ACTION PLAN FOR

ACTION PLAN FOR SUSTAINABLE PRODUCTION AND CONSUMPTION

REPORT OF THE FIRST CYCLE OF IMPLEMENTATION
2011 – 2014

Ministry of the Environment
Secretariat of Institutional Articulation and Environmental Citizenship

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CONSOLIDATION AND REVIEW

Raquel Breda dos Santos

Director of the Department of Citizenship and Environmental Responsibility

Coordination

Ariel Cecílio Garces Pares

Director of the Department of Sustainable Production and Consumption

Technical Staff

Department of Sustainable Production and Consumption

Secretariat of Institutional Articulation and Environmental Citizenship

Ministry of the Environment

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FOREWARD

The Action Plan for Sustainable Production and Consumption, published in 2011, represented a new level in the Brazilian development model, in which economic growth must be fair and inclusive, reducing inequalities and improving people's quality of life, as well as promoting the management and conservation of natural resources and ecosystems.

Changing patterns of production and consumption is a huge and complex challenge for all countries, but particularly for developing ones, such as Brazil, which necessarily has, as its main objectives, social inclusion and the fight against poverty, in a difficult international context. Promoting economic growth dissociated from environmental degradation, using fewer resources and generating less waste and pollution, and combining this together with social development is an undertaking as large as the country itself.

These new patterns of production and consumption can only be made possible with the conscious and committed participation of private and public sectors, at all levels, and with the participation of society as a whole. In spite of being in its first cycle of implementation, the PPCS has managed to mobilize a large number of actors for the agenda of sustainability in production and consumption processes, in partnerships that have proven to be fundamental in advancing this goal in the country.

This report contains a survey of the measures and initiatives that have contributed to change the patterns of production and consumption in Brazil in the period between 2011 and 2014, and it presents some challenges and opportunities that may point to improvements, as well as new actions, partnerships and initiatives to strengthen the implementation of the Plan in its second cycle of implementation and, therefore, Brazil's commitment to sustainable development.

Izabella Teixeira

SUMMARY

I. Objectives and Methodology

The main objective of this report is to consolidate the information about the developed and/or implemented activities and initiatives for the promotion of sustainable production and consumption in the scope of the first cycle of implementation of the Action Plan for Sustainable Production and Consumption – PPCS (its abbreviation in Portuguese), from the time it was adopted until 2014. The report will not describe all initiatives and actions taken, both by government institutions and the private sector and by civil society in general; instead, it seeks to identify good practices and recommendations in order to adapt, replicate and disseminate existing policies and initiatives, as well as the challenges to be faced to strengthen the implementation of the Plan, thereby advancing its main goal which is the achievement of sustainable development in the country.

In a scenario of economic growth and the social mobility of an important percentage of Brazilian citizens that ascended into the middle class, Brazil faces the historical opportunity to shape a new pattern of development. The consumption patterns observed in countries that were industrialized first proved to be predatory and unsustainable, exploiting natural resources in their territories and outside them. The incentive of excessive consumption and the lack of concern in offering less environmentally harmful technologies and products aggravated global problems, causing climate change, the pollution of the oceans and the generation of waste.

In Brazil, however, we can see a different outlook, from both civil society and government, seeking socially and environmentally responsible solutions for the growth of the country and a strong adherence to more conscientious consumption practices, with citizens eager to be part of the change. Brazil, which is a huge country, and both socially and biologically diverse, is a main actor in the new world economy, becoming a sustainable development model for the world.

In the construction of this new model, it is necessary to involve all sectors in the promotion of more sustainable production and consumption patterns. The tools used are dialogue and partnership, among others, and the strategies include the implementation of the Action Plan for Sustainable Production and Consumption – PPCS. The PPCS is an ambitious instrument that involves a number of complex and challenging priorities. However, even in its short implementation time, it has been possible to effect a clear change in patterns and practices that involve consumption and production in the country, in the sense that sustainability is now considered a paradigm of the development process.

The challenge for the future is to strengthen and expand policies, programs, projects and initiatives that contribute to the goals of the Plan, identifying ways to monitor and evaluate them, and increasingly seek to involve all sectors of society in this fundamental effort in order to assure a future with quality of life for present and future generations.

This document was elaborated by conducting a data survey and collecting some of the information contained in reports and publications from government agencies, companies and non-governmental institutions, particularly the ones that are more involved with the implementation of the Sustainable Production and Consumption Plan. The results are organized according to the priorities established for the first cycle of implementation of the PPCS and they are supplemented with details on initiatives that contribute to other priorities and to the general objective of the Plan.

II. Executive Summary

Economic development and social progress in Brazil, with its effects on industrialization and urbanization processes, as well as on production and consumption patterns, have created an increasing demand on natural resources and greater pressures on the environment.

It is in this challenging context that the overall review on the set of initiatives by government and various sectors of civil society, including the productive sectors of goods and services that were developed and/or implemented in the scope of the first cycle of implementation of the Sustainable Production and Consumption Plan, whose summary is outlined below and whose details are discussed later in this document, managed to demonstrate that it is possible to advance to a more sustainable development model, assuring a better quality of life for present and future generations.

PRIORITY 1 – EDUCATION FOR SUSTAINABLE CONSUMPTION

In order to form a new generation of citizens that is able to integrate the concept of sustainability in their personal and professional decisions, the initiatives for consumption education sought to respond to the need for new cultural and educational models, reaching thousands of citizens through actions of training/qualification and communication, using the most modern and innovative instruments and information technology, communication and learning.

The training and qualification processes included:

- Initiatives that were targeted to representatives of government and society, involving more than 3,000 people in courses such as: "Sustainable Lifestyle" and "Children and Consumption";
- Semi-presential courses of the Program for Environmental Education and Family Farming – PEAAF, which were organized in partnership with 16 institutions, in 11 states, training 1,700 people, in order to encourage more sustainable and fairer production practices in rural areas, as well as the environmental regularization of rural properties. These courses are being expanded to another 11 institutions, with support from the National Environment Fund, intending to reach another 1,650 farmers, managers and leaders in this segment;
- A special edition of the digital magazine EducaRES, a platform that contains sustainability experiences aimed at education for conscientious consumption and environmentally correct and proper disposal of solid waste. A broad initiative, aimed at educators in the context of the PEAAF, receiving more than 13,500 hits as of September of 2014.
- Financial transfer by the National Fund for the Development of Education (FNDE) to promote actions to improve the quality of education and support public schools in the adoption of sustainable social and environmental criteria – PDDR Sustainable Schools; and
- 4th Children's Conference on the Environment, held in 2013, that mobilized more than 9 million people across the country, involving roughly 17,500 schools, with the theme "Let's take care of Brazil with sustainable schools".

The information and communication actions also managed to mobilize a significant number of people, in initiatives such as:

- The special edition of the site and magazine COLECIONA on the PEAAF theme, directed to thousands of educators, containing information about the use and conservation of natural resources, which has received more than 13,500 hits since its release to September of 2014;
- Green Rooms, 358 social and environmental reference spaces that are distributed across the country, to which kits with publications on sustainable consumption were sent; and the Green Screen Circuit that reached more than 15,000 people through exhibitions and discussion on environmental and social topics;
- Awareness and mobilization campaigns on "Conscientious Consumption of Packaging", "Saco é um Saco-(Bag is a Drag), "Vamos Tirar o Planeta do Sufoco" (Let's Save the Planet) and "Separate Trash and Hit the Can";
- Booklets from the series "Ways to practice responsible consumption", which is part of the Sustainable Consumption in Rural Areas Project with examples of responsible and fair consumption practices;
- Platform available on the Internet for the Conscious Consumption Test[1], a partnership between the Akatu Institute and the MMA, which was created to evaluate people's consumption awareness profile;
- "Sustainable Consumption Month" that is held every year in October, as well as "Conscious Consumer Day", which is celebrated on October 15th, involving actions to raise public awareness on social, economic, environmental and political problems that are caused by the excessive and unsustainable production and consumption patterns that are practiced today. These actions include, for instance, collection points for electronics, among others, and the organization of conscientious picnics;
- Earth Hour (2014), a campaign to inspire people to change their daily consumption habits, with the intention of reducing, among other things, negative impacts on natural resources;
- Consumption Notebook "Children Consumerism: running contrary to sustainability", a booklet that was launched in 2012, in a partnership of the MMA and the Alana Institute, giving tips and treating the issue in a clear and illustrative way for parents, teachers and educators. 80 thousand copies were distributed throughout Brazil;
- Flea Markets that are organized through partnerships of the MMA with governmental and non-governmental institutions in order to stimulate collaborative consumption practices among children, exchanging toys, among other products;
- Studies and research conducted in order to qualify information and refine initiatives such as, to cite some examples, the publication Sustainable Consumption – Scientific Research Notebook Vol. 3, of the Ministry of Justice; and the research Sustainability Here and Now, conducted in 2010, What Brazilians Think about the Environment and Sustainable Consumption, 2012 edition and *AKATU Research 2012: Toward a Healthy Society*; and
- The 4th National Conference on the Environment, held in 2013, was the largest environmental conference ever organized and had a fundamental role in advancing the discussion and awareness of sustainable production and consumption by choosing issues like Solid Waste and the implementation of the National Policy on Solid Waste Management, which was debated by approximately 200 thousand people in the preparatory process and at the national Conference stage.

[1] http://tcc.akatu.org.br/

PRIORITY 2 – SUSTAINABLE PUBLIC PROCUREMENT

Over the past 4 years, sustainable public procurement jumped from R$ 13.5 million to R$ 40.4 million with respect to acquisitions by SISG agencies (Integrated System for the Administration of General Services) – direct federal public administration, autarchic and foundational - which meant an increase of 200% in 2013 in relation to 2010. Sustainable public procurement represented, in 2013, 0.06% of total public procurement, a significant increase compared to 2011, at the beginning of the Plan, when it counted for only 0.02%. In the first three months of 2014, sustainable public procurement moved R$ 7.9 million in the acquisition of goods, by means of 168 processes. Comparing the same period in 2013, sustainable acquisitions increased by 66%.

In order to achieve these results, legal and regulatory norms were fundamental, as well as the qualification and training of public managers and the organization of internal logistics for government purchases:

- Decree N°. 7.746/2012 that determines criteria, practices and guidelines for the promotion of sustainable national development in public procurement, held by the Federal Public Administration, and establishes the Inter-ministerial Commission on Sustainability – CISAP;
- Resolution N°. 482/2012/ANEEL establishing the general conditions for access of micro- and mini-generation distributed to power distribution systems, and the power compensation system;
- inclusion of information on product sustainability in the Materials Catalogue – CATMAT that is used in federal procurement;
- inclusion in the Report on Environmental Management and Sustainable Bids of the Federal Court of Accounts (TCU) and attachment with the Checklist for evaluating environmental management and sustainable bids, enabling greater knowledge and control under the sustainable practices held by agents involved in contracting and public procurement;
- Technical Cooperation Agreement between the Ministry of Environment (MMA), the National Confederation of Industry (CNI) and the Ministry of Industry and Commerce (MDIC), with the creation of the Permanent Forum for dialogue among public and private sectors, in order to promote the debate about Sustainable Production and Consumption, with the participation of Ministry of Science, Technology and Innovation (MCTI), Ministry of Planning, Budget and Management (MPOG) and researchers of University of Brasilia, who are responsible for the preparation of sectoral studies of reference;
- Training in Sustainable Procurement and Contracting:
  - ✓ courses, workshops, seminars and training programs at the MMA, MPOG, TCU, The Institute for Applied Economic Research (Ipea), House of Representatives, the Superior Council of Justice of Labor (TRT10-CSJT), the Brazilian National Department of Transport Infrastructure (DNIT), the Ministry of Education (MEC) and the Attorney General of the Union (AGU);
  - ✓ Course of Sustainable Public Procurement for the Thematic Chamber of Environment of the World Cup 2014 and for public managers of World Cup host cities, including participants from Municipalities, Departments, Public Ministry, Court of Accounts, Court of Appeals and the Regional Labor Court of the participating states; and
  - ✓ training courses for federal civil servants of the Federal Institutes of the Southern Region (40 civil servants), training civil servants of the Ministry of Defense (80 civil servants), of the Association of Auctioneers (80 civil servants) and of the Supreme Council of Labor Justice (962 civil servants in 25 branches, classroom course/via teleconference);

- Resolution CD/FNDE N°. 18/2013 that covers the destination of financial resources (FNDE) to adapt the physical space in public schools – using building materials better adapted to local conditions and an architectural design that results in buildings with better thermal and acoustic comfort, assuring accessibility, efficient management of water and energy, sanitation and proper disposal of waste;
- transfer of funds to 4,975 public schools of basic education – in 2013 and 2014, amounting to approximately R$ 53 million – by means of the Program Direct Money in School– PDDE Sustainable Schools, of the MEC;
- Normative Instruction N°. 02/2014/MPOG that defines the rules for procurement or leasing machines and energy-consuming devices by the Federal Public Administration, direct, autarchic and foundational, and the use of the National Energy Conservation Label (ENCE) in projects and in their new federal public buildings or in the ones that receive a *retrofit*;
- inclusion in the Minha Casa Minha Vida (My Home My Life) Program (PMCMV) of the option of buying solar water heaters instead of using electric showers, which resulted in an energy savings of 1.3 million MWh/year by March of 2014, the equivalent of the total energy that will be generated by the Santo Antônio hydroelectric plant (RO);
- Provisory Measure N°. 647, of May 28 of 2014, that determines the addition of biodiesel to diesel fuel sold to the final consumer, contributing to the rational use of fuels in freight and public transport;
- promotion of sustainability in the agricultural sector, by means of initiatives such as the ABC Plan (Low Carbon Agriculture), the Minimum Price Guarantee Policy for Socio-biodiversity Products (PGPM-Bio) and the Food Acquisition of Family Agriculture Program – PAA; and
- Realization of sustainable shared public procurements, which have been increasingly used and have resulted in significant advantages in speed, transparency, cost reduction, rationality, economies of scale and formation or expansion of the producer of sustainable goods market.

Based on advances and trends identified in the first PPCS cycle, we should see increasingly significant and consolidated growth in sustainable public procurement in the country in the coming years.

PRIORITY 3 - ENVIRONMENTAL AGENDA IN PUBLIC ADMINISTRATION – A3P

- The A3P program doubled the number of Program partners in the period between 2011 and 2014, both in formal memberships - 118 new Terms of Accession - as in A3P network - 900 new members, totaling 1,300 registered institutions. The A3P program currently has a membership of 159 municipal institutions, 168 state institutions and 168 federal institutions. At the federal level, A3P has partners such as the Attorney General's Office, the Federal Savings Bank, the Chamber of Deputies, the Mint of Brazil, the Brazilian Army Command and Furnas Centrais Elétricas S/A, among others;
- Through awareness campaigns, conducted in 2012 and 2014, 4.1 metric tons of electronic material were collected. A case in point is the MMA, where the program has resulted in significant savings in water consumption and energy, among other resources. Just as an example, the amount of recyclable material collected, selected and destined for cooperatives rose from 6.7 tons in 2011 to 17.6 tons in 2013, representing an increase of 260%;
- Three meetings of the National Forum of A3P were held (in 2011, 2012 and 2014), totaling roughly 1,200 participants; as well as four regional forums, in 2012, which, when counted together, totaled about 410 participants representing 141 institutions;
- Three awardings of the A3P Prize for Best Sustainability Practices were held in 2011, 2012 and 2014, which involved close to 1,200 people directly in discussions, projects and the evaluation of initiatives;

- In 2014, the Sustainability in Public Administration Seal - Seal A3P was launched, which has certified 112 institutions with the Green Seal (formal compliance), 8 with the Silver Seal (annual report delivery), and 10 with Orange Seal (A3P Prize winners); and
- In the period covered by this report, training courses were held for 13 classrooms, with the participation of 780 officials, and 2 distance training classes were held, with 3,727 students.

PRIORITY 4 – INCREASE IN SOLID WASTE RECYCLING

With the publication of Law N°. 12,305/2010, there has been great progress in the statistics related to recycling in Brazil, driven by the principles and instruments set out in the National Policy on Solid Waste:

- Between 2010 and 2014, the federal government invested more than R$ 1.2 billion to encourage the development of solid waste plans, investments in infrastructure and productive inclusion of recyclable material collectors. These investments have resulted in:
  - ✓ growth in the number of municipalities that have already developed their solid waste plans - currently accounting for 33.5% of all municipalities, involving 37% of the population (MUNIC 2013);
  - ✓ the proper disposal of waste, implemented in 38% of municipalities, corresponding to 62% of the population; and
  - ✓ the support of 1,500 projects of recyclable material collectors, with a total of R$ 455 million invested in training and education, technical assistance and infrastructure.
- By August of 2014, 24 of the 27 Brazilian states had support for the development of state-level plans for solid waste, totaling R$ 28.5 million invested. These investments, together with training and education initiatives and public awareness campaigns, in addition to sectoral agreements, have resulted in progressive increases in the percentage of recycling in important areas of production such as aluminum (with a rate of almost 100%), paper and plastics;
- The CATAFORTE Program - Sustainable Business in Solidarity Networks, a part of the Pro-Catador Program project, which, in its third phase, launched in 2013, provides 170 million in grant resources and more than R$ 30 million in loan resources. The Notice of the CATAFORTE Program, released in 2014, provided funds of approximately R$ 20 million for the development of 24 Cooperation Networks of Solidarity Economic Projects of Recyclable Materials Collectors;
- The Cidade Pró-Catador (Pro-Recyclable Waste collector City) Award, launched in 2013, which aims to encourage, promote and give visibility to practices that contribute to the implementation of social and economic inclusion policies of recyclable waste collectors and, in particular, the implementation of selective waste collection, held two award grantings to recognize municipalities for practices that favor collector inclusion. In the first edition, launched in 2013, four winning initiatives were selected. In the 2014 edition, winning initiatives can present a joint project investment proposal to the city council and the cooperative or association of up to R$ 120 thousand for a total of 12 initiatives in four categories; and
- Creation of business associations such as the Business Coalition for Reverse Logistics Packaging, which set a goal to recover 20% of the 55,400 metric tons of recyclable solid waste that is discarded daily in Brazil by 2015.

PRIORITY 5 - SUSTAINABLE RETAIL

The retail sector represents 14% of GDP in Brazil, which is why the inclusion of sustainability practices in its operations plays an important role in promoting sustainable consumption. The retailers represent a great potential for contribution in the field of social responsibility, especially through direct contact with consumers and the community at large. The territorial network and the wide range of retail relations reinforce its vocation as an agent of social change.

Since 2011, with the adoption of the PPCS, the sector increased its initiatives and practices for: reduction in resource use and waste generation, especially those generated by the use of plastic bags; increasing the number of eco-efficient stores; increase in voluntary delivery points for packaging and waste; increasing the supply of sustainable products in four categories - food, utensils, clothing and cleaning and hygiene; and encouraging products with quality certifications and which include social and environmental criteria in their certification processes, among others.

- Several retail chains are collecting, storing and offering environmentally-friendly destinations for waste through recycling stations or eco-locations, which receive paper, plastic, packaging, metal, glass, batteries, cooking oil and printer cartridges. In just one of the chain's shops, they collect 70,000 liters of cooking oil annually, which is transformed into biodiesel, saving millions of liters of water from being polluted every month.
- The recycling stations from only one chain already have the ability to collect more than 1,000 metric tons of waste produced in the homes of its customers, which is sent to recycling cooperatives, promoting social inclusion and income generation. The stations collect cell phones, accessories, batteries and a wide range of used products, packaging and waste.
- The green boxes for collecting secondary packaging previously destined for the public garbage collection service have become a common sight, especially in supermarket chains. Strategically positioned just after the cash registers in order to collect the plastic or cardboard packaging of newly-purchased products by consumers who, in turn, do not want to take it home with them.
- The formation of retail agents to act on sustainability initiatives has already reached, in only one of the chains, more than 4,500 employees, with a replication capacity which, apart from reaching its employees, also helps to spread sustainable practices in the community involved.
- The GVcev Awards of the Center for Retail Excellence at the Getulio Vargas Foundation, through the recognition of green economy initiatives, retail social schools, tree planting programs, recycling and reduction of carbon emissions, among others, has helped disseminate good practices and promote its growth.
- Campaigns and reduction targets for the use of plastic bags were adopted before the launch of the Sustainable Production and Consumption Plan. The "Bags are a Pain" campaign alone, for example, resulted in the reduction in consumption of 5 billion plastic bags across the country over a period of two years. As part of the campaign, the MMA has distributed 200,000 eco-bags.
- Growth in the availability of products in refillable containers, mainly for cosmetics, beauty products and cleaning products has reduced plastic usage (by 70%) and CO2 emissions (by 60%).
- Sector pacts, agreements or voluntary actions in partnership with MMA:
  - ✓ ABIPLA (Brazilian Association of Cleaning and Related Industries): site of the Cleaning Conscious Movement program, with about a thousand hits per month, promoting the reduction of water and energy use, reducing greenhouse gas emissions, the reducing use of chemicals and containers, and greater ergonomics in the chain and for the consumer;

- ✓ Abre (Brazilian Packaging Association): inclusion of selective disposal symbols on 3,000 packages of products not registered as dangerous consumer goods, and about 2,000 which have not yet been registered. Coordination for the guidance of the selective disposal of packaging materials covered the sectors of food and drinks, cosmetics, utensils and appliances, among others.

- ✓ Other voluntary initiatives such as:

Sanofi Farma - minimizing the environmental impact of its promotional activities, promoting consumer awareness among doctors and consumers, promoting the manufacturing of more sustainable products, and publishing, in print and digital media, the Conscious Consumption Guide;

Packaging Institute - technical training for MMA agents, airlines, the National Industrial Apprenticeship Service (SENAI), the Brazilian Micro and Small Business Support Service (SEBRAE), and the National Industry Confederation (CNI) with the course "Packaging from A to V (*Aço ao Vidro*)- Steel to Glass" packaging materials and their disposal; elaboration of the contents of the first Sustainable Production Notebook on packaging, eco-design and waste disposal; and a film about the importance of eco-design in packaging and the correct choice of materials.

PRIORITY 6 - SUSTAINABLE CONSTRUCTION

In the construction sector, the objectives of the Plan advance following several approaches:

- Brazilian Program of Habitat Quality and Productivity - PBQP-H, which developed evaluative matrix systems in a partnership between the public and the private sectors:

  - ✓ System to Assess Compliance of Services and Works - SiAC, which has certified approximately 3,260 builders in all regions of Brazil;

  - ✓ System Qualification for Companies in the Area of Materials, Components and Building Systems - SiMaC, created to combat non-compliance materials, waste and low productivity, which aims to increase and maintenance the average percentage of product conformity to technical standards by 90%; with SiMaC and the implementation of Sector Quality Programs - PSQs, the percentage of non-compliance, which was 50% has been reduced to approximately 20%, and some sectors are already close to 100% compliance; and

  - ✓ National System for the Technical Evaluation of Innovative Products - SiNAT, which seeks to mobilize the technical community in construction to evaluate the performance of new products, stimulating technological innovation, an increase in the number of alternatives available and competitiveness, based on guidelines for safety, livability and sustainability. Since 2009, 10 SiNAT guidelines have been published and over 20 Technical Assessment Papers - DATec.

- The **Minha Casa Minha Vida** (*My Home My Life)* program, launched by the Federal Government in 2009, has also been conducted on the basis of sustainability guidelines. The program, among other practices, has encouraged extra funding for the installation of solar water heaters in public housing, seeking to provide an average savings of 35% in electricity consumption. By March 2014, the energy savings from these actions had already reached 1.3 million MWh/year.

- The **National Program for Energy Conservation** (Procel) in the part dedicated to Buildings, works with voluntary labeling and efficiency in public and commercial buildings. Only in 2013, Procel Build held 16 training courses; released the Hidrothermoenergy Simulation Software of Domus Eletrobras Buildings with three dedicated training courses; conducted technical assessment of public buildings; and published the 3rd edition of the book "Energy Efficiency in Architecture", among other actions.

- The **ProjetEEE**, coordinated by the MMA, a tool that aims to achieve savings of up to 4 million MWh of electricity over the next 20 years, provides an online tool that provides energy efficiency solutions, develops informative and educational materials about labeling, and studies about energy efficiency projects.
- The **Selo Casa Azul (Blue House Seal) of the Caixa Econômica Federal** is another initiative to promote sustainability in the construction sector, through the environmental classification of housing projects financed by the CAIXA, seeking to recognize projects of enterprises that adopt efficient solutions in construction, use, occupancy and maintenance of buildings, encouraging the rational use of natural resources and improving the quality of housing and its surroundings.
- Distribution of 100,000 copies of the **publication** "Sustainable Construction and Renovations", part of the **Sustainable Consumption Notebooks** series (MMA and BASF).
- **Studies** on state-of-the-art sustainable building, a partnership between the MMA, the Brazilian Council for Sustainable Construction (CBCS) and UNEP; and initiatives aimed at expanding the proper disposal and reuse of construction waste, particularly in the context of the publication and implementation of the National Policy on Solid Waste.
- **Certification and sustainable management** of sports arenas, particularly those made in connection with the hosting of the 2014 World Cup, which became examples not only in Brazil, but worldwide.

OTHER INITIATIVES

There were many contributions brought forward by voluntary initiatives and actions taken by government agencies, non-governmental organizations, international organizations, business groups and others to further the goals and objectives of the Plan for Sustainable Production and Consumption since its launch in 2011:

Sustainable Finance

- Issue of Resolution N°. 4,327 of April 25, 2014, of the Central Bank of Brazil, which provides the guidelines to be observed in the establishment and implementation of the Social and Environmental Responsibility Policy by financial institutions and other institutions authorized to operate by the Central Bank of Brazil.

Integrated Sustainability Reports

- Created in Rio+20, the Group of Friends of Paragraph 47, an initiative involving South Africa, Brazil, Denmark, France, Austria, Chile, Colombia, Norway and Switzerland to support the promotion of sustainable business reports. UNEP carries out the function of the group's secretariat and the *Global Reporting Initiative* (GRI) supports their activities.
- The creation of the inter-institutional work group, which is developing guidelines for companies and institutions in the preparation of their respective reports; and formulating a national strategy to stimulate the publication of reports.
- The Corporate Sustainability Index (ISE) of BM&FBOVESPA, with technical support of the Center for Sustainability Studies of the Getúlio Vargas Foundation (Gvcev), has encouraged the voluntary publication of sustainability reports or the like by companies that wish to have their shares traded on the ISE.
- The Brazilian Business Council for Sustainable Development (CEBDS), which brings together about 70 of the largest business groups in the country, was responsible for the first Brazilian Sustainability Report and has contributed to systematize and share the experiences of Brazilian companies on integrated sustainability reports.

Inova Sustainability Program

- The Inova Sustainability Program - a joint initiative of MMA, National Bank for Economic and Social Development (BNDES) and the Financier of Studies and Projects (Finep) - supports projects in the area of sustainable production; Recovery of Brazilian Biomes and Fosters Sustainable Forest-Based Production Activities; Environmental Sanitation (accounting for over 90% of demand); and the Monitoring of Natural Disasters. In Step 3 of the publication of the 2013 Inova Sustainability, Finep/MCTI received 196 requests from business plans, submitted by 136 leading companies, with an average value of R$ 25.7 million, totaling approximately R$ 5 billion.

Partnership with UNEP

Various actions, undertaken in order to implement the PPCS, were executed through the MMA/UNEP project "Resource Efficiency and Sustainable Consumption and Production", whose goal is to foster a vigorous and continuous process of expanding actions in Brazil aligned to the concept of Sustainable Consumption and Production (SCP), established by the Marrakech Process, in conjunction with national efforts addressing climate change, the fight against poverty, economic development and biodiversity and resources conservation such as:

- The publication of the study "What Brazilians think of the environment and sustainable consumption" in 2012;
- Promotion of Green Passport Campaign, during the 2014 World Cup, with the slogan "I take Care of My Destination"; and
- The undertaking of a study on state-of-the-art sustainable construction in Brazil, a partnership involving, in addition to MMA and UNEP, the Brazilian Council for Sustainable Construction (CBCS).

The 2014 Football World Cup

- The MMA was responsible, in conjunction with the Ministry of Sports, for coordinating the Sustainability Thematic Chamber for the 2014 World Cup, whose actions included: certification and sustainable management of arenas; the Green Passport Campaign - communication platform on sustainable consumption and production, interactive website, mobile app and strong presence in social media; and support for 12 host cities for inclusion of recyclable waste collector associations in the integrated management of solid waste in the World Cup events.

Mercosur

- The creation of the manuals "Good and Best Practices for Cleaner Manufacturing and Sustainable Management in Environmental Matters" - for sawmills and timber industries, sugar mills, electric and electronic waste, and textiles and clothing sectors - to be disseminated among small and medium companies and organizations in the region.

III. ACTION PLAN FOR SUSTAINABLE PRODUCTION AND CONSUMPTION

The Action Plan for Sustainable Production and Consumption (PPCS), launched in 2011, under the Ministry of Environment, is intended as a sort of road map, built with the greater society, to achieve the goals of sustainable development through sustainable production and consumption activities. The PPCS is coordinated and monitored by the government, but only comes to fruition with the active and committed participation of all interested parties.

MISSION

The mission of the PPCS is to promote policies, programs and sustainable consumption and production actions in the country aimed at broadening the solutions to socio-environmental problems, in accordance with national policies to eradicate poverty and promote sustainable development, and with the international commitments made by Brazil especially with the guidelines of the Marrakech Process.

Thus, it also contributes to changes in production and consumption patterns, leading to a low-carbon economy, to ensure the sustainability of human society in harmony with the planet.

PRINCIPLES

Given its wide-reaching scope, the principles of the Action Plan for Sustainable Production and Consumption - PPCS are compatible with those expressed in national structuring policies and international agreements of which Brazil is a signatory, focused on related topics, such as eradicating poverty, climate protection, solid waste management, water resource management, combating desertification and protecting biodiversity, among others. The Plan, therefore, is guided by the following principles:

- **Sustainable development**
- **Shared responsibility**
- **Government leadership by example**
- **Precaution**
- **Prevention**
- **Participation of civil society and transparency**
- **Cooperation**
- **Environmental education**

GUIDELINES

The actions under the PPCS seek, ideally, to incorporate (and benefit from) the reciprocal influence that exists between production and consumption, taking into account the physical and biological limits that nature imposes and ethical values that inform the culture of sustainability, seeking to:

- consider both the productive system itself, as well as the institutional and regulatory system that supports it: infrastructure, technology, economic and regulatory instruments;
- consider the impact of the PPCS on the labor market and the requirements of the definition of "green jobs" of ILO;
- include actions that have an impact on cultural and educational system aimed at changing behavior;
- promote the integration of SCP plans with other national programs and plans, such as, for instance, those focused on climate change, the reduction of poverty, energy issues and the use of water and soil;
- identify, encourage and explain the connections between the main national policies, programs and plans;
- identify existing actions in Brazil, which, given their characteristics, are likely to join and enrich the PPCS;
- identify synergies and convergences between the priorities and methods proposed at national and international levels in order to contribute to the international process and sustainability at the global level;

- involve Brazilian society in a wider way in the process, both through organizations already engaged in the Steering Committee and its work groups, and through other organizations and networks that can be identified and motivated to participate;
- observe the variety and diversity of different populations, regional cultures and social groups within the country; and
- take into account international agreements signed by Brazil, especially the Convention of Biodiversity and Climate, and others affecting directly or indirectly the priorities adopted by the PPCS.

OBJECTIVES

The **primary objective** of PPCS is to foster movements and actions, in the medium and long term, that change the current paradigm of production and consumption, contributing significantly to the sustainable development of Brazilian society.

The **general objectives** of the PPCS are:

1. Foster in Brazil a strong and continuous process to expand actions aligned with the concept of SCP, as established by the UN in the Marrakech Process, sharing with national and international partners the effort to also promote sustainability on a global scale;
2. Integrate the initiative of spreading the SCP to the effort to tackle climate change, as well as other priority fronts for Brazilian society, such as combating poverty, equitable distribution of the benefits of development and the conservation of biodiversity and other natural resources.

The **specific objective** of the Action Plan is to provide the basic guidelines and define the priorities for a set of appropriate actions, hinged together, that can accomplish significant and measurable changes in both consumption and production patterns, which can be recognized as more sustainable.

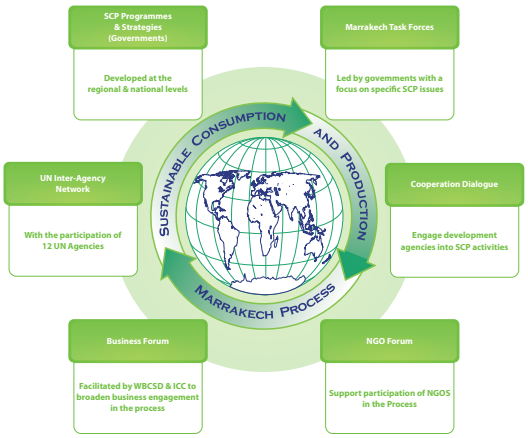
PROCESS

The Johannesburg Plan of Implementation (adopted at the World Summit on Sustainable Development, or Rio+10, in 2002) proposed the development of a set of programs, lasting ten years (*10-Year Framework Program*) that would support and strengthen regional and national initiatives to promote changes in consumption and production patterns.

In order to fulfill this mandate, the Marrakech Process was established under the coordination of the United Nations Environment Programme (UNEP) and the United Nations Department of Economic and Social Affairs (UNDESA), which also featured the essential participation of national governments, development agencies, the private sector, civil society and other participants.

Joining the Marrakech Process presupposed the development of activities that would lead to the creation of an Action Plan. To help in this endeavor, UNEP and its partners have created seven Task Forces[2], each in charge of a topic in the context of the "10-Year Framework of Programmes on SCP - 10YFP" (Johannesburg 2002) - the results of the first program were presented during the Nineteenth Commission on Sustainable Development (CSD 19) of the United Nations, held in New York in May of 2011 and although the proposal was approved by the members of the working group, the decision to make feasible the implementation of the program from 2012 was not taken.

The Task Forces (Marrakech Task Forces - MTF) were able to count on the participation of experts from developed and developing countries. These groups consisted of voluntary initiatives, coordinated by governments which, in cooperation with other countries, set out to undertake a number of activities at the national or regional level, reporting advances in relation to established objectives. The purpose of the Task Forces created was to bring together the most advanced SCP experiences world wide and to disseminate them, including methodological manuals.



Brazil formally joined the Marrakech Process in 2007, pledging to develop its Action Plan for Sustainable Production and Consumption (PPCS).

The first version of the PPCS was available on the UNEP website in May 2008. This version reflected the work done over a year, initiated under the Cleaner Production Steering Committee, which is now called the **Steering Committee of Sustainable Production and Consumption** as of February of that year (MMA Ordinance N°. 44 of 13/02/2008). The preparation of the Plan involved a wide and diverse group of organizations from Brazilian society, both governmental and non-governmental organizations, under the coordination of Ministry of Environment (MMA) in partnership with UNEP. The first version included the definition of key concepts, background and scope, as well as the description of the structures with which they rely on and the definition of a set of 17 priorities, designating those responsible for implementing them.

With a view to contributing to the Climate Summit in Copenhagen, the MMA started that same year to work on the elaboration of the National Plan on Climate Change (PNMC)[3], launched in December. Given the connection between the topics it was decided, after consulting with the Steering Committee, to review the PPCS to make it

[2] Task Forces: 1.Cooperation with Africa (led by Germany); 2. Sustainable Products (UK); 3.Sustainable Lifestyles (Sweden); 4.Sustainable Public Procurement (Switzerland); 5.Sustainable Tourism (France); 6.Sustainable buildings (Finland); 7.Education for Sustainable Consumption (Italy).

[3] We have used the original Brazilian acronyms for important institutions and projects in Brazil, although the names have been translated. For example, the Ministry of Environment is abbreviated as "MME", the Brazilian acronym for Ministerio do Meio Ambiente. By the same token, the Plan for Sustainable Production and Consumption is abbreviated as "PPCS", following the original Português text. Similarly, we have maintained the original names of important Brazilian projects and initiatives such as the Minha Casa Minha Vida national housing project. The reason for this is to make further research easier using search engines like google, where entering the original names in searches will provide more information.

compatible with the Plan for the climate, identifying synergies and confluence points in order to allow the actions provided for in both plans to combine results to achieve the same or similar goals.

Between 2009 and 2010, a review of the Action Plan for Sustainable Production and Consumption was undertaken by the technical team of the Ministry of Environment, the Steering Committee for Sustainable Production and Consumption, and partners. In the same period, an International Technical Cooperation Project with the United Nations Environment Program (UNEP) was developed to support studies, consultancies and the development of methodological manuals necessary for the implementation process of the Plan.

Between September and November 2010, the Plan was made available for general public consultation on the MMA website. The final document incorporated the contributions of this process, as well as updates from the period between December 2010 and September 2011.

The final document of the UN Conference on Sustainable Development (Rio+20), held in Rio de Janeiro in 2012, called The Future We Want, reaffirmed that the promotion of sustainable modes of production and consumption, among others, is an essential objective and indispensable requirement for sustainable development. In the document, the United Nations also adopted the Ten-Year Framework of Programmes on Sustainable Consumption and Production (10YFP on SCP, its acronym in English), a set of voluntary initiatives of the United Nations.

Timeline of sustainable consumption

1981	Creation of the law establishing the National Environmental Policy.
1987	The Brazilian Institute of Consumer Defense (IDEC) is created.
1988	Federal Constitution - directly relevant Articles: 170 and 225.
	The Consumer Protection Committee of OAB / SP is established.
1990	Enactment of the Consumer Protection Code.
1992	United Nations Conference on Environment and Development (ECO-92) in Rio de Janeiro, provides the basis of Agenda 21, which proposes "changes in consumption patterns."
1993	Creation of the Brazilian Program of Labeling - PBE and Procel Energy Economy Seal - INMETRO, in order to guide the consumer when purchasing, indicating products with the best energy efficiency levels within each category and stimulating manufacturing and the marketing of more efficient products.
1995	The UN Commission on Sustainable Development documents the concept of sustainable consumption, "the use of services and products that meet the basic needs of the entire population and improve the quality of life, while reducing the use of natural resources and toxic materials, waste production and pollution emissions throughout the life cycle without compromising the needs of future generations."

1998	The State of São Paulo leads the way with the adoption of standards that incorporate environmental, social or ethical principles in purchases promoted by the government, with Decree N°. 42,836/98, with wording amended by Decree N°. 48,092/03, which provides for the imposition of the acquisition of vehicles running on ethanol for the fleet of cars of the state's special group.
1999	Establishment of the Environmental Agenda in Public Administration - A3P.
2003	State Decree - São Paulo N°. 48,138/2003, which provides for the obligation to adopt measures to reduce consumption and water rationalization within the direct and indirect public administration.
2005	Establishment of the "Best Practices in A3P" Award.
2007	Brazil adheres to the Marrakech Process.
2008	Sectoral agreements signed on soy, cattle and timber.
	The first green store in Brazil is inaugurated in the city of Indaiatuba, São Paulo.
	First campaign of the Ministry of Environment focused on conscious consumption, named "Conscious Consumption of Packaging: the choice is yours, the planet is ours."
2009	The Ministry of Environment establishes October 15th as the National Conscious Consumer Day.
	The Law establishing the National Climate Change Policy is approved.
2010	The campaign "Bags are a pain" for MMA in partnership with the Brazilian Association of Supermarkets (ABRAS) is launched.
	The National Policy on Solid Waste is instituted, after twenty years in the National Congress.
	IN N°. 1/2010, which is concerned with the environmental sustainability criteria in the procurement of goods, services or public works by the public administration.
2011	The Month of Sustainable Consumption, in October, is created.
	The Action Plan for Sustainable Production and Consumption is launched in its first cycle.

2012	Creation of the Inter-ministerial Commission on Sustainability in Public Administration - CISAP by Decree N°. 7.746/2012.
	IN N°. 10/2012 outlying the rules for the establishment of sustainable logistics management plans.
	Institution by the Inter-Ministerial Decree N°. 244/2012, Sustainable Esplanada Project - PES, whose purpose is to integrate actions aimed at improving efficiency in the rational use of public resources and the inclusion of the socio-environmental variable in the workplace.
	IN Publication N°. 2/2014-SLTI/MPOG, which provides rules for the purchase or leasing of machines and energy-consuming appliances and the use of the National Label of Energy Conservation (ENCE) in federal public buildings.

LEGAL AND INSTITUCIONAL FRAMEWORK

In Brazil, the environmental laws on the national scale began with the creation, within the federal executive branch, of the Special Secretariat of Environment (SEMA)[4]. Later, Law N°. 6938 of August 31, 1981, established the National Environmental Policy to ensure the development of the country and guarantee the preservation of natural resources.

In 1988, the constituent assembly approved the new Federal Constitution, whose chapter on the environment is considered to be one of the most modern in the area of international constitutionalism; in its article 225, which guarantees the right to an ecologically balanced environment for present and future generations.

Environmental protection is also guaranteed by Article 170 of the Constitution, concerning the economic order: "based on the value of human work and on free enterprise," to "ensure to all a dignified existence, as social justice dictates", including through consumer rights, as item V and environmental protection, as section VI.

Other Brazilian laws have been pioneers in regulating the protection of natural resources and the actions of economic agents in order to encourage a change in patterns of production and consumption. This is the case of Law N°. 4,771, of September 15, 1965, which established the Forest Code. In May 2012, Law N°. 12,651 established the new Brazilian Forest Code, which provides for the protection of native vegetation in the country.

Law N°. 9,433, of January 8, 1997, establishes the National Water Resources Policy, recognizing water as a natural resource with an economic value; Law N°. 9,605, of February 12, 1998 provides for criminal and administrative sanctions for conduct and activities harmful to the environment[5], regulated by Decree N°. 3179 of 1999 and Law N°. 9795 of April 27, 1999 establishing the National Environmental Education Policy.

Directly related to current standards of the economic system, Law N°. 12.187, of December 29, 2009, establishes the National Policy on Climate Change (PNMC) and takes as one of its guidelines the encouragement and support for the maintenance and promotion of sustainable patterns of production and consumption (art. 5, XII, 'b').

Regulated by Decree N°. 7.390, of December 9, 2010, the PNMC includes the goal of reducing emissions of greenhouse gases (GHG) from 36.1% to 38.9%, a contributing factor for the development of more sustainable production systems and consumer goods. Some states also have set up their own local policies, with actions to mitigate and adapt such as: Amazonas - State Law Nº. 3,135/2007; Goiás - State Law 14,497/2009; São Paulo - State

[4] SEMA was established by Decree N°. 73.030 of 30 October 1973, by the Ministry of Interior. This decree was amended by Decree N°. 99.604 of October 13, 1990, which made SEMA the direct assistance agency of the President. Currently, after historical changes, Decree N°. 6101 of April 26, 2007 is in force, which articulates the powers of the Ministry of the Environment.

[5] Environmental crimes law, available at http://www.mma.gov.br/port/gab/asin/lei.html.

Law 13,798/2009; Santa Catarina - State Law 14,829/2009; Pernambuco - State Law 14,090/2010; Espírito Santo - State Law Nº. 9,531/2010; and Rio de Janeiro - State Law Nº. 5,690/2010.

Similarly, Law N°. 12.305, of August 2, 2010, which established the National Policy on Solid Waste (PNRS), seeks to encourage the adoption of sustainable patterns of production and consumption and encourage the recycling industry. The PNRS was regulated by Decree Nº. 7404, of December 23, 2010, which, among its highlights, created the Inter-ministerial Committee of the National Policy on Solid Waste and the Guidelines Committee for the Implementation of Reverse Logistics Systems.

Other laws, decrees and resolutions also encourage proper waste management in the country, such as Law Nº. 11.445/2007 regulated by Decree Nº. 7.217/2010; Law Nº. 7.802/1989, regulated by Decree Nº. 4074/2005; Decree Nº. 5.940/2006; CONAMA Resolution Nº. 416/2009; CONAMA Resolution Nº. 362/2005; CONAMA Resolution Nº. 307/2002 and CONAMA Resolution Nº. 257/99.

Finally, we should emphasize Decree Nº. 5,940, of October 25, 2006, aligned with PNRS, which determines the selective collection of waste from the Federal Public Administration and its destination to associations and cooperatives of recyclable waste collectors. We should also mention the Normative Instruction SLTI/MP N°. 1 of 19 January, 2010, which defines environmental sustainability criteria in the procurement of goods and contracting of services and works in the federal public sphere, and the Normative Instruction SLTI/MP Nº. 10, of 12 November, 2012 which establishes rules for the creation of Sustainable Logistics Management Plans.

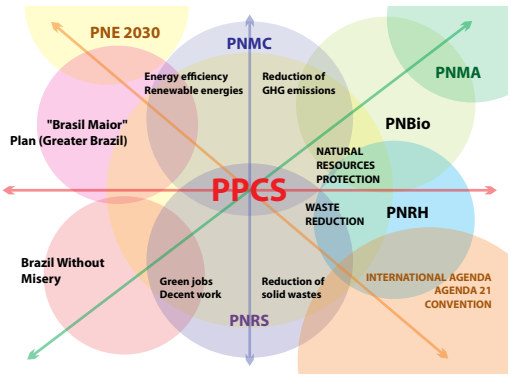
The command and control mechanisms mentioned above have in common the fact that they orient economic agents and Brazilian society towards sustainable development and constitute the legal framework for the PPCS.

CONNECTIONS AND SYNERGIES

In order to meet one of the main objectives of the Plan, which is to internalize the issue of sustainable production and consumption in government policies, connections and synergies were identified in the PPCS with the structural policies and other national plans of the Federal Government. This effort affords effective solutions, avoiding duplication of actions and transmitting to society the idea of integration and interconnectivity of public policies.

While they have not always been explicit in the first PPCS cycle, relations with other policies, such as the Biodiversity Policy and the National Water Resources Policy, are internalized in the priorities and actions of the PPCS itself. Internationally, the Convention to Combat Desertification and the Montreal Protocol are examples of legal and institutional frameworks that also guide actions of the PPCS.

