FOREST TRENDS

A FOREST TRENDS REDDX REPORT

Mapping Financial Flows for REDD+ and Land Use in Brazil

National and Subnational Analysis for the Period 2009 through 2016

July 2017

Authors:

FOREST TRENDS

IDESAM
Instituto de Conservação e Desenvolvimento Sustentável da Amazônia

Donors:

Good Energies
POWER FOR A BETTER WORLD

UN environment

25 years gef

A Forest Trends REDD*X* Report

Mapping REDD+ and Land Use Financial Flows in Brazil

National and Subnational Analysis for the Period 2009 through 2016

*Ana Carolina Bastida, Mariano Colini Cenamo, and Gustavo Silva Chávez**

*Ana Carolina Bastida, Economist and Researcher—Idesam. E-mail: ana.bastida@idesam.org.br
Mariano Colini Cenamo, Senior Researcher—Idesam. E-mail: mariano@idesam.org.br
Silva-Chávez. Forest Trends. E-mail: gsilva@forest-trends.org

Acknowledgements

The authors would like to thank Brian Schaap of Forest Trends and Carolle Utrera Alarcon for the insights, review and support during the development of this report. We would like to thank the following individuals and their respective institutions for their very helpful contributions on providing data from their institutions related to climate and land use financial flows, which made this study possible: Alexandre Mancuso da Cunha of—USAID; Juli Chamberlin of David & Lucile Packard Foundation; Rosa Maria Vidal and Luke Printchard Of GCF Task Force; Juliana Santiago and Daniel Rossi Soeiro of Brazilian Development Bank (BNDES); Márcia Soares and Carina Pimenta from Fundo Vale; Victor Salviati and Gabriela Sampaio of Amazonas Sustainable Foundation (FAS); Geraldo Couto of Secretariat of Planning and Development of Amazonas State (SEPLAN-AM); Magaly Medeiros and Pavel Jezek of Institute for Climate Change and Regulation of Environmental Services (IMC–ACRE); Alberto Tavares of Company for the Development of Environmental Services (CDSA–ACRE) and Claudia Saldanha of State Secretariat for planning of Acre state (SEPLAN–ACRE).

Finally, the authors extend their appreciation to Terry Buck for his graphic design assistance and Clarise Frechette for her layout design assistance.

Background

Between 2009 and 2016, around US$10 billion were pledged to finance REDD+ activities in developing countries (ODI, 2014a). Despite the significant increase in financial pledges and the high expectations around the REDD+ mechanism to finance tropical forest conservation, there is still great uncertainty regarding which arrangements and financial mechanisms are most efficient in channeling resources and investments, which activities generate most results, and how much these resources are being effectively disbursed in forested countries.

The REDD*X—REDD+ EXpenditures Tracking Initiative*, internationally coordinated by Forest Trends and implemented in Brazil by the Institute of Sustainable Development and Conservation of the Amazon (IDESAM), seeks to map these resources, generate information, and enable detailed analyses for planning, improvement and implementation of the REDD+ mechanism in Brazil at the national and state level.

The goal is to ensure transparency and identify financing gaps and overlaps to improve the understanding around financial flows associated with REDD+ in Brazil. These analyses seek to support donors, governments and stakeholders in decision-making and development of national and subnational policies.

For the purposes of this study, REDD+ is broadly understood to include all donations, loans and technical cooperation contracts (focused on deforestation reduction, forest conservation and activities for the sustainable use of natural resources) that are considered as investments and financial flows destined for REDD+.

This report presents the mapping results of national and international REDD+ financial flows to Brazil from 2009 through 2016, and contains detailed analyses regarding new sources of finance flows that may impact REDD+ goals, including (i) financial commitments to promote low-carbon agriculture and (ii) subnational case studies of the states of Amazonas and Acre.

Executive Summary

This study presents the updated financial flows for REDD+ in Brazil for 2009 through 2016,[1] a preliminary mapping of investments dedicated to deforestation free commodities, and two case studies of mapping investments in the states of Amazonas and Acre. The goal is to promote a better understanding on three fundamental issues:

1. Amount and sources of national and international financial resources for the promotion of sustainable agriculture, including private sector commitments to zero deforestation, in order to better understand the key players (e.g. donors and beneficiaries) in this sector.
2. The evolution of REDD+ financial flows in Brazil with regard to the efficiency of disbursements compared to commitments from main donors and priority REDD+ activities.
3. Assess financial arrangements at subnational initiatives for REDD+ in Brazil and the relevance of state-level governments in this process.

Highlights

- Over US$2.2 billion has been committed to the development of REDD+ activities in Brazil from 2009 through September 2016. The speed or "efficiency" at which this money was disbursed increased over time. In 2016, 88% of the total amount pledged was disbursed, indicating a higher efficiency in the transfer of funds compared to previous years from 2009–2012, when the disbursement rate ranged between 47% and 50%.

- The year 2015 marked the last disbursement of the resources committed by Norway to the Amazon Fund in its first contract. The Government of Germany and Petrobras also finalized the disbursements committed in the same year. The total amount of funds transferred to the fund between 2009 and 2015 was US$1.037 billion. Out of this total, 50% of these funds have been committed to national and subnational governments, but only 25% has been actually disbursed, leaving the Amazon Fund with significant disbursements of the remaining amount over the next few years.

- Donors and recipients continue to prioritize REDD+ readiness activities in Brazil. Considering the number of mapped activities (482), a large part of financial flows was directed to activities such as stakeholder engagement, institutional strengthening and public policies. Meanwhile, implementation activities such as the provision of financial credit to producers, technical assistance and payments for environmental services received a smaller portion of overall resources. Changing this scenario and moving toward results-based payments to programs and projects at subnational levels will be an important challenge for Brazil in the coming years.

- The Brazil "performance" in terms of deforestation reductions is much larger than the currently available "payment" through the Amazon Fund. The total committed to the Amazon Fund (US$1.037 billion) represents the payment for results of almost 200 million tons of CO_2—equivalent to 5.9% of total REDD+ emission reductions generated through Brazil's achievement in lowering its Amazonian deforestation between 2006 and 2015.

[1] The tracking of REDD+ Finance to Brazil can be accessed by http://www.forest-trends.org/releases/p/reddx-2015.

This leaves significant room for the Brazilian national government and/or subnational state governments to pursue additional funding for the remaining emission reductions which have not yet been compensated for (almost US$26 billion). States will need to receive a larger share of the funds, as well as to tap into new investors willing to purchase these emission reductions, and identify new sources of financing in order to improve and maintain performance going forward.

- For the first time, we were able to track US$80 million in financial flows aimed at promoting low-carbon agriculture in the Amazon. These are mostly donations from national and international foundations towards non-profit organizations for the dissemination of sustainable practices, technical assistance, and public policies. The commodities with the highest impact on deforestation and forest degradation in the Amazon region—cattle and soy—are present in at least 37% (25 out of 67 projects) of mapped flows.

- The states of Amazonas and Acre are pioneers in the creation and implementation of REDD+ Jurisdictional Programs. Between 2012 and 2015, US$394 million and US$413 million have been committed to the states of Amazonas and Acre, respectively, from domestic sources (federal and state governments, private sector and Amazon Fund) as well as international sources (World Bank, Inter-American Development Bank (IDB) and the German Development Bank (KfW)).

- For the state of Amazonas, domestic sources contributed to a larger share of mapped resources (85%), and the primary source was the state government itself (US$188.2 million or 48% of the committed total). International sources, which represented only 15% of the committed total, include the German government, international foundations and multilateral agencies (World Bank and Inter-American Development Bank).

- The government of Acre received the bulk of its funding from a few main donors, including the German government (KfW), the Amazon Fund and the Brazilian federal government, which together committed US$174 million (42%), followed by international multilateral agencies, such as the World Bank and IDB, at 37%. State resources represent only 20% of the committed total at US$82 million. At a smaller scale (1%) are the financial flows between the Amazon Fund and community organizations within Acre.

Table of Contents

Acknowledgements ..... **iv**

Background ..... **v**

Executive Summary ..... **vi**

Highlights vi

1. Introduction **1**

2. Methodology **2**

3. REDD+ Financial Flows in Brazil: 2009 Through 2016 ..... **3**

4. Amazon Fund: Main Financial Instrument for REDD+ in Brazil **8**

Resources from the Amazon Fund represent less than 6% of the REDD+ potential generated in the Amazon region 11

5. Low-Carbon Agriculture and Zero Deforestation Commitments in the Brazilian Amazon **13**

6. Subnational Initiatives: A Case Study of the States of Amazonas and Acre **20**

Who is Financing REDD+ Activities in Amazonas and Acre? 21

7. Conclusions: Barriers and Financial Challenges for the Success of REDD+ Implementation in Brazil **28**

8. References **30**

1. Introduction

The Brazilian Amazon is the largest tropical forest on the planet and the largest biome in Brazil, covering over 4.1 million km² or 60% of the national territory, and is home to 20 million people. However, it generates less than 8% of the Brazilian GDP and faces a series of social and environmental pressures. The economy of the Brazilian Amazon is based on natural resource exploitation, mining and agribusiness, which has resulted in the conversion of approximately 20% of the original forest cover into pastures and other agricultural crops (Cenamo & Soares, 2016).

In the last 10 years, the Amazon generated the largest reduction in greenhouse gas pollution ever achieved by a single country, allowing Brazil to become an international leader in the fight against climate change. Due to a series of economic, social and environmental factors and targeted policy approaches, Brazil reduced its deforestation rate by 80% compared to 2004 levels, and national emissions dropped to 1.8GtCO_2e in 2014 (SEEG 2016).

However, this positive turnaround is unlikely to hold over time and adverse changes have already been felt. In 2015, deforestation in the Amazon increased by 24%, and this caused Brazil's national greenhouse gases emissions to rise by 3.5%. The situation is worrisome due to the current economic recession in the country: Brazil's GDP dropped by 3.8% in 2015 and 3,6% in 2016, and that economic reality compromises the country's capacity in continued investments for forest conservation (SEEG, 2016). In 2016 deforestation increased again at a 29% rate, and early estimates indicate that this pattern is continuing in 2017 (Folha de São Paulo,2017).

A permanent solution for deforestation depends on a transition to a low-carbon economy in the Amazon, as well as providing sustainable financial incentives, and attracting investments by the private sector, governments, and international donors. Moreover, local and subnational actions must be better rewarded. The state-level governments, traditional and indigenous communities, and civil society are the ones that have contributed the most to the reduction of Brazilian emissions in recent years, but there is a large gap in direct funding of subnational jurisdictions' efforts to reduce deforestation. Today, most resources must run through the federal level, via the Amazon Fund (AF) or Ministry of Environment (MMA), before being channeled to the states.

The Brazilian states seek greater autonomy and independence to dialogue directly with the private sector and international donors and to directly receive compensation for their successful forest protection efforts. The goal for the Amazon states is to consolidate bilateral agreements in order to ensure a better benefit sharing of REDD+ resources and more efficient resource implementation.

This study, and the third phase of the REDD*X* Initiative in Brazil, seeks to understand the status of REDD+ and sustainable agriculture financial flows in Brazil in recent years, at the national and subnational level, in order to achieve the following goals:

- Update the REDD+ investment flows from national and international sources to Brazil in 2015 and 2016, in order to identify changes in the volume and disbursement of commitments, and the evolution of REDD+ activities that have been prioritized by donors and implementing agents.
- Map financial flows to sustainable agriculture efforts related to zero deforestation in Amazon states, in order to identify the volume of resources, the prioritized activities, and production chains.
- Better understand the role of the states in financing REDD+ state policies and their capacity to contribute resources in addition to national and international donors. Therefore, two case studies were selected, focusing on pioneering Amazon states with respect to REDD+ and Environmental Services public policies—Amazonas and Acre.

2. Methodology

The mapping of financial flows was carried out through research of public data and complemented with interviews and questionnaires sent to key actors. A top-down methodology was utilized, focusing on the original source of funds (donors/investors), initially selected from a list of primary forest conservation donors in Brazil between 2009 and 2016.

For the purposes of this study, two financing categories were considered: commitments and disbursements. Commitments are the resources agreed between parties through formal agreements that determine the conditions and expected results for the disbursement of funds. Disbursements are the funds that have been actually transferred from donor to a recipient institution.

In certain cases, it was not possible to obtain detailed information on the status of some disbursements—in these cases, disbursements were considered to have been disbursed in the same year as the commitment or according to the project timeframe. In the case of the Amazon Fund, data is presented in a more detailed fashion, as this information is available online.[2]

For the mapping of financial flows for REDD+ at sub-national level, we used public data from the state budget, donations to non-governmental organizations (NGOs) and private institutions operating in the states considered—Amazonas and Acre. All data, as well as research at national level, have been validated with relevant actors, such as state departments, representative of recipients and donor organizations. In the case of the state public budget, the data was collected from financial reports made available through the government transparency portals for Amazonas[3] and Acre.[4]

Public budgets have very specific terms and rules classifications that were used in the study methodology. In Amazonas and Acre, a commitment is defined as a ***recursos autorizado*** in Portuguese, and is defined by the Annual Budgetary Law—the public administration instrument that estimates revenues and determines the authorized spending amounts to the state in a given year. A disbursement is defined as an ***empenho*** in Portuguese, and it is defined as the administrative act that creates a payment obligation to the state for a certain specific action (Camera dos Deputados, 2016).

[2] "Projects", Amazon Fund Website, accessed October 10, 2016, http://www.fundoamazonia.gov.br.

[3] "Transparência Fiscal do Estado do Amazonas", Government of Amazonas State, Accessed September 30, 2016, http://www.transparenciafiscal.am.gov.br/.

