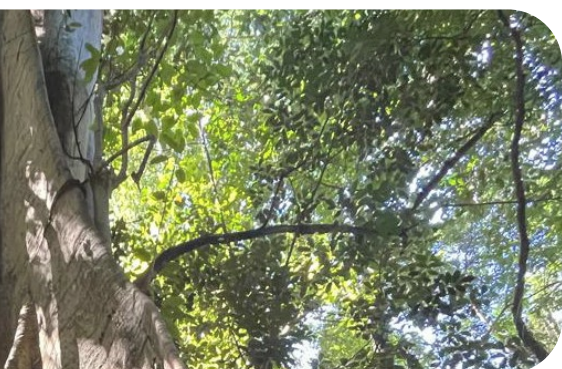




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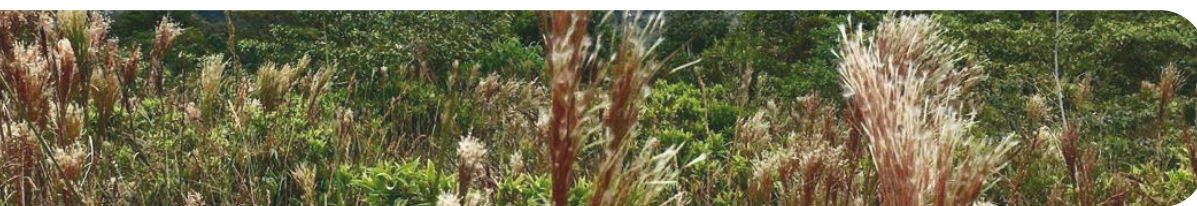


Executive Summary



Where Does Brazil Stand with the Implementation of the Forest Code?

*A Snapshot of
CAR and PRA in
Brazilian States*



**2025
EDITION**



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About Climate Policy Initiative

Climate Policy Initiative (CPI) is an organization with international expertise in finance and policy analysis. CPI has seven offices around the world. In Brazil, CPI has a partnership with the Pontifical Catholic University of Rio de Janeiro (PUC-RIO). CPI/PUC-RIO works to improve the effectiveness of public policies and sustainable finance in Brazil through evidence-based analysis and strategic partnerships with members of the government, civil society, the private sector and financial institutions.

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Executive Summary

The Forest Code (Law No. 12,651/2012), one of Brazil's most important environmental policies, balances the protection of native vegetation with agricultural production on rural properties. Essential to achieving the country's climate goals and conserving biodiversity, the law also promotes sustainable forest management, the restoration of degraded areas, low-carbon agriculture, food security, and the adoption of nature-based solutions, all key pillars of a green and resilient economy.

Recognizing the Forest Code's foundational role in advancing sustainable development in Brazil, Climate Policy Initiative/Pontifical Catholic University of Rio de Janeiro (CPI/PUC-RIO) has been systematically monitoring its implementation across Brazilian states since 2019. CPI/PUC-RIO researchers conduct detailed analyses of state-level regulations, collect and systematize data, and maintain ongoing dialogue with technical experts and public managers from state environmental and agricultural agencies through both in-person and virtual meetings. The result is an **annual publication offering a comprehensive snapshot of the implementation of the Rural Environmental Registry (Cadastro Ambiental Rural - CAR) and the Environmental Compliance Program (Programa de Regularização Ambiental - PRA) across all Brazilian states, now in its seventh edition.**

The study applies specific indicators to highlight progress, gaps, and challenges observed over the past year. It also identifies successful strategies developed by leading states that can serve as models for others, while pointing out opportunities to accelerate the law's implementation.

In 2025, CPI/PUC-RIO is releasing this executive summary ahead of the full report as an independent and timely contribution to climate discussions in the lead-up to the 30th Conference of the Parties (COP30) to the United Nations Framework Convention on Climate Change (UNFCCC), to be held from 10 to 21 November 2025 in Belém, Brazil. As a result of this early release, the analysis reflects data up to August 2025, rather than November as in previous editions.¹

¹ For the states of Ceará, Mato Grosso, Minas Gerais, and São Paulo, data was updated in October due to significant progress recorded in these states.

COP30 presents a strategic opportunity to address the connection between forests and climate, and the Forest Code stands as Brazil's primary bridge between these agendas. By establishing mandatory conservation rules, such as the protection of Permanent Preservation Areas (*Áreas de Preservação Permanente* - APPs) and the maintenance of Legal Forest Reserves on rural properties, the law integrates private lands into Brazil's broader forest conservation framework. Furthermore, by requiring the restoration of illegally cleared areas, the Forest Code provides the foundation for a structured, nationwide public policy for forest restoration. The target of restoring 12 million hectares is set out in the National Native Vegetation Recovery Plan (*Plano Nacional de Recuperação da Vegetação Nativa* - PLANAVEG)² and more recently in the National Climate Plan (*Plano Clima*) particularly by bringing non-compliant rural properties into environmental compliance.³

Consolidating the Forest Code as a cornerstone of Brazil's climate policy requires not only recognizing its potential but also strengthening its effective implementation. In 2025, progress was made at both the federal and state levels, with structural improvements in governance and technological systems, and at the state level, where authorities play a leading role in implementing the law on the ground.

This executive summary provides an updated overview of the Forest Code's implementation in Brazil. It begins by outlining progress in federal governance of the CAR and the National Rural Environmental Registry System (*Sistema Nacional de Cadastro Ambiental Rural* - SICAR), then examines how implementation has advanced across states, highlighting progress at each phase—registration, analysis, and environmental compliance—and explores how the Forest Code interacts with other public policies. The full report, including detailed analyses and additional data, will be published after COP30 in Portuguese.

Strengthening Federal Governance of CAR and SICAR

In 2025, the federal government's role in managing the SICAR gained new momentum, with concrete advances in governance, infrastructure, and intergovernmental coordination. Led by the Ministry of Public Management and Innovation (*Ministério da Gestão e da Inovação em Serviços Públicos* - MGI), in collaboration with the Brazilian Forest Service (*Serviço Florestal Brasileiro* - SFB) and with technical support from Dataprev—a public technology company under the MGI—the government began a gradual structural transformation of SICAR. These changes are repositioning the system as one of Brazil's main public digital infrastructures: more open, interoperable, and aimed at serving the public interest.

2 MMA, DFLO and DFLO/SBIO. *National Native Vegetation Recovery Plan (PLANAVEG) 2025-2028 - Executive Summary*. Brasília: MMA, 2024. bit.ly/3J28DK3.

3 The Sectoral Plan for Nature Conservation, which will be part of the mitigation strategy under the National Climate Plan (*Plano Clima*), is currently under public consultation. Learn more at: Brasil. *Plano Clima Mitigação - Plano Setorial Conservação da Natureza*. nd. bit.ly/4mDW2KS.

This evolution marks a new stage in SICAR's governance, now supported by stronger institutional arrangements and guided by a structured work plan with specific goals, timelines, and clearly defined responsibilities among the MGI, SFB, and Dataprev. Under this framework, the MGI oversees SICAR's technological infrastructure and database, with a focus on interoperability and digital innovation. The SFB, the agency responsible for environmental compliance policy, defines the operational rules and technical specifications for modules related to the analysis of CAR registries and the operation of the PRA. Dataprev manages the system's infrastructure under the MGI's supervision, ensuring its stability and processing capacity while developing and maintaining modules in line with SFB guidelines. This clearer, more collaborative, and functional shared governance model has enhanced SICAR's ability to respond to the demands of Brazil's federative system.

After overcoming the critical stage of migrating SICAR's technological infrastructure to Dataprev in 2024 and resolving the initial instabilities caused by this transition, federal efforts shifted to improving the quality of the registry database and continuously enhancing the system's performance and flexibility. These efforts laid the foundation for a more stable, scalable, and interoperable platform, better equipped to meet future demands. Key improvements include increased processing capacity, integration of CAR with other public databases, and upgrades to SICAR's architecture, such as modernizing the source code and preparing the system for new functionalities.⁴

In terms of data integration, the federal government made progress in advancing interoperability among SICAR, the National Rural Land Registry System (*Sistema Nacional de Cadastro Rural - SNCR*), and the Land Management System (*Sistema de Gestão Fundiária - SIGEF*). This interoperability allows these systems to communicate and exchange information in a standardized and secure way, helping reduce land tenure and registry inconsistencies and improving the reliability of CAR data. To ensure continuous integration between SICAR and states' own or customized systems, Dataprev has been improving technical routines, while the SFB has contracted consultants to conduct local diagnostics, propose solutions, and support improvements to data integration.

2025 also brought significant progress in strengthening shared governance with the states, particularly through the creation of the Interfederative Network for CAR Management and Innovation (*Rede Interfederativa de Gestão e Inovação do CAR - REDE CAR*). The Rede CAR has become a permanent technical forum for intergovernmental dialogue, promoting the harmonization of procedures, the exchange of experiences and best practices, and collaborative problem-solving to address common challenges in CAR registry analysis and environmental compliance. The joint participation of the MGI, SFB, and state representatives in the Rede CAR has helped to consolidate a cooperative model for Forest Code implementation, based on transparency, coordination, and minimum procedural standardization.

