THE BRAZILIAN INDUSTRY ON THE WAY TO SUSTAINABILITY

INDUSTRY MEETING FOR SUSTAINABILITY

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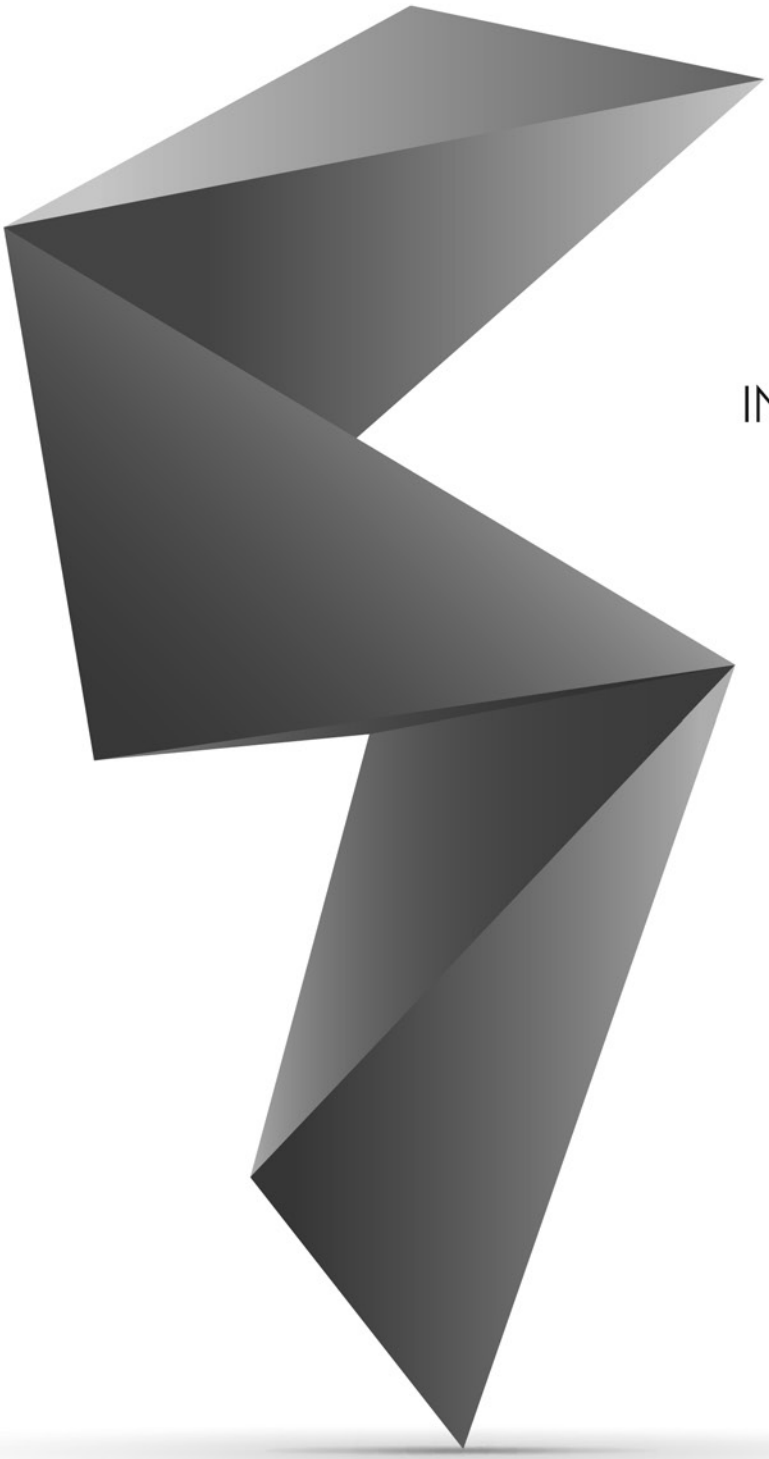

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CNI
National Confederation of Industry

Headquarters
Setor Bancário Norte
Quadra 1 – Bloco C
Edifício Roberto Simonsen
70040-903 – Brasilia – Federal District
Phone: (61) 3317-9000
Fax: (61) 3317-9994
www.cni.org.br

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SUMMARY

CNI PRESENTATION

The sustainable development agenda bears great challenges and many opportunities for Brazil. The country has a diversified and sophisticated industry and accounts with a combination of natural resources that puts it in a privileged position to deal with the tasks and seize opportunities arising from the need to be more sustainable. The challenges to society are also challenges for the industrial sector, which is totally engaged in joint efforts to find solutions.

The Rio+20 provides a broad reflection about the Brazilian strategy to deal with the themes of this agenda. The topics "Green Economy in the context of sustainable development and poverty eradication" and "Institutional framework for sustainable development" are at the center of the discussions in Rio de Janeiro. The Brazilian National Confederation of Industry (CNI), which is the major representative of the Brazilian industrial sector, presents a set of ideas about how to develop Brazil respecting the environment.

The creation of conditions for increasing the competitiveness of industry, by increasing the efficient use of resources and skills in relation to all stakeholders in the business, is our primary goal. The continuous compatibility of this goal with the requirements of sustainability is our challenge today and tomorrow.

The efforts should be focused on keeping alive the spirit of negotiation and cooperation. The CNI hopes that we reach the definition of concepts and clear mechanisms that promote the balance of the three classic dimensions of sustainable development – economic growth, poverty eradication and environmental conservation – considering the cultural dimension. It is important to seek balance among them, without sacrificing any one over the others.

The changes required by a standard of sustainable development depend on public and private investments, especially in innovation and cleaner production technologies, and innovative methods in business management. The Brazilian industry is already doing its part by investing in new technologies and improving its production

processes, seeking to combine productivity gains with employment generation and the efficient use of resources. The second part of this document is broad in concrete examples of such advances.

To deepen its contribution to sustainable development, the industry must rely on regulatory and institutional environments favorable to productive changes and to investments required. This document presents a set of domestic and international requirements for the transition to more sustainable patterns of production and consumption. The Brazilian industry demonstrates its commitment to participate in the concretion of such conditions, because it understands that sustainability is only possible if based on a close dialogue among governments, business and society.

The paper T**he Brazilian Industry on the Way to Sustainability** is the result of a comprehensive process of articulation and reflection of the CNI along with state federations of industry and industry associations to submit to the Brazilian society, government and international players its updated view on the sustainable development agenda. In addition to the actions of communication, the documents prepared in partnership with the 16 industrial sectors and the debates that will take place in Rio de Janeiro are the national industry recognition that sustainability is at the center of the competitiveness strategy of the country.

The CNI presents in this document, a set of positions and commitments of the Industry System in the field of sustainability. CNI will promote the theme of sustainability in its representation networks and the engagement in partnership with governments and civil society organizations, in building a political-institutional environment that creates the conditions for the incorporation of sustainability requirements in the Brazilian economy.

Thus, it contributes to the consolidation of a productive and competitive economy which fosters the development respecting the environment.

Robson Braga de Andrade
President of the National Confederation of Industry – Brazil

1 INTRODUCTION

The Rio+20 offers a unique opportunity to assess the progress made and the challenges to be faced by the international community and different countries in their efforts to reconcile economic and social development with environmental protection.

Since the Rio 92, the National Confederation of Industry – CNI – has sought to stimulate the industrial sector to take the co-responsibility for the sustainable management of natural resources, adding innovation and efficiency in processes, aiming at sustained economic growth under the aegis of social justice and environmental conservation.

The construction of the industrial sector positions for the Rio+20 is the result of the articulation of CNI with sector associations and industry state federations. This process represented an opportunity to update the views and positions of the Brazilian industry on the challenges of sustainable development, to assess progress and identify upcoming obstacles.

Based on this process, CNI presents society with the schedule of industry's contribution to sustainable development. It is time to give greater precision to the concepts under discussion, identify mechanisms and improve the system of global governance. The second section of this document presents the vision of the industrial sector on the issues that make up the agenda of the Conference. The third section presents Brazil´s assets and opportunities for the industrial sector resulting from the transition agenda. The challenges of this new agenda are carriers of opportunities for the Brazilian industry and such opportunities are highlighted in this section of the document. The fourth section lists the obstacles to be overcome to allow the industry to make their contribution. Finally, the last section presents the current initiatives in the Industry System to encourage the efforts of Brazilian companies toward sustainable development.

