor**	**Partners**
2.1. Increase of timber and non-timber production through Sustainable Forest Management and Forest Concessions	Expand the area of federal public forest under forest concession by up to 5 million hectares, including forest restoration and forestry of native species	Area (ha) under forest concession/ Amount of commercialized timber forest products/Production value (BRL)	2027	MMA/SFB	
	Implement a program of economic incentives and support for production organization, rural extension and technical assistance for forestry and agroforestry enterprises, including those of a community nature	No. of forestry and agroforestry projects supported	2024	SFB and SBC – MMA/MDA/ MEC/MF/MAPA/ MDIC/Anater	
	Implement concessions for forest restoration in 100 thousand hectares	Area (ha) of implanted forestry concession	2027		
	Create a federal program to support ecological restoration and community forest management	No. of stages completed to create the program	2024	SFB – MMA/ SFDT – MDA	ICMBio
2.2. Promotion of native vegetation recovery in public and private areas	Implement PLANAVEG, based on studies of the production chain of environmental recovery in the Amazon (MMA/MAPA)	No. of completed stages to implement the program/No. of studies	2024	SBio e SBC - MMA/MAPA	
	Assist 3,390 rural women, through ATER, for technical assistance and rural extension services for actions geared towards healthy food production, sustainable development and environmental conservation	No. of rural women assisted/Value of investment	2027	SSM – MDA/ ANATER	ICMBio, Conab

	Assisting the 9 states of the Legal Amazon with technical training and investments in public ATER organizations for technical assistance and rural extension to family farming	No. of properties/ possessions/ territories assisted by public Technical Assistance and Rural Extension	2024	MDA/ANATER	Conab
	Implement a public call for proposals to produce and disseminate technical-scientific guidelines for large-scale recovery actions and activities in the Amazon	No. of completed stages for implementation of the public call for proposals/No. of projects contracted and supported	2024	MCTI/MMA/MAP	CNPQ
Goal 3. Strengthen the coordination with the states of the Legal Amazon in efforts to promote sustainable production					
Expected Result	**Target**	**Indicators**	**Deadline**	**Key actor**	**Partners**
3.1. Strengthened coordination with the states of the Legal Amazon in efforts to promote sustainable production	Support the implementation of the Green Recovery Plan	No. of actions carried out to support the implementation of the plan/Bilateral working groups created, initiatives implemented in partnership.	2024	MMA	Conab
Axis II - Environmental monitoring and control					
Goal 4. Ensure accountability for environmental crimes and administrative infractions linked to deforestation and forest degradation					
Expected Result	**Target**	**Indicators**	**Deadline**	**Key actor**	**Partners**
4.1. Achieve a high level of administrative, civil and criminal accountability for illegal deforestation and forest degradation	Create an integrated interagency framework to combat deforestation and forest degradation	no. of actions carried out within the scope of the interagency framework/year	2023	Ibama, ICMBio and SECD – MMA/PF, PRF and FNSP – MJSP/Censipam – MD/Abin – CCPR/GSIPR, Funai – MPI/ Inpe/MGI	States
	Create state intelligence centers in the Legal Amazon to assist in actions to prevent and control deforestation and forest fires	no. of intelligence centers created / no. of actions carried out in each center	2023	Abin	Sisbin Institutions

	Inspect 30% of the illegally deforested area identified by last year's consolidated Prodes	% of area (hectares) inspected for illegal deforestation/year	2023	Ibama	Inpe/AGU
	Embargo 50% of the illegally deforested area identified by last year's consolidated Prodes in federal Conservation Units	% of area (hectares) embargoed due to illegal deforestation in federal Conservation Units/ year	2023	ICMBio	Inpe/AGU
	Increase by 10% the number of environmental infraction notices judged in the first instance/year in comparison to 2022	% increase in infraction notices judged in the first instance per year	2023	ICMBio	
	File 3500 administrative proceedings per year to investigate administrative infractions against the flora in the Amazon	no. of proceedings filed/year	2023	Ibama	-
	File 50 civil lawsuits for the enforcement of collective rights (ACPs) per year to collect compensation for damages to the Amazon flora	no. of ACPs filed/year	2023	AGU	Ibama, ICMBio
4.2. Make available human, technological and logistical resources to effectively combat environmental crimes and unlawful activities	Structure 10 strategic bases for multi-agency action in the combat against crimes and environmental infractions in the Amazon	no. of structured bases/year	2023	Ibama, ICMBio and SECD – MMA/PF, PRF and FNSP – MJSP/Censipam – MD/Abin – CCPR/GSIPR	Funai – MPI
	Establish 4 new decentralized Federal Police stations (Tefé – AM, Humaitá – AM, Juína – MT and Itaituba – PA)	no. of Federal Police stations established	2024	PF – MJSP	
	Establish investigation offices in the 9 states of the Legal Amazon	no. of joint investigation offices established	2024	PF – MJSP	PRF, FNSP, Ibama, ICMBio, Abin, Censipam and state public security agencies