The plans *Brasil Sem Miséria* (Brazil Without Poverty) and *Brazil Maior* (Greater Brazil), the National Plan on Climate Change and the National Policy on Solid Waste established goals and guidelines that were incorporated into the PPCS. It is about the construction of concurrent and integrated efforts against extreme poverty, and by encouraging the pursuit of greater productive efficiency of the economy, coping with the consequences of global climate change and the search for solutions for the management of various types of waste generated in line with the search for production processes and more sustainable consumption habits. In the figure below, one can see the axes of the PPCS articulated with other policies through common actions and objectives. These policies also have synergies and connections between them.



NATIONAL STEERING COMMITTEE OF THE PPCS

Created by MMA Ordinance N°. 44/08, the National Steering Committee of the SCP was reinstituted by MMA Ordinance N°. 437/2014. The Committee brings together the following institutions:

I. Ministry of the Environment (MMA) - coordinator
II. Ministry of Finance (MF)
III. Ministry of Agriculture (MAPA)
IV. Ministry of Mines and Energy (MME)
V. Ministry of Development, Industry and Foreign Trade (MDIC)
VI. Ministry of Planning, Budget and Management (MPOG)
VII. Ministry of Science, Technology and Innovation (MCTI)
VIII. Ministry of Transports (MT)
IX. Ministry of Agrarian Development (MDA)
X. Ministry of Cities
XI. Central Bank (BACEN)
XII. National Bank for Economic and Social Development (BNDES)
XIII. National Institute of Metrology (Inmetro)
XIV. United Nations Environment Program (UNEP)
XV. Brazilian Business Council for Sustainable Development (CEBDS)
XVI. National Confederation of Industry (CNI)
XVII. National Industrial Apprenticeship Service (SENAI)
XVIII. Support Service for Micro and Small Enterprises (SEBRAE)
XIX. Trade Union Confederation involved in environmental management activities, cleaner production and sustainable development, represented by the Worker's Central – CUT
XX. Getúlio Vargas Foundation – FGV
XXI. Akatu Institute
XXII. National Confederation of Commerce – CNC
XXIII. Brazilian Institute of Consumer Defense – IDEC
XXIV. Business Commitment for Recycling – CEMPRE
XXV. Brazilian Association of Life Cycle – ABCV
XXVI. Brazilian Independent Auditors Institute - IBRACON

The role of the Steering Committee is to monitor, direct and promote development activities and implementation of the PPCS and its priorities, creating the conditions for an effective paradigm shift in production and consumption processes. To achieve its objectives, the Committee may invite other institutions to collaborate with them.

In the institutional context, it is important to note the creation of, in the Ministry of Environment, a dedicated sector to coordinate and foster targeted actions and initiatives for sustainable production and consumption, demonstrating just how important this ideal is for the MMA and the federal government as a whole. In addition to studies, research and campaigns, the Department of Sustainable Production and Consumption held events such as the "First International Workshop on Sustainable Public Procurement" in 2012 and "A Full and Dignified Life for All: The Challenge of Sustainable Production and Consumption"in 2013; prepared and published the MMA Sustainable Logistics Plan; and promoted distance education courses dealing with issues pertaining to the Action Plan on Sustainable Production and Consumption, among many other actions.

PPCS PRIORITIES

Throughout the preparation process of its earlier versions, the Steering Committee identified a set of 17 priority areas that form the structure of the PPCS:

- **Education for sustainable consumption -** To design and put into practice instruments such as surveys, case studies, guides and manuals campaigns and other tools to sensitize and mobilize the individual/consumer, aimed at changing behavior of the general population;
- **Sustainable Public Procurement -** To encourage the adoption of sustainable public procurement within the public administration, in the three spheres and levels of government, encouraging the industrial sector and companies to expand their portfolio of sustainable products and services, and encouraging, through this dynamic, the expansion of activities compatible with the green economy or low-carbon emissions;
- **Environmental Agenda in Public Administration / A3P -** To consolidate A3P as a reference framework of socio-environmental responsibility in government;
- **Increased recycling of solid waste -** To encourage recycling in the country, by both the consumer and by the manufacturing sector, promoting actions consistent with the principles of shared responsibility of waste generators and reverse logistics, as set out in National Solid Waste Policy (PNRS). In this regard, it should also encourage social inclusion within the recycling industry (insertion of recyclable waste collectors);
- **Retail and sustainable consumption -** To discuss the perception of the retail industry concerning the integration of sustainability practices into their operations and their role in promoting sustainable consumption through actions consistent with the premises and objectives of the PPCS;
- **Promoting initiatives in sustainable construction -** To encourage civil construction and infrastructure, such as roads, ports and others, to adopt practices that improve their socio-environmental performance, from design to the final construction, through careful selection of materials and lower-impact alternatives to the environment and human health;
- **Policy Integration in SCP -** To integrate the PPCS to other production and consumption policies in the area of economic development and act in international cooperation with the SCP Plan, Mercosur and the Marrakech Process;
- **Strengthening of national coordination in SCP -** To organize initiatives to optimize resources and efforts to promote and implement joint actions of SCP on a national level;
- **Innovation and diffusion of technology in SCP - T**o promote the management of knowledge in sustainable production and consumption, with actions aimed at developing innovative design of services and solutions that consider the variables of eco-efficiency and other areas, such as nanotechnology or "dematerialization", of the economy - as a competitive and strategic advantage for Brazilian companies;
- **Development of SCP indicators -** To generate information that support the development of public policies focused on sustainable production and consumption, mobilizing information producing institutions, such as the Brazilian Institute of Geography and Statistics (IBGE) and IPEA (government level), and centers of excellence in federal and state public universities and private universities;

- **Dissemination and training in SCP** - To disseminate concepts and relevant knowledge and information related to the idea of SCP within the productive sector, governments and civil society;
- **Sustainable agriculture and livestock raising-** To encourage the protection of biodiversity and the reduction of deforestation/emission of greenhouse gases (GHG) by expanding the possibilities that value standing forests, and encourage the adoption of farming practices aimed at reducing environmental impacts and deforestation;
- **Promoting sustainable production and consumption -** To promote initiatives so that public spending and the banking system commit themselves increasingly to sustainability criteria, when offering credit and financing, as well as the purchase of goods and services, thereby contributing to encourage correction, mitigation, and also a growing sustainable business market;
- **Decreased social and environmental impact in the generation and use of energy - T**o encourage the adoption of energy-saving practices by consumers (individuals and companies), providing access to more efficient options, and promote the improvement and the application of technologies for energy generation and the use of renewable energy;
- **Labeling and life-cycle assessment** - To consolidate environmental labeling as a tool for the development of new patterns of sustainable consumption and production, through the mobilization of market forces, increase the number of Brazilian experts in environmental labeling, increase the number of products with life-cycle analysis (LCA), so that it is not just a media label, but something to guide the responsible consumption;
- **Labeling for sustainable expansion of biofuels -** To ensure that the expansion in the production and use of biofuels is done sustainably, giving consumers the ability to make informed choices;
- **Encouraging the creation and expansion of businesses/markets with social inclusion and lower environmental impact** - To disseminate the concept "markets/inclusive businesses" - new models and business practices that promote social inclusion; create and disseminate innovative products and processes accessible to low-income populations; provide the needy population access to income through business opportunities, employment, consumer goods and services, in order to improve their quality of life; stimulate the productive sector to adopt social inclusion (generating products, employment and including it in its supply chain), contributing to the social development of low-income populations; and encourage the consumption of products that promote social inclusion.

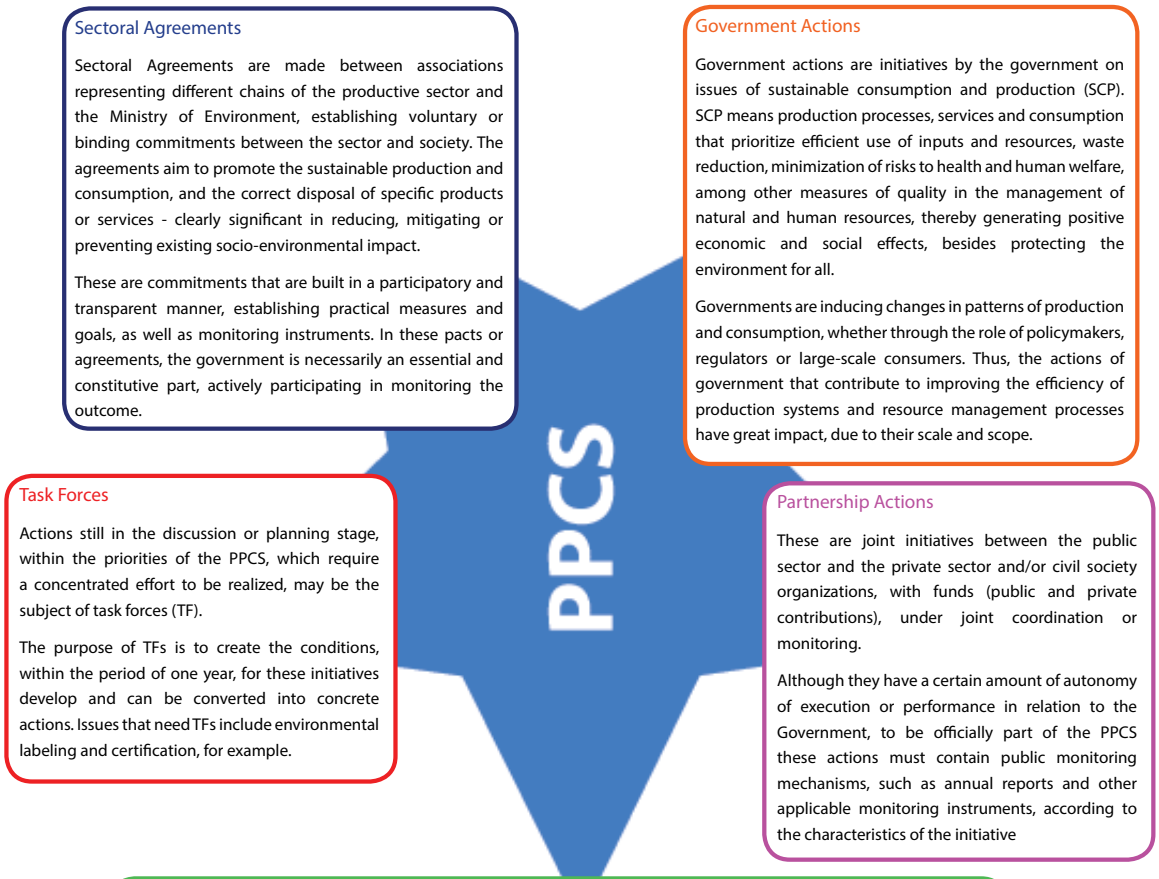
The implementation strategy of the Plan for Sustainable Production and Consumption was structured to operate in four-year cycles, redefining the priorities according to the evolution of eco-efficiency standards of the Brazilian economy and new commitments to the country's global duties. In the first cycle - 2011-2014 - six priority areas were selected:

- Education for sustainable consumption
- Sustainable procurement
- Environmental Agenda for Public Administration - A3P
- Increased solid waste recycling
- Sustainable retail and consumption
- Promotion of sustainable construction initiativesl

The selection of these priority areas did not imply the exclusion of other areas of interest and expertise. The expectation was that, during the first cycle, the early actions would mature, adding content to the PPCS according to the demand of society itself.

In addition, it sought to first address the role of the consumer of all kinds, individuals or institutions involved in the production chain. The reason for this approach was based on the fact that the consumer's role as a political agent has been neglected by public policies. In addition to rights, it is also necessary to share responsibilities and duties, assigning actions to the relevant actors who consume natural resources, both in the consumption of goods and services as well as the production process.

The Plan lists Sectoral Agreements, Government Actions, Voluntary Initiatives, Partnership Actions and Task Forces. These are the instruments to implement this new development model proposed by the PPCS, covering public and private actions, individually or in partnerships.



Sectoral Agreements

Sectoral Agreements are made between associations representing different chains of the productive sector and the Ministry of Environment, establishing voluntary or binding commitments between the sector and society. The agreements aim to promote the sustainable production and consumption, and the correct disposal of specific products or services - clearly significant in reducing, mitigating or preventing existing socio-environmental impact.

These are commitments that are built in a participatory and transparent manner, establishing practical measures and goals, as well as monitoring instruments. In these pacts or agreements, the government is necessarily an essential and constitutive part, actively participating in monitoring the outcome.

Government Actions

Government actions are initiatives by the government on issues of sustainable consumption and production (SCP). SCP means production processes, services and consumption that prioritize efficient use of inputs and resources, waste reduction, minimization of risks to health and human welfare, among other measures of quality in the management of natural and human resources, thereby generating positive economic and social effects, besides protecting the environment for all.

Governments are inducing changes in patterns of production and consumption, whether through the role of policymakers, regulators or large-scale consumers. Thus, the actions of government that contribute to improving the efficiency of production systems and resource management processes have great impact, due to their scale and scope.

Task Forces

Actions still in the discussion or planning stage, within the priorities of the PPCS, which require a concentrated effort to be realized, may be the subject of task forces (TF).

The purpose of TFs is to create the conditions, within the period of one year, for these initiatives develop and can be converted into concrete actions. Issues that need TFs include environmental labeling and certification, for example.

Partnership Actions

These are joint initiatives between the public sector and the private sector and/or civil society organizations, with funds (public and private contributions), under joint coordination or monitoring.

Although they have a certain amount of autonomy of execution or performance in relation to the Government, to be officially part of the PPCS these actions must contain public monitoring mechanisms, such as annual reports and other applicable monitoring instruments, according to the characteristics of the initiative

Voluntary Initiatives

These are initiatives undertaken by the private sector or civil society organizations, without the help of government funds, underway or planned for the period of the first PPCS cycle (2011-2014), that promote direct contributions to meet the priorities of the Plan. These can be actions of companies that are developed individually, in a group or sector, represented in this case by a business association or civil society entity.

To be officially part of the Plan, the initiative should observe transparency criteria, which include annual reports and monitored goals - by agents external to the company or organization. The initiatives must be innovative and inspiring, promoting, through their exemplariness, changes in consumption and production patterns in the country.

The Voluntary Initiatives should represent a step forward towards greater sustainability in processes and products and consumption and post-consumption of these processes and products..

Implementation mechanisms of the PPCS

The PPCS has mechanisms and tools incorporated into the implementation strategy:

Steering Committee of Sustainable Production and Consumption (CGPCS):

established by MMA Decree N°. 44/2008, as the highest deliberative body for the development and implementation of the PPCS, is comprised of MMA, MCTI, MDIC, MME, MCidades, MF, BNDES, CEBDS, CNI, SENAI, SEBRAE, ABIPTI, CUT, FGV, Akatu Institute (Ethos Inst.), CNC, IDEC and CEMPRE.

Annual Forum of the PPCS:

with the goal of fostering the exchange of experiences and to showcase successful experiences as well as to discuss the bottle-necks in the implementation of the Plan.

Sectorial Dialogues:

round tables with the participation of the MMA and the private sector, from both the retail sector and the productive sector. It is also expected, for 1st cycle, to establish ad hoc Working Groups for specific topics.

Public Consultation:

held between September 21 and November 30 of 2010, after the approval of the Plan by the Steering Committee, with the compilation of the contributions received.

Agreement with UNEP:

technical cooperation agreement to support the implementation of the Plan, in the period from 2011 to 2014, through studies and manuals, training, the establishing of partnerships, exchanges and technical cooperation, among others.

Portal and networks / communication and electronic information:

use of electronic platforms for communication and information on the progress in implementing the PPCS: Sustainable Consumption Portal; Information Network on Sustainable Production and Consumption for Latin America and the Caribbean - RedPyCS, with the establishment of a Brazilian base.

GOALS OF THE FIRST CYCLE OF IMPLEMENTATION

The synthesis of the PPCS goal is to significantly increase the number of production agents engaging in eco-efficiency and the supplying of more sustainable products; and an increasingly larger number of Brazilian institutions and citizens who practice sustainable consumption, with verifiable results (quantitative and qualitative).

Macro-goal of the PPCS for 2014, 1st cycle:

INCREASE BY 100% THE NUMBER OF CONSCIOUS CONSUMERS IN BRAZIL, BASED ON THE 2010 SURVEY

PRIORITIES AND MACRO-GOALS		
Priority	**Macro-goal**	**Deadline**
1. Education for sustainable consumption	Increasing the number of conscious consumers in C class by at least 50%	2014
2. Sustainable procurement	Complete 20 bidding processes with sustainability criteria in the federal administration	2014
3. Environmental Agenda in Public Administration - A3P	Establish socio-environmental responsibility as a permanent strategy in every organ of Direct Federal Public Administration	2014
4. Increased waste recycling	To increase recycling in the country by 20% in 2015 and by 25% by 2020	2015 and 2020
5. Sustainable retail	1. Encourage 50% of the supermarket sector to incorporate PCS practices 2. Encourage PCS practices in another 2 retail segments	2014
6. Sustainable construction	Increase the environmental performance of works by 20%, using a sustainability index defined by indicators of water consumption, energy, generation of waste and responsible purchasing	2020 (partial goals starting in 2012)

To achieve the PPCS objectives of the priority topics selected for the first cycle, the MMA established goals together with partners involved with members of the Steering Committee of Sustainable Production and Consumption and government agencies. Some of the goals of the Federal Government agencies adopted by the PPCS are listed in the Multi-Year Administrative Plan - PPA for the period 2012-2015, which reflects the commitment of the Federal Government to these results, many of which funded with the public budget.

IV. IMPLEMENTATION REPORT 2011 - 2014

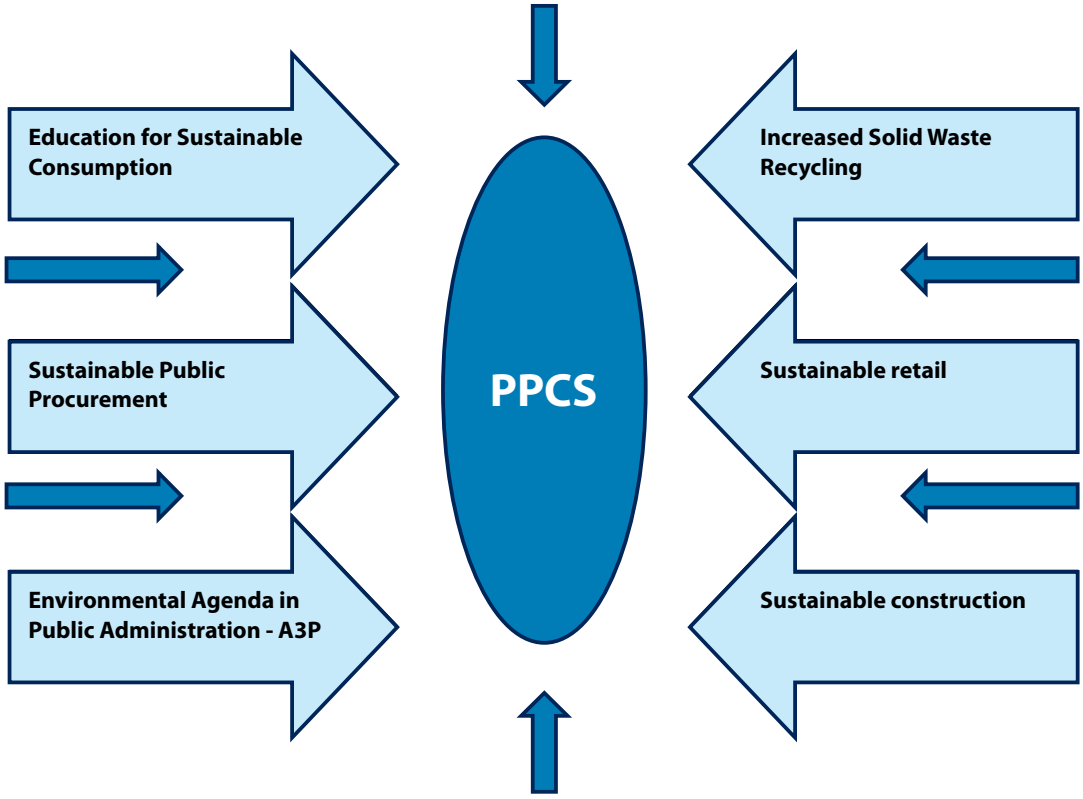
The implementation of the Action Plan for Sustainable Production and Consumption - PPCS was structured in a four-year cycle, defining and, when necessary, updating its priorities according to the evolution of eco-efficiency standards of the Brazilian economy and the country's new engagement with global commitments.

The strategy used in the first cycle of implementation of the Action Plan for Sustainable Production and Consumption – PPCS was based initially on the encouragement of voluntary adherence to the Plan, by institutions in both the public and private sectors, and by leading by example, through the adoption of measures aimed at promoting changes in consumption and production patterns in the country, in order to strengthen sustainable development.

With this greater goal, the actions were primarily focused on measures related to consumption, with the support of strategic partners. In addition, ways to identify and strengthen existing initiatives and good practices were sought, both within the government as well as those implemented by the private sector, which contributed to the objectives of the Plan. Thus, the initiatives developed over this cycle contributed to the achievement of the targets set in all the priorities, not just those prioritized in the first implementation cycle.

Various initiatives and actions developed outside the context of the Plan, such as energy efficiency programs, programs for collection and disposal of empty pesticide containers and Sustainable Esplanade Project, among others, contributed with their goals.

Even during the first implementation cycle of the PPCS, ways to identify elements that could be considered in the implementation of the remaining cycles were sought, with a view to improving and strengthening the Plan.



EDUCATION FOR SUSTAINABLE CONSUMPTION

In 2002, the United Nations Educational, Scientific and Cultural Organization - UNESCO launched the "Decade of Education for Sustainable Development", covering the period from 2005 to 2014. The objective of the initiative was to promote cooperation programs, with the collaboration of its partners, including Brazil, that could increase the role of the education sector in sustainability issues and contribute decisively to changes in mentality and behavior. When we consider the role of education in cultural change that the ideal of a sustainable society requires, one must take into account that there is not only objective consumption, geared only to meet basic human needs. There is also subjective consumption, related to emotional and psychological factors, associated with the mental model of each person, constructed throughout his or her life, in the family and in society. Lifestyles, sometimes more than income level, determine consumption styles, more or less receptive to the positive values of individual and collective responsibility.

> Environmental education is understood as the processes through which the individuals and the community develop social values, knowledge, attitudes and skills geared to the conservation of the environment, a common good, essential for life and its sustainability

Sustainable consumption education is becoming a viable path, not only as a way to aggregate a number of technical skills and concepts to be disseminated, but also as a means to propose and contribute to new public policies that can regulate - with voluntary or compulsory mechanisms - the "excesses" of purely individual interests, devoid of positive ethical values, as in the case of misleading advertisements or those that promote preconceived ideas or the excessive consumption of goods and services.

It is for this reason that education necessarily has a key role in the Plan for Sustainable Production and Consumption, whether through the instruments established by the National Environmental Education Policy, or through the use of new tools, such as digital ones and what is termed *educommunication*.

The main objective pursued in the priority of Education for Sustainable Consumption is to design and implement instruments, such as training and capacity-building initiatives, research, case studies, guides and manuals, campaigns and other tools, to sensitize and mobilize the individual/consumer, with an aim to effect changes in behavior among the general population, using the latest and most innovative tools and information technology, communication and learning.

EDUCATION AND TRAINING PROCESSES

Training and capacity-building actions have been implemented with a target audience of not only public managers, but society in general, with reference to the principles and guidelines established by the National Environmental Education Policy (Law N°. 9.795/1999), especially through the Department of Environmental Education SAIC - DEA.

In this context, the Ministry of Environment created the Virtual Learning Environment platform - AVA (ava.

mma.gov.br), for distance education, a new learning environment that offers tools which facilitate the development of formative processes through distance education, with greater interactivity.

In 2014, the **courses** "Sustainable Lifestyle" and "Children and Sustainable Consumption" were launched, with a forecast of 2,000 openings, which added up to 11,624 attendees in the end. Even with a significant number of attendees who didn't finish the course, 1,364 students completed the course "Children and Sustainable Consumption". The "Sustainable Lifestyle" course ended with a total of 1,600 attendees. The total amount of attendees was 50% higher than what was originally predicted. Other courses were also carried out at the 4th National Conference on Environment, on the topic of Solid Waste, the Environmental Agenda in Public Administration - A3P, and on Gender and Sustainability.

The **Program for Environmental Education and Family Farming - PEAAF**, to encourage more sustainable and fairer production practices in the field, as well as environmental regularization of rural properties, contributed significantly to the promotion of sustainable development in the rural segment made up of family farmers. The PEAAF considers family and peasant farming more conducive to sustainable agricultural production, with practices which have potentially less impact on the environment and natural resources. Moreover, it can promote sustainable consumption in urban centers, since about 70% of food comes from this segment of production, according to the Ministry of Agrarian Development.

The PEAAF has trained thousands of farmers, managers and leaders in this segment. Even before its formal creation (MMA Ordinance N°. 169/2012), the PEAAF promoted formative processes in 11 states, with the training of more than 600 people through state and regional workshops and seminars, such as Good Environmental Education Practices in Family Agriculture. Currently, 3 training initiatives are already training thousands of new teachers. The course Training of Popular Agents in Environmental Education and Family Agriculture is being developed by the AVA platform, through semi-presential attendance, in partnership with 16 government and non-governmental institutions across the country, reaching approximately 1,700 students. The same course is being promoted by the National Fund for the Environment - FNMA, with about R$13 million, in partnership with 11 other institutions, which should train another 1,650 farmers, with emphasis on rural youth. The PEAAF Implementation course is intended for extension workers, managers and rural leaders, with more than thousand people signed up. Trained public: 4,950.

The **EducaRES** platform, part of the National Strategy on Solid Waste Environmental Education and Social Communication, is another initiative that supports education to gather and disseminate experience and knowledge developed by government institutions, the business sector and civil society, especially recyclable waste collectors' associations. To this end, there is an open public tender, launched by the MMA, with the aim of increasing the number of knowledge-generating experiences on the EducaRES platform (educares.mma.gov.br), so those that contribute effectively to education in conscious consumption and the environmentally sound disposal of solid waste will be officially sanctioned. In parallel, the MMA's Department of Environmental Education is hiring consultants to develop, in conjunction with recyclable waste collectors, a semi-presential course, which will be directed at strengthening this segment, under the National Policy on Solid Waste. By September of 2014, the EducaRES platform had been accessed by more than 700 users.

Sustainable Schools

A government initiative that helped to support the promotion of sustainability for children was the regulation of MEC, which recently released the manual for sustainable schools, which is to support the implementation of CD/FNDE Resolution N°. 18 of May 21 2013, which directs financial resources, under the operating guidelines of the Direct Money in School Program - MEC (PDDE), to municipal, state and district public schools that have students enrolled in basic education, according to data extracted from the School Census immediately prior to the transfer, in order to encourage improvements in the quality of education and the promotion of socio-environmental sustainability in schools.

Sustainable schools are defined as those which maintain a balanced relationship with the environment and offset their impacts, with the development of appropriate technologies, so as to ensure quality of life for present and future generations. These spaces are intended to educate by example and spread their influence to the communities in which they are located. The transition to sustainability in schools is promoted through three interrelated dimensions: physical space, management and curriculum.

The PDDE Sustainable Schools, operating under the guidelines established by the National Fund for Education Development (FNDE), consist of financial transfers, through the transfer of funding and capital resources, to promote actions to improve the quality of education and encourage the public schools of the district, municipal and state systems to adopt social and environmental sustainability criteria, considering the curriculum, management and physical space, in order to turn them into sustainable education spaces.

The 4th **National Children's Conference for the Environment** (4th CNIJMA) held in 2013, addressed the theme "Let's Take Care of Brazil with Sustainable Schools" as an educational "pretext" involving teachers, students, staff and the communities around the schools. Adding the conference phase in schools – where projects were developed based on the Sustainable School topics (buildings, waste, school curriculum, democratic management etc.) - and the conferences at municipal, regional, state and national levels, the 4th edition of CNIJMA mobilized approximately 9 million people across the country, involving 17,457 schools. The MMA and MEC coordinate this unique conference dedicated to children.

Let's take care of Brazil with sustainable schools

Prior to the 4th Conference, 500,000 Turma da Mônica magazines - Special Edition Rio + 20 - were distributed, on the topic of waste and sustainability, along with booklets on Consumerism among Children, to 72,500 elementary schools.

INFORMATION AND COMMUNICATION PROCESSES

In the information and communication initiatives, the most modern tools were used in the organization and dissemination of information as well as communication targeted to raise public awareness. Among these initiatives, we should mention the site and special edition of the magazine called **Revista COLECIONA** on the subject of the PEAAF, directed to thousands of educators, and which received more than 13,500 hits since its launch and September of 2014. The National Environmental Education Policy (PNEA) and the PEAAF were recognized by the National Plan for Agro-ecology and Organic Production - PLANAPO, integrating axis 1 - Use and Conservation of Natural Resources, and 3 - Knowledge.

"Coleciona" folder for environmental educators

The spaces of the **Green Rooms** project, with 358 spaces distributed across the country which are a socio-environmental reference, received kits with publications on sustainable consumption, as well as publications from the MMA and its related bodies, with reference to its priority agendas, reaching an estimated audience of 36,000 people.

Edu-communication is also part of this effort on education for sustainable consumption, including actions and teaching methods using media and technology as resources for the educational process and mobilization of people. In the context of the **Green Screen Circuit – CTV** project, an MMA initiative in partnership with the Ministry of Culture - MinC which aims to stimulate independent audiovisual production on socio-environmental themes, videos were developed by local communities and governmental and non-governmental institutions which were part of the 5th CTV, and which were selected and distributed in 2014 for showing and debates in 1,365 exhibition spaces in Brazil, reaching an estimated audience of 15,000 viewers.

The "Green Screen" Circuit

Awareness and Mobilization Campaigns

There are various campaigns promoted by the Ministry of Environment and partners who are part of the awareness and mobilization strategy for Sustainable Production and Consumption, including: Consumer packaging Awareness; **Saco é um Saco** (Bag is a Drag); **Vamos Tirar o Planeta do Sufoco** (Let's Save the Planet); Separate Trash and Hit the Can; and October - Sustainable Consumption Month.

The **Consumer Packaging Awareness** campaign seeks to lead consumers to think of the environment when they are shopping and assess whether the packages that they are taking home with the products are really needed or made from environmentally-friendly materials - recycled material, made from renewable resources, easy to recycle or to able to be reused.

The campaign endeavors to foster awareness that consuming packaging in a responsible way means consciously avoiding buying "superpackaged" products and, where possible, to give preference to non-packaged goods (such as, for example, fresh food). It means taking a napkin from a napkin holder rather than accepting one that comes inside a plastic bag. It means avoiding too much packaging, such as a "box-within-a-little-bag-within-a-larger-bag-within-a-big-bag" that generates a huge amount of waste. It means using a returnable bag to reduce consumption of plastic bags and asking the packers at the cash to use the full capacity of the bag - and require that merchants provide reusable, resistant bags, within the technical quality specifications.

It also means to buy products in packages sized for one's family - for example, if the family is big, the drinks should be purchased in larger containers; if it is small, one should avoid large containers, and consequently, waste. It means knowing that there are several products that come concentrated, in just one package, containing the

equivalent of many of the product's normal packages. It means not buying disposable bottles of soft drinks and other drinks when there is an option to buy them in returnable bottles. It means giving preference to products that offer the refill option – so as to help save natural resources in the manufacturing of new packaging.

The generation of waste grows with the increase in consumption, and the greater the amount of consumption, the greater the amount of packaging produced. The conscious consumption of packaging takes into account that all the packaging that comes with a purchase has an impact on the environment - whether in its manufacturing or its disposal. Consumers should look for packaging that is scaled to its intended use, which avoids wasting the product, can be resealed to preserve the contents after its opening, and the inclusion of adequate information on the product and its proper consumption.

The **Saco é um Saco** (Bag is a Drag) campaign sought to draw attention to the enormous environmental impact of plastic bags and suggest other paths to conscious consumption. It endeavored to educate the consumer that plastic bags are, in actual fact, produced from oil or natural gas, two types of non-renewable natural resources, and that the impact of plastic bags starts

with the consumption of plastic bags by the billions around the world and, since they are disposable, the demand for these natural resources only increases.

Once extracted, the oil goes through refining in the plastics production process, consuming water and energy and, on top of that, emits greenhouse gases and effluents. Plastic is a highly durable material and, consequently, plastic bags can last up to 400 years in the environment. In addition, plastic bags pollute cities, forests and oceans, and become reservoirs for rainwater and a nursery for mosquitoes, clog sewers and storm drains and kill animals. The campaign sought to show that plastic bags are not the villain of the environment, but excessive consumption of them is a major environmental problem.

The campaign gave tips on how to avoid these impacts by, for example, taking purchases home in reusable bags or cardboard boxes, which many stores now offer to their customers.

After three years of building consumer awareness on the negative environmental impacts of over-consumption of plastic bags, the MMA launched the second phase of the **Saco é um Saco** (Bag is a Drag) campaign, talking about reusable alternatives to plastic bags. In partnership with ABRAS and APAS (Brazilian and Paulista Association of Supermarkets), the MMA launched, at the national level, the **Vamos Tirar o Planeta do Sufoco** (Let's Save the Planet) campaign.

"Let's Save the Planet" Campaign

"Use reusable bags"

The campaign talked about the alternatives to disposable bags: reusable packaging - all reusable packaging, containers, bags or boxes can be used several times if it is made of durable material, such as cloth or durable plastic bags, cardboard boxes, plastic crates, hand trolleys for carrying goods etc.

The **Vamos Tirar o Planeta do Sufoco** (Let's Save the Planet) campaign began in São Paulo, and then it was taken to the other states of the country, to mobilize citizens and local businessmen. More than 100 municipalities in São Paulo joined the campaign, which reached 75% of the state's population. The great benefit of the campaign was preparing communities for reducing the supply of plastic bags, either through the internal policies of supermarket chains or by dictate of law.

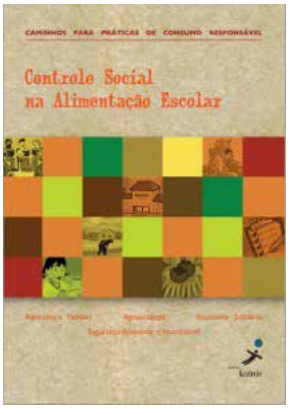
The Ministry of Environment, in partnership with the Ministry of Social Development and Hunger Alleviation, started a national campaign to raise the awareness of the Brazilian population about the value of waste, how to separate it properly to generate income and employment and how it is possible to use it to conserve natural resources.

With the message *Separe o Lixo e Acerte na Lata* (Separate Trash and Hit the Can), the first stage of the campaign had advertisements with trash as the main character and all that it can offer: from fertilizer to energy - in case of organic waste –, and even synthetic wood and textiles - from recycling plastic bottles and cartons.

The **booklets** in the series "Pathways to responsible consumption practices" are part of the Sustainable Consumption in Rural Areas project, an MDA partnership with the Kaikós Institute, which present consumption practices that promote the alliance between producers, retailers and consumers in a responsible and fair manner. The initiative intends to, on the one hand, facilitate consumer access to products and services of family farming, agro-ecological and solidarity economy at a fair price, at the same time seeking to build an outlet for these products, fairer remuneration and better working conditions.

Organizing Responsible Consumption Groups

Comsumers and Producers Partnerships for Organizing Marjets



Social Control of School Meals

In the sixth year of the **Hora do Planeta** (Earth Hour) movement (2014), promoted by the WWF-Brazil in March, the Akatu Institute, a non-governmental organization (NGO) that works in the area of conscious consumption, also joined the movement, mobilizing more than 700 schools all over the country, participating in Edukatu - Learning Network for Conscious Consumption, to participate in the movement. Mainly dedicated to fighting global warming and climate change, the movement also inspires people to change their daily consumption habits in order to reduce the negative impact on natural resources, among other things. The NGO also participates in the conscious consumption effort with communication and awareness **campaigns**.

10 Tips for Conscientious Consumption

1) Only buy what you really need
2) Fix things that are still usable
3) Verify the origins of products you buy
4) Buy new electronics only if necessary
5) Consume more organic food and from local producers
6) Choose more energy-efficient products
7) Trade or donate items you no longer use
8) Avoid waste, like paper, at home and at work
9) Recycle as much as possible, from electronics to day-to-day trash
10) Encourage others to follow your example and help save the planet

ConsciousConsumer'sDay

Another interesting media instrument for sustainable consumption was launched in October of 2014 by the Akatu Institute in partnership with the Ministry of the Environment: The new **Conscious Consumption Test** platform[6], designed to assess people's consumer awareness profile. After taking the test, consisting of 55 multiple-choice questions, the system indicates which conscious consumer category the person is in: indifferent, beginner, engaged or aware. The test was adapted to the virtual world, enabling the registration and the sharing of results in social networks. Another highlight is the greater user interaction with the results offered.

Consumer Awareness Day and Month

On October 15 of 2008, *Consumers International*, the worldwide organization of consumer rights protection associations, conducted a campaign on Sustainable Consumption called *Consumer's Action Day*. Entities such as Brazil's Protest and IDEC mobilized their networks, prepared informational materials and sent protests to the government, reinforcing the importance of this issue for our future.

Even before the Plan for Sustainable Consumption and Production was put into action, the Ministry of Environment, involved with the issue, launched the **Conscious Consumer Day** on October 15 of 2009 to publicize a movement that has been growing worldwide through their media campaigns to raise awareness and to educate society.

In 2010, the Ministry of Environment (MMA) asked consumers: "Where is your eco-bag?". The goal was to stimulate consumers to take their reusable bags out with them and avoid plastic bags that harm the environment, clog

[6] http://tcc.akatu.org.br/

sewers and storm drains, cause flooding, pollute seas and kill sea turtles. The campaign suggested that, in order to be a conscientious consumer, you should not just have one of these nice reusable bags as an ornament at home, but use it!

Large companies also supported the challenge and the campaign. Unilever, for example, donated a thousand reusable bags, which were distributed by the "Ecobag Man" on October 15 at the MMA booth, which was set up at the 29th Book Fair of Brasilia, in the Exhibition Hall of the City Park. Anyone who strolled through the Fair, received ribbons (similar to the *Senhor do Bonfim* ones) donated by Carrefour, with personalized messages to remind Brazilians to take their eco-bags when out shopping. In total, two thousand ribbons were distributed at the Book Fair. The idea was, while tying the little ribbon and making three Conscious Consumer wishes, one should visualize a world free of plastic bags, beaches and streets without garbage and a cleaner future for all. Another two thousand ribbons donated by the supermarket chain were distributed by the Secretary of Environment of Rio de Janeiro to people passing through Cinelândia or the Praça XV square in downtown Rio.

In 2011, the MMA inaugurated the **Sustainable Consumption Month**, with activities to mobilize and raise awareness among consumers and different sectors of society. Three new campaigns were launched during this period, such as the electronic equipment collection campaign, which was held in subway stations in Brasília, Rio de Janeiro, São Paulo and Belo Horizonte. Between the 12th and 26th of October, collection points were established in places chosen for the intense movement of passengers. Consumers were encouraged to bring their old or unused equipment such as TVs, home appliances, monitors, computer cables, telephones, cell phones, CDs, DVDs, VHS tapes and the like.

In this campaign, the MMA had as partners Phillips, Carrefour and two collection and recycling companies, Descarte Certo and Oxil, which did the collection, sorting and proper disposal for recycling. This was a way to prepare consumers for the reverse logistics process provided for in the National Solid Waste Policy. The strategy was to generate consumer awareness not to dispose of electronics in the regular trash, as this practice has a high environmental impact, since the products have chemical and toxic components. Furthermore, improper disposal is wasteful of materials that can be recycled, such as plastic, glass and metals.

The Akatu Institute supported the celebration with a fun proposal: holding picnics in parks and squares across Brazil, giving tips for a conscientious picnic: i) opt for non-disposable cups and plates, ii) take cloth napkins, iii) place the sweets and juice in reusable containers, iv) go to the picnic using public transportation, v) take a bag for disposing of organic waste and vi) if there is any garbage that can be recycled, save it until you find an appropriate recycling bin for it.

Cam*paign: "October 2011 – Sustainable Consumption Month: Your consumption habits affect the quality of life of all of us. Participate in the movement, change your attitude and be an example!"*

In 2012, the importance of reducing water waste was emphasized. On the MMA site, **Tips for the conscientious consumption of water** were made available, prepared by the Akatu Institute: i) Eliminate leaks - a 2 mm hole in a water pipe wastes up to 3.2 thousand liters per day, or 96,000 liters per month - which is enough drinking water for four people for 33 years; ii) Don't let leaky faucets drip: one drop per second wastes an average of 46 liters of water. In one year that's 16,500 liters of water; iii) Save water in the shower: shorten your bath time or turn off the tap while soaping up. On average, 160 liters of water are used every 10 minutes; iv) Brush your teeth with the tap closed. Every two minutes of a running tap represents 13liters of water; v) Choose toilets with a coupled water tank as opposed to a wall valve and differentiated flushing which use less water; vi) Install faucets with automatic sensors (for commercial buildings); vii) Use a broom to

clean the driveway and other paved areas; and viii) Use basins or use the sink plug when washing the dishes. 15 minutes of washing the dishes with the water running uses up to 240 liters of water.

In 2013, the MMA celebrated the date by giving tips on conscientious consumption, encouraging reflection at the moment of the purchase and its disposal, given that informed citizens make more sustainable choices. Also with this concern in mind, the MMA produced the EAD course on Sustainable Lifestyle and Children and Consumption.

Child consumerism

According to the Brazilian Institute of Geography and Statistics (IBGE), children from 0-14 years represent more than 45 million Brazilians, or almost a quarter of the total population. This significant portion of the population is increasingly being seen as a consumer and the subject of actions that encourage consumption. One example is that the country is the second largest consumer of children's products for children of 0-10 years of age, according to the Euromonitor research institute.

However, children and adolescents should be seen not only as victims of a system that promotes consumerism, but also as important actors for the viability of the changes needed. Starting from the premise that children and youth also have a transformative potential and that they can develop critical thinking, the state, parents and civil society should together look out for them.

Through education, access to information and encouraging debate at home - especially following the parents' example - children can start learning early on to have sustainable behaviors and to not fall into the traps of consumerism.

Some of the main problems faced today in relation to child consumption are:

- ✓ Children are the target of publicity hype which encourages consumerism: Brazilians are among those who watch the most television in the world. The average of more than 5 hours a day helps to encourage consumerism, physical inactivity and energy consumption;
- ✓ Exaggerated access to new technologies: the child consumer is within reach of the influence of the virtual world. Through smartphones, notebooks and other media, the child is exposed to and experiencing a reality much closer to that of an adult;
- ✓ Inappropriate diet and excessive eating: childhood obesity has already reached 15% of the Brazilian child population. According to IBGE data, the percentage of overweight children has doubled in the last 34 years and is closely related to increased consumption of processed foods, widely publicized by the producer and distributor market; and
- ✓ False happiness reference: children are growing up with the same idea that adults generally have about personal satisfaction. The phrases "I want it, I have it", "I'll buy it" are considered synonymous with contentment.

To address this reality, the Ministry of Environment developed strategies and actions to combat these problems. In partnership with the Alana Institute, it launched the Consumer Notebook "Children and Consumerism: running contrary to sustainability".

The booklet, launched in 2012, gives tips and addresses the issue in a clear and illustrative way for parents, teachers and educators. 80 thousand copies have been distributed throughout Brazil.

Some tips offered in the publication are:

- ✓ Encourage questions: Do I want it or do I need it?
- ✓ Organize or participate in solidarity exchange groups. The families of the neighborhood can regularly make a day for trading toys and clothes;
- ✓ Organize the donation of all that is no longer used or won't be traded;
- ✓ Reduce time spent in front of the TV and encourage playing in the street or in parks. Board games are another lost tradition. How about reviving it?
- ✓ Want to try a new recipe? Children can help in the kitchen by washing fruits and vegetables and lettuce leaves. Contact with these foods can stimulate an appetite for healthier foods;
- ✓ Prepare the child's lunchbox with fruit, natural juices and sandwiches made at home; and
- ✓ Watch and expose children to video documentaries on sustainable consumption.

Campaign: "Children and Consumerism: Running Contrary to Sustainability"

A Different Children's Day – The Exchange Flea Market Campaign

The Ministry of Environment and Secretariats of the Child and Education of the Government of the Federal District (GDF) participated in a movement for a different Children's Day. They held the Exchange Flea Market to stimulate trading instead of purchasing. The Flea Market took place in the Municipal Park of Brasília, on Children's Day in 2013, and its main purpose was to stimulate collaborative consumption practices among children. This campaign was originally launched by the Alana Institute in 2012 and more than 50 flea markets were held in all regions of Brazil. In 2013, in partnership with the Alana Institute, the MMA repeated the invitation.

In addition to promoting a fun activity, the exchange flea markets give children a chance to socialize among peers. Much more than just swapping toys that are not as interesting as they once were, the experience is enriching by giving new meanings to old objects and affirm that relations need not be guided by purchasing.

In this sense, this activity is an opportunity to teach children the pleasure of the exchange: trading what is hidden away in the back of a drawer and is no longer used in exchange for something new that someone else has. It is a transaction where money has no importance. The exchanges take place through barter and dialogue, promoting the skills of persuasion and negotiation among children. This is a practice that allows one to address various issues such as solidarity, consumerism, re-use and sustainable lifestyles.

Campaign: "Toy Exchange Flea Market- How about celebrating Children's Day in a different way? Instead of giving the little ones new toys, we invite families to participate in the exchange flea market! It's easy: Children can bring toys that no longer interest them, but could be a novelty for another child." "Trading is more fun than buying new!"

Children and Consumption - EAD

In 2013, seeking to expand the access of various groups to the education and training developed by the MMA, eight courses were launched through the Virtual Learning Environment platform (AVA). Among them was the course on Children and Consumption which addresses the idea of qualifying and reducing children's consumption. The 20-hour course reached an audience of 5,089 registered users.

