

Measuring financial resources allocated to the Green Economy

Second edition – February 2017



FEBRABAN

Brazilian Federation of Banks

THE NATIONAL FINANCIAL SYSTEM AND THE GREEN ECONOMY

Measuring financial resources allocated to the Green Economy

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Introduction

In 2014, the Brazilian Federation of Banks (FEBRABAN) established an agenda in partnership with the Center for Sustainability Studies of the Getulio Vargas Foundation (GVces) to analyze possible ways to promote the transition to a Green Economy in Brazil through the allocation of resources that are intermediated by the National Financial Sector.

As a result of this partnership, in October 2015 the first edition of the study “Measuring Financial Resources Allocated to the Green Economy” was published. The report presented the amounts of funding allocated in 2013 and 2014 to representative sectors of the Green Economy and to sectors whose activities may have an impact on the environment.

In 2016, following recommendations for the continuous improvement of the methodology, some changes were made in the processes, notably the creation of the “Low-Carbon Economy – Database” at FEBRABAN and the “Secure Sector Information Environment” (AISS). Additionally, financial products specifically relating to socio-environmental issues, low-carbon agricultural activities and good agricultural practices were considered as Green Economy sectors. The study carried out in 2016 also had the participation of five additional banks. Finally, in order to widen and improve the analysis, a different source of data was used to measure the share of resources allocated in the sectors being studied in total corporate loans provided by the banking sector and by the participating financial institutions.

Due to these methodological changes and the inclusion of new banks in the study, this report presents the results in terms of the balances of loans and/or financing portfolio on December 31, 2015 for the two sectors mentioned: The Green Economy and sectors with a potential to cause socio-environmental impacts.

This report is organized in five parts: the first briefly presents the institutional context in which the National Financial System (SFN) operates; the second part outlines the methodology, describing the main advances and assumptions adopted, the sectors analyzed and the participating banks; the third part describes the results taking into account the scope of the analysis; the fourth part explains the strategic value of the research; and the fifth part offers suggestions to broaden the scope of future studies.



1. Brief history

FEBRABAN, in exercising its commitment to socio-environmental responsibility, has undertaken a series of studies on possible ways to promote the transition to a Green Economy in Brazil through resources intermediated by the National Financial System ('Sistema Financeiro Nacional' - SFN) and to encourage the integration of businesses and sustainable development.

In early 2014, the United Nations Environment Programme (UNEP) launched a global study involving a number of countries, entitled "Inquiry: Design of a Sustainable Financial System." The objectives were to map public policies, aspects and innovations that could accelerate and increase the allocation of financial resources to initiatives that could leverage the transition to a Green and sustainable Economy. The fact that Brazil was selected to participate in the research represents an acknowledgement of the country's leadership in this area.

The president of FEBRABAN, Murilo Portugal, served as a member of the Advisory Board of the UN inquiry, demonstrating engagement of the SFN on the discussion of a Brazilian agenda for sustainable development.

Since then, some studies on in this area have been undertaken by FEBRABAN, among them a methodology to identify resources intermediated by the SFN and allocated to the Green Economy, according to the definition and criteria established by the United Nations. Subsequently, amounts allocated to sectors with potential to cause socio-environmental impacts were included, in accordance with the provisions of the Resolution 237/1997 of the National Environment Council (CONAMA)¹. The codes of the National Classification of Economic Activities (CNAE)² were used as the basis for collecting information from the financial institutions studied.

These studies, conducted by GVces and published in 2015 were developed in close collaboration with a working group made up of representatives of the ten largest banks in Brazil as well as by staff members of FEBRABAN.

¹ CONAMA is the consulting and deliberative body of the National Environmental System (SISNAMA). It was established under Law 6,938/81, which provides for the National Environmental Policy, regulated by Decree 99,274/90. It has the technical capacity and mandate to define sectors and economic activities that have a potential environmental impact.