	Establish a tactical air base in the Amazon	No. of completed stages to establish the base	2024	PF – MJSP	
	Acquire/lease 6 aircraft to support Federal Police operations	no. of helicopters and planes leased / no. of helicopters and planes purchased	2024 (acquisition) or 2023 (lease)	PF – MJSP	
	Establish 14 bases for implementing the actions of the project "Amazon: Security and Sovereignty"	No. of bases established	2027	MJSP	
	Hire 1600 environmental analysts through a competitive civil-service examination to combat deforestation by 2027	no. of environmental analysts hired/year	2027	MMA, Ibama, ICMBio	
	Hire 40 Technologists to work in the Monitoring Program through a competitive civil-service examination by 2027	no. of technologists hired	2027	INPE – MCTI	
	Hire 4 rotary wing aircraft to assist in operations to combat deforestation and fires	no. of rotary wing aircraft hired/year	2024	Ibama, ICMBio	SECD/MMA
	Hold an annual seminar to prioritize actions to combat environmental crimes	no. of completed stages to hold the Seminars	2023	Censipam	Ibama, ICMBio and SECD – MMA/PF, PRF and FNSP – MJSP/Abin – CCPR/GSIPR/ Inpe
	Develop a technological solution that promotes the interoperability of data on administrative and criminal proceedings	no. of stages of the solution developed/ year (during solution development)	2024	IBAMA, PF	Censipam

Goal 5. Improve the ability to monitor deforestation, fires, degradation and production chains					
Expected Result	**Target**	**Indicators**	**Deadline**	**Key actor**	**Partners**
5.1. Increased capacity to monitor deforestation, fires and forest degradation	Produce daily deforestation and forest degradation alerts	no. of daily deforestation and forest degradation alerts produced/year	yearly	INPE – MCTI	
	Improve the Project for Monitoring Deforestation in the Legal Amazon by Satellite (Prodes) through the inclusion of artificial intelligence	no. of completed stages to improve the project	2027	INPE – MCTI	
	Carry out one action per year in a critical location prioritized by the technological solution for forecasting deforestation (after the development of the solution)	no. of completed stages related to the development of the solution (during the development of the solution) / no. of operations carried out in critical locations identified from the technological solution for forecasting deforestation/year	1 year	Ibama, ICMBio and SECD – MMA/Inpe – MCTI	PF, Censipam
	Make deforestation alerts available by Deter Intenso for 12 months of the year	Area (hectares) of Deter Intenso alerts made available	Yearly	Ibama – MMA/ Inpe – MCTI	
	Develop a technological solution to increase the automation of the annual monitoring of vegetation suppression (Prodes), by 2025	no. of stages of the solution developed/ year (by 2025)	2025	MCTI	Inpe

	Develop a technological solution to increase the automation of the annual monitoring of vegetation degradation and suppression (Deter) in real time by 2025	no. of stages of the solution developed/ year (by 2025)	2025	MCTI	Inpe
	Develop a technological solution for integrating deforestation alerts	no. of stages of solution developed per year	2024	SECD – MMA/ INPE – MCTI	Ibama, PF, Censipam
	Integrate nine databases of the states of the Legal Amazon on fire permits and firefighting actions in SISFOGO	no. of fire permits and firefighting actions registered in SISFOGO	2024	Ibama, ICMBio – MMA/Inpe – MCTI	SECD – MMA
	Provide a monthly publication of information about fires on the SISFOGO dashboard	no. of publications/ month	monthly	Ibama, ICMBio – MMA/Inpe – MCTI	SECD – MMA
	Produce 12 compilations of radar-detected deforestation and forest degradation maps and alerts	no. of deforestation and forest degradation alerts/ month	2023	Ibama – MMA/ Inpe – MCTI/ Censipam – MD	SECD – MMA
	Prepare nine State/District Atmospheric Emissions Inventories in the states of the Legal Amazon.	no. of states in the Legal Amazon with a Atmospheric Emissions Inventory prepared	2027	SQA – MMA	SECD – MMA/ Inpe
5.2. Improved monitoring of production chains	Develop a mechanism to improve the traceability of agricultural products	no. of stages of the mechanism developed/year	2024	SECD – MMA/ MAP	Inpe
	Develop a technological solution to integrate data from Sinaflor to Sicar	no. of stages for data integration completed/year	2024	SFB, SECD and Ibama – MMA	
	Integrate data from vegetation suppression authorizations (ASV) from the 9 states of the Legal Amazon into Sinaflor	no. of authorizations integrated with Sinaflor/year	2024	Ibama – MMA	