During this period, the SFB also continued to develop new SICAR modules. Recent deliverables include improvements to the Environmental Compliance Agreement module and a new parameterization feature for state managers. However, the most significant progress occurred in advancing the Environmental Reserve Quota (*Cota de Reserva Ambiental - CRA*) agenda. Following a decision by Brazil's Supreme Court that reopened the path for its implementation, SFB developed a dedicated CRA module within SICAR, consolidating the instrument's status as both an environmental and financial asset of national scope. This

4 Source code is the set of commands and instructions that form the basis of a system and determine how it operates.

agenda has been implemented in close coordination with the states, which play a central role in issuing and monitoring the quotas, with particular emphasis on the partnership with Rio de Janeiro, where the first CRAs from Private Natural Heritage Reserves (*Reservas Particulares do Patrimônio Natural* - RPPNs) are being prepared for issuance.

In parallel, the SFB engaged with the financial sector to design mechanisms for registering and trading CRAs. This approach aims to ensure legal certainty and economic attractiveness, giving the instrument real potential to fulfill its dual purpose: compensating Legal Forest Reserve environmental non-compliance and economically valuing preserved or restored native vegetation.

ADPF 743 and Its Effects on the Forest Code Agenda

The federal government's management of the SICAR in 2025 was also affected by rulings from Brazil's Supreme Court in the context of ADPF 743, a constitutional legal action aimed at protecting core principles and provisions of the Brazilian Constitution. Filed by the political party Rede Sustentabilidade in 2020, the case alleged government inaction in addressing the surge in wildfires and deforestation across the Amazon and Pantanal biomes. The final ruling, issued in 2024, obliged the federal government to present a detailed plan to improve and integrate federal land and environmental management systems—including SICAR, the Land Management System (SIGEF), the National Rural Land Registry System (SNCR), and the National System for the Control of the Origin of Forest Products (*Sistema Nacional de Controle da Origem dos Produtos Florestais* - SINAFLOR), among other territorial and environmental data systems.

This plan to integrate territorial and environmental data could help address one of the main bottlenecks in CAR registry analysis: the weakness and inconsistency of land tenure information. The Supreme Court's decision prompted the formalization of a federal action plan with its own timeline, goals, and governance structure. Although initially limited to federal agencies, the plan was later expanded, by order of the Supreme Court, to include the participation of the states of the Amazon and Pantanal biomes in its governance. The creation of the Intergovernmental Group for the Development of Common Solutions, composed of representatives from state environmental secretariats, the Office of the Chief of Staff of the Presidency, and relevant federal agencies, gave the process an unprecedented political and strategic dimension, distinguishing it from technical forums such as the Rede CAR.

The states also submitted a plan to the Supreme Court, containing guidelines, goals, and priorities for implementing the CAR and the PRA. Although this document was not formally incorporated into the federal plan approved by the Court, it has served as a reference for discussions and technical meetings, signaling a willingness to build joint solutions. One of the guidelines agreed upon within the Intergovernmental Group for the Development of Common Solutions is the systematization and consolidation of state-level information into an Integrated Action Plan.

Although this arrangement is currently limited to the states of two biomes, the judicially driven experience of intergovernmental governance underscores the need to expand and institutionalize permanent mechanisms for federative coordination within the federal executive branch. **While mediation by the Supreme Court has enabled important progress, fully strengthening the implementation of the Forest Code requires embedding this intergovernmental coordination more systematically into public administration, under the political leadership of the federal government.**

Progress on the Implementation of the Forest Code Across States

The implementation of the Forest Code across Brazilian states continues to progress at an uneven pace. In 2025, states that had already made significant advances in previous years consolidated their progress, while new initiatives began to emerge in regions that had historically shown lower levels of activity.

Over the past year, significant progress in processing CAR registrations was observed only in states that implemented automated systems, such as São Paulo, Mato Grosso, Alagoas, Amapá, Ceará, Minas Gerais, and Rio de Janeiro. However, the most substantive progress in completing these processes—with the effective validation of registry data—occurred only in states that adopted mechanisms to automatically generate or review CAR data, without requiring prior landowner approval, as in São Paulo and Mato Grosso. These procedural innovations have been decisive in translating automation into concrete validation outcomes (Box 1).

At the same time, this progress highlights a new challenge: **the lack of verifiable land tenure information within CAR, which has become one of the main obstacles to advancing CAR analysis.** In Mato Grosso—one of the most advanced states in implementing CAR and PRA—it is estimated that around 30% of registrations show significant overlaps, that is, spatial conflicts between boundaries that prevent automatic validation and require rectification by landowners. When these corrections are not made, the process stalls. Integration between SICAR and the SIGEF could help mitigate this problem by enabling automated systems to identify registrations based on certified, georeferenced data. However, since the SIGEF database covers only a portion of rural properties—excluding most landholdings and uncertified properties—it will be essential to develop complementary solutions, including strategies to encourage, mediate, and facilitate the correction of overlaps.

Amid uneven implementation across the country, a regional analysis offers an overview of the states that have made the greatest progress, those that have recently resumed advances, and those where implementation of the policy remains limited.

In 2025, none of the Northern region states made significant progress on implementing the Forest Code. Pará focused its efforts on registering agrarian reform settlement plots and developing a new CAR management system, but made no meaningful progress in analysis. Rondônia recorded an increase in the number of environmental compliance agreements, while Acre, despite a slowdown in analyses, stood out for its greater capacity to bring areas into compliance. Other states recorded only limited progress: Amapá expanded the use of streamlined analysis but still faces challenges in validation; Amazonas reached the initial stages of PRA implementation, with the first environmental compliance agreements signed; Roraima's regulation of the PRA was vague and unclear at the end of 2024 and has yet to implement it; and Tocantins indicated plans to move forward with automation tools.

In the Central-west region, Mato Grosso remains a leading reference and has consolidated its position as one of the most innovative states in implementing the Forest Code, showing steady progress in both CAR analysis and in environmental compliance. The pace has been more uneven in the other states. Mato Grosso do Sul continues to make steady progress on CAR analysis and is now working to organize environmental compliance projects that were voluntarily submitted before the official PRA module was in place, under a self-declaration format. Goiás recorded a significant increase in environmental compliance agreements, driven by state legislation that allowed the regularization of environmental non-compliance beyond the national legal cut-off date (2008). The Federal District, however, still has limited implementation capacity.

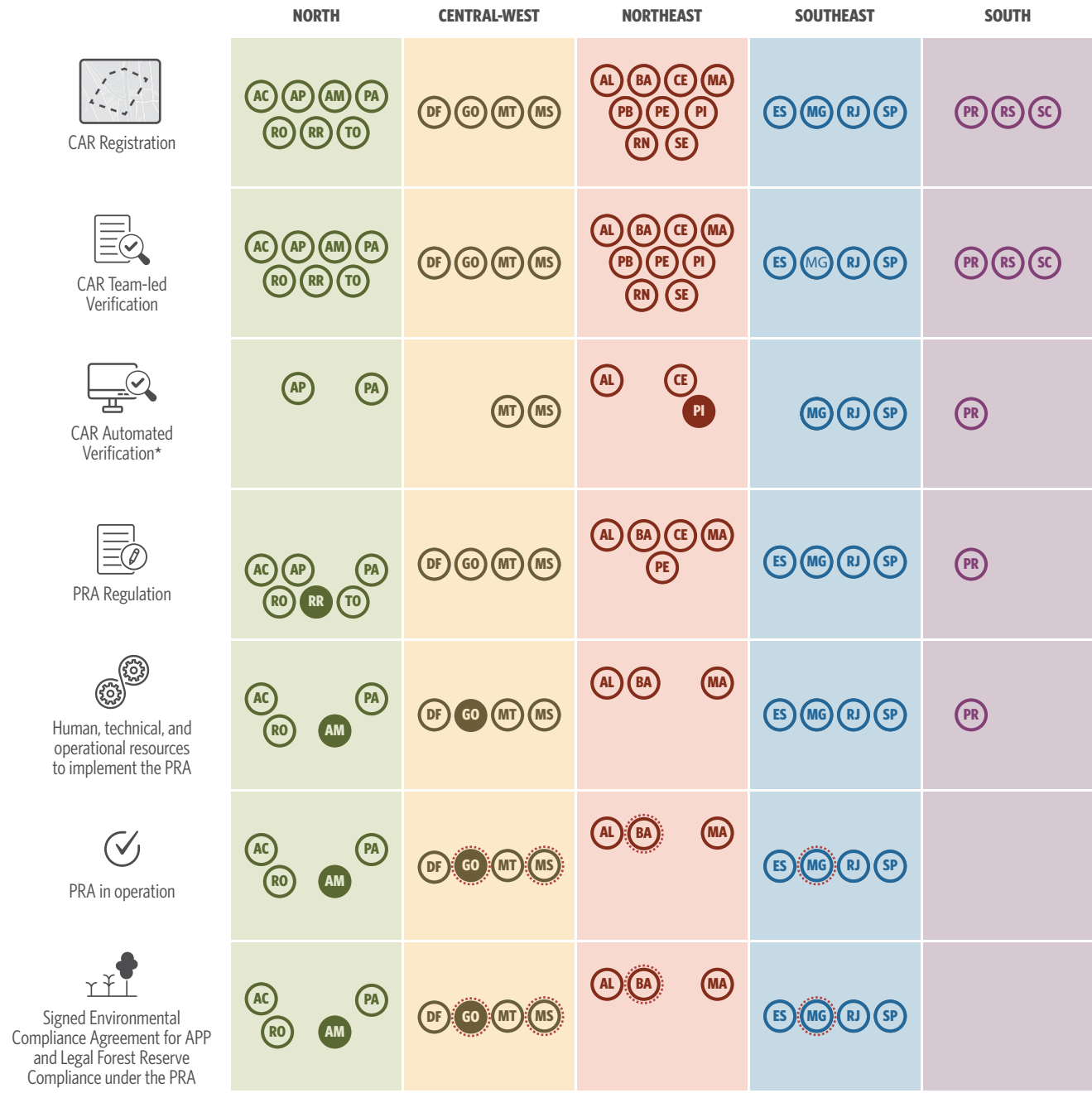
In the Northeast region, progress in 2025 remained concentrated in a few states. Alagoas and Ceará, which adopted streamlined analysis, were the only states to record consistent progress in CAR analysis, although both still have a large number of registrations awaiting landholder response to official notifications. Among the states that began analyses in 2024, only Piauí showed meaningful growth—still modest relative to its overall registry base. Piauí also started using streamlined analysis, but in a limited and small-scale manner. Maranhão, which had led the regional agenda in previous years, made no progress in 2025. Paraíba and Sergipe continued at a very slow pace, while Bahia remained the region's largest gap, with no public data or concrete signs of implementation. PRA implementation also advanced little: although Alagoas and Maranhão have formal programs in place, very few rural properties are undergoing environmental compliance.