The aim of the course was to work on the parents' knowledge in order to transmit more sustainable values to their children, discouraging the idea of *buying for buying's sake* and encouraging the practice of playing and games, healthier habits and more sustainable attitudes. The specific objectives were: i) consolidate the values of sustainability; ii) raise consumer awareness; iii) warn of the impacts of consumerism; and iv) encourage sustainable consumption.

Separated into seven chapters and using a fun approach, with pictures and audiovisual content, the course offered the general public the tools for involvement in the proposed changes in paradigms and cultural behavior. The strategy used by the MMA and its partners, at present, is to seek to articulate and enhance the institutional capacity for education and training, expanding the social base of environmental policy in the country.

"Every day, I look for ways to work on the idea of a sustainable environment with my students, and through the course I realized that we always have something to learn and teach. The course opened new horizons in my classroom and in my life to work on this important subject. Thank you for the opportunity and I hope to take other courses on this subject." EAD course student

Some initiatives have also been promoted with a view to strengthening the legal framework aimed at limiting children's advertising. Since 2001, currently in the House of Representatives, Bill N°. 5.921/01 addresses this issue. The discussion is, however, controversial. Advertising and business people in the industry are against the bill and argue that the National Council for Advertising (Conar) is self-regulated. At the same time, civil society organizations argue that the state has the obligation to provide a regulatory framework.

Indeed Conar has some regulations aimed at establishing less offensive advertising for children. However, it is a private entity and does not have the force of law necessary for those rules to be enforced. In 2012, a small step was taken by Conar, which might signal progress on this front. The council banned merchandising in children's television programs, but whether the ban will be obeyed or not remains to be seen.

Meanwhile, other related bills proceed through Brazilian Congress, including:

- PL 4815/09: prohibiting the selling of toys or gifts with snacks or fast food
- PL 1637/07: establishing rules for the advertising of foods high in sugar, salt and fat, as well as beverages with low nutritional value, such as soft drinks

In addition, the National Consumer Secretariat, of the Ministry of Justice, has been monitoring the impacts of child advertising. They commissioned a technical study on international standards and regulations on the subject in order to bring successful examples into the debate.

The Federal Constitution of 1988 dedicates article 227 to the child and the adolescent: "It is the duty of the family, society and the State to ensure children and adolescents, with absolute priority, the right to life, to health, to food, education, leisure, professional training, culture, dignity, respect, freedom and family and community life, and to keep them safe from all forms of negligence, discrimination, exploitation, violence, cruelty and oppression."

Another important development was the establishment of the Statute of Children (ECA) in 1990 which, although it does not clearly mention the issue of advertising, reinforces the priority that children and adolescents have, and recognizes their unique condition as people in development, which must be respected.

However, the Consumer Defense Code (CDC), also from 1990, clearly states that advertising that takes advantage of children's poor judgment is unacceptable, and that also goes for any advertising that induces children to behave in a manner detrimental to their health. The Consumer Defense Code, CDC, in Article 37, paragraph 2, finds abusive *"discriminatory advertising of any nature, that incites violence, exploits fear or superstition, takes advantage of children's lack of judgment and experience, disrespects environmental values, or is capable of inducing the consumer to behave in a harmful or dangerous way to their health or safety."*

Resolution N°. 163 of the National Council for the Rights of Children and Adolescents – Conanda, published on April 4 of 2014, reiterates the unacceptability of advertising directed at children as outlined in the Consumer Defense Code and addresses the issue of marketing communication in the school environment as well.

Studies and Research

Studies were conducted to support and qualify information and thus strengthen the implementation of the priority areas of the Plan for Sustainable Production and Consumption. Among these are:

Sustainable consumption - Scientific Research Notebook vol.3 - Ministry of Justice

The Ministry of Justice, under the National Consumer Secretariat, through the National Consumer Defense School, published the third volume of the Scientific Investigations Notebook collection, which deals with the theme of Sustainable Consumption. The publication is the result of studies by various experts who discussed the impact of consumption on contemporary society and the importance of sustainability in public policy on consumer defense.

The Scientific Research notebook reflects the new era of the National Policy on Consumer Affairs, in which consumer protection is transformed into state policy in conjunction with various public agencies and policies concerned with development and environmental protection.

According to the 1998 Human Development Report of the United Nations Development Programme (UNDP), the cost of private and public consumption doubled from 1975 to 1998, reaching 24 trillion dollars. The number also represents six times more than that of 1950. The study shows that the twenty-first century development model continues to move in the same direction. This is the result of population growth, marketing focused on consumer society and the lack of policies to educate consumers, showing how individual purchasing decisions have an effect on the global stage.

The Scientific Notebook addresses four central pivotal points: "From the world of consumption to sustainable consumption"; "Axes of inclusive and sustainable development"; "Consumer protection and sustainable consumption" and the "National solid waste policy from the perspective of consumer protection."

Research constituted some of the main tools of the PPCS, focused on the area of environment, sustainable development and consumption, with the goal of providing relevant data to better understand the Brazilian reality with regard to knowledge and behavior.

Sustainability Here and Now

The study "Sustainability Here and Now" was commissioned by the Ministry of Environment (MMA) and Walmart Brazil and was conducted by Synovate, surveying 1,100 people in 11 capitals: Belém (PA), Belo Horizonte (MG), Brasilia (DF), Curitiba (PR), Fortaleza (CE), Goiânia (GO), Porto Alegre (RS), Recife (PE), Rio de Janeiro (RJ), Salvador (BA) and São Paulo (SP).

Research shows that the Brazilian population has a growing perception that caring for the environment is mandatory and that there is no other solution for the planet's future other than adopting attitudes to preserve its natural resources: 59% of respondents believe that the environment should take priority over economic growth. However, acting on these principles by taking individual action is not yet in the conscience of people, especially if these actions involve costs.

The research aimed to find out if the awareness-raising actions–such as the "Saco é um Saco" (*Bag is a Drag*) campaign to reduce plastic bags, for example - actually reach ordinary citizens. The study revealed that the majority of the population (60%) is sympathetic to the idea of banning plastic bags, but 21% would not know how to dispose of household waste in a world without plastic bags.

As a result of the findings, it is important to mention the main aspects of the research. Respondents understand "the environment" as a very broad concept and related to issues more closely linked to their daily lives, such as garbage collection, recycling or sanitation. 40% of respondents believe that "street cleaning" is the main environmental problem in their cities or neighborhoods. In second place was "green areas" with 9% of respondents. 61% think the environment is the responsibility of public bodies (municipality and government) and 18% responded that the environment is the individual's responsibility. 82% of respondents, in turn, are willing to participate in petitions to address environmental issues, but not to act directly in solving problems.

The survey also made a direct relationship with the issue of waste and highlighted some alarming facts: over 70% of respondents throw batteries in the trash; 66% throw medicines in the household trash; 33% throw paints and solvents in the household trash; 39% discard used cooking oil in the kitchen sink and 17% have electronic "junk" at home. It also called attention to the role that supermarkets can play in consumer awareness, with collection stations for recyclable material, information on product sustainability to facilitate the choice when buying and stocking healthier items on their shelves.

Another interesting fact is that Brazilians are counting on the next generation to shape a more active society in favor of the environment. 63% say that the school is the most appropriate place to build environmental awareness, followed by communities (58%) and churches (43%). The data shows that by assigning children and schools the responsibility for forming a new environmentally responsible society, Brazilians demonstrate a possible omission, or lack of ability or willingness to make the necessary changes themselves.

When asked what could bring them more happiness, between the options of money, time or career, the sample was divided into two distinct groups with surprisingly similar percentages. 56% prefer to bet on having more money and improving their career to make them happy, and 44% prefer more time with family and defend values such as "faith in humanity."

As a general conclusion, the study showed that the population has a significant concern for issues such as environment, health and quality of life. However, there is little willingness to make changes if those changes involve work or costs. That is to say, there is still a reasonable distance between intention and action, although there is a fertile breeding ground for environmental education programs and campaigns that make the environment a concern in everyday life.

What Brazilians think about the Environment and Sustainable Consumption

The survey "What Brazilians think about the Environment and Sustainable Consumption", 2012 edition, said that Brazilians are more aware of the importance of the environment.

The survey was conducted with the technical cooperation of the United Nations Environment Programme (UNEP), which surveyed 2,200 people from urban and rural areas in all regions of the country. The report revealed that the environment is sixth on the Brazilian list of concerns, behind health and hospitals, with 81%; violence and crime, with 65%; unemployment, with 34%; education, with 32% and politicians, with 23%. Six years ago, the environment appeared in 12thplace, ahead only of agrarian reform and foreign debt. In 1992, the year of the first survey, the issue was not even mentioned.

The survey revealed that over two decades, the youngest and eldest people are the least aware of the environmental reality, but awareness has increased. 20 years ago, almost 40% of respondents between 16 and 24 did not have opinions about environmental problems, as well as more than 60% of Brazilians 51 years old or more. In 2012, the proportion fell to 6% among the young and 16.5% among older people.

The main environmental problem cited by Brazilians has been, since the first survey, the cutting of forests, which in 2012 registered 67%. Other major problems are the pollution of rivers and lakes (47%), air pollution (36%), increased volume of waste (28%), wasting water (10%), the ozone layer (9%) and climate change (6%).

Other problems were also cited in the survey such as the extinction of animals and plants; lack of sanitation; pollution by fertilizers; the excessive consumption of plastic bags; and the lack of environmental awareness of the population.

The issue of garbage, for example, was one of the problems that most won positions in the ranking of environmental challenges by Brazilians. The disposal, selection, collection and other processes involving waste, which concerned only 4% of people interviewed in 1992, had reached 28% of people interviewed in 2012.

The survey revealed, however, that the natural beauty of the country is the main source of pride for Brazilians. Approximately 28% of people said that the Brazilian environment is a source of pride, ahead of economic development, with 22%; characteristics of the population, with 20%; pacifism, with 13%; culture, 6% and quality of life, 1%.

Other studies in the area are worth mentioning because they guide the implementation of PPCS priorities and the creation of sustainability policies:

AKATU Research 2012: Towards a Healthy Society

In 2012 the Akatu Institute launched the study Towards a Healthy Society - Assimilation and Perspectives of Conscious Consumption in Brazil & Perception of Corporate Social Responsibility by Brazilian consumers, and provided a window on the moment of transition of the current civilization and consumption models.

The publication of the study also broke new ground by including data on the subjective relationship between consumption and happiness. The results showed, among other things, that Brazilians associate their happiness much more with their physical and emotional well-being and social life than financial aspects and ownership of assets.

National Conference on the Environment

The 4thNational Conference on the Environment (IV CNMA) in 2013 was the largest environmental conference ever organized and played a key role in expanding the discussion and awareness of sustainable production and consumption by choosing the theme Solid Waste and the implementation of the National Solid Waste Policy, focusing on four cardinal themes: Sustainable Production and Consumption; Reducing environmental impacts; Generating employment and income; and Environmental Education.

The 4thNational Conference on the Environment mobilized over 200,000 people across the country, representing 65.61% of Brazilian municipalities, distributed across all 26 states and the Federal District, and 1,352 delegates only in national stage.643 municipal and 179 regional conferences were held in the preparatory stages of the Conference, followed by state and district conferences, in which the 1,352 delegates were elected for the national stage.

The IV CNMA theme was "Solid Waste" and marked the beginning of a strong institutional joint effort, involving federal, state and municipal governments, the productive sector and civil society in the search for solutions and strategies that contribute to the implementation of the National Solid Waste Policy, approved in 2010, after 21 years of debate in Congress.

The conference proceedings introduced three novelties: the Free Conferences, the Virtual Conference and thematic panels. There were 224 Free Conferences, which gathered 25,000 people in 26 states. 3,000 people participated in the Virtual Conference. The innovation of the thematic panels favored the dynamic of the Conference and helped organize the discussions on the most relevant topics on the National Solid Waste Policy - such as reverse logistics; eradication of landfills; and the role of recyclable waste collectors in the management of solid waste - to reach a total of 60 resolutions, 15 per thematic area.

Another important innovation of the 4thConference was the establishment in 2014 of the Committee for Monitoring Deliberations of the IV CNMA, composed of representatives of government, civil society organizations and the business sector to continue the participatory process implemented in the Conferences, as well to monitor and contribute to the implementation of approved resolutions.

SUSTAINABLE PUBLIC PROCUREMENT

Worldwide, government administrative structures are responsible for a large portion of the activity in the economy of their countries. Normally the government is the main consumer of the national economy. European governments spend approximately 16% of GDP each year on goods and services and public spending in Latin American countries is around 24%.In Brazil, the share of consumption by public administrations was 21.5% of GDP in 2012, according to IBGE. Considering just the purchases of standardized products by the federal government, in 2013 these alone amounted to R$ 68.4 billion in the acquisition of goods and services, according to the Ministry of Planning, Budget and Management.

Variation in Public Procurement

Source: IBGE/FGV 2014

Given the scale of these operations, government purchasing power has been increasingly used as a public policy instrument with the productive sector, especially to change the standard of production, combining innovation and sustainability. The objective is for the productive sector to adopt environmental and social considerations in their production and supply processes, induced by demands for sustainability criteria, introduced in public procurement notices.

Since 2002, the issue has received a lot of attention on a global level. At the World Summit on Sustainable Development in Johannesburg, South Africa, an implementation plan was prepared urging authorities to take sustainable development into account in their decision-making. In this sense, the text explains the importance of bids "... encompassing actions to promote public procurement policies that encourage the development and diffusion of environmentally sound goods and services".

In Brazil, the practice has been adopted for at least seven years in state initiatives and, in the federal government, since 2010. Aside from the Federal Government, two other members of the Federation should be highlighted: the states of São Paulo (State Decree. 50.170/2005) and Minas Gerais (State Decree N°. 44.903/2008 and Decree N°. 46.105/2012). Both states systematically use the power of government purchasing as a public policy instrument aimed at the expansion of sustainability practices in the Brazilian productive sector.

The priority of this issue in the PPCS reflects a determination of the Federal Government taken in 2010 with the creation of the Program for Sustainable Procurement of the Ministry of Planning, Budget and Management (MPOG), and the inclusion in the federal legislation of bids, with Law 8.666/93 concerning environmental sustainability criteria for purchases and contracts conducted by the Federal Public Administration.

The establishment of a specific legal basis was crucial to the expansion of sustainable contracts, as is clear from the first section. The Federal Government has learned, however, that it is not enough to just set standards of responsible conduct for the public sector and, by induction, for the private sector. Experience shows that the government must take a leadership position and, at the same time, give examples of more efficient socio-environmental management, able to induce major changes towards sustainability in the productive sector. This is why the efforts in training and performance of the A3P program have been indispensable in the promotion of sustainable procurement policy, described in the second section and one of the chapters of this report. Finally, it is important to report the results of the operational strategy adopted alongside initiatives to introduce sustainability guidelines in sectoral policies. This is recorded in the third and fourth sections.

It is a fact that advances in sustainable public procurement policy have always depended on the creation of relevant legislation. Measures are needed aimed at expanding the legal support for public managers, responsible for contracts, to take the initiative to undertake them with sustainability requirements. Although the relevant legal basis was favorable for this, starting with articles present in the Federal Constitution[7],sustainable public procurement policy had to dedicate itself in recent years to building a legal framework at the federal level, and in the states that have this policy, in jurisprudence, through the Judgments of the Accounts Courts.

The Federal Constitution of 1988 establishes environmental protection as a principle of economic and financial order, including by differential means, depending on the environmental impact of products and services – Item VI of article 170.However the possibility of the inclusion of sustainability criteria in public procurement has only become feasible under Law Nº 12.349 of 2010, which gave new wording to art. 3 of Law Nº 8.666/1993, defining Sustainable Bidding as one that is intended to ensure compliance with the constitutional principle of equality, the selection of the most advantageous tender for the administration and the promotion of sustainable national development. The move prompted the Federal Government to take the first step in its sustainable procurement policy by creating Normative Instruction 01/2010of the Department of Logistics and Information Technology of the Ministry of Planning, Budget and Management - MPOG.

Before that, Law N°. 12.187/2009, on Climate Change Policy - PNMC already provided for preference criteria in public tenders for proposals that provide greater savings of water and electricity, and other natural resources. Another law, N°. 12.305/2010 referring to the National Solid Waste Policy - PNRS, had already established the priority, in government procurement and contracting, for recycled and recyclable products and for goods, services and public works that consider criteria compatible with standards of socially and environmentally sustainable consumption.

However, it was through the regulation of art. 3 of Law N°. 8.666/1993, by Decree N°. 7.746/2012, that the doubts regarding the principle of equality were clarified. Such changes have led to a new way of looking at public procurement, both for the executor of contracts and those who have the duty to oversee them. The Decree establishes guidelines and practices for the promotion of sustainable national development in procurements carried out by the Federal Public Administration. The instrument also established the Inter-ministerial Commission on Sustainability in Public Administration - CISAP.

As a result of this new law, the concept of sustainable procurement became standardized in the legal doctrine. This new concept determines that the decision to approve a contract can no longer be limited to the principle of economy and equality among competing bidders, as in the prevailing traditional way, and establishes the concept of "most advantageous proposal" for the Public Administration, in which sustainable goods and services, albeit sometimes at a higher cost, are approved because they provide greater public benefit.

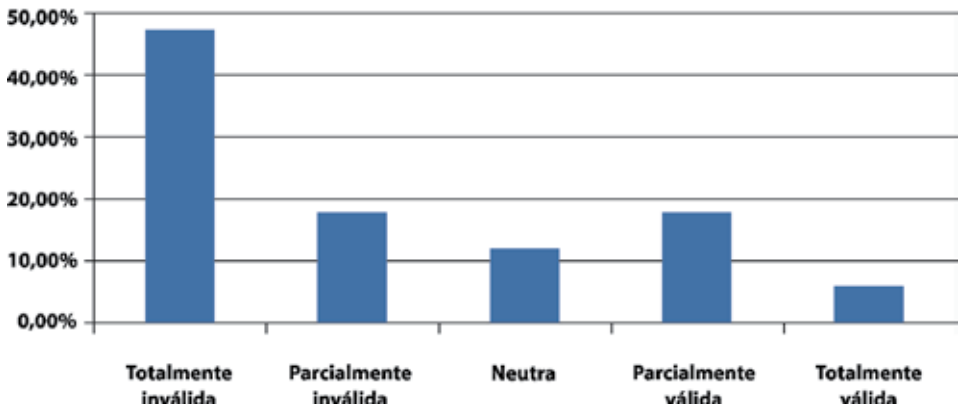
[7] The Federal Constitution of 1988 establishes environmental protection as a principle of economic and financial order, including by differential means, depending on the environmental impact of products and services – Item VI of article 170.

Legal Basis of Sustainable Procurement	
Art. 225 of the Federal Constitution/88	Right to a balanced environment - Fundamental right
Art. 225 of the Federal Constitution/88	Obligation of the Government to ensure the right
Art 170 of the Federal Constitution, Item VI	Establishes "environmental protection" as one of the principles of the national economic order.
Law N°. 12.187/2009	National Policy on Climate Change
Law N°. 8.666/1993 - Article 3, caput, and 12, item VII	General Law of Tenders and Contracts
Complementary Law N°. 123/2006	National Statute on Micro and Small Businesses
Law N°. 11.947/2009 and FNDE Resolution N°. 38/2009	National School Feeding Programme
Law N°. 12.305/2010	National Solid Waste Policy - priority for recycled and recyclable products in procurement and contracting
Law N°. 12.349/2010	Amending Law N°. 8.666/1993 - General Law of Tenders and Contracts
Normative Instruction N°. 01/2010-SLTI/MPOG	Establishes the environmental sustainability criteria in the procurement of goods, contracting of services and public works
Ordinance N°. 02/2010 - SLTI / MPOG	Specifications for IT goods Standards
Decree 7.746 of 05/06/2012	Regulates art. 3 of Law 8.666/93; establishes criteria, practices and guidelines for the promotion of sustainable national development; and establishes CISAP
Normative Instruction N°. 10/2012-SLTI/MPOG	Establishes rules for preparation of the Sustainable Logistics Management Plans in public bodies
Normative Instruction N°. 02/2014- SLTI/MPOG	Provides rules for the purchase or leasing of machines and energy-consuming appliances and the use of the National Energy Conservation Label (ENCE) in federal public buildings
Normative Instruction N°. 04/2014 – SLTI/MPOG	Establishes the process in the contracting of IT Solutions in federal public administration.

A series of regulations and guidelines are being implemented to encourage the use of government purchasing power to promote technological innovation and create awareness about responsible consumption. The Differentiated Contracting Regime (RDC), for example, was initially created to reduce bureaucracy in contacting and public works for the Olympics and the World Cup and, later, extended to education, health and the Growth Acceleration Plan (PAC). The rule that established the RDC, Law N°. 12.462, of August 4, 2011, has regional development and sustainability as its prerogatives.

Even with the change in the Bidding and Contracts Law in 2010, concern for products less harmful to the environment was just beginning in most of the organs of the Federal Administration. For a long time there remained doubts about the legality of the inclusion of sustainability criteria for selecting the most advantageous tender due to a possible affront to the principle of equality which governs the bidding process, as shown by the survey conducted by the Federal Court of Accounts - TCU with the managers involved in the hiring process under the Inclusion of Sustainability Criteria in Bidding, in the Consolidated Management Report, shown below.

Question 1 – Inclusion of Sustainability Criteria in Bidding



[Totally invalid – Partially invalid – Neutral – Partially valid – Totally valid]

Source: Consolidated Management Reports for the year 2010 / TCU

It is clear from the figure above that, at that moment, most of the interviewed institutions admitted to not achieving sustainable bids, going against the provisions of Normative Instruction N°. 01/2010/SLTI/MP.

Law N°. 12.349, of 2010, gave new wording to art. 3 of Law N°. 8.666/1993, which defined a sustainable bid as one that is intended to ensure compliance with the constitutional principle of equality, the selection of the most advantageous tender for the administration and the promotion of sustainable national development.

With the regulation of Art. 3 of Law N°. 8.666/1993, by **Decree N°. 7.746/2012**, which specifically included the term "sustainable" in the general bidding law, the doubts regarding the principle of equality were resolved. Such changes have imposed a new way of looking at public procurement, both for the executor of contracts and those who have the duty to oversee them. As a result of this change, the concept of sustainable procurement became standard in the legal doctrine.

However, the Brazilian legal system already included various legal norms which encouraged the practice of sustainability in Public Administration. The very Constitution, in article 225, guarantees the right of everyone to an ecologically-balanced environment, being a duty of the government and the community to defend and preserve it, as well as citing, in item VI of art. 170the protection of the environment as one of the principles that guide economic activity in the country.

Furthermore, Law N°. 12.187/2009, of the Policy on Climate Change - PNMC already contained preference criteria in public tenders for proposals that offered greater savings of water and electricity, and other natural resources. Another law, N°. 12.305/2010 on the National Solid Waste Policy - PNRS, had also established the priority, in government procurement and contracting, for recycled and recyclable products, and for goods, services and public works that consider criteria compatible with standards of socially and environmentally sustainable consumption.

The implementation of the sustainable public procurement policy is carried out on two fronts, differentiated according to the nature of the contracted goods and services. The first front contains procurements for government consumption, whose main feature is that they are standardized goods and services. In this case, the possibility of comparing sustainable items with conventional ones that have the same function allows you to centralize their implementation, in the area responsible for logistics of the Government. This makes the task of increasing the sustainable procurement scale in the public administration faster, as well as increasing the more immediate understanding by managers of their contribution to this policy.

On the second front there are the contract signings by the State for the implementation of sectoral policies and whose orientation is to provide society with public goods and services. The main feature of these contracts is non-standard goods and services and to directly mirror the guidelines of the sectoral policy. In this case the sustainable procurement policy is decentralized by definition and requires the introduction of sustainability guidelines in the center of each sectoral policy conducted by different bodies of the public administration.

PROCUREMENTS FOR GOVERNMENT CONSUMPTION

The model adopted in this type of procurement has been the same at the three Government levels, meaning, the widespread use of a list of sustainable goods and services, the use of a set of sustainability criteria to select sustainable goods and services that can be added to the list, a normative base which gives legality to different acts of procurement and the creation of an intra-governmental governance to promote and increase the value of sustainable procurement in the public administration.

With the creation of the Program for Sustainable Procurement of the Ministry of Planning, Budget and Management (MPOG) and the enactment of Normative Instruction N°. 01/2010 of the Logistics Department of the MPOG, the Sustainable Goods Catalog was created under the Integrated System of General Services Administration - SIASG. This is the system where the operations of government purchases of standard goods and services are carried out by member organs of the SISG (direct, independent and foundational Federal Public Administration). The system includes the publication and realization of bids, performance grades, the recording of administrative contracts, the cataloging of materials and services and the registration of suppliers. In Brazil, as in other countries, the adopted arrangement was to create lists of standard products, considered sustainable, taking into account a pre-established set of sustainability criteria. The same principle is used for contracting services defined as sustainable, except in this case the catalog does not have a standard sustainable service list, but a set of standard notices, for each service, describing procedures and the use of sustainable products to be considered by candidates submitting a bid.

The **sustainable goods Catalog**[8], within the SIASG, and the efforts to expand the number of items offered to the buyer has constituted one of the main instruments in the policy to increase the value of sustainable procurement in relation to the total procurement expenditure in the public administration. Currently the catalog of the federal government has approximately 810 items, a number that has been growing over the last years. The Catalogue of the State of São Paulo has approximately 990 items and the Catalogue of the State of Minas Gerais about 510 items. The identification of sustainable goods and services has grown systematically and, as a consequence, so has the total amount of sustainable procurement. The State of São Paulo, the oldest state to have adopted this practice,

[8] The Materials Catalog -CATMAT –offers a list of products with descriptions and material coding. Developed and maintained by the Ministry of Planning, Budget and Management (MPOG), it is a mandatory tool for all agencies of the federal government using the SIASG and optional for all public bodies in the three spheres of power. It includes food, hygiene products, clothing, chemicals, weapons, agricultural machinery, medicines, equipment and materials for use in hospitals, and laboratory supplies and equipment.

saw an increase of 40% in the value of sustainable procurement in 2011/2012 when compared to the value reached in 2008/2009. The value of sustainable procurement in the period of 2011/2012, was 4.7% in relation to the total value of purchases, or the equivalent of R$ 202.5 million. The Federal Government also recorded significant growth in the value of sustainable procurement, although a lesser value than the State of São Paulo, due to the fact that it adhered to the system much later, only in 2010.

Even though it needs to be expanded, the data presented in the tables below show that sustainable procurement underwent a considerable evolution. Starting at R$ 13.5 million in 2010, reaching R$ 40.4 million in procurements by organs of the Integrated System of General Services Administration - SIASG, which represented an increase of 200% in 2013. In the first year of the regulation of art. 3 of Law N°. 8.666/1999, by Decree N°. 7.746/2012, the increase in the value of sustainable procurement was 200% in relation to the previous year, compared to growth of approximately 30% in the overall value of public procurement in the same period. Despite this growth, it represented a paltry 0.06% of the R$ 68.4 billion total spent on government procurement in 2013, taking into account all the different procurements.

MINISTRY OF PLANNING

Secretary of logistics and Information Technology – SLTI

Value of sustainable procurement - SISG Bodies

Year	Value of Sustainable Procurements[1]				
	Electronic Trading	Presential Trading	Invitation	Waiver / Bidding Exemption	Total
2010	11,705,665.26	53,157.88	943.45	965,076.07	12,724,842.65
2011	13,506,612.94	20,909.88	458.92	635,254.32	14,163,236.06
2012	39,503,845.06	15,506.00	613.50	425,962.13	39,945,926.69
2013[2]	39,818,783.58	3,850.00	528.00	603,724.90	40,426,886.48

[1] Seasonally adjusted values corrected by the IPCA

[2] January to December

Source: Comprasnet.

Preparation: SLTI / MP

MINISTRY OF PLANNING

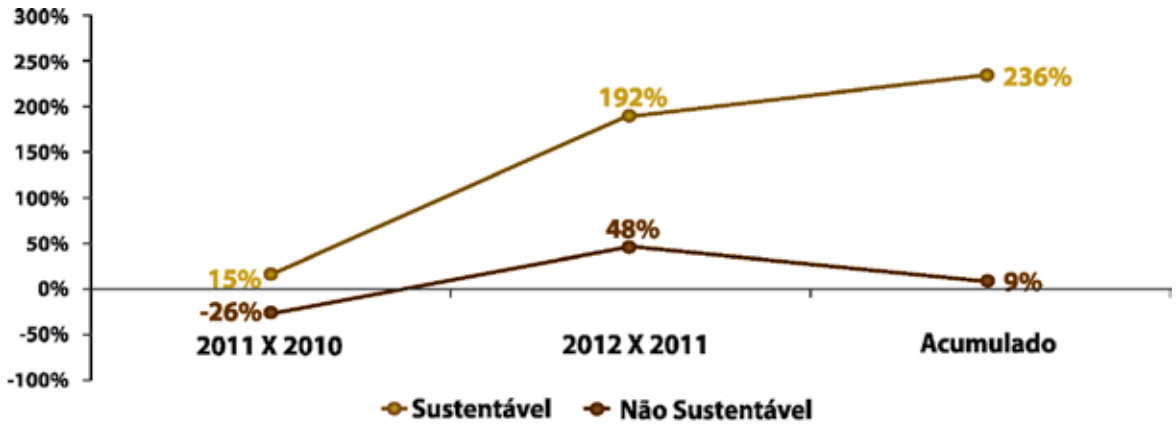
Secretariat of Logistics and Information Technology – SLTI

Procurement values, per process types – SISG (General Services System) institutions

Modality		Value of procurement[1]					
		2008	2009	2010	2011	2012	2013[2]
Competition		9.167.855.840,53	14.546.704.831,43	12.393.154.773,53	6.377.263.000,50	12.678.890.659,73	5.140.841.080,08
international Competition		146.359.305,34	1.053.839.103,41	1.032.577.330,98	85.951.777,18	140.937.239,77	12.378.228,84
Competition		372.625,43	1.151.347,51	2.974.844,09	901.562,48	2.581.625,00	3.357.349,09
invitation		163.181.777,33	73.198.638,70	49.330.037,37	32.885.611,90	22.409.868,60	14.808.398,04
Bidding waiver		15.134.384.857,80	8.725.194.787,66	11.676.471.129,88	7.646.697.849,80	13.802.507.425,32	9.442.357.296,24
Exemption from Tender		3.210.978.280,03	5.824.096.648,18	7.731.978.598,76	11.513.800.634,23	10.672.115.922,26	11.738.434.680,30
Electronic Trading		21.277.510.721,75	22.026.596.987,24	28.656.588.714,71	33.639.555.907,00	33.639.555.907,00	40.963.356.588,24
Presential Trading		2.802.208.233,58	3.117.945.219,90	1.313.059.935,34	1.152.980.671,26	1.152.980.671,26	726.223.535,31
Prices		745.677.499,84	696.300.483,06	557.320.756,89	507.064.775,89	507.064.775,89	394.789.405,35

[1] Seasonally adjusted values corrected by the IPCA.
[2] January to Dezember
Source: Comprasnet.
Preparation: SLTI/MP.

According to the Procurement Balance Sheet of the federal government, the evolution of bids is shown in the table below:



Fonte Comprasnet - janeiro a dezembro.
Elaboração: SLTI/MP

Evolution of sustainable and non-sustainable bidding growth

— *Sustainable* — *Non-sustainable*

Between January and December of 2013, sustainable procurement made by the federal government accounted for R$ 40.4 million. The most purchased items were: A4 paper, air conditioners and disposable cups.

MINISTRY OF PLANNING
Secretary of Logistics and Information Technology - SLTI
Products most acquired in more sustainable procurement of SISG organs 2013

Product	Value
A4 Paper	12,414,902.40
Air conditioning equipment	6,481,920.77
Disposible cups	4,934,178.06
Soap	3,696,152.78
Ballpoint pens	1,772,208.25
Other Products	11,127,524.22
Total	40,426,886.48

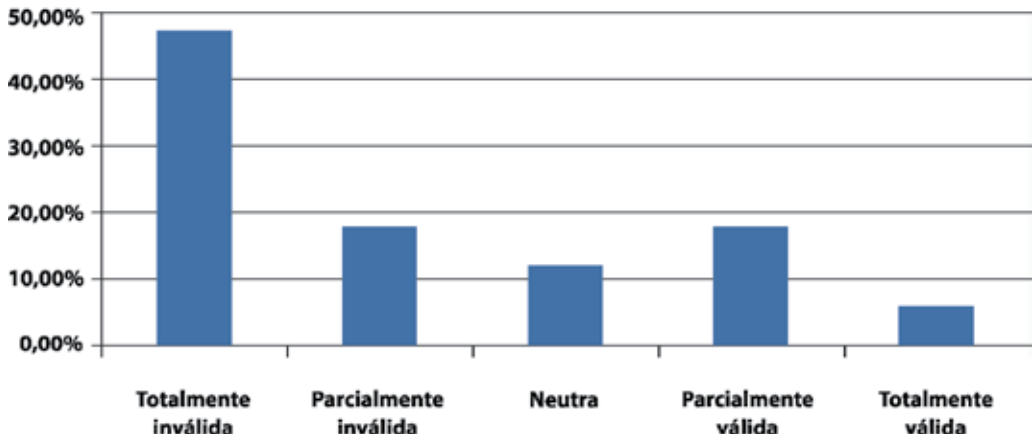
Source: Comprasnet – January to December

Preparation: SLTI/MP

The relatively small result, if seen alongside the total value of procurements of standard products by government, demonstrates, on the one hand, the short-term experience of the Federal Government in the promotion of sustainable public procurement and, on the other hand, the difficulties in overcoming the resistance of buyers to take new positions, as is clearly shown in research carried out by the TCU in 2010.

Even with the change in the Bidding and Contracts Law in 2010, concern for products less aggressive to the environment was just beginning for most organs of the Federal Administration. For a long time there remained doubts about the legality of the inclusion of sustainability criteria for selecting the most advantageous bid due to a possible affront to the principle of equality which governs the bidding process. The graph below shows the responses of managers involved in the procurement process in 2010, in response to the question elaborated by the Federal Court of Accounts - TCU on the validity of including Sustainability Criteria in Bidding, in the Consolidated Management Report.

Question 1 – Inclusion of Sustainability Criteria in Bidding



Totally invalid – Partially invalid – Neutral – Partially valid – Totally valid

Source: Consolidated Management Report for the year 2010 / TCU

The survey also reveals the TCU's special concern with the sustainable procurement policy. This is apparent in the Checklist of the Environmental Management and Sustainable Procurement Report published yearly by the Federal Court of Accounts– TCU.

With the amendment of article 3 of the Tenders and Contracts Law, sustainable national development was determined as one of the objectives to be achieved by bidding, and a new way of looking at public procurement came into force, both for the executor of contracts and those who have the duty to oversee them.

Among the attachments of the Environmental Management and Sustainable Procurement Report by the TCU, there is a Checklist where several items are listed for evaluating environmental management and sustainable procurement, with which managers should issue an evaluation according to their agreement or not with the claims presented. The result of this questioning enables greater insight and control over sustainable practices carried out by the agents involved in public contracting and procurement.

Because of the importance of an external control agency, special emphasis can be attributed to it for the progressive change in the pattern of procurements made by federal agencies, through sustainable production and consumption actions.

It is in the field of sustainable Tenders and Contracts that good results of the PPCS are evident. This good performance is due, in part, to the training effort made by the Ministry of Environment (MMA) and the MPOG, involving public managers responsible for procurement.

Under the Ministry of Planning, Budget and Management - MPOG, the federal government has sought to train their agents, both through the Distance Education system - DE, as well as the presential system. A striking fact has been the systematic inclusion of sustainable public procurement courses during meetings of the Budget and Financial Administration Management and Public Procurement Weeks held by the ESAF (School of Finance Administration).

ENAP was also engaged to disseminate this practice together with the procurement agencies of the organizations of the Federal Administration. The Department of Sustainable Production and Consumption of the Ministry of Environment - DPCS/SAIC/MMA, in partnership with SLTI/MPOG and the Attorney General of the Union (AGU), developed the 21-hour training program focusing on "Sustainability in logistics and public procurement", for organs of the Federal Public Administration. The project intends to introduce the subject in the curriculum of regular ENAP courses.

The data presented in the table below are a sample of the actions undertaken for the training of agents involved in public procurement and contracting.

TRAINING IN SUSTAINABLE PROCUREMENT AND CONTRACTING			
ORGAN or AGENCY	**COURSE**	**DATE**	**LOCATION**
MMA	1st Procurement and Contracts Forum	11-14/08/14	Brasília
MPOG	2nd International Seminar on Sustainable Public Procurement	27-28/08/14	Brasília
MPOG	Course on Public Policies on Sustainability in Public Procurement	29/08/14	Brasília
MPOG	Workshop on Margin Preference and Procurement of Information and Communication Goods and Services	29/08/14	Brasília
TCU	"Sustainable Procurement and Certification" Workshop	27/03/14	Brasília
MPOG	Training in Sustainable Logistics	2014	Brasília
IPEA	Responsible Public Sector Seminar	4-6/06/14	Brasília
Chamber of Deputies	Training Program in Sustainable Public Procurement	4-5/08/14	Brasília
MMA	" Sustainable Public Procurement" Course	19-22/8/13	Brasília

TCU	"Sustainable Public Procurement" Seminar	05/12/13	Brasília
MPOG	Distance Education: Sustainable Public Procurement	2012	
MMA	Sustainability in Public Procurement	21-23/8/12	Paraíba
TRT10 – CSJT	DVD on "Sustainable Procurement"	2012	Brasília
DNIT	A model for reducing expenses, streamlining processes and greater intelligence in public procurement		Brasília
MPOG	Distance Education: Training in Sustainable Public Procurement	2011/2012	
MEC	Sustainable Public Procurement	22-23/05/12	Brasília

In 2012, 962 civil servants from 25 states were trained at an event held in Brasilia organized by the High Council of the Justice of Labor and broadcast, via teleconference, to 24 states. In 2013, DPCS/SAIC and the MPOG, including the Order of Auctioneers of Brazil, trained about 500 managers, including decentralized units of the Federal Government, in States.

In 2014, training sessions were offered on "sustainability in public procurement" within the Sustainable Public Procurement Initiative in the context of the World Cup 2014. The Ministry of Environment (MMA) and the United Nations Environment Programme (UNEP) offered the course "Sustainability in Public Procurement" under the Environment Programme and Sustainability World Cup. The course included workshops, theoretical modules and a roundtable to discuss local experiences. The organization of the event was the responsibility of state and municipal governments and the content, under the responsibility of SAIC/MMA, was developed in partnership with the Attorney General of the Union. The courses were held in the cities of Natal, Cuiabá, Porto Alegre and Rio de Janeiro, and benefited 55 agencies.

The demand for Sustainable Procurement courses has been growing, at the three levels of government, requiring the involvement of Government Schools like ESAF and ENAP, as well as the development of distance education courses for the coming years with longer courses and the dissemination of good practices.

The Ministry of Environment (MMA), the National Confederation of Industry (CNI) and the Ministry of Industry and Trade (MDIC) have agreed to work together to implement the agenda proposed by the Plan for Sustainable Production and Consumption (PPCS). The initiative contains a **Technical Cooperation Agreement** to support a number of activities initiated in 2013 with the creation of the Permanent Forum for dialogue between the public and private sectors to encourage debate on the topic of Sustainable Production and Consumption. Four meetings were held, involving the main business associations and 5 Regional Seminars in order to foster debate for the review and updating of the Action Plan for Sustainable Production and Consumption (PPCS) with the State Industry Federations. Another initiative under way is the creation of sectoral technical chambers of industry in an action called **Sector Dialogues for Sustainable Production and Consumption**. The goal is to define criteria/specifications that can serve as a reference for public managers to include in the terms of reference related to public procurement and to define initiatives for joint actions - business associations, CNI, MDIC and MMA - geared towards the dissemination of cleaner production and conscientious consumption practices. The intention is to create conditions for the establishment of ever-higher sustainable production and consumption

standards through dialogue between the productive sector and the public sector. The Sector Dialogues rely on the direct participation of researchers from the University of Brasília who are responsible for the preparation of sectoral reference studies for the generation of commitments between the parties. The Chambers are composed of members of business associations, CNI, MDIC, MCTI, MPOG and the MMA. Considering the sectors that most supply the government, the dialogues were initiated, in 2014, with three segments: electronics, cleaning materials and services and furniture.

The **Shared Sustainable Procurements** in the context of a single public body or between them, offer several benefits: the sharing of market studies and public hearings; economies of scale; procedural rationality; reduction of the final cost; increased transparency; adequacy, quality and standardization of the products purchased; greater speed; and the formation or expansion of the supplier market of sustainable products, among others.

One of the first shared procurements involved 10 bodies, including the Botanical Gardens of Rio de Janeiro-JBRJ (manager), the Tax Department (Receita Federal - RF), Fiocruz, the National Institute of Intellectual Property - INPI and the Federal Police, among others, to acquire 22 sustainable products, which generated a savings of 49.89% over the initial estimate made in market research. In some cases, the sustainable items purchased had a price equal to, or lower than, that of conventional items.

In another sustainable shared procurement that was made, 19 administrative units were involved working in an executive committee. The acquisition was for 20 of the 33 items listed and included new sustainable items such as white recycled paper envelopes and BIC pens made with recycled plastic, among others. There was a 43.59% savings on recycled A4 paper and adhesive labels, compared to the first purchase.

The lessons learned can be seen as a positive advance in the recently-launched system. There was a need to reduce the diversity of items, with a greater focus on quality. It was still necessary to carry out technical visits to industries awarded contracts relating to the main items of sustainable materials (ex.: white recycled paper envelope), associated with the need to refine the list for the second purchase, with the standardization/technical description of items.

SUSTAINABLE PUBLIC PROCUREMENT TOPROVIDE SOCIETY WITH GOODS AND SERVICES

The pursuit of sustainability is not only limited to goods and services for the maintenance of the activities of the Government. It goes beyond, and should be reflected also in its sectoral policies. The intention, in this case, is that they incorporate socio-environmental guidelines in the provisioning of goods and services for society. Sustainable public procurement allows for the management of demand and contracts, as well as generating changes in the production chain and in the very manufacturing processes of products. It also allows for developments related to the direction technology may take through the demand for products or equipment that make use of environmental, economic and social resources in a more rational way.

Energy Sector

In the energy field, social and environmental policies stand out immediately with the permanence of a clean energy matrix. Despite thermal generation being used circumstantially, investments are predominantly applied to renewable energy sources such as hydroelectricity and co-generation from biomass and wind. In addition, it is worth highlighting the efforts of the National Program for Energy Conservation (PROCEL) and the National Program of Rationalization of the Use of Oil and Natural Gas Programa Nacional da Racionalização do Uso dos Derivados do Petróleo e do Gás Natural (CONPET) in the field of energy efficiency.

The National Electric Energy Agency (ANEEL) Resolution N°. 482/2012 was another important provision related to energy, establishing terms and conditions for access of micro- and mini-generation distribution to power grids, and the power compensation system, and it became an important means for stimulating sustainable procurement

by society. This resolution has enabled the consumer to also become a power generator who can opt for power-generating equipment such as wind turbines, solar panels or biomass. This mode does not require storing energy in batteries because as long as there is sunlight or wind, the system generates and transfers the surplus energy to the grid of the electric utility.

The Resolution created a system in which the energy injected into the power grid by the consumer through micro- or mini-generation is given on "loan" to the local distributor, generating energy credits. Later, this amount of loaned energy is repaid with the electricity consumption of that consumer on the same meter or any other meter that is registered under the same name and tax number, Registration of Individuals (CPF) or National Register of Legal Entities (CNPJ) (individual or company), with the Ministry of Finance.

Distributed generation (DG) opens up other possibilities within the energy distribution system and imparts greater rationality to it, as it approaches the idea of a system that generates what it consumes. In addition to increasing the system's efficiency and decreasing the value of the energy bill, distributed generation encourages the construction of smart grids, where consumption can be planned for the payment of lower rates, coupled with greater energy security due to increased reliability of the system.

Incentives for public agencies to also become distributed generators, installing energy-generation systems in their buildings and negotiating with utility companies for more favorable terms on energy bills, is including in the next cycle of the PPCS and A3P program. This would provide a great impetus for energy conservation and reduce energy costs in Public Administration.

To support the development of DG, a booklet was released by the ABDI (Brazilian Association for Industrial Development)at the International Conference for Renewable Energies - RENEX in December of 2013. In compliance with the request by the MME, distributed energy was included in the BNDES credit card system. *Construcard*, from the CAIXA, also did the same. The solar panel group of the ABINEE (Brazilian Association of the Electrical and Electronics Industry) met with banks to assess expectations concerning the conditions of credit that could make distributed solar generation services viable. In addition, the commission that deals with certification for small wind power generation was reactivated. The ordinance and its rules were opened for public consultation and is in the final phase for implementation.

In the area of the promotion of bio-fuels, note should be given to the recent efforts to expand their use with the publication of Provisional Measure N°. 647 of May 28, 2014, on the addition of biodiesel to regular diesel sold to the final consumer. The initiative also contributes to the rational use of fuels in freight and public transportation. From July 1 of 2014, it became mandatory to add 6% biodiesel into the mix with fossil diesel, and from November 1 of 2014, this percentage will become 7%. With this measure, the mandatory biodiesel demand will grow by 40% by the end of 2014, making the purchase of the fuel mix more sustainable.

CONPET, created in 1991, is another program that promotes the development of an anti-waste culture in the use of non-renewable natural resources in Brazil. Under the Ministry of Mines and Energy, CONPET encourages efficiency in energy use in various sectors, with emphasis on homes, industries and transportation, in addition to promoting actions in environmental education. The main objectives of the program are to rationalize the consumption of petroleum derivatives and natural gas; reduce air pollution emissions in the atmosphere; promote research and technological development; and provide technical support to increase energy efficiency at the final consumption point, as well as educate consumers about the importance of the rational use of energy for sustainable development and a better quality of life.