	Develop a technological solution for integration of data from DOF/ Sinaflor and NFE systems	no. of stages developed/year	2024	Ibama, SECD - MMA/RFB and Serpro – MF	
	Develop a wood traceability module in Sinaflor	no. of stages developed/year	2024	Ibama	SECD/MMA
	Develop a digital certification technological solution for transporters of native wood	no. of stages developed/year	2024	Ibama	SECD/MMA
	Develop a technological solution for monitoring the transport of native wood	no. of stages developed/year	2025	Ibama	SECD/MMA
	Develop a technological solution for monitoring embargoed areas	no. of stages developed per year	2024	Ibama, SECD – MMA/Inpe – MCTI	
5.3 Disseminated and strengthened community initiatives for monitoring and cooperation in the environmental protection of territories	Support a community initiative for monitoring and cooperation in environmental protection in each state of the Legal Amazon	no. of states with supported community initiatives	2027	ICMBio, Ibama and SNPCT – MMA	SECD/MMA
Goal 6. Prevent and combat the occurrence of forest fires					
Expected Result	**Target**	**Indicators**	**Deadline**	**Key actor**	**Partners**
6.1. Reduction in the area affected by forest fires	Deploy federal brigades for prevention of fires and firefighting in the 9 states of the Legal Amazon	no. of states with federal brigades deployed/no. of brigade members hired/year	2027	Ibama, ICMBio	SECD/MMA
	Combat forest fires annually in all critical areas in the Legal Amazon	no. of forest firefighting actions carried out/year	2027	Ibama, ICMBio	SECD/MMA
Objetivo 7. Avançar no controle e na regularização ambiental com o aprimoramento do Sistema Nacional de Cadastro Ambiental Rural					
Expected Result	**Target**	**Indicators**	**Deadline**	**Key actor**	**Partners**
7.1. Environmental bases with improved controls	Suspend/cancel 100% of irregular CAR registrations overlapping with federal public lands and notify CAR registration holders with illegal deforestation via SICAR according to priority by area and size of deforestation	Number/proportion of CAR registrations overlapping with federal public lands (UCs, TIs, undesignated public land) suspended/ cancelled	2027	SFB and SECD – MMA	MPI, MDA, MINC, GSIPR, States

7.2 Implement the National Rural Environmental Registry System as an effective instrument for environmental regularization	Support the states of the Legal Amazon in the analysis of CAR registrations and actions to suspend and cancel registrations	no. of CAR registrations analyzed by state per year	2027	SFB and SECD – MMA	States
	Support the states of the Legal Amazon in the drafting of the Rural Environmental Registry (CAR) of Territories of Traditional Peoples and Communities (PCT)	No. of PCT Rural Environmental Registry registries drafted and analyzed by state per year	2027	SFB and SECD – MMA	States
Goal 8. Strengthen the coordination with the states of the Legal Amazon in environmental inspection efforts					
Expected Result	**Target**	**Indicators**	**Deadline**	**Key actor**	**Partners**
8.1. Activities of the states of the Legal Amazon aligned with the PPCDAm	Support the update of state PPCDQs	no. of states with updated PPCDQs/ year	2027	SECD – MMA	
	Hold 6 annual alignment meetings with state environmental departments in the Amazon	no. of annual meetings held	2027	SECD – MMA	
Axis III - Territorial and land planning					
Goal 9. Ensuring the protection of undesignated public land					
Expected Result	**Target**	**Indicators**	**Deadline**	**Key actor**	**Partners**
9.1. Reduce land insecurity	List 100% of the vacant lands as Union's property	Area (in hectares) of vacant land listed as Union's property	2027	Incra and SFDT – MDA	
	Landholding regularization of 50,000 occupants of public lands	No. of titles issued	2027	Incra and SFDT – MDA	states
	Georeference 100,000 rural occupations on public land	Georeferenced area (in hectares) of rural occupations on public land	2027	Incra and SFDT – MDA	states