2 THE BRAZILIAN INDUSTRY TOWARDS THE AGENDA FOR RIO+20

The Rio+20 presents numerous opportunities for Brazil, which has a diversified and sophisticated industry, as well as a relevant technology park. The Brazilian industry recognizes that the agenda of sustainable development with social inclusion and environmental protection has great power to transform the structures of production and consumption worldwide.

The central themes of the Conference – "Green Economy in the context of sustainable development and poverty eradication" and "Institutional framework for sustainable development" – have the potential to foster the development of Brazilian industry on the tripod of competitiveness, innovation and environmental and social responsibility.

In a context marked by the impasse of the international agendas, the great challenge is to keep alive the spirit of negotiation and cooperation that has generated, albeit with great difficulties, commitments of developed countries and developing countries in coping with global challenges such as poverty and misery eradication, climate change mitigation, etc.

WHAT BRAZILIAN INDUSTRY EXPECTS FROM RIO+20:

- the adoption of concepts that have mobilizing potential and strengthen the balance between the three dimensions of sustainability;
- the improvement of the global governance model of the efforts toward sustainability and the effective implementation of operational mechanisms for financing and technology transfer to developing countries;
- the advance in the definition of new metrics and indicators of sustainable development, supported by consistent information bases and in comprehensive theoretical models that encompass the three dimensions of sustainability.

2.1 Sustainable development: sustainable production and consumption on the axis of global politics

The Rio+20 should move towards in providing the operational content to the concept of green economy. Although its degree of generality has undeniable potential to mobilize, its conception and use should serve to reaffirm the pact on sustainable development in its three dimensions: economic, social and environmental.

It is essential to seek balance between the three types of goals. In this sense, it is not acceptable to sacrifice any of the dimensions of sustainability at the expense of the others, but rather seek mechanisms and solutions to make them compatible.

Although it has the potential to drive the movements toward development, the concept of green economy requires qualifications in order to avoid the risk of promoting an imbalance between the three dimensions of sustainability, producing new international standards that cause distortions in terms of competitiveness.

In this case, we could be facing an approach that emphasizes the development limitations, weakening the commitment to poverty eradication. It is not of Brazil or its industry interest. However, more important than a never ending conceptual debate is to set goals and deadlines for commitments already made and not implemented.

Sustainable production and consumption: references to the Brazilian industry

Brazil has an imperative need to develop and generate wealth to incorporate significant segments of its population to the benefits of a consumer market for industrial goods. The national development requires thus an increase in the levels of production and consumption that meets the goals of priority income distribution in a democratic society.

It is the companies' task to create economic progress and contribute to the generation of jobs and income in a responsible and sustainable way. The social inclusion of a large range of the population in emerging and developing countries, so far without access to mass consumer markets, will be a major factor in the dynamism of the global economy in the following years.

These challenges are carriers of opportunities to the creation of new patterns of work and employment to meet the necessary technologies and innovations. They are also a stimulus to the absorption of professions still nonexistent, whose profile is being designed by new demands for products, goods and services in contemporary society.

For the Brazilian industry, it is essential to use the idea of sustainable consumption and production under the terms of the Marrakech Process[1], as programmatic reference. This concept is far from the vision that calls for the immobilization of natural resources, approaching notions such as sustainable management and eco-efficiency, among others. For a country like Brazil, which has significant assets in natural resources, this distinction is more than rhetoric: it is essential.

2.2 The issue of global governance

The last 20 years have produced a set of international commitments and agreements on the objectives of sustainable development. However, the enormous and increasingly difficulties to advance in the sphere of negotiation and international cooperation have led to questions about the governance model. That is why the Rio+20 agenda includes the review of the global institutional structure for sustainable development.

The need for greater coordination between the ongoing efforts and the search for greater international capacity to implement the measures negotiated multilaterally are the basis of the proposals for the creation of an environment agency within the UN to replace the United Nations Environment Programme (UNEP).

There are substantial disagreements in relation to this proposal, and, more generally, to the model of global governance for sustainable development. This makes the discussion about governance one of the biggest challenges of Rio+20.

A relevant global challenge in relation to the model of global governance, involves the need to create international conditions for the full engagement of developing countries in the efforts to transition to sustainable production and consumption standards, without such efforts being perceived as socially unjust and economically costly, in terms of the development objectives of these countries.

The commitment must involve all countries, considering the principle of common but differentiated responsibilities. Moreover, it must cover necessarily all stakeholders – governments and society in general, as well as the productive sector, workers, social movements and organizations.

1 Coordinated by UNEP, the 10-year program on Sustainable Consumption and Production (SCP) – also known as the Marrakech Process – has established a number of initiatives that promote sustainable standards of production and consumption aligned with the needs of social, economic and environmental development. Among the task forces for Implementation of Sustainable Consumption and Production (CPSs) already created are Sustainable Construction, Sustainable Public Procurement, Sustainable Tourism, Education for a Sustainable Consumption, Cooperation with Africa, Sustainable Lifestyles and Sustainable Products.

Incremental improvements in global governance

The international framework disfavors significant "institutional jumps". Improvements, however, are fundamental and should have as axis the creation of incentives and the removal of obstacles to the transition to new standards of production and consumption, especially for emerging and developing countries. In this sense, the existing multilateral agreements should be considered as references to global efforts and to domestic policies in this area.

Regional, national and local peculiarities

The battle against social and economic inequalities should be gradually made compatible with the transition to standards of sustainable production and consumption. This process – global by nature – will only be successful if the negotiations and international cooperation initiatives create environments and mechanisms that stimulate desirable change and encourage the participation of developing countries in this effort.

Perhaps in productive social inclusion resides the main economic force in developing countries. It is an essential condition for the emergence of the poorest countries to a new level of development. This is the great challenge for current equations of production and consumption – include productively without increasing the impact on the environment.

It is essential to take into account the peculiarities of local, regional, national and international cultures. The experiences of sustainable production and consumption associated with them should be encouraged and disseminated through international cooperation and through the coordination of the various links in supply chains.

The preservation of the autonomy of countries to choose their development paths and compatibility of their economic and social goals to environmental and climate objectives plays an important role in the creation of favorable conditions for the engagement of developing countries in addressing the challenges of global sustainability.

Financing and technology transfer: key elements

As a result of a global conjuncture concerned with the potential insolvency of developed economies and the risks of stagnating global economy, there is a framework that does not encourage the pursuit of international mechanisms that reduce the costs associated with the transition to a sustainable economic-social-environmental model, especially for emerging and developing countries.

There are a wide range of institutions and mechanisms involved in the international financing of sustainable development. However, the low degree of coordination and synergy among them results in an inadequate supply of financing to the needs and priorities of developing and emerging countries. A significant effort of coordination and partnerships among different agencies and institutions is necessary.

The efforts of financing and technology transfer should have the developed countries as its main donors. In a complementary fashion, the south-south cooperation has an important role to play in the provision of appropriate technologies to regional specificities, which take into account cultural issues in the development of innovations that can be effectively absorbed and implemented.

These issues are closely interrelated, since one of the central components of global governance of this process is the implementation of transfers of financial and technological resources to developing countries.

Trade Barriers: a temptation to be avoided

Care is needed in the formulation of environmental, social and climatic policies that affect the flow of goods. The introduction of barriers to imports of products intensive in the use of energy, water and emissions of greenhouse gases is being discussed in developed countries. This hypothesis, if implemented, would generate new focuses of trade conflict between developed and developing countries, without any tangible benefit in facing environmental challenges and those associated to climate change.

The possibility that the efforts to cope with climatic and environmental challenges be "contaminated" by trade conflicts, updating the concerns of developing countries, with the "green protectionism" is not small. The issue has already entered the trade agenda, through panels of the WTO dispute settlement system and the relationship between climate and environment on the one hand, and trade and investment regime, on the other, should receive increasing attention from international negotiators.