The Southeastern states—Espírito Santo, Minas Gerais, Rio de Janeiro, and São Paulo—have already implemented all phases of CAR and PRA. This leadership was consolidated more recently, particularly through the significant advances achieved in São Paulo and Minas Gerais. São Paulo currently leads the country, with approximately 185,000 CAR registrations validated by the state, while Minas Gerais has shown consistent progress both in CAR analysis and in aligning environmental compliance with productive development strategies. Espírito Santo, which had already advanced its analyses using its own system, completed integration with SICAR in July 2025. Rio de Janeiro, the last state in the region to advance, launched in 2025 a robust institutional strategy expected to accelerate implementation of the Forest Code.

The Southern region showed a clear shift in its approach to the Forest Code agenda in 2025, after years of limited implementation. Paraná made significant progress in streamlined analysis and restructured CAR governance. Santa Catarina took its first concrete steps to resume implementation after a long period of inactivity. Rio Grande do Sul signed a judicial agreement early in the year recognizing that grazing in native grasslands does not prevent their recognition as remaining native vegetation, enabling the issuance of a new decree that could unlock CAR and PRA implementation in the Pampa biome. Although these measures are at different stages, they reflect renewed institutional engagement and create conditions for more consistent progress in the region. Despite this new momentum, Paraná faces legal disputes affecting CAR analysis in Atlantic Forest areas, creating legal uncertainty about the continuity of the process.

Overall, states have made more progress within the phases already underway than by advancing to new ones, which makes overall progress appear more modest than in previous years. Figure 1 below highlights the states that reached new implementation phases over the past year.

Figure 1. Implementation Status of CAR and PRA by State, 2025



Legend:

- Phase reached in 2025
- Phase already reached by the state
- Self-declared PRA and Environmental Compliance Agreement

* Automated verification is not an independent or mandatory phase separate from team-led verification. It is highlighted in the figure to indicate which states have adopted automated verification tools.

Source: CPI/PUC-RIO, 2025

Registration in the CAR

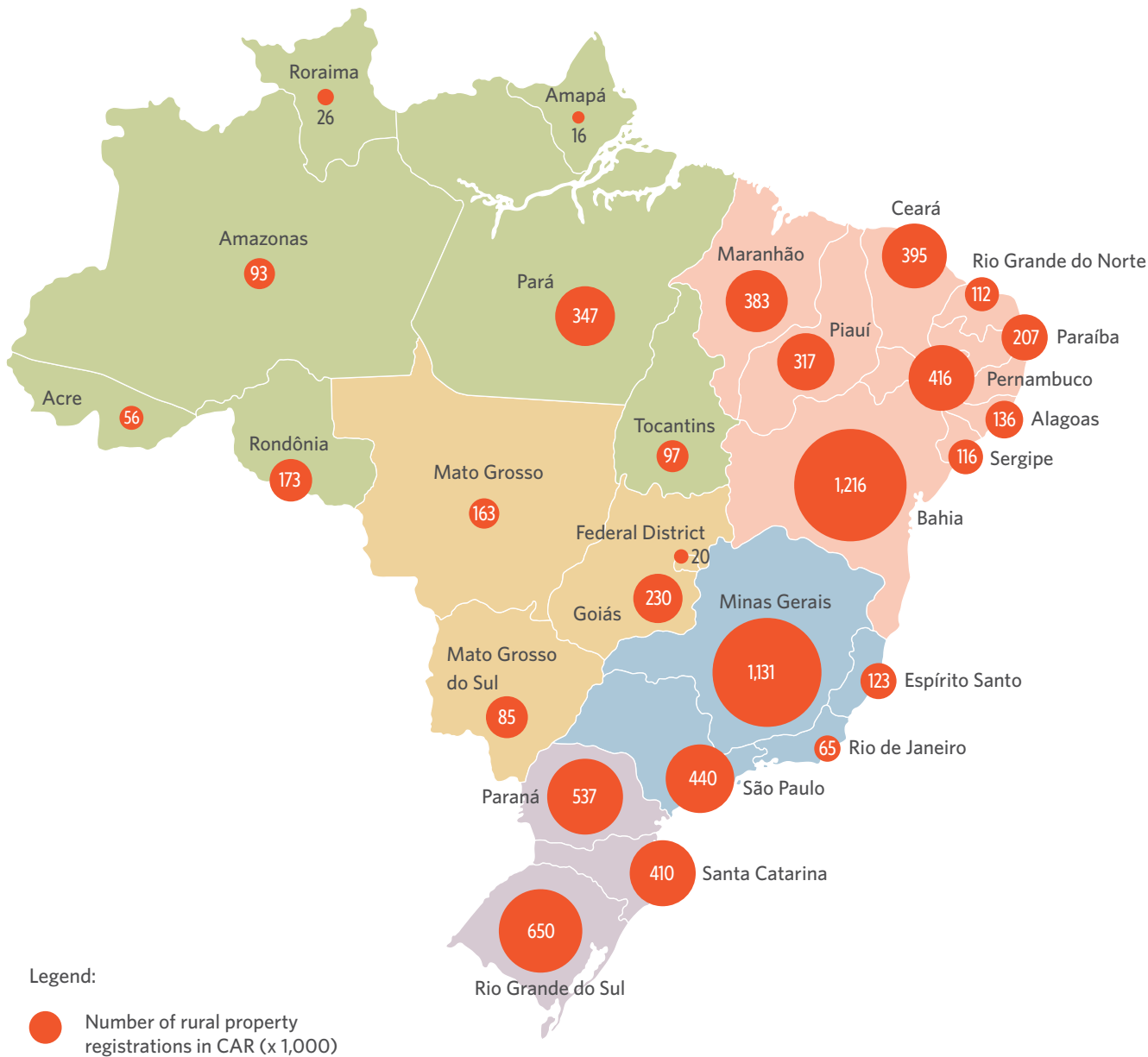
Registration of Rural Properties in the CAR

More than a decade after the creation of the CAR, the registration phase of rural properties has long been consolidated across all Brazilian states. However, the CAR database continues to expand. Between November 2024 and August 2025, the national registry grew by 4%, reaching almost 8 million registrations. This increase was driven by the individualization of agrarian reform settlement plots, the inclusion of smallholders and Indigenous Peoples and Local Communities (IPLC) territories, and, most importantly, by the dynamics of subdivision, consolidation, and registration updates.

Bahia and Minas Gerais remain the states with the largest number of registrations, both exceeding one million (Figure 2). In Bahia's case, this high number is directly linked to the registration model adopted by the state: in the State Forest Registry of Rural Properties (*Cadastro Estadual Florestal de Imóveis Rurais* - CEFIR), the state-level version of the CAR, registration is carried out by land title rather than by rural property. As a single property may comprise multiple titles, this approach significantly inflates the total number of records in the state database.

In general, the number of registrations in each state reflects its land tenure structure. More fragmented structures, dominated by smallholdings (*minifundia*), tend to generate a much larger number of registrations, creating additional challenges for managing, reviewing, and ensuring the environmental compliance of these records.

Figure 2. Rural Properties with CAR Registration, 2025



Source: CPI/PUC-RIO, with updated data provided by state agencies responsible for CAR (as of August, 2025) and the Brazilian Forest Service's Environmental Compliance Dashboard (updated in August, 2025). Data for Ceará, Mato Grosso, Minas Gerais, and São Paulo were updated in October, 2025.