	Promote and support the preparation of the National Plan for the Titling of Quilombola Territories	No. of completed stages to prepare and approve the plan	2024	INCRA – SETEQ-MDA/MIR	
	Regulate the identification, recognition and regularization of traditional peoples and communities	No. of completed stages for regulation / published legal frameworks	2025	SETEQ-MDA/ MMA	SNPCT/MMA
	Integrate land and territorial information	No. of layers of land and territorial information (covering the entire Legal Amazon) incorporated into a single registry	2027	Incra and SFDT – MDA, MMA/ SECD, MPI, MPO	MD, MAPA, MGI
9.2. Designated and protected public forests	Designate 29.5 million hectares of federal public forests that are undesignated	Area (in hectares) of undesignated federal public forests	2027	MDA/MGI/SECD, SNPCT, SBio, SFB and ICMBio – MMA/ MPI	GSI/PR
	Demarcate 230,000 km of marginal land limits of federal rivers	Kilometers of limits of marginal land demarcated	2027	MGI	
9.3. Land bases with improved controls	Monitor the existence of irregularities in 5000 rural plots of land or certification of rural properties in undesignated federal public land	Number of plots monitored	2027	Incra and SFDT – MDA	GSI/PR
	Audit 20% of requests for landholding regularization, certification and registration of rural properties on public lands with evidence of irregularities	Number/proportion of audited requests for landholding regularization, certification and registration of rural properties on public lands with evidence of irregularities	2027	Incra – MDA	MDA, GSI/PR
	Update the national repository of land titles	Number of registries of rural properties in the national repository	2027	SFDT, Incra – MDA	CNJ, MGI

Goal 10. Expand and strengthen the management of protected areas					
Expected Result	**Target**	**Indicators**	**Deadline**	**Key actor**	**Partners**
10.1. Conservation Units created, consolidated and with strengthened management	Creation of 3 million hectares of conservation units	Area (in hectares) of conservation units created	2027	ICMBio and SBio – MMA	MDA, MGI, MMA/SECD, SNPCT, SBio, SFB and Ibama/ MPI, MME and INPA
	100% of conservation units located in priority areas with management plans prepared	% of conservation units with management plans prepared in priority areas	2027	ICMBio	
	80% of conservation units with advisory committees established and active	Number/proportion of conservation units with advisory committees established and active	2027	ICMBio and SBio – MMA	Civil society organizations and representatives of other public agencies that participate in the Committees
	40% of the area of federal UCs in the public domain regularized	Areas (ha) regularized in federal public domain UCs	2027	ICMBio – MMA	MME
	40% of federal UCs with consolidated limits	% of federal UCs with consolidated limits	2027	ICMBio – MMA	
	21 instruments for the compatibility of rights developed or made permanent, or with negotiation/elaboration initiated, in areas with an overlap or double affectation between federal conservation units and territories of traditional peoples and communities	No. of instruments for the compatibility of rights developed or made permanent, or with negotiation/ elaboration initiated	2027	ICMBio - MMA	

	28 CCDRUs, TAUS and other similar instruments signed for traditional peoples and communities	No. of Real Right of Use Concession Contracts (CCDRU), Terms of Authorization for Sustainable Use (TAUS) and other similar instruments signed for traditional peoples and communities	2027	SFDT-MD/ICMBio – MMA/MGI	MDA
10.2 Identified, delimited, demarcated, confirmed, regularized and strengthened management of Indigenous Lands and Quilombola Territories	Promote and support the preparation of the National Plan for the Titling of Quilombola Territories	No. of completed stages to prepare the plan/Plan prepared and published	2027	SETEQ-MDA/ MIR/INCRA	SNPCT/MMA
	Regulate the identification, recognition and regularization of territories of traditional peoples and communities	No. of completed stages for regulation/ published legal frameworks	2027	SETEQ-MDA/ MMA	
	Develop 8 plans for territorial and environmental management in indigenous lands	No./proportion of indigenous lands with elaborated territorial and environmental management plans	2027	MPI	MMA/SNPCT
10.3. Established sustainable use and occupancy guide-lines	Review of the Legal Amazon MacroZEE	MacroZEE of the Legal Amazon reviewd	2025	MMA/SECD	MIDR, MPO, MAPA, MT, MME
	Elaboration/review of the ZEE of all the states of the Legal Amazon	Proportion of Legal Amazon territory with elaborated/ review state ZEE initiatives	2027	MMA/SECD	MDIC/BNDES, MME
	Elaboration/review of the ZAE for bioenergy crops	Number of ZAEs for bioenergy crops (sugarcane, corn, oil palm, etc.) prepared/ reviewed	2027	MAPA	MMA/SECD, MME and SBio