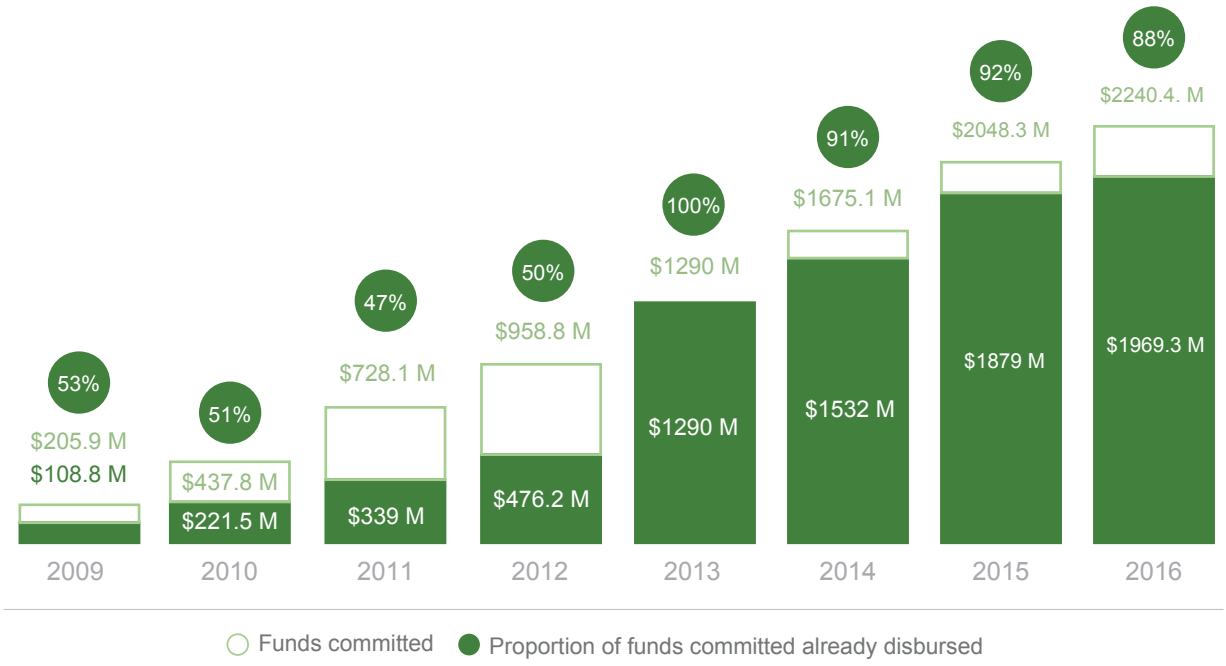
[4] "Portal de transparência do Estado do Acre", Government of Acre State, Accessed September 30, 2016, http://sefaznet.ac.gov.br/transparencia/servlet/portaltransparencia.

3. REDD+ Financial Flows in Brazil: 2009 Through 2016

From January 2009 to September 2016, more than US$2.2 billion was committed to REDD+ in Brazil. Of this total, US$1.9 billion (88%) has already been disbursed by donors. When analyzing the amounts committed and disbursed, there is an improvement in the disbursement performance over the years, mainly from 2013, as can be seen from **Figure 1** below.

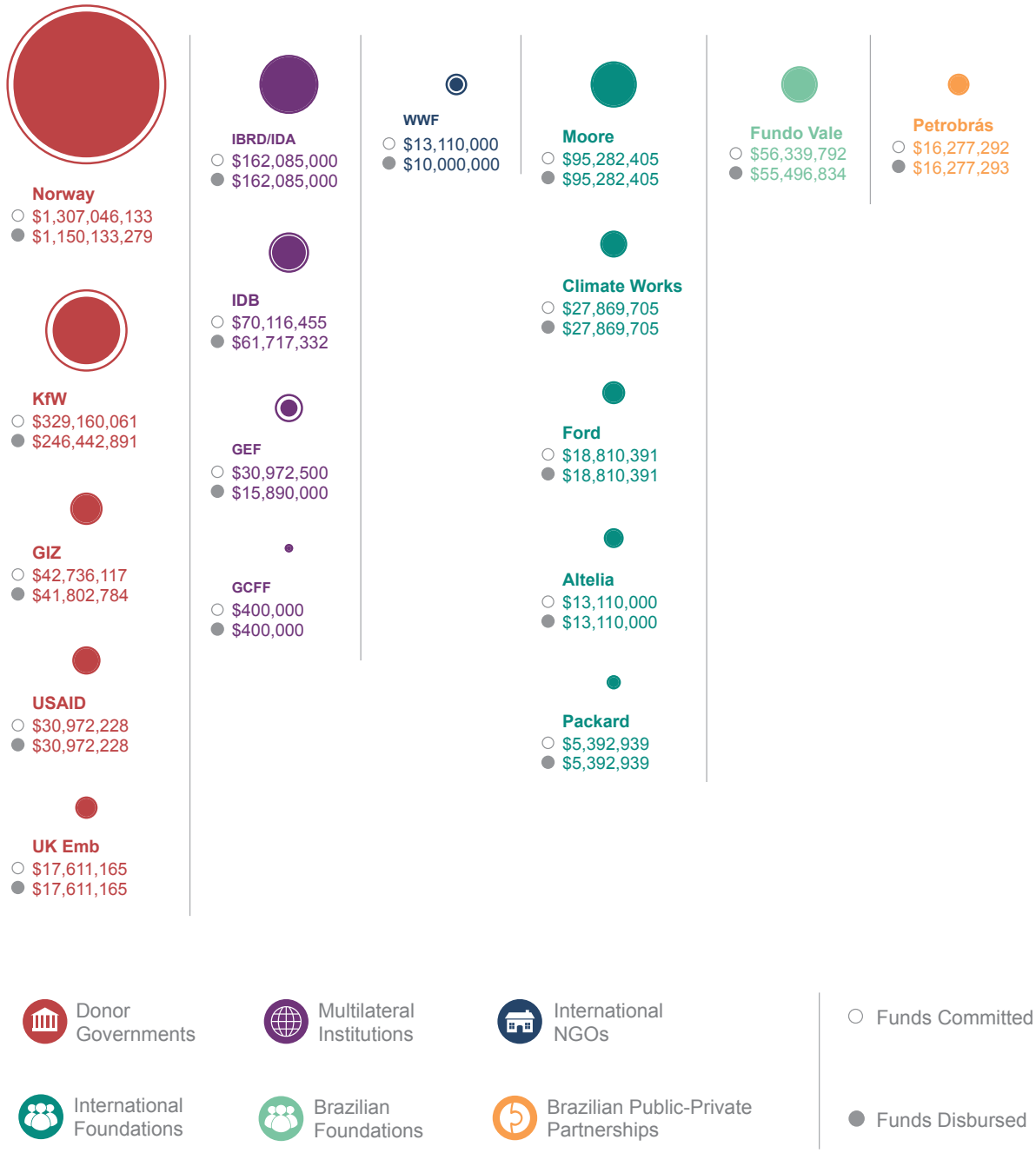
For the first years of analysis (2009–2012), the significant difference between commitments and disbursements can be justified by several factors, which often are not the responsibility of donors; for example, the processing time in the receiving country or period for execution by the end agent. Thus, it is important to analyze each case individually. In the case of the delay in Norway's disbursements to the Amazon Fund, the reasons are many, including the inefficiency of the fund in the transfer of resources and the lack of income statement by recipients, which has delayed disbursements by Norway.

Figure 1. Cumulative Commitments and Disbursements, 2009–2016



Although there are a number of donors funding REDD+ activities in Brazil, the vast majority of the commitments are from only a few donors, primarily government and multilateral institutions, as can be observed in **Figure 2** below. Donor governments, particularly Norway, are responsible for the highest investments made to Brazil from 2009 to 2016, both in committed values (US$1.727 billion) as well as in disbursements (US$1.486 billion) of which Norway accounts for US$1.307 billion on committed values or 75%. In second place are the Multilateral Institutions which committed a total of US$263 million (12%). When grouped, Private Foundations (international and Brazilian foundations) occupy the third place amongst the highest donors, representing 10% of total analyzed donations or US$216 million committed.

Figure 2. Total Commitments by Type of Donor (Cumulative 2009–2016)



Although with relatively smaller amounts of investments, private foundations have shown to be extremely important for REDD+ in Brazil, as their operational structure is more efficient in disbursing resources, as can be observed in **Figure 2** above—donors have disbursed 100% of resources committed through September 2016. Commitments from the Betty and Gordon Moore Foundation represented 43% of all private funding in the Amazon, while other foundations, including ClimateWorks as well as the Ford Foundation, the David and Lucile Packard Foundation and the Fundo Vale, also made significant contributions.

The UN-REDD Program considers the private sector as the key REDD+ stakeholder that must be more engaged in REDD+ countries. There are two main private sectors relevant in the REDD+ context: a) those focused on producing verified emission reductions (VERs) and b) those involved in the supply chains of forest-risk commodities (UN-REDD Program). The mapped funds cover the both types of financial arrangements. The biggest delay by governments as compared to private foundations is due to the nature of the transaction. Government donors face more complex and time-consuming transactions, as they come from often complex public sector bureaucracies and typically involve larger sums of money. In the case of Norway, the institutional arrangement determines that resources run through an intermediary institution, the Amazon Fund, before being allocated to implementing institutions.

In the Brazil context, most of the REDD+ finance can be classified as national level transactions since the most representative recipients in terms of values received are national level institutions such as the Amazon Fund and the Brazilian Government. These actors received 53% and 16% of total analyzed donations, respectively.

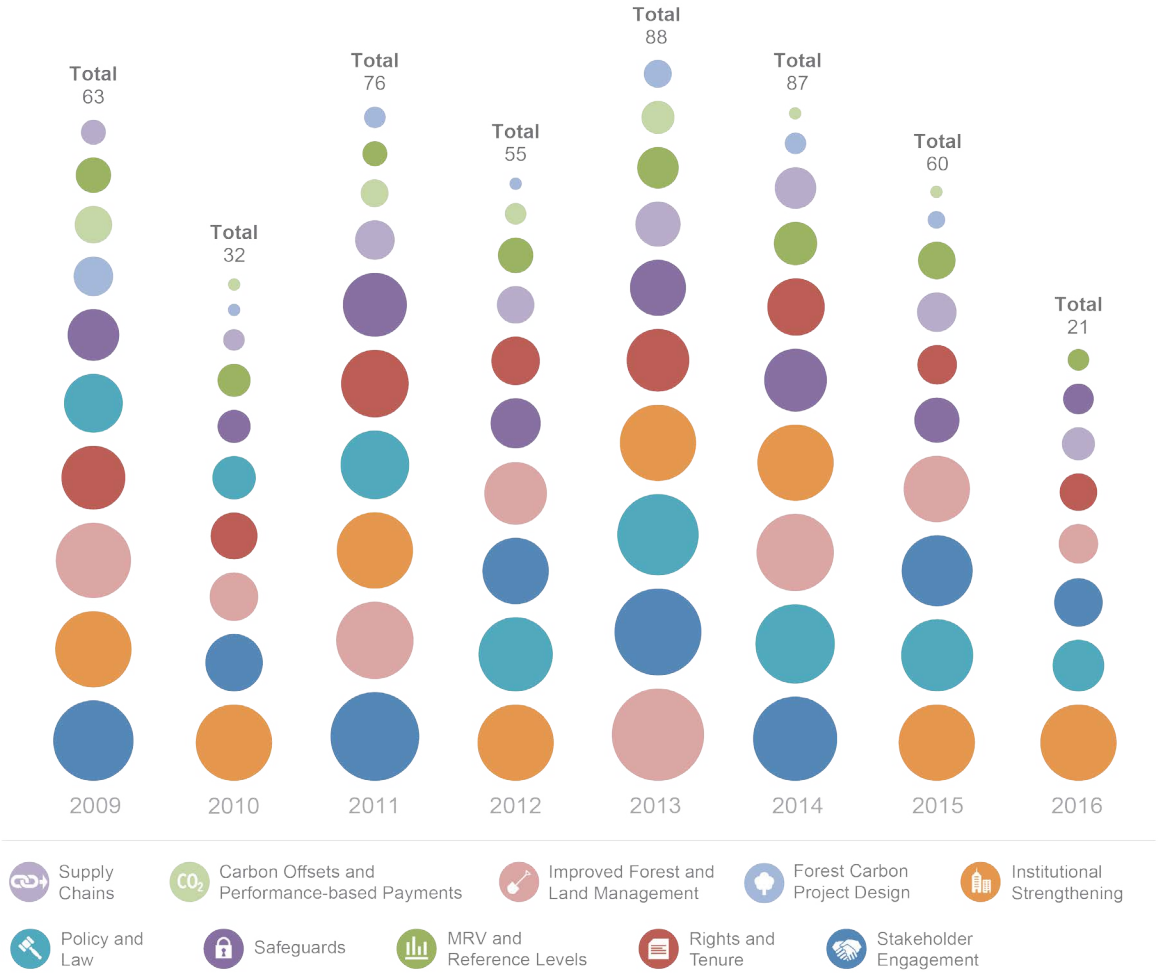
The REDD+ jurisdictional contracts—signed directly with state and municipal governments of the Amazon—represent only 9%, or $185,143,600, of total money committed to the country in the period of 2009 and 2016. Considering that the Brazilian Amazon region specifically has a fundamental role in reducing national emissions and, moreover, it is a complex region in terms of social and environmental conditions, it is clear that the Amazon states should be better rewarded by the forest conservation services they perform. In the future, the challenge is to ensure the states' autonomy in directly receiving these funds through bilateral agreements with diversified sources, resulting in a reduced dependency from the federal level government (Governors' Climate and Forests Task Force, 2014).

Regarding the **Scope of REDD+ activities and phased REDD+,**[5] the investment priority remains focused on REDD+ Readiness activities and early phases of Polices and Measures.