² CNAE is a classification used to standardize the identification codes of productive units in the country in the registers of the public administration in the three spheres of government, especially for tax purposes, contributing to the improvement of the quality of information systems that inform the decisions and actions of the State.

This is a ground-breaking project, carried out with the banking sector – a key actor in this context since the transition to a Green Economy is expected to mobilize a large volume of financial resources – and of extreme importance for Brazil to move towards the development of a low-carbon economy, contributing to the discussion of resource allocation and efficiency as well as outlining actions and guidelines that inform decision-making by financial agents and regulators.

It is important to note that Brazil already has a solid and comprehensive set of laws, resolutions and voluntary agreements that govern the socio-environmental area. It is also important to highlight the leadership role of Brazilian financial institutions as stakeholders in agreements related to sustainability for the sector.

In 2014, the Brazilian Central Bank included socio-environmental issues in the SFN regulations with Resolution 4,327/2014, which provides guidelines to be observed by financial institutions when creating and implementing their Socio-environmental Responsibility Policies and their respective action plans, providing a clear governance structure, strengthening risk and opportunity management and the expansion and quality of credit.

It is also worth noting that FEBRABAN plays an important role in raising awareness and encouraging its members to focus on reducing – even if only indirectly – the socio-environmental impacts of their activities, as well as complying with applicable regulations and legislation. To this end, in August 2014, the organization published the N° 14 Standard in the Banking Self-Regulation System (SARB), outlining minimum procedures for compliance with Resolution 4.327/2014 and guiding the socio-environmental practices of its signatories in their business and with stakeholders.

The governance of socio-environmental issues at FEBRABAN is concentrated in its Social Responsibility and Sustainability (CRSS) Committee, which reports to the Executive Board of the Federation and involves the participation of 30 institutions, accounting for about 80% of the total of banking sector assets.

In order to promote a constant dialogue on socio-environmental issues between financial and capital market associations, FEBRABAN also established the Financial Sector Sustainability Committee, with representatives from the Brazilian Financial and Capital Markets Association (ANBIMA), the Brazilian Securities, Commodities & Futures Exchange (BM&FBOVESPA) and the Brazilian Confederation of General Insurance Companies, Private Pension and Life insurance funds and Supplementary Health and Capitalization (CNseg).



2. Methodology

The methodology developed aims to measure the loans and/or financing offered by banks to economic sectors that are part of the Green Economy in Brazil.

The methodology identifies the economic activities of sectors considered by UNEP as part of the Green Economy and the economic activities of sectors considered by CONAMA as having potential to cause socio-environmental impacts. Subsequently, the corresponding CNAE codes of the activities that comprise these sectors were identified.

Assumptions for analyzing the data:

- ✓ **Use the National Classification of Economic Activities (CNAE), in its fifth structural level (subclasses), as a basis for reporting the amounts contracted, disbursed and the balance of operations, for the base year 2015.**

It should be noted that the CNAE is structured in five hierarchical levels: section, division, group, class and subclass.

For the Green Economy sectors, product lines of financing and/or loans focused on low carbon agribusiness activities and specific products with socio-environmental purposes were added. To quantify these resources, FEBRABAN codes were created following the official CNAE structure.

- ✓ **Consider onshore credit operations and specific financing for Green Economy sectors identified in the CNAE.**

- ✓ **Do not consider co-obligations (guarantees, sureties) for credit operations, or any other capital market transactions and/or any involving the issuance of securities.**

It should be emphasized that data collection followed the same guidelines as the methodology used in the first editions, but with improvements that aim to allow for greater detail and clarity in the classification of resources.

Thus, in 2016, taking into account the recommendations for continuous improvement of the methodology, changes were made in the processes with the aim of automating and standardizing the way to measure resources allocated by the banks to the different economic sectors.

To this end, two projects developed by FEBRABAN and validated by the Working Group, composed of the participating financial institutions, are highlighted below.



Database Low-Carbon Economy

A web system that allows the collection and consolidation of data as well the issuance of reports with the amounts contracted, disbursed and the balance of financing operations intermediated by the financial sector for the economic sectors of the Green Economy and for sectors with a potential to cause socio-environmental impacts.