Goal 11. Align the planning of large infrastructure projects with national targets for reducing deforestation					
Expected Result	**Target**	**Indicators**		**Key actor**	**Partners**
11.1. Major infrastructure projects prioritized and adapted to Brazil's development and environmental goals	Reduce deforestation and GEE emissions due to land use change in the area of influence of large infrastructure projects	No. of preventive territorial governance plans and mitigation actions prepared and implemented	2027	SECD, Ibama, ICMBio – MMA	MME, MT and MF, OEMAs
	Alignment of National Sectorial Plans with national targets for reducing deforestation	No. of National Sectoral Plans reviewed to address environmental and/ or climate change issues	2027	MME, MT	CCPR, MF, MMA/SECD, Ibama and ICMBio
Axis IV - Rules and economic instruments					
Goal 12. Create or improve rules and economic instruments for deforestation control					
Expected Result	**Target**	**Indicators**	**Deadline**	**Key actor**	**Partners**
12.1. Established and expanded funds in support of control of defore	Expand the Amazon Fund project portfolio	No. of supported projects/Volume of disbursed resources (BRL)/No. of assisted territories/ No. of supported organizations	2027	BNDES/SECD – MMA/MDIC	
	Increase the volume of resources allocated via funds for the implementation of the PPCDAm	Volume (BRL) of committed resources	2027	BNDES/SECD – MMA/MDIC	
12.2. Implementation of instruments to stimulate mitigation and adaptation activities	Propose a Green Taxonomy of activities that integrate the mitigation and adaptation strategy for climate change to guide government and private sector activities	1- Proposal for an established taxonomy/ 2- No. of proposed guidelines, legal and regulatory instruments	1.1- Nov/2023 1.2- Tax. of sectors: AUG/2024 / 2- DEC/2024	MF/BCB/SBC – MMA	MDIC/MGI
	Establish an economic subsidy under the tax reform to stimulate the addition of value to bioeconomy products in the Manaus Free Trade Zone (ZFM)	Subsidy created/ % of subsidies destined to bioeconomy activities/No. of jobs and value of income (BRL) associated with bioeconomy in the ZFM	2027	SDES and SERT – MF/SBC – MMA/ MDIC	SEDECTI-AM

	Create "Green Markers" in the budget and in the PPA (2024-27)	No. of programs identified with green markers	2024	MF/MPO	
12.3. Create and implement tax incentives, grants and funding for sustainable biodiversity business and production	Assist 1000 beneficiaries through the creation of PRONAF credit for traditional peoples and communities, with the purpose of supporting and stimulating seed multiplication fields, cultivation of medicinal plants and production of herbal medicines	No. of recipients and territories accessing the new line of credit	2027	MDA	SNPCT – MMA
	Execute the transfer of tax and credit incentives to 3000 recipients from quilombola, indigenous and traditional peoples and communities	No. of payments, tax and credit incentives for bioeconomy and food products, in particular from quilombola communities, indigenous lands and territories of traditional peoples and communities	2027	MPI/SETEQ – MDA	SNPCT – MMA
	Expand access to PRONAF in lines of credit geared towards the sustainable use of natural resources and socio-biodiversity chains	No. of PRONAF credit recipients for the sustainable use of natural resources and socio-biodiversity chains/ Total volume of resources invested (BRL)	2027	SAF – MDA/BCB	MMA
	Expand the insertion of products of forest origin in the international market	Total export values of products of forest origin (BRL)	2027	MDIC	SBC, SFB, Ibama - MMA
	Create an evaluation method for incentives, tax exemption, concept of indigenous products, investments and logistics	No. of completed stages to create the method	2024	MPI	Funai/MMA/ MDA