In terms of number of financial arrangements, most of the activities mapped address themes related to the structuring and construction of REDD+ polices which can be classified as "Readiness", such as Institutional Strengthening and Stakeholder Engagement, present in 61% and 58% of the activities mapped, respectively. These activities, as well as support for public policies (48%), remain prominent among the mapped donations over the years, as shown in **Figure 3**.

[5] The REDD*X* Initiative considers three phases of REDD+ implementation: **Phase 1. Readiness**—when countries prepare a national REDD+ strategy through inclusive multistakeholder consultations, start building capacity in monitoring and verification (MRV), and begin demonstration activities; **Phase 2. Policy and Measures**—phase is 'more advanced readiness', but the focus is to implement policies and measures (PAMs) to reduce emissions (as set out in the national REDD+ strategy and which will be verified by proxy indicators); **Phase 3. Full Implementation**—when tropical countries are compensated solely for reduced emissions and enhanced carbon stocks relative to agreed reference levels.

Figure 3. Annual Evolution of Mapped REDD+ Activities (2009–2016)



Considering that a diverse range of stakeholders should be involved in the REDD+ legal framework discussion and implementation, this scenario continues to make sense to Brazil since the country is currently developing a legal framework for national REDD+, and is still facing some challenges and gaps, including scales of implementation and accounting, the roles of governments and local communities, the distribution of benefits, and other methodological issues.

To move forward to subsequent REDD+ phases, primarily Pay-for Performance, the country must establish a framework to equitably share REDD+ benefits across various levels of governance (local, state, national) and stakeholders (farmers, communities, indigenous populations, NGO's, etc.), and complete the implementation of a legal framework for REDD+ at national and subnational scale.

Also, the decentralization of regulation and management of REDD+ among federal and state governments could improve the REDD+ fundraising strategy in Brazil and give states more control over their territories (Governors' Climate and Forests Task Force, 2014). It is worth highlighting that Improved Forest and Land Management has been gaining interest after the year 2013 as shown on graph 3 above. When considering the total number of arrangements mapped across these years, these activities are in 51% of the financial arrangements. This shows that money to promote zero deforestation comes primarily from private sources, as

we will discuss with details in section 5 below, **“Low-carbon agriculture and zero deforestation commitments in the Brazilian Amazon”.**

However, when dealing with a pioneer country in REDD+ implementation, whose activities began as early as 2006, and whose REDD+ results have been formally presented and verified within the United Nations Framework Convention on Climate Change (UNFCCC), it is surprising to learn that investments continue to be directed towards activities typically related to REDD+ readiness. One of the challenges for the country in the upcoming years is to change this, and move towards a Pay-for-Performance model that can prioritize economic activities and provide incentives for forest protection in the long run.

4. Amazon Fund: Main Financial Instrument for REDD+ in Brazil

The main institution for REDD+ finance in Brazil is the Amazon Fund, whose budget represents 53% of all national and international flows committed to the country from January 2009 to September 2016.[6] The mechanism is funded by donations for compensation/payment for achieved emissions reduction results, formalized through bilateral agreements with the governments of Norway and Germany, and Petrobras, a state owned Brazilian corporation. Through 2016, the Fund received about US$1.037 billion, equivalent to RS$ 2.5 billion, destined to REDD+, which completes the first phase of donations to the Fund.

Out of the total disbursed to the Amazon Fund, about 50% was committed to other institutions as shown in **Figure 4** below. The remaining resources are still in the Fund and are currently not allocated. This low efficiency in allocating resources can be linked to a series of factors, including:

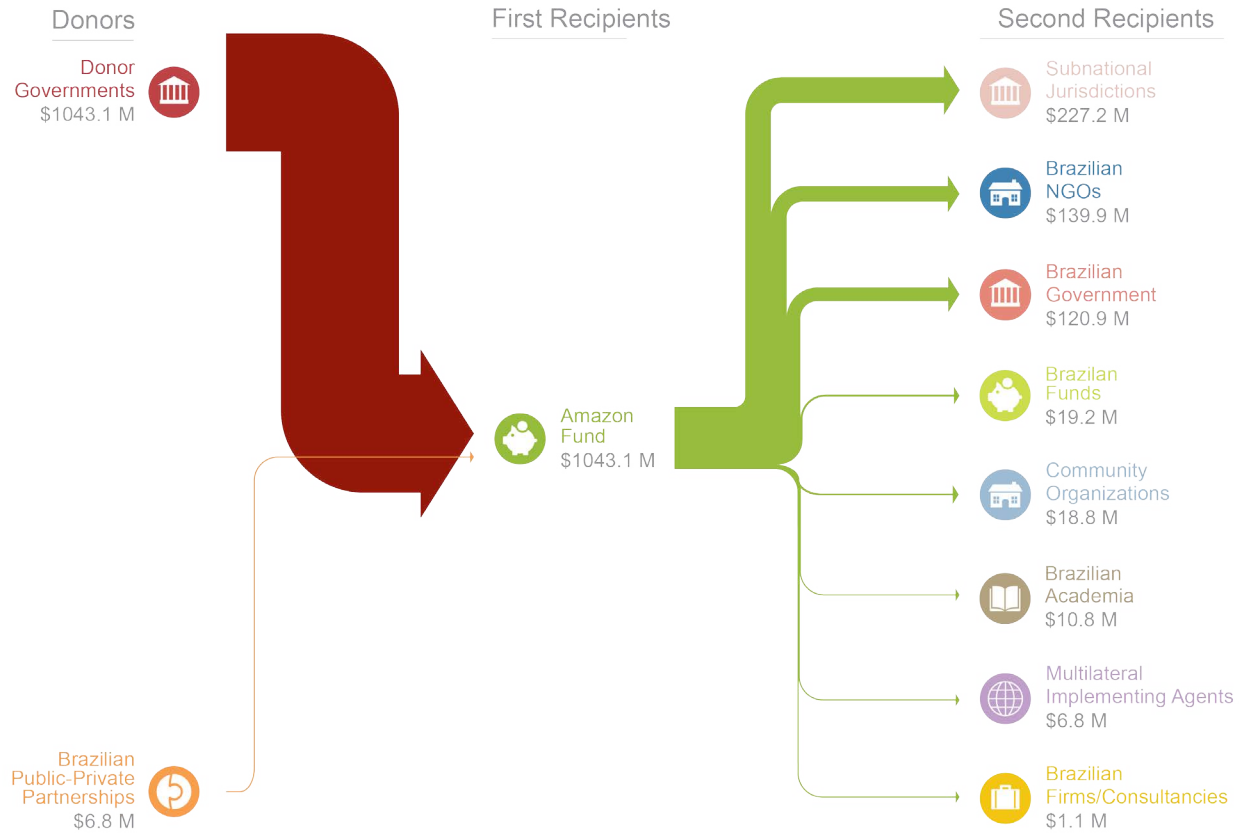
- The project submission, evaluation and approval process is inefficient, especially due to reduced technical staff—it can take up to three years for projects to receive approval.
- The process of disbursing to third parties is bureaucratic, with onerous requirements and documentation that are inappropriate for projects developed by NGOs, associations and cooperatives.
- Implementing institutions face difficulties executing their projects, in demonstrating results and delivering accountability reports to the Fund (Marcovitch, 2013).

Subnational governments (Amazon states and municipalities) received the largest share of commitments from the Amazon Fund in the period (47%), followed by non-governmental organizations (30%) and the Federal government (7%). Resource distribution is disparate between the types of recipients, and highlights the dependency of the states on the Amazon Fund as the main institutional arrangement for REDD+ funding allocation.[7]

[6] Since Brazil had committed to continue reducing deforestation at a level accorded until 2020, both of them (Norway and Germany Government) announced that they will continue financing the fight against deforestation in Brazil and they had signed a pledge contract with Amazon Fund of US$600 million and US$100 million, respectively.

[7] Donations Values committed until September 2016. More recent data can be found here: http://www.fundoamazonia.gov.br/FundoAmazonia/export/sites/default/site_pt/Galerias/Arquivos/Informes_Portugues/2016_11_Informe_da_Carteira_Fundo_Amazonia.pdf.

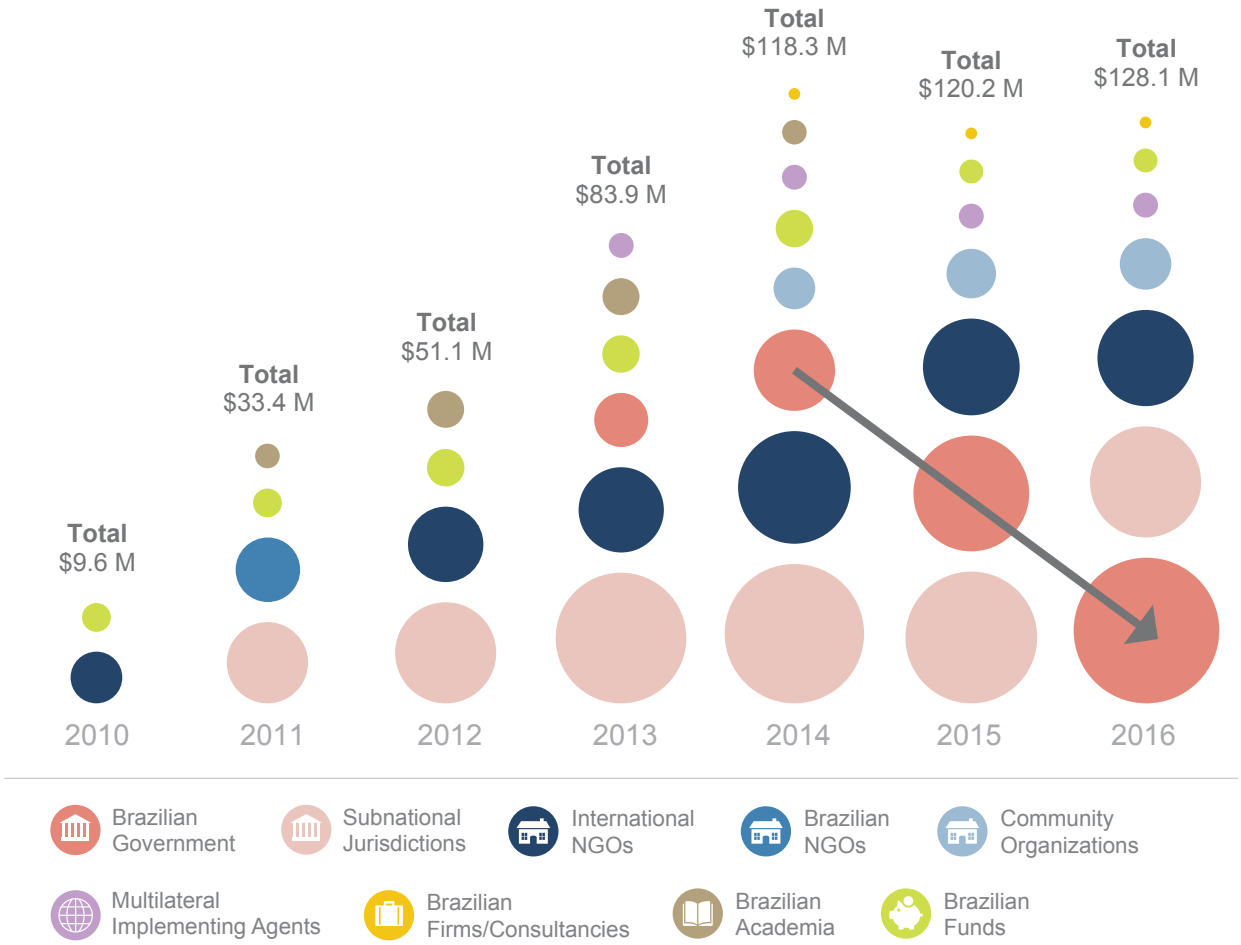
Figure 4. Commitment Flows from Donors to Recipients (Cumulative Amounts for 2009–2016)



However, when analyzing the amounts committed by the Fund to implementing agents over time **(Figure 5),** a shift can be observed in the distribution of the Amazon Fund's resources from 2014 onwards, when federal government institutions began to gain greater prominence in total committed resources and clearly found a "fast track" to approve projects in the Amazon Fund. In 2016, these institutions received up to 45% of the amount committed by the Fund. In this category, the flows committed to federal command and control bodies, such as the Brazilian Institute of Environment and Natural Renewable Resources (IBAMA) and the National Public Security Force, are highlighted.

The recent request for funds by IBAMA to the Amazon Fund is in response to a shrinking level of federal public investments to combat deforestation in the Amazon region. In 2016, government monitoring of deforestation experienced a 30% reduction in its budget compared to 2013, going from US$105 million in 2013 to US$78.9 million in 2016(or R$325.9 million and R$243.7 million) , without discounting the inflation in the period (VALOR, 2016).