New metrics and indicators of sustainability

One of the most important challenges at the global level is to develop new metrics that respond to the specificities of the challenge of sustainable development, encompassing indicators to quantify the evolution of wealth and development, considering the environmental and social aspects.

In this sense, the discussion on indicators and targets for sustainable development is central to the Rio+20 agenda. The Brazilian industry understands that the definition of goals and standards of comparability across countries, sectors and companies demand the formation of solid and reliable reference databases that meet regional and sector specificities.

The construction of indicators and targets for sustainable development must necessarily occur from a close dialogue between government authorities, civil society organizations and the productive sector.

3 SUSTAINABLE DEVELOPMENT: OPPORTUNITIES FOR THE BRAZILIAN INDUSTRY

For the Brazilian industry, the transition to an environmentally sustainable and socially inclusive economy is compatible with the objectives of economic growth and improvement of competitiveness. It is the presence of factors that discourage investment and inhibit innovation that can place in opposition the sustainability efforts and the search for greater competitiveness of the industry.

Brazil has a combination of resources – biodiversity, potential for clean energy generation, availability of water resources, forest heritage unmatched in the world, plenty of fertile land, among others – that gives it a privileged position to develop itself in an economically viable, environmentally sustainable and socially inclusive manner[2].

The advance of Brazilian industry in the issues at stake in Rio+20 reflects the recognition from different industries that sustainability is becoming an important factor for business success. It is not about dealing with sustainability as speech and expression of good intentions, but to have it present in the development of companies' business plans and as key variable for their competitiveness strategies.

2 The High-level Panel on Global Sustainability presented in January 2012 its report to UN Secretary-General Ban Ki-moon. The Panel is composed of 22 members and was created by the Secretary-General in August 2010 to formulate a new project of sustainable development and low carbon. According to the document, the demand for resources will grow exponentially whereas the jump of the population of 7 billion to 9 billion by 2040 and the inclusion of 3 billion people to the middle class over the next 20 years.

3.1 Energy matrix, forests, biodiversity and water: Brazilian assets for sustainable development

The abundance of natural resources makes Brazil a key player in leading the world on the path of sustainable development. Clean energy sources, forest cover representing 60% of national territory and immense biodiversity are assets that, if properly used, are undeniable comparative advantages in a world that needs to incorporate billions of people to consumer society. For the Brazilian industry these assets present many opportunities and important challenges.

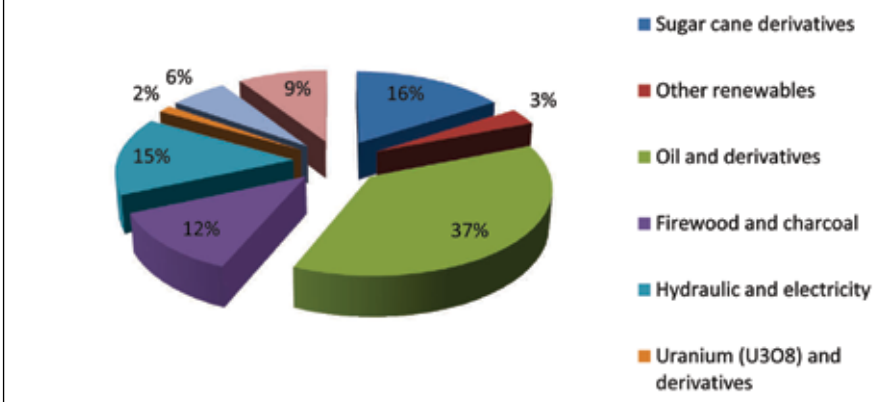
SOME OF BRAZIL'S ASSETS

- almost half of the energy supply comes from renewable sources.
- forest area corresponding to 60% of its territory.
- the largest area of rainforest in the world and the second largest extent of forests worldwide.
- the largest stock of the world's carbon stored in the forest biomass.
- 15% of the number of species known to science, and about 30% of the tropical forests in the world.
- approximately 12% of the surface water availability on the planet.

3.1.1 The Brazilian energy matrix

Brazil has an energy matrix that, besides diverse, is one of the cleanest in the world. The country has the world's largest fleet of cars powered by biofuels. The generation of electricity is mostly hydraulic. Almost half of the energy supply in Brazil comes from renewable sources, especially bioenergy and hydroelectricity.

CHART 1. BRAZILIAN ENERGY MATRIX

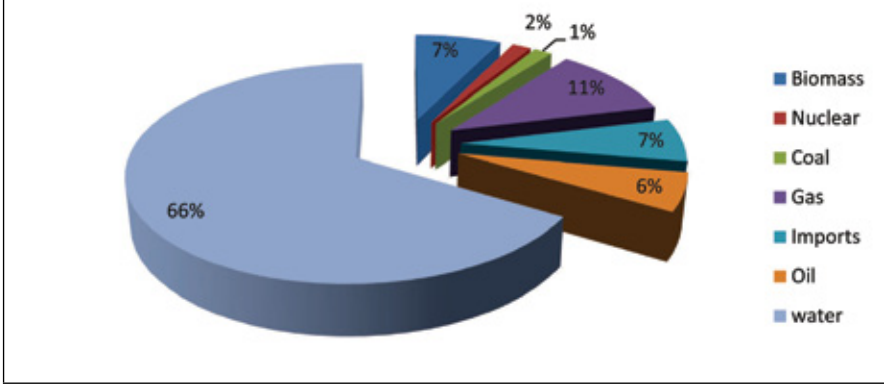


Source: National Energy Balance 2011: Base Year 2010, Energy Research Company – EPE

ELECTRICITY

The Brazilian energy matrix is particularly clean, mainly reflecting the high share of hydropower generation in the total. The chart below shows the current composition of the Brazilian electro-energy matrix (including imports).

CHART 2. BRAZILIAN ELECTRIC-ENERGETIC MATRIX



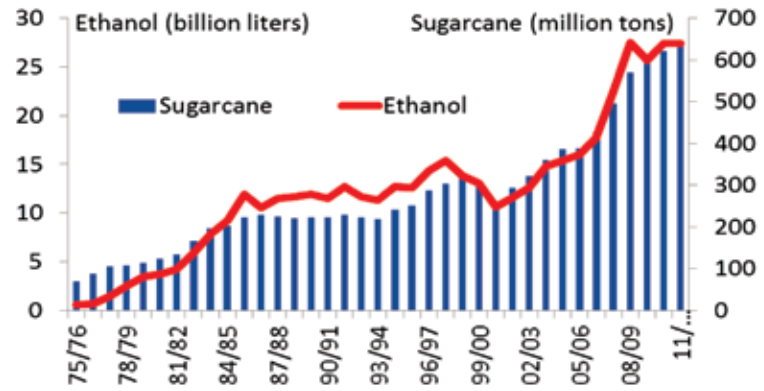
Source: BIG – Generation Information Database of Aneel – April 2012

Brazil achieved in 2011 a total of 99,649 kilometers of transmission lines. The electric-energetic optimization is the motivating factor for such interconnection, since in this system, the different regions barter energy among themselves, taking advantage of the hydrological diversity of a country with continental dimensions.

BIOFUELS (ETHANOL AND BIODIESEL)

In 2010, biofuel production totaled 27.1 million tons of oil equivalent (toe) – 93% as ethanol and 7% as biodiesel – corresponding to 542,000 barrel of oil day – bbl/day, about 27% of current domestic oil production, a considerable volume in absolute and relative terms (EPE, 2011). The energy products originated from sugar cane are responsible for a significant portion of primary energy supply in the country.

CHART 3. EVOLUTION OF SUGAR CANE AND ETHANOL PRODUCTION IN BRAZIL



Source: Luiz Horta, from UNICA, 2011a – Sector Fascicle of IBP.

The production and use of ethanol have a direct impact on the mitigation of GHG emissions in the transportation sector. The National Climate Change Plan strongly recommends strengthening the participation of ethanol in the energy matrix and indicates that the use of ethanol fuel should be increased. In the period of 1970 to 2007, the emission of 800 million tons of CO2 into the atmosphere was avoided through the use ethanol as biofuel.