Registration of IPLC Territories in the CAR

In 2025, the registration of IPLC territories in the CAR showed no significant progress compared to the previous year. The total number of registrations remained virtually unchanged. This scenario contrasts with the expansion observed in 2024 and indicates a stagnation in the inclusion of traditional territories in the registry.

Alagoas continues to lead in the number of IPLC CAR registrations, currently with 1,209—about one-third of the national total. Maranhão (683), Bahia (612), and São Paulo (290) follow in sequence. Another four states—Minas Gerais, Paraná, Pernambuco, and Piauí—each have between 100 and 200 registrations. Most of the remaining states show very low numbers: Amazonas, Goiás, Pará, Rio de Janeiro, Rio Grande do Norte, and Tocantins each have between 10 and 100 registrations, while all others have fewer than ten. Particularly noteworthy is Mato Grosso, which, despite its significant presence of traditional communities, still has only one IPLC CAR registration in SICAR.

However, the number of IPLC CAR registrations does not necessarily reflect the quality of these records. In Pará, specific projects and protocols involved workshops and training activities with the direct participation of communities, resulting in the registration of 69 IPLC territories covering about 4 million hectares and benefiting more than 20,000 people.

Individual Registration of Agrarian Reform Settlement Plots in the CAR

The individual registration of agrarian reform settlement plots in the CAR has evolved in recent years and is expected to expand significantly with the implementation of a new system in 2025. The CAR Plot Module (*Módulo Lote CAR*), developed in 2017 and made operational in 2023, gave rise to the Environmental Management System for Agrarian Reform Settlements (*Sistema de Gestão Ambiental em Assentamentos da Reforma Agrária* - SIGARA), which is scheduled to begin operating within 2025. SIGARA enables the individualization of settlement plots by cross-referencing multiple land tenure and environmental databases, producing more qualified registrations that include information on APPs, Legal Forest Reserves, land use, and the identification of beneficiaries for each plot.

Before data is submitted to SICAR, it must be validated by the beneficiaries, including the definition of the Legal Forest Reserve modality (individual or collective). Once implemented, the system is expected to scale up individualized settlement plots, though the requirement for prior beneficiary validation may become a bottleneck.

So far, approximately 13,900 plots across 264 settlements have been individualized through the CAR Plot Module, and these registrations will be incorporated into SIGARA's workflow, which is currently being implemented. At the same time, states have been adopting their own methodologies: Pará validated more than 600 registrations in partnership with the National Institute for Colonization and Agrarian Reform (*Instituto Nacional de Colonização e Reforma Agrária* - INCRA) and technical institutions; in Rondônia and Amapá, cooperation agreements enabled the preparation of individual registrations and the updating of land-use and cover information through participatory methods.

These experiences show that, although still in the process of national consolidation, the individual registration of settlement plots in the CAR is gaining scale and becoming a key instrument for integrating land tenure and environmental compliance in agrarian reform settlements.

CAR Analysis

The CAR analysis phase verifies whether the information provided by the landowner reflects the property's actual conditions, in accordance with the criteria established by the Forest Code. Its purpose is to assess environmental compliance by identifying non-compliance or confirming that the property meets legal requirements. CAR data is processed by the state authority, with the procedure either conducted manually by a technical team or automated through systems such as the streamlined analysis module. If inconsistencies or missing information are identified, the landowner is notified to provide clarifications or make corrections. The verification, therefore, proceeds through successive cycles until the registration is officially "validated".

In practice, many registrations remain for long periods within these intermediate verification cycles. To reflect this reality, this report distinguishes between two categories: (i) **Under Review**, referring to registrations that have entered the verification process but have not yet been finalized, and (ii) **Validated**, referring to those whose verification cycles have been completed and officially approved by the state authority.

Registrations under Review

Although the registration phase has consolidated CAR as a key tool for environmental management, verifying the declared data is what gives the registry consistency and reliability—and this remains the main challenge on the agenda.

In 2025, the CAR analysis phase advanced across several states, albeit unevenly. While most states still show very low percentages of registration under review relative to their registry bases, some have managed to scale up the process. The most consistent progress was achieved in states that adopted automated analysis tools—such as Alagoas, Amapá, Ceará, Mato Grosso, Minas Gerais, Rio de Janeiro, and São Paulo—though each followed different paths.

Amapá, a pioneer in adopting streamlined analysis, expanded the tool's reach and processed more than half of its registrations. Alagoas, which had already been achieving excellent results in recent years, maintained its progress and now has nearly half of its registrations under review. Ceará made a remarkable leap, advancing well above the national average, driven by the full use of streamlined analysis. Minas Gerais doubled its number of registrations under review in one year, thanks to multiple strategies, including streamlined analysis modules and outsourcing to private companies. Rio de Janeiro recorded significant growth in 2025, after having only begun streamlined analysis on a small scale the previous year. Mato Grosso, which had previously been a forerunner on team-led verifications alongside Pará, restructured its strategy and, with the launch of CAR Digital, scaled up the process, achieving a substantial increase in processed registrations and improvements in technical quality.

Paraná projects a significant increase in the number of registrations under review by the end of 2025, driven by the contracting of a specialized company that has already processed more than 200,000 smallholder registrations. This progress demonstrates the potential of automation to rapidly scale up CAR reviews in the short term. These results, however, have not yet been incorporated into SICAR, as the state is in the process of publishing a decree to regulate this procedure, as well as the completion of the technical process required to integrate the reviews into the federal system.

In other states that also use automated analysis tools—such as Mato Grosso do Sul and Pará—numbers remained stable or grew only modestly in 2025. In some cases, this can be explained by the reprocessing of previously processed registrations using updated cartographic data, which improves quality without substantially changing totals. São Paulo presents a distinct situation: the state has already processed, through automation, virtually all registrations eligible for this phase. In states where CAR verification relies solely on technical teams, the number of registrations under review increases only when there is institutional reinforcement—through staff hiring, outsourcing, or delegation to municipalities. Even so, scaling up remains a challenge.

Beyond differences in analytical strategies, a structural obstacle limits progress

nationwide: land tenure conditions. States such as São Paulo and Mato Grosso have been able to apply automated analysis tools at scale because they have a large base of properties with consolidated and verifiable boundaries, supported by registries such as SIGEF. However, registrations with overlaps that exceed the legal tolerance threshold cannot move forward—whether through automation or team-led verification—until landowners make the necessary corrections.

Based on consolidated data over the years, São Paulo remains the national leader, with approximately 395,000 registrations under review. Ceará follows, with around 271,000, a sharp increase in 2025, driven by streamlined analysis after technical bottlenecks were resolved and by improved coordination with the Brazilian Forest Service, which improved batch processing. Pará also remains among the most advanced states, with about 251,000 registrations under review, the result of various strategies implemented over the past decade. Other states with significant numbers of registrations under review include Minas Gerais (167,000), Mato Grosso (92,000), Espírito Santo (81,000), and Alagoas (64,000).

A group of states remains at an intermediate level, with 10,000 to 50,000 registrations under review. Most saw only modest progress in 2025—including Acre, Amazonas, Goiás, Maranhão, Paraná,⁵ Rio de Janeiro, and Rondônia. Mato Grosso do Sul stands slightly above this group, with approximately 58,000 registrations under review.

At the lower end, eight states and the Federal District have yet to surpass 10,000 registrations under review—Amapá, Paraíba, Piauí, Rio Grande do Norte, Roraima, Santa Catarina, Pernambuco, and Sergipe. In Amapá's case, although the absolute number is small (9,000), it represents a major milestone for 2025, as it already corresponds to more than half of the state's registry base. The most critical cases are Pernambuco, Rio Grande do Sul, and Tocantins, with around one hundred registrations under review. Bahia continues to present a major gap, with no available data due to the specificities of its CEFIR system.

⁵ The total number of registrations under review in Paraná is expected to be updated soon and may exceed 250,000 by the end of 2025, as a result of the automated analysis carried out by the contracted company.

Absolute numbers illustrate the scale of effort but do not fully convey the challenge each state faces. Since registry bases vary widely in size, the percentage of registrations under review relative to the total number of registrations provides a clearer picture of each state's progress.

When looking at state-level percentages, disparities become even more evident. **São Paulo leads with 90% of its registrations under review, followed by Pará (72%), Ceará (69%), Mato Grosso do Sul (68%), Espírito Santo (66%), Amapá (56%), and Mato Grosso (56%). At an intermediate level are Alagoas (47%) and Amazonas (37%). Rondônia (29%), Acre (20%), Rio de Janeiro (17%), and Minas Gerais (15%) fall into a lower intermediate group. In the remaining states, registrations under review account for less than 10% of the total.**

The analysis shows progress in states with large registry databases. For example, Minas Gerais demonstrates significant gains in absolute numbers despite still-low percentages. There is also progress in states with smaller databases, such as Amapá and Alagoas, where more modest totals represent a substantial share of their registry bases.

Nationally, the number of registrations under review grew by 41% between November 2024 and September 2025. In total, approximately 1.6 million registrations have undergone at least one verification cycle, representing about 20% of the national registry.

In states that have adopted automated systems, the pace of CAR reviews has accelerated exponentially. In some cases, the recent adoption of streamlined analysis has produced sharp increases within just a few weeks, potentially leading to a markedly different national scenario by the end of the year, with higher percentages of registrations reviewed.