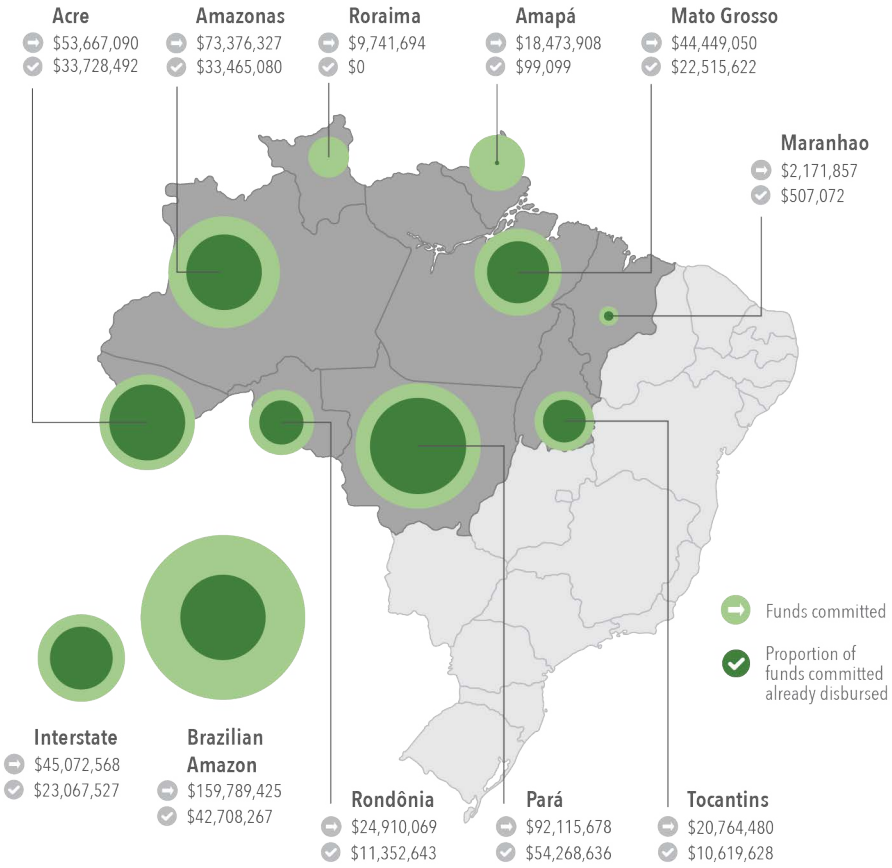
Figure 5. Annual Commitments by the Amazon Fund by Type of Recipient, 2009–2016



The geographical distribution of resources (**Figure 6**) also shows great disparity within Brazilian Amazon states. In the Amazon region scenario, considering all implementing agencies, Pará (17%), Amazonas (13%) and Acre (10%) received the most resources from the Amazon Fund which corresponds with the current status of development of REDD+ subnational frameworks across the states. The states with the least amount of resources committed are Amapa (3%) and Rondônia (2%).

Despite not having specific legislation for climate change or mechanisms to reduce emissions, Pará has two major legal tools aimed at this: The State Plan for Deforestation Prevention, Control and Alternatives—PPCAD/PA, created in 2009, and the Green Municipalities Program, launched in 2011 (Governors' Climate and Forests Task Force, 2014). Also, Pará is the second largest Brazilian state and key to reducing overall Brazilian emissions. Acre state has created a unique System of Incentives for Environmental Services (SISA), while Mato Grosso created its own REDD+ System on 2013. The states of Rondônia, Amapá and Amazonas are also in the process of developing their regulations through public consultations and needs assessments, among other activities.

Figure 6. Geographical Distribution of the Flows Committed by the Amazon Fund to All Organizations



The projects financed by the Fund cover a broad range of activities such as: support for family farming, traditional communities, satellite monitoring, processing products, research, surveillance and many others.

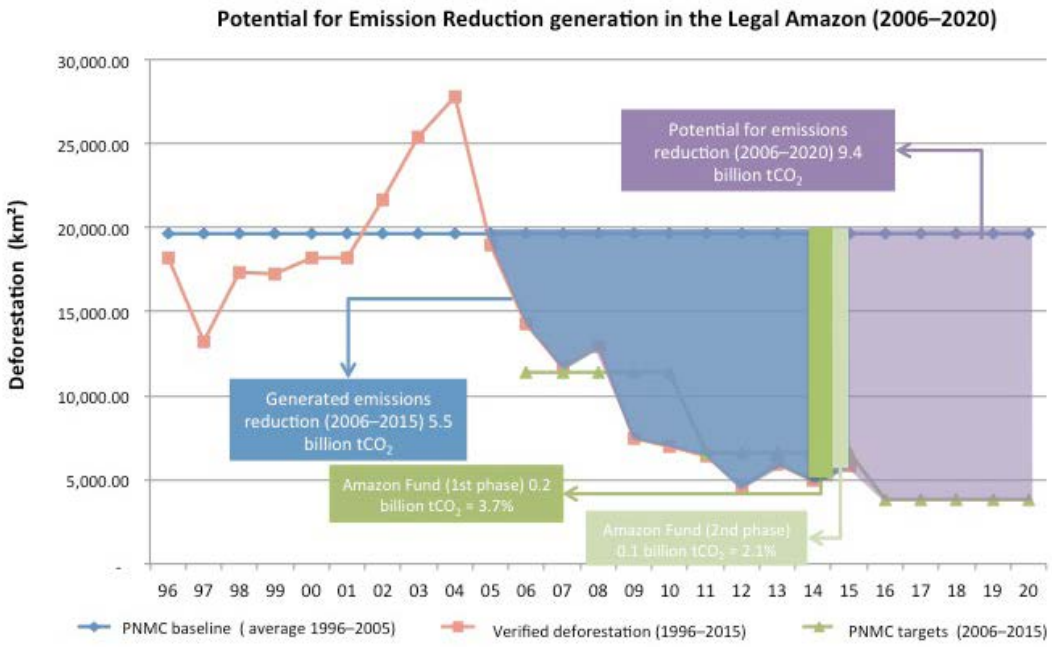
From 2009 to September 2016 the Amazon Fund invested in 80 projects. Of this total, 64% was allocated to support activities for sustainable use of land and production chains, and is mainly run by non-governmental institutions. Secondly, there are also activities related to the engagement of actors and institutional strengthening, following the same trend of the projects that receive direct funding from international donors.

As mentioned above, Brazil is still in the process of implementing its national REDD+ strategy and in parallel, the Amazonian states are developing and implementing their sub-national policies. In this way, and given the context of multinationals involved in the process of building and discussing these policies, it makes sense that the investments of the Amazon Fund are also funding these activities.

Resources from the Amazon Fund represent less than 6% of the REDD+ potential generated in the Amazon region

The resources received through the Amazon Fund are far below the REDD+ potential generated in the Amazon. Between the years of 2006 and 2015 it is estimated that Brazil voluntarily reduced some 5.6 billion tons of CO_2 through reduced deforestation rates in the Amazon. The financial incentives acquired by the contracts signed with the Amazon Fund represent just over 200 million tCO_2 (or 5.8% of the total achieved reductions), as illustrated in **Figure 7** below.

Figure 7. Potential for Emission Reduction Generation in the Legal Amazon and Investments Through the Amazon Fund



Source: IDESAM, 2016.

This shows that there is still a huge potential for receiving payment for achieved results: considering funding under the same conditions (i.e. $US 5/tCO$_2$), an amount of US$26 billion—about R$79 billion—can be estimated, representing 94.1% of the REDD+ emissions reductions generated between 2006 and 2015, which has not yet been capitalized.

In this sense, there is a window of opportunity for REDD+ payments to be paid directly to the State governments. However, it is not yet clear how state programs will be recognized and integrated into the federal system. While in the negotiation phase, it is important that the State governments continue working in defense of their interests, as a compliment to national efforts.

It is unacceptable for the country and especially the Amazon Region, with its numerous economic and socio-environmental issues, not to be adequately rewarded for its efforts in helping the climate and environment. But, unfortunately, this has been happening for several years despite the success at the national level to reduce emissions from deforestation. Several subnational jurisdictions in Brazil and other countries have started to build their own REDD+ legislation, and are aiming to guarantee social and environmental safeguards while increasing investment attractiveness at the subnational level and reducing regulatory risks.

5. Low-Carbon Agriculture and Zero Deforestation Commitments in the Brazilian Amazon

Agriculture, Forestry and Other Land Use (AFOLU) accounts for around 24% of global greenhouse gas emissions (US Environmental Protection Agency, 2016). In Brazil, the 6th largest GHG emitter in the world, AFOLU accounts for 68% of national emissions, mainly due to deforestation and extensive livestock production in the Amazon region. The Brazilian Amazon has already lost 20% of its original forest cover, and 70% of this area is currently covered by pastures (Brazil, 2004).

Despite harboring a vast territory and the greatest wealth of natural resources and biodiversity on the planet, the Amazon region is one of the poorest regions in Brazil. It represents 60% of the territory, but only generates 8% of the national GDP (IBGE, 2013). The main deforestation driver in the region is the demand for economic development in the form of cattle and agricultural production.

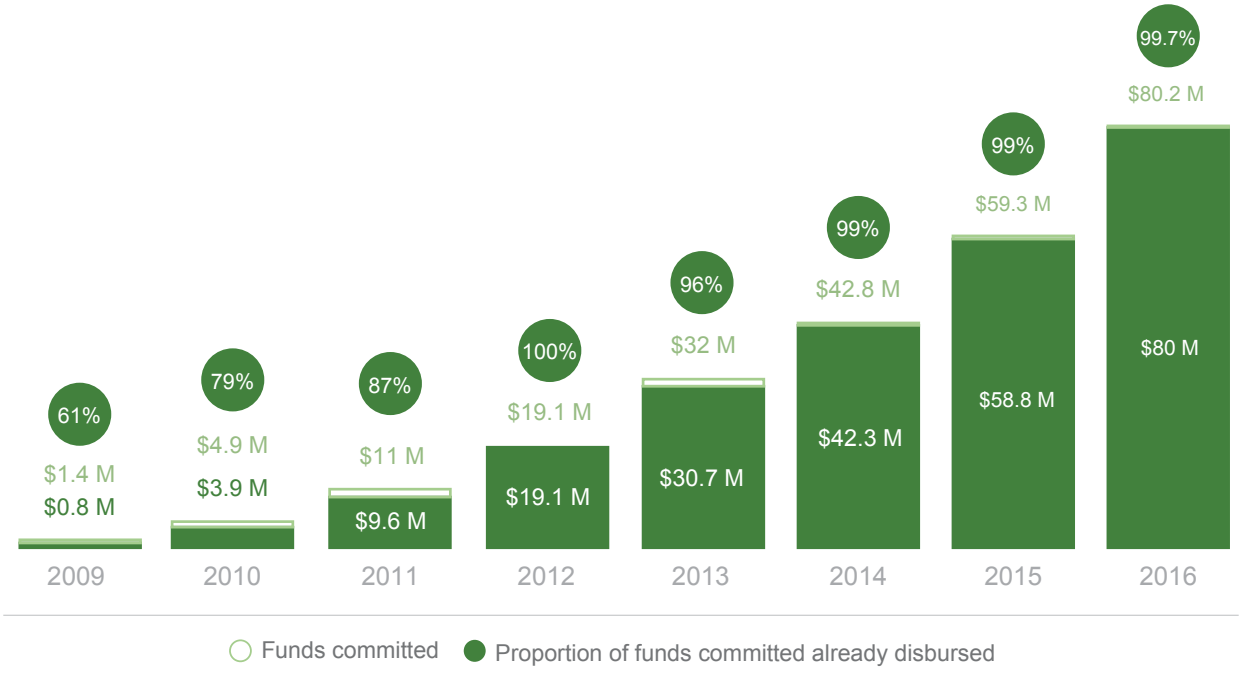
Over the last eight years, the Brazilian government has implemented a series of policies and programs, mostly based on command and control policies, which were able to reduce deforestation in the region by 75%. These results are unlikely to hold up in the long term, mainly because of the country's current economic recession, which has reduced the resources available for all government priorities.

Currently, Brazil is experiencing the worst economic crisis in its history: the national GDP fell by 3.8% in 2015 and 3.6% in 2016 (Folha de São Paulo, 2017). Agribusiness was the only sector to grow in 2015 (2.5%) and is maintaining the same growth rate in 2016 (Brazil, 2016). Business as usual agriculture, extensive livestock production, and illegal deforestation will continue to expand within the Amazon forest unless positive incentive mechanisms are created for the creation of a new low-carbon economy. Both government and private donors have already realized the importance of investing in sustainable production alternatives that guarantee a win-win relationship, where increased productivity leads to forest conservation and economic return for the producer.

Given this scenario, this study mapped international financial flows to low-carbon agriculture in the Amazon region. The flows are shown below, together with some discussion about the incentives from the Brazilian government, and new financing models for the sector.

We were able to track US$80 million in financial flows from donors to projects for low carbon agriculture and zero deforestation commitments in Brazil between 2009 and 2016.[8] The analysis of efficiency in the application of resources (**Figure 8**) indicates little or no disparity between commitments and disbursements, mainly because they come from private foundations, from which greater efficiency in resource disbursement is expected.