Although in its early stage, biodiesel could represent a promising renewable source. Since January 2010 (in anticipation of the initial target of 2012), the biodiesel content in diesel came to be of 5%, ensuring an annual demand of around 2.4 billion liters. This favorable scenario, with guaranteed demand and future prices set at auctions, stimulated a rapid expansion of installed capacity, which in October 2011 reached 6.03 billion liters/year in 58 plants, about 2.5 times superior to the expected annual demand, according to the Brazilian Institute of Oil, Gas and Biofuels – IBP.

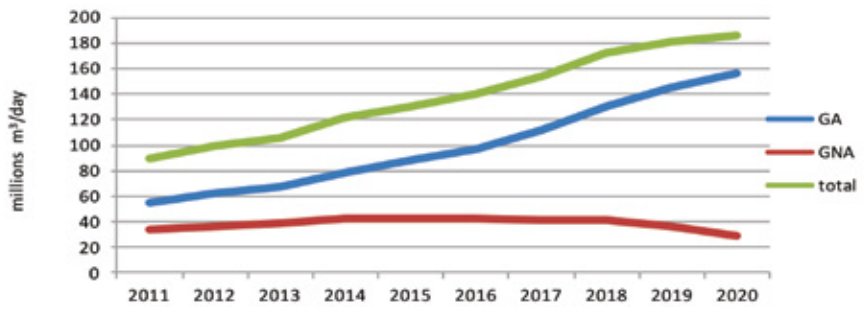
OIL AND GAS

The Brazilian oil production reached in 2011 the level of 2.2 million barrels of oil per day (bbl/day), which enhances the self-sufficiency of the country regarding the supply of this energy source, reached in 2006. The growth rate of oil production in Brazil in recent decades was much higher than the increase in consumption. Furthermore, the relationship between proved reserves and production (R/P) is currently 18 years, which puts Brazil in a comfortable position in terms of future availability of the resource.

Meanwhile, natural gas, whose production will also grow in association with the exploration of new oil fields, tends to be a source of strategic power, whose development and use should be encouraged. This recent tendency is reinforced by the debate on global climate change, since natural gas, as a less carbon-intensive fuel, can make an important contribution in mitigating emissions of greenhouse gases.

According to the Brazilian Institute of Petroleum, the exploitation of the pre-salt reserves may be convergent with the positioning of the country regarding the sustainability agenda. The country has a diversified economy in which oil revenues will not be dominant. The greatest effect of exploiting these reserves will generate increases in income to support higher investment in education and technology development and in other constraints of sustainable development. The country's global leadership in the environmental area and the degree of technological excellence tends to facilitate the development of safe operations and adequate protection to the environment, combining the use of a differential comparison of the country with the principles of sustainability.

CHART 4. FORECAST OF DOMESTIC NATURAL GAS PRODUCTION FROM DISCOVERED RESOURCES (RESERVES AND CONTINGENT)



Obs: GA: associated gas and GNA: non-associated gas.

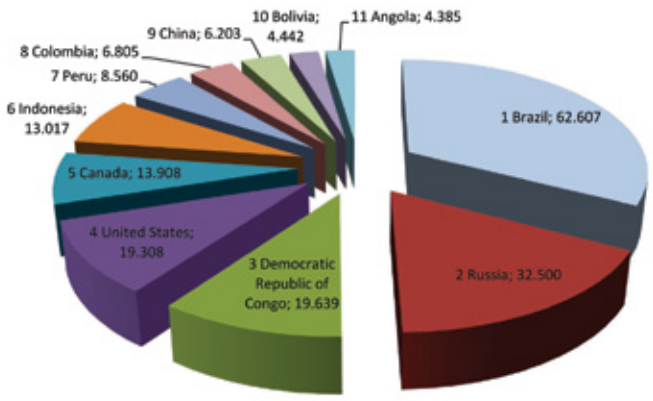
Source: Amaro Pereira Jr., based on De Gouvello (2010)

3.1.2 Forests

With a total forest area of 524 million hectares, corresponding to 60% of its territory, Brazil bears a prominent global position. Despite being in decline, the rates of removal of the country´s forest cover are still high. There are efforts to reduce deforestation, mainly in the Amazon, where the problem has gained large dimension in recent decades.

The Brazilian forest cover data indicates that the country has the largest area of rainforest in the world, besides having the second largest extension of forests in the planet, only behind Russia with its vast boreal forests. On the other hand, Brazil has the largest stock of CO_2 stored in its forest biomass among all countries. The Brazilian forests store around 62 billion tons of CO_2, followed by Russia with 32.5 billion tons and the Democratic Republic of Congo, which is in third place with something close to 19.7 billion tons. (SBF, 2010)[3].

CHART 5. CARBON STOCK (MILLION TONNES)



Source: SFB, 2010.

Regarding the sustainable use of native forest, important challenges have to be overcome in order to allow better use of local potential timber without generating significant environmental costs. There are 290 million hectares of forests registered as public forests by the Brazilian Forest Service – SFB, likely to be sustainably managed, 93% of it in the Amazon. Of this total, 226 million hectares are already designed to some use and 64[4] million hectares are still awaiting a destination. This timber stock indicates the existing potential to expand and consolidate a sustainable forestry economy in the Amazon, through the use of timber and non-timber resources, without damage to the conservation of biodiversity and water resources that characterize the region.

3 Brazilian Forest Service. Book: Forests of Brazil in summary 2010. Available at: http://www.florestal.gov.br/publicacoes/tecnico-cientifico. Accessed on: 10/04/2012.

4 Data obtained from the publication "Brazilian Native Production Forests." Brazilian Forest Service & Environmental Research Institute of Amazon. 2011. Brazilian Native Production Forests. (Report). Brasília, DF.

Even before the inefficiency of the exploration and production systems of the native forest, some examples indicate that sustainable management can be a source of wealth income and employment generation, especially in the Amazon, as evidenced by the certification of 2.7 million[5] hectares of native forests subject to exploitation under a sustainable management regime in 2010.

Sustainable forest management in the Amazon represents a key strategy to enhance the biome as a source of employment and income generation, replacing the current model based heavily on the residual use of wood originated from deforested areas for the alternative use of the soil. The definitive reduction of deforestation rates in the region requires a model of development based on the forest and not in its suppression to expand the agricultural frontier.

Some economic sectors are already seeing opportunities and recognizing the importance of going beyond the legal restrictions. The initiative for voluntary certification by the forestry sector, through the Forest Stewardship Council – FSC is a good example. The FSC is one of the most widely adopted green seals in the world, ensuring that the wood used by companies in a given product is derived from sustainable production.

3.1.3 Biodiversity

It is estimated that Brazil has about 15% of the number of species known to science and about 30% of the tropical forests in the world. These forests, which occupy less than 7% of Earth's surface, hold more than half of the known species of flora and fauna worldwide. The biological wealth puts the country in evidence and demands its role as one of the protagonists in the global debate on the conservation and sustainable use of biodiversity.

The bioeconomy products resulting from the use of biodiversity, in particular of its genetic resources, have high added value and advanced production technology standards, yielding good profits to the investments made and are attractive in the international market.

This industry, represented mainly by biotechnology, does not cause risks to biodiversity conservation: in addition to performing a low degrading potential extractive activity, obeys a law which provides strict requirements aimed at ensuring the sustainable use of biodiversity. Moreover, the enormous potential attributed to the biotech sector is due to the various production stages – since the exploitation of raw materials until the final consumer sales – by which underlies its inputs.

Perhaps no other sector combines that many opportunities to the challenges of this new century, marked by the constant pursuit of innovation and by the concern about the limits of natural resources, and thus, perhaps no other sector in Brazil is provided with that many opportunities to excel internationally too.

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5 Brazilian Forest Service. Available at: http://www.florestal.gov.br/snif/producao-florestal/certificacao-florestal. Accessed on: 10/04/2012.

3.1.4 Water

Brazilian rivers account for 12% of the surface water availability on the planet. Considering the contribution of neighboring countries that number rises to about 18%. This comfortable situation is complemented by a set of aquifer systems that ensure a significant reserve capacity of water. The distribution of water availability in Brazil is not very heterogeneous. The Amazon region is responsible for ¾ of the water availability in the country, sustaining a significant portion of the country's biodiversity and the rains in the Brazilian Cerrado and the Southeast region.