In the Minha Casa Minha Vida Program (My home, My Life) - PMCMV, the option was included to buy solar water heating instead of using electric showers, which place great energy demands on the system at peak times, decreasing the reliability of the distribution system. In part 1 of the program, which covers single-storey houses in urban areas, in cities with over 50,000 inhabitants and families with an income of up to R$ 1.6 thousand, 100% of homes are equipped with solar water heating. The goal is to finance 400 thousand solar water heaters through

a line of credit from the Caixa Econômica Federal (Construcard), amounting to R$ 680 million, so that those interested can purchase the equipment for their homes. By March of 2014, the actions taken had resulted in an energy savings of 1.3 million MWh/year, or the equivalent of the total amount of energy that will be generated by the Santo Antonio hydroelectric plant (RO).

Transportation Sector

The choice of priorities, such as public investment in more efficient modes of transport for freight, be it by sea, rail or waterway, transforms the conventional means based on road transport, and creates a demand for products and equipment of a different nature. In addition, giving priority to investments in more sustainable modes of transportation reduces the price of services rendered to society.

The National Logistics and Transport Plan (PNLT) develops the implementation of Brazil's transportation infrastructure to solve the problems of transportation and logistics systems in the country. Considering its long-term planning, the Plan does not present only incremental actions to improve the systems, but actions to change the structure as well.

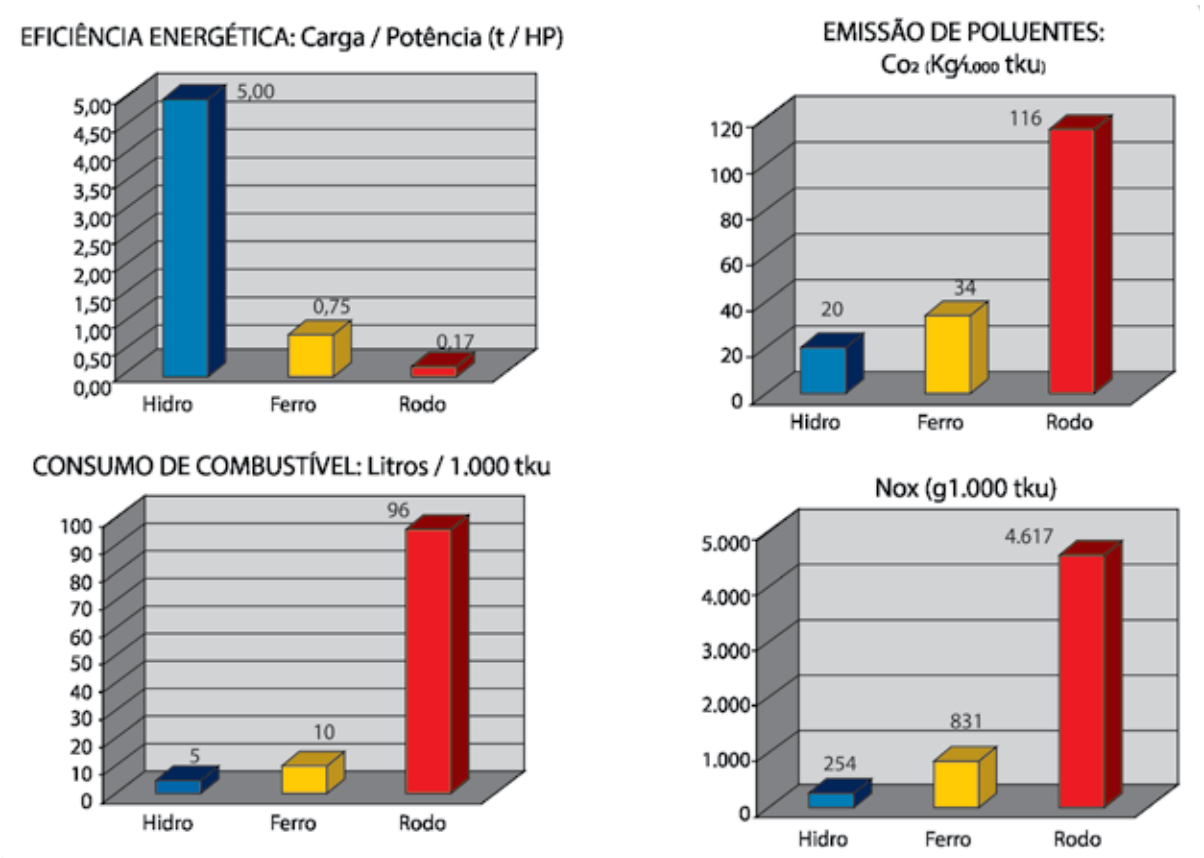
The PNLT is based on aspects such as the promotion of multi-modality, to maximize the use of the advantages of each mode of transport, valuing the existing structures and networks, and the promotion of social and environmental gains, with the use of micro-regional advantages and reducing the impacts of pollution emission.

The Plan identifies the need for change in the current freight transportation system of the country, with a better balance between different modes of transportation, seeking to meet the development needs of cargo and passenger logistics across the country, through the rational use of road transport and the more intensive and appropriate use of railways, pipelines and waterways.

The PNLT anticipates a significant change in modes of transportation, as shown in the following table, reducing the share of road transport from 58% in 2005 to only 30% in 2025.

MODE	1996	2005	2025
Air	0.33	0.40	1.00
Waterway	11.47	13.00	29.00
Pipeline	3.78	3.60	5.00
Rail	20.74	25.00	35.00
Road	63.68	58.00	30.00
Total	100.00	100.00	100.00

This effort to change the system has significant consequences in energy efficiency, fuel consumption, pollution emissions, particularly CO2 emissions, as shown in the tables below.



Tables:

Energy Efficiency: cargo/power (metric ton/HP) Waterway – Rail – Road // Pollution Emissions: CO2 (kg/1,000 ntk) Waterway – Rail – Road

Fuel Consumption: Liters/1,000 ntk Waterway – Rail – Road // NOx (g/1,000ntk) Waterway – Rail – Road

Education Sector

The Handbook of Sustainable Schools of the Secretariat of Continuing Education, Literacy, Diversity and Inclusion (SECADI)[9]of the Ministry of Education, contains operating guidelines to support the implementation of Resolution CD/FNDE N°. 18 of 21/05/2013, which allocates financial resources, under the guidelines of the Direct Money in School Program–PDDE, for municipal, state and district public schools that have students enrolled in basic education. This document contains the definition of Sustainable Schools as *"those which maintain a balanced relationship with the environment and offset their impact with the development of appropriate technologies in order to ensure quality of life for present and future generations. By setting good examples, they seek to radiate their influence to the communities in which they are located."*

[9] http://pdeinterativo.mec.gov.br/escolasustentavel/manuais/Manual_Escolas_Sustentaveis_v%2005.07.2013.pdf

The transition to sustainability in schools is promoted through three interrelated areas: physical space, management and curriculum. Many of the aspects to be followed by managers of schools, by virtue of legal institutes, led to the practice of "Sustainable Procurement" of the Action Plan for Sustainable Production and Consumption, which has a scope beyond the borders of internal government consumption.

In the guidelines found in Resolution CD/FNDE N°. 18/2013, regarding the suitability of physical space, it specifies the use of building materials more suited to local conditions and an architectural design that allows the creation of buildings with greater thermal and acoustic comfort, guaranteeing accessibility, efficient management of water and energy, sanitation and the proper disposal of waste. It also offers guidance on the need for the inclusion of environmental criteria in the production and acquisition of teaching materials, *"giving preference to the purchase of non-polluting and/or less toxic materials and equipment, in part or totally recycled or recyclable, that minimize the consumption water or electricity, are produced locally, among other attributes that contribute to social and environmental sustainability in school, considering the extraction, manufacturing and disposal processes."*

In its recommendations for the actions taken it values local knowledge, the cultural characteristics of local buildings, the hiring of people from within the school community when contracting services, materials which are in accordance with environmental guidelines and durable, non-polluting and energy-efficient materials, preferably certified and provided with environmental seals. These demands have resulted in significant advances in the integration of social and environmental criteria, alongside economic criteria, as well as promoting improvements in these processes in the government's direct actions, being the result of the goal to use the state's purchasing power to promote sustainable growth.

Through the Direct Money in School Program - PDDE Sustainable Schools, MEC transferred financial resources to 4,975 basic education public schools, amounting to a total of approximately R$ 53 million in 2013 and 2014.

The Caminho da Escola (*School Pathway*) program was created with the objective, among others, to renew the fleet of school vehicles to ensure safety and quality in the transportation of students and to standardize these vehicles. The National Institute of Metrology, Quality and Technology (Inmetro), Ministry of Education's partner in the program, established that, among the requirements to carry out inspections of school buses for the transportation of basic education students of the public school network, the vehicles of the program that run on diesel must be able to run on biodiesel, in accordance with the guidelines established by the National Program for Production and Use of Biodiesel.

Agricultural Sector

The ABC Plan of the Ministry of Agriculture, Livestock and Food Supply

The Sector Plan for Mitigation and Adaptation to Climate Change for the consolidation of a Low Carbon Emission Economy in Agriculture, called the ABC Plan, was made in accordance with Article 3 of Decree N°. 7.390/2010 and endeavors to organize the planning of actions to be taken for the adoption of sustainable production technologies in agriculture, so as to avoid increasing current levels of emissions and deforestation.

From 2011 to 2014, about R$ 7.2 billion was committed to support the seven programs of the Plan, six of which relate to mitigation technologies and a final one with actions to adapt to climate change. The scope is national and the duration of the Plan is from 2010 to 2020, with planned revisions and updates in this period.

Commitments in agricultural activity are geared to the recovery of currently degraded pastures; the promotion of crop-livestock integration (iLP) and expansion of the use of the no-till planting system (SPD) and the biological fixation of nitrogen. In addition to these measures there are also strategies to integrate crop-livestock-forest (iLPF)

and agro-forestry systems (AFS) and the production of planted forests and the process of treatment of animal waste. The goal for the integration of the crop-livestock-forest (iLPF) and agro-forestry systems (AFS) is to reach 4 million hectares across the country.

The growth in the use of no-till systems (SPD) promotes soil and water conservation, increased efficiency of fertilization, the preservation of organic matter in soil and, especially, the reduction of fossil fuel consumption. It also reduces pesticide consumption, mitigating the emission of greenhouse gases and contributing to increased soil resilience. The procurements in the sector become more sustainable as there is a reduction in the consumption of carbon-intensive inputs. The goal, in this case, is to reach 8 million hectares by 2020.

The use of bio-digestion and composting processes as provided for in the Plan results in the reduction of production costs by avoiding energy consumption and chemical inputs, reduces risks to the environment as well as reducing GHG (greenhouse gas) emissions. The goal of the plan is to expand the use of technologies for treating 4.4 million cubic meters of animal waste for power generation and the production of organic compost, for on-site consumption or sale.

Minimum Price Guarantee for Socio-biodiversity products - PGPM-Bio

In addition to guaranteeing income, the strengthening and economic and social development of traditional populations, and maintaining populations in the forest, the Minimum Price Guarantee for Socio-biodiversity Products (PGPM-Bio) Policy represents the value of standing forests, contributing to the conservation, preservation and sustainable use of their natural resources.

The action allows for the payment of the Direct Subsidy to the Harvester. The policy is under the operations of CONAB, coordinated by a Steering Group, which is composed of the Ministries of Environment (MMA), Agriculture, Livestock and Food Supply (MAPA), Finance (MF), Agrarian Development (MDA) and Planning, Budget and Management (MPOG). Initially, the action sought to regulate the price of seven socio-biodiversity products – açaí fruit, babaçu palm, rubber, Brazil nuts, carnauba palm, pequi fruit and palm fiber. Later, other products were added to the list of the minimum price guarantee program, as shown in the table below, and further studies are being conducted to include other harvested forest products in Brazil.

Minimum Prices by Region and Subsidy limits

Products	Minimum prices for the crop 2013/2014 (R$/kg)	Brazilian States / Regions supported	Subsidy limit from the crop 2013/2014 (R$/DAP)
Açaí (fruit)	1.11	North and Northeast	1,000.00
Andiroba (nut)	1.29	North and Northeast	1,000.00
Babaçu (nut)	2.49	North, Northeast and MT	3,000.00
Baru (fruit)	0.25	Cerrado Biome	1,000.00
rubber (coagulated latex)	4.90	Amazon Biome	3,000.00
Cocoa (nut)	5.54	North	2,000.00
Brazil nuts (in shell)	1.18	North and MT	2,000.00
Carnaúba – type 4 wax	8.12	Northeast	2,000.00
Carnaúba – type B powder	4.97	Northeast	1,000.00
Juçara (fruit)	1.87	Couth and Southeast	2,000.00
Macaúba (fruit)	0.45	CE, MG, MS	2,000.00
Mangaba (fruit)	2.53	Northeast	1,000.00
Pequi (fruit)	0.43	North and Northeast	2,000.00
	0.51	Southeast and Center-West	2,000.00
Piaçava (natural fiber)	1.70	North and Bahia	3,000.00
Pinhão (fruit)	2.26	South, SP and MG	1,000.00
Umbu (fruit)	0.53	Northeast and MG	1,000.00

Source: Conab – Companhia Nacional de Abastecimento. Folder pgmbio.

The tables below show data for the Subsidy Payment PGPM-Bio for the years 2011, 2012 and 2013:

Payment of subsidy PGPM-BIO - 2011

STATE	N°. of harvesters	Quantity (Kg)	Value (R$)
Latex			
AC	381	104,896	142,102.08
AM	952	450,884	435,524.60
PA	121	153,966	200,843.60
RO	148	57,866	69,494.95
Subtotal	1,602	767,612	847,965.23
Babaçu nut			
CE	16	11,625	5,347.00
MA	3,639	815,402	410,398.52
PI	12	2,779	1,000.26
Subtotal	3,667	829,806	416,745.78
Piaçava fiber			
BA	473	1,048,467	627,717.25
Subtotal	473	1,048,467	627,717.25
Pequi			
MG	11	17,750	2,662.50
Subtotal	11	17,750	2,662.50
Total	5,753	26,663,635	1,895,090.76

Source: Management Report - Matrix - Year 2011 http://www.conab.gov.br/OlalaCMS/uploads/arquivos/12_07_09_11_40_42_relatorio_matriz_2011.pdf

Payment of subsidy PGPM-BIO - 2012

Product	State	N°. of Harvesters	Quantity (metric ton)	Value (R$)
Latex	AC	21	13.8	28,460.61
	AM	833	336.4	213,362.50
	PA	188	85.8	93,871.72
	RO	93	84.0	140,143.60
	Subtotal	1,135	520.1	475,838.43
Babaçu nut	CE	79	103.3	54,872.84
	MA	6,560	1,341.5	772,047.22
	Subtotal	6,639	1,444.8	826,920.06
Piaçava fiber	BA	1,492	7,021.0	2,946,903.30
Açai	AM	15	29.0	9,090.70
Total		9,281	9,014.9	4,258,752.49

Source: Management Report - Matrix - Year 2012 http://www.conab.gov.br/OlalaCMS/uploads/arquivos/13_06_05_10_37_03_relatorio_de_gestao_- 2012_matriz.pdf

Payment of subsidy PGPM-BIO - 2013

Product	State	Quantity (Kg)	Value (R$)	N°. of Harvesters Access
Latex	**AC**	180,663	437,683	347
	AM	237,523	335,471	757
	RO	69,461	122,929	186
	PA	82,470	154,199	89
Subtotal		**570,117**	**1,050,282**	**1,379**
Babaçu nut	**MA**	2,097,894	2,234,156	9,947

Brazil Nut	**AC**	134	283	1
	AM	338,421	43,995	112
Subtotal		**338,555**	**44,277**	**113**
Piaçava fiber	**AM**	135,890	59,906	70
	BA	6,473,076	2.030,179	816
Açaí	**AC**	31,335	9,726	32
	AM	245,014	58,953	138
Subtotal		276,349	68,679	170
Total		**9,891,881**	**5,487,480**	**12,495**

Source: 2013 Management Report - Conab / Matrix - p. 135

http://www.conab.gov.br/OlalaCMS/uploads/arquivos/14_07_02_12_37_57_relatorio_de_gestao_de_2013_conabversao_1.pdf

With this policy, the State has contributed to the management and sustainable use of local biodiversity, using purchasing power as an element to promote changes in local production and consumption standards of forest-harvesting populations and other traditional peoples and communities.

Food Acquisition Program for Family Agriculture - PAA

According to the Organic Law on Food Security and Nutrition - LOSAN (Law N°. 11.346 of September 15, 2006) It is understood that Food and Nutrition Security - SAN is *"the realization of the right of all people to regular and permanent access to quality food, in sufficient quantity, without compromising access to other essential needs, based on food practices that promote health and respect cultural diversity and that are environmentally, culturally, economically and socially sustainable"*, the Food Acquisition program for Family Agriculture - PAA, being one of its branches.

The Food Acquisition Program (PAA) works in promoting social and economic inclusion in the countryside by strengthening family farming, combating food and nutrition insecurity, contributing to the formation of strategic stocks, the institutional supplying of food for different purposes and permits the storage of products by farmers to be sold for fairer prices.

Established in 2003 by Article 19 of Law N°. 10.696/2003, the PAA is developed with funds from the Ministries of Social Development and Fight against Hunger (MDS) and Agrarian Development (MDA). The implementation of the PAA occurs through partnerships with the National Food Supply Company (CONAB) and municipal and state governments. There are four types of instruments used by CONAB to run this inter-ministerial program at the national level:

Modality	Source of Resources	Executor
Direct purchase from Family Agriculture	MDS/MDA	CONAB
Support for Stock by family farming	MDS/MDA	CONAB
Incentive for Milk Production and Consumption - PAA	MDS	States in the Northeast and North of Minas Gerais
Purchase with Simultaneous Donation	MDS	CONAB, states and municipalities.

Source: http://aplicacoes.mds.gov.br/sagi/paa/visi_paa_geral/pg_principal.php?url=abertura (accessed on 05/09/2014).

In the General Balance Sheet report for the 2013 year[10], Conab reports that the PAA *"reached 524 municipalities and 41,412,000 producers/families, acquiring 123 thousand tons of products"* and that *"the program committed resources on the order of R$ 666,083,000 in the year 2013".*

[10] http://www.conab.gov.br/OlalaCMS/uploads/arquivos/14_07_02_12_37_57_relatorio_de_gestao_de_2013_conab_versao_1.pdf

ENVIRONMENTAL AGENDA IN PUBLIC ADMINISTRATION

Public Administration has the responsibility to contribute to addressing environmental issues, seeking innovative strategies to modify current patterns of production and consumption, introducing social and environmental components. Thus, public institutions have been motivated to implement initiatives and develop programs and projects that promote socio-environmentally responsible policy in the public sector.

The Environmental Agenda in Public Administration - A3P is the main socio-environmental management program in the Public Administration and has been implemented by various bodies and institutions in the three spheres of government, under the three powers, and can be used as a socio-environmental management model for other segments of society.

The state has extensive influence and a fundamental role to stimulate the inclusion of sustainability criteria in their activities and integrate social and environmental actions with public interest. In addition to the capacity to induce change, the state can also use government procurement to mobilize important sectors of the economy, thus promoting changes in patterns of production and consumption and reducing the negative socio-environmental impacts generated by public activity.

In this context, the A3P program was identified as a priority for the Plan for Sustainable Production and Consumption, which should be consolidated as a reference for environmental responsibility in government.

The A3P program works on six cardinal themes:

- ✓ Waste Management: preventing and reducing the generation of waste, by proposing the adoption of habits of sustainable consumption and a set of instruments to encourage increased recycling and the re-use of solid waste - that which has economic value and can be recycled or re-used - and the environmentally sound disposal of waste - that which can not be recycled or re-used.
- ✓ Sustainable Bids: formal administrative procedures that contribute to the promotion of sustainable national development through the inclusion of social, environmental and economic criteria in procurement of goods, the contracting of services and the execution of works.
- ✓ Quality of Life in the Workplace: adoption of measures and adaptation of spaces to provide better quality of life for civil servants and society in general.
- ✓ Awareness and Training for Public Servants: creating civic awareness and socio-environmental responsibility in public managers and civil servants through training and awareness, including campaigns.
- ✓ Rational Use of Resources: reduction in the consumption of energy, water and other inputs, resulting in greater conservation of natural resources.
- ✓ Sustainable Buildings: design, construction, operation and renovation of buildings and spaces that consider measures and adaptations to reduce and optimize the consumption of materials and energy, and waste generated, the preservation of the natural environment and improving the quality of life of individuals and communities.

In addition to the A3P program, other initiatives are being implemented to promote sustainability - environmental, economic and social - in public administration, at all levels of government.

The **Projeto Esplanada Sustentável** (Sustainable Public Administration Project) - PES, a joint initiative of the Ministries of Planning, Environment, and Mines and Energy and the General Secretariat of the Presidency, which has as its main objective to encourage federal agencies and public institutions to adopt models of organizational management and structured processes in the implementation of actions aimed at the rational use of natural resources, promoting environmental and socio-economic sustainability in the Federal Public Administration.

In addition to these objectives, the PES seeks to improve the quality of public spending by eliminating waste and through continuous improvements in the management of processes; encouraging the implementation of energy-efficiency measures in public buildings; stimulating actions for the rational consumption of natural resources and public goods; ensuring the integrated management of post-consumption waste, including its environmentally sound disposal; improving quality of life in the working environment; and recognizing and rewarding the best efficiency practices in the use of public resources, in economic, social and environmental terms.

To date, the Presidency and 33 Ministries participate in the PES and it is expected that by December of 2014, all agencies of the direct federal public administration will also participate.

Sustainable Logistics Plans (PLS) are planning tools that allow agencies or entities to establish practices of sustainability and rationalization of expenses and processes in the Public Administration, which, according to the Normative Instruction SLTI/MPOG N°. 10/2012, should be developed by all direct, autonomous and foundational organs and agencies of the Federal Public Administration and state-owned companies.

The publication of the MPOG's **Normative Instruction N°. 02/2014** on energy efficiency is another important component for encouraging the rationalization of energy use in the public sector. The Instruction established rules for purchasing or leasing machines and energy-consuming devices for direct, autonomous and foundational organs and agencies of the Federal Public Administration and the use of the National Energy Conservation Label (ENCE) in designs and new federal public buildings or those that undergo a retrofit.

It also determined that when machines and energy-consuming devices are found to be uneconomical or unusable and therefore need replacement, they should be disposed of in an environmentally responsible way, applying the requirements of the specific regulations on the subject, according to the nature and type of good. This measure prevents low-efficiency equipment from returning to the market by transforming them into scrap for recycling.

Considering that there are about 20,000 public buildings in Brazil just in the direct administration of the Federal Government, one can estimate the impact of these regulatory measures on government consumption as well as their effect on all the economic chains involved.

PATHS OF ACTION

To expand the Environment Program in Public Administration, the Ministry of Environment has been working on 9 paths of action:

Adherence to the A3P

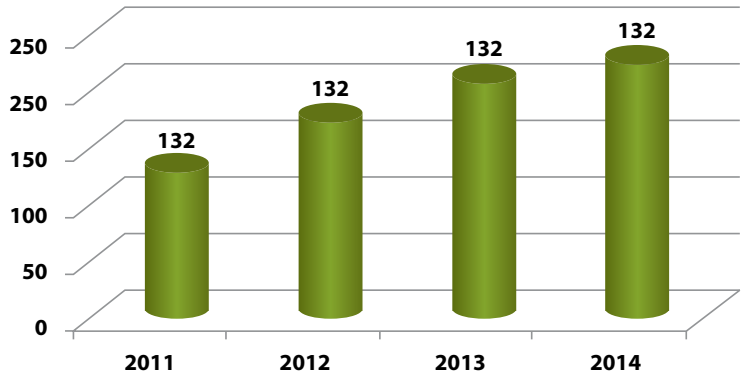
The Adhesion Agreement is the binding instrument used to implement the A3P in public institutions, between interested parties and the MMA, whose purpose is to integrate efforts to develop projects for the implementation of the A3P. The signing of the Agreement demonstrates the commitment of the institution to the social and environmental agenda and transparent management.

The goal that was set in the context of the Plan for Sustainable Production and Consumption was to increase the number of adhesions to the A3P by bodies and agencies of the federal, state and municipal governments, including the judiciary and the legislature, from the 110 that existed at the creation of the PPCS by at least 20 new memberships annually.

Given that adherence to the A3P program is a voluntary decision, its dissemination to public institutions has been the main strategy of awareness and dissemination. In order to increase the number of members the Projeto Esplanada Sustentável (Sustainable Public Administration Project)– PES was created, holding regional forums and organizing classroom training in various regions of the country. The classroom training contributed to the increase in interest of state and municipal institutions to adhere to the Agenda and served as a tool to disseminate the A3P intensively in the states and municipalities and to promote the agenda to their managers. The creation of the Sustainable Logistics Plan proved to be a very important mechanism to increase adhesions to the A3P.

Results achieved: the goal set under the PPCS was met and even surpassed. Taking as reference the date of November 23, 2011, the publication of the PPCS, to September 5, 2014, 118 new Adhesion Agreements were signed. It is noteworthy that in addition to these members, there are a number of new Adhesion Agreements in progress which have not yet been finalized.

Adhesion Agreement Evolution Chart



Note: 2014 data – up to 05 Sept/2014

A3P Campaigns

With the goal of holding a national A3P campaign annually, as an initiative of the Executive or its partners, to focus on its main themes, reinforcing the connection to the current PPCS, the campaigns seek to raise awareness among managers and civil servants of the importance of including the issue of sustainability in the agenda to modernize public service.

For awareness-raising and training of A3P partners, events, seminars and thematic campaigns are held, both nationally and regionally. These initiatives are intended to draw the attention of managers and civil servants to the importance of inserting sustainability as a reference when carrying out their activities.

Old computers: one of the targets of the campaign

Through the A3P program, no major national campaign was undertaken. However, various events and seminars were held, as well as internal and external campaigns. In the year 2012, 12 internal campaigns were created to raise awareness among the MMA agents and related entities. In 2012 and 2014, electronics campaigns were organized in order to build awareness among public officials about the importance of disposing of these materials in an environmentally proper manner. In the second edition (2014), the initiative, in addition to the MMA and its related entities, enjoyed the partnership of the Brazilian Army, General Secretariat of the Presidency, the Ministry of Mines and Energy and the Ministry of Labor and Employment. In the first campaign, they collected 2.5 metric tons of electronic equipment and in the second, a total of 1.6 metric tons.

A3P Annual Forum

A3P Forums aim to promote debate about the design and feasibility of Public Policy on Environmental Management for Public Administration, the exchange of experiences and the engagement of new partners who are committed to the implementation of the A3P. Continuing to hold the Forum, each one oriented to optimize efforts from other lines and/or PPCS programs, such as recycling and sustainable procurement, with the objective to organize four annual forums by 2014, is the goal that guides the objective of disseminating good practices and increasing the program's coverage.

Three editions of the National Forum were held in 2011, 2012 and 2014, plus four regional forums, not planned for under the PPCS. The decision to hold the Forum every two years, starting in 2012, was taken as a way of perfecting the initiative. In total, the A3P held eight national forums, from 2005 to 2014. In each of these events partners from all over Brazil were present, with about 400 participants in each edition. All the forums were held in the city of Brasilia - DF.

Since the beginning of the PPCS, the following topics have been discussed:

- ✓ 6th Governmental Forum on Environmental Management in Public Administration, held in November of 2011 with the topic: Public Procurement and Sustainable Buildings;
- ✓ 7th Forum held in November of 2012, with the topic: Sustainable Consumption in Public Administration and Social and Environmental Challenges of Solid Waste Management;
- ✓ 8th Forum held in June of 2014, with the topic: 15 Years of the A3P: Highlights.

In 2012, for the first time, four Regional Forums were held. These forums had the following objectives: strengthen the implementation of the A3P in state and municipal agencies which are partners in the Agenda; promote the adoption of the A3P in agencies and entities that are not developing actions towards sustainability; promote debate on topics relevant to sustainability in public administration; bring together A3P partners; and encourage and disseminate knowledge and good practices of sustainability in the Public Administration.

The four regional forums, in total, reached approximately 410 participants, representing 141 institutions. In each of the Regional Forums discussion groups were created which identified priority actions for the implementation and improvement of the A3P. The results were presented at the 7th edition of the National Forum, held in 2012.

With the process of regionalization of the discussions, it was possible to increase the number of partnerships, promote the program and encourage good sustainability practices, especially with municipalities.

A3P Network

The A3P Network is a permanent communication channel to promote technical exchange, disseminate information on topics relevant to the Agenda, systematize data and information on the environmental performance of institutions and encourage training and organizational change programs, allowing for the exchange of experiences.

Strengthening and doubling the A3P Network, which had400 members in 2011, is another goal of the program in the context of the PPCS, which seeks to make use of the development of new connectivity technologies and publish an electronic newsletter 3 times a year aimed at disseminating good practices and advances in PPCS topics.

The goal set out by the PPCS was met and surpassed. Taking as reference the date of November 23 of 2011, the establishing of the PPCS, until September 5 of 2014, 900 new members entered the A3P Network. The current total of registered members of the A3P Network is 1,300.

The "Best Practices in A3P" Prize

With the organization of the Prize, the idea is to continue to recognize good practices and publicize the program. There had been four grantings of the prize by 2014. The A3P Prize for Best Sustainability Practices was created in 2008 to give visibility to the Program, recognize the merits of initiatives undertaken by bodies and institutions in public sector and to get to know, *in loco*, the initiatives that are innovating public management in the country.

So far there have been three editions of the prize, in the years 2011, 2012 and 2014. The decision to make it a biennial Prize, from 2012 on, was made taking into account the same issues already presented to the National Forum.

The first edition of the A3P Prize was held in 2009, with the registration of 23 public institutions and 24 projects. In the second edition, held in 2010, there were 21 institutions and 29 projects registered. In the third edition, 26 institutions and 39 projects were registered, and the fourth has reached the mark of 40 institutions and 74 projects registered.

The increase in the number of projects in the fourth edition was the result of the creation of a new award category called "Highlight of the A3P Network". This new category made possible the participation of agencies and entities that have not signed a Term of Adhesion with the A3P, but participate in the Program Network.

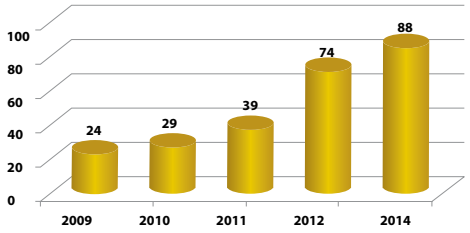


Figura 1 - Evolução da premiação - nº de projetos inscritos.

Figure 1 - Evolution of awards – N°. of projects registered.

In the fifth edition of the prize, a refinement of the awards process was carried out with the inclusion of an evaluation phase on site, which gave more credibility to the results obtained. In this new context, the prize became biennial.

Indicators and mechanisms to measure advances

Developing indicators and mechanisms to measure advances is another objective of the Program in order to follow and monitor the actions taken by A3P partner agencies and improve the actions and environmental responsibility projects with measurable targets and goals for the implementation of the PPCS and the National Solid Waste Policy (PNRS).

Monitoring indicators will be added to an online database where government agencies which are A3P partners can record the results of implemented sustainability initiatives. These actions include measures for the efficient use of natural resources, quality of life at the workplace and sustainable public procurement, among others.

The monitoring system is already in development and will allow for qualitative and quantitative evaluations of the data and results achieved by the institutions that adhere to the A3P. By gathering information and results on the actions implemented, the system will allow for partial or full analyses. The system will be an important control and monitoring tool for partner agencies, which will be able to graphically see the progress of each action implemented.

Sustainability Seal in Public Administration –The A3P Seal.

The Sustainability Seal is the most relevant instrument to encourage partner institutions of the A3P to continue the sustainability initiatives already implemented by recognizing the commitment in adopting institutional policies of environmental responsibility and disseminating practices that are based on concepts of sustainability.

They are three types of seal: Green, Silver and Orange.

- ✓ Green Seal: granted to public institutions that adhere formally to the Program (Term of Adhesion);
- ✓ Silver Seal: Term of Adhesion + Annual Report monitoring the actions set out in the work plan, demonstrating achievement of targets;
- ✓ Orange Seal: granted to bodies that have had actions highlighted by the A3P Prize.

With the launch of the initiative, there was an increase in interest in joining the program. A greater effort from the partner institutions to receive all three of the A3P seals was observed as well. Thus, the initiative creates a greater commitment to implementing sustainability initiatives.

Training workshops

Training public servants of the three levels of government and the three powers for the planning, implementation, monitoring and sustainability initiatives in Public Administration is one of the most important tools to increase membership and strengthen the implementation of the A3P program.

The classroom courses are tools for technical support and sharing successful actions implemented in the MMA and partner agencies of the Program. Courses have a workload of 24 hours and cover nine main topics: Project Management; Sustainable Buildings; Energy Efficiency; Efficient Use of Water; Waste Management; Quality of Life in the Workplace; Awareness and Training for Public Servants; Product Life-cycle Analysis; and Sustainable Bids.

Just in 2013, four training courses were held; three in the Federal District and one in the state of Ceará. By July of 2014, there were eight courses, one in each of the following states: Pernambuco, Pará, Tocantins, Rio Grande do Sul, Paraná, Sergipe, Rio de Janeiro and Minas Gerais. In all, 475 public servants were trained.

Distance education training courses

Distance education training courses are aimed at increasing the capacity of the A3P to empower public servants of the three levels of government and the three powers for the planning, implementation, monitoring and sustainability initiatives in Public Administration.

The courses present a simplified content, with respect to the classroom courses, and seek to provide an overview of sustainability in Public Administration, the duties of each public agency and technical support for the first steps in implementing the A3P.

Two distance education training courses were held; the first in September and the second in October of 2014. Initially, the plan was for two courses with 1,500 students in each. For the first group taking the course the number of registered students was 2,600 people. Registrations for the next course were closed on September 30, 2014.

SOLID WASTE RECYCLING INCREASE

The enormous volume of waste generated by modern societies can have serious environmental consequences, such as the contamination of soil, air and water as well as contribute to climate change. The growth in waste generation and its inadequate management have various negative impacts. To get an idea of the size of the problem, in 2010 about 11 billion tons of solid waste were collected worldwide, according to the report *State of the World 2012* by the *World Watch* organization. Of this total, only 10% is recycled. The health of populations is also made more vulnerable. Waste that is incorrectly disposed of can stimulate the proliferation of vector-borne diseases, in addition to the dangers of contamination from the toxic substances found in products and materials used in daily life.

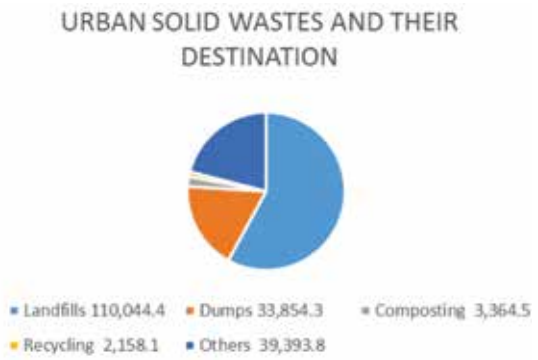
A study commissioned by Business Commitment to Recycling (Cempre), for example, showed that the waste discarded by Brazilians generates 158 million metric tons of carbon per year. The generation of solid waste in Brazil adds up to about 66 million metric tons per year, according to data from the National Survey of Basic Sanitation of 2008, of the Brazilian Institute of Geographic and Statistics - IBGE. The expected economic growth would have exacerbated the problem had the National Solid Waste Policy (PNRS) not been adopted in 2010.

In addition to generating environmental gains, the PNRS seeks to promote an increase in recycling, with positive consequences for industry, consumers and the country. According to the study "Reverse Logistics in the Packaging Industry "by Cempre, recycling offers financial gains in various sectors through the reduction in energy use in the production of goods using recycled materials and also in reducing production costs due to the use of recycled raw materials.

It is in this context that the proposed increase in recycling by the Action Plan for Sustainable Production and Consumption (PPCS) emerges as an opportunity to reduce waste produced and dumped in the environment. The practice of recycling helps to reduce the extraction of natural resources; the reduction of the volume of waste in landfills and, thus, increasing its useful life; a reduction in spending on waste treatment; the reduction of energy use in industry; and growth in the local economy, creating jobs and formalizing thousands of jobs, with the social inclusion of recyclable waste collectors.

The Generation of Waste in Brazil

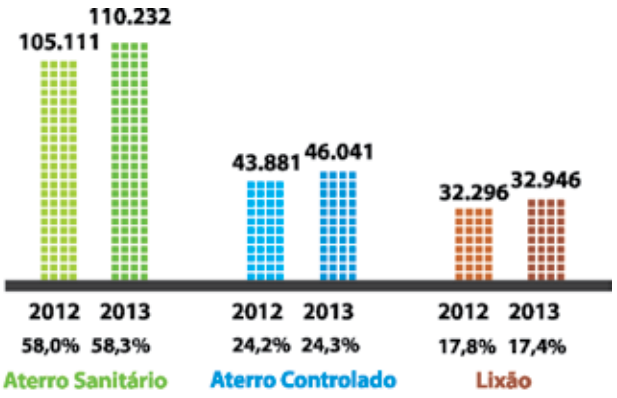
Of the approximately 66 million metric tons of waste produced each year, only 1.2 million are collected selectively. According to the Institute of Applied Economic Research -IPEA, the country loses about R$ 8 billion annually by not recycling solid waste.



Values in Tons per day

In the following figure, what is significant are the numbers related to the disposal of waste collected. The research shows that 58.3% went to landfills in 2013, practically unchanged from the scene of the previous year. Furthermore, it is important to note that of the remaining 41.7%, 24.3% went to controlled landfills[11] and the remaining 17.4% to dumps. Even with the PNRS and all the efforts to implement it by sub-national entities, inadequate disposal of urban solid waste is still present in all Brazilian regions and states.

Disposal of Urban Solid Waste (metric ton/day)



Fonte: Pesquisa ABRELPE

Sanitary landfill – Controlled landfill – Dump

Source: ABRELPE Research

Number of municipalities by Waste Disposal Type - 2012

Final Destination	2012 – Regions and Brazil					
	North	Northeast	Center-West	Southeast	South	BRAZIL
Sanitary Landfill	90	450	157	814	702	2,213
Controlled Landfill	110	505	149	643	366	1,773
Dump	249	839	160	211	120	1,579
BRAZIL	449	1,794	466	1,668	1,188	5,565

Source: Research ABRELPE

In 2013, sixty percent of municipalities still made use of inappropriate sites for the final disposal of collected waste.

[11] The controlled landfill is an intermediate solution between the open-air garbage dump and the sanitary landfill. It receives a covering of earth and grass, which contains the garbage being deposited there. This procedure minimizes the smell and visual impact and prevents the proliferation of insects and animals. However, there is no measure to prevent leaching into the water table nor is the leachate treated or a system to produce biogas used.

Number of municipalities by Waste Disposal Type - 2013

Final Destination	2013 - Regions and Brazil					
	North	Northeast	Center-West	Southeast	South	BRAZIL
Sanitary Landfill	92	453	161	817	703	2,226
Controlled Landfill	111	504	148	645	367	1,775
Dump	247	837	158	206	121	1,569
BRAZIL	450	1,794	467	1,668	1,191	5,570

Source: Research ABRELPE

Increased recycling, as proposed in the PPCS, can be achieved through actions that promote better purchasing and disposal choices by consumers, and the commitment of productive chains to adopt sustainable practices to generate less waste and reuse raw materials. It is a process that involves a commitment from governments and society to selective collection, consumer education, the environmental improvement of production processes and the enhancement and strengthening of recycling associations, as provided for in the National Solid Waste Policy.

National Solid Waste Policy

The National Solid Waste Policy Act - PNRS (Law N°. 12.305/2010) and Decree N°. 7.404/2010 represent a major innovation: change society's relationship with the waste that it produces, acting on waste generation - to reduce it - and on disposal and wastefulness, promoting re-use and recycling.

The PNRS creates important goals, which contribute to the elimination of dumps, and establish planning at the national, state, micro-regional/inter-municipal, metropolitan and municipal levels, with the preparation of solid waste management plans.

In the four years since the creation of the PNRS, significant efforts for its implementation were made. Between 2010 and 2014, the Federal Government, through the MMA, the Ministry of Cities and the National Health Foundation (Funasa), invested R$ 1.2 billion to implement the policy and the number of participating municipalities doubled. According to the IBGE, in 2008, environmentally-sound waste disposal was implemented in 1,092 municipalities, while in 2013 this figure had already grown to 2,200 municipalities. In August of 2014, the deadline for the implementation of environmentally-sound waste disposal expired, as dictated in art. 54 of the National Solid Waste Policy - PNRS (Law N°. 12.305/10). A good part of municipalities have not yet deactivated the dumps and implemented sanitary landfills.

The PNRS establishes that the only waste that should be disposed of is what is left after having exhausted all the technical and economic possibilities of re-use and recycling, in order to avoid damage or risks to public health, safety and to minimize environmental impacts, until selective collection.

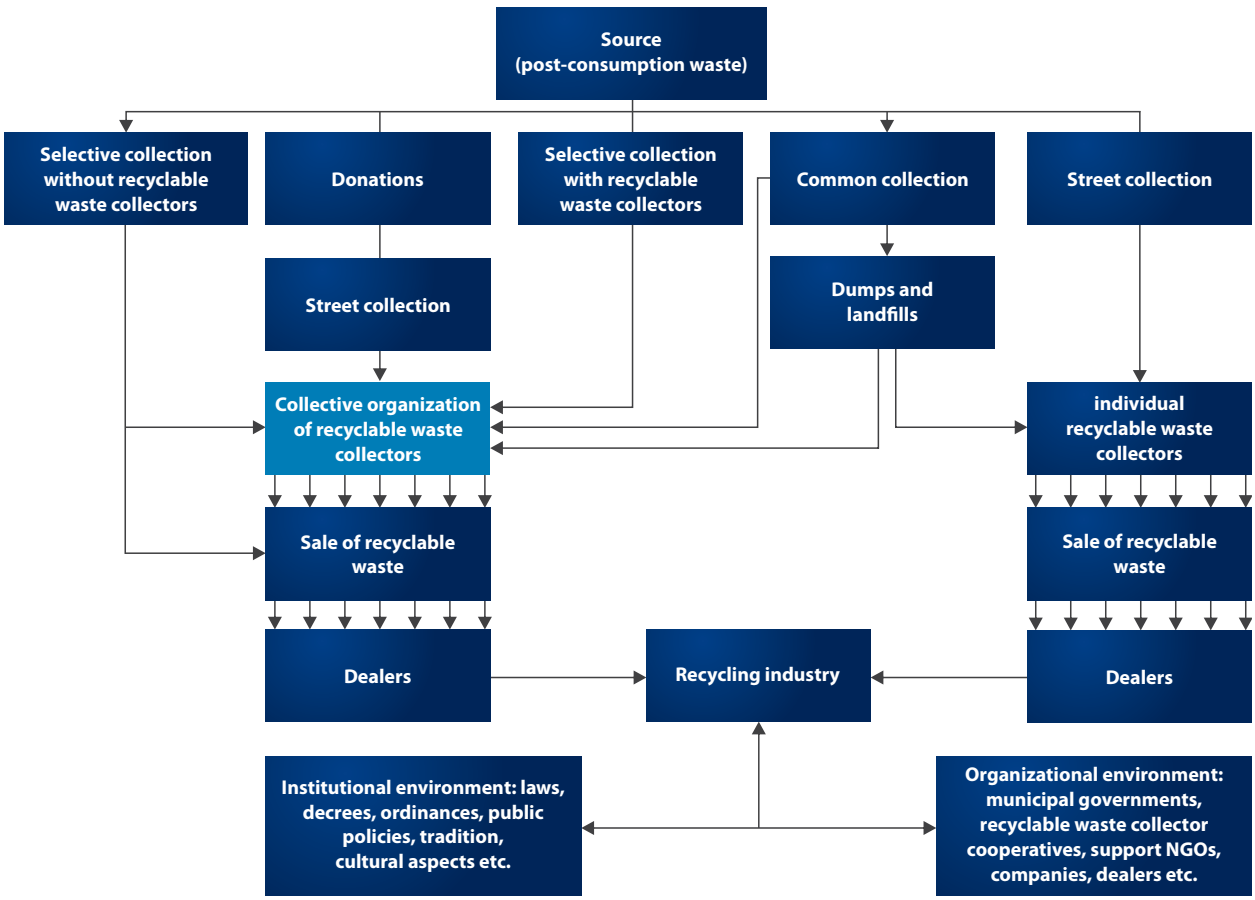
When it comes to the actual amount of recycling of municipal solid waste in Brazil, the percentage is still quite low compared with the potential for recycling that can be achieved with dry recyclable waste (paper and cardboard, plastics, metals and glass). Within the group of recyclable solid waste, there is what is termed "wet" waste or easily biodegradable organic waste, which accounts for up to 50% of urban waste and which can be recycled through the process of composting.

Recycling in Brazil

The idea of recycling as a productive sector with great potential for economic returns is relatively recent. The economic viability of exploiting this sector came mainly from the considerable increase in the level of consumption in urban centers in recent years, which resulted in, on the one hand, an increase in the same proportion in materials to be disposed of and, on the other hand, the steady increase in the cost of raw materials for the production of consumer products in general, which are increasingly demanded by society. Consequently, new technologies have been developed that transform waste into the raw materials that return to the production process (IPEA 2013).

The figure below illustrates, in summary, the main relations between the actors, structures and commercial relations that make up the chain of recycling value:

Flowchart of the recycling value chain



In addition to environmental and social benefits, the re-use of materials also generates financial benefits: IBGE data indicate that the substitution of pulp with recycled fibers allows for a savings of R$ 331 per metric ton, half the

cost of what it would be without using recycled fibers (R$ 687 per metric ton). In the case of aluminum, the value drops from R$ 6,100 to R$ 3,400 per metric ton.