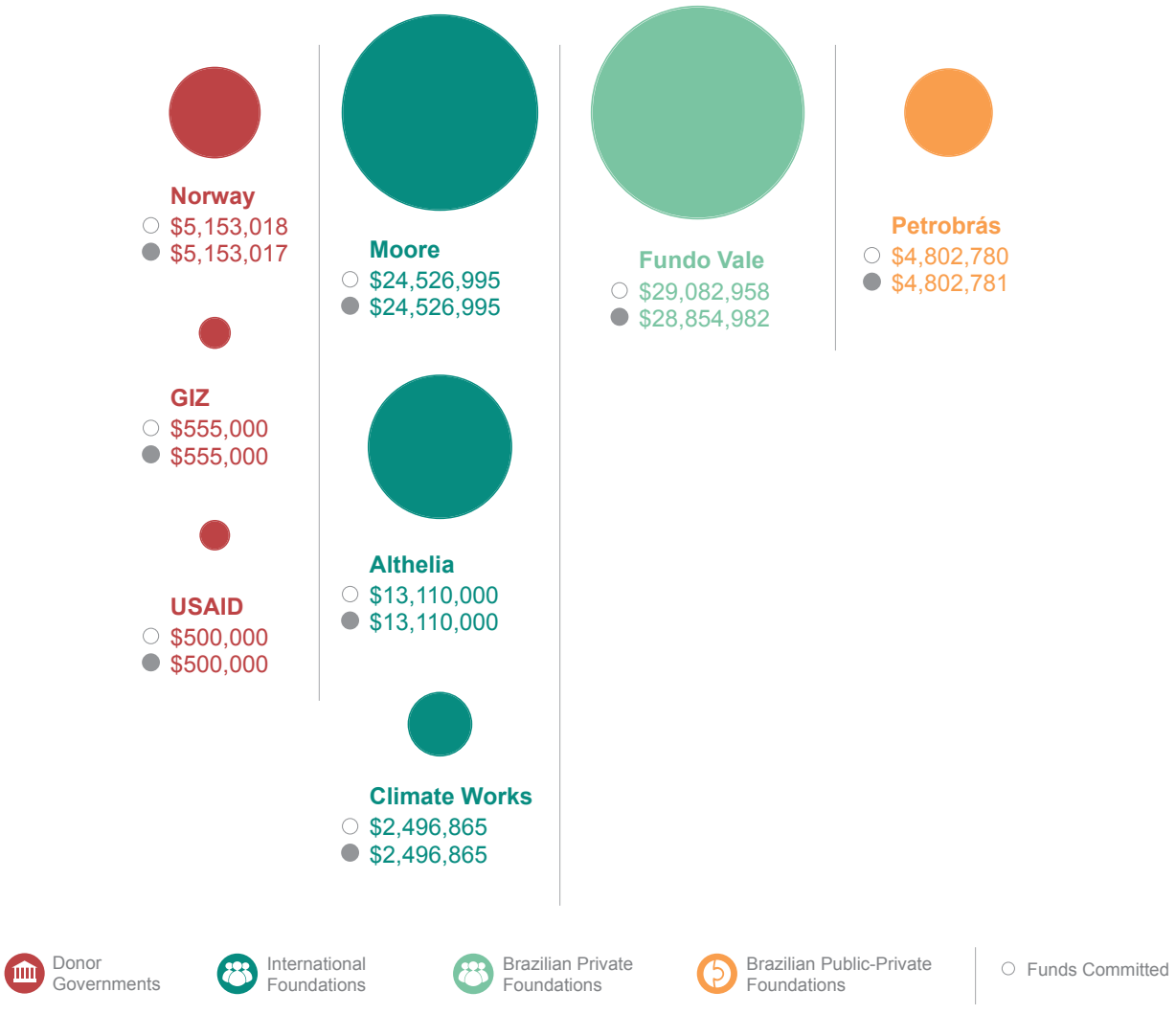
Figure 8. Cumulative Commitments and Disbursements by Donors to Low Carbon Agriculture (2009–2016)



[8] Because they are also within the scope of REDD+ activities, the financial flows for low carbon agriculture presented here are also accounted for in the national flow for REDD+ in Brazil. These are projects exclusively for low-carbon agriculture and sustainable land use, but that relate to the objectives of REDD+ in Brazil.

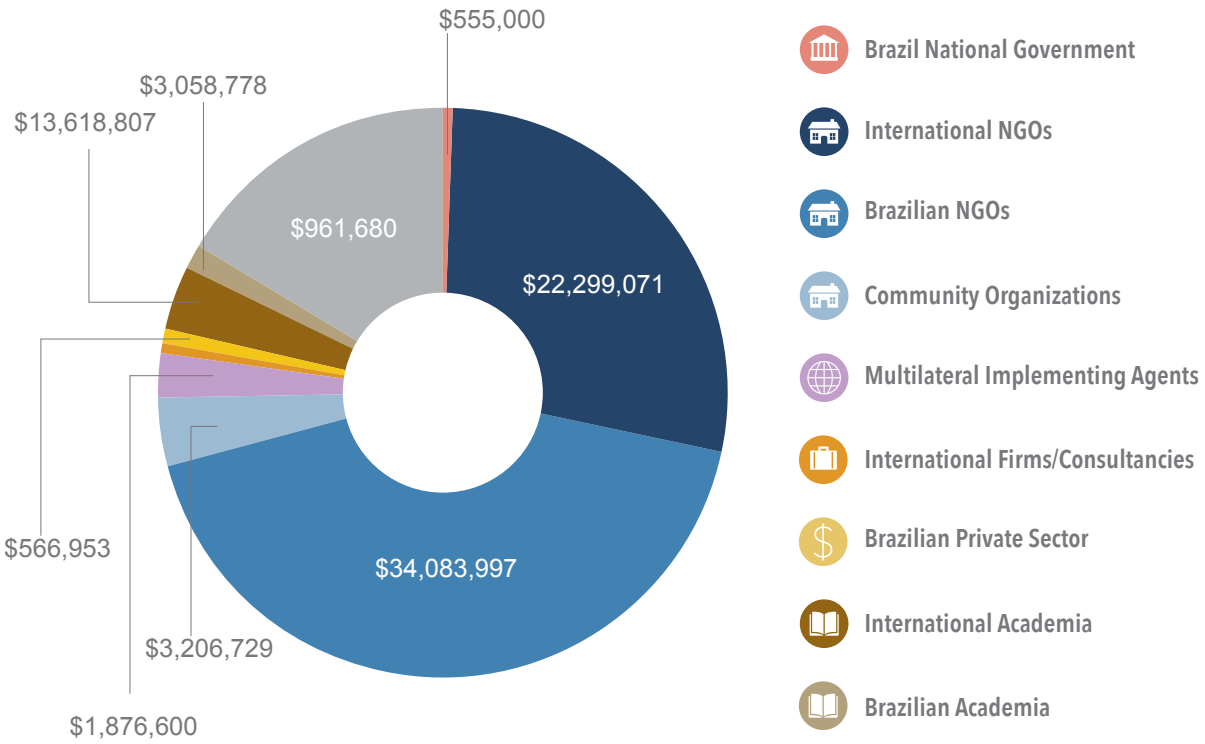
The mapped sources are basically donations to national and international non-governmental non-profit organizations (70%) and, secondly, to the Brazilian private sector (17%) as can be seen on **Figure 9**. The main donors mapped in this first phase include the Moore Foundation, Fundo Vale and Althelia Fund, which together account for 83% of the total mapped commitments.

Figure 9. Commitments to Low Carbon Agriculture by Donor (Cumulative 2009–2016)



National and international non-governmental organizations have been the most common recipient. Out of the total resources mapped, 70% were committed to these organizations, which together add up to $56.4 million. National and international private sector actors also have a very representative participation, adding together US$14.2 million and 17.7% of the total, as can be observed in **Figure 10.**

Figure 10. Commitments to Low Carbon Agriculture by Type of Recipient (Cumulative 2009–2016)



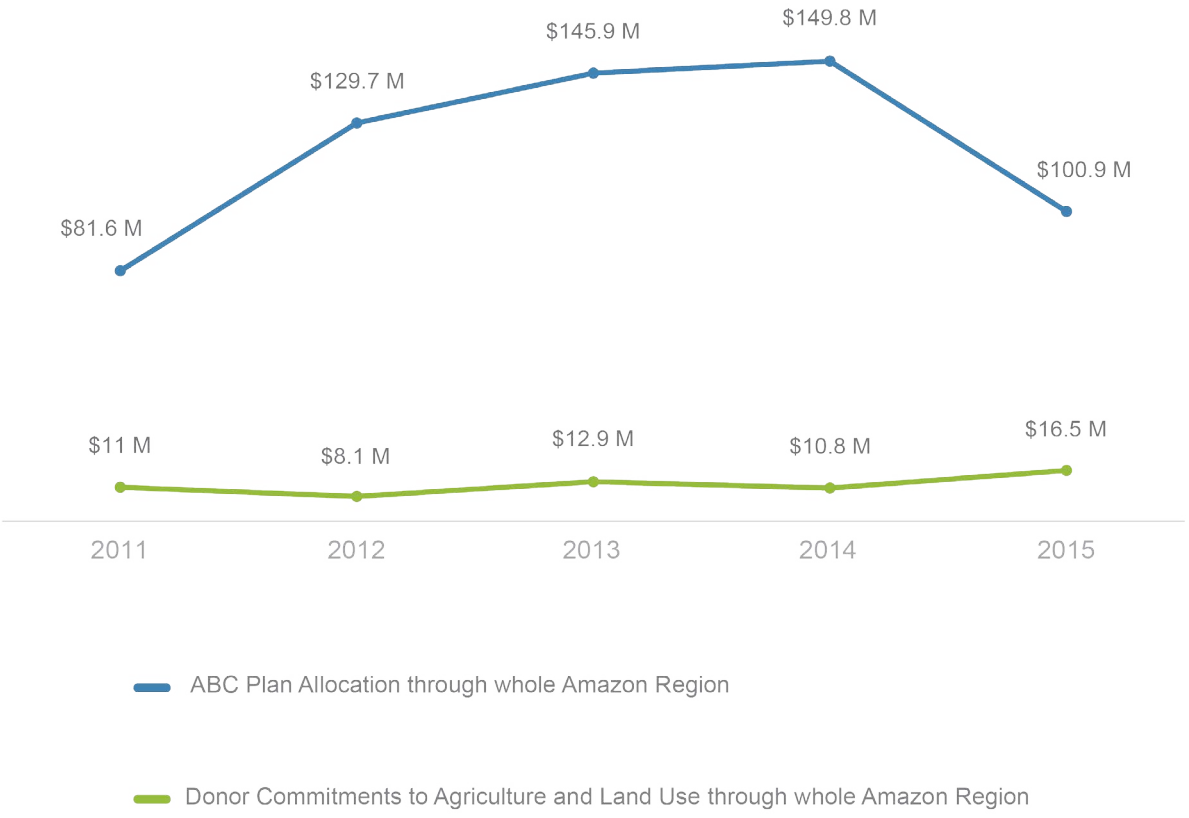
The commodities with the greatest impact on deforestation and forest degradation in the Amazon region—livestock and soybeans—are present in at least 37% (25 of the 67 projects) of mapped flows. As to the type of financed activity (**Figure 11**), there are two important highlights: dissemination of sustainable practices and the development and implementation of public policies respectively, in 54% and 45% of mapped financial flows. These are financial flows from private foundations to non-governmental non-profit organizations.

Figure 11. Supply Chain Activities and Supply Chain Sector by Number of Financial Arrangements Mapped (Out of 67 Total Financial Arrangements)

It is worth mentioning that this mapping is still preliminary but additional analysis is needed to broaden the scope of donors and financial arrangements to other categories, such as private investors, governments (rural credit) and the private sector.

In this sense, to illustrate the importance of other financing modalities for sustainable agriculture, we can examine some data related to the Low Carbon Agriculture Plan (Plano ABC) in the Northern region of the country. Since its beginning in 2011 until 2016, US$607.9 million has been earmarked for rural credit to small and large producers utilizing low carbon agriculture techniques in the Legal Amazon, a high amount when compared to the donor funding mapped in the study, as shown in **Figure 12**.

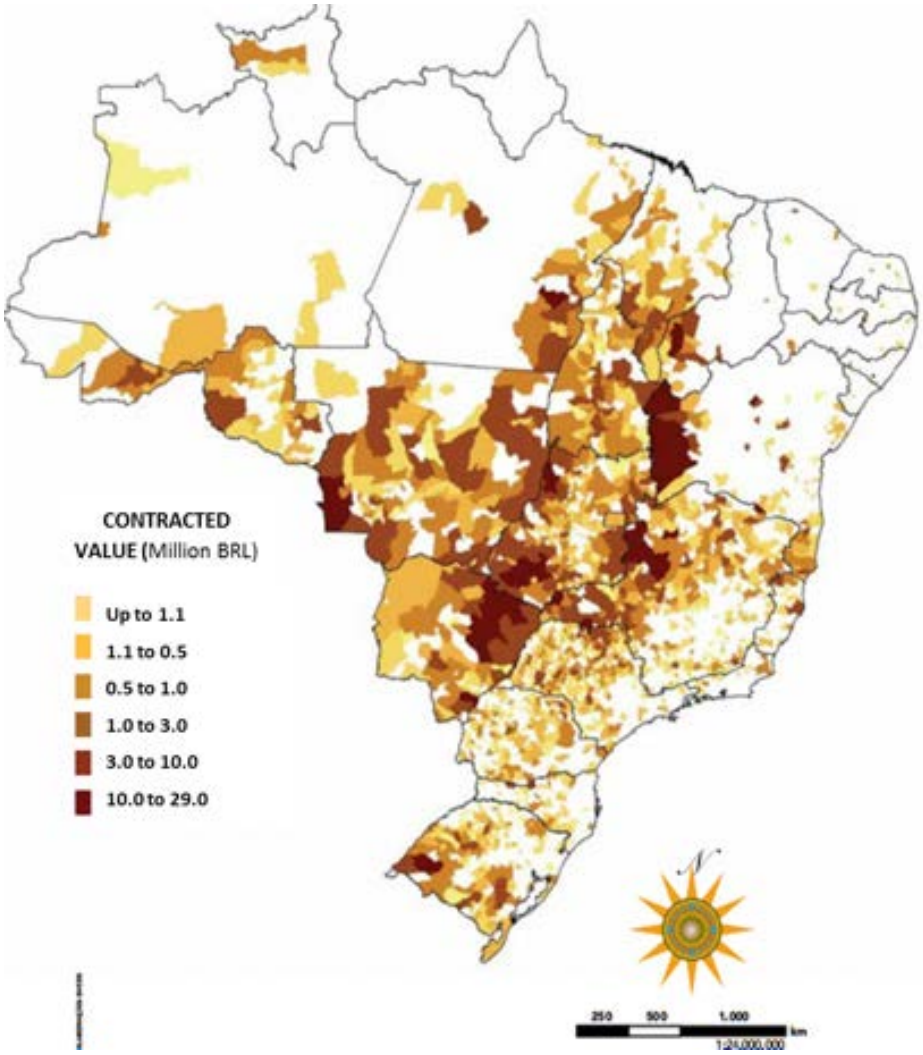
Figure 12. Financial Flows Under ABC Plan and Donor Commitments to Agriculture and Land Use to Amazon Region (2011–2016)



Source: ABC Observatory, 2016.