Secure Sector Information Environment (AISS)

independent from the corporate network and complying with the strictest security standards, the proposed process aims to guarantee the confidentiality, privacy and integrity necessary to maintain the exchange of data in the exclusive environment of the financial institutions and FEBRABAN.

In order to present the web system and information security environment (ISSA), and aiming to standardize the understanding of financial institutions as well as to guarantee individual access and consistency in data collection and consolidation, a workshop was held covering the areas of sustainability, socio-environmental risks, internal controls, planning and finances of participating banks.

The study looked at the volume of financing and/or loan operations (credit portfolio), according to the criteria mentioned below.

Portfolio balance on December 31, 2015: this is the amount disbursed, plus operational costs, barring the amount paid (amortized) by the customer, according to criteria and procedures established in the Accounting Plan of the Institutions of the National Financial System (COSIF).

Balance allocated in the Green Economy: relates to the operations granted to economic activities identified by the CNAE that are part of the Green Economy and financing products with specific modalities presented as CNAEs FEBRABAN.

Balance allocated in sectors with potential to cause socio-environmental impacts: related to financing and/or credit operations granted to economic activities identified in the CNAE in accordance with CONAMA Resolution 237/1997.

2.1. Sectors analyzed

Resource allocation was measured for two groups of sectors or activities: The Green Economy and sectors with potential to cause socio-environmental impacts.

Box 1 presents the definition of The Green Economy and the respective economic sectors.

Box 1 – Definition of the Green Economy and economic sectors, as defined by UNEP

Green Economy

It results in improvements in well-being and social equality, while significantly reducing environmental risks and ecological scarcity, and has the following main pillars: low carbon emissions, efficient use of resources and social inclusion.

Sectors

- ✓ Renewable energy
- ✓ Energy efficiency
- ✓ Sustainable construction
- ✓ Sustainable transport
- ✓ Sustainable tourism
- ✓ Water
- ✓ Fisheries
- ✓ Forestry
- ✓ Sustainable agriculture
- ✓ Waste
- ✓ Specific agribusiness activities
- ✓ Social sectors such as education, health, productive inclusion and local and regional development

Note: due to its wide scope and because it is not related to any specific branch of activity, it was not possible to identify the energy efficiency sector within the premises of this report.

The second box is more comprehensive and encompasses sectors whose activities have potential to cause socio-environmental impacts, where risk management is fundamental, either to mitigate negative impact or to increase positive impact. Most are sectors subject to special risk assessments by banks.

Box 2 presents these sectors, according to the provisions of Resolution 237/1997 of the National Environmental Council (CONAMA).

Box 2 – Sectors with activities that have potential to cause environmental impacts according to CONAMA



- ✓ Extraction and processing of minerals
- ✓ Non-metallic mineral products industry
- ✓ Metallurgy
- ✓ Mechanical engineering
- ✓ Electrical, electronic and communications equipment industry
- ✓ Transportation industry
- ✓ Forest products industry
- ✓ Pulp and paper industry
- ✓ Rubber industry
- ✓ Tanning industry
- ✓ Chemical industry
- ✓ Plastic products industry
- ✓ Textile, clothing, footwear and fabrics industry
- ✓ Food and beverage industry
- ✓ Tobacco industry
- ✓ Civil works
- ✓ Utility services
- ✓ Transportation, terminals and warehouses
- ✓ Tourism
- ✓ Agricultural and livestock activities and the use of natural resources.

2.2. Participating financial institutions

In 2016, the following financial institutions took part in the study, from which we highlight the inclusion of **five new banks**: **ABC Brasil**, Banco do Brasil, Banco Votorantim, **BASA**, BNDES, Bradesco, BTG Pactual, Caixa Econômica Federal, Daycoval, HSBC Bank Brasil, Itaú Unibanco, Santander, **Rabobank** and **Triângulo**.