12.4. Improve rural credit	Establish lower interest rate premiums and other incentives for sustainable production, through the Crop Plan for Family Agriculture and the Crop Plan.	No. of contracts with premiums for sustainable production/ Total amount of premiums for sustainable production (BRL)	2023	Mapa/MDA	SBC-MMA; SECD-MMA; SMC-MMA
12.5. ENREDD+ aligned with the current challenges of mitigating climate change through forest policies	Review and implement the National Strategy for REDD+ (ENREDD+)	No. of completed stages to review and implement the strategy/No. of states eligible for REDD+ fundraising	2023	CONAREDD+, SMC, SECD-MMA/SGATI – MPI	MPI/FUNAI
	Implement the Floresta+ Project	No. of recipients assisted/No. of traditional peoples and communities and territories assisted/Area conserved and recovered (ha)/Total value of transferred resources and income generated (BRL)	2026	SECD-MMA	SNPCT-MMA, SBIO-MMA, SBC-MMA
12.6 Strengthen technical assistance and rural extension for sustainable activities of family farming and traditional peoples and communities	Strengthen the National Program for Technical Assistance and Rural Extension (Pronater) to meet the demands of family farming and traditional peoples and communities, with support for sustainable production and improving family income	No. of producers assisted by ATER	2027	SAF – MDA/ SNPCT – MMA	ANATER
		Resources (BRL) made available by PRONATER to assist family farming and traditional peoples and communities			
12.7. Implement the Environmental Reserve Quota (CRA) for compensation and payment of PSA	Conceptualize "ecological identity" and implement the CRA Module in Sicar	No. of states operating the CRA module / Number of issued CRAs	2027	SFB/MMA	
	Review the decree that regulates the Environmental Reserve Quota to ensure the environmental integrity of the instrument	No. of completed stages to review the published decree/ regulation	2027	SECD – MMA	Ibama

12.8. Improve the inspection of irregular mining processes and of the gold supply chain	Establish guidelines for blocking primary processes in areas with mining restrictions	Guidelines developed and published	2027	MME/ANM	
12.9. Improved sustainable use in federal conservation units and strengthened community and family forest management	Regulate technical assistance policy to strengthen community and family forest management and other sustainable production	No. of completed stages for the regulation/ Regulation published	2025	ICMBio, SFB, SNPCT and SBio – MMA	
12.10. Propose legal amendments to improve inspection of Securities Dealers (DTVMs) that buy gold	Improve the regulation for the inspection of Securities Distributors (DTVM) that buy gold	No. of completed stages for regulatory review/Regulation published	2025	MF/BCB/MDA	SECD – MMA/ ANM – MME
12.11. Regulate and implement Integrated fire management (IFM), and present bills or other relevant acts for zero deforestation	Regulate Integrated Fire Management (MIF)	No. of completed stages for the regulation/ Regulation published	2024	SECD – MMA	
	Analyze and present bills related to achieving zero deforestation through economic incentives	No. of Bills presented	2027	CCPR/SECD – MMA/MDA	

12.12. Regulation of Law 14119, 2021, and creation of review of new economic instruments and mechanisms for Payment for Environmental Services (PES)	Regulate the Federal PSA Program for priority assistance to family farming, indigenous peoples and traditional peoples and communities	No. of completed stages for the regulation/ Regulation published	2024	SBC – MMA	MPI/FUNAI/ MDA
	Relaunch and strengthen the Environmental Conservation Program (Bolsa Verde Program)	No. of completed stages to relaunch and strengthen the program/No. of assisted recipients/ No. of assisted territories/Annual amount transferred (BRL)	2025	SNPCT – MMA	Inpe – MCTI / Anater – MDA
	Create a methodology for assessing the monetary value of biodiversity in preserved areas, to encourage the issuance of certificates as products originating from native forest conservation activities	No. of completed stages to create the methodology/No. of certificates issued	2024	MDIC/MF/Mapa/ MCTI//MME/ MPO/MIDR/ MDS/MMA	
12.13. Regulate the Brazilian Emission Reduction Market (MBRE)	Regulate the Carbon Market in Brazil	No. of completed stages for regulationr / regulations published	2023	SECD, SMC, SBC – MMA/ MF/MDIC/CCPR/ MME	MCTI
12.14. Improve the Priority Municipality List Policy	Review the rules for inclusion, exclusion, benefits and sanctions for the negative and positive lists of priority municipalities for control of deforestation	Regulation published	2023	SECD – MMA/ SFDT, SAF – MDA	
12.15 Landholding regularization of quilombola territories	Review Decree 9191, 2017, and Incra Administrative Rule 128, 2022	Regulation published	2025	SETEQ – MDA	MME

MINISTÉRIO DO
MEIO AMBIENTE E
MUDANÇA DO CLIMA

GOVERNO FEDERAL
BRASIL
UNIÃO E RECONSTRUÇÃO