Figure 3 shows the total number of registrations under review and their share in relation to the total number of records in each state.

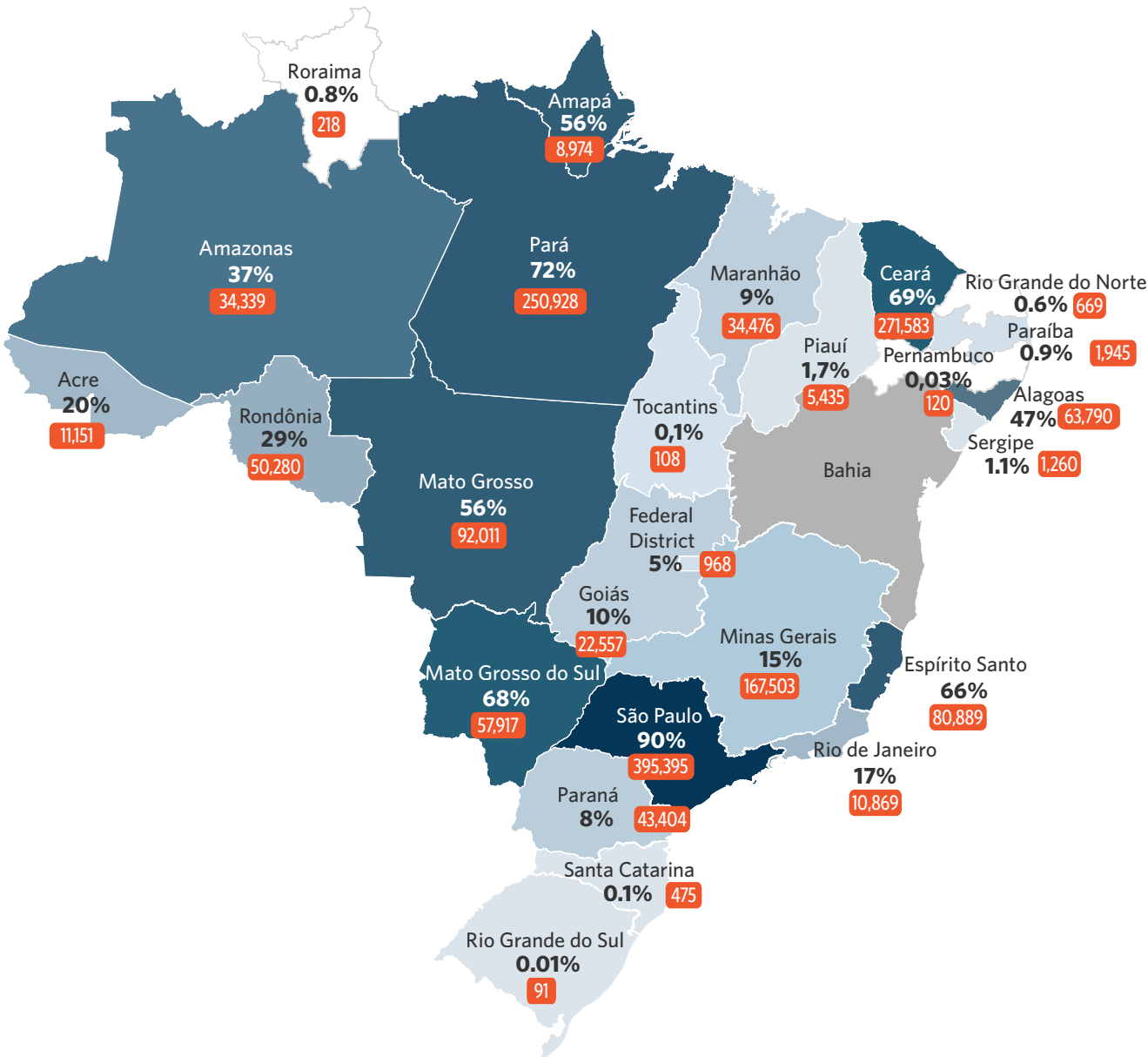
Figure 3. Share and Total Number of CAR Registrations Under Review, 2025

CAR registrations under review/Total CAR

0% 90%

Total of CAR registrations under review

Unavailable data



Note: Only valid registrations are included; analyses of canceled records were excluded.

Source: CPI/PUC-RIO, with updated data provided by state agencies responsible for CAR (updated August, 2025) and the Brazilian Forest Service's Environmental Compliance Dashboard (updated August, 2025). Data for Ceará, Mato Grosso, Minas Gerais, and São Paulo were updated in October, 2025.

Box 1. Innovations by São Paulo and Mato Grosso in the CAR Analysis Phase

The CAR analysis phase faces structural challenges. The adoption of a self-declaration system enabled the creation of a vast database of information on rural properties, but it also led to uneven technical registrations. Compared with more precise cartographic databases, many registrations present inconsistencies, such as overlaps between properties, incorrect delimitation of APPs, or inaccuracies in identifying consolidated rural areas—a portion of a rural property already occupied by human activities before July 22, 2008, including buildings, infrastructure, or agricultural, livestock, or forestry uses. The need for rectification by landowners, combined with communication barriers and missed deadlines, has led to a growing backlog of pending registrations and process bottlenecks.

In response, São Paulo and Mato Grosso have become national references by adopting distinct yet complementary solutions, both aimed at increasing scale, quality, and efficiency in CAR verifications.

São Paulo combined the customization of the automated analysis tool developed by the Brazilian Forest Service with regulatory adjustments to accelerate CAR verification. The state faced two main bottlenecks: low-quality registrations and the requirement for landholders' prior approval. To address these barriers, São Paulo leveraged the system's high-quality cartographic data to automatically correct smallholding registrations. In addition, a regulatory change reversed the approval process: the results are directly incorporated into the registry, while landowners retain the right to contest them afterward if they disagree. This combination of measures improved the process's efficiency and scalability. The impact was especially evident in the validation phase: the number of validated registrations more than doubled—from 77,000 in November 2024 to 185,000 in September 2025—rising from 18% to 42% of the state's total registry base.

Mato Grosso advanced through the creation of **CAR Digital**, which introduced an innovative approach by reconstructing registrations using the property boundaries already declared in the registry and integrating them with high-resolution cartographic datasets. This process rebuilds each registration by overlaying its perimeter onto updated spatial layers—such as land cover, hydrography, and topography—and automatically populates each property's internal attributes with verified data. This integration produces more complete and higher-quality registrations, automatically delineating APPs, Legal Forest Reserves, remaining native vegetation, and consolidated land-use areas. In 2025, with the statewide expansion of the tool, the launch of version 2.0 introduced a decisive change: it eliminated the requirement for prior approval by landowners. This regulatory adjustment significantly increased the scale of analyses, enabling faster, more consistent processing, though rectification is still required for cases of land overlap. As a result, the number of registrations processed more than doubled—from 45,000 (30% of the registry base) to 92,000 (56%). The effect was also evident in validation, as the share of registrations validated rose from 11% to more than 19% of the state's total.

The experiences of these two states show that combining automation tools—capable of producing higher-quality registrations or triggering mandatory corrections—with procedural adjustments has been key to overcoming long-standing bottlenecks in CAR verification. At the same time, they demonstrated that sustained progress depends on robust technological infrastructure, reliable cartographic databases, and effective solutions to land tenure challenges that continue to prevent a significant share of registrations from advancing.

Validated Registrations

Validation of CAR registrations remains the main bottleneck for the implementation of the Forest Code. By September 2025, approximately 485,000 registrations had been validated, more than 6% of the national database. Although this represents an increase of approximately 92% compared to 2024, major disparities persist across states: only a few have validated a meaningful share of their databases; many remain below 5%, and nearly half have yet to reach 1%. Even so, the expansion of automated analysis is expected to accelerate this stage as well, potentially changing the national scenario by the end of the year, with higher validation rates across states.

The most notable progress occurred in states that adopted structural strategies combining high-quality cartographic databases, automatic or compulsory rectifications, and the capacity to validate registrations without requiring prior approval from landowners. In 2025, adjustments to the tolerance threshold for automated analysis were introduced. These changes had a nationwide effect but were particularly relevant in Ceará, Minas Gerais, São Paulo, and Mato Grosso, as they enabled validation of registrations previously blocked by minor cartographic inconsistencies.

Paraná is moving in the same direction. A decree expected in October 2025 will regulate the adoption of compulsory rectification, allowing for the automatic validation of registrations reviewed in compliance. Those with confirmed environmental non-compliance will depend on landowners accepting the automatic corrections. With these measures in place, the state expects to validate at least 165,000 registrations by the end of the year.

Some states are also testing complementary strategies, such as the RetifiCAR program, coordinated by the Brazilian Agriculture and Livestock Confederation (*Confederação da Agricultura e Pecuária do Brasil - CNA*) in partnership with state federations, rural unions, and environmental agencies. The program hires consultants to assist landowners in correcting their registrations. Although still at an early stage, the program has already contributed to validation progress in states such as Alagoas, Ceará, and Rio de Janeiro.