However, the resources for the Northern region are notably far below when compared to how much is invested in other regions of the country such as Central-West and Southeast. The ABC Government Plan had invested a total of US$6.08 billion between the years 2011 and 2016, and 70% of this total was allocated to these regions while the northern region attracted the fewest resources, at only 10%. **Figure 13** shows the resources allocated by state and region of Brazil between 2014 and February 2015, and shows a clear disparity between the northern region and the rest of the country.

Figure 13. Spatial Distribution of ABC Program's Resources by Municipality for the Harvest of 2014/15 (Through February)



Source: ABC Observatory, 2015.

6. Subnational Initiatives: A Case Study of the States of Amazonas and Acre

In the absence of a consolidated national REDD+ policy, the Amazon states took the lead in the design of state-level programs to achieve jurisdictionally-defined targets. Amazonas and Acre states together with the states of Mato Grosso and Pará were pioneers in the design of subnational REDD+ policies.

Amazonas is the largest Brazilian state by territorial size, with an area of more than 1.5 million km², 54% of which are protected areas and 97% of which still contains its original forest cover. The state has always been at the forefront of subnational policies for climate change, pioneering the creation of the State Policy on Climate Change (PEMC –AM) and the creation of the Environmental Services Policy (PSA),[9] currently being implemented.

In **Acre state**, Law 2308/2010 created the State System of Incentives for Environmental Services (SISA), a pioneer in Brazil. Also, the state holds the most advanced jurisdiction REDD+ program—the REDD Early Movers (REM), an initiative of the German Development Bank (KfW), implemented in Brazil and Colombia. Acre has an area of 164,221 km_2 and 148,700 km_2 in forests, its deforestation affects approximately 13% of its area. Main drivers of deforestation are infrastructure projects, primarily roads like BR-317 and BR-364, land settlement projects and private proprieties (the last two are responsible together for more than 70% of deforestation areas each year). (World Wildlife Fund, 2013).

Thus, these case studies for Acre and Amazonas, show that states are ahead on jurisdictional program design and implementation, and aim to provide a better understanding of how these states have been financing deforestation control related activities in their territories.

Data collection methodology follows international research guidelines, but with some Brazil-specific modifications, as it relates to public budgets that respond to a specific set of rules from the Brazilian public administration. For both states, this specific data was collected over the years 2012–2015; this period corresponding to the last Pluriannual Plan full implemented.

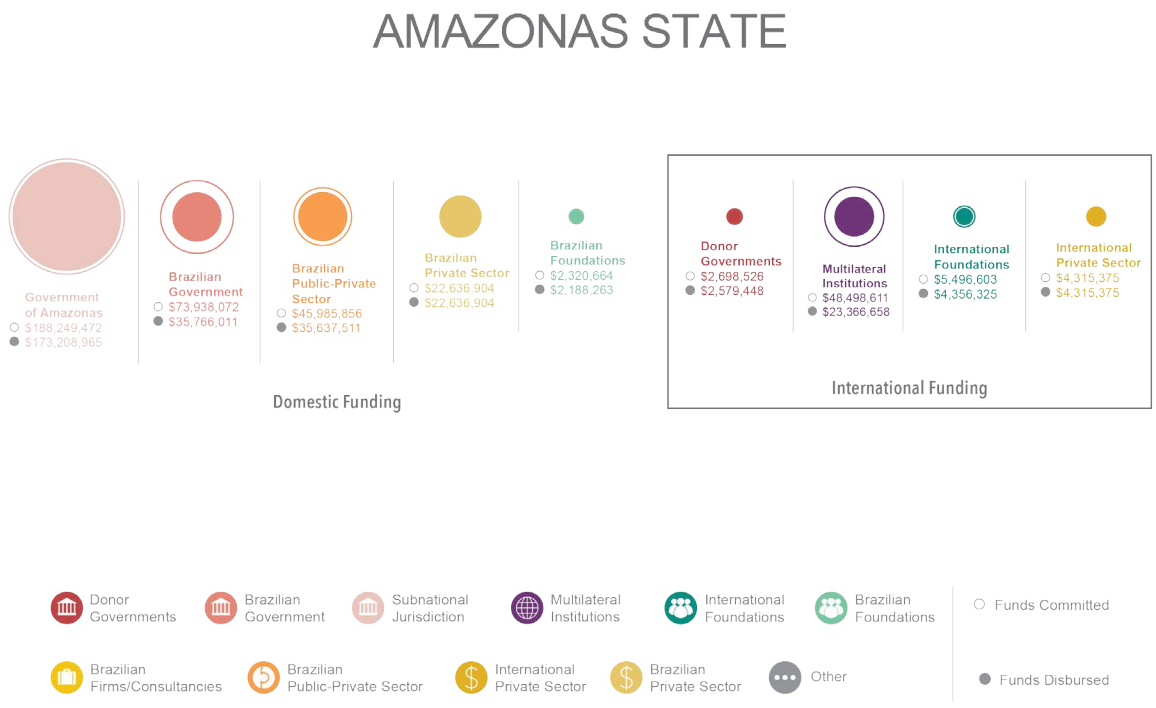
[9] Environmental Services Policy (PSA) is an important regulatory framework for Amazonas state, as it establishes a legal framework for governments, companies, organizations and national and international civil society to invest in the state. That is, the state may receive payment for the environmental services provided by its forests. Once it is regulated, the policy will provide greater autonomy for direct fundraising with international donors, given the state's great potential for generating benefits through REDD+ (IDESAM,2016).

Who is Financing REDD+ Activities in Amazonas and Acre?

During the years 2012 to 2015, the REDD*X* initiative mapped $394 million and $413 million committed to Amazonas and Acre states, respectively.

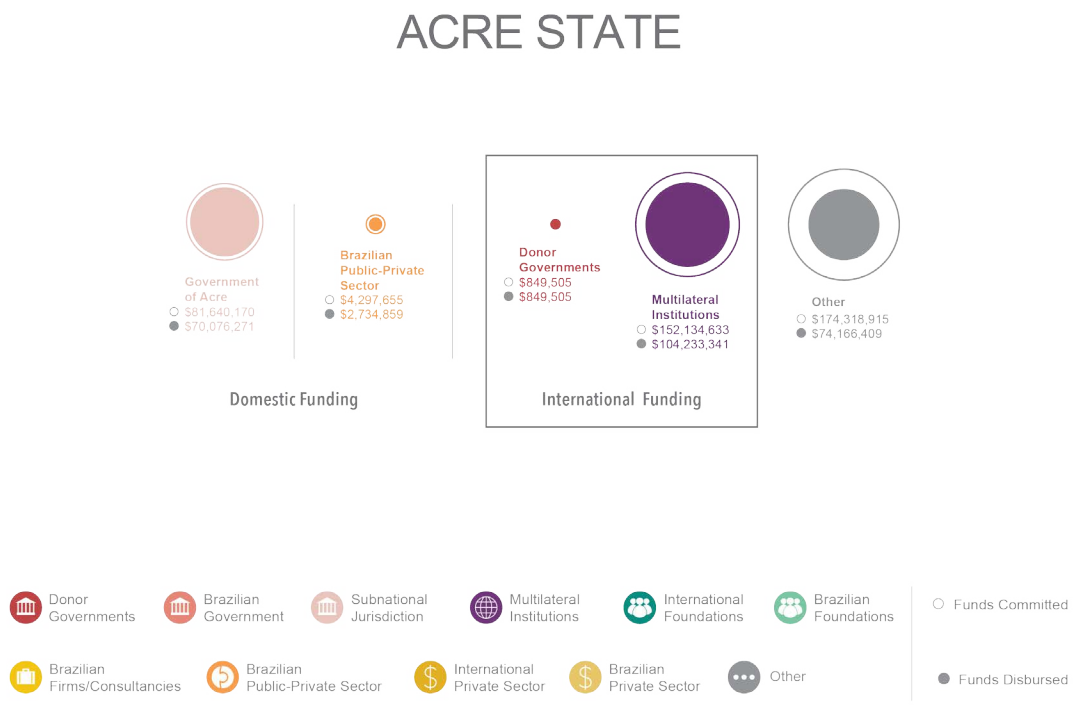
The majority of funding (85%) to **Amazonas State** is from domestic sources such as the Government of Amazonas (own resources), the Brazilian Government, Brazilian Public Partnerships (Petrobras and Amazon Fund) and other Brazilian private initiatives, as can be observed on **Figure 14** below.

Figure 14. Total Commitments and Disbursements by Source of Revenue to Amazonas State in Million USD (Cumulative 2012–2015)



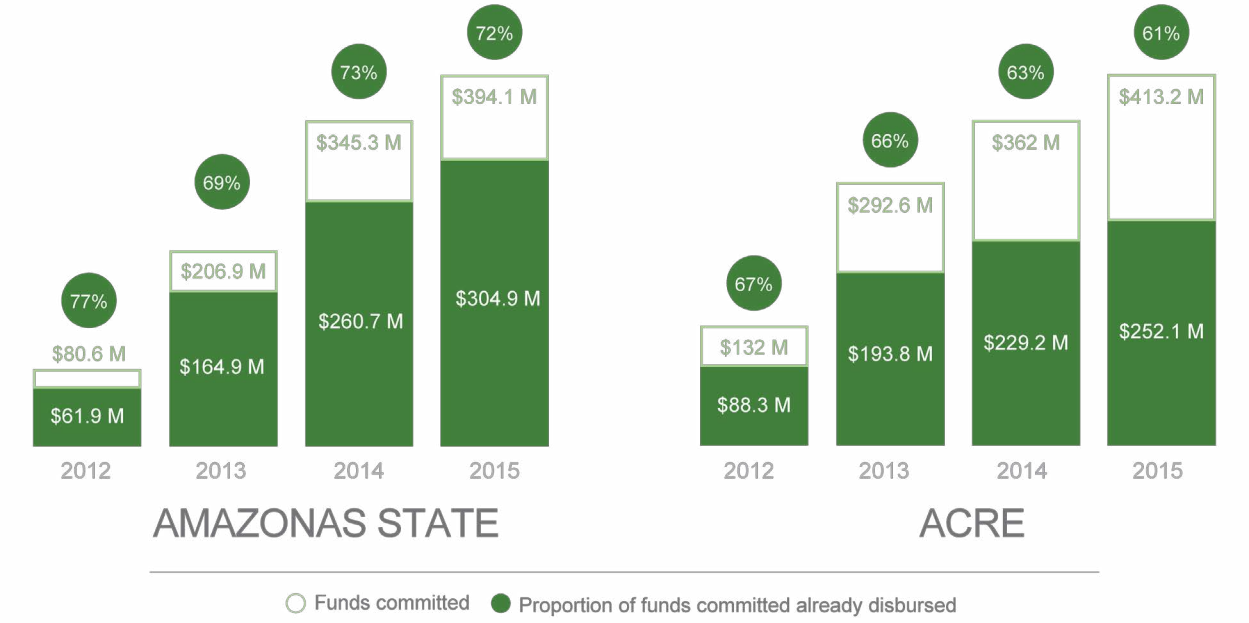
In contrast to Amazonas, **Acre** receives the majority of funding (US$326 million or 80%) from commitments made by Multilateral Agencies, Donors Government and the Amazon Fund. It stands to reason that Acre would likely be receiving more REDD+ finance than Amazonas state, as the state holds a jurisdictional program at a more advanced stage, and it was the subnational level pioneer to receive payments for results directly from donors through the REDD Early Movers Program supported by the German Bank—KFW, as shown in **Figure 15**.

Figure 15. Total Commitments and Disbursements by Source of Revenue to the State of Acre in Million USD (Cumulative 2012–2015)



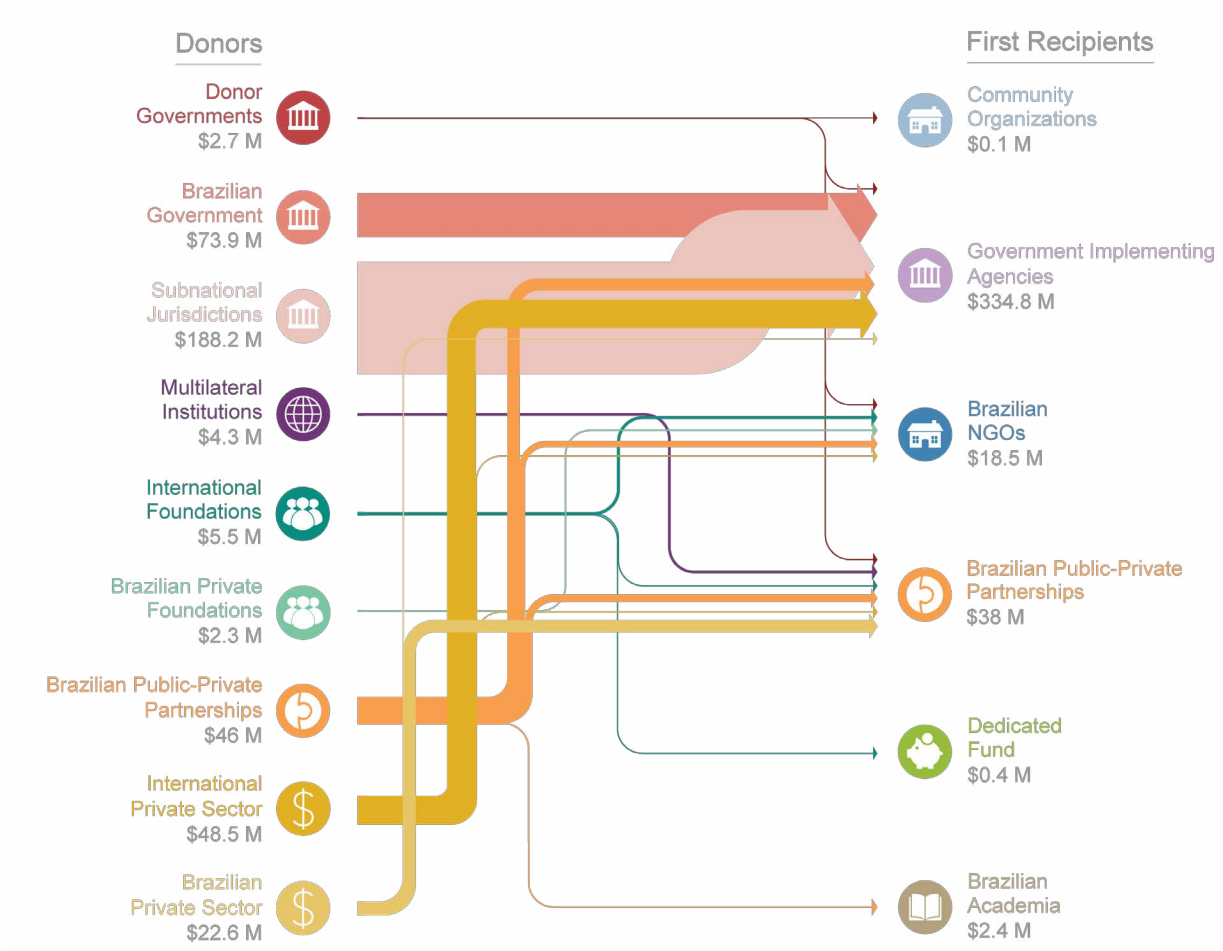
The temporal analysis of cumulative cash flows for the years 2009 through 2015 shows great disparity between committed and disbursed flows for both states (**Figure 16**), which means low efficiency in the disbursement of committed funds. As well as the analysis at national level, the cause of this inefficiency can be attributed to several factors and should be looked at case-by-case. The resources that are allocated to public agencies of the state, which in both cases are the majority (84% Amazon and 99% Acre), for example, are subject to the rules of public administration and complex bureaucratic processes, resulting in the difference between the volumes committed and disbursed in the period.