The industrial sector accounts for 22% of global water demand, the industry in Brazil accounts for 17% of water catchment and only 7% of its consumption. The industrial use of water is more intense in the basins of the Prata river and in the other basins of the Southeast region, where the industry sector already invests in the practice of recycling and reuse of water.

Several opportunities are associated with the sustainable use of water resources in the country. The exploitation of hydroelectric potential, cited above, the increased productivity of food production through irrigation, the increased use of waterways as a mode of transport will be important advances in the competitiveness of the country. For a good overall water management in production processes, it will be strategic to know the local conditions of water resources in the different stages of the supply chains.

The increased water security is directly related to climate safety (adaptation) and energy safety. The sources of power generation are linked directly (hydroelectric, biofuel) to the availability of water or indirectly (thermal or nuclear plants), when demanding for large volumes of water for cooling. The elimination of the liability in the environmental sanitation sector, besides being an opportunity for the industrial sector, tends to reduce business risks associated with water.

3.2. The opportunities for the Brazilian industry

The Brazilian industry, aware that sustainability is built along with competition, responsibility and innovation, sees the opportunities that arise in this new economy.

The responsible use of the country´s assets combined with the engagement of companies in the process of sustainable production opens a wide range of new features with the potential to generate economic, social and environmental benefits for the whole society. It's time to seek new solutions and develop new businesses.

The role of CNI in this context is to call attention to the importance of this agenda and guide the productive sector to become part of this new model in a competitive, innovative and responsible way.

OPPORTUNITIES FOR THE BRAZILIAN INDUSTRY

- Energy
- Solid waste management
- Climate and emissions
- Sanitation
- Biodiversity and forests
- Technology and innovation
- Social Inclusion and education
- Better management and corporate governance practices

Energy

Energy efficiency is crucial in the transition to a sustainable economy and structuring programs for generation, transmission, conservation and search for alternative energy sources bring opportunities for all industrial sectors. Ensuring availability and price of energy are key factors for industrial competitiveness in Brazil.

- There is still a vast potential for identifying opportunities for improving energy efficiency, using the demand-side management in the industrial sector as well as in the commercial and residential segments.
- Since one decade, the use of waste as energy source in cement kilns is growing. However, in comparison to other countries, the current level of utilization of waste in Brazil is still relatively low and there is great potential for increasing the utilization of waste energy.
- Amazon has emerged as the new frontier of hydropower generation in Brazil. There is an untapped hydroelectric potential, concentrated in the region, of over 100 GW, whose use will be fundamental for increasing the relative share of renewable energy in the Brazilian energy matrix. The new technologies allow exploitation of this energy source with low environmental impact.
- In Brazil, biodiesel represents around 10% of the total production of biofuels. Its production will tend to grow with the identification of new raw materials to be used. Biodiesel has positive potential for various industrial sectors, for its contribution to potential reduction of CO_2 emissions.
- With high levels of solar radiation, especially in the Northeast and Midwest regions, Brazil may become better positioned on the intensive use of solar energy in coming decades. In these regions, where the daily level is estimated by the National Agency

of Electric Energy – Aneel up to 6.100 Wh/m^2, the country is in a position to make intensive use of solar energy in the coming decades. On the path of widespread use of photovoltaic energy, there is room for investment in local technology, innovation for the production of solar cells and materials engineering to reduce costs of implementation and generation of this alternative energy.

- There is great potential for wind energy development in Brazil. Within the framework of the Incentive Program for Alternative Sources of Electric Energy – PROINFA – implemented in 2004, were hired 1.422.92 MW generated from 54 wind farms.

Solid waste management

The reuse of waste as inputs in the production system is already in itself a true revolution in the transition to sustainable development, because it involves economical use of material taken previously as discard or reject. In addition to financial and economic opportunity, it is a potential to reduce pressure on landfills, increasing its use cycle.

- Brazil is an international reference for waste recycling with activities that contribute to social inclusion. There are notable improvements in many products such as aluminum, paper and cardboard, cartons, PET and steel scrap, but there is still enormous potential for recycling. According to the Overview of Solid Waste in Brazil[6], of the more than 60 million tons of urban solid waste, of the dry fraction that accounts for 49%, there is a potential of mechanical or chemical recycling for around 20 million tons and energy recovery for almost 10 million tons, where the industry could play a preponderant role.

- Increasingly, recycling will be the keynote of the production of secondary raw materials, which will be essential to the industry of the future in replacement of much of the raw materials originating from nature. Furthermore, the industry based on recycling creates job opportunities and income that benefits the significant contingent of collectors of recyclable material.

- The implementation of reverse logistics in the country will enable the creation of a new market focused on the recycling of various materials, including electro-electronics, lamps, packaging and other products discarded by consumers. The challenge in Brazil will be the creation of public policies that favor the establishment and strengthening of the recycling industry in all regions of the country

- There is enormous potential for recycling of solid waste in the country, generated in the industry in general and in particular in the construction industry. One example is the use of recycled aggregate in paving works by municipalities, which has promoted the interest of the private sector in setting up recycling plants for inert waste.

6 ABRELPE (2010)

- Within the industry, a common way to reduce waste generation is to use it in the industrial processing for generating energy. Thus, the biomass of the crushed sugar cane, poultry and swine manure, rice husk, is transformed into electricity and steam. These forms of energy supply the industries themselves, and often also generate additional income. This applies to companies that sell surplus energy or sell carbon credits generated by replacing fossil fuels with biomass. With these and other strategies, there are already examples of companies that have shown to be possible to reach close to 100% recycling of industrial waste.

Climate e emissions

In the last decade, climate change has emerged as one of the major concerns for governments, businesses, investors and society at large. The effective management of carbon, minimizing risks and maximizing opportunities, is already on the agenda of the Brazilian industry.

- Companies that implement an inventory of the current level of GHG emissions will be able to take advantage of new market trends, consolidating the image of corporate responsibility and preparing to deal with competitiveness issues which may arise from possible scenarios with emissions restrictions.

- Brazil offers exceptional opportunities for industry to expand the share of renewable energies in an energy matrix that is already one of the cleanest in the world. The hydraulic potential is underutilized. There are still vast areas available to increase energy production from biomass (wood, cane, etc.), besides the potential wind and solar energy, allowing the industry to use cleaner energy in comparison to their international competitors. In addition, the agenda for mitigating emissions encourages more efficient use of energy and raw materials, reducing production costs.

- Establishing policies for the management of greenhouse gases creates new investment opportunities for the private sector, whether through participation in the carbon market (MDL or voluntary markets, as CCX, VCS), or through access to capital through indexes and indicators, such as the Carbon Disclosure Leadership Index, the Carbon Efficient Index (ICO_2) and participation in sustainability indexes, for example. The eventual implementation of REDD+ represents new business opportunities and investments for the Brazilian industry.

- The National Fund on Climate Change – Climate Fund (established by Law Nº 12.114/2009 and regulated by Decree 7.343/2010) is one of the instruments of the National Policy on Climate Change that deserves attention from the productive sector. It aims to provide resources to support projects and studies and financing of ventures aimed at mitigation and adaptation of climate change and its effects. The Climate Fund is an initiative of the Multiannual Plan 2012 – 2015, with a budget estimated at R$ 389 million (three hundred and eighty-nine million reais) for 2012.

Sanitation

Sanitation must be a priority on the national agenda due to its impacts on water resources and on the basic infrastructure necessary for the eradication of poverty. Investments in this sector have a high potential to generate opportunities to the industry and can provide a relevant source of employment. The water supply service reaches 95.2% of the urban population. On the other hand sewer service reached, in 2009, just over a half – 52.9% – of Brazilian households and only 37.9% of the wastewater generated were treated. This framework is only possible to overcome through investments and technologies appropriate to local conditions.

- To accelerate the sanitation coverage, funding instruments such as public-private partnerships – PPPs will tend to be more used. The PAC 2 (Program for Accelerated Growth) – which covers the period from 2011 to 2014 – is expected to invest R$ 3.7 billion in works of water supply and sewerage in towns up to 50 thousand inhabitants. Until 2014 the amount of R$ 35.1 billion will be invested in the sanitation sector. Also the program My House, My Life opens investment opportunities for several sectors of the economy.