Espírito Santo stands out for validating 65% of its database. The state benefited from technical assistance provided by the Espírito Santo Institute of Agricultural and Forestry Defense (*Instituto de Defesa Agropecuária e Florestal do Espírito Santo - IDAF/ES*) to smallholders during registration, which ensured higher-quality data from the outset. These validations were conducted through a state-level system that operated independently of SICAR. Until 2025, the validated registrations from Espírito Santo were not reflected in the national database. The integration completed this year enabled those results to be officially consolidated within SICAR.

As of August 2025, some states concentrated the highest numbers of validated registrations. São Paulo leads with 185,000 validated registrations, followed by Espírito Santo (80,000), Ceará (64,000), Pará (39,000), Mato Grosso (32,000), Minas Gerais (37,000), Mato Grosso do Sul (13,000), and Rondônia (11,000).

A few states show intermediate performance, with between 2,000 and 10,000 validated registrations: Maranhão (7,900), Alagoas (4,700), Paraná (4,000),⁶ and Acre (2,600). Rio de Janeiro is also in this group, with slightly more than 1,200 validated registrations.

Most states have yet to reach 1,000 validated registrations: Amazonas (848), Amapá (586), Federal District (242), Goiás (182), Paraíba (76), Piauí (63), Sergipe (54), Santa Catarina (20), Roraima (15), Tocantins (14), Rio Grande do Sul (7), and Rio Grande do Norte, with only one validated registration.

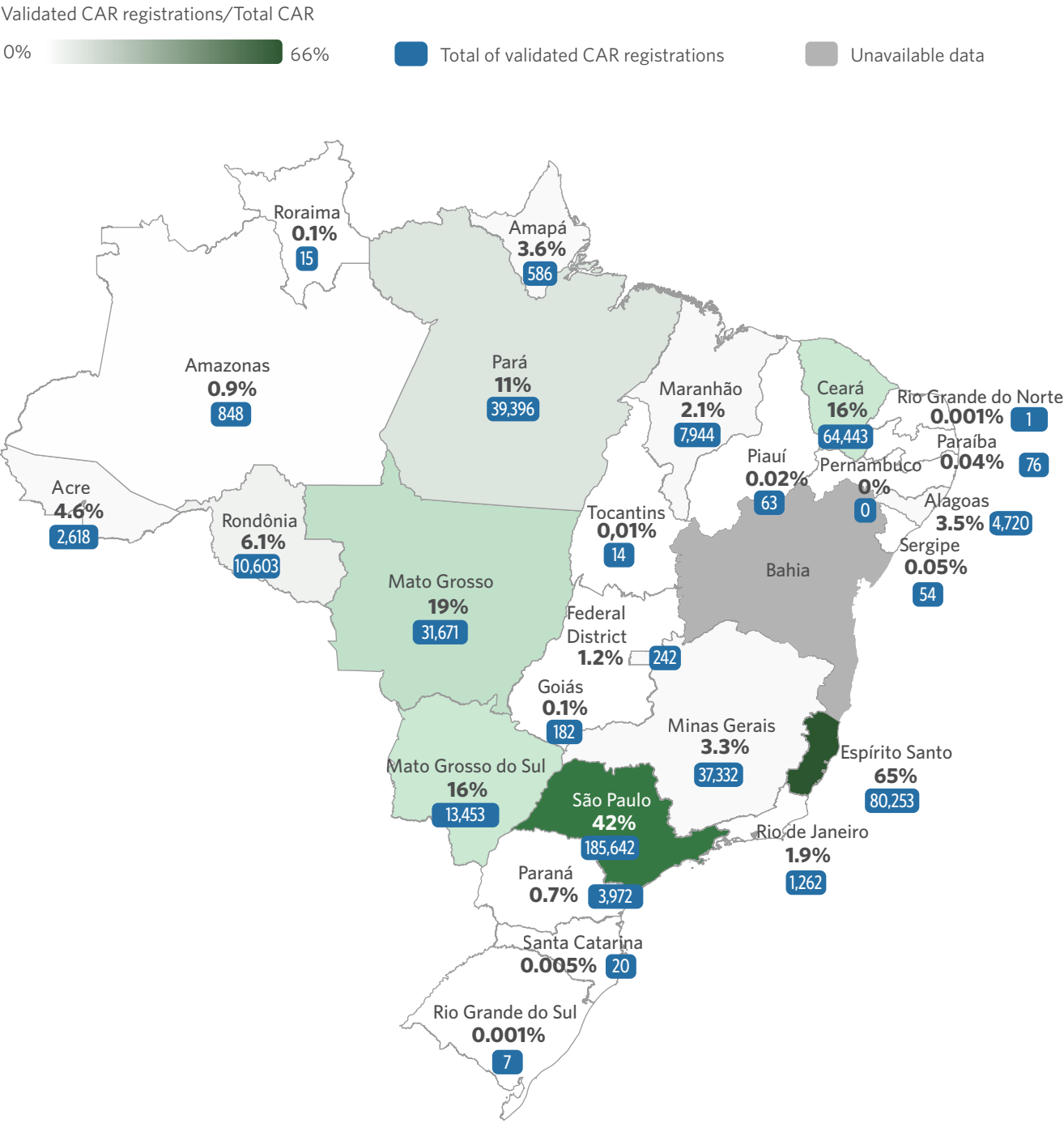
Pernambuco is the only state that has not validated any registrations, while Bahia reports no available data due to the specific features of its state-level system.

When comparing the share of validated registrations within each state's total database, disparities become even more evident. Espírito Santo leads with 65% of its database validated, followed by São Paulo (42%), Mato Grosso (19%), Mato Grosso do Sul (16%), Ceará (16%), and Pará (11%).

Lower percentages are observed in Rondônia (6.1%), Acre (4.6%), Amapá (3.6%), Alagoas (3.5%), Minas Gerais (3.3%), Maranhão (2.1%), Rio de Janeiro (1.9%), and the Federal District (1.2%). The remaining states have validated only about 1% of their database, namely Amazonas, Goiás, Paraíba, Paraná, Piauí, Rio Grande do Norte, Rio Grande do Sul, Roraima, Santa Catarina, Sergipe, and Tocantins.

6 The total number of validated registrations in Paraná is expected to be updated soon, with projections indicating at least 170,000 validations by the end of 2025.

Figure 4. Share and Total Number of Validated CAR Registrations, 2025



Note: Only valid registrations are considered; analyses of canceled registrations are excluded.

Source: CPI/PUC-RIO, with updated data provided by state agencies responsible for the CAR (as of August 2025) and the Brazilian Forest Service's Environmental Compliance Dashboard (updated in August 2025). Data for Ceará, Mato Grosso, Minas Gerais, and São Paulo were updated in October 2025.

A key obstacle to validating registrations is communication with landowners. In many cases, they either do not receive or fail to respond to requests from state authorities for data correction or additional information. As a result, many registrations remain classified in SICAR as “awaiting response to notification”. This issue is observed in states such as Amapá, Alagoas, and Ceará, which have advanced automated analyses but still face barriers due to pending corrections or unconfirmed approvals from landowners. The new strategies adopted by São Paulo and Mato Grosso, as described above, have proven effective in addressing this bottleneck, but the problem persists nationwide. Many states have resorted to joint analysis and temporary task forces, which can yield short-term results but fall short of the scale needed to accelerate the process. This situation underscores the need for a national communication campaign to raise producers’ awareness of the importance of keeping their CAR data in SICAR up to date and of responding to notifications. Measures such as expanding communication channels (e.g., using WhatsApp in Mato Grosso and radio campaigns in Ceará) can broaden outreach and speed up the verification process.

Finally, legal disputes continue to hinder the progress of CAR analysis and the broader implementation of the Forest Code. Controversy over the concurrent application of the Atlantic Forest Law and the Forest Code in the State of Paraná illustrates this dynamic. In 2021, Brazil’s High Court of Justice (*Superior Tribunal de Justiça* - STJ) suspended an injunction requiring the state to apply the 1990 Atlantic Forest protection framework, thereby allowing CAR verifications to proceed under the Forest Code. However, in August 2024, the High Court’s plenary panel, composed of all justices, reviewed the decision and reestablished the validity of the framework that determined the application of the Mata Atlântica regime. Yet the ruling has not been published, and the decision remains unenforced.⁷

In parallel with this latest STJ decision, the Federal Court of Paraná issued, in September 2024, a final ruling consistent with the injunction, requiring compliance with the Atlantic Forest framework. This ruling was later suspended, in June 2025, by the Federal Regional Court of the 4th Region (*Tribunal Regional Federal da 4ª Região* - TRF-4), which cited the risk of serious harm to public order and economic stability.^{8,9} The suspension allowed the state to continue CAR analyses under the Forest Code framework. However, pending a final judgment, CAR analyses remain under significant legal uncertainty.

The case in Paraná reveals a genuine judicial standoff, with successive and contradictory rulings overlapping across different jurisdictions. This back-and-forth shows how the Judiciary has become an arena for political and strategic disputes surrounding the application of the Forest Code. The effects of this conflict extend beyond Paraná and could affect up to 17 states containing Atlantic Forest ecosystems, generating legal uncertainty for CAR verifications and environmental compliance across Brazil.