Figure 16. Commitments and Disbursements to the States of Amazonas and Acre (Cumulative 2012–2015)



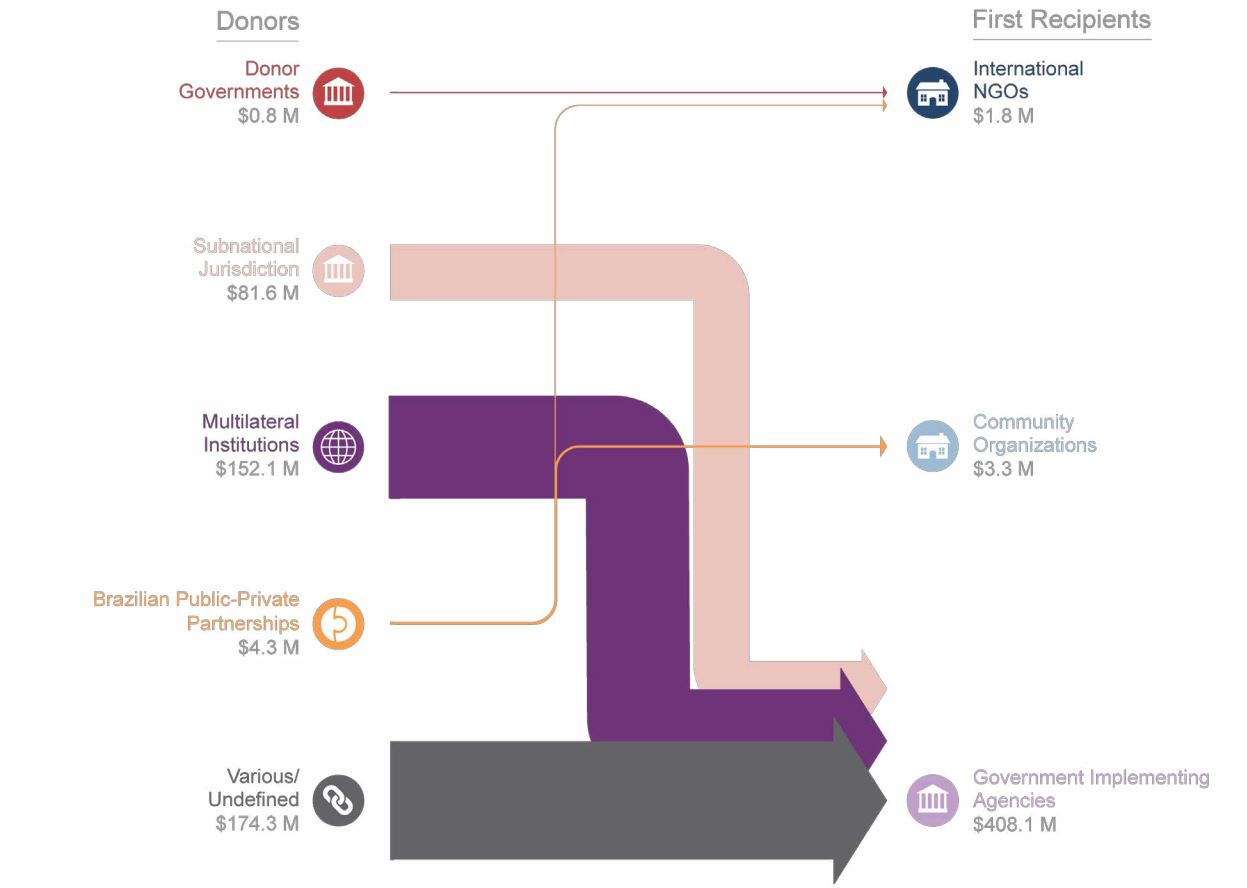
Regarding the institutional arrangements for Amazonas state, the government implementing agencies stand out in receiving 84% of total committed resources mapped (**Figure 17**). The second largest recipient in the state is the Amazonas Sustainable Foundation, a public-private organization that operates the Bolsa Floresta Program (from Portuguese PBF), an important mechanism of payment for environmental services implemented in state Conservation Units. From 2012 to 2015, the program received about US$37 million (9.6% of the total). The PBF is funded by diverse sources and its resources have been invested since 2008 in the promotion of sustainable production activities and social organization to strengthen State Conservation Units.

Figure 17. Donor to Recipient Financial Flows for the State of Amazonas (Cumulative 2012–2015)



Acre has received less funds for institutional arrangements. The overwhelming majority of commitments (US$408.1 million or 99%) is going to Government Implementing Agencies as shown in **Figure 18**. This amount comes from different sources of funding as previously discussed above. Community organizations and non-governmental organizations received a combined of US$5.15 million.

Figure 18. Donor to Recipient Financial Flows for the State of Acre (Cumulative 2012–2015)



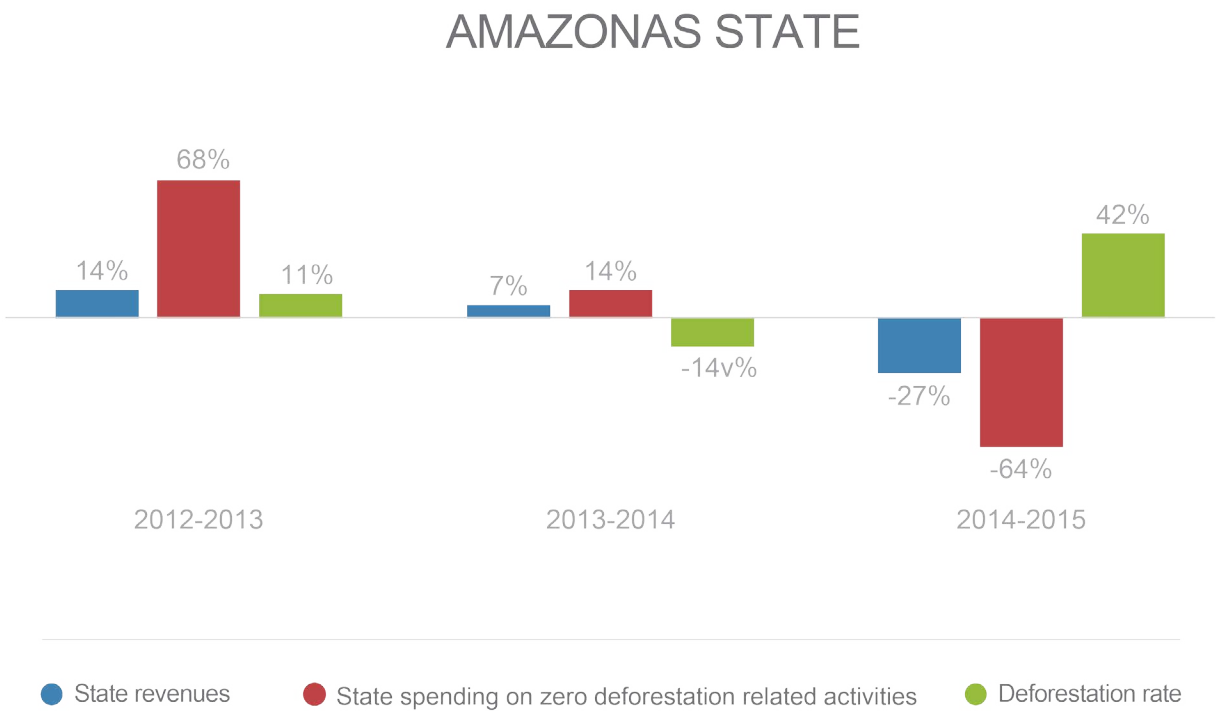
When analyzing only the state **public budget**, there is a drop in committed and disbursed resources between 2014 and 2015 for both states.

For **Amazonas state**, in 2015 there was a significant reduction of public expenditures for the environmental sector by the Amazonas state government (**Figure 19**). There was a cut of 88% in the Secretariat of Environment's total budget, including the dismissal of employees and the closure of entire departments. This administrative reform led to protests from local socio-environmental organizations, and its effects can already be felt in the 42% increase in deforestation observed during the same period. Although an absolute cause-and-effect relation cannot be established, the reduction in environmentally-related expenditures (including with regard to environmental law enforcement) and associated increase in deforestation is a disturbing indicator for a state of such large proportions, particularly since the preservation of forest-related environmental services in Amazonas is paramount for climate and water maintenance across the country (Amazônia Real, 2015).

The cutback in the Amazonas environmental sector budget, coupled with the current Brazilian economic recession, has led to increased pressure on forests and a change in the state's economic matrix with a greater focus on land use activities that cause deforestation, such as agriculture, livestock and mining.

The recent release of deforestation data for the year 2016 increased the urgency of this reality. The rate was 7,989 km², representing an increase of 54% over the previous year, which in turn had already been 24% higher than in 2014 (INPE, 2016). According to the forecast, the State of Amazonas would be responsible for the biggest jump in forest destruction in Brazil, which would leave the state in fourth place in overall deforestation ranking among all Brazilian states in 2016.

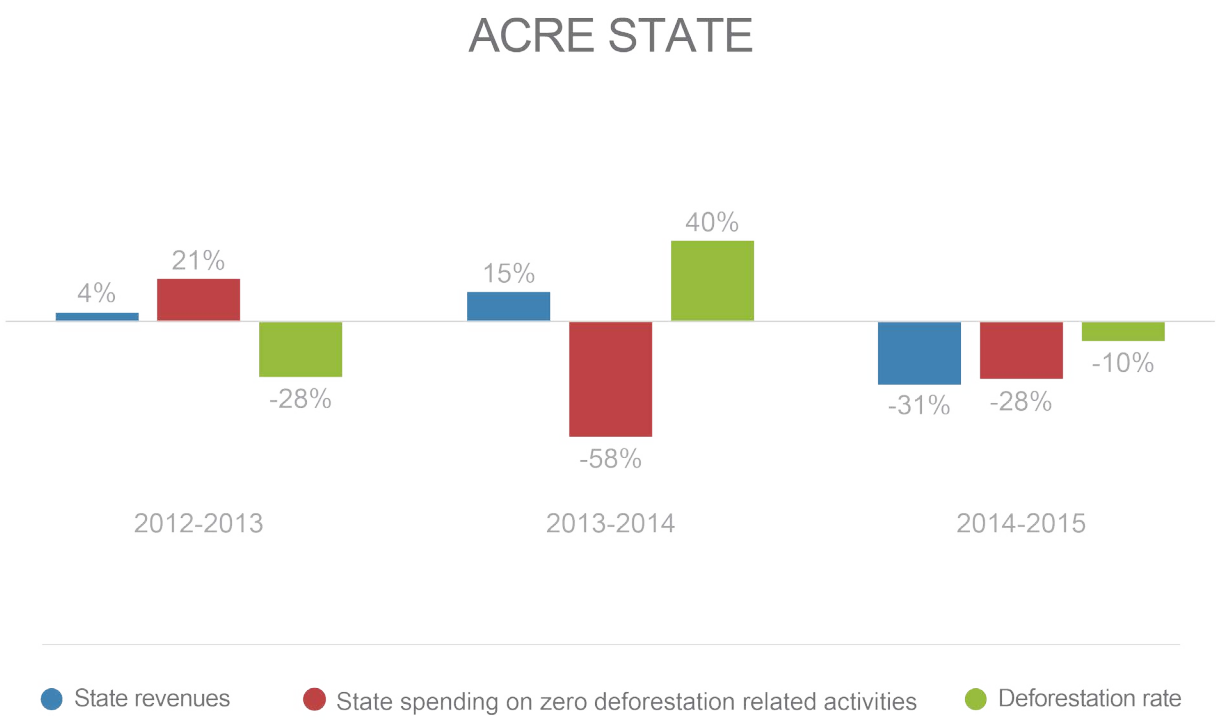
Figure 19. Conjectural Analysis for Amazonas State: Total State Revenue, Total Expenses Committed to Deforestation Control, and Relative Deforestation Rate



Source: INPE, 2016; Amazonas, 2016.