- The transition environment to sustainability is conducive to investment in the operation of sanitation infrastructures– water supply, sewage treatment and garbage collection. The reduction of losses in the distribution of drinking water and the improvement in the efficiency of sewage treatment systems, as well as the deployment of landfills, will be essential for the reduction of urban pressure on water resources.

- The private initiative should have a key role in the pursuit of universal sanitation infrastructure services, whether in the realization of projects and works, whether in the operation of the systems, forming a virtuous cycle towards wealth creation, labor assimilation and to a new level of sustainable development.

- The industry also contributes to the sustainability providing smart and innovative solutions to meet the sanitation sector deficits. The supply of more modern and efficient household equipments in the use of water to reduce water consumption of urban users and, consequently, the demand for water and the sewage release of cities, represents significant opportunities to the industrial sector.

- The reuse of wastewater in industrial processes is an opportunity to reduce the corporate risk associated with water. The spread of water reuse practices reduces the pressure on water resources, especially in critical areas in terms of water availability.

Biodiversity and forests

The rich collection of Brazilian diversity offers unique opportunities for the development of new products such as pharmaceuticals, food, cosmetics, among others. In addition, the vast expanse of forests provides a huge opportunity for sustainable and certificate forest management.

- The development of knowledge and the exploit of the biotechnology potential, engine of biodiversity sustainable use, present itself as an opportunity for advancement to the Brazilian industry. The biotech sector is included among those that have the potential to radically transform products, processes, and ways of use in the medium and long term.
- Although Brazil is home to approximately 15% of all existing species on the planet, only a small portion of that heritage is known. The development of its knowledge and the exploit of the biotechnology potential present itself as an opportunity for advancement to the Brazilian industry.
- The sustainable market based on conservation of biodiversity can generate great business opportunities in the coming years. According to the study "The Economics of Ecosystems and Biodiversity" (TEEB) the flagship of the green economy are the certificated agricultural products. It is estimated that the annual drive to this sector will grow from US$40 billion in 2008 (equivalent to 2.5% of the global market for food and drink) to US$210 billion in 2020.
- Sustainable use of biodiversity as an opportunity must be aligned to the policies that stimulate innovation and competitiveness. To generate wealth from its biodiversity, Brazil should move towards integrating the industry value chain, at a global level, participating in forums aimed at the immediate removal of current legislation obstacles.
- The great rainforest extension capable of sustainable use, the availability of underutilized land in farming that can be destined for forest plantations, coupled with favorable climatic and edaphic conditions, the technological development in forestry and the sustainable management practices already tested, gives to the Brazilian forestry sector expressive advantages in the field of sustainability. The forest-based industry can be one of the pillars of the low carbon economy in Brazil.
- Brazil has a stock of wood which means the possibility to enlarge and consolidate a sustainable forestry economy in the Amazon region, through the use of timber and non-timber resources without prejudice to the conservation of biodiversity and water resources that characterize the region.
- The sustainable forest management of Amazon, replacing the current model of deforested areas residual wood use, has the potential to generate employment and income. The reduction of deforestation rates in the region implies forest-based development rather than its deletion.

Technology and innovation

In the new economy, the private sector must examine the investments in research and technological development as potential opportunities, recognizing that innovation and creativity are more than demands of new and old customers or a market imposition. They are also a source of opportunities to increase efficiency, reduce cost and develop new business.

- The Brazilian industry might be more active in attracting foreign R&D business centers, articulating and coordinating better public and private actions in the development of new technologies for the new sustainable demands. It can also improve the infrastructure and industrial property culture in the country.
- The productive sector will have an increasing role in the formation of qualified human resources in engineering, hard science and technical education – basis for the pursuit of cutting-edge technology.
- The support for structuring R&D projects in large-scale, mobilizing the productive chains of anchor companies, as well as the innovation and diffusion of technology to small and medium-sized enterprises, aiming to reduce competitiveness differentials existent today in the private sector, will be a driving opportunities agenda for the whole productive sector.

Social inclusion and education

The sustainable development agenda with the eradication of poverty requires the strengthening of sustainable and productive social inclusion factors by combining efforts to improve education through offering better jobs.

- The incorporation of large population to new heights of human development is at the same time a great opportunity and a great challenge to the countries with abundant economies in natural resources. The economic growth in developing countries, especially those of larger population, adds new pressures on the sources of raw materials and environmental services. To be sustainable, social inclusion cannot repeat past models.
- The social inclusion of the poorest requires new technologies and living habits. The conformation, both of urban collective space and work and domestic environments should be commanded by sustainability criteria. As in all countries, in Brazil there are broad opportunities to the renewal of productive parks in order to respond to such needs.
- Due to the historical process and the similarities of cultural identity, the Brazilian companies internationalization movements toward other countries in the southern hemisphere carries great potential for strengthening the productive social inclusion in those countries. Companies in sectors such as construction, biofuels, mining, cement, steel and oil have been expanding with success in Africa and Latin America and, when interacting with local communities, they transfer policies and practices developed in Brazil. Thus, the productive social inclusion ability of Brazilian industry turns out into an international competitiveness factor.
- Recent statistics, raised by the American Institute The Conference Board shows that the Brazilian worker productivity is very low, measured by the ratio between the goods and services produced in the country and the employed persons. With strong economic growth based on commodity production, productivity resents the investment gap and the population education. It's not only necessary to invest in

infrastructure and value-added products, but also treat education as a top priority. Education seen as opportunity will be a basic tool for productivity and growth.

- The consumption of lower classes has experienced strong growth in Brazil, reflecting the income increase of these classes as well as the ability of Brazilian companies to design adequate products, services and marketing criteria. There is still a vast contingent of population to be incorporated into the consumer market in Brazil. There are numerous opportunities to the industry in offering goods and services tailored to the needs and demands of new customers and the requirements of sustainable production.

- The poorest people incorporation in dividends of wealth productive generation also brings business opportunities and new ways of attracting capital. The government created many years ago, participation mechanisms for workers in the productive process, as the Length-of-Service Guarantee Fund – FGTS, the Workers Assistance Fund – FAT and PIS/PASEP taxes. Such mechanisms revert in periodic bonuses to formal workers, derived from the income provided by investment in the country's productive capacity. However, there is much to be done in respect of poor's access to investment markets in productive activities that can turn into business opportunities and new ways of attracting capital.

Best management practices and corporate governance

Investments in improvement and modernization of business strategic management processes with greater coordination between the actors involved, interested or affected by production processes, represent opportunities to capture financial dividends, improving competitiveness and image strengthening in a context of sustainable production.

- The development of modern management models and the dissemination of best economical, social and environmental practices in the production chain aggregate reputation to identity and image of enterprises, in addition to reducing production and administration costs.

- Actions for sustainability enhancement increase the business credibility, improve the competitive differentiator, contribute to attracting and retaining talent as well as building partnerships.

- The environmental products labeling, when not transformed into commercial barrier, can be an important tool to improve the efficiency in the inputs use, helping to gain new customers and markets.

- Companies listed in the main stock markets sustainability indexes tend to have its shares valued, facilitating access to capital and differentiated funding lines that incorporate environmental criteria and improving the goodwill of stakeholders. In the case of companies that require formal and informal licenses for exploitation of natural resources, this is even more relevant.

- The elaboration of annual sustainability reports with initiatives in line with the tripod of economically feasible, environmentally correct and socially just has contributed to the improvement of the image of several Brazilian companies.
- The voluntary adoption of quality, environmental, occupational health and safety and social responsibility certifications and standards is also an opportunity to add value to the business.

The Brazilian industry wants to be protagonist, in a consciously and constructive way, along with the public authorities and civil society in the consolidation of sustainable development and the eradication of poverty. The productive sector wants to take advantage of the opportunities that are opening up with this new agenda, while preparing to deal with the challenges to competitiveness brought by tougher scenarios of natural resource-intensive goods production and consumption.