Economic benefits of recycling *

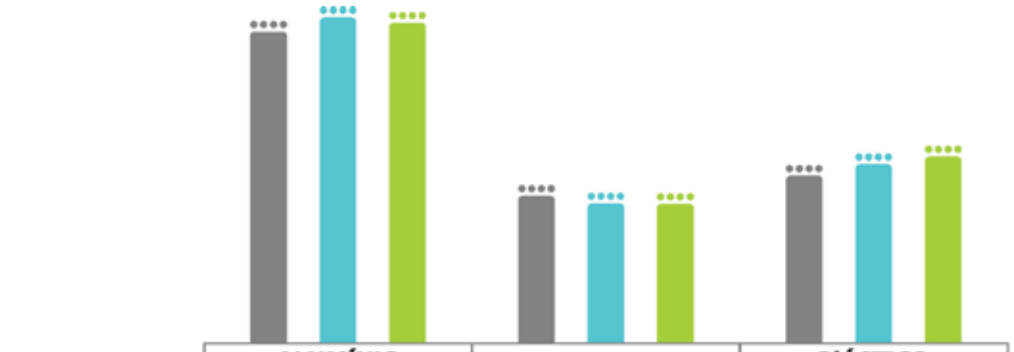
	Economic benefit per day				
Material	**Incremental Recycling (metric tons/day)**	**Inputs (R$)**	**Environmental (CO2, energy and biodiversity) (R$)**	**Additional recycling costs (R$/ metric ton) ****	**Total profit (R$/ day)**
Steel	253	32,164	18,741	113	22,287
Aluminum	61	164,496	20,539	113	178,189
Celulose	1,397	460,854	33,517	113	336,563
Plastic	554	644,545	31,009	113	612,982
Glass	246	29,572	2,711	113	4,436
Total	2,511	1,331,632	106,517		1,154,457

* Projection based on 90% selective collection coverage in the FIFA World Cup 2014 host cities

** Selective collection costs (R$ 136/Ton - equivalent to USD 49.50/Ton - exchange rate December 2014) minus the disposal costs (R$ 33/Ton - equivalent to USD 12 - exchange rate December 2014)

Some items already have significant recycling rates in the country, confirming an upward trend over the years, as demonstrated by the products below:

Recycling Rates for Aluminum, Paper and Plastic (PET)



	ALUMÍNIO (LATAS)	PAPEL	PIÁSTICO (PET)
2012	97,9	45,7	58,9
2011	98,3	45,5	57,1
2010	97,6	44,0	55,8

Fontes: ABAL Associação Brasileira de Alumínio; BRACELPA Associação Brasileira de Celulose e PAPEL; ABIPET Associação Brasileira da Indústria de PET

Aluminum (cans) – Paper – Plastic (PET)

Source: ABAL Brazilian Aluminum Association; BRACELPA Brazilian Cellulose and PAPER Association; ABIPET Brazilian PET Industry Association

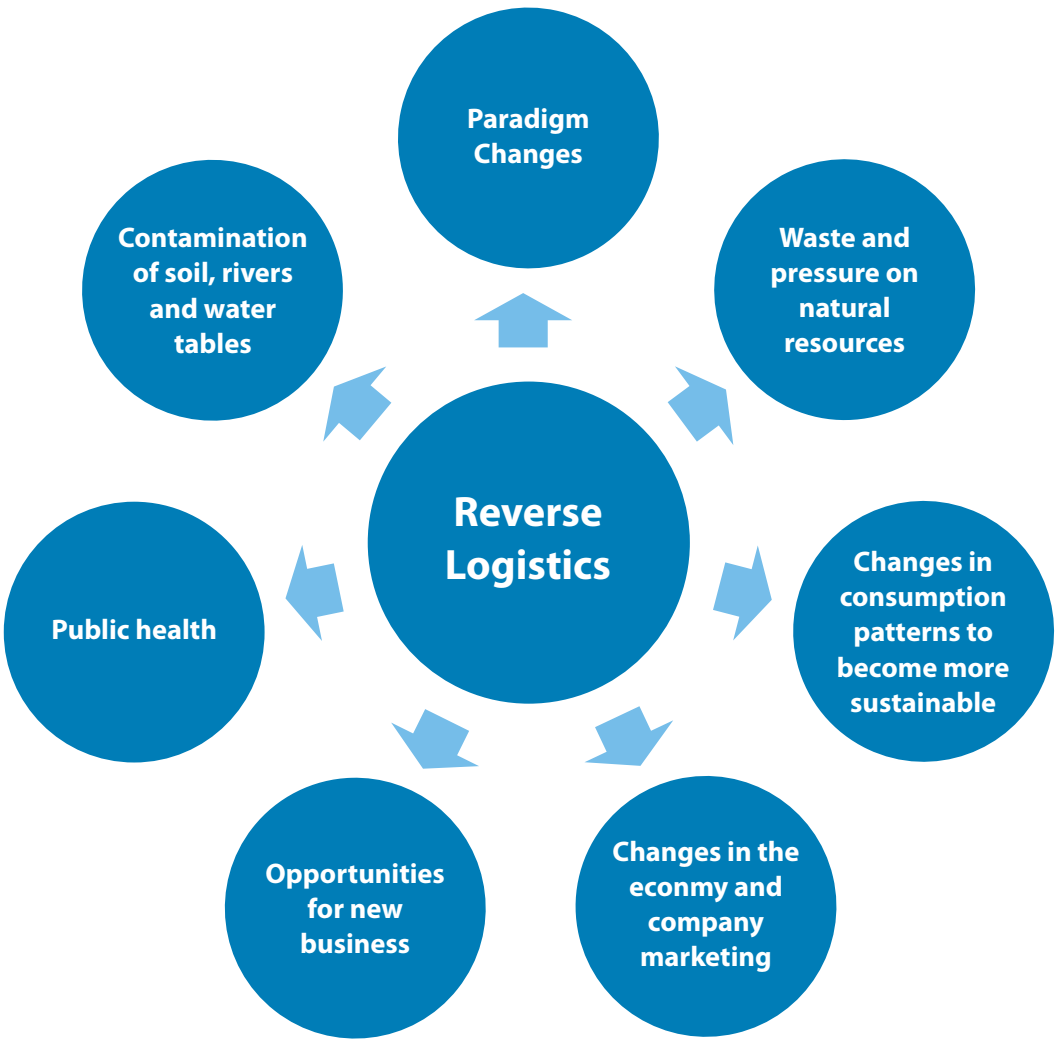
The **4th National Conference on the Environment**, held in 2013, was instrumental in broadening the discussion and awareness on the topic of Solid Waste and the implementation of the National Solid Waste Policy, focusing on four themes: Sustainable Production and Consumption; Reducing environmental impacts; Generating employment and income; and Environmental Education. The debate was based on the concept of Shared Responsibility, where each sector of society has responsibilities and roles in the effort to solve or mitigate problems related to solid waste.

With the mobilization of more than 200,000 people across the country, representing 65.61% of Brazilian municipalities, distributed in all 26 states and the Federal District, and 1,352 delegates just at the national level, it was the largest environmental conference ever held and marked the beginning of a strong institutional coordinated effort, involving federal, state and municipal governments, the productive sector and civil society in the search for solutions and strategies that contribute to the implementation of the National Solid Waste Policy, approved in 2010 after 21 years pending in the National Congress.

We should also mention the training and education efforts, through the distance education (DE) platform of the MMA, which offered the course "Guidelines for Developing a Simplified Plan for the Integrated Management of Solid Waste", with a workload of 20 hours, with tutoring. In 2013, 400 people registered for the course and 179 were approved. In 2014, 1,000 were enrolled, with the course still in progress. The 3rd edition is scheduled for the 2ndhalf of 2014, offering 1,000 vacancies.

Reverse logistics is an "economic and social development tool, characterized by a set of actions, procedures and means to enable the collection and return of solid waste to the business sector, to be reused in its cycle or other production cycles, or for other ends".

Under Article 15 of Decree N°. 7.404/10, reverse logistics systems are implemented and operationalized through Sectoral Agreements, regulations issued by the Government, among these the instrument of modeling and governance, and through commitments, that can be signed with state and/or municipal governments, approved by the National Agreement when they do not conflict with federal law and other instruments governing the matter.



The reverse logistics systems already in place and being implemented are listed in the following tables:

REVERSE LOGISTICS SYSTEMS IMPLEMENTED- BEFORE THE PNRS			
Products	**Legal Norm**	**Date**	**OtherLegal Norms**
Pesticide containers	Law N°. 7.802/1989	11/7/1989	Decree N°. 4.074/2002
	Law N°. 9.974/2000 (alteration)	6/6/2000	-
Used or contaminated lubricating oil (OLUC)	CONAMA Resolution N°. 362/2005	23/6/2005	CONAMA Resolution 450/2012
Tires	CONAMA Resolution N°. 416/2009	30/9/2009	-
Batteries	CONAMA Resolution N°. 401/2008	4/11/2008	CONAMA Resolution 424/2010

REVERSE LOGISTICS SYSTEMS IN IMPLEMENTATION- PNRS		
Products	**Current Situation**	**Forecasted Announcement of Agreement**
Plastic packaging of lubricating oils	Agreement signed on 12/19/2012	Published in early February, 2013
Sodium and mercury vapor lamps and mixed lights	Agreement text going through minor alterations to be sent to CORI	2014
General packaging	Agreement text going through minor alterations to be sent to CORI	2014
Electronic products and their residues	In negotiation with those involved	2014
Disposal of drugs and medicines	Notice published; forecast for receipt of tenders 01/04/2014	2015

Other initiatives contribute to this priority of the PPCS, such as the creation of business associations like the Business Coalition for Reverse Logistics of Packaging, which set a goal to recover, by 2015, 20% of the 55,400 metric tons of recyclable solid waste discarded daily in Brazil.

In Brazil, the **social inclusion of recyclable waste collectors** reaches about 600 thousand people, who, in addition to ensuring the livelihood of their families with waste separation, provide an important environmental service to society, to the extent that they are responsible for most of the recycling in the country.

Currently, many of these workers are in the dumps and landfills throughout Brazil. With the passing of Law N°. 12.305/2010 (PNRS), it was forbidden to practice this activity in dumps. It became necessary then to integrate them into the recycling chain and, in doing so, promote the citizenship of these workers with social inclusion and the generation of employment and income. With this in mind, the Inter-ministerial Committee for Social and Economic Inclusion of Reusable and Recyclable Waste Collectors (CIISC), was established with Decree N°. 7.405/2010.

The CIISC, coordinated by the General Secretariat of the Presidency, consists of members from the Ministries of Environment; Social Development and Hunger Alleviation; Labor and Employment; Social Security; Education; Health; Cities; Tourism; Mines and Energy; Finance; Science and Technology, and Planning, Budget and Management; as well as the Union Heritage Secretariat; General Secretariat of the Presidency; Human Rights Secretariat of the Presidency; the Bank of Brazil Foundation; Eletrobras; Civil House of the Presidency; Caixa Econômica Federal; Petrobras; National Health Foundation; Itaipu Technological Park and Applied Economic Research - IPEA.

With the creation of CIISC, the *Programa Pró-Catador*(Pro-Recyclable Waste Collector Program) was established in order to integrate and coordinate the actions of the Federal Government aimed at supporting and fostering the productive organization of reusable and recyclable waste collectors, improving working conditions, the expansion of opportunities for social and economic inclusion, the expansion of selective solid waste collection and re-use and recycling, through the activities of this segment.

The CATAFORTE III Program - Sustainable Business in Solidarity Networks is a project of the Pró-Catador program that is providing resources for establishing Cooperation Networks for Solidarity Economic Enterprises of Recyclable Waste Collectors. Started in 2007, the CATAFORTE program has reached 768 solidarity economy enterprises in 21 states since its first phase. The third phase, launched in 2013, is expected to have R$ 170 million in grant resources and more than R$ 30 million for loans. The Edict of the Cataforte III Program launched in 2014, provided funds of approximately R$ 20 million for establishing 24 Cooperation Networks.

The program created, in 2013, the Pró-Catador Award –an award initiative of the General Secretariat of the Presidency in partnership with the Ministry of Environment, the Bank of Brazil Foundation, IPEA and the National Movement of Recyclable Waste Collectors. The idea is to give visibility to municipalities whose practices of social and economic inclusion of collectors can serve as a reference to encourage other municipalities to follow suit. It also seeks to deepen the knowledge of federal, state and municipal public officials on public policy of recycling, selective collection and the social and economic inclusion of collectors as well as create a database of good municipal practices. In the first edition, launched in 2013, four winning initiatives were selected. In the 2014 edition, in addition to the awards, the winning initiatives presented investment proposals for projects, in partnership with the city hall and the cooperative or association, of up to R$ 120 thousand for a total of 12 initiatives in four categories.

The PNRS also strengthens the collectors of recyclable waste, promoting the formation of cooperatives and their inclusion in the production chain of recycling. All this strengthens the recycling industry, which will benefit from separated domestic waste, selective collection and recycling cooperatives.

Summary table of the social situation of recyclable waste collectors in Brazil

Categories	Indicators	Brazil	South	Southeast	Northeast	Center-West	North
Demographics	Total of recyclable waste collectors	387,910	58,928	161,417	116,528	29,359	21,678
	Average age of recyclable waste collectors	39.4	38.9	40.6	38.3	40.0	36.5
	Women (%)	31.1	34.1	30.9	29.3	34.1	29.5
	Afro-Brazilians (%)	66.1	41.6	63.0	78.5	71.3	82.0
	Recyclable waste collectors living in urban areas (%)	93.3	93.5	96.2	88.5	95.6	93.2
	Total of residents in domiciles with at least one recyclable waste collector	1,426,584	196,787	578,190	456,060	99,412	96,135
	Dependence ratio of children in households with at least one recyclable waste collector	50.0	53.5	43.6	55.3	46.3	64.1
	Formalization of the workforce (CTPS and RJU) (%)	38.6	32.2	45.7	33.8	38.4	29.0
Work and Income	Average income of recyclable waste collectors (R$)	571.56	596.90	629.89	459.34	619.00	607.25
	Income inequality among recyclable waste collectors (Gini Index)	0.42	0.42	0.39	0.43	0.37	0.42
	Residents in households with at least one extremely poor recyclable waste collectors (less than R $ 70 per capita %)	4.5	4.1	2.2	8.4	1.8	3.8

Social Security	Recyclable waste collectors with social security contribution (data PNAD 2012) (%)	15.4	25.9	17.7	6.2	10.6	7.4
	Coverage of elderly people in households with at least one recyclable waste collector	57.8	59.1	56.1	61.5	55.1	54.8
Education	Illiteracy rate among recyclable waste collectors	20.5	15.5	13.4	34.0	17.6	17.2
	Recyclable waste collectors aged 25 or more with at least primary school completed (%)	24.6	20.6	28.3	20.4	23.9	30.0
	Recyclable waste collectors aged 25 or more with at least secondary education completed (%)	11.4	7.9	13.5	9.7	10.8	14.0
Access to public services	Households with at least one recyclable waste collector with adequate sanitation (%)	49.8	40.9	75.4	32.5	28.0	12.3
	Children (0-3 years) who attend day care residents in households with at least one recyclable waste collector (%)	22.7	19.8	27.9	21.7	18.5	13.0
	Households with at least one recyclable waste collector with access to electricity (%)	99.0	98.5	99.7	98.4	99.5	98.4
Digital inclusion	Households with at least one recyclable waste collector with computer (%)	17.7	20.1	26.4	7.0	19.2	9.0

Source: Demographic Census 2010 (IBGE,2012a) PNAD 2012 (IBGE, 2012b

Given the heterogeneity that characterizes this profession, it is not easy to establish the precise number of these professionals in Brazil, or anywhere else in the world for that matter. In the study Diagnosis of Solid Waste Collectors conducted by the IPEA (2011), it was estimated, based on data from public and business organizations and the National Movement of Recyclable Waste Collectors - MNCR, the number is between 400,000 and 600,000 men and women working as recyclable waste collectors in the country.

In the 2010 Demographic Census, there were 387,910 men and women in Brazil who declared themselves as recyclable waste collectors as their main occupation. Although this number is very close to the estimate offered by the IPEA (2011), it may be below the true total, for a number of reasons. One reason being the very nature of the occupation, which, being part of the informal economy is subject to fluctuations in the economic environment and the demand for labor in other sectors. Further to this point, Crivellari, Dias and Pena (2008) point to the possibility that recyclable waste collectors (especially those with more education) have been encouraged to look for other jobs with higher pay, which started to be offered over the past decade with the recovery of economic growth and new opportunities in the labor market in the country (IPEA 2013).

The project "Social and Productive Inclusion of Recyclable Waste Collectors" is part of the National Action in Defense of Fundamental Rights and is intended to promote actions aimed at the protection of the rights of these workers, as well as children and adolescents, within the parameters of the National Solid Waste Policy and current legislation. To make it feasible the Brazilian Public Ministry has to take effective, concrete and incisive actions, in cases of irregularities:

- ✓ To establish and regularize the legal status of recyclable waste collectors, be they adults, seniors, children and adolescents involved in waste collection activity; and
- ✓ To promote the legal accountability of Municipalities.

The following objectives were established within the project:

- ✓ Carry out inspections and establish investigative procedures in municipalities that have not yet deactivated their open-air garbage dumps;
- ✓ investigate and prosecute in cases of degrading working conditions in dumps and in the streets; and
- ✓ Issue recommendatory notifications, sign Responsibility Agreements for Modifying Behavior and oversee civil class actions.

Under this initiative, the National Council of the Public Prosecutor's Office launched the Ministerial Practice Guide: Deactivation of dumps and social and productive inclusion of recyclable waste collectors[12].

One of the main instruments of the PNRS to be taken into account for encouraging recycling is the implementation of **selective collection programs** in cities, involving the steps of collection, transportation, processing and sorting of waste generated by households and businesses. Such programs, aside from enabling greater efficiency in the recycling of various materials, also reduce the environmental impact caused by the improper disposal of solid waste, since they allow for a reduction in the volume of waste discarded by redirected it to an adequate destination.

The collection includes organic and inorganic waste, or wet and dry, or recyclable and non-recyclable, which were previously separated at the source. This is a kind of treatment of waste that begins at the source with the separation of organic and inorganic materials; and then, ready to be removed, which may be at the door of the residence, business or industry, for later collection by officials or by recyclable waste collectors, or delivered to voluntary delivery points or recycling cooperatives. Subsequently, this material will be separated at sorting plants into paper (cardboard, newspaper, white paper, etc.), plastic (pet, pvc, pp, etc.), metal (aluminum, tin cans, copper, etc.),

[12] http://www.cnmp.mp.br/portal/images/Livro_Catadores_WEB.pdf.

composite packaging and other waste, which will then be organized and baled and sold for recycling, becoming a product or raw material in the production chain.

Selective collection is also a way to raise awareness on the issue of dealing with the solid waste produced in our day-to-day life, whether generated in public environments or in private ones.

Multi-Selective Selective Collection involves collection by different types of solid waste, normally applied in cases where the results of implemented selective collection programs have been satisfactory.

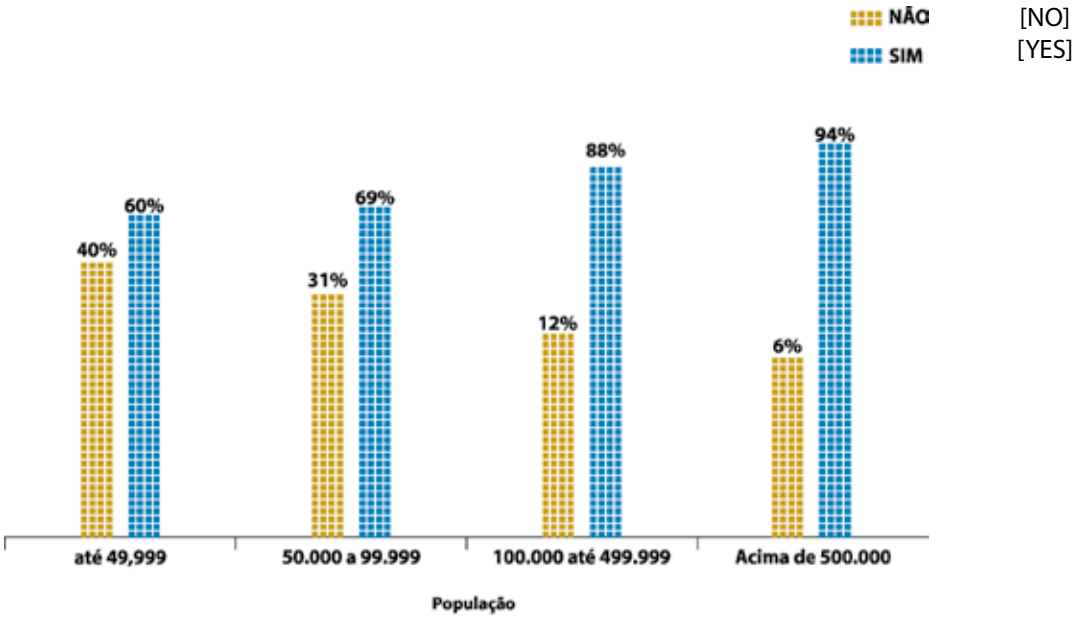
CONAMA Resolution N°. 275 of April 25, 2001, establishes a color code for different types of waste, to be adopted in identifying collection containers and transporters as well as in information campaigns about selective collection:

- **Blue: paper/cardboard**
- **Orange: hazardous waste**
- **Red: plastic**
- **White: medical and health services waste**
- **Green: glass**
- **Purple: radioactive waste**
- **Yellow: metal**
- **Brown: organic waste**
- **Black: wood**
- **Gray: general waste that is not recyclable or mixed, or contaminated and not able to be separated.**

Selective collection allows for better processes of recycling and reverse logistics and helps to achieve goals associated with the disposal of waste in an appropriate and sustainable manner.

According to research conducted in 2013 by the Brazilian Association of Public Cleaning Companies and Special Waste - ABRELPE, 3,459 Brazilian municipalities had selective collection initiatives. The graphs, figures and tables that follow show the results for the country:

Selective Collection Initiatives by Municipalities
Ranked by Population Size (%)



[NO]
[YES]

Fonte: Pesquisa ABRELPE

Source: ABRELPE research

Distribution of Municipalities with Selective Collection Initiatives (%)

[YES]
[NO]

Source: ABRELPE research

Municipalities with Selective Collection Initiatives												
Region	**North**		**Northeast**		**Center-West**		**Southeast**		**South**		**BRAZIL**	
	2012	2013	2012	2013	2012	2013	2012	2013	2012	2013	2012	2013
Yes	213	223	678	725	148	158	1,342	1,378	945	975	3,326	3,459
No	236	227	1,116	1,069	318	309	326	290	243	216	2,239	2,111
Total	**450**		**1,794**		**467**		**1,668**		**1,191**		**5,570**	

Source: ABRELPE research

Projections based on public data show that 27% of recyclable waste (dry part) collected in the cities was effectively recovered in 2012, meaning it was diverted from dumps and landfills and returned to productive activity. In the case of packaging the recovery rate was 65.3%.

The following table shows initiatives/actions that have contributed to achieving the PPCS goal of increasing the recycling of solid waste in the country:

Ongoing actions	Responsibility	Type	Goal	Results
"Separate Waste and Hit the Can" Campaign	MMA, MDS, SECOM-PR	Partnership action	No goals	
Brazilian Program for the Elimination of HCFCs - PBH	MMA	governmental actions	1 - freeze the production and consumption of HCFCs in 2013, based on average consumption from 2009 to 2010;	PBH was approved at the 64thMeeting of the Executive Committee of the Multilateral Fund for the Implementation of the Montreal Protocol (MLF), which took place from July 25 to 29 of 2011, with US$ 19,597,166.00 in resources. The funds will be used to implement the first stage of PBH, which make up the actions planned by 2015, to freeze consumption in 2013 and reduce this consumption by 16.6% by 2015.
			2 - 10% reduction in consumption by 2015, 35% in 2020, 67.5% in 2025, 97.5% in 2030, and elimination of consumption in 2040	Goal underway

Voluntary initiatives of Refrigeration Companies (baseline year: 2010)	MMA, Unilever, Metalfrio	Voluntary initiatives	1 - Replacement of HFC gases by natural gas: 20% of refrigeration companies by 2012, 35% by the end of 2014, 50% by 2016, 65% by 2018 and 80% by 2020;	
			2 – Re-use and/or recycling of components at the end of the useful life of the refrigeration unit: 20% by 2013, 35% by 2015, 50% by 2017, 70% by 2019 and 100% by 2021	
Regulation of Law N°. 12.305/2010	Federal Government	governmental actions	Law N°. 12.375/2010 establishes the credit of IPI on the acquisition of recyclable waste used as raw material, purchased directly from recyclable waste collectors' cooperatives	Introduced in the IPI table - TIPI - CN code (39-2) which reduces to zero the rate of tax charged on products consisting of a mixture of exclusively recycled plastics, with printable outer layers, called synthetic paper, classified under code 3920.20.19 when used for the printing of books and periodicals.
"Saco é um Saco" (*Bag is a Drag*) Campaign	MMA and different partners	Partnership action	Reduce the national consumption of plastic bags by 50% by 2014	The goal can not be achieved because of contrary court rulings to end the free supply of plastic bags. However, the debate is not over and the result has been an increase in sustainable consumption with regard to plastic bags and increased awareness on the use of reusable bags. The campaign triggered reflection on the need to use plastic bags, leading to a massive reduction in their use by 5 billion bags annually.
Inclusion of selective disposal symbols on the packaging of consumer goods	MMA and ABRE	Partnership actions	3,000 packages/products between 2012 and 2014	Goal met

Sustainable Consumption Notebook - Volume 1 - Recycling	MMA and CEMPRE	Partnership actions	20,000 copies distributed by 2013	The MMA launched the Sustainable Consumption Notebooks series, which are explanatory and entertaining, with information on sustainable consumption and its contributions to society and the environment. The books address the issues of sustainable consumption: recycling, construction and children's consumption. The print run was 100,000 for each notebook. The goal now is to create conscientious consumers.
LevPET - proper disposal of pet bottles - Portal with the locations of places to leave empty pet bottles	ABIPET	Voluntary initiatives	Informative, without goals	The system is already in operation at the link: http://www.abipet.org.br/index.html?method=mostrarMapa&mapa=true
Solid Waste Program	MMA	Governmental actions	1 - Support for 100 municipalities to implement selective collection programs	766 municipalities in the country already have selective collection (Ciclosoft research data)
			2 - Training and strengthening of the participation in selective collection for 60,000 recyclable waste collectors	
			3 - Fostering the creation and implementation of 120 public consortia operating in solid waste	
			4 - Development and strengthening of 500 cooperatives/associations and cooperation networks of recyclable waste collectors to act in selective collection and recycling chains	
			5 - Increase of 100 recyclable materials business networks collected by recyclable waste collectors' associations	
			6 - Providing infrastructure for 280,000 recyclable waste collectors	

			7 - Implementation of 8 Sectoral Agreements on reverse logistics in production chains	
			8 - Increase the percentage of Brazilian municipalities with solid waste recycling to 20%	
			9 - Implementation of Integrated Management of Solid Waste Plans (PGIRS) in 35% of municipalities in the country	
			10 -Implementation of the Solid Waste Information System	
			11 - R$ 1.5 billion in contracts supporting the implementation of environmentally sound final disposal of solid waste in municipalities with inadequate forms of waste disposal	

SUSTAINABLE RETAIL

The Plan for Sustainable Production and Consumption elected Sustainable Retail as one of its priorities for the first cycle due to its key role in the economy. Not only that, it also recognized retail chains as strong partners of the government in the implementation of initiatives that contribute to public policies aimed at sustainability. To understand the importance of this, it is enough to look at some industry figures: since 2003, retail has grown at twice or even three times the rate of the gross domestic product in Brazil and already represents 14% of GDP, with potential to reach 30% in ten years, according to data from the Institute for Retail Development (IDV).

When it comes to sustainable retail, basic questions were raised concerning the implementation of this initiative, such as what type of product is marketed and how is that done; what are the social and environmental criteria used; and if these criteria are respected or not in all processes, from beginning to end.

It is true that the consumer makes the decision on what and where to buy, but so that one can exercise this free will, one must have alternatives to choose from. Among the partners in this effort are retail chains in the areas of supermarkets, home appliances, building materials, clothing and fuel, among other segments of the retail sector. In this context, the urgent "change in patterns of production and consumption" is highlighted with many challenges to overcome at local, national and international levels. After all, retail is the most important link between producers and consumers.

The Action Plan for Sustainable Production and Consumption (PPCS) launched the challenge of implementing sustainable practices for the retail industry, including encouraging sustainable consumption. The objective is to encourage actions to:

- ✓ create monitoring mechanisms that show the increasing economy in resource use and waste generation, especially those generated by the use of plastic bags;
- ✓ increase the number of eco-efficient stores;
- ✓ increase the number of voluntary delivery points for packaging and waste;
- ✓ increase the availability of sustainable products in four categories: food, utensils, clothing, and cleaning and hygiene; and
- ✓ encourage products with quality seals and include social and environmental criteria in their certification processes.

In recent years, the sector has made progress in the Social Responsibility of companies, but also understood that it is not enough to consolidate the link between sustainability and profitability, competitiveness, effectiveness and productivity. In this new approach, opting for sustainability is not considered synonymous with stagnation or an increase in costs, but innovation and forward thinking. In Brazil, the large retail groups are acting beyond the physical structures of their buildings and turning green stores into places for the dissemination of concepts and practices of conscientious consumption.

Some of the results achieved by the sector, such as those made by the three largest retail store chains in the country and partners of the Plan for Sustainable Production and Consumption (PPCS), are presented below as examples of the efforts being made across the country. The data and information cited were obtained directly or in publications and the web pages of retail chains, associations, companies and institutions and demonstrate what is already being done in the country, as well as the sector's potential to contribute to sustainable production and consumption. They include actions aimed at increasing efficiency in energy consumption and the resulting reduction in emissions; the reduction of waste generation, as well as its collection and disposal at recyclable

waste cooperatives; an increase in products offered with an ecological differential and sustainability criteria; the adoption of family-sized and recycled packaging; the supply of organic products and products from family farms; and to train employees in sustainability practices, just to mention a few of the actions.

As an example, one can cite Walmart Indaiatuba, in the state of São Paulo, the first hypermarket in the country to use 100% LED lighting. The success of this initiative was achieved thanks to a partnership, with the retail chain working with a supplier to develop lighting fixtures and systems tailored to the store, which has 7.9 thousand square meters of floor space. The exclusive use of LED has resulted in a savings of more than 27% in lighting as well as reduced maintenance costs due to the increased lifespan of the product. By the end of 2014, Walmart wants to have another 15 stores, which will undergo renovations, with this type of lighting in their sales areas.

The Walmart Network already has 42 stores in Brazil denominated **eco-efficient** for adopting a number of initiatives to reduce the use of ecosystemic services. 10 were launched in 2013. The company also has an eco-efficient distribution center. Over the years, Walmart Brazil has developed a list with more than 60 sustainable initiatives, to be used in the construction of their new stores or in the renovation of their old ones. For example, the refrigeration equipment used in new Walmart Brazil stores no longer uses the refrigerant R22, which may affect the ozone layer of the planet and contribute to the greenhouse effect. Instead, the company uses R404A, which does not affect the ozone layer. In 2013, Walmart reached the global target of cutting 20% of its emissions of gases causing the greenhouse effect, using 2005 as the base year. The goal was met ahead of schedule.

Providing customers with a greater **guarantee of origin** of beef by means of a monitoring system and supporting Amazonian ranchers in more sustainable ways of livestock production are the main goals of two new projects of the Walmart Brazil Sustainable Farming Program, launched in partnerships with the meat suppliers of the chain. The Producers' Club is another program, launched 12 years ago, giving small and medium producers access to the large retailer and giving customers access to products of higher quality and more sustainable production.

Through the **Ponta-a-Ponta** (Beginning-to-End) Sustainability Program, now in its 4th edition, the retail chain offers more socio-environmental products, combining quality with innovation and efficiency. In the program, the stages of the product's life-cycle are detailed to identify opportunities for improvements that will lead to a reduction in the consumption of natural resources, energy and emissions (air and water) and the generation of solid waste, both industrial and post-consumption. The program also identifies social contribution activities and those related to environmental education.

An important tool Walmart has to demonstrate its sustainability actions is the publication of its Environmental Responsibility Report, which organizes its efforts using the GRI (Global Reporting Initiative) model, made available on its website.

Since 2013, the Carrefour Group has been active in a wide-reaching **waste management** program, aimed at the internal and external public of the retail chain. Internally, all the stores carrying the Carrefour name have undergone changes, which began with the preparation of Waste Management Plans (PGR), the adaptation of operating structures (bins, dumpsters, storage locations), the identification and development of partners for waste management (companies that meet Carrefour criteria and can provide an environmentally appropriate destination for all separated waste), as well as the training of more than 45,000 employees working for the company in the country.

In this program, according to company data, they achieved significant results with regard to waste generation, for example: 40% less waste going to landfills and re-routed to the recycling process. The company also has a specific program for organic waste recycling in its 55 stores in the state of São Paulo. All flours and starches that have passed the best before date and fat and bones from the meat counter are turned into animal feed.

For the general public, Carrefour works to provide numerous alternatives to improper waste disposal. Currently, Carrefour stores receive general packaging (paper, plastic, glass, metal and Tetra Pak packaging), used cooking oil, expired medications, batteries and printer cartridges. More than 110 of the chain's stores receive used cooking oil which is turned into biodiesel, saving millions of liters of water from being polluted every month. Every year, 70,000 liters of oil are received in Carrefour stores nationwide. In partnership with HP, 71 of the chain's stores receive used printer cartridges.

In 2014, Carrefour completed the installation of its 138th **Recycling Station**, consolidating its project in 13 Brazilian states, including ten cities hosting World Cup games in 2014. The "recycling stations" program included the renovation of 44 existing stations and the installation of another 94. With the expansion, the ability to collect waste increased from 350 metric tons to more than 1,000 per month and meets the population's growing demand for places that can receive the recyclable waste generated in their homes. There are 138 recycling stations in hypermarkets and supermarkets located in 47 major Brazilian cities, where more than 12.6 million customers circulate every month.

The Pão de Açúcar Group is another that stands out for their recycling stations, being the first retail chain to provide voluntary delivery points. In a partnership signed with Unilever, they created the Pão de Açúcar Unilever Recycling Stations, which became a reference in the industry and today is the oldest and largest retail recycling program in the country. All that is collected is donated to recycling cooperatives, partners in the program, promoting social inclusion and income generation.

Another important partnership was the Extra Recycling Station Program and Procter & Gamble, which since July of 2012 offer voluntary delivery points for recyclable materials such as paper, plastic, metal, glass and cooking oil. All that is collected is donated to recycling cooperatives, partners in the program, promoting social inclusion and income generation.

The **Green Box** program is another initiative that encourages recycling, focusing on pre-consumption. In the program, customers can leave the secondary packaging, that need not be taken home, in the box set up after the checkout lines. The packaging can be things like promotional packs, toothpaste or shaving cream boxes or beverage packaging. The program is present in 100% of Pão de Açúcar's stores, all over the country, and everything that is collected is also given to recycling cooperatives, partners in the program.

It is important to note that there are already retail companies in the country conducting carbon **inventories** and, in the calculation of the main environmental indicators of the company, include - consumption of water, energy and waste generation and data about third party vendors that manufacture part of their products. In addition to creating recycling stations to encourage consumers to separate and drop off their recyclable waste they also carry out promotional campaigns offering discounts on the bill in exchange for empty containers.

Sectoral pacts, agreements or voluntary actions are also part of the initiatives with the retail sector, such as:

- ABIPLA (Brazilian Association of Cleaning and Related Industries): site of the "Movimento Limpeza Consciente"(*Clean Conscience Movement*) program, with about a thousand hits per month, which promotes the reduction of water and energy use, reduction of greenhouse gas emissions, reduction in the use of chemicals and containers and better ergonomics in the production chain and for the consumer; and
- Abre (Brazilian Packaging Association): inclusion of selective disposal symbols on the packaging of 3,000 registered non-hazardous consumer products and about 2,000 that have not yet been registered. Standardization for the guidance of selective disposal of packaging materials was included for products from food, beverages, cosmetics, utensils and appliances industries, among others.

- In addition to other voluntary initiatives, such as:
  - ✓ Sanofi Farma - minimizing the environmental impact of its promotional activities, promoting conscientious consumption among doctors and consumers, promoting the manufacturing of more sustainable products, and publishing the Conscientious Consumption Guide in print and digital media;
  - ✓ Packaging Institute - technical training for workers of the MMA, airlines, SENAI, SEBRAE and the National Industry Confederation (CNI) with the "Packaging from A to V - Steel to Glass" course on packaging materials and their disposal; elaboration of the contents of the first Sustainable Production Notebook on Packaging, eco-design and waste disposal; and a film about the importance of eco-design in packaging and the correct choice of materials.

Standards and sustainability certificates are voluntary instruments, usually evaluated by third parties, related to environmental, social, ethical and food safety themes. Adopted by companies to demonstrate the performance of their organizations, facilities, chains, processes or products, they are increasingly present in the sustainability strategies of companies and chains. Most certifications consider the triple bottom line - environmental quality, social equality and economic prosperity.

Products that use green plastic, for example, are identified with the label "I'm Green™" in product lines that include animal feed, cosmetics, beauty product packaging, rice packaging, promotional bags and agrochemicals.

LEED Certification[13], one of the principle seals of sustainable construction around the world, is an international certification system and an environmental orientation for buildings, which encourages the development of projects, construction and operation of buildings based on sustainability. Many retail chains are seeking LEED certification for their stores, a recognition that was given to 6 stadiums of the 2014 World Cup in Brazil.

Eurofios, a manufacturer that develops yarns for crafts from the waste of textile companies, has just received a certification from the Brazilian Retail Textile Association (ABVTEX) that attests to the reliability of the brand in the sector. Responsible for manufacturing thread and string for handicrafts, the company has collected more than 100 metric tons of fabric waste from textile companies and produces green curtains.

Another example is the AQUA certification - Alta Qualidade Ambiental (*High Environmental Quality*), audited by the Vanzolini Foundation, an entity linked to the University of São Paulo. One of the Leroy Merlin stores, located in Niteroi, received the first AQUA certification given to a retail business in the country. The 'green building' met the certification requirements in the stages of Planning, Project Design and Construction.

Sustainability Reports also are becoming common practice among retailers, an act of transparency with the public that highlights their commitment to sustainability. The C&A chain was the first company in the retail fashion industry in Brazil to issue a sustainability report based on the guidelines of the *Global Reporting Initiative* (GRI). The chain is on the 3rd publication of the Report, which presents the results and actions for sustainability in the period covering 2012 and 2013, and included goals for the next years on issues of responsibility in the supply chain, environmental impact, impact of products, management of people and engagement for sustainability.

The reporting process generally includes an external audit, which ensures the consistency of the data and the transparency of socio-environmental information.

The Most Sustainable – The GVcev Award

Retail companies represent a great potential for contributing to social responsibility, especially because of their direct contact with the consumer and the community at large. The territorial network and the wide range of retail relations reinforce its vocation as agents of social change. This fact is fundamental to raise the retailer's awareness that it's not enough just being a vendor, you must also create intimate ties with consumers and the community.

[13] http://www.gbcbrasil.org.br/?p=certificacao.

A reflection of the paradigm shift in the industry is the GVcev Award - Center for Excellence in Retail of the Getulio Vargas Foundation (FGV-EAESP), which annually announces the winners of the Award for Social Responsibility and Sustainability in Retail. With this award, GVcev - Center for Excellence in Retail FGV-EAESP seeks to recognize and encourage programs, projects or social responsibility actions developed by companies and retail institutions throughout Brazil. The Award is an initiative that is part of the FGV-EAESP Program on social responsibility in Retail, which endeavors to mobilize, train, recognize and spread the practices of social responsibility of retail companies and organizations of all sizes, sectors and regions of the country.

Corporate social responsibility is understood as being the ethical and committed position of the company in relation to its activities and to society in an ongoing process that includes the adoption of principles and values in its relations with various interested parties (employees, customers, suppliers, shareholders, partners, government, community and environment, among others), aimed at long-term sustainability.

The table below shows the winners of the 6thGVcev Award held in 2012.

CATEGORY	PROJECT	COMPANY / ENTITY	CITY/STATE
SMALL AND MEDIUM COMAPNY	Plantar o Verde para colher Saúde	Farmácia Drogacentro	Piraju/SP
	Panetone do Bem	Galegão Supermercados	Blumenau/SC
WINNER	**Programa Ipê Amarelo**	**PB Lopes**	**Londrina/PR**
LARGE COMPANY*	Geração de Renda	Dudalina	Blumenau/SC
	Escola Social do Varejo	Walmart	São Paulo/SP
WINNER	**Economia Verde**	**Dpaschoal**	**Campinas/SP**
	Qualidade Desde a Origem	**Grupo Pão de Açúcar**	**São Paulo/SP**
SHOPPING CENTER	Ciclo Global Sustentável	Auto Shopping Global	Santo André/SP
	Recicla Mundo	Shopping Eldorado	São Paulo/SP
WINNER	**CenterVale Plantando o Futuro**	**CenterVale Shopping**	**São José dos Campos/SP**
RETAIL ENTITY	Programa de Qualificação de Fornecedores para o varejo Têxtil	ABVTEX - Associação Brasileira do Varejo Têxtil	São Paulo/SP
	Conexão Social Sindivarejista	Sindivarejista de Campinas e Região	Campinas/SP
WINNER	**Franchising de Baixo Carbono**	**AFRAS - Associação Franquia Sustentável**	**São Paulo/SP**

** Because of a tie the Award Committee chose two winners in the Large Company category.*

Retail and Plastic Bags

In Brazil, supermarkets went ahead and took up the cause of reducing the consumption of plastic bags. An important incentive was given in the "Saco é um Saco" (*Bag is a Drag*) campaign launched by the Ministry of Environment in June of 2009 in partnership with diverse institutions and companies, schools, municipalities, NGOs and radio stations. Besides seeking to raise awareness of the impacts caused by the use of plastic bags, the campaign sought to encourage the use of reusable bags and other alternatives, including holding the contest "Your sentence on the bag."

The "bag is a drag" campaign

Data from the Ministry in 2011 showed that there had been a reduction of 5 billion plastic bags consumed in Brazil during the two years after the launch of the campaign. This number represented a decrease of 33% and agrees with the estimates made by the Walmart, Carrefour and Pão de Açúcar supermarket chains for cities that have banned plastic bags voluntarily, such as Xanxerê (SC) and Jundiaí (SP), and the Quality and Responsible Consumption of Plastic Bags Program of the National Plastic Institute (INP).

The Brazilian Association of Supermarkets (Abras), a partner of the MMA, has set reduction targets that should reach the entire retail sector, which represents 76,000 establishments across the country. The goal was to reduce the use of plastic bags by 30% in stores nationwide by 2013 and 40% by 2014. However, due to court rulings against ending the free supply of plastic bags, the goal can not be achieved and will have to be reviewed. The issue still needs to be discussed to move forward. However, the campaign and the initiatives resulted in public awareness of the benefits of using reusable bags, which is increasing year by year.

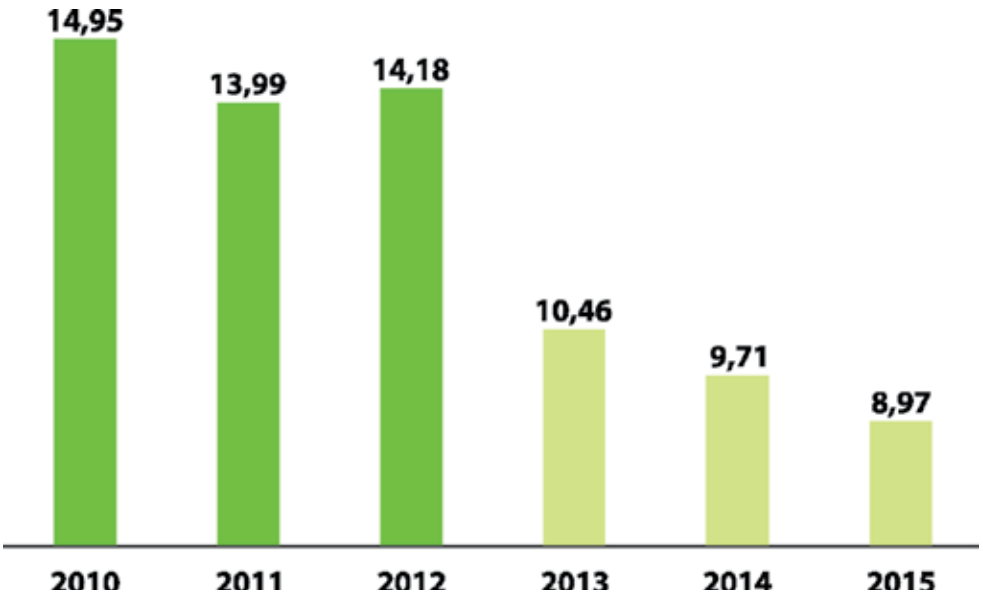
In this context, it is worth mentioning the creation of the Plastic Bags Working Group, through Ordinance N°. 404/2012 MMA, aimed at studying the sustainable consumption of plastic bags and proposing legislative discipline on the matter. The Working Group (WG), composed of representatives of the MMA, MJ, INMETRO, consumer protection institutions, non-profit organizations and representatives of the wholesale sector and others, seeks to: (i) identify the technologies available in Brazil and assess their actual impact on environment, natural and urban, taking into account the different use scenarios of plastic bags; (ii) examine the possibility of creating certifications for different types of disposable and reusable plastic bags, in order to guide the consumer; (iii) select topics and content to be covered in awareness campaigns about the problems that arise from the use and inappropriate disposal of plastic bags; (iv) discuss the patterns of sustainable consumption of disposable plastic bags and the role of reusable bags in reduction policy advocated by the Action Plan for Sustainable Production and Consumption; and (v) identify and assess legal instruments, including proposals in progress in Brazil and abroad, in order to obtain a basis for legislative discipline, object of the Plastic Bags WG.