3. Results

The study considered the amounts contracted, disbursed and the balances of financial operations. However, due to methodological improvements and the inclusion of important banks, only the results for the balances of 2015³ are presented, since these represent, in fact, the final position of the financial institutions with the Brazilian Central Bank.

The results are reported in aggregated form, in order to protect the identity of the institutions studied.

The following are the results of the balance of loans and financing portfolios (credit portfolio) on December 31, 2015 in both sectors, as per the methodology presented.

3.1. Representative sectors of the Green Economy

In 2015, the portfolio balance for the sectors of the **Green Economy** was **R\$ 316,932 million**

For these sectors, the financial amounts of specific products for socio-environmental purposes and the financing of low-carbon agriculture activities and good agricultural practices were added.

³ The balances for 2013 and 2014 of the Green Economy and sectors with a potential socio-environmental impact are available in the first edition of Measuring Financial Resources Allocated in the Green Economy (Mensurando Recursos Financeiros Alocados na Economia Verde), at www.febraban.org.br, in Sustainability, SFN and the Green Economy.

Table 1 – Balances for sectors of the Green Economy in 2015

Sectors	Balances in R\$ Million
✓ Sustainable transport	99,609
✓ Sustainable agriculture	84,288
✓ Renewable energy *	50,745
✓ Specific products for social and environmental purposes	43,899
✓ Education	15,469
✓ Health	11,899
✓ Water	4,951
✓ Waste efficiency	2,663
✓ Forests	2,120
✓ Cities	1,078
✓ Fisheries	209
✓ Sustainable tourism	2
Total	316,932

* According to the criteria of the National Electricity System Operator (ONS), an organ of the Ministry of Mines and Energy, for the CNAE related to the generation, transmission and distribution of electricity, only 74.67% of the total resources reported by financial institutions were considered – a considerable amount of non-CO₂ emitting energy (excluding thermonuclear sources). Source: www.ons.org.br.

3.2. Sectors with activities that may cause socio-environmental impacts

The total portfolio balance of operations in these sectors on December 31, 2015 amounted to R\$ 617,575 million.

Table 2 – Balances for sectors with potential to cause socio-environmental impacts (sectoral division) in 2015

Sectors	Balances in R\$ Million
✓ Production of coke, petroleum products and biofuels	68,673
✓ Production of food products	63,997
✓ Electricity, gas and other utilities	34,842
✓ Ground transportation	34,024
✓ Manufacturing of motor vehicles, trucks and buses	33,038
✓ Production of chemical products	28,993
✓ Warehousing and related transport activities	27,424
✓ Extraction of metallic minerals	27,171
✓ Metallurgy	26,407
✓ Agriculture, livestock and related services	25,988
✓ Manufacturing of other transport equipment, except motor vehicles	25,988
✓ Production of pulp and paper and paper products	22,455
✓ Wholesale trade, except motor vehicles and motorcycles	21,518
✓ Manufacturing of machinery and equipment	21,007

Sectors	Balances in R\$ Million
✓ Construction	18,385
✓ Infrastructure works	13,019
✓ Transportation via waterways	11,777
✓ Manufacturing of non-metallic mineral products	11,349
✓ Manufacturing of rubber and plastic products	10,670
✓ Manufacturing of metal products, except machinery and equipment	10,611
✓ Retail trade	10,527
✓ Manufacturing of textiles	8,661
✓ Manufacturing of clothes and accessories	7,826
✓ Manufacture of electrical machinery, devices and equipment	6,806
✓ Production of beverages	6,188
✓ Others	40,231
Total	617,575