4 WHAT DOES THE INDUSTRY NEED TO TAKE ADVANTAGE OF THE OPPORTUNITIES?

The transformations required by the sustainable development agenda depend on public and private investment, especially on innovation and on cleaner production technologies, apart from innovative methods in business management. Industry can contribute to the transition towards an economy effectively sustainable, adopting new technologies that align higher productivity with several supply chains balance, demand for quality employment generation and efficiency in the use of natural resources, avoiding waste.

The domestic context is today dominated by growing concerns about the Brazilian industry loss of competitiveness. To deepen its contribution to sustainable development the industry needs to have institutional and regulatory environments favorable to productive transformations and investments required.

Brazil has a diversified industrial matrix of a sectoral and spatial standpoint. This diversity should be considered in the design of public policies in the country. The asymmetries that are at the origin of regional and income disparities affect the performance of the industry and its ability to adhere to sustainable forms of production.

The productive systems respond to the market and public policies, which is why the industrial activities performance and the productive system structure cannot be separate from the government policies contents. The public policy role is to create conditions for companies to incorporate sustainability into their production strategies, direct consumption, correct regional inequalities and seek fairness in income distribution.

The topics related to the sustainability of production and consumption standards have not been adequately integrated into the Brazilian agenda of industrial policy and innovation. As a result, these policies do not create incentives for private companies to incur the costs and risks involved in the necessary investments to a sustainable production transition.

Investment decisions depend, crucially, on prospects for sustainable economic development, access to reduced cost financing, compatible tax structure, appropriate and predictable regulation, the availability of qualified workforce and sustainable sources of energy and raw materials, with competitive prices and conditions, as well as modern and efficient infrastructure.

The quality and efficiency of public spending have a central role in this process and, therefore, the government should optimize the provision of public services, increasing the quality and efficiency of utilized resources.

The Brazilian industry faces a domestic setting with tax, fiscal and credit policies that are still timid in stimulating productive investment and affect the competitiveness of its products in domestic and foreign markets.

OBSTACLES OF THE DOMESTIC ENVIRONMENT FOR THE SUSTAINABLE DEVELOPMENT AGENDA

- distortions of the Brazilian tax system;
- high costs and access difficulties to long-term credit in Brazil;
- scarce instruments of Research, Development and Innovation (RDI) policies for sustainability;
- instability, inadequacy and administration of regulatory frameworks in the environmental area;
- inadequacy and lack of infrastructure services;
- the lack of investment in education and training of workers;
- obsolescence of the labor legislation.

As part of its representing and interests defending activities of Brazilian industry, CNI has identified an important set of domestic obstacles, of regulatory and systemic nature, which mortgage business efforts to increase productivity and competitiveness. In addition, for each of the obstacles identified, CNI formulated proposals and recommendations aiming at the improvement public policies and its implementation-specific mechanisms.

All factors that negatively impact the competitiveness and productivity of Brazilian industry also jeopardize its transition towards sustainable consumption and production paradigms.

From competitiveness agenda...

The Brazilian industry faces a domestic setting with tax, fiscal and credit policies that are still timid in stimulating productive investment and affect the competitiveness of its products in domestic and foreign markets.

Just as it is unlikely that the Brazilian industry systematically increases its productivity and competitiveness without removing these obstacles – identified by CNI's political agenda for more than a decade – it's hard to imagine that it will be able to deepen its transition trajectory to sustainable production standards increasingly socially and environmentally demanding in a regulatory and institutional context marked by so many distortions.

Especially because, besides the obstacles that stand between the industry and its investment objectives and competitiveness, there are others that hamper the achievement of corporate sustainability goals specifically.

... to the sustainable competitiveness agenda

In fact, the transformations required by the sustainable development agenda rely heavily on investments in product innovation and cleaner production processes, as well as the adoption of innovative methods in the business management.

The deepening of the industry trajectory towards sustainability adds to the competitiveness agenda requirements and additional requirements in terms of public policies and institutional and regulatory environment. These requirements involve both the issues already listed (tax distortions, obsolescence of labor legislation, etc.), and issues that are directly related to the sustainability goals.

With regard to the issues that comprise the competitiveness agenda set by CNI for several years now, the priority given to sustainability is expressed through the "modulation" of domestic policy instruments capable to remove obstacles and facilitate the transition. The Brazilian industry agenda for improving the domestic environment includes:

Elimination of the Brazilian tax system distortions

The tax system needs to take into account the social and environmental dimension of companies' performance, rewarding the efficient use of natural resources and, more generally, the sustainable models of production.

The diversity of taxes and the frequent changes in the taxation form in Brazil generate a system of high complexity and low convergence with the taxation standards of the major world economies. This imbalance strongly impacts the Brazilian industry competitiveness and creates distortions in the resources allocation, with decisive effect in the Brazilian industrial structure.

The main problem to the sustainable development agenda are the numerous tributes, many cascading, which constitute the final price of capital goods and elevate the final cost of the investment – main vector of productive processes transformation. The national tax policy should not consist merely in collection, but stimulate the development directed towards sustainability.

Thus, the tax system should respect the principles of progressiveness, simplification and non-accumulation, without losing sight of the social and environmental issue.

Reduction of costs and improvement in the access conditions to long-term credit

The long-term financing faces two structural problems in Brazil: high interest rates and difficulties in accessing by micro and small enterprises. These play an important social and economic role in generating employment and income and, therefore, in the reduction of poverty indicators.

The provision of long-term credit is still concentrated in the Brazilian Development Bank (BNDES). There are, within the framework of the BNDES and its credit lines, innovative initiatives, which – beyond the socio-environmental conditionalities required of companies seeking finance with the bank – confer more favorable treatment for actual environment investment. But such initiatives are actually ad hoc and largely minority yet.

In the investment financing area the priority should be the dissemination of public financing instruments with special rates for the adoption of processes and changes in the production, which contribute to the industrial sector adequacy to achieve the sustainable growth goals, as well as to take advantage of new business opportunities related to those goals.

Improvement of RDI policy instruments for sustainability

In recent years, innovation policy has undergone major and positive changes, geared to reducing the distance between, on one hand, the research activities, technological development and innovation and, on the other, companies, their functioning and their strategies. These changes were motivated by the observation that historically these activities were developed almost exclusively in an academic sphere, with the productive sector acting in peripheral way.

Despite these efforts, the results in terms of business innovation performance in Brazil, are yet found to be unsatisfactory, what motivated CNI to organize, in recent years, the Entrepreneurial Mobilization for Innovation. In a context of fierce international competition as well as strong competition from imported products in the Brazilian market, innovation became an inescapable component of business strategies in the country.

The coordination between the innovation actors, both public and private, needs to be encouraged, since many productive sectors absorbed technologies with potential for further spread in the search for sustainable solutions in production cycles, reverse logistics and distribution.

Innovation policy has a central role to play in the transition to a model of sustainable production and consumption. All the developed countries and some emerging countries such as China and South Korea, have already realized this fact and have integrated ambitious goals related to the sustainability paradigm to their industrial and innovation policies.

It is necessary to intensify the activities of research, technological development and innovation and integrate environmental and climatic concerns to the Brazilian agenda of innovation policy. It is also essential to strengthen the Brazilian network of technical, technological and industrial property services and develop sectoral plans and the financial subsystem of innovation support.

Stability, adequacy and proper administration of regulations in the environmental area

The inadequacy and instability of the regulatory framework constitute a major obstacle to private investment. In the environmental area, the recent legal framework and the lack of a consolidated case law create an environment of insecurity. Non-statutory rules which governs the environmental licensing of effective and potentially polluting activities are lagged. There are still problems of articulation between different areas of government that interfere in the regulations, whether in the sphere of a same federation member, or because of the federal pact fragility, leading to the overlapping of competences between Union, states, Federal District and municipalities. This often confuses more the entrepreneur than assists him in the search of sustainability into his business.

Although one cannot deny that Brazil has an advanced environmental legislation in comparison with other countries, one of the difficulties of legal norms application, that ends up turning into an obstacle, is the fact that there is a long-winded legislation and often difficult to apply.

On the other hand, the doctrinal foundations of Brazilian environmental policy are still based on the State command and control mechanisms. The legislation is adequate to punish the inefficient use of natural resources and the environmental degradation, but is devoid of economic instruments that encourage sustainable use.