The Ministry of Environment also sought to continue to encourage the reduction in the consumption of plastic bags, motivated by the understanding of the cumulative impact of excessive consumption and wasteful use of

these items, in the context of the MMA/ABRAS (Brazilian Supermarket Association) Agreement. The agreement between ABRAS and the MMA was signed on World Consumer Rights Day, March 15, 2011. According to the agreement signed at the time, ABRAS pledged to reduce the consumption of plastic bags by 40% by 2015, orienting consumers to opt for sustainability in their purchases.

Projection of consumption of plastic bags in supermarkets (in billions)

* Base year 2010 – Consumption of 14.945 billion / Plastic Bags



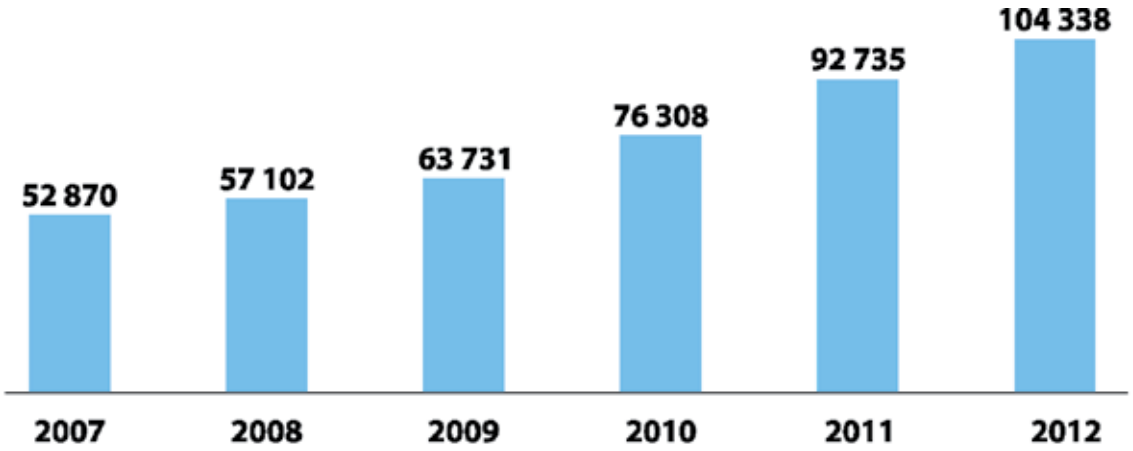
Source: Department of Economics and Research / PESQUISA RANKING ABRAS 2011/2012

According to Abras, the campaign to reduce the use of plastic bags was started in Jundiaí and continued in the state of São Paulo. In the first month, there was a 57% reduction in the consumption of plastic bags, but after the signing of the Conduct Adjustment Term (TAC) with the Federal Prosecutor's Office and Procon of Sao Paulo, there was the withdrawal of biodegradable bags from the market - sold at cost - which led to a lack of inexpensive alternatives for customers. The Paulista Supermarket Association - APAS created a number of options to serve customers, however, facing a lawsuit, it was decided to go back to providing plastic bags. APAS appealed with an injunction, which is still awaiting a verdict. According to APAS, awareness campaigns are not enough to cause a significant reduction in the consumption of plastic bags. They explain that establishing a price for plastic bags and charging for them would be efficient tools, citing cases in other countries where this has occurred.

SUSTAINABLE CONSTRUCTION

The construction sector is one of the main drivers of national development. The construction industry, which includes the construction of buildings, roads and heavy construction (infrastructure and industrial plants), involves dozens of industries among suppliers of raw material, equipment, services and distribution related to this activity. This sector represents 11.6% of GDP and construction companies employed about 2.5 million people in 2010 (IBGE, 2010).

Added value of construction - Brazil / 2007 - 2012

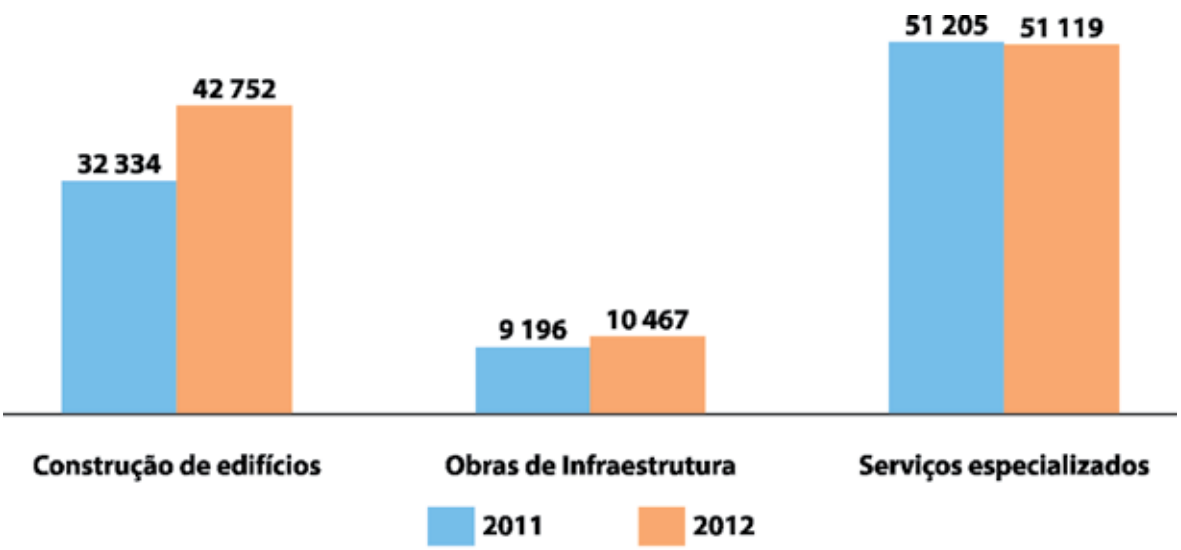


Fonte: IBGE, Diretoria de Pesquisas, Coordenação de Indústria, Pesquisa Anual da Indústria da Construção 2007/2012

Source: IBGE, Research Directorship, Industry, Annual Research of the Construction Industry 2007-2012

It is estimated that in Brazil, 50% of extracted natural resources end up used by the construction industry, which is also responsible for over 50% of the generation of municipal solid waste (debris) and 40% of energy consumed. The sector has a high rate of consumption of natural resources and generates large volumes of waste, ranging from those generated in the production of inputs used, to waste generated in the execution or maintenance of the construction (UNDP, 2014).

Number of companies according to sector of activity - Brazil - 2011/2012



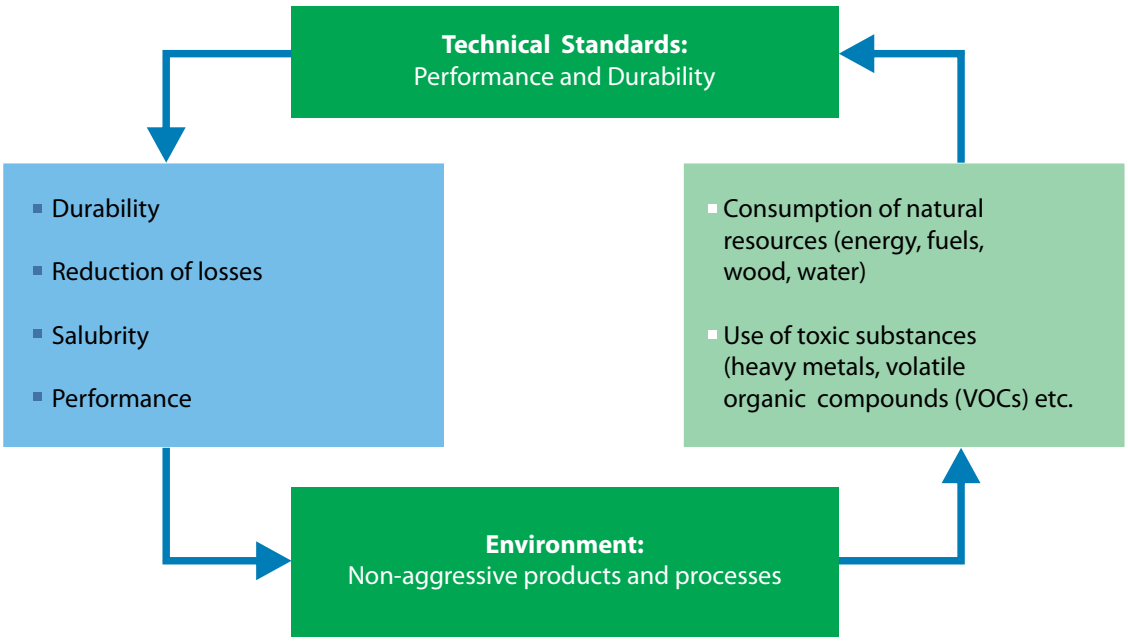
Construction of buildings – Infrastructure – Specialized services

Source: IBGE, Research Directorship, Industry, Annual Research of the Construction Industry 2007-2012

The main objective of the Plan for Sustainable Production and Consumption (PPCS) on the topic of Sustainable Construction is to encourage the construction industry to adopt practices that improve environmental performance, from the design to the execution of the building, through the careful selection of materials and alternatives that have less impact on the environment and human health.

Among the guidelines for encouraging the sustainable construction sector promoted by the federal government, through the PPCS, are: encouraging programs that promote energy efficiency, rational use of water and its re-use, making use of natural conditions (ventilation, lighting, heat), use of materials and environmentally-friendly techniques, promoting the internal quality of the spaces built and waste management.

SUSTAINABLE CONSTRUCTIONS



Source: PBQP-H/SNH/MCidades

In this context, for the first PPCS cycle, the federal government has taken steps to promote sustainable construction in Brazil, a strategy that has proven there can be a positive bottom line in the cost-benefit account in relation to actions for sustainable development in the construction industry. The payback comes in environmental benefits such as reducing the consumptionof water, natural resources and energy, and also in productivity, in the case of housing and the quality of life of the population.

By way of illustration, the actions taken by the Federal Government to promote the sector should be mentioned, encouraged by the PPCS, which are: the Brazilian Program for Housing Quality and Productivity (PBQP-H), the Minha Casa Minha Vida (MCMV) (*My Home My Life*) program, PROCEL Edifica, the Selo Casa Azul (*Blue House Seal*) of the Caixa Econômica Federal and the certification of the 2014 World Cup arenas, all examples of success in fostering the development of sustainability in the productive chain of the construction industry.

Since 2008, the rules of the Federal Government for sustainable housing programs have included socio-environmental variables, leading to the following recommendations: minimize the building's impact on the environment; make use of the natural resources of the local environment; manage and save water and energy in the construction process; promote the rational use of building materials; plant trees and encourage tree planting on the lot; promote the collection and recycling of solid waste in construction; adopt solutions to improve the indoor comfort of the houses; and promote environmental education for the residents.

These measures and actions strengthened by the first cycle (PPCS) help to promote more sustainable urban buildings. The potential impact of this initiative can be evaluated when considering, for example, the amount of resources invested by the Government through the Growth Acceleration Program (PAC).

Initial investment forecast

Areas	Investments		R$ billion
	2011-2014	Post- 2014	Total
PAC Better City	57.1	-	57.1
PAC Community and citizenship	23.0	-	23.0
PAC Housing	278.2	-	278.2
PAC Water and electricity for all	30.6	-	30.6
PAC Transport	104.5	4.5	109.0
PAC Energy	461.6	626.9	1,088.5
Total	955.0	631.4	1,586.4

Source: Ministry of Planning, Budget and Management.

Brazilian Program for Housing Quality and Productivity (PBQP-H)

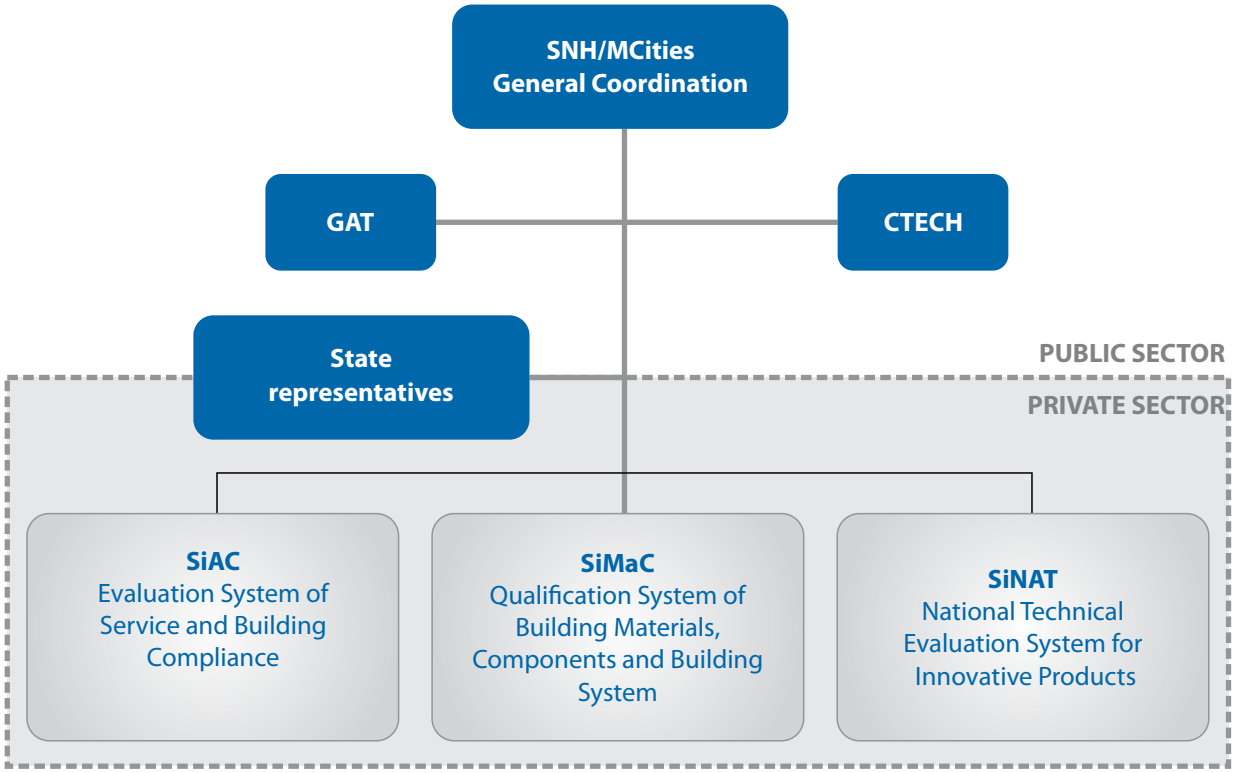
Programa Brasileiro da Qualidade e Produtividade do Habitat

The PBQP-H[14] is an important instrument of the Federal Government aimed at promoting the quality of productivity in the construction industry, being organized from a matrix structure of their projects. To achieve this end, Coordination teams, the Forum of State Representatives, an Advisory Committee and a Technical Advisory Group were created (Figure 1). At the federal level, the program is managed by the National Housing Secretariat (SNH) of the Ministry of Cities (MCidades).

The goal of the PBQP-H is to organize the construction sector around two major issues: improving housing quality and modernizing production.

[14] Available at: http://pbqp-h.cidades.gov.br

Organizational structure of the PBQP-H (source: SNH/MCities)



Available at: http://pbqp-h.cidades.gov.br

The PBHP-H program is a partnership between the public and private sectors and has been instrumental in promoting changes in the construction sector. Aiming at adapting to the demands of sustainability, the PBHP-H program developed systems to evaluate quality and development for the entire production chain of the sector through the SiAC, SiMaC and SiNAT systems. These systems are important because they make possible the creation of indicators and goals to verify compliance with the goals of environmental sustainability in buildings. Sustainability indicators in the PBQP-H have shown positive results (MCidades, 2014).

The **Evaluation System of Service and Building Compliance - SiAC** is a strong propellant of the PBQP-H project, which aims to assess the conformity of the quality management system of services and construction companies, taking into account the specific characteristics of activity of these companies in the construction industry and based on ISO 9000 standards. This system has certified approximately 3,265 construction companies on 3 levels.

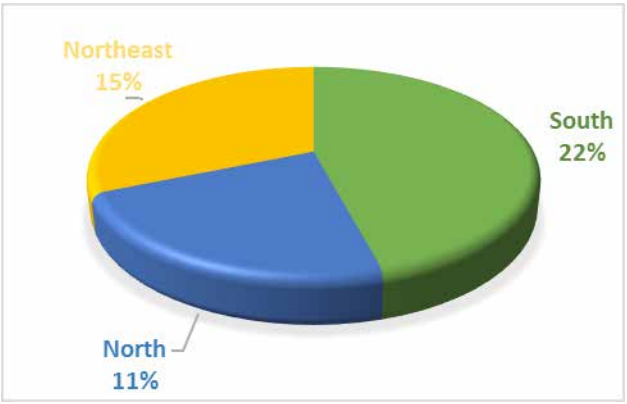
The System seeks to contribute to the evolution of quality levels in the industry, involving technical experts in construction, specialized construction execution services, management of buildings and projects, and project design.

The principles of SiAC are: nationwide; develop levels of assessment of progressive compliance; proactively pursue the creation of a supportive environment to guide companies in obtaining the desired evaluation of level of conformity; flexibility in adapting to regional characteristics, different technologies and forms of management of each technical expertise and its subsectors; confidentiality of information relating to each company; transparency; and impartiality, among others.

Builders Certified by SiAC

Technical Specialty CONSTRUCTION

Approximately 3,265 SiAC certified construction companies



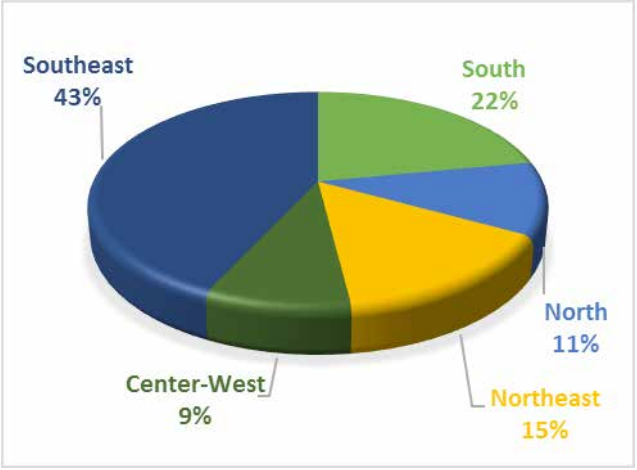
100% of the companies that are involved in the PMCMV

Source: SNH/MCidades

Certified Companies by Region in Brazil

Technical Specialty CONSTRUCTION

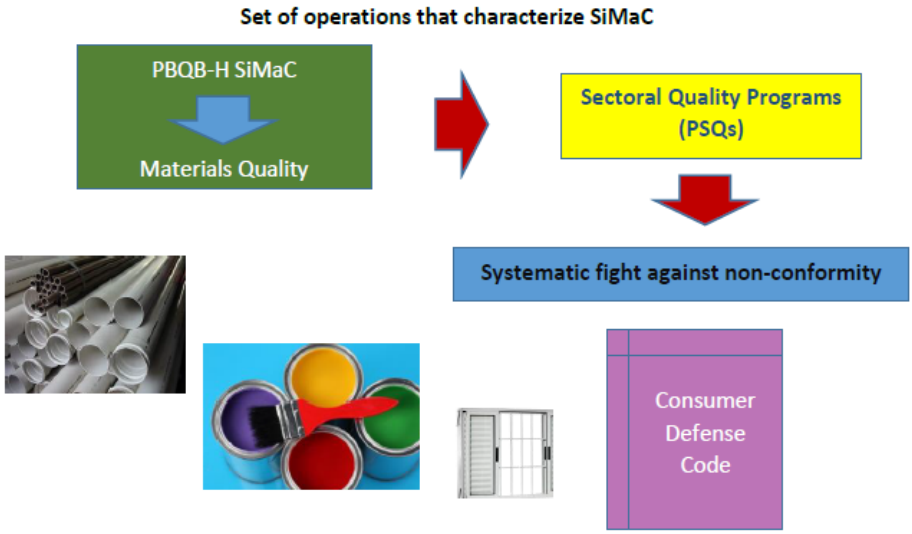
Approximately 3,265 SiAC certified construction companies



Source: SNH/MCidades

One of the aspects necessary for sustainability lies in the quality and performance of building materials and components in the construction sector. The **Qualification System of Building Materials, Components and Building Systems - SiMaC** was created in partnership with the private sector to combat against waste, low productivity and the technical non-compliance of materials.

The goal of SiMaC of the 2012-2015 PPA for the Moradia Digna (*Decent Housing*) Program is to increase to, and maintain at 90%, the average percentage of compliance with technical standards of the products making up the basket of building materials. Through Sector Quality Programs (PSQs), it is possible to combat the systematic non-compliance of products based on the Consumer Code.



Source: SNH/MCidades

It is known that the technical non-compliance of materials and construction components results in housing and civil works of poor quality, affecting the citizens, businesses and the urban environment. SiMaCis already showing positive results: before the implementation of the system, the average percentage of non-compliance of materials and components of housing construction was around 50%. With the creation of the Sector Quality Programs (PSQs), this percentage has been reduced to about 20%, and some segments have reached levels close to 100% compliance.

The **National System of Technical Assessment of Products (SiNAT)** is a mobilization initiative of the technical community of the construction industry that supports the implementation of a set of procedures recognized by the entire production chain of construction. The goal is to evaluate and conduct a performance analysis of new products used in the construction process that have no tradition of use in Brazil.

The goals of the system are the encouragement of technological innovation, increasing technological alternatives available for house construction and the competitiveness of the construction industry.

New Building Systems Encouraged by SiNAT

Innovation
Innovative products and processes that do not have a Brazilian technical norm for analyzing performance and which are not commonly used in the country.

Use of new technologies

Source: SNH /MCidades

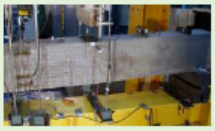
Guidelines for Technical Evaluation of Products and Building Systems – SiNAT

The Guidelines for technical evaluation of products include performance requisites and criteria. as well as the evaluation methods that will be adopted.

Performance aspects considered in the evaluation

A) Safety
. structural safety
. safety against fire
. use and operational safety

B) Livability
. water tightness
. termal performance
Acoustic performance

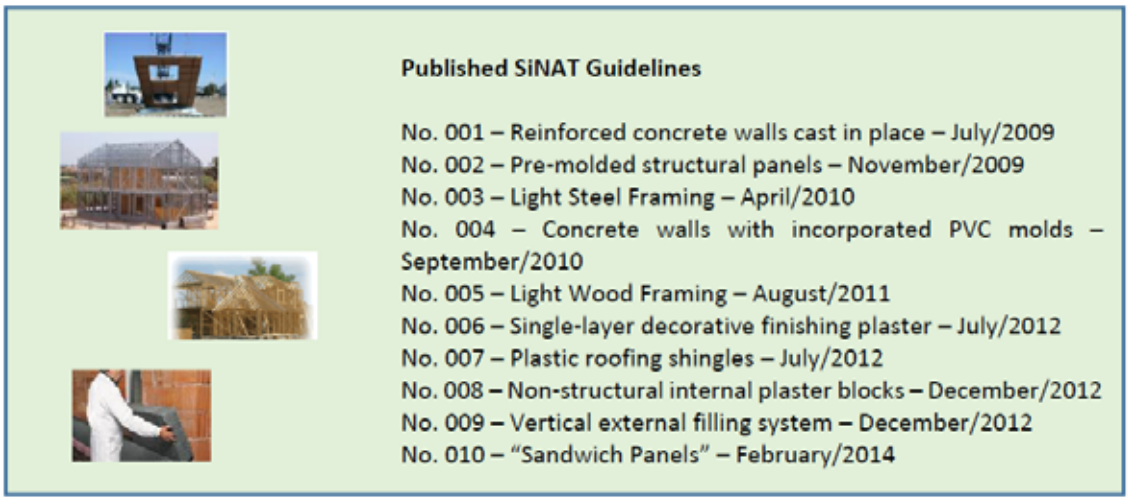


C) Sustainability
. durability
. ease of maintenance

Source: SNH/MCidades

SiNAT has published guidelines relating to innovative building systems and Technical Appraising Institutions - ITAs has written documents for technical evaluation. These initiatives seek to improve components and building systems and improve the quality of housing.

Publications of SiNAT Guidelines



Source: (MCidades, 2014)

Published Technical Assessment documents - DATec:

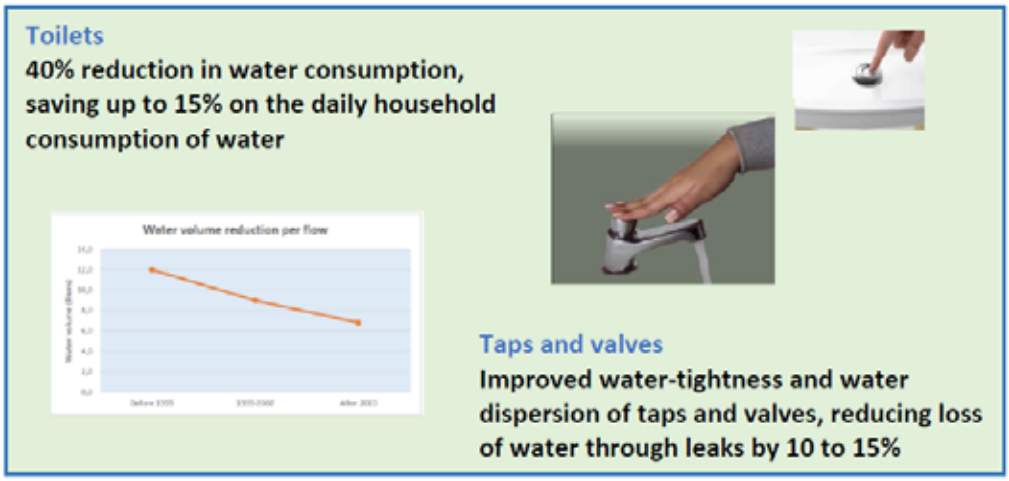
- ✓ N°. 001-A –SERGUS Construction System with Banche-type plates - July / 2011
- ✓ N°. 002 - SULBRASIL Constructive System of Reinforced Concrete walls Molded in Place – Dec. / 2010
- ✓ N°. 003-A VIVER Construction Systems for walls made with Precast Solid Reinforced Concrete Panels– Dec. / 2010
- ✓ N°. 004 - TENDA Construction System of Reinforced Concrete Walls Molded in Place – Feb. / 2011
- ✓ N°. 005-A-HOBRAZIL Building System of solid walls molded in place, made of Lightweight Concrete with Polymer and Fiberglass Cloth and Polyester Structure - June / 2011
- ✓ N°. 007 - ROSSI System precast solid structural panels of reinforced concrete for the execution of walls – Nov. / 2011
- ✓ N°. 008 - JET CASA (PDG REALTY SA) System of mixed pre-cast panels of reinforced concrete and ceramic blocks for walls – Nov. / 2011
- ✓ N°. 009-A - CASA EXPRESS System of mixed pre-cast panels of reinforced concrete and ceramic blocks for walls – Feb. / 2012
- ✓ N°. 010 –BAIRRO NOVO Construction System of reinforced concrete walls molded in place - March / 2012
- ✓ N°. 11 - CARRILHO Construction system of reinforced concrete cast in place - May / 2012
- ✓ N°. 012 PRECON Construction System of pre-fabricated mixed filler panels - July / 2012

- ✓ N°. 013 - Construction System for walls made of mixed pre-cast panels of reinforced concrete and ceramic blocks - DHARMA Construction - Dec / 2012
- ✓ N°. 014 –Dry Construction System SAINT - GOBAIN Light Steel Frame - April / 2013
- ✓ N°. 015 - BRAZIL LP OSB Construction System of Light Steel Frame closed with OSB plates finished with vinyl siding- April / 2013
- ✓ N°. 016 - BRAZIL LP OSB Construction System of Light Steel Frame closed with Smart Side Panels -April / 2013
- ✓ N°. 017 - GLOBAL Construction System of walls made of PVC panels filled with concrete - August / 2013
- ✓ N°. 018 - GIASSI Construction System of pre-fabricated reinforced concrete panels - August / 2013
- ✓ N°. 019 - Decorative plaster "Weber –pral classic SE" for wall finishing - October / 2013
- ✓ N°. 020 - TECVERDE Construction System: "light system in wood" - Nov / 2013
- ✓ N°. 021 - "CASAS OLÉ" Construction System - January / 2014.

Sustainability - Saving Water:

A positive result from sustainability initiatives for the improvement of the construction industry in Brazil, through the PBQP-H, has been the efforts made to improve performance in reducing levels of water consumption, improve the functional performance of equipment, improvements in the water-tightness of taps, and innovation and new technologies for productivity and quality of housing, among others. A practical example is the 40% reduction of water consumed in flushes in toilets that result in a household daily water savings of up 15%.

Water Consumption Reduction by Discharge



Source: SNH/MCidades

Solid Construction Waste (RSC):

One of the strategic challenges of the PBQP-H is the implementation of the Quality of Work Plan (PQO) that can determine the appropriate destinations for solid and liquid waste generated by construction (rubble, sewage, wastewater), which respect the environment and are in agreement with the National Solid Waste Policy (Law 12.305/2010) and applicable state and municipal laws. It is a fact that 40% to 70% of the rubble is disposed of irregularly, although 60% to 80% of solid construction waste can be recycled (BLUMENSSCHEIN, 2007 and NORIE/UFRGS).

Reducing the generation of construction waste is directly linked to the construction process as a whole that, when properly integrated, can reduce the level of material waste, reducing the generation of solid construction waste. The PBQP-H proposes the inclusion of quality indicators focused on the sustainability of the company's construction site through an indicator of waste generation, throughout the building period, in cubic meters per worker per month, a water consumption indicator in cubic meters per square meter of floor space, and a power consumption indicator over the building period in kWh per employee per month and, at the end of the building period, in kWh per square meter of floor space.

The targets of the indicators are defined by the construction company. The Office of Conformity Assessment (OAC) follows the evolution of these indicators between different constructions, making sure that actions were implemented aimed at improving the sustainability results of the enterprises.

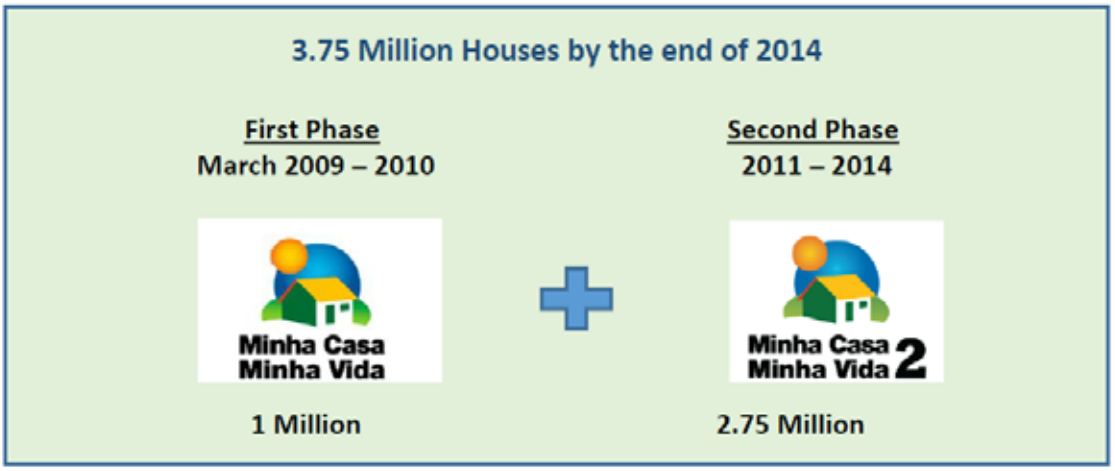
The MINHA CASA MINHA VIDA (My Home My Life) Program – PMCMV

In March of 2009, the Federal Government launched the Minha Casa Minha Vida program – PMCMV (Law N°. 11.977/09), with a goal of producing 3.75 million homes by the end of 2014. The general guidelines for the acquisition and financing of houses in the Program - resources, Residential Lease Fund (FAR)[15] are defined in the following Ordinances of the Ministry of Cities:

- ✓ Ordinance N°. 168 of 12/04/2013 - to work in the capital and its metropolitan areas, if there are any, in the metropolitan regions of Campinas/SP and Santos/SP, in neighboring municipalities of Teresina/PI and which belong to the respective Integrated Development Region - RIDE, in the Federal District and in municipalities with a population equal to or greater than 50,000 inhabitants and municipalities covered in item 4.1, Annex I of the Ordinance.
- ✓ Ordinance N°. 363 of 08/12/2013 - for other municipalities with less than 50,000 inhabitants.

The Minha Casa Minha Vida program, responsible for building more than 3 million new homes in five years is the new frontier of the public sector in sustainable buildings, along with the construction industry: implementation of the ABNT performance standard, with important implications for the sustainability of buildings by the impact on the post-occupational conditions of the buildings.

Number of Houses Built by the PMCMV



Source: SNH/MCidades

The program's sustainability is in compliance with actions aimed at further improving the quality of life of families, the creation of new jobs (directly and indirectly), particularly through the production chain of construction, and the promotion of accessibility to public areas and common areas in the housing projects. The guidelines of the Brazilian Program for Housing Quality and Productivity (PBQP-H) state, among them, the use of building materials produced in accordance with technical standards and the contracting of certified construction companies must also be respected. The PMCMV[16] also stipulates that the projects need to be in compliance with municipal governments, utilities and environmental agencies, and be in accordance with labor legislation. It is also recommends planting trees in the proportion of one tree per house in horizontal housing projects and a tree per apartment, in the case of the vertical projects.

[15] The specifications of the enterprises are available at: http://www.cidades.gov.br/index.php/programas-e-acoes/1069-fundo-de-arrendamento-residencial-far.html .
[16] Information on the MCMV program is available at http://www.cidades.gov.br/

The Federal Government, through the Ministry of Cities, regulates the entire program, including determining the public to benefit from the program, revisions to the MCMV program and the rules of the participating organs in the system (especially the banks Caixa Econômica Federal and Banco do Brasil and state and municipal governments).

According to the National Housing Secretariat (SNH), the maintenance of programs for the "C" economic class[17] is critical, as is the partnership between public and private sectors. In addition, Magalhães pointed out the costs - adherence to the profile of families and reducing the cost of the production processes, quality and sustainability as the main challenges of the Minha Casa Minha Vida 2 program (MCidades, 2014).

In the implementation of MCMV program, efforts have been made to find a balance between environmental protection, social justice and economic viability in the fight against the housing shortage and qualification of urban centers, with an objective to build housing developments planned according to principles of sustainability that are in compliance with the land use and occupation legislation, environmental and building standards, enabling integration with the surrounding community and preserving the environment.

In addition, it seeks to enhance the self-esteem of current and future users, and offer a dignified and respectful relation with the social and community environment through architectural strategies that allow adequate ventilation, thermal and acoustic comfort, lighting that makes the maximum use of sunlight and the re-use of rainwater, as well as more permeable paved areas and a reduction in the total impermeable paved area.

Housing Units Contracted

Total Housing Units Contracted: 3,239,629

FAMILY INCOME	HOUSING UNITS CONTRACTED
CATEGORY 1: UP TO R$ 1,600	1.52 Million
CATEGORY 2: UP TO R$ 2,750	1.29 Million
CATEGORY 3: FROM R$ 2,750.01 TO R$ 5.000	417 Thousand

Investment R$ 199 Billion

Housing Units Delivered 1,509,520

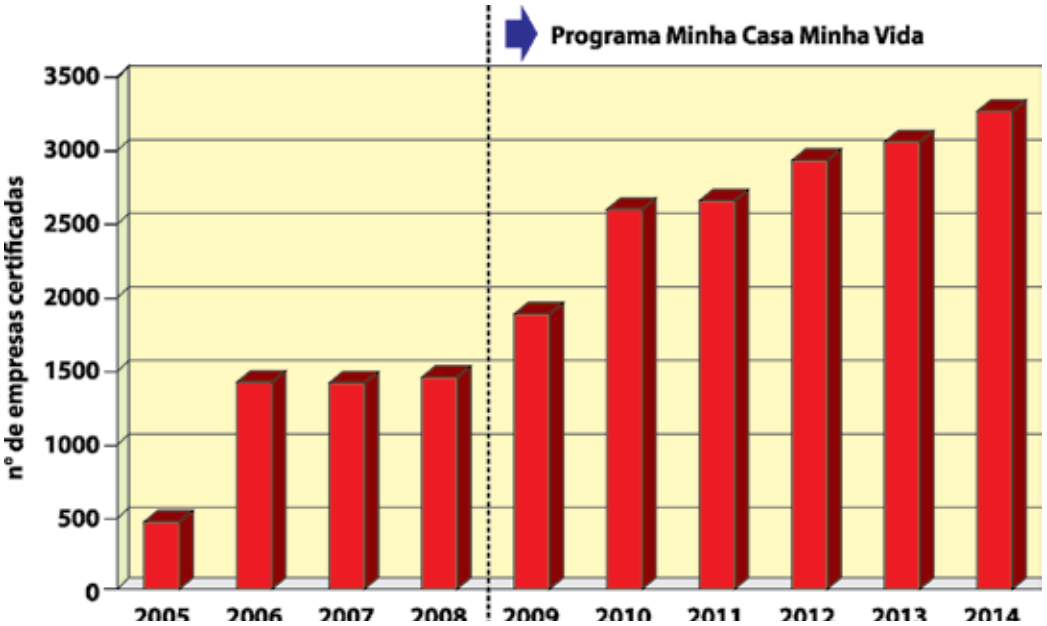
Source: SNH/MCidades

[17] According to FGV, a family is considered C class when its monthly income is between R$1,064 and R$ 4,591. The economic elite (A and B Classes) have a monthly income superior to R$ 4,591; while the D class earns between R$ 768 and R$ 1,604.

The guidelines of the PBQP-H have been met in the Minha Casa Minha Vida program housing units delivered, and used materials produced by PSQs Qualified companies, under contracts with SiAC certified construction companies and meeting the SINAT criteria for innovative products.

Minha Vida Minha Casa Program

Number of MCMV Certified Companies



Source: SNH/MCidades

Solar Water Heaters

Minha Casa Minha Vida

Tipos de Projetos - Tipo 1

The Minha Casa Minha Vida program also encourages an extra financing for the installation of solar water heating systems in public housing.

Every year the sun provides fifteen thousand times more energy than the world population consumes. There are several ways to take advantage of solar energy, among which the solar water heater stands out, an excellent technology to produce clean, renewable energy. The solar heater provides a monthly average savings of 35% in electricity consumption, helping to lower the electricity bill.

The Minha Casa Minha Vida program (phase 1) covers single-storey houses in urban areas, in cities with over 50,000 inhabitants and for families with an income of up to R$ 1,600 per month. For this group of 340,000 housing units, 100% are being provided with solar water heating (MCidades, 2014).

The goal is to finance 400,000 heaters, through a line of credit from the Caixa Econômica Federal bank (Construcard), totaling R$ 680 million so that interested parties can purchase the equipment for their homes. By March of 2014, the actions taken had achieved energy savings of 1.3 million MWh/year, equivalent to the total amount of energy that will be generated by the Santo Antonio hydroelectric plant (Rondônia state).

In the first phase of the Minha Casa Minha Vida program (2010/2011), 41,449 low-income families benefited from solar water heaters in their new homes. The goal was 40 thousand, exceeded by 27.8% and reaching 50,745 units by March of 2014. The idea of the Federal Government for the second phase of the MCMV program (2012) is to provide single-storey houses in all regions of the country with solar water heaters (MCidades, 2014).

It is also worth mentioning the effort of Eletrobras Procel in directing part of its actions to the dissemination of the potential use of solar energy for water heating. According to Eletrobras, stimulating the use of solar heating systems has benefits for the electricity system as it enables a reduction in energy use at peak hours as well as providing economic benefits to users, considering that 24% of all electricity delivered to Brazilian households is used to heat water for bathing (Eletrobras Procel, 2013).

One can also mention the partnership between Eletrobras, the Pontifical Catholic University of Minas Gerais (PUC-MG) and the Institute for Technological Research (IPT), aiming to provide the technological infrastructure to conduct energy efficiency tests on solar collectors and thermal reservoirs, having developed considerable practical studies to assess issues related to maintenance, the size-scaling of solar water heating systems and quality of the installation of solar heating systems. This study served as the basis for generating an action plan for the Program as well as inform the Ministry of Environment (MMA) for the Brazilian plan for the dissemination of solar energy, with the goal of doubling the installed area of solar collectors in Brazil by 2015.

It is noteworthy that, in 2011, Eletrobras Procel signed a partnership agreement with the University Center (UNA) of Belo Horizonte (MG) for creating the Solar Eletrobras Procel Network, which has the support and participation of universities, research centers and educational institutions in five Brazilian regions. Its main objective is to create regional centers for professional training and conduct studies of Measurement and Verification (M&V), prioritizing the Minha Casa Minha Vida program (MCMV).

Energy Efficiency

The government created the **Energy Efficiency in Buildings Program - PROCEL EDIFICA** in December of 1985, through the Ministries of Mines and Energy and Industry and Trade, managed through an Executive Secretariat under Eletrobrás. On July 18, 1991, Procel was transformed into a government program, expanding its scope and responsibilities.

The Energy Efficiency in Buildings Program – Procel Edifica is a voluntary program for labeling and efficiency in public and commercial buildings –covering the surroundings, the physical part of the building; the lighting system; and the air conditioning system - which evaluates the type of device being used and its efficiency in different areas of the building, being one of the specific sub-programs of the Electric Energy Conservation Program - PROCEL (Eletrobras Procel, 2013).

Procel Edifica has as its objective the development of a set of projects aimed at:

- ✓ investing in technological and professional training, stimulating research and development of solutions adapted to the Brazilian reality in order to reduce energy consumption in buildings;
- ✓ attract an increasing number of partners linked to the various segments of the construction industry, improving the quality and efficiency of Brazilian buildings;
- ✓ promote concepts and practices of bio-climatism, by including the themes of environmental comfort and energy efficiency in architecture and engineering courses, educating a new generation of professionals committed to the sustainable development of the country;
- ✓ disseminate the concepts and practices of Energy Efficiency in Buildings among professionals in architecture and engineering, and those involved in urban planning;
- ✓ support the implementation of the Regulation of the Energy Efficiency Law (Law N°. 10.295/2001), through the Brazilian Program for Labeling of Buildings - PBE, with regard to Brazilian buildings, and technically guide the agents involved and municipal technicians to update their Building Codes and municipal development plans.

To achieve their goals, Procel Edifica operates in six different areas: Training, Technology, Dissemination, regulations, Housing and Energy Efficiency, and Planning.

In 2013, the main activities carried out by Procel Edifica were:

- 16 training courses on the application of the Technical Regulations of Energy Efficiency Level Assessment in Residential, Commercial, Public and Services Buildings, promoted in partnership with the member institutions of the Energy Efficiency in Buildings Network (R3E). In total, 280 university-educated professionals were trained;
- Launch of the Domus Eletrobras Hydro thermal energy of Buildings Simulation Software, as well as holding three training courses on how to use the software, helping to spread knowledge on environmental comfort and energy efficiency in buildings, for a total of 90 participants;
- Technical assessment of the energy efficiency of Eletrobras's headquarter building in Rio de Janeiro, to check the class of efficiency achieved in the PBE-Edifica, using the Domus Eletrobras software. An analysis was also conducted for obtaining the National Energy Conservation Label (Ence) class A, with subsequent proposition for improvements in the building and evaluation of return on investment;
- Preparation of the 3rd edition of the book "Energy Efficiency in Architecture";
- Customer Service attendance, through the technical ombudsman, totaling 360 answered e-mails;
- Supporting Inmetro in the publication of "Compliance Assessment Requirement for Energy Efficiency of Buildings", which brings together the scopes of "Commercial, Service and Public Buildings" and "Residential Buildings" to simplify the process of obtaining Ence and present the new model of the label;
- Finalizing a Contingency Plan for making mandatory the PBE Edifica as well as a Procel Edifica Action Plan for the period 2013-2015, in partnership with SAGA Energy Systems Consulting and the British Embassy; and
- Supporting the granting of Ence, in partnership with Inmetro, to a total of 987 buildings, with 24 buildings built. It is worth noting the Ence class A obtained by the Sebrae Center for Sustainability, built in Cuiabá - MT.

With the decline in deforestation in Brazil, energy efficiency in buildings and agribusiness are now the focus of projects aimed at reducing greenhouse gas emissions. An important project to support the promotion of energy efficiency in buildings in the country is the tool ProjetEEE, developed under the project "**Energy Efficiency Market Transformation in Brazil - ProjetEEE**", coordinated by the MMA, through the Secretary of Climate Change and Environmental Quality.

The purpose of this tool is to influence and develop the energy efficiency market in commercial and public buildings, and aims to contribute with a savings of up to 4 million MWh of electricity in the next twenty years and with a reduction in GHG emissions of up to 2 million tons of carbon dioxide (CO2eq) (ANEEL, 2014). Thus widens the share of participation of energy efficiency actions to reduce emissions envisaged in the voluntary targets of Brazil set by the energy sector (PNUD, 2014).

The B block of the Esplanade of Ministries, which houses the Ministries of Environment and Culture, will serve as a model of energy efficiency for other public buildings

(photo: Fabiana Pullen/PNUD)

"The building sector has huge potential for reducing greenhouse gas emissions in the atmosphere," says Alexandra Maciel, infrastructure analyst of the Secretary of Climate Change and Environmental Quality of the Ministry of Environment (MMA).

The importance of energy efficiency of buildings to reduce the emission of greenhouse gases has increased due to a change in the emission profile, the result of the significant effort to combat deforestation in Brazil.

Aware of the potential of this segment and the necessity to develop strategies and policies to reduce emissions, PNUD, the MMA, the Global Environment Fund (GEF), the Inter-American Development Bank (IDB) and the Montreal Protocol have teamed up to develop a project which seeks to transform the energy efficiency market of buildings in Brazil, through the fostering of projects in the area and through increased investments in upgrading lighting systems, air conditioning and infrastructure of public and commercial buildings (PNUD, 2014) .