7 STJ - SLS 2950/PR (2021/0170590-0). Case record available at: bit.ly/42sMgno.

8 TJPR - Civil Action no. 5023277-59.2020.4.04.7000/PR. Judgment available at: bit.ly/3VUw3ne.

9 TRF-4 - SLS no. 5015462-83.2025.4.04.0000/PR. Decision available at: bit.ly/4nO93PK.

Cancellation of CAR Registrations in Non-registrable Public Lands

The cancellation of CAR registrations overlapping Indigenous Lands, Protected Areas under public domain, and other non-registrable areas—such as undesignated public forests and other lands that are not eligible for rural registration—remains an important indicator of the Forest Code’s implementation. Some states—namely Pará, Acre, Amazonas, Mato Grosso, Rondônia, and Roraima—have adopted measures to suspend and cancel irregular registrations in Indigenous Lands. Pará stands out for maintaining permanent enforcement actions and for publicly releasing data through an online dashboard.

This issue progressed at the federal level in 2025. Under the Territorial and Environmental Data Integration Plan approved by the Supreme Court in the context of ADPF 743, the federal government began implementing automatic filters in SICAR to identify and block the registration of rural properties located on federal public lands, and to require prior authorization from the competent authority for any corrections of registrations overlapping embargoed areas. Centralizing this agenda at the federal level tends to enhance the effectiveness of these efforts, especially regarding Indigenous Lands and other federal public lands, whose management cannot rest solely with the state authorities. Nevertheless, monitoring state-level actions remains essential to assess concrete progress and ensure alignment with federal efforts.

State-level Regulation of the Forest Code

Regulation of the Environmental Compliance Program (PRA) and the Establishment of APPs and RL Compliance Metrics

In the past year, Roraima enacted its PRA regulation, marking the first step toward implementation. In total, 20 states and the Federal District have now regulated their PRAs, establishing metrics for implementing environmental compliance measures in APPs and Legal Forest Reserves. However, six states—Paraíba, Piauí, Rio Grande do Norte, Rio Grande do Sul, Santa Catarina, and Sergipe—still lack the minimum regulatory framework required to ensure environmental compliance for rural properties.

Roraima’s PRA regulation introduced several innovations, including incorporating climate objectives, promoting productive restoration, and creating incentives to encourage producers to join the program. However, the law has a critical weakness: it does not distinguish between deforestation that occurred before and after July 2008, nor does it refer to consolidated rural areas—that is, rural areas that were legally occupied and used before this cutoff date. This omission creates legal uncertainty and may open the door to interpretations that are more flexible than those allowed under the Forest Code.

Other states have also issued new regulations. Paraná updated its rules regarding compliance with APPs and Legal Forest Reserves. Rio Grande do Sul resolved its legal impasse regarding the Pampa biome, and following a judicial agreement, revised the decree governing restoration and land use in the biome. The new decree recognizes that extensive grazing is compatible with the maintenance of remaining native vegetation and provides for the reclassification of these areas in the CAR for the establishment of the Legal Forest Reserve.

Pará, in turn, established an unprecedented and controversial mechanism for compensation in the Legal Forest Reserve by regulating the CPA. Initially designed to channel funds toward the creation and management of Fully Protected Areas, the CPA was later expanded to allow its use for compensating Legal Forest Reserve deficits resulting from deforestation that occurred before July 2008—the cutoff date established by the Forest Code for environmental compliance. Under this arrangement, compensation is formalized through a temporary conservation easement established within the protected area associated with the quota. Since these protected areas are already subject to strict use restrictions, the easement does not alter existing protection levels; it merely creates a legal fiction that allows producers' payments to be recognized as compensation. In practice, this measure creates a shortcut to compliance: it enables producers to comply through a mechanism more flexible than permitted under the Forest Code, while providing the state with an additional source of revenue to finance the management of protected areas.

States such as Ceará, Minas Gerais, Paraná, and Santa Catarina have established more robust governance structures to manage the CAR and/or the PRA, placing them within higher-level institutions or involving multiple government agencies. This institutional design strengthens the Forest Code agenda, enhances its political relevance within state governments, and promotes greater coordination with production sectors.

Between September 2024 and August 2025, approximately 30 state-level normative acts were enacted, regulating procedures related to the CAR, the PRA, and the compliance metrics of APPs and Legal Forest Reserves—some complementing previous regulations and others replacing them altogether.

Implementation of the Environmental Compliance Program (PRA)

The implementation of environmental compliance measures—including the restoration of APPs and the recovery or compensation of Legal Forest Reserves—is a key objective of the Forest Code. Yet, this remains far from being achieved in the short- or medium-term across Brazil.

In 2025, there was little progress in implementing the Environmental Compliance Program. Among the states that had not yet advanced to this phase, only Amazonas began formalizing its first environmental compliance agreements, and Paraná is expected to implement its PRA by the end of the year. Even so, some states recorded an increase in the number of signed environmental compliance agreements, including Acre, Alagoas, Maranhão, Mato Grosso, Pará, Rondônia, and São Paulo.

One way to accelerate environmental compliance is through producer-driven procedures, in which landowners themselves identify their environmental noncompliance and submit a compliance plan before their registration is analyzed. Minas Gerais followed this path by allowing landholders to join the PRA through a self-declaration procedure. Goiás adopted the Environmental Declaration of the Property (*Declaração Ambiental do Imóvel*—DAI), under which landowners present a restoration plan for APPs and Legal Forest Reserves. This hybrid model becomes effective only after it is reviewed and approved by the competent authority. Mato Grosso do Sul also adopted an early self-declaration model, allowing landowners to submit their environmental compliance plans at the time of registration.

Self-declared compliance models should be understood as part of a broader set of approaches to facilitate environmental compliance, but they are not sufficient on their own. Implementing environmental compliance measures requires comprehensive and coordinated strategies that combine economic incentives, legal certainty, and technical support—adapted to local conditions—to increase participation and ensure effective enforcement of the Forest Code.

Environmental Compliance Agreement

In the states where the Environmental Compliance Program is already operational, only a small share of validated CAR registrations—that is, those with confirmed environmental non-compliance—have advanced to the next phase: enrolling in the program, submitting an Environmental Compliance Plan for Degraded and Altered Areas (*Projetos de Regularização de Áreas Degradadas e Alteradas* - PRADA), and signing environmental compliance agreements to implement environmental compliance measures in APPs and Legal Forest Reserves.

The low transition rate to compliance reflects both producers' reluctance to assume restoration commitments and the fact that restoration—whether ecological, productive, or multifunctional—requires financial and technical capacities that most producers lack.

Between November 2024 and August/September 2025, Maranhão and São Paulo recorded the most significant progress in signing environmental compliance agreements. Maranhão increased from just over 100 to 418 signed agreements, while São Paulo rose from fewer than 250 to 730.

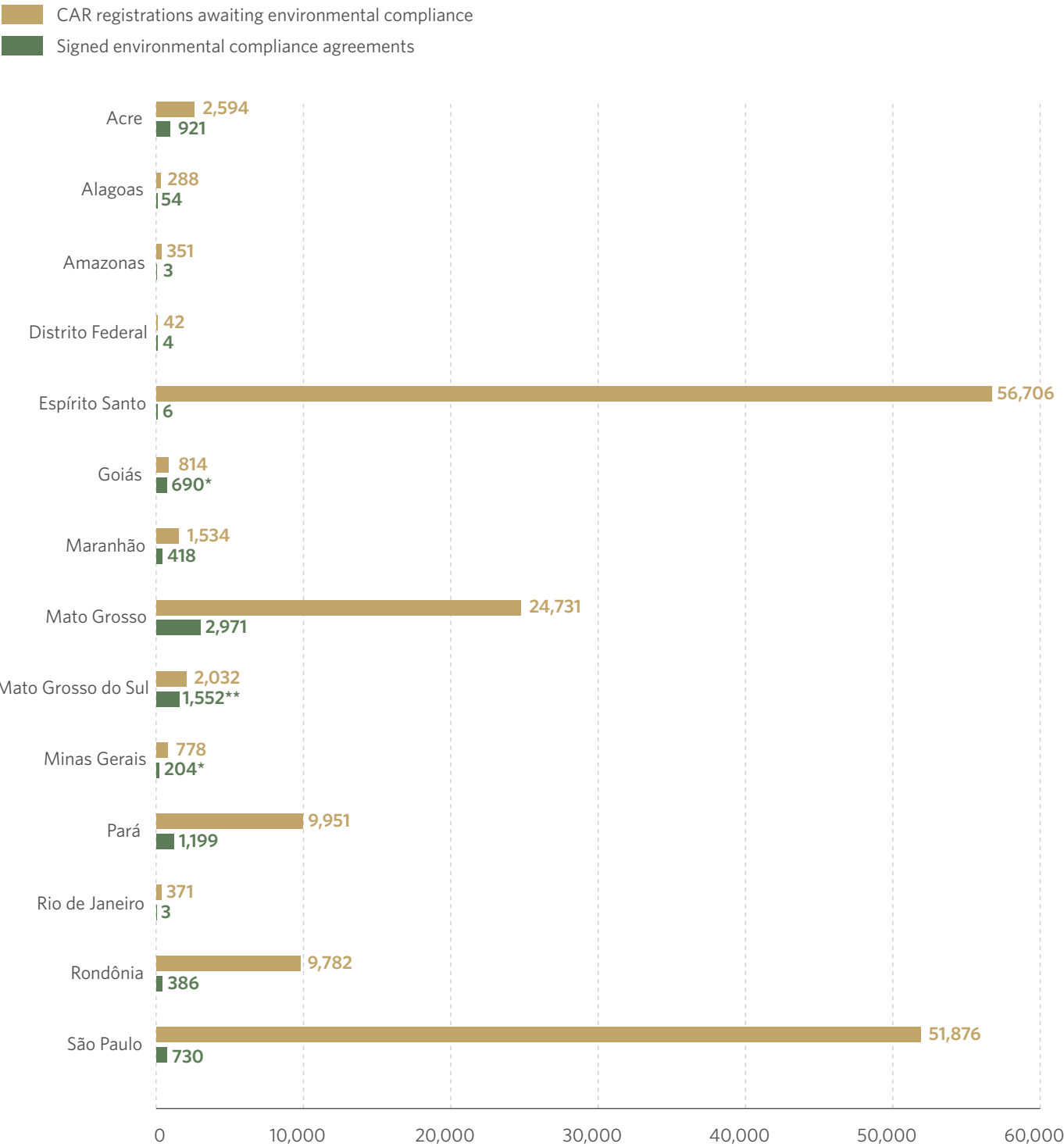
Goiás stands out as a special case. The state adopted a self-declaration procedure and recorded an increase in the number of agreements driven by state legislation that weakens environmental compliance requirements. The law allows compensation for Legal Forest Reserve areas cleared after 2008, effectively extending the legal cut-off date for consolidated rural areas to 2019. Although it requires each hectare cleared to be compensated with two hectares elsewhere, the law undermines key provisions of the Forest Code and sets a precedent that could encourage further flexibility in its implementation. In this context, Goiás already reports 690 signed environmental compliance agreements.