The state of Acre had two consecutive declines in the state's public budget: the first of 70% in 2014 and the second of 49% in 2015, as can be seen on **Figure 20** below. The 2014 budget cut was accompanied by an increase in deforestation, as in the state of Amazonas. However, performance improved the following year, despite additional reductions in government spending for the environmental agenda. The 10% reduction in deforestation between 2014 and 2015 was an important achievement by the state and is largely a result of the implementation of its environmental policy. The green economy and social inclusion policy promoted by the government with incentives from the German Bank (KfW) and the Amazon Fund (BNDES) has shown positive results (Agencia Acre, 2016). However, for 2016, the news is not positive: PRODES projections published in November of 2016 indicate an increase of 47% in the deforestation rate, in relation to 2015 (INPE, 2016).

Figure 20. Conjectural Analysis for Amazonas state: Total State Revenue; Total Expenses Committed to Deforestation Control and; Relative Deforestation Rate



Source: INPE, 2016; Acre, 2016.

To definitively combat deforestation in Amazonian states, it is necessary to know the main drivers of deforestation in order to determine policies, actions and the role of each sector of the economy or of governance in the process.

In the Amazonas territory, the main deforestation foci are concentrated in the southern state whose municipalities are among the ten most deforested the entire Amazon region. In this case, the main driver of deforestation is the expansion of extensive cattle ranching and increasing demand for meat in the state. The lack of land tenure governance also contributes to deforestation. Credit policies and encouraging sustainable practices are essential to contain the opening of new areas of forest and recover degraded areas by grazing.

Livestock is also the main driver of deforestation in Acre state. However, the state deforestation dynamics are different from the rest of the Legal Amazon. The main focus of deforestation in state has been on rural settlements. These properties are relatively small, and there are strong indications that the expansion of extensive cattle ranching is the main driver of deforestation in such areas. Data from state government shows that a large part of the deforestation occurs in agrarian reform settlements, which occupy only 10% of the state, and data shows that in 2012, this is where 35% of all deforestation occurred in the state (World Wildlife Fund, 2013).

As well as for Amazonas state, the most efficient strategic to reversing the scenario is to focus efforts on intensifying ranching on already cleared areas by increasing the number of head of cattle per hectare. Adoption of improved ranching practices would reduce the currently high rate of deforestation in settlement projects.

7. Conclusions: Barriers and Financial Challenges for the Success of REDD+ Implementation in Brazil

It is evident that Brazil is at the forefront of the international effort to reduce deforestation since it has received almost half of total of global committed money to develop and implement REDD+ (ODI, 2014b). The country started its REDD+ activities in 2006 and presented results under the United Nations Framework Convention on Climate Change (UNFCCC). However, there are some important gaps that need to be overcome before the country advances to the full implementation of the REDD+ mechanism, and can receive large-scale, sustainable sources of funds for Pay-for-Performance results.

The results through 2016 have demonstrated a greater concentration of funds committed to national governance institutions such as the Amazon Fund and the Brazilian Federal Government, which received more than 60% of total funds tracked. Subnational jurisdictions on the other hand received only 9% of the total commitments. Today the states are still very dependent on financial arrangements with the federal government, mostly because the states are still lacking autonomy and support from federal government to have direct access to REDD+ funders and investors for their jurisdictional programs.

The value of payments received via the Amazon Fund, although a great accomplishment for real reductions in Brazil, does not even represent 10% of Brazil's emissions reduction potential, estimated at 5.5 billion tCO_2 or US$26 billion. This lack of full payment for performance is part of the reason why deforestation in the Amazon regained traction and raised again in 2015 and 2016. There is an opportunity window for the states to capture REDD+ resources at a subnational level of governance.

The most recent increases deforestation rates in the Amazon has gone hand in hand with the ongoing Brazilian economic crisis. The agribusiness was the only sector that grew (2.5%) during the crisis (Brasil, 2016) and should continue growing in the coming years. Business as usual agriculture, livestock and illegal logging will continue to expand towards the Amazon forests unless alternative “low carbon economy” business models are implemented in the region.

Over the next several years, Brazil will need to implement its national and state climate/forests policies in order to meet its Paris Agreement obligations. Based on the findings of this report, and the current political situation in Brazil, there are several key issues that need to be resolved as soon as possible to help Brazil achieve its 2020 forest and climate mitigation goals. These include:

1. More financial resources are needed. Over US$2.2 billion has been committed to the development of REDD+ activities in Brazil from 2009 through September 2016, and this helped Brazil to become a global leader in reducing its emissions from deforestation. But in order to continue this progress and meet its current and future deforestation reduction goals, they need to find additional resources that are predictable and can generate a large amount of resources for performance-based payments.

2. Compensate the states that are achieving REDD+ goals. Based on our analysis, we conclude that a great part of emissions reductions achieved by the country to date are a result of the efforts made by the Amazon states. However, the international REDD+ finance committed to the country was not enough to cover all of the efforts made to date.

3. Although Brazil has a recent successful record in combating deforestation on the world stage, the main actors responsible for and most impacted by this, Amazon states and local communities, are not being properly rewarded for their achievements and investments.

And worse, the efforts made so far are no longer sufficient to sustain this recent progress in the Brazilian Amazon - command and control actions alone are not enough to contain current deforestation. It is necessary to move towards joint strategies with all sectors of the economy, especially the private sector and agribusiness.

4. The sources of funds for REDD+ activities and programs in Brazil need to be diversified, and greater autonomy is needed for the states to directly receive funds through bilateral agreements with international donors. Today the states are still very dependent on financial arrangements with the federal government to finance their actions.

5. Pay-for-Performance finance needs to increase significantly and reach subnational actors. Brazil and its donors need to move beyond REDD+ Readiness funding and into Pay-for-Performance payments for the reductions that Brazil has been consistently making over the last decade. Although large results in terms of reducing deforestation have been delivered, a large part of REDD+ funding in Brazil has been spent on "Readiness" activities, those aimed at preparing the country for financing with based on results demonstrated reductions of deforestation and associated emissions.

6. Better alignment between agricultural expansion and forest protection activities. Agricultural subsidies are sometimes at odds with the goals of reducing deforestation. We were able to track US$80 million in financial flows aimed at promoting low-carbon agriculture in the Amazon. While this is a good sign of policies that can provide economic benefits in a low carbon manner, estimates indicate that Brazil's total public agriculture finance is around $55 billion annually, dwarfing the $2 billion that has been spent on REDD+ in Brazil.

7. Integrate the voluntary efforts by the private sector, in particular, those companies with Zero Deforestation commitments, into the national and state level climate policy implementation. Brazil is a leader in REDD+ implementation and it has valuable lessons to share with other countries and companies that have been at the forefront of collaboration in harmonizing their respective supply chain and NDC goals. Brazilian states and companies can provide strong examples of how this is starting to be integrated and implemented.

8. In the future, Brazil's main challenge is to embrace low-carbon growth as a necessary strategy for economic development, especially in the Amazon region, through financial incentives to improve agricultural efficiency and livestock production committed to zero deforestation.

8. References

ACRE. 2016. *"Portal de transparência do Estado do Acre"*. Accessed September 30, 2016. Acre: Government of Acre, http://sefaznet.ac.gov.br/transparencia/servlet/portaltransparencia.

AMAZONAS. 2016. *"Portal de Transparência Fiscal do Estado do Amazonas".* Amazonas: Government of Amazonas. Accessed September 30, 2016, http://www.transparenciafiscal.am.gov.br/.

AGENCIA ACRE. 2016. *"Acre está em último lugar no ranking de desmatamento na Amazônia"*. Accessed March,20 2017. Acre: Government of Acre, http://www.agencia.ac.gov.br/acre-esta-em-ultimo-lugar-no-ranking-de-desmatamento-na-amazonia/.

Amazon Fund. 2016. *"Projects".* Accessed November 20, 2016. http://www.fundoamazonia.gov.br.

Amazônia Real. 2015. Ministério Público Federal vai monitorar política ambiental do Amazonas. Accessed March, 24, 2017. http://amazoniareal.com.br/ministerio-publico-federal-vai-monitorar-politica-ambiental-do-amazonas/.

Brasil. 2004. *"Plano de Ação para a Prevenção e Controle do Desmatamento na Amazônia Legal (PPCDAM)".* Brasília-DF: Grupo Permanente de Trabalho Interministerial para a redução dos índices de desmatamento na Amazônia Legal.

—. 2016. *"Economia e emprego—PIB Agronegócio cresceu 1,8% em 2015".* Accessed November 20th. http://www.brasil.gov.br/economia-e-emprego/2016/03/pib-do-agronegocio-cresceu-1-8-em-2015.

Environmental Protections Agency. 2016. *"Global Greenhouse Gas Emissions Data".* Accessed December 8. https://www3.epa.gov/climatechange/ghgemissions/global.html.

Folha de São Paulo, 2017. "PIB do Brasil cai 3,6% em 2016 e país tem pior recessão da história recente".. Accessed March, 23. http://www1.folha.uol.com.br/mercado/2017/03/1864275-pib-do-brasil-cai-36-em-2016-e-amarga-segundo-ano-de-queda.shtml.

Governors' Climate and Forests Task Force. 2ed. 2014. *"Proposal for allocation of "U-REDD" emissions reductions in Brazilian GCF member states".* Manaus: IDESAM, 2014, http://www.gcftaskforce.org/documents/contributions_national_REDD+_strategy_proposal_allocation-state_union_EN.pdf.

IBGE. 2013. *"Contas Regionais: de 2010 a 2013, PIB do Mato Grosso acumula a maior alta (21,9%) entre todos os estados".* Accessed December, 8. http://saladeimprensa.ibge.gov.br/noticias?view=noticia&id=1&busca=1&idnoticia=3038.

IDESAM. 2016. *"Desafios e Oportunidades para a Implementação da Lei de Serviços Ambientais do Amazonas —Análise de Progresso após 10 dias da Lei Estadual".* Accessed November, 29. http://www.idesam.org.br/wp-content/uploads/2016/09/analise-lei-servicos-ambientais.pdf.

IPAM, 2016. *"Desmatamento da Amazônia Brasileira em 2016—prenuncio de um retrocesso".* Accessed November, 10. http://ipam.org.br/desmatamento-na-amazonia-brasileira-em-2016-prenuncio-de-um-retrocesso/.

INPE. 2016. *"Projeto PRODES- monitoramento da floresta amazônica brasileira por satélite".* Accessed November, 30. http://www.obt.inpe.br/prodes/index.php.

UN-REDD PROGRAM. 2013. *"Launch of Policy Brief on 'The Role of the Private Sector in REDD+: the Case for Engagement and Options for Intervention".* Accessed February, 20. https://www.unredd.net/documents.html.

Observatório ABC, 2015. *"Análise dos Recursos do Programa ABC: Foco na Amazônia Legal—Potencial de Redução de GEE e estudo de caso sobre o Programa ABC".* Accessed November, 2016, http://mediadrawer.gvces.com.br/abc/original/gv_agro_v3_digital_em-duplas.pdf.

—. 2016. *"Sistema ABC"*. Accessed December, 7. http://observatorioabc.com.br/sistema-abc/?locale=pt-br.

ODI. 2014 a. *"The State of REDD+ Finance." CGD Working Paper 378. "Washington, DC: Center for Global Development."* Washington, DC: Center for Global Development. Accessed February, 15. http://www.cgdev.org/publication/state-redd-finance-working-paper-378.

—. 2014b. *"Climate Finance Thematic Briefing: REDD+ Finance. London UK: Overseas Development Institute".* Accessed February, 20, 2016, http://www.odi.org/sites/odi.org.uk/files/odi-assets/publications-opinion-files/9330.pdf.

REUTERS. 2016. *"Brazilian economy's steep slide raises specter of depression".* Accessed November 20. http://www.reuters.com/article/us-brazil-economy-gdp-idUSKCN0W51CZ.

SEEG. 2016. *"Plataforma SEGG Total de Emissões".* Accessed December, 7. http://plataforma.seeg.eco.br/total_emission.

Valor Econômico. 2016. *"Ibama receberá R$56 milhões do Fundo Amazônia para manter fiscalização".* Accessed December, 5. http://www.valor.com.br/brasil/4764307/ibama-recebera-r-56-mi-do-fundo-amazonia-para-manter-fiscalizacao.

World Wildlife Fund. 2013. *"Environmental service incentives system in the state of Acre, Brazil. Lessons for policies, programs and strategies for jurisdiction-wide REDD+"*. Accessed February 20, 2016, https://rainforestrescue.sky.com/assets/assets/documents/2013/10/590001_SISA_Report_ENGLISH_A4.pdf.

FOREST TRENDS

Pioneering Finance for Conservation

Biodiversity Initiative

Promoting development of sound, science-based, and economically sustainable mitigation and no net loss of biodiversity impacts

Coastal and Marine Initiative

Demonstrating the value of coastal and marine ecosystem services

Communities Initiative

Strengthening local communities' capacity to secure their rights, manage and conserve their forests, and improve their livelihoods

Ecosystem Marketplace

A global platform for transparent information on environmental finance and markets, and payments for ecosystem services

Forest Policy, Trade, and Finance Initiative

Supporting the transformation toward legal and sustainable markets for timber and agricultural commodities

Public-Private Finance Initiative

Creating mechanisms that increase the amount of public and private capital for practices that reduce emissions from forests, agriculture, and other land uses

Supply Change

Tracking corporate commitments, implementation policies, and progress on reducing deforestation in commodity supply chains

Water Initiative

Promoting the use of incentives and market-based instruments to protect and sustainably manage watershed services

Learn more about our programs at www.forest-trends.org