It is estimated that in 20 years, the project will have contributed to a savings of up to 4 million MW/h, enough energy to supply the whole state of Mato Grosso do Sul for a year (data from Aneel). In addition, for the same period of time, 2 million tons of equivalent carbon dioxide (CO2eq) will not be released into the atmosphere.

In the first phase of the project an energy simulation was made of B block of the Esplanade of Ministries, with the objective to certify the building with a label under the Brazilian Labeling Program of Inmetro, similar to the labels applied to domestic and electronic equipment such as refrigerators and air conditioners. The building is now entering the certification stage of the design that will be executed, and will consider the solutions and energy-savings measures suggested by the simulation. The reduction in energy consumption will amount to 30%.

Inmetro label that certifies energy efficiency

in commercial, service and public buildings

The intention is that the project developed for the building of the Ministries of Environment and Culture (MMA and MinC) can be replicated by other ministries that have similar challenges within the Sustainable Esplanada Project and which can also earn the "A" energy efficiency label.

The federal government owns 28,000 buildings across the country. If only 47 public buildings with power consumption levels similar to the building of the two ministries implemented the project, the emission reduction target of the project would be reached. To raise awareness and empower the public sector, the project will introduce, in the second quarter, a national training program on the labeling of buildings, in cooperation with the School of Finance Administration (ESAF) of the Ministry of Finance.

The project also seeks ways to minimize the difficulties for entrepreneurs, managers, consultants and energy conservation service companies (ESCO) to gain access to lines of credit to develop energy efficiency projects. This process is known as the Energy Efficiency Guarantee Mechanism (EEGM), in which a letter of guarantee provided by the Inter-American Development Bank (IDB) helps entrepreneurs or managers to obtain credit from financial institutions for the implementation of energy efficiency projects. Thus, both the public sector and the private sector now have more access to lines of financing in the market.

Also to facilitate the securing of credit for projects in this area, the MMA and PNUD, in partnership with the IDB, are conducting training so that financial institutions will know how to evaluate energy efficiency projects, putting to rest the myth that these are high-risk investments.

In addition, training is being offered to consultants and project managers in order to enable them to develop energy efficiency projects so they can have access to the EEGM. Shortly, models of these projects will be made available to the public to serve as an example for the development of projects related to this theme.

Other actions that make up the project are:

- ✓ *Projeteee*, a free online tool, developed by the Federal University of Santa Catarina (UFSC), where the user, architect, engineer or designer selects the city where the building will be built and the tool offers simple solutions for energy efficiency taking into account the bioclimatic characteristics of the building location;
- ✓ Development of informative and educational materials about the labeling of buildings for the public and private sectors; and
- ✓ Study on the state of the art for contracting energy efficiency projects in Brazil.

Selo Casa Azul Caixa (*Blue House Seal*) - Socio-environmental Classification of Housing Development Projects

The Selo Casa Azul of the Caixa Econômica Federal is the first classification system of sustainability of housing projects in Brazil and was developed for the reality of housing construction in Brazil.

The purpose of the seal is to recognize housing projects that demonstrate their contribution to reducing environmental impacts. Construction companies can apply to receive the CAIXA Blue House Seal for their projects and which is issued on three levels - gold, silver and bronze - depending on the amount of criteria met by the project within six categories: Urban Quality, Design Comfort, Energy Efficiency, Material Resource Conservation, Water Management and Social Actions (CEF, 2014).

With the implementation of the CAIXA Blue House Seal, the intention is to encourage the rational use of natural resources in the construction of housing developments, reduce the cost of maintenance of buildings and the monthly expenses of residents as well as promote awareness among entrepreneurs and residents of the advantages of sustainable buildings.

To assist contractors who are candidates for the Seal, the Caixa Environmental Sustainability Guide - Blue House Seal was developed (CEF, 2010).

Notebook Series on Sustainable Consumption - Sustainable Construction and Renovations

The publication and distribution of "Sustainable Construction and Renovations", which is part of the Notebook Series on Sustainable Consumption of the MMA, is aimed at spreading construction and renovation practices that generate economy and durability within sustainable housing concepts. BASF, a company that produces chemicals for construction, collaborated in the preparation of this volume, in a partnership that will distribute 100,000 copies nationwide.

In a practical way, the publication provides a map that shows every room in the house and what the options are for building or renovating within the concepts of sustainability. In addition, the book demonstrates the best layouts of spaces in a residence, to ensure the appropriate degree of sunlight and natural ventilation for each room.

The publication points out a challenge that modern society faces: introducing a new concept of housing and construction in urban areas that offers better quality of life for inhabitants of large cities with the lowest possible impact on the environment. One alternative to achieve this goal is to practice sustainable consumption, using the resources and materials needed for construction or renovation more efficiently and thus reducing waste.

The publication emphasizes the importance of developing projects that use natural lighting and ventilation and other advantages that the environment provides, promoting the "3Rs": reduce, re-use and recycle in construction and renovation.

Study on the State of the Art of Sustainable Building[18]

Another good example for the encouragement of sustainable buildings was the development of the study on the State of the Art of Sustainable Construction in 2013, in a partnership between the MMA, the Brazilian Council for Sustainable Construction (CBCS) and PNUMA, under PNUMA Project N°. 61-P7 (Brazil Project): "Sustainable Production and Consumption", which will serve as a resource for identifying the most critical aspects of the sector and the un-sustainability of its processes and the collection of successful cases that show changes in production practices that may be used in the preparation of public policy.

Continuing this partnership, they also developed the study "Aspects of Sustainable Construction in Brazil and Promotion of National Public Policy", published in October 2014, which conducted a diagnosis of the current state of construction as a base to propose a set of guidelines for orienting, in a technical and objective way, future public policies, contributing to the goal of more sustainable construction. The scope defined by the study focused on three major areas in the construction industry: water, energy and materials. The approach encompassed priority lines in buildings: buildings and systems, focusing on demand. The study used virtual research data by industry professionals to understand the demands of the production chain.

The objective of the first stage of the project was to understand the role of the agents involved in the construction industry, their needs and difficulties, based on research with industry professionals, in three areas: energy efficiency, rational use and management of water, and selection and disposal of materials in construction.

The survey revealed the following needs: (1) deficiencies in knowledge and the need for awareness campaigns directed at the population and the demand for a higher degree of technical training of those involved; (2) the need to create specific tools; (3) the need to create incentives and lines of financing; and (4) the need for legislation and specific regulations.

[18] Study available at: < http://www.mma.gov.br/responsabilidade-socioambiental/producao-e-consumo-sustentavel/estudos-em-pcs>

The study offers, besides the identification of general suggestions, specific recommendations for the focus areas of the study. Regarding the issues related to water, the study recommends, among other things, the modernization, expansion and implementation of institutional demand management programs, by linking the public and private sectors, in addition to encouraging the efficient use of water through financial incentives or tariffs, the replacement or refit of hydraulic equipment and the modernization of hydraulic systems in buildings.

Among the 27 policy and priority actions identified on the question of energy, it recommended to support and strengthen the PBE Edifica (Brazilian Program for Labeling of Buildings), in conjunction with a program of evaluation and certification of the operational energy performance of buildings in use, stimulus to retrofit or renovate existing buildings, and the qualification and training of professionals, including through the strengthening of technical institutions.

Regarding the chain of materials, the proposal by ACV Modular - sent to the PBACV for coordinating the Materials area ABRAMAT/FIESP-Deconcic - was regarded as consistent with international standardization, simple enough to encourage small and medium companies to participate in the Environmental Declaration of Products, and capable of being expanded to its full scope, generating extra benefits such as an industry benchmark and an inventory of greenhouse gases. Reducing the consumption of raw materials was identified as a priority. Encouraging the industrialization of construction was considered a good alternative to reduce losses and, by consequence, the environmental impacts of construction as well as reduce the generation of waste in construction. The innovation was considered fundamental to sustainability, which could be strengthened by creating an eco-innovation program, with significant potential for environmental returns and gains in the competitiveness of the industry.

Construction Waste

The National Policy on Climate Change (Law N°. 12.187/2009) states in Article N°. 11, sole paragraph, that the decree of the Executive Branch establishes gradual anthropogenic emission reduction targets in various activities, including construction. The National Solid Waste Policy - PNRS (Law N°. 12.305/2009) also contains important provisions to reduce and reuse the solid waste produced by the construction industry by determining that construction companies and municipalities must take shared responsibility for the waste produced by construction.

The proper disposal and reuse of waste is still one of the main problems in the civil construction sector. It is vital for the future of sustainability that techniques for saving natural resources are incorporated and minimizing the impact on the environment caused by construction waste. The potential for reuse and recycling of construction waste is huge, but not much is being put to beneficial use.

In recent years there have been important advances in solid waste management policies at construction sites, such as the creation of Resolution N°. 307/2002, and its amendments, of the National Environment Council, which establishes guidelines, criteria and procedures for the management of this waste, classifying it into four different types:

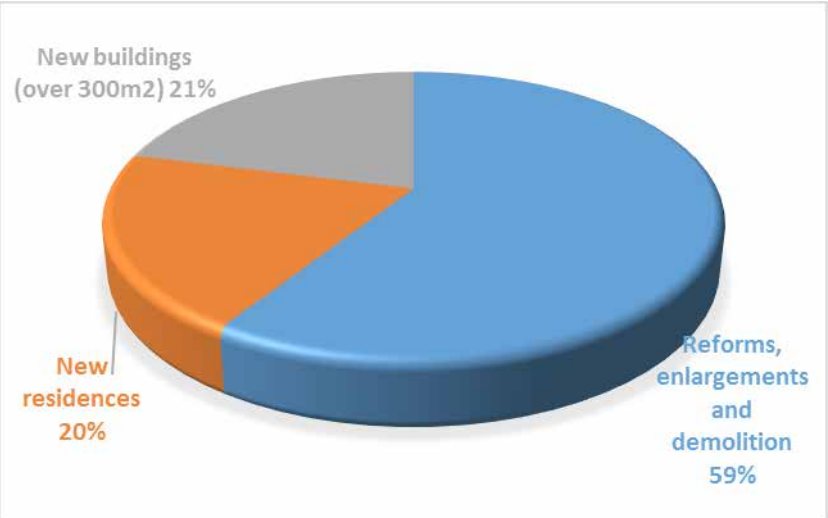
Class A. reusable or recyclable waste as aggregates (brick, concrete etc.)

Class B. reusable/recyclable waste for other industries (plastic, paper etc.)

Class C. waste for which there are no viable technologies that allow recycling (gypsum and others)

Class D. hazardous waste (paints, solvents etc.) or contaminated waste (from radiology clinics, industrial facilities and others).

Origin of construction waste (CSR) in some Brazilian cities (% of total mass)



Source: (MMA, 2012)

Another important step taken by the government was the approval of the new National Solid Waste Policy. The reuse of this material was given an important boost as Brazilian municipalities must establish an integrated waste management plan, overseeing its disposal on a systematic basis and encouraging recycling. Many municipalities also have their own laws.

According to the Brazilian Association for Construction and Demolition Waste Recycling (Abrecon), Brazil currently has about 120 recycling plants in operation or under implementation, concentrated mostly in the metropolitan regions of São Paulo, Belo Horizonte, Curitiba and north region of the state of São Paulo. Considering the individual actions of some contractors who have acquired crushing equipment for their work sites, Abrecon currently estimates there are around 300 initiatives for recycling construction debris.

Also, according to Abrecon, about 70% of existing recycling plants are currently concentrated in the Southeast region of the country, where 80% of them are operated by the government (municipalities) or under concession to the private sector. Only the remaining 20% correspond to private sector projects in origin. In general, these fixed units work with an installed capacity of 3,000 metric tons of recycled material per month, enough to supply a city of 300,000 inhabitants.

There is no question that the challenge is great. It is common knowledge that solid waste from construction and demolition have a large environmental impact and it is often disposed of in clandestine ways, in vacant lots and public areas, or illegal dumps and landfills, wasting this potential resource.

To face these challenges, the federal government encourages the implementation of a technological model that provides for the eradication of landfills and illegal dumps, stipulating that the management should be performed according to the order of priorities set out in the PNRS: cut generation and encourage reduction, reuse, recycling, treatment and final disposal, preferably in regional landfills, for a better scale of operations.

Thus, the search for solutions for the disposal of waste reflects society's demands, pushing for changes motivated by the high socio-economic and environmental costs. The challenge of waste management can become a great opportunity because, if properly managed, solid waste acquires commercial value and can be used in the form of new raw materials or new inputs. The implementation of a Management Plan will have positive repercussions

socially, environmentally and economically, as it not only tends to reduce the consumption of natural resources, it also opens new markets, generates labor, employment and income, leading to social inclusion, and reduces the environmental impacts caused by the improper disposal of waste.

Current policies developed by the federal government, such as the PNRS and Conama Resolution N°. 307 for civil construction waste, have provided changes in the current construction waste management, the main goal at the moment being adapting cities to the requirements of laws and regulations in force so that they that can collect, transport and dispose of construction waste in an environmentally appropriate manner. To this end, it has invested heavily in partnership actions between the public sector and the private sector**.**

Certification and Sustainable Management of Sports Arenas

One can also highlight the sustainable construction of the 12 stadiums for the 2014World Cup based on LEED (Leadership in Energy and Environmental Design)certification criteria-a certification system of North American origin and developed by the NGO *United States Green Building Council*. This action resulted in a determination by FIFA that subsequent World Cup events adopt this certification as standard.

The criteria evaluated by LEED (GBC Brazil, 2014) are:

- ✓ Sustainable space - promotion of strategies that minimize impact on the ecosystem during the construction of the building and address fundamental issues of large urban centers, such as reducing car use and the urban heat island;
- ✓ Efficient use of water -promotion of innovations for the rational use of water, focusing on reducing the consumption of treated water and alternative ways to treat and reuse water;
- ✓ Energy and atmosphere - promotion of energy efficiency in buildings, through simple and innovative strategies, such as energy simulations, measurement, system commissioning and the use of more efficient equipment and systems;

Mineirão (Belo Horizonte)

- ✓ Materials and resources – encouraging the use of low environmental impact materials (recycled, regional, recyclable, reused etc.) and reduced waste generation, as well as promoting conscientious disposal, diverting the volume of generated waste from landfills;
- ✓ Indoor environmental quality –promotion of indoor environmental air quality, essential for environments with high concentrations of people, focusing on the choice of materials with low emissions of volatile organic compounds, controllability of systems, thermal comfort and prioritizing areas with external views and natural light;
- ✓ Innovation and processes - encouraging the pursuit of knowledge about *Green Buildings*, as well as the creation of projective measures not described in the LEED categories. Exemplary performance points are enabled for this category; and

- ✓ Regional credits – incentives for credits defined as a regional priority for each country, according to the environmental, social and economic differences in each location. Four points are available for this category.

In another voluntary initiative of the Brazilian government, financing from BNDES for the stadium projects was conditional upon obtaining the basic standard certification in sustainable construction.

Thus, the 2014 World Cup was the first to have all stadiums Certified, which should boost the sustainable construction market in the country and consolidate the capacity of the main Brazilian construction companies in the sector.

From this initiative, the orientation of the Federal Government is that the next sporting events should be characterized by sustainability. Therefore, the construction of stadiums, arenas and sports facilities across the country must comply with the guidelines of sustainable construction. In this context, Brazil will host the Olympics in Rio de Janeiro in 2016 based on sustainability criteria.

Certification of World Cup Stadiums

Stadium	Certification
1. Fortaleza (Castelão)	LEED Certification
2. Manaus (Arena da Amazônia)	LEED Certification
3. Recife (Arena Pernambuco)	LEED Silver
4. Salvador (Fonte Nova)	LEED Silver
5. Rio de Janeiro (Maracanã)	LEED Silver
6. Porto Alegre (Beira Rio)	LEED Silver
7. Belo Horizonte (Mineirão)	LEED Platinum
8. Brasília (Estádio Nacional de Brasília)	Has score for Gold – Asking for Platinum
9. Curitiba (Arena da Baixada)	In the final analysis by the Green Building Council - lacking commissioning
10. Natal (Arena das Dunas)	Inmetro Energy Efficiency Certification and in completion phase of the final reports to obtain the LEED certification
11. São Paulo (Arena Corinthians)	Completion phase of the final reports to obtain the LEED certification
12. Cuiabá (Arena Pantanal)	Completion phase of the final reports to obtain the LEED certification

Source: Department of Sustainable Production and Consumption / MMA

OTHER INITIATIVES

1. SUSTAINABLE FINANCE

Coordination of efforts to direct the Brazilian economy on a more sustainable trajectory requires cooperation between levels of government, businesses and society. As an agent involved in the allocation of resources for productive activities, the financial community has an important role to play, in alignment with the concept of sustainable finance.

In other words, the undesirable effects of economic growth have concerned civil society and its institutions for decades, due to the social and environmental impacts of industrial activities and the progressive scarcity of natural resources. In this context, the financial sector has to be encouraged to use criteria associated with sustainability in their lending processes, giving rise to what is termed sustainable finance.

The contribution of the financial community may be in the suggestion that companies, governments and citizens should link their spending decisions to the concept of sustainability, which suggests that, in the long run, there is no developed society with weak companies, or winning companies in defeated societies. This can be seen as a natural extension of the usual emphasis of corporate financial management on creating value, changing to consider, in the discussion of *value drivers* of organizations, a larger set of interest groups (*stakeholders*).

With regard to Sustainable Finance, the Department of Sustainable Production and Consumption (DPCS) assisted the Central Bank of Brazil (BACEN) in the construction of the necessary conditions for the publication of **Resolution N°. 4327** of April 25, 2014, which provides the guidelines to be observed in the establishment and implementation of Social and Environmental Responsibility Policy by financial institutions and other institutions authorized to operate by the Central Bank of Brazil. Currently, work is being done to reinstall the Forum of Banks, composed of representatives of public, private and Federal Government financial institutions, with the aim of establishing **voluntary guidelines** that will orient the development of social and environmental responsibility policies, and create a common agenda in order to foster the adoption of sustainability criteria in the decision-making processes of these intuitions.

2. SECTORAL DIALOGUES

In the context of promoting Sustainable Production and Consumption, the Ministry of Environment seeks to stimulate production processes with less impact and more responsible consumption so that it is possible to move towards a green economy. The results expected of this process are the continuous improvement of the quality of life of the population and environmental protection, through production and consumption practices that respect the carrying capacity of the planet, now and in the future.

One of the priority agendas of the policy refers to encouraging/promoting government agencies to undertake sustainable public procurement. To this end, sustainable public procurement is understood as procurements that consider environmental, economic and social criteria, in all stages of the procurement process, transforming the state's purchasing power into an environmental protection instrument and for economic and social development.

Given this reality, one of the challenges for public agencies has been to identify the goods, services and construction most acquired by the government to examine the feasibility of adopting sustainability requirements in future tenders, enabling the buyer to opt for procurements that cause less environmental impact.

From this perspective, short-, medium- and long-term strategies were drawn up so that the promotion of sustainable public procurement can be conducted in a structured and consistent manner over the coming years. As a result, the starting point of this strategy was defined as the carrying out of studies that define sustainability criteria that can be adopted to characterize, and subsequently procure, the good or service demanded.

In addition, the need to map out which products are offered on the market and the qualities of these products were identified, taking into account the environmental characteristics of their composition and the production processes used in their production. In short, it was found that it is not enough to just identify and list sustainability criteria without knowing the actual technological stage of the product, the necessary raw materials to make it and the combination of production factors that go into the final product.

Faced with this challenge, two processes were started. The first was to enable the preparation of a **study**, in partnership with the University of Brasilia Foundation (FUB), in order to identify, describe, catalog and define environmental criteria for three classes of goods, selected based on the quantity demanded by the Public Administration, which were: cleaning and related products, furniture and computers. The aim of this study is to build parameters to be used as an effective operational tool for sustainable public procurement under the material cataloging system (CATMAT).

The second process started was to anchor the discussions of the study results in the institutional environment provided by the Systemic Coordination of Sustainable Production of the Brasil Maior Plan, through **Sector Dialogues**, so that the definition of these sustainability criteria could be built from the collaboration between representatives of government, universities and industry, giving legitimacy and providing all interested parties the opportunity to participate in the construction of this strategic instrument of environmental public policy.

Finally, it is important to note that the anchoring of the debates in the Brasil Maior Plan is important, as it is the industrial, technological and foreign trade policy of the federal government, consisting of a set of guidelines that orient the implementation of the strategy for technological development and innovation in the Brazilian economy. Accelerate productivity gains, promote the productive and technological consolidation of value chains, expand markets, create better jobs and ensure inclusive and sustainable growth are some of the goals that are part of a national development plan based on social mobilization, equity and in creating a business environment conducive to investment and innovation. Under this plan, several measures of a systemic nature aimed at the development of industry and production support services were created.

Agreements / Pacts / Initiatives (Partnerships)

Organization	Objective
ABIPLA	Development of technical papers, and their publication related to the following themes: (i) best practices in the use of cleaning products, including the correct use of compressed or concentrated products; (ii) post-consumer responsibility of packaging used in the marketing of these products and (iii) raising awareness among government agencies about the importance of making purchases of cleaning products with companies who provide technical / legal regularization of their production processes.
ABIQUIM	Development of technical papers, and their publication related to the following themes: (i) best practices in the use of products or processes in the chemical industry; (Ii) post-consumer responsibility of packaging used in the marketing of these products; (Iii) awareness among industry and government agencies on the importance of registration of manufactured or exported chemicals, and substitute the most dangerous chemicals with companies to provide technical / legal regularization of their production processes; (Iv) the training of chemical industry workers to encourage responsible production, consumer awareness and dissemination of further high standards of production and technology at National level and (v) use of technical symbols of selective disposal and technical identification symbols on materials in their packaging, according to internationally harmonized symbols for labeling and ABNT/NBR 13230, which are the inclusion of technical symbols of selective disposal of XXXX products/year packages nationally and the inclusion of technical symbols identifying materials XXX products / packaging year.

VOLUNTARY INITIATIVES	
Organization	**Objective**
Instituto de Embalagens	I - Development of a Sustainable Production Notebook on packaging, eco-design and waste disposal; II - Training MMA civil servants, partners and airline companies on packaging materials and their disposal; III - video about the importance of the eco-design of packaging and the correct choice of materials, IV - dissemination of publications and related events.
Loreal Brasil	I - Offer courses without tutoring: 6 video classes of two hours each for hairdressers, on basic care with the use of water and energy and how to dispose of waste, II - Achieving zero carbon target by 2014 in one of the industries that is being installed in São Paulo; III - Install at least 3 drop off points in retail outlets that allow the return of packaging of cosmetic and personal hygiene products; IV - Adhesion of the Sectoral Agreement on Symbols for Selective Discard signed between the MMA and the ABRE, offering to include the symbol of the selective disposal and material specification on all of their products.
Grupo Sanofi Brasil	I - minimize the environmental impact of promotional actions, II - promote education for environmental citizenship and responsible consumption, III - promote eco-design in products where possible.

TECHNICAL COOPERATION AGREEMENT	
Organization	**Objective**
CAU/BR	Develop joint actions, especially personnel training, for the dissemination of criteria of sustainable consumption and disposal practices, enforcement and management of solid waste generated at construction sites among small, medium and large construction companies, conscientious consumption of electricity, water, materials and use of new technologies in the Building Industry.
SINDUSCON/DF	Develop joint actions, especially personnel training, to provide the dissemination of sustainability criteria and practices, the management of solid waste generated at construction sites among small, medium and large construction companies, conscientious consumption of electricity, water, materials and use of new technologies in the Construction Industry.
CREA/DF	Develop joint actions, especially personnel training, to provide the dissemination of sustainability criteria and practices, the management of solid waste generated at construction sites among small, medium and large construction companies, conscientious consumption of electricity, water, materials and use of new technologies in the Construction Industry.
CNI	Collaboration and cooperation in the development of joint actions involving the theme of sustainable production and consumption.

3. SUSTAINABILITY REPORTS

For over two decades, the perception has arisen that good socio-environmental performance could be a source of competitive advantage, leading to more efficient processes, improved productivity, lower compliance costs and new market opportunities. This understanding has evolved with the concept of the *Tripple Bottom Line*, integrating environmental, social and economic dimensions.

The Brazilian government, as outlined in paragraph 47 of the Declaration "The Future We Want" (Rio + 20), pledged to encourage companies to consider the integration of information about the sustainability of their activities in their periodic reports. Seeking the effective implementation of this commitment, the governments of South Africa, Brazil, Denmark and France created, in 2012, the **Group of Friends of Paragraph 47**–*Group of Friends* 47 (GoF 47).

Indeed, in Brazil, there is no policy or national strategy to encourage the publication of integrated sustainability reporting. However, there are several initiatives, particularly in the private sphere, which create an environment of acceptance of these reports that could favor the construction of a national strategy. This environment has arisen from different experiences, initiatives and organizations that have been working in the area of the publication of reports. Among them, one can cite the Corporate Sustainability Index (ISE) of the BM & FBOVESPA as an example, which encourages the voluntary publication of sustainability reports, or similar reports, by companies that wish to have their shares traded on the ISE.[19]

With regard to the agenda pertaining to Integrated Sustainability Reports, a **Working group on Sustainability Reports** (WG) was created with two objectives: (1) define guidelines, or minimum content, to guide companies and institutions during the preparation of their respective reports; and (2) formulate a national strategy to stimulate the

[19] It is important to note that in 2012Brazil's Central Bank carried out a public consultation on the Resolution which provides for the development and dissemination of the Socio-environmental Responsibility Report by financial institutions. The proposal is based on the principle of transparency, in line with the best recommendations and protocols for self-regulation, like the Green Protocol and the Principles for Responsible Investment. The proposal, though not yet published, represents a potential advance in terms of quality of information.

publication of such reports. These are the issues that should be dealt with within this WG: i) How the government uses the information in the reports; ii) What the decisions are taken by government based on the reports; iii) The legislation/regulation concerning the report should be generic or sectoral; iv) How is the supervision and social participation of the information in the reports; v) What are the penalties/incentives; vi) How is the governance in the implementation and use of reports by the government; vii) What organs are involved; and viii) What is the impact of the rules.

4. "INOVA" SUSTAINABILITY PROGRAM

The **Inova Sustainability Program** is a joint initiative of the Ministry of Environment (MMA), the National Bank for Economic and Social Development (BNDES) and the Financier of Studies and Projects (Finep), which aims to coordinate actions that foster innovation and improve the integration of support instruments available for investments in the environment.

The purpose of Inova Sustainability is to support Business Plans focusing on innovations that lead to sustainability in Brazilian development. The program supports business plans focusing on innovations that lead to sustainable development in Brazil in four thematic areas: Sustainable Production; Recovery of Brazilian Biomes and Fostering Sustainable Forest-Based Production Activities; Environmental Sanitation; and Monitoring of Natural Disasters. The production and sanitation areas received over 90% of the demand of business plans.

One of the Inova Empresa Plan initiatives, with a total budget of R$ 32.9 billion, was created by the Presidency of the Republic and the Ministry of Science, Technology and Innovation (MCTI) in March 2013. The edict of the program has an expected budget of R$ 2 billion, which may be increasing at the discretion of the supporting institutions.

In Step 3 of the Inova Sustainability edict, Finep/MCTI received 196 business plans. The initial demand, which totaled R$ 8.4 billion, was reduced to R$ 5 billion. The projects in the running were submitted by 136 leading companies. The average value per plan is R$ 25.7 million.

5. INDICATORS AND MONITORING

Statistical information constantly updated and of a broad thematic and geographic scope is essential to support the development, monitoring and evaluation of the actions, projects, plans and programs. In Brazil, the Brazilian Institute of Geography and Statistics - IBGE, an institution of the Federal Government under the Ministry of Planning, Budget and Management (MPOG), is the leading provider of data and information to meet the needs of various segments of civil society and the organs of government at the federal, state and municipal levels.

A great effort has been made over the last 30 years in Brazil to expand the thematic scope covered by IBGE research and also make it accessible to its main users in public administration and society in general. In addition to surveys, censuses and statistics, economic indicators and projections, the IBGE has developed very important indicators in the areas of the environment and sustainable development.

Since 2002, the IBGE has been putting together and releasing Sustainable Development Indicators in Brazil, becoming part of the set of international efforts to implement the ideas and principles formulated at the United Nations Conference on Environment and Development held in Rio de Janeiro in 1992 with respect to the relationship between the environment, development and information for decision making.

In the latest edition (2010), 55 indicators were presented that, for the most part, correspond to those contained in the 2008 edition - revised and updated - and originating from surveys and studies of the IBGE and other institutions. They provide, in their environmental dimension, information related to the use of natural resources and environmental degradation, organized under the topics of atmosphere, land, freshwater, oceans and coastal areas, biodiversity and sanitation. In their social dimension, the indicators are linked to the satisfaction of human needs, improving quality of life and social justice, covering themes such as population, employment and income, health, education, housing and security. The economic dimension of the indicators seeks to portray the macroeconomic and financial performance and the impact on the consumption of material resources and energy, by addressing the topics of the state of the economy and patterns of production and consumption. In turn, the institutional dimension deals with the issues of institutional framework and institutional capacity, provides information about political orientation, ability and efforts for the changes necessary to implement sustainable development.

In addition to the Sustainable Development Indicators, the IBGE has been incorporating into its research the collection of data and information that contribute to the monitoring and evaluation of environmental management in the country, as well as the internationally agreed upon goals and targets such as the Millennium Development Goals and commitments to gender issues, among others. Emphasizing, in this regard, the inclusion in the **Survey of Basic Municipal Information 2013 - MUNIC2013**, by demand from the Ministry of Environment, of the following tables:

Table 7 - Municipalities, total and adhesion of municipal managers to the Schedule of Commitments Millennium Development Goals - MDGs, by Major Regions and size classes of the population of the municipalities - 2013

Table 8 - Municipalities, total and adhesion of municipal managers to the Schedule of Commitments Millennium Development Goals - MDGs, by Major Regions and States - 2013

Table 13 - Municipalities, total, and with Land-Use Plan, by Major Regions and size classes of the population of the municipalities - 2013

Table 14 - Municipalities, total, and with Land-Use Plan, by Major Regions and States - 2013

Table 15 - Municipalities, total, and with urban planning tools, by Major Regions and size classes of the population of the municipalities - 2013

Table 16 - Municipalities, total, and with urban planning tools, by Major Regions and States - 2013

Table 17 - Municipalities, total, and affected in their urban area over the past 5 years by flooding and accelerated erosion, by Major Regions and the population of the municipalities - 2013

Table 18 - Municipalities, total, and affected in their urban area over the past 5 years by flooding and accelerated erosion, by Major Regions and States - 2013

Table 19 - Municipalities, total, and affected in their urban areas over the past 5 years by floods or gradual flooding, indicating the events with the highest number of affected buildings and by action to prevent or minimize the damage caused, by Major Regions and the size classes of the population of the municipalities - 2013

Table 20 - Municipalities, total, and affected in their urban areas over the past 5 years by floods or gradual flooding, indicating the events with the highest number of affected buildings and by action to prevent or minimize the damage caused, by Major Regions and States - 2013

Table 21 - Municipalities, total, and affected in their urban areas over the past 5 years by floods or sudden flooding, indicating the events with the highest number of affected buildings and by action to prevent or minimize the damage caused, by Major Regions and the size classes of the population of the municipalities - 2013

Table 22 - Municipalities, total, and affected in their urban areas over the past 5 years by floods or sudden flooding, indicating the events with the highest number of affected buildings and by action to prevent or minimize the damage caused, by Major Regions and States - 2013

T**able 23 -** Municipalities, total, and affected in their urban areas over the past 5 years by landslides or mudslides, indicating the events with the highest number of affected buildings and actions to prevent or minimize the damage caused by Major Regions and classes size of the population of the municipalities - 2013

Table 24 - Municipalities, total, and affected in their urban areas over the past 5 years by landslides or mudslides, indicating the events with the highest number of affected buildings and actions to prevent or minimize the damage caused, by Major Regions and States - 2013

Table 25 - Municipalities, total, and with planning tools, by Major Regions and size classes of the population of the municipalities - 2013

Table 26 - Municipalities, total, and with planning tools, by Major Regions and States - 2013

Table 27 - Municipalities, total and with instruments for management of disaster risks arising from floods or gradual flooding or landslides or sudden floods in urban areas, by Major Regions and size classes of the population of the municipalities - 2013

Table 28 - Municipalities, total and with instruments for management of disaster risks arising from floods or gradual flooding or landslides or sudden floods in urban areas, by Major Regions and States - 2013

Table 29 - Municipalities, total, and with instruments for management of disaster risks resulting from mudslides or landslides in urban areas, indicating the estimated population vulnerable to these events, by Major Regions and size classes of the population of municipalities - 2013

Table 30 - Municipalities, total, and with instruments for management of disaster risks resulting from mudslides or landslides in urban areas, indicating the estimated population vulnerable to these events, by Major Regions and States - 2013

Table 49 - Municipalities, total, and with management structure in the environmental area, by characterization of the governing body, by Major Regions and size classes of the population of the municipalities - 2013

Table 50 - Municipalities, total, and with management structure in the environmental area, by characterization of the governing body, by Major Regions and States - 2013

Table 51 –People employed in the environmental area, by type of employment, by Major Regions and size classes of the population of the municipalities - 2013

Table 68 - Municipalities, total, and with Integrated Solid Waste Management Plan, under the National Solid Waste Policy, by Major Regions and States - 2013

Table 69 - Municipalities, total, and with initiative in the area of sustainable consumption, by Major Regions and size classes of the population of the municipalities - 2013

Table 70 - Municipalities, total, and with initiative in the area of sustainable consumption, by Major Regions and States - 2013

Tables 71-92 - data on services and structures related to gender.

Of particular interest for monitoring and evaluating the implementation of the Plan for Sustainable Production and Consumption - PPCS are the Tables 67 and 68 - management of solid waste, and 69 and 70 - sustainable consumption, reproduced in Annex 2.

6. CONSUMER LAW AND SUSTAINABILITY

Consumption is not only an economic phenomenon, which reflects individual desires and moves the economy through collective behavior, but it is also a social and cultural process through which people express their identities and establish their place in society. In addition to being a physical process that, literally, consumes resources. What people eat, how they light their homes and how they go to work may seem like something that relates only to themselves, but the collective consequences of these consumption decisions, and how their needs are met, are the main vehicles of significant environmental impact, such as climate change, which in turn has effects on the people, countries and species of the whole world.

Consumer behavior determines the success or failure of new products and services marketed based on their sustainability. Despite the significant increase in environmental awareness among consumers, the number who do not consider the impacts of their consumption patterns, in their purchasing decisions and their behavior, is still very large. However, to exercise their role as a conscientious and responsible consumer, individuals, companies and governments need tools that enable them to understand the consequences of their choices.

The consumer rights system, which began in Brazil in the 1960s, has built itself into an instrument which is fundamental in guaranteeing the right to safety, information and choice, contributing significantly to strengthen the awareness of Brazilians as consumers, to understand that more sustainable consumption is not only a question of what products or services to acquire, but a lifestyle in which sustainability is reflected in all aspects of behavior.

In 2012, the **National Consumer Secretariat – Senacon** was created, whose duties were laid down in art. 106 of the Consumer Defense Code and art.3 of Decree N°. 2.181/97. The activities of Senacon focus on the planning, preparation, coordination and implementation of the National Policy for Consumer Affairs, with the following objectives: (i) ensure the protection and exercise of consumer rights; (ii) promote cooperation in consumer relations; and (iii) encourage integration and joint action by SNDC members.

Among other initiatives, the Secretariat provides educational materials on consumption produced by the Federal Government, Consumer Protection Agencies (Procons) and civil organizations across the country, sharing information in order to instill an awareness of and respect for consumer rights in our society. Among the materials provided by the Department of Consumer Protection and Defense one can cite: the Consumer Defense Code; Health and Safety Notice; Consumption and Health Newsletter; Consumption and Finance Newsletter; Consumer/ Investor Protection Bulletin; Consumer calendar; Guidelines for e-commerce.

The **National School for Consumer Protection (ENDC)**, established in 2007, contributes in this effort by training, updating and offering specialized courses for technicians of the National Consumer Defense System. Providing classroom and virtual courses, the school has the task of maintaining, in a continuous and permanent way, the training programs for agents and institutions aimed at consumer protection and, in this way, can be seen as an advance for consumer protection in Brazil. In addition, the National School seeks to encourage the creation of state consumer protection schools by State governments.

Among the courses offered, some that stand out are the Virtual Courses for Young Consumers, focused on educating young Brazilians to become more conscientious and informed consumers, covering topics such as health and hygiene, private education, internet and social networks, financial education and sustainable consumption, among others.

In partnership with the Department of Consumer Protection and Defense - DPDC, under the National Consumer Secretariat (SENACON) of the Ministry of Justice, the Ministry of Environment, with a view to increasing knowledge on sustainable consumption and its own Plan (PPCS), participated in **training** events conducted by the DPDC, presenting the evolution of the theme from its historic beginnings in the international initiative of the Marrakech Process to the break up of the elaboration of the Brazilian Plan focused on sustainable consumption, the importance of its implementation in Brazilian policy and the alignment of its priorities with the perspective of consumer protection. Training events are targeted at agents of the National Consumer Protection System, Consumer Protection Agencies (PROCONS), Ministries, Public Defenders, Consumer Protection organizations, Small Claims Courts, Civil Consumer Defense Entities and Regulatory Agencies.

The **National Plan for Consumption and Citizenship - Plandec** (Decree N°. 7.963/2013) aims to ensure improved quality of products and services, as well as encourage the development of consumption relations. The plan also seeks to integrate consumer defense systems, to act in conflict prevention and promote the effectiveness of norms. One of the actions to this end is the creation of the National Council of Consumer Affairs, composed of the Ministries of Justice, Finance, Development, Planning and Civil House, which must formulate an essential product list for consumers and which will have any problems resolved immediately.

One of the basic guidelines of Plandec is ensuring the basic right of citizens of the guarantee of freedom of choice, quality information and the importance of education to ensure that the country can have adequate consumption patterns. The highlight of Decree N°. 7963/13, in line with promoting sustainable consumption patterns, is that it establishes, in Article 3, the objectives of the National Plan for Consumption and Citizenship. Among these objectives are:

V - promote access to sustainable production and consumption patterns;

Implementing the plan has a number of structural challenges, including the need for addressing the issues across all levels of government and the question of after-sales relationships, with regard to the responsibilities of the productive sector, retail and consumer.

Regarding the after-sales relations, the Technical Committee of Consumption and After-Sales under the National Observatory for Consumer Relations, created by Plandec, should be mentioned. The purpose of the Technical Committee is to promote studies and formulate proposals for achieving the Plandec goals, and monitor the implementation of the policies, programs and actions of the Plan. These objectives are interlinked, both with the evolving priorities listed in the sphere of the Plan for Sustainable Production and Consumption, as well as with the implementation of the National Solid Waste Policy, especially with regard to the Sectoral Agreements on reverse logistics in the country and the Solid Waste Plans among the states.

7. PARTNERSHIP WITH THE UNITED NATIONS ENVIRONMENT PROGRAMME - UNEP

UNEP

United Nations Environment Programme

From the beginning UNEP has been the principle partner of the MMA in promoting actions and initiatives aimed at making consumption and production patterns more sustainable in Brazil, as referenced in the framework Decennial Programs on Sustainable Consumption and Production (10YFP). In March of 2010, the Ministry of Environment and UNEP established the "**Efficiency of Resources and Sustainable Consumption and Production**" project, whose goal is to foster a vigorous and continuous expansion of actions in Brazil aligned to the concept of Sustainable Consumption and Production established by the Marrakech Process, integrated with national efforts to confront climate change, alleviate poverty, stimulate economic development and conserve biodiversity and resources.

The main objectives of the MMA/UNEP project are: promoting the validation, launching and implementation of the Action Plan for Sustainable Production and Consumption; and monitoring, reviewing and systematically improving the PPCS, and generating subsidies from their progress, contributing to the international dimension of the Marrakech Process.

In addition to supporting the studies required for the development of the Plan for Sustainable Production and Consumption, the project with UNEP has been the main instrument for achieving the implementation of initiatives and actions of the MMA concerned with the implementation, monitoring and improvement of the Plan for Sustainable Production and Consumption, such as:

- ✓ Initiative for Sustainable Procurement and Major Events - MMA, UNEP and FGV
- ✓ Distance learning courses for Environmental Agents, specializing in Sustainable Production and Consumption
- ✓ SPPEL Brazil Project – *Sustainable Public Procurement and Ecolabeling*.

The partnership, which allowed the generation of data and initial studies that formed the basis for the construction of the Action Plan for Sustainable Production and Consumption, was greatly strengthened by a donation to UNEP, by the Brazilian Government, of US$ 1 million, for the promotion of sustainable consumption and production patterns, through the financing of activities in developing countries.

Survey "What Brazilians think about the environment and sustainable consumption"

In the context of this project, the survey "What Brazilians think about the environment and sustainable consumption" was conducted in 2012, which showed a significant increase in the environmental awareness of Brazilians. The objectives of the research were to produce a panel of public information on environmental awareness in the country; continue the historic trend on the subject started in 1991; describe the consumption habits of the population; and probe the pro-environmental habits and attitudes and knowledge on sustainable development and related topics.

In the survey[20], conducted between 15 and 30 of April, 2012, the most striking indicator of this positive change was the number of people who could not point out an environmental problem in Brazil, in their town or neighborhood; which accounted for 46% of surveyed people in 1992, dropping to only 10% in 2012. The survey interviewed 2,200 people from urban and rural areas in all regions of the country and found that the environment ranks sixth on the list of concerns of Brazilians, behind health and hospitals (81%); violence and crime (65%); unemployment (34%); education (32%); and politicians (23%). Six years earlier, the environment appeared in 12th place, just ahead of agrarian reform and foreign debt.

In addition to general indicators, the survey included specific questions relating to sustainable consumption, some dealing with knowledge of the topic, others on consumption attitudes and habits, the collection and treatment of waste, and measures for saving products and natural resources, among others.

The questions related to consumption habits and recycling indicate that policies such as the one concerned with solid waste and the campaign to reduce the consumption of plastic bags have reached the population, as shown by the strong willingness to join the effort. Overall, the research showed that Brazilians still have habits which are harmful to the environment, particularly in the incorrect disposal of various items in the post-consumption stage. However, the historic trend indicates that campaigns for the separation of waste and the fight against energy and water waste remain as high points, with great adherence by Brazilians.

Passaporte Verde (*Green Passport*) Campaign

With the slogan "I Take Care of My Destination," the *Green Passport* campaign, coordinated by UNEP and the Ministries of Environment and Tourism, took advantage of the World Cup to start a focused campaign for consumers and businesses to opt for more sustainable practices. The campaign was implemented through a communication platform for sustainable consumption and production, with an interactive website, mobile app and strong presence in social media.

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[20] Final report: http://www.akatu.org.br/Content/Akatu/Arquivos/file/12_08_20_ConsumoConsciente_PesquisaMMAQuanti_Completa_agosto2012.pdf

Sustainable Construction

UNEP supported some important studies for the advancement of the theme of sustainable construction in Brazil, in partnership with the MMA and the Brazilian Council for Sustainable Construction (CBCS), such as the study on the State of the Art of Sustainable Construction, conducted under UNEP project N°. 61-P7 (Brazil project): "Sustainable Production and Consumption", which will serve as a source for identifying the most critical issues in the industry and the lack of sustainability of its processes as well as the collection of case studies showing changes in practices of production that could be used in the preparation of public policy.

Continuing this partnership, the study "Aspects of Sustainable Construction in Brazil and Promotion of National Public Policy", published in October of 2014, was also undertaken, which sought to organize a diagnosis of the current state of construction as a resource to propose a set of guidelines for orienting, in a technical and objective way, future public policies, to contribute to making construction practices more sustainable. The scope defined for the work focused on three major areas in the civil construction industry: water, energy and materials.

8. BRAZILIAN NETWORK OF WOMEN LEADERS FOR SUSTAINABILITY

The Network of Women Leaders for Sustainability was launched in November of 2011 in Brasilia, in a meeting organized by the Ministry of Environment, as a Brazilian contribution to the United Nations Conference on Sustainable Development (Rio + 20, 2012).

The Network brings together women leaders of executive management, advisory or decision-making boards, representatives of public and private institutions, both for profit and non-profit, that work with issues relating to the promotion of commitments for sustainability and women's empowerment, and who can implement them within their institutions. All work is done voluntarily and collaboratively.

In 2012, the Network launched the Platform 20 document, during the Rio + 20, which reflects the expectations, consensus and efforts of the network members, in order to construct a more just, equitable and sustainable country that recognizes and values women.

The Platform 20 presents a summary of the main proposals for actions to be implemented, linked to three agendas prioritized by the Network in its meeting in November, 2011:

- Women's Empowerment (in line with the UN Women and SPM/Brazil) - promote women leaders in strategic positions in public and private power structures in structuring sustainability;
- Green Entrepreneurship and Sustainable Business - foster entrepreneurship in sustainable business within the institutional framework of the inclusive green economy; and
- Need to change consumption and production patterns (Marrakech/UNEP and Plan of Action for Sustainable Consumption and Production/Brazil) - promote new patterns of consumption, especially among urban middle classes, with mass communication strategies and strategic alliances with social segments that have similar objectives.

With an eye on the future, the network took on some commitments to be achieved through the engagement of the participating companies and other companies and institutions, together with the Ministry of Environment, composed of five objectives, eight targets and 14 partnership actions.

In June of 2014, MMA Ordinance (Ordinance N°. 211 of 06/12/2014) was established, formalizing a new structure for the Network, approved by the Strategic Council. The new governing structure, with an 18-month mandate, is composed of a deliberative Council and an Executive Secretariat. The Council, the top body for advising and decisions of the Network, is currently composed of the Minister of Environment, Izabella Teixeira, as Honorary

President; Samyra Crespo, President of the Botanical Garden Research Institute, as Executive Chairman; Vania Somavilla, of Vale do Rio Doce, as Executive Vice-President; and Andrea Alvares, Pepsico Brazil, as 2nd Executive Vice President; plus 18 Full Councilors. The Network's Executive Secretariat is exercised by the Secretary of Institutional Articulation and Environmental Citizenship of the MMA.