3.3. Amount of allocated resources

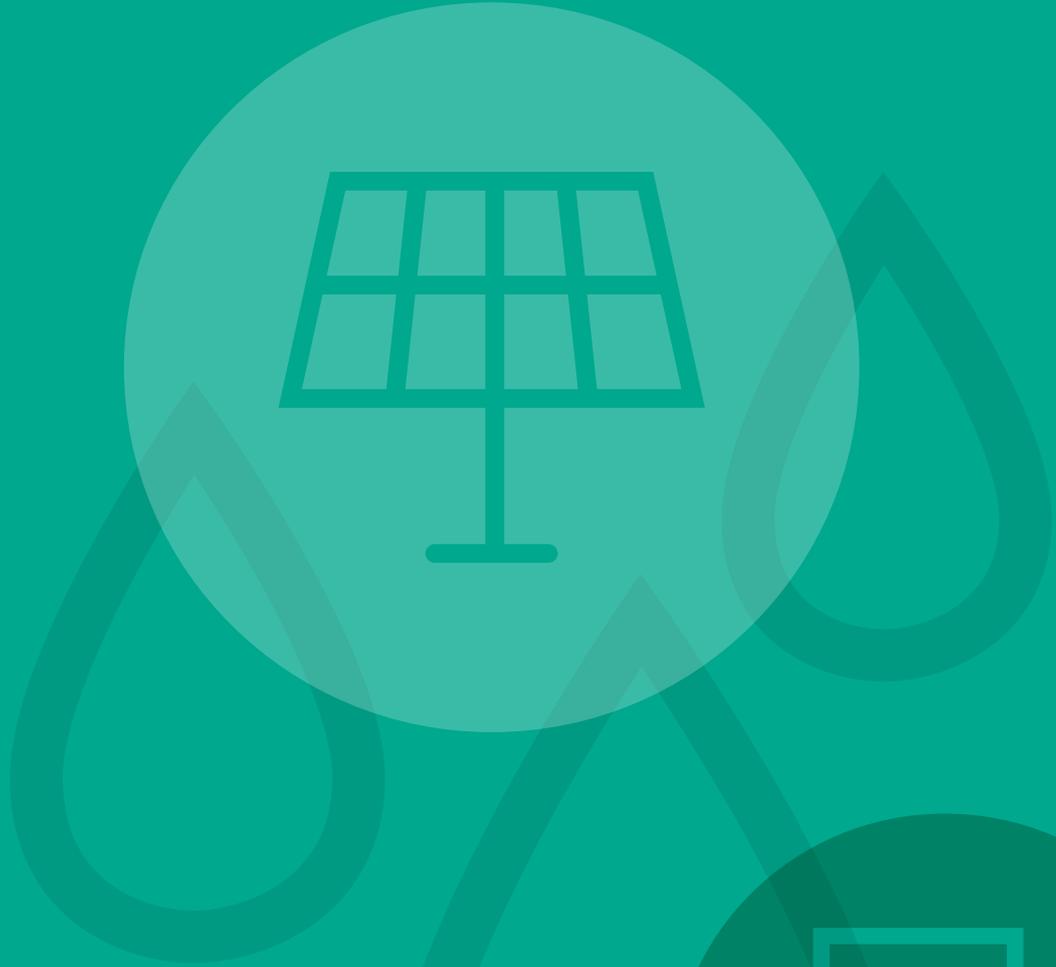
In order to determine the amount of resources allocated to sectors of the Green Economy and to sectors with potential to cause socio-environmental impacts, we considered the total amount of corporate loan portfolios of all banks in the market (R\$ 2,175 billion) and the total amount of corporate loan portfolios of the banks participating in the study (R\$ 1,893 billion).

To calculate the proportions, in addition to the information provided by the participating banks, the reports of the Selected Data of Supervised Entities (IF.data) of the Brazilian Central Bank were used.

Financing and/or loan balances for Green Economy sectors accounted for 16.74% of total corporate loans offered in 2015 by the banks participating in the study. The representation of these balances in the total amount of corporate loan portfolios of banks in the financial system was 14.56%.

The balances of financing provided to sectors with potential to cause socio-environmental impacts, in turn, accounted for 32.62% of total operations with legal entities and corporations carried out by participating banks in the same period. These balances correspond to 28.38% of the total corporate loan portfolio of the banks in the market.





