

## **STRATEGIC**

## **NOTES**

**STRATEGIC AFFAIRS SECRETARY OF THE PRESIDENCY OF THE REPUBLIC**

**SPECIAL EDITION | set 2014**

### **STRATEGIC NOTES 4 – PLANTED FORESTS: BASIS FOR A NATIONAL POLICY**

Brazil's tradition on planted forests has more than 100 years. The country has the largest and most biodiverse tropical forest in the world and almost 60% of its territory is covered with forests. Nonetheless, its participation in the international trade of forest products is less than 3%, despite being among the top 10 global producers.

The low participation in the world market of forest products suggests that the country still directs most of its production to the domestic market, does not benefit from its native forests potential, and its planted forests sector, which supplies the vast majority of the domestic demand, does not yet put Brazil in a prominent position in international trade.

In 2009, the Secretariat of Strategic Affairs of the Presidency of the Republic (SAE/PR) began an articulation process for the construction of a proposal for a National Policy for Planted Forests.

In May 2014, the Brazilian President determined that the policy should be inserted within the scope of the broader strategy of the Brazilian agricultural sector, which is the 2014/2015 Agricultural and Livestock Plan.

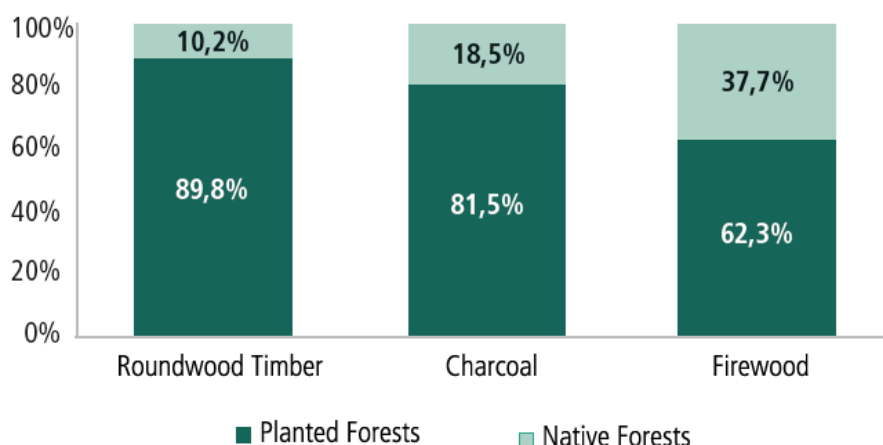
This Strategic Note summarizes what is regarded by SAE/PR as the fundamental principles and guidelines for building the pillars of a National Policy for Planted Forests, which are based on discussions between the government and key stakeholders.

### **ECONOMY OF THE FOREST SECTOR**

Forests occupy about 31% of the Earth surface (FAO, 2010)<sup>1</sup>, and 7% of this total are planted forests, which correspond to 264 million ha. Besides playing an important role in conservation strategies, they are essential to ensure the supply of forest raw material. For example, they provide between 1/3 and 2/3 of global demand for roundwood timber for industrial purposes (EFIATLANTIC, 2013)<sup>2</sup>.

In Brazil, there is a similar trend. The country has one of the largest forest areas in the world, with 463 million ha; out of these, only 7 million ha correspond to planted forests (less than 1% of the country's surface area). This small relative area is able to supply nearly 90% of total roundwood industrial timber, 81.5% of charcoal and 62.3% of domestically produced fuelwood (Chart 1).

Chart 1. Planted and native forests shares in the production of timber, charcoal and firewood in Brazil – 2011-2012 (%).



Source: IBGE, 2013<sup>3</sup>.

The forest sector has a great growth potential due to an increasing demand for forest products, since there is still a low per capita consumption of these products in Brazil. A good example is the apparent consumption of paper, which is 49 kg/capita in Brazil, below the world average (57 kg/capita) and countries such as Mexico, Chile and China, but far behind developed countries such as Finland (281 kg per capita) and Germany (243 kg per capita).

The high share of planted forests in total forest production is explained by several factors such as:

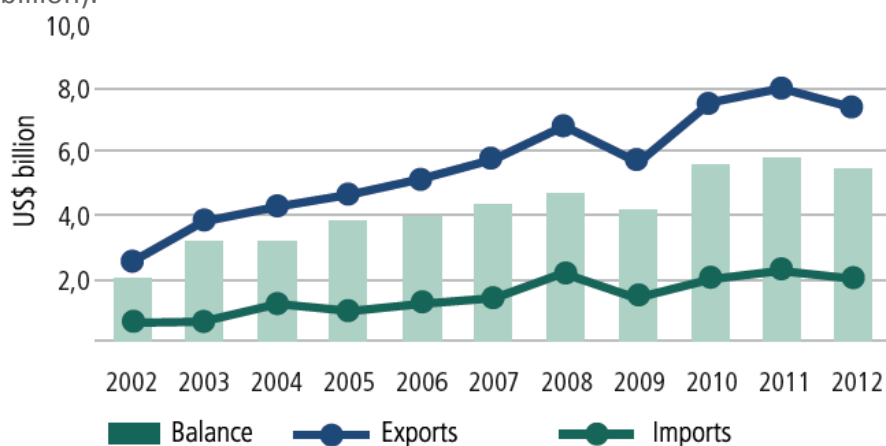
- The high productivity of planted forest species in the country; increased awareness of society in relation to the environment and increasing social and environmental constraints;
- increased demand for forest products with better quality standards;
- reduced production of forest raw material from native forests in the Caatinga (semi-arid vegetation), Cerrado (savanna vegetation), the Atlantic Forest, and also from the Amazon; and
- simplified environmental licensing.

The contribution of the forestry sector to the Brazilian economy is relevant not only in terms of supplying the domestic market. If exports from agribusiness are taken into account,

forest products are among the four most important, with 10% of the total, lagging behind only soybeans, beef and sugarcane. It is noteworthy that Brazilian agribusiness accounted for 41% of Brazil's total exports, reaching nearly \$ 100 billion – all data for 2013.

Despite its favorable statistics, the country still has a lot to advance in order to better benefit from the sector's economic potential. When analyzing the sector in a segmented manner, it is possible to see a strong differentiation in terms of international competitiveness. In the case of pulp, we are the 4th largest producer, having reached about 14% of world trade of \$30.6 billion in 2012. In the case of paper, the country is the 9th largest producer, but its participation in international trade was less than 2% in that same year.

Chart 2. Evolution of the trade balance of planted forests products in Brazil, 2002-2012 (USD billion).