Among the examples of actions undertaken by the companies and institutions of the network, one can cite: the line of Sustainable Businesses and Green Entrepreneurship Kapeh, composed of cosmetics manufactured from a base of certified high-quality coffee, produced in a sustainable way, with disclosure of origin and traceability; the initiative of Social Affairs of Coca-Cola Brazil, which seeks to promote the participation of low-income communities in the company's activities, women's entrepreneurship and recycling; the Editora April Movement for Sustainability, a multiplatform project with communication strategies for sustainable consumption; and the Conscientious Consumption strategy of Walmart Brazil, covering issues like responsible purchasing, waste reduction, promoting responsible consumption and the efficient use of water and energy.

http://hotsite.mma.gov.br/redemulheres/

9. SUSTAINABLE WORLD CUP 2014

In addition to the socio-economic benefits such as job creation, improved infrastructure, increased flow of tourists and others, the hosting of the FIFA Football World Cup in Brazil in 2014 represented an excellent opportunity for the implementation of environmental projects, which not only left a very important legacy for the country, but have become a new benchmark for major events worldwide in which sustainable development is a fundamental reference in the preparation, organization and implementation stages. Ensuring sustainable development in this type of global event means contributing to the reduction of social and environmental costs, inefficiencies and waste, and contributing to greater integration with society and the continuous development of people and communities for a better relationship between society and the environment.

Five themes underpinned the actions planned for the World Cup in relation to sustainability:

- Certification and sustainable management of stadiums (coordinated by the Ministry of Sports):

This was the first World Cup in which all stadiums followed models of sustainable construction and management and were able to obtain international certification. Some arenas have received certification and others are in the process to receive the LEED (*Leadership in Energy and Environmental Design*) seal, recognized worldwide. Indeed, the National Bank for Economic and Social Development (BNDES) decided to adopt sustainability criteria as a requirement for the release of funding for projects. Six stadiums have achieved certification. The Castelão Stadium presented a 67.6% reduction in potable water consumption and a 12.7% reduction in annual energy consumption and 97% of the project's waste was diverted from landfills. The Fonte Nova Stadium, in turn, used 20% of its building materials made from recycled material, 75% of the construction waste was diverted from landfills and 35% of its energy comes from renewable sources like solar and wind[21]. FIFA liked the idea so much that it has made this a requirement for the next World Cups.

- Waste management and recycling (coordinated by the Ministry of Environment):
    - The federal government opened a line of support for the host cities for the inclusion of recyclable waste collectors and six capitals were awarded R$ 2.3 million. With the investment, the collectors undertook the selective collection in the vicinity of arenas in the official celebrations for football fans. All the material collected was sent to recycling cooperatives. In addition, BNDES offered a line of credit for these programs to operate on a permanent basis in Brasilia, Curitiba, Porto Alegre and Rio de Janeiro. The project, called "Cities of the World Cup," received a total of approximately R$ 79 million in investments.
- Compensation and mitigation of emissions (coordinated by the Ministry of Environment):
    - In the fight against global warming, Brazil compensated seven times more than estimated for direct emissions of greenhouse gases generated by the hosting of the World Cup. The excellence of the process has been recognized by the United Nations. The *ex ante* inventory of 2014 World Cup emissions was also undertaken, with a projection of emissions related to the event. The inventory, coordinated by the MMA, estimated that the total World Cup emissions would reach 1.406 million tCO2eq. Of the total, 87.1% would come from international air transport and 9.2% from national flights (indirect emissions). The rest was divided between accommodation (1.8%), construction (0.5%) and operations (1.4%).

[21] Portal EcoD.

Even before the World Cup, on June 3, 2014, the Environment Minister, Izabella Teixeira, awarded the Low Carbon Seal to representatives of the 11 companies that joined the public call intended to neutralize the emissions caused by the World Cup. In total, 420.5 metric tons of equivalent carbon dioxide (tCO2eq) were compensated. The number exceeded the 59.2 tCO2eq estimated for activities such as construction, energy use in stadiums and use of official vehicles. The figures were the result of a coordinated action between the federal government and the private sector, arising from the public call to Brazilian companies. Companies across the country donated, and still can donate, Certified Emission Reductions (CERs), carbon credits, which are emission offset projects certified by the United Nations.

The compensation of World Cup emissions did not involve financial resources and represented a milestone in Brazilian environmental policy related to emissions of greenhouse gases. According to the Environment Minister, Izabella Teixeira, adaptation and mitigation actions on climate change will be a priority of the federal government. "This was a tremendous learning experience," she said. "We need to transpose the World Cup and get everyone engaged in a low-carbon economy."

- Passaporte Verde (Green Passport) Campaign (coordinated by the Ministries of Environment and Tourism, as well as UNEP):

With the slogan "I take care of My Destination," the Green Passport campaign took advantage of the World Cup to start a focused campaign for consumers and businesses to opt for more sustainable practices. The campaign has become a communication platform on sustainable consumption and production, with an interactive website, mobile app and a strong presence in social media.

Among the highlights in the 12 host cities were the Green Passport Tours, sixty tour options from each of the capital cities; the Sustainability Days, seminars to encourage eco-efficient practices for commercial establishments; and the Green Passport commitment, an online tool for businesses to conduct a self-assessment and see the level of sustainability of their business. By joining the campaign, establishments were available for online consultation by consumers via hot site and an App.

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- Organic and Sustainable Brazil Campaign (coordinated by the Ministries of Social Development and Agrarian Development):

Under the Sustainable World Cup Project, coordinated by the Ministry of Environment, the Organic and Sustainable Brazil Campaign was launched, with the aim of encouraging the marketing and consumption of organic and family-farmed products, before, during and after the 2014 World Cup. In addition to fostering family farming, promoting the social integration of small farmers, the campaign aimed to contribute to the increase in trade of organic products, generating jobs and income for hundreds of workers.

The Ministry of Social Development and Fight against Hunger (MDS) created the Organic and Sustainable Brazil Campaign for the 2014 World Cup. The event was held in 12 Brazilian cities: Brasília, Curitiba, Cuiabá, Belo Horizonte, Fortaleza, Manaus, Natal, Porto Alegre, Recife, Rio de Janeiro, São Paulo and Salvador.

The World Cup was an opportunity for the inclusion of the theme of production and consumption of organic products in the national sustainability agenda, with great visibility for tourists. The main strategy was to raise awareness among consumers and increase demand for organic and sustainable products, whose production is based on the principles of sustainability, fair trade and healthy eating. During the World Cup, farmers sold their products through retail outlets that had been installed in the World Cup host cities in the period between 11 and 27 of June. The kiosks were set up in high-movement areas of World Cup tourists, and in several cities will be become integrated into the local outdoor Organic Markets circuit, which joined the Organic and Sustainable Brazil Campaign.

Sustainable and organic Brazil
Opportunities for those who produce and those who consume

60 groups and associations of producers were selected by Public Edict, and each kiosk had producers from various Brazilian biomes. In all, there were about 25 thousand families of organic producers around the country that had the chance, through this action, to promote and market their products. The kiosks were installed in tourist traffic areas and, in several towns, were complemented by taking part in the local circuit of organic markets that had joined the campaign. The goal, in addition to selling organic products, was that the campaign would leave a production chain that is increasingly organized and structured. The total investment was R$ 2,691,630.00.

Snack kits for volunteers: the participants of the Federal Government's Brazil Volunteer Program received kits with non-perishable organic food items. The products were purchased by the MDS, through the Institutional Purchase of the Food Acquisition Program (PAA), in an unprecedented initiative. The products were distributed with the Volunteer Kits. The food items were purchased from cooperatives and associations and included organic juices, nuts, cereal bars, dried fruit, cookies and other items. The objective was to promote the consumption of healthy and sustainable food among the volunteers, who acted as multipliers of the campaign to the public attending the World Cup.

Even the choice of World Cup mascot reflected the concern for the environment. The animal chosen was the Brazilian three-banded armadillo, which is on the red list of species at risk of extinction, according to the Ministry of Environment (MMA). The choice of this species of armadillo was because, when defending itself, it rolls up into a ball, protecting the soft underbody under the rigid shell. Recent studies show that the three-banded armadillo suffered a decline of more than 30% over the past 12 years as a result of hunting, agriculture and habitat reduction.

10. SUSTAINABLE PRODUCTION AND CONSUMPTION IN MERCOSUR

On June 28, 2007, the Mercosur Common Market Council approved, by Decision No 26/2007, the "Promotion and Cooperation Policy for Sustainable Production and Consumption in Mercosur". This regional policy is intended to be a guide for improving the efficiency of production processes, reducing risks to human health and the environment. Taking into account the principles and commitments made by member states of Mercosur, it considered it necessary to make a shift to more sustainable consumption, environmental management of companies oriented to a more rational and efficient use of natural resources, pollution prevention and improved competitiveness. The actions and tools for sustainable production and consumption should help create jobs, reduce poverty and foster social inclusion in the member states.

Cleaner Production is understood as the continuous application of an integrated preventive environmental strategy to processes, products and services, aimed at improving efficiency, reducing risks to human health and the environment through the rational use of raw materials, water and energy, the elimination of hazardous inputs and reducing the quantity and toxicity of emissions and waste at the source. The concept of Sustainable Production systemically integrates economic, environmental and social variables in the production of goods and services.

Sustainable Consumption is the use of goods and services that satisfy human needs and provide a better quality of life, while minimizing the use of natural resources, hazardous materials and the generation of residues and contaminants, without jeopardizing the needs of future generations.

The **ECONORMAS Mercosur project** is part of the Regional Indicative Program (RIP) 2007-2013 for the European Union's cooperation with Mercosur and is anchored on three pillars:

- Support for the institutionalization of Mercosur
- Support for the consolidation and deepening of Mercosur
- Efforts to strengthen and enhance the participation of civil society and knowledge of the regional integration process.

The program arose from strategies, sectoral plans and agendas set by Mercosur through its technical groups (Working Subgroup N°. 3 "Technical Regulations and Conformity Assessment" and Working Subgroup N°. 6 "Environment") and its political forums (for example, Meeting of Ministers of the environmental sectors, trade and industry).

The 60-month project is a pilot project that aims to converge the cross-cutting strategies of each member state consistent in coherent and executable regional strategies, as well as articulate four lines of integrated and complementary actions among the member states:

1. The promotion of sustainable production and consumption (SCP);
2. The fight against desertification and the effects of drought (DeS);
3. Advances to implement the Globally Harmonized System of Classification and Labelling of Chemicals (SGA), defined by SGT N°. 6; and
4. The convergence of the base of rules and regulations - quality and safety - of products in specific selected areas - wood and furniture (Uruguay and Paraguay), electrical products, engineering - and creating regional capabilities for conformity assessment, defined by SGT N°. 3.

The GMC Resolution N°. 41/09 approved the signing of the Financing Agreement for the project "Support Program for Deepening the Economic Integration Process and Sustainable Development of Mercosur (ECONORMAS MERCOSUR)" DCI-ALA/2009/19707, between the European Community, represented by the European Commission, and Mercosur (Argentina, Brazil, Paraguay, Uruguay), represented by the Common Market Group of MERCOSUR, which appointed the Technological Laboratory of Uruguay (LATU) of the Republic of Uruguay as the Executing Agency of the Project .

The project's main objective is to improve the quality and safety of Mercosur products and strengthen its capacity to reconcile economic growth and commercial activity with the sustainable management of resources, and strengthen environmental protection. For this, it adopted a focus on promoting good sustainable production and consumption practices, strengthening the protection of the environment and health as well as increasing trade through the shared technical regulations and conformity assessment.

The outcomes expected from the implementation of the project are:

Outcome 1: Sustainable Consumption and Production (SCP) were promoted through the progressive incorporation of environmental management systems and cleaner production in small and medium enterprises (SMEs) and sustainable consumption patterns by consumers in order to improve the quality of life of the region.

Outcome 2: There was a convergence of national plans to combat desertification and the effects of drought (DYS), through Mercosur sub-program involving the development of participatory plans in selected areas.

Outcome 3: Mercosur has made significant progress in implementing the Globally Harmonized System of Classification and Labelling of Chemicals (GHS) and created the Mercosur regional analytical capabilities.

Outcome 4: Mercosur has completed the development of technical and regulatory standards based on MERCOSUR quality aspects and product safety in selected areas: wood and furniture in Uruguay and Paraguay, electrical products and metals, building conformity evaluation capacity in the region.

The activities to achieve the aforementioned results are:

Activities related to Outcome 1: Promoting Sustainable Consumption and Production (SCP).

Activity 1.1 Produce and disseminate information on best SCP practices for the target sectors (consumers, SMEs, micro-enterprises and the public sector) of MERCOSUR, taking into account the particular characteristics of each member state. This activity aims to provide information about the target groups on regional capacities for environmental management, cleaner production and sustainable consumption.

Activity 1.2 Creation of a regional mechanism to implement environmental management and cleaner production practices by SMEs in MERCOSUR.

Activities related to Outcome 2: Combating desertification and the effects of drought (jm).

Activity 2.1 promote the convergence of national plans to combat desertification and the effects of drought through a regional program in MERCOSUR and implementing interventions of preventive, corrective or curative force by government, in at least four homogeneous areas selected by the member states, SGT-6 .

Activity 2.2 Identify and implement interventions of preventive, corrective or curative force, in at least four amendments proposed by the Steering Committee of the Project. This activity is to execute at least four preventive, corrective or curative interventions, for demonstration purposes in each member state in some of the areas identified as priorities (for example, reforestation with native species, strengthening the interstices of nature between cultures, soil use that is compatible with its ecological vocation, flood control, recovery of saline soils). These interventions will be identified in activity 2.1 and must be proposed by the Steering Committee of the Project and implemented by the central and/or local government of each member state.

Activity 2.3 Develop and disseminate pilot projects for each of the four proposed interventions in the areas identified as priorities, in order to identify the use of sustainable management techniques of land in degraded areas worthy of recovery. This activity is to focus on solving the problem not only for Mercosur, but for each of the identified areas. It is, therefore, expected to close in on each one of the zones, representing pilot areas, in small areas and develop a detailed plan for each that can then be extended to the entire area. It is the main criterion to establish the representativity of the problem in the area in question. Two main criteria will be involved in identifying the pilot areas: the geography and size of holdings, but others can be added that are deemed suitable. This activity will be coordinated and implemented simultaneously with activity A1.1.2 as it involves the same SGT6 institutions. The resources allocated are for the incorporation of graphic information and georeferencing information systems and digital graphic elements.

Activities related to Result 3: Early adoption of the international guidelines of the Globally Harmonized System of Classification and Labelling of Chemicals (GHS) in MERCOSUR and for the regional development of analytical skills.

Activity 3.1 Promote the adoption of the international standards of the EMS and its compatibility with the European Union REACH legislation. This activity aims to show how the rules and regulations in each member state, directly or indirectly, affect the implementation of the GHS.

Activity 3.2 Strengthen and develop local capacity for chemical analysis and strengthen laboratory infrastructures available to implement the GHS.

Activities related to Outcome 4: Define basic technical standards and harmonize regulatory aspects of Mercosur in quality and safety of selected products in specific areas - wood and furniture (Uruguay and Paraguay) and electrical products, metal and mechanics - and training assessment according in the region (Technical Regulations and Conformity Assessment Procedures).

Activity 4.1 Promote the regulatory convergence and regulatory and conformity assessment procedures (PECs) in selected areas.

Activity 4.2 Accredit Tests.

Activity 4.3 Reinforce conformity assessment of domestic products.

Under the action line "Promotion of Sustainable Production and Consumption (SCP)" of the ECONORMAS project and support for the work from "consulting services for the implementation and subsequent evaluation of environmental management practices and cleaner production in SMEs of MERCOSUR", carried out by the GOPA-ITA-Euro Invest consortium in SMEs of the region served, the manuals Good and Better Clean Manufacturing Practices and Sustainable Management in Environmental Matters were prepared, to be disseminated among small and medium enterprises (SMEs) and organizations in the region.

The purpose of the manuals is to produce and disseminate, mainly, the concepts of clean production and sustainable consumption, enhancing and generating parameters for the activities of companies, within the current environmental regulatory framework in the field of waste management and operational licensing. There are 4 publications that refer to a productive sector by country: Electrical and Electronic Waste (RAEES), in Argentina; Textiles and Clothing, in Brazil; Organic Sugar, in Paraguay; and Sawmills and Wood Products, in Uruguay.

Links to manuals:

Cleaner Production, Sustainable Consumption and Good Environmental Practices for the Sustainable Management of the Sawmill and Wood Products Industry in Uruguay >>

Cleaner Production, Sustainable Consumption and Good Environmental Practices for the Sustainable Management of Sugar Industry Waste in Paraguay >>

Good Practices for the Sustainable Management of Electrical and Electronic Appliance Waste (WEEE) >>

"MERCOSUR produces sustainably" event (August of 2014)

V. CONNECTIONS AND SYNERGIES

One of the main objectives of the "10-Year Framework Program for Sustainable Consumption and Production" (10YFP), adopted at the United Nations Conference on Sustainable Development (Rio+20, 2012), is to integrate the issue of sustainable production and consumption in policies, plans, programs and strategies for the sustainable development of countries, including those dedicated to reducing poverty and achieving the internationally adopted goals.

The articulation and promotion of synergies between the actions for sustainable production and consumption, and the remaining actions, both governmental (at all levels) as well as from business and civil society in general, strengthen the achievement of the objectives of all public policies involved, and even the meeting of goals and commitments, in the context of international conventions and agreements.

Encouraging the use of cleaner and renewable energy sources in buildings; energy efficiency in production processes and facilities; reducing deforestation through source control systems and tracking; among many other actions, the Plan for Sustainable Production and Consumption is clearly contributing to the objectives of the National Policy on Climate Change (Law N°. 12.187/2009) and the implementation of commitments made in the context of the United Nations Framework Convention on Climate Change, the Kyoto Protocol and other instruments on climate change.

The initiatives implemented within the framework of priorities in the "Environmental Agenda in Public Administration - A3P" and "Increase in Solid Waste Recycling", among others, using the principles, tools and institutional guidelines established in the National Solid Waste Policy (Law N°. 12.305/2010), are aimed at addressing the major environmental, social and economic problems arising from the inadequate management of solid waste, contributing also to the inclusion of recyclable and reusable waste collectors in the context of national strategies for poverty reduction and social inclusion.

Using the power of government procurement, the Government is able to induce new market practices and mobilize important sectors of sustainable public procurement toward more sustainable production, through sustainability criteria for the procurement of goods and services. In addition to promoting a more modern, competitive - nationally and internationally - and inclusive trade system, the Government strengthens the policies, programs and actions for local development and combats regional inequalities.

"Public procurement can help create a large market for sustainable business, increasing the profit margins of producers through economies of scale, and reducing their risks. On the other hand, public authorities, as large-scale consumers, can foster innovation, encourage competition in the industry, guaranteeing producers returns for the best environmental performance of their products, through market demand or real incentives. These market mechanisms play an important role and there are numerous examples that illustrate how the conscious choice of consumers has considerably changed the market structure."[22]

The National Forest Program (PNF), the action plans for prevention and control of deforestation, biodiversity conservation instruments - including the Convention on Biological Diversity (CBD, 1992) - sustainable rural development, the National Solid Waste Policy (PNRS) and the National Water Resources Policy (PNRH), plus several other policies, programs, projects and actions have their goals strengthened when government and companies limit consumption to attending real needs, without waste and adopting reuse to extend the life of products; buying products with less negative impacts and using them efficiently, preventing or minimizing pollution or pressure on natural resources; developing innovative products and services; avoiding the transfer of negative environmental impacts from one environment to another; encouraging environmental improvements in all stages of the product's life and taking into account the whole lifecycle - production, distribution, use and disposal - of products and services in making decisions about their purchases.

[22] http://cpsustentaveis.planejamento.gov.br/wp-content/uploads/2010/06/Cartilha.pdf.

By introducing environmental criteria in public procurement in the sectors of Education, Agriculture and Transport, the Government is promoting the quality of life and health of the population, not only of those directly targeted by programs, but their families and communities as well.

These are just some examples of how a change in patterns of production and consumption can have enormous potential to contribute to sustainable development goals, economically, socially and environmentally. More than that, this change becomes more viable the greater the joint efforts and inter-sectoral coordination become, in both the governmental sphere and in the broader context of society.

In the final Rio+20 document "The Future We Want", the Heads of State and Government "affirmed the need for better integration of economic, social and environmental aspects of sustainable development at all levels, and recognized the relationship between these various aspects to achieve sustainable development in all its dimensions. They recognized that eradicating poverty, replacing unviable modes of consumption and production with sustainable modes, as well as the protection and management of natural resources, that structure economic and social development, are fundamental objectives and essential requirements for sustainable development. It was also reaffirmed that the achievement of sustainable development requires: promoting sustainable, equitable and inclusive economic growth; creating greater opportunities for all; reducing inequalities; improving basic living conditions, promoting equitable social development for all; and promoting integrated and sustainable management of natural resources and ecosystems, which contributes significantly to social and human development, without neglecting the protection, regeneration, restoration and resilience of ecosystems in the face of challenges, whether new or old."

The implementation of the Action Plan for Sustainable Production and Consumption can and should be, more and more strongly, a key instrument for the realization of the future idealized at Rio+20.

VI. CHALLENGES AND OPPORTUNITIES

Maintaining a growth model with social inclusion and growth of income and employment for all entails a broad policy of changing consumption and production patterns in the country, within the context of global negotiations. This challenge is expressed with more emphasis in the debate on achieving the Millennium Development Goals (MDGs), and especially the new Sustainable Development Goals (SDGs), to be adopted in the context of the development agenda of the United Nations Post-2015, for the world and Brazil must produce goods and services more efficiently, using fewer resources and generating less waste and pollution.

With regard to the social and environmental dimension, it is important to note that this is an action that embodies the commitments of the set of public policies. In this context, it is fundamental to face the complexity of defining the priorities and instruments that give strategic direction and vigor to the 2nd cycle of the Plan for Sustainable Production and Consumption.

In this context, the experience of the 1st cycle reveals how one of the paths is strengthening the role of articulation of policies that directly and indirectly have a strong influence in promoting change in the pattern of production and consumption in Brazil. The results of the 1st cycle show that the primacy of this function is to strengthen and generate state instruments of action that envisage the integrated results of sectoral policies.

Besides the importance of a horizontal articulation of the Federal Government, it is essential to build a platform to promote policies which involve other federal entities, states and municipalities. Although some of this challenge is to be attributed to the federal character of the government's sectoral policies, the success of federal instruments of the National Environmental Policy - CONAMA, SISNAMA - shows that they can contribute in a complementary way, committing all the states of the Federation.

The implementation of the priorities of the 1st cycle also revealed specific challenges for the continuation of these themes in the 2nd cycle:

ENVIRONMENTAL EDUCATION (EA) for production and consumption is a strategic tool in the transition towards a more sustainable and less harmful paradigm with the environment, natural and human, and its resources. If education by itself does not guarantee change, without it the necessary changes will not become effective in culture and everyday life.

Thus, a major challenge is to incorporate EA in the myriad of public policies, as a cross-cutting item, in dialogue with other related issues such as sustainable production and consumption. Education, just as socio-environmental policy, demands synergistic actions so it can provide better results for government efforts, also in the area of sustainable production and consumption.

Another important challenge and opportunity for the National Environmental Education Policy in this area is to approach and focus its principles and guidelines more, promoting critical and creative reflection that is able to stimulate structuring and integrated actions in building sustainable societies. That is, while it informs and mobilizes citizens and populations on a daily basis, it also offers their organizations, networks and communities comprehensive content, able to contribute, including in the dissemination, in the control and social participation, along with public policies on conscientious, responsible and sustainable production and consumption.

Under the priority **SUSTAINABLE PUBLIC PROCUREMENT**, relevant challenges for public managers and suppliers have been identified, such as:

- Reduce transport of people and materials by using video conferencing, electronic document scanning systems and digital signatures. Sending documents by electronic means instead of conventional transport results in a reduction in the use of fossil fuels;
  - ✓ Opt for more efficient means of transport and lower emissions per ton or passenger carried;
  - ✓ Choose more energy-efficient vehicles which have the "A" INMETRO/COMPET seal, and use renewable fuels for vehicles to transport people or cargo, encouraging the rational use of means of transport;
  - ✓ When possible, encourage the use of zero-emission electric vehicles in the Public Administration;
  - ✓ Encourage public or private collective transport for civil servants to go to and from the workplace;
  - ✓ Install distributed generation of power in public buildings through the installation, where possible, of alternative sources of energy;
  - ✓ Install smart grid systems in public buildings, for proper management of demand and contracted input of energy consumed;
  - ✓ Consider the negative extra-economic factors in the calculations of lower cost and equality so sustainable purchases are fair.
  - ✓ Change the paradigm of "best value for the money" for one that analyses the environmental costs over the entire lifecycle of the product, as well as the social parameters;
  - ✓ Insert biodiversity conservation as principle in sustainable public procurement;
  - ✓ Use payment systems for environmental services in sustainable public procurement;
  - ✓ Expand the capacity of public officials, especially those who are part of the Sub-secretariats of Planning, Management and Administration - SPOAs;
  - ✓ Include the perspective of sustainable procurement in the proceedings when drafting the terms of reference;
  - ✓ Consider the multi-disciplinarity of sustainability when training civil servants in general;
  - ✓ Strengthen the understanding of food and nutritional security as a public good, through campaigns in various media;
  - ✓ Disseminate the PGPM-Bio policy as a strengthening factor for the economic and social development of traditional populations and valuing the forests;
  - ✓ Consolidate a Center for Shared Procurements;
  - ✓ Disseminate knowledge and experiences of shared procurements through training, aimed at raising awareness among policy makers and the involvement of public administration in different spheres of activity;
  - ✓ Create new networks (councils, committees) of public officials to carry out sustainable shared procurements;

- ✓ Increase the number of agencies and entities involved in shared procurements and sustainable procurement;
- ✓ Simplify the bureaucracy and optimize shared procurement processes;
- ✓ Increase the volume of sustainable procurement: do not just register under CATMAT and quote, but consume the sustainable option;
- ✓ Provide the Ministries of Planning and Environment, in addition to INMETRO, with human, budgetary and logistic resources for sustainable procurement;
- ✓ Continuous improvement of specifications/standardization of products and better knowledge through the analysis of product lifecycle;
- ✓ Determine more systemic sustainability attributes in the tenders, such as those with less environmental impact, such as recyclable/reusable, lower toxicity of materials and products, renewable raw materials, the use of clean technologies, energy efficiency, water efficiency and lower gas emissions;
- ✓ Create lines of research, technical and technological development, and innovation, in partnership with universities to support the definition of criteria of sustainability and sustainable product development;
- ✓ Create eco-labels, in partnership with INMETRO for sustainable products and services;
- ✓ Implementation of Sustainable SICAF; and
- ✓ Promote economic instruments to encourage the market for sustainable products and services (special financing for the acquisition of machinery, reduced tariffs and rates etc.).

The major challenge for the program **ENVIRONMENTAL AGENDA IN PUBLIC ADMINISTRATION - A3P** is, along with other initiatives and programs of the Federal Government, to make sustainability a central agenda in the activities developed by the public authorities at all levels of government. In addition to this, other challenges for the agenda include the expansion of training activities for managers and civil servants, and the scope of the Agenda as a national sustainability framework, especially with the municipalities.

The monitoring and systematic evaluation of the actions implemented by A3P partners across the country in order to consolidate real gains resulting from their implementation, are also challenges to be faced in the coming years.

In addition, improving the Agenda so that, in addition to being a benchmark of sustainability, it can be an instrument of technical and financial support and certification of sustainability initiatives already undertaken by public institutions is also an important challenge to be faced from 2015 onwards.

"The implementation of the national **SOLID WASTE** policy is difficult and complex in a continental and diverse country such as Brazil. The challenges are complex and require a lot of time and effort from various areas of government in its three levels, federal, state and municipal, as well as civil society and business. It is not only a question of eradicating dumps, or performing selective collection, although these are important points in the process. We have quite challenging horizons ahead of us, changing our consumption patterns, being more sustainable and reducing the generation of waste." (Ney Maranhão, 2014)

- ✓ While it is possible to observe numerous advances, there are still municipalities that have not adapted and are experiencing difficulties in meeting the targets set by the PNRS. A way out for these municipalities can be the signing of a Term of Conduct Adjustment (TAC) with the State Prosecutor's Office, providing a time extension to comply with the PNRS. To this end, the Federal Government released funds from the Growth Acceleration Program (PAC), the Growth Acceleration Program 2 (PAC2), Caixa Econômica Federal, National Bank for Economic and Social Development (BNDES) and the National Health Foundation (FUNASA).
- ✓ Formalizing the shared responsibility for the disposal of waste: no proposal or plan will work unless all segments of society receive enough information and are made aware of how to reduce consumption, the long-term use, the reuse of materials and the final appropriate disposal of waste.
- ✓ The Federal Government seeks consensus among various segments of society, especially industry, the main transformational agent in regard to cost reduction and recycling. The search for consensus is made through sectoral agreements, regulations and public commitments to implement shared responsibility.
- ✓ Reverse logistics is the concrete realization of the shared responsibility between manufacturers, importers, distributors, retailers, consumers and the government, to reintroduce solid waste in the production chain and increase the recycling market in Brazil.
- ✓ The creation of efficient mechanisms for enforcing and penalizing, aimed at respecting the sectoral agreements.
- ✓ Expansion of investments for creating more sanitary landfills throughout Brazil.

Lack of information and clarification is still at the base of the main challenges for incorporating sustainability criteria in different sectors, and of course the **RETAIL** sector is no exception. With many dilemmas and problems encountered along the way, sustainability requires constant learning and the sharing of experiences. In addition, retailers have, as one of their dilemmas, the role of encouraging the use of credit. It is a contradiction to have a store that sells certified products but at the same encourages consumers to drown in debt for months, paying high interest rates. This is an issue that goes far beyond systems, logistics and sustainable buildings.

- ✓ Demand for sustainable products: a dilemma in retail is overcoming the barrier of prevailing wisdom that a sustainable product is expensive and therefore of interest to only a small portion of the population, not generating sales volume and, consequently, reducing profits. Large companies have managed to undo this association, but medium and small ones still find it difficult to overcome this barrier.
- ✓ Managing the Supply Chain: encouraging suppliers to develop products with greater environmental and/or social responsibility. It is necessary to join efforts to implement sustainable procurement and encourage the emergence and strengthening of small suppliers.
- ✓ Education and Information for Consumers: encourage the purchase of sustainable products, as well as educate on how to use and dispose of products properly. Another important contribution is to provide places for selective collection and clearly mark aspects of sustainability of products through labels.
- ✓ Ensuring sustainability throughout the whole process: One must consider values and aspects that go beyond the financial ones, like social and environmental ones, such as: the development of fair trade and ethical trade relations; the proper use of resources and their origin; the pollution generated in production and transportation; and the working conditions and fair remuneration of the people engaged in the production chain.

- ✓ Advances in sustainability certifications and seals, in the creation of industry associations and tracking of products, for example. Some strategies, such as the training of staff, investment in responsible marketing and communication campaigns, partnerships with other companies, NGOs and governments are also essential.

In these processes, the consumer is the central figure that legitimizes the company and the value chain behind it.

Sustainability in **CONSTRUCTION** requires the qualification of all actors in the construction supply chain to promote, among others, the following measures, which are still challenges to be faced:

- Integration of the building in its environment;
- Performance-based design;
- Improved quality of buildings;
- Industrialization;
- Impact assessment tools for design decisions;
- Waste Management;
- More eco-efficient materials.

The opportunities and challenges for the construction industry are diverse, but can be summarized as the reduction and optimization in the consumption of materials and energy, reduction of waste generated by construction, preservation of the natural environment, improving the quality of constructed spaces and using materials with less impact on the environment, security and human health. It is important to further advance the actions in partnerships between the public sector, the private sector and civil society, which allow for:

- ✓ changes in the conventional production process, towards flexible integrated projects, with the possibility of readjustment for future change of use to meet new demands, reducing demolitions;
- ✓ search for innovative solutions that promote the rational use of energy or the use of renewable energy;
- ✓ ecological water management;
- ✓ reducing or eliminating the use of materials with high environmental impacts;
- ✓ reduction of construction waste, with modulation of components to reduce losses and specifications which allow the reuse of materials;
- ✓ creation of value in the construction sector;
- ✓ promotion of collaborative projects, using Information Technology in Construction (ITC);
- ✓ development of Life Cycle Assessment methods (LCA);
- ✓ incentives, models and tools for evaluating the performance of buildings, infrastructure and its parts, including testing methods and equipment;
- ✓ encouraging knowledge management system models to serve as support for the implementation of the System of National Practice Codes;
- ✓ research on applications of Information Technology in construction, including the design, construction, operation and maintenance of buildings and infrastructure;

- ✓ development of innovative components, systems and processes for the construction of public and private buildings;
- ✓ development of eco-efficient materials, components, equipment and systems;
- ✓ development of production systems, involving issues such as: cost management, deadlines and risks; management of people; logistics and supply management; and efficient production;
- ✓ disseminating information on methods and tools for managing use, operation and maintenance; and
- ✓ development of methods and tools for internal comfort in buildings and energy efficiency on an urban scale.

Finally, the construction and management of the internal constructed environment should be viewed from the perspective of the lifespan and lifecycle of the building. Thus, the implementation of the second cycle of the PPCS will encourage even more activities and programs for sustainable construction through the development of strategic management in the simulation of scenarios, studies and research for the Civil Construction Industry, which indicate the possibility of a National Policy for Sustainable Construction in Brazil in the future.

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ANNEX 1 - CHECKLIST: LEED EVALUATION CRITERIA

5.2 Credits	Development of space, maximizing open spaces		10% to 20% of Content
6.1 Credits	Design for rain water, quantity control	5 Credits	Regional materials
6.2 Credits	Design for Storm water quantity control		10% to 20% Materials Extracted, Processed and Manufactured
7.1 Credits	Heat Island Reduction, Uncovered Areas	6 Credits	Quick Renewal Materials
7.2 Credits	Heat Island Reduction, Covered Areas	7 Credits	Certified Wood
8 Credits	Reduction of Light Pollution		
			Indoor Environmental Quality
	Rational Use of Water		
		1 Prerequisite	Minimum performance of Indoor Air Quality
1 Prerequisite	Reduced Water Use	2 Prerequisites	Cigarette smoke control
1 Credit	Efficient water use in landscaping	1 Credits	Outdoor Air Monitoring
	50% Reduction	2 Credits	Increased Ventilation
	Use of non-potable water or without irrigation	3.1 Credits	Air Quality Management Plan, During Construction
2 Credits	Innovative technologies for water	Credit	Air Quality Management Plan Before
3 Credits	Reducing water consumption	Credit	Low-Emissions Materials, Adhesives
	30% Reduction	4.2 Credits	Low-Emissions Materials, Paints and Varnishes
	35% Reduction	4.3 Credits	Low-Emissions Materials, Carpets and flooring
	40% Reduction	4.4 Credits	Low-Emissions Materials, Composite Wood Products

			Agri-fibers
		5 Credits	Internal Control of Pollutants and chemicals
	Energy and Atmosphere	6.1 Credits	Control system, Lighting
		6.2 Credits	Control system, Thermal Comfort
	Commissioning of power systems	7.1 Credits	Thermal Comfort, Design
	Minimum Energy Performance	7.2 Credits	Thermal Comfort, Verification
	Fundamental Management Refrigeration Gases, no use of CFCs	8.1 Credits	Natural lighting and landscape, daylight
	Optimization of energy performance	8.2 Credits	Natural lighting and Landscape, Views
	12% New Buildings or 8% Renovated Buildings		

Source: GBC Brasil, 2014

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Table 67 - Municipalities, total, and with Integrated Solid Waste Management Plan, pursuant to the National Policy on Solid Waste, by Major Regions and size classes of the population of the municipalities – 2013

Major Regions and size classes of the population of municipalities	Municipalities		
	Total	With Integrated Solid Waste Management Plan	
		Total	With only plan covering the investigated municipality
Brazil	**5,570**	**1,865**	**1,436**
Up to 5 000	1,247	400	312
From 5 001 to 10 000	1,227	330	248
From 10 001 a 20 000	1,378	438	321
From 20 001 to 50 000	1,080	396	316
From 50 001 to 100 000	339	156	118
From 100 001 to 500 000	260	122	103
More than 500 000	39	23	18
North	**450**	**151**	**135**
Up to 5 000	80	17	15
From 5 001 to 10 000	81	14	11
From 10 001 to 20 000	110	49	42
From 20 001 to 50 000	111	43	41
From 50 001 to 100 000	42	21	20
From 100 001 to 500 000	24	6	5
More than 500 000	2	1	1
Northeast	**1,794**	**428**	**253**
Up to 5 000	234	31	15
From 5 001 to 10 000	360	53	28
From 10 001 to 20 000	577	127	71
From 20 001 to 50 000	443	140	95
From 50 001 to 100 000	119	51	26
From 100 001 to 500 000	50	19	14
More than 500 000	11	7	4
Southeast	**1,668**	**481**	**398**
Up to 5 000	374	102	83
From 5 001 to 10 000	397	85	73
From 10 001 to 20 000	359	97	77
From 20 001 to 50 000	290	87	69
From 50 001 to 100 000	107	45	38
From 100 001 to 500 000	124	57	50
More than 500 000	17	8	8
South	**1,191**	**640**	**536**
Up to 5 000	420	208	173

From 5 001 to 10 000	280	144	115
From 10 001 to 20 000	228	129	108
From 20 001 to 50 000	159	96	86
From 50 001 to 100 000	52	28	25
From 100 001 to 500 000	48	32	27
More than 500 000	4	3	2
Center-West	**467**	**165**	**114**
Up to 5 000	139	42	26
From 5 001 to 10 000	109	34	21
From 10 001 to 20 000	104	36	23
From 20 001 to 50 000	77	30	25
From 50 001 to 100 000	19	11	9
From 100 001 to 500 000	14	8	7
More than 500 000	5	4	3

Source: IBGE, Research Directorate, Population Coordination and Social Indicators, Basic Municipal Information Research in 2013.

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Table 68 - Municipalities, total, and with Integrated Solid Waste Management Plan, under the terms established in the National Solid Waste Policy by Major Regions and States – 2013

Major Regions and States	Municipalities		
	Total	With Integrated Solid Waste Management Plan	
		Total	With only plan covering the investigated municipality
Brazil	**5,570**	**1,865**	**1,436**
North	**450**	**151**	**135**
Rondônia	52	19	11
Acre	22	1	1
Amazonas	62	50	49
Roraima	15	5	5
Pará	144	38	35
Amapá	16	8	8
Tocantins	139	30	26
Northeast	**1,794**	**428**	**253**
Maranhão	217	55	45
Piauí	224	15	12
Ceará	184	101	59
Rio Grande do Norte	167	22	7
Paraíba	223	37	23

Pernambuco	185	59	32
Alagoas	102	43	16
Sergipe	75	34	11
Bahia	417	62	48
Southeast	**1,668**	**481**	**398**
Minas Gerais	853	165	127
Espírito Santo	78	16	7
Rio de Janeiro	92	39	27
São Paulo	645	261	237
South	**1,191**	**640**	**536**
Paraná	399	253	237
Santa Catarina	295	122	83
Rio Grande do Sul	497	265	216
Center-West	**467**	**165**	**114**
Mato Grosso do Sul	79	29	16
Mato Grosso	141	25	18
Goiás	246	110	79
Distrito Federal	1	1	1

Source: IBGE, Research Directorate, Population Coordination and Social Indicators, Basic Municipal Information Research in 2013.

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Table 69 - Municipalities, total, and with initiative in the area of sustainable consumption, by Major Regions and size classes of the population of the municipalities – 2013

Major Regions and size classes of the population of municipalities	Municipalities						
	Total	With initiative on sustainable consumption					
		Total	Initiative				
			Reducing the use of plastic bags	Environmental sustainability of public institutions such as the Environmental Agenda in Public Administration - A3P	Reducing water and energy consumption	Use of environmental criteria in procurement or public tenders	Other initiaves
Brazil	**5,570**	**2,286**	**915**	**417**	**1,093**	**435**	**1,213**
Up to 5 000	1,247	401	161	37	188	67	202
From 5 001 to 10 000	1,227	390	156	60	189	65	208
From 10 001 to 20 000	1,378	571	224	98	260	109	304
From 20 001 to 50 000	1,080	510	206	99	239	92	276

From 50 001 to 100 000	339	203	82	45	116	46	103
From 100 001 to 500 000	260	181	74	60	83	45	102
More than 500 000	39	30	12	18	18	11	18
North	**450**	**182**	**67**	**51**	**68**	**27**	**102**
Up to 5 000	80	27	13	6	10	4	12
From 5 001 to 10 000	81	20	9	5	7	1	14
From 10 001 to 20 000	110	50	17	12	20	9	30
From 20 001 to 50 000	111	45	12	17	15	5	21
From 50 001 to 100 000	42	21	7	3	8	1	12
From 100 001 to 500 000	24	17	7	7	6	6	11
More than 500 000	2	2	2	1	2	1	2
Northeast	**1,794**	**637**	**265**	**131**	**338**	**104**	**290**
Up to 5 000	234	52	19	4	33	7	15
From 5 001 to 10 000	360	74	34	8	34	12	31
From 10 001 to 20 000	577	200	83	37	99	32	87
From 20 001 to 50 000	443	195	81	42	106	29	104
From 50 001 to 100 000	119	67	32	22	43	16	25
From 100 001 to 500 000	50	41	14	14	20	7	23
More than 500 000	11	8	2	4	3	1	5
Southeast	**1,668**	**768**	**285**	**152**	**405**	**207**	**422**
Up to 5 000	374	133	43	14	68	37	77
From 5 001 to 10 000	397	147	51	26	84	33	79
From 10 001 to 20 000	359	163	67	33	88	48	88
From 20 001 to 50 000	290	152	56	26	73	41	84
From 50 001 to 100 000	107	68	24	13	40	18	38
From 100 001 to 500 000	124	93	39	31	44	25	50
More than 500 000	17	12	5	9	8	5	6
South	**1,191**	**530**	**233**	**46**	**209**	**72**	**303**
Up to 5 000	420	150	70	10	58	16	81
From 5 001 to 10 000	280	114	44	10	51	12	67
From 10 001 to 20 000	228	124	54	9	41	16	75
From 20 001 to 50 000	159	83	38	7	30	12	48
From 50 001 to 100 000	52	34	14	4	18	7	19
From 100 001 to 500 000	48	22	12	5	10	6	12
More than 500 000	4	3	1	1	1	3	1
Center-West	**467**	**169**	**65**	**37**	**73**	**25**	**96**
Up to 5 000	139	39	16	3	19	3	17
From 5 001 to 10 000	109	35	18	11	13	7	17
From 10 001 to 20 000	104	34	3	7	12	4	24
From 20 001 to 50 000	77	35	19	7	15	5	19
From 50 001 to 100 000	19	13	5	3	7	4	9
From 100 001 to 500 000	14	8	2	3	3	1	6
More than 500 000	5	5	2	3	4	1	4

Source: IBGE, Research Directorate, Population Coordination and Social Indicators, Basic Municipal Information Research in 2013.

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Table 70 - Municipalities, total, and with initiative in the area of sustainable consumption, by Major Regions and States - 2013

Major Regions and States	Municipalities						
	Total	With initiative on sustainable consumption area					
		Total	Initiative				
			Reducing the use of plastic bags	Environmental sustainability of public institutions such as the Environmental Agenda in Public Administration - A3P	Reducing water and energy consumption	Use of environmental criteria in procurement or public tenders	Other initiaves
Brazil	**5,570**	**2,286**	**915**	**417**	**1,093**	**435**	**1,213**
Norte	**450**	**182**	**67**	**51**	**68**	**27**	**102**
Rondônia	52	20	5	6	7	6	9
Acre	22	9	3	3	6	1	5
Amazonas	62	35	14	12	16	3	15
Roraima	15	8	3	3	4	3	5
Pará	144	52	16	12	13	6	37
Amapá	16	6	3	2	2	1	3
Tocantins	139	52	23	13	20	7	28
Northeast	**1,794**	**637**	**265**	**131**	**338**	**104**	**290**
Maranhão	217	81	30	10	33	13	50
Piauí	224	47	20	3	25	14	13
Ceará	184	108	46	35	74	10	54
Rio Grande do Norte	167	43	18	8	28	4	18
Paraíba	223	54	21	7	31	4	21
Pernambuco	185	82	33	25	39	16	29
Alagoas	102	40	17	8	22	8	24
Sergipe	75	34	10	8	13	6	16
Bahia	417	148	70	27	73	29	65
Southeast	**1,668**	**768**	**285**	**152**	**405**	**207**	**422**
Minas Gerais	853	264	95	29	134	40	153
Espírito Santo	78	44	10	9	21	11	26
Rio de Janeiro	92	53	13	19	19	6	29
São Paulo	645	407	167	95	231	150	214
South	**1,191**	**530**	**233**	**46**	**209**	**72**	**303**
Paraná	399	200	89	25	75	27	126
Santa Catarina	295	129	61	7	47	16	78

Rio Grande do Sul	497	201	83	14	87	29	99
Center-West	**467**	**169**	**65**	**37**	**73**	**25**	**96**
Mato Grosso do Sul	79	30	11	6	17	2	16
Mato Grosso	141	45	18	1	17	7	29
Goiás	246	93	36	29	38	16	51
Distrito Federal	1	1	-	1	1	-	-

Source: IBGE, Research Directorate, Population Coordination and Social Indicators, Basic Municipal Information Research in 2013.

(Footnotes)

1 SEMA was established by Decree N°. 73.030 of October 30, 1973, by the Ministry of Interior. This decree was amended by Decree N°. 99.604 of October 13, 1990, which made SEMA a direct assistance agency of the President. Currently, after historical changes, Decree N°. 6.101 of April 26, 2007 is in force, which provides for the powers of the Ministry of the Environment

2 Environmental Crimes Law, available at http://www.mma.gov.br/port/gab/asin/lei.html

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