4. Strategic value

The implementation of the web system – Low-Carbon Economy Database, with centralized information in a single platform, and the Sector’s Secure Information Environment (AISS) – guarantees information security and quality and allows for the creation of historical series and analysis of the banking sector.

The participating institutions, in turn, in addition to evaluating their own performance, are able to compare themselves with the banking sector when it comes to loans provided to each of the economic sectors identified in the CNAE.

Thus, the importance of the analysis is to:



Identify and evaluate the amounts of loans provided to different sectors of the economy and the potential of markets



Allow financial institutions to understand and manage the different types of portfolios considering their exposure to social, environmental and climate-related risks



Evaluate progress in terms of the evolution of loans and financing intermediated by the banking sector and directed to the Green Economy



Contribute to the identification of business opportunities relating to the Green Economy as well as to the development of mitigation strategies to deal with risks associated with the transition to a low-carbon economy



Allow comparative analyses in the future for countries developing a similar methodology



5. Moving forward

It is important to emphasize that the improvement of this methodology is an ongoing process. We expect to adopt an information assurance process in 2017 in order to guarantee the quality of the data collected for the research.

Recent methodological changes allow financial institutions to:



Improve the structure of the processes adopted to collect and consolidate information



Build a homogeneous database



Evaluate the possibility of increasing the frequency of measurements



Extend the scope of the analysis to investment resources of Assets Managers, Pension Funds and Insurance Companies

Finally, this study also intends to continue to encourage the participation of new institutions and, thus, to increase the measurement of the flow of resources intermediated by the National Financial System and directed to the Green Economy.



6. Appendixes

Appendix 1 – Template screen for data entry*

BANCO DE DADOS ECONOMIA DE BAIXO CARBONO **FEBRABAN**

Bases Temas Especificos| Setores da Economia Verde

Entrada de dados

Setores da Economia Verde

Ano calendário 2015
Exercício 2016

Código CNAE	DESCRIÇÃO	Valores em R\$		
		Contratado	Desembolsado	Suado
01.4	Produção de sementes e mudas certificadas	Contratado	Desembolsado	Suado
0141-5/01	Produção de sementes certificadas, exceto de forrageiras para pasto	<input type="text"/>	<input type="text"/>	<input type="text"/>
0141-5/02	Produção de sementes certificadas de forrageiras para formação de pasto	<input type="text"/>	<input type="text"/>	<input type="text"/>
02.1	Produção florestal - florestas plantadas	Contratado	Desembolsado	Suado
0210-1/01	Cultivo de eucalipto	<input type="text"/>	<input type="text"/>	<input type="text"/>
0210-1/02	Cultivo de acácia-negra	<input type="text"/>	<input type="text"/>	<input type="text"/>
0210-1/03	Cultivo de pinus	<input type="text"/>	<input type="text"/>	<input type="text"/>

* Part of the Web System screen that allows data entry and consolidation.

Source: FEBRABAN.

Appendix 2 – Template screen - consolidated report (output)*

BANCO DE DADOS ECONOMIA DE BAIXO CARBONO FEBRABAN

Economia de Baixo Carbono | Relatórios

Filtros de Pesquisa

Tema:

Banco: Ano:

Seção	Divisão	Grupo	Classe	Nome	2015		
					Contratado	Desembolsado	Saldo
				Total			
A				AGRICULTURA, PECUÁRIA, PRODUÇÃO FLORESTAL, PESCA E AQUICULTURA			
		01		AGRICULTURA, PECUÁRIA E SERVIÇOS RELACIONADOS			
			01.4	Produção de sementes e mudas certificadas			
			01.41-5	Produção de sementes certificadas			
		02		PRODUÇÃO FLORESTAL			
			02.1	Produção florestal - florestas plantadas			
			02.10-1	Produção florestal - florestas plantadas			
			02.2	Produção florestal - florestas nativas			
			02.20-9	Produção florestal - florestas nativas			
			02.3	Atividades de apoio à produção florestal			

* Part of the Web System screen that allows data entry and consolidation.

Source: FEBRABAN.

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