In addition, the public environmental management in most cases reduces licensing activities and commitments without the adoption of other instruments of environmental policy and natural resources management. In most cases, there are impacts on the industrial activities, with high costs, without the government contribution to facilitate the fulfillment of the commitments required by the new environmental quality standards to be observed by the industry.

It is necessary to integrate to the policies a menu for the environmental and climatic area, today predominantly supported by command and control mechanisms, planning, market and information dissemination tools. Expand the use of strategic environmental assessments, among other instruments of place-based planning, will qualify the environmental licensing procedures by reducing their bureaucratic profile.

Improvement of infrastructure services

Brazil invests little in infrastructure. The precarious infrastructure services have important impacts on the efficiency of industrial production process, generating waste of resources and undermining sustainable production. It is also an important barrier to greater social inclusion, because the higher costs resulting from infrastructure inefficiency falls proportionately upon the poorest layers of the population, especially in the transportation and sanitation areas.

The lack of adequate infrastructure reflects in all aspects of the country's development. Its insecurity is associated with the Brazil cost, mainly concerning transport, communications and energy. It is therefore essential to finding alternatives that include the participation of private capital, as already occurs on highways, airports, communications and energy, construction, expansion and modernization of other infrastructure segments, including sustainable buildings.

Economic and environmental efficiency of logistics in a country of continental proportions depends on the rebalancing of the transport matrix, with largest participation of alternative modes less polluting and carbon-emitting.

The inadequate transportation infrastructure creates insecurity not only of material nature, but also to the environment and the population. This is the case of the precariousness observed especially in highways, which in addition to claiming prematurely lives of an increasing number of people, causes serious damage to the environment.

The sanitation issue deserves a prominent place, according to environmental and social criteria. On the Environmental side, the lack of sanitation is today the main source of water pollution, overcoming the industrial sources. From the social point of view, the shortcomings in this area negatively impact – and with much strength – poverty eradication efforts.

The reality of sewer service is dramatic. One of the challenges of the sanitation sector is to accelerate the expansion pace of sewer collector network coverage. This will only be possible through the elimination of barriers to investment.

Even with the network expansion in recent years, the growth rate could be more intense if financing instruments such as public-private partnerships – PPPs were more used by the federal government.

Increased investment in education and employees qualification

Improving the quality of education is a fundamental condition for the country to succeed in its goals of sustainable development. It depends on the elevation of the population environmental awareness level and the ability of qualified workers to contribute to sustainable manufacturing processes.

Without quality basic education there is no productive force to be trained. Without vocational high school remains the gap in qualifying for the labor market and, finally, without college degree education there is no science and without science there is no technology and no innovation.

The lack of workforce qualification is one of the major barriers to sustained growth in Brazil. The Program for International Student Assessment – PISA, which assesses 15 years old students' skills in reading, mathematics and science, displays a frame that needs to be overcome: the average Brazilian student score surpassed the 400 points only in 2009, far from the students performance of developed countries, creating a gap in sustainability also in terms of education.

Modernization of employment law

Brazilian law did not follow the labor world modernization, and as it remains paralyzed, it keeps representing an obstacle to the country's sustainable development. Technological progress creates new working arrangements, which are not compatible with the application of homogeneous formulas of worker's protection. These new working arrangements allow more efficient production processes, with lower travel costs and less intensity of natural resources use.

For the Brazilian industry to be able to play an effective role in relation to the opportunities that present themselves, it is essential that institutional and regulatory arrangements, also under the labor law, provide growth, stability, predictability and a more compatible environment with the new workers profile in the 21st century.

5 COMMITMENTS OF THE INDUSTRY SYSTEM WITH THE ENCOURAGEMENT OF SUSTAINABLE PRODUCTION

CNI has the conviction that economic growth must be sustainable in social development and environmental conservation. The institution undertakes to exercise the leadership role to mobilize and engage the Brazilian industry in the transformation of production and consumption standards to more sustainable models.

Building on the momentum created by the holding of Rio+20, CNI presents an agenda of initiatives intending to bring proposals and mobilize the country's business leaders.

The transition to sustainable growth needs change in products and processes that require innovation, incorporating new technologies, best management and corporate governance practices, education and vocational training. The Industry System undertakes to strengthen its programs and actions directed to environmental sustainability and social development.

COMMITMENTS OF THE INDUSTRY SYSTEM:

- spread of new technologies, processes and best practices
- identification of goals and construction of indicators
- investments in education and vocational training
- liaison with international and domestic actors.

Spread of new technologies, processes and best practices

CNI will concentrate efforts on encouraging the sustainable production, through the intensification of international and domestic partnerships aimed at the dissemination and the support for the implementation of new technologies and processes and best practices. The planned initiatives are:

- Stimulus to activities and initiatives for sustainability in the medium, small and micro-enterprises, including through dissemination of best practices, promoting greater integration and compatibility of the practices adopted by companies of all sizes, in partnership with institutions such as SEBRAE.
- Strengthening of competitiveness and environmental conservation programs, such as: Support Program to the Competitiveness of Micro and Small Industries – PROCOMPI, Energy Efficiency Program, Cleaner Production Program, Waste Stock System.
- Quest for partnerships expansion with the federal government in the environmental area, through the conclusion of agreements with various ministries and executive and regulatory agencies that can help with this agenda.
- Stimulus to the sectoral associations to ensure partnerships and dialogues with the government and civil society to identify sustainable alternatives for industrial processes.
- Encouragement to industry federations to build partnerships and dialogues with governments and civil society in order to promote a stable institutional environment for investments to favorable sustainable development, taking into account regional specificities.

Identification of goals and construction of indicators

The construction of indicators and goals for sustainable development must necessarily occur from a close dialogue between public authorities, civil society organizations and the productive sector.

For setting goals it is necessary a governance system that ensures conditions for medium and long term investment. The following elements are essential to governance systems:

i) providing institutional stability in business environment;

ii) transparency of data bases and methodologies used;

iii) ensuring competitive conditions, with social and environmental goals of sustainable development seen as positive differentiators and not restrictive.

CNI wants to contribute to this process through the following initiatives:

- Liaison with the several industrial sectors for the development and qualification of social-environmental inventories, in order to map and reduce business risks associated with the use of natural resources and to health issues, workplace safety, environment and greenhouse gas emissions.
- Promoting the involvement of national industry in its sustainability standards analysis, from their supply chains, seeking the construction of indicators and the establishment of voluntary and progressive goals.
- Coordination, every four years, of review and analysis efforts of national industry's advances towards the goals of sustainable production, according the construction process of this document and the sectoral fascicles.

Investments in education and vocational training

Education is a fundamental vector of sustainable development. It is a condition to the development of creativity and innovation, the incorporation of the values and concepts of sustainable development, the implementation of new technologies and above all, to access the best forms of employment and income generation.

The accelerated improvement of the Brazilian population average schooling is a strategic factor for the promotion of sustainability. The universal basic education with quality, the strengthening of vocational education and the stimulus to continued education, both inside and outside the workplace, are commitments of the Industry System.

CNI has incorporated in the Industry's Strategic Map to 2007-2015, education as a key element for sustainable development. The work programs of the System Industry institutions will be oriented to the quality assurance of basic education, the strengthening of vocational and technological education and the promotion of digital inclusion.

Liaison with international and domestic actors

CNI undertakes to influence international negotiation processes involving the topics of sustainability, whether through its interaction with the federal government, or acting in international business forums. CNI's commitment is to intensify participation in international forums, defending the Brazilian industry's sustainability agenda.

In the domestic environment, CNI assumes the commitment to intensify the dialogue with public authorities and civil society organizations for the construction of objective conditions to the realization of sustainable consumption and production standards.

CNI is committed to supporting the federal government in the results translation of conventions and international dialogues for the internal environment, seeking to reconcile the international commitments to the needs of the national industry's competitiveness agenda.

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NATIONAL CONFEDERATION OF INDUSTRY – BRAZIL

DIRECTORY OF INSTITUTIONAL RELATIONS

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Director of Institutional Relations

ENVIRONMENT AND SUSTAINABILITY UNIT

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Technical Coordination

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