Mato Grosso do Sul also presents unique circumstances. The state faces challenges in monitoring plans submitted as PDFs under the self-declaration model. Migrating these plans to the PRA module within SICAR requires converting the information into a standardized digital format. In addition, many plans contain inconsistencies, particularly the underestimation of environmental non-compliance. Even so, this strategy has enabled the state to achieve a relatively high number of formalized environmental compliance agreements compared to others: out of 13,502 voluntary submissions, 1,552 have already been approved.

At the national level, the signing of environmental compliance agreements remains highly uneven. Mato Grosso has the highest number of agreements signed, with 2,971, followed by Mato Grosso do Sul (1,552), Pará (1,199), and Acre (921). They are followed by São Paulo (730), Goiás (690), Maranhão (418), Rondônia (386), and Minas Gerais (204). Alagoas (54), Espírito Santo (6), the Federal District (4), Amazonas (3), and Rio de Janeiro (3) still show very limited progress, underscoring that consolidating the PRA remains a major challenge for most states.

Figure 5 illustrates the performance of states where the PRA is operational, showing the relationship between the number of validated registrations with confirmed environmental non-compliance and the total number of signed environmental compliance agreements—the main indicator of progress in rural properties' compliance with the Forest Code.

Figure 5. CAR Registrations Awaiting Environmental Compliance and Signed Environmental Compliance Agreements, 2025



*In Mato Grosso and Goiás, PRA follows a self-declaration model. Therefore, the environmental compliance agreements do not necessarily correspond to CAR registrations with confirmed environmental non-compliance, which limits comparability with other states.

**The number corresponds only to self-declared Environmental Compliance Agreements already approved by the state; 13,000 Environmental Compliance Agreements are still awaiting approval.

Source: CPI/PUC-RIO, 2025

Acre stands out for effectively translating registration validation into concrete environmental compliance outcomes, with a high proportion of signed environmental compliance agreements. São Paulo shows the opposite pattern: despite significant progress in validation, this has not yet translated into participation in the PRA. This disparity highlights one of the main implementation challenges: bridging the gap between rural properties with confirmed environmental non-compliance and those actively working to achieve compliance.

The case of São Paulo is particularly illustrative: once the bottleneck in CAR analysis is overcome, the main challenge becomes engaging landowners in joining the PRA. For the full implementation of the Forest Code in São Paulo, it will be crucial to understand two aspects: (1) why many producers, even when called upon, choose not to join the PRA; and (2) which instruments could most effectively encourage their participation.

Finally, the relationship between the number of signed agreements and the total area under environmental compliance reveals significant contrasts among states. Pará accounts for by far the largest area under compliance—about 110,000 hectares, mostly in APPs (97,000 hectares)—despite not being among the states with the highest number of signed agreements. In Amazonas, just three agreements cover 5,400 hectares of APPs under compliance, showing that a few commitments can encompass very large areas.

At the other end of the spectrum, Minas Gerais (204 agreements covering 1,800 hectares) and Acre (98 agreements covering just over 2,000 hectares) show smaller-scale commitments. In São Paulo, 730 agreements cover roughly 15,200 hectares of restoration and 7,500 hectares of compensation, while in Rondônia, with 386 signed agreements, the area involved is even larger—56,800 hectares—reflecting more extensive commitments per property.

This overview reinforces that the number of environmental compliance agreements alone does not reflect the actual scale of environmental compliance: in some states, many agreements cover small areas, while in others, few cover extensive areas. This disparity affects how progress under the PRA is perceived and highlights the importance of considering the territorial dimension of environmental compliance. It is also worth noting that data on the area under compliance was provided directly by the states, and to date, no public sources allow independent verification or additional detail.

Environmental Compliance Monitoring

Monitoring the Implementation of Environmental Compliance Measures in APPs and Legal Forest Reserves

Although several states have already established rules for monitoring the implementation of environmental compliance measures in APPs and Legal Forest Reserves, few have effectively developed systems or tools to track restoration progress. Most still rely on self-monitoring by landowners through the submission of periodic reports, complemented by occasional actions from environmental agencies, such as remote sensing or on-site inspections when deemed necessary.

Some states are still developing their monitoring platforms, while others have postponed this because they have not yet reached this stage of the environmental compliance process. The use of technology, such as monitoring systems and geospatial data platforms, is essential for managing forest restoration and making the process more efficient and transparent.

Alignment of the Forest Code with Other Public Policies

Strengthening alignment between the Forest Code and other environmental policies is essential to enhancing its effectiveness. Integrating the CAR with policies on conservation, restoration, deforestation control, land tenure regularization, and rural credit allows it to evolve from a mere monitoring and compliance instrument into a driver of a broader sustainable development agenda.

A concrete example of this alignment is the ***Floresta+ Conservação Program***, a federal Payment for Environmental Services (PES) policy implemented in partnership with the states of the Legal Amazon. Focused on conserving native vegetation, reducing deforestation, and maintaining ecosystem services in small rural properties and agrarian reform settlements, the program has promoted joint actions with state agencies to advance the CAR agenda. These actions include field mobilization efforts, capacity-building activities, and support for the verification, correction, and validation of CAR registrations for potential program beneficiaries.

These initiatives have already been implemented in seven states—Acre, Amapá, Amazonas, Maranhão, Mato Grosso, Pará, and Rondônia—and have so far resulted in 15,418 verifications, 5,535 rectifications, and 10,076 validations, in addition to 3,837 new registrations. These results demonstrate the potential of *Floresta+ Conservação* to accelerate the implementation of the Forest Code by integrating the CAR agenda with incentive-based conservation policies.

State-level PES programs also reinforce this alignment. In São Paulo, the *Refloresta-SP* Program combines financial incentives for conservation and restoration with eligibility criteria based on the CAR and the PRA, ensuring that benefits are available only to properties in compliance with the law. Similarly, state restoration programs use CAR data to identify priority areas for reforestation and guide investment decisions. The *Florestas do Amanhã* Program in Rio de Janeiro aims to expand native vegetation cover by 10% by 2050 and uses CAR data to guide its restoration actions.

Another point of convergence is deforestation control. Amazonas has developed a procedure that cross-references alerts from the National Institute for Space Research (*Instituto Nacional de Pesquisas Espaciais* - INPE) with CAR data. When unauthorized forest clearance is detected, the competent authority immediately suspends the property's CAR, embargoes the area, and issues fines. Other states—such as Amapá, Espírito Santo, Paraíba, and Rio Grande do Norte—also cross-check CAR data with satellite-based deforestation alerts to identify responsible parties and guide enforcement actions and embargoes, though not always suspending registrations.

Finally, aligning the Forest Code with rural credit policy is a strategic way to promote more sustainable agriculture and livestock production. The financial system has begun incorporating environmental and social criteria in the allocation of rural credit, restricting loans for properties involved in illegal deforestation or under environmental embargoes, while expanding access and offering lower interest rates to producers whose registrations have been validated and properties are in compliance or in the process of achieving compliance. This trend was consolidated in recent resolutions issued by the National Monetary Council (*Conselho Monetário Nacional* - CNM) and the Central Bank of Brazil (*Banco Central do Brasil* - BCB), which made credit limits conditional on compliance with the Forest Code and, more recently, prohibited financing for activities involving native vegetation clearance. While these measures represent significant progress, they still lack robust monitoring mechanisms and effective enforcement tools, limiting their potential to fully drive environmental compliance across the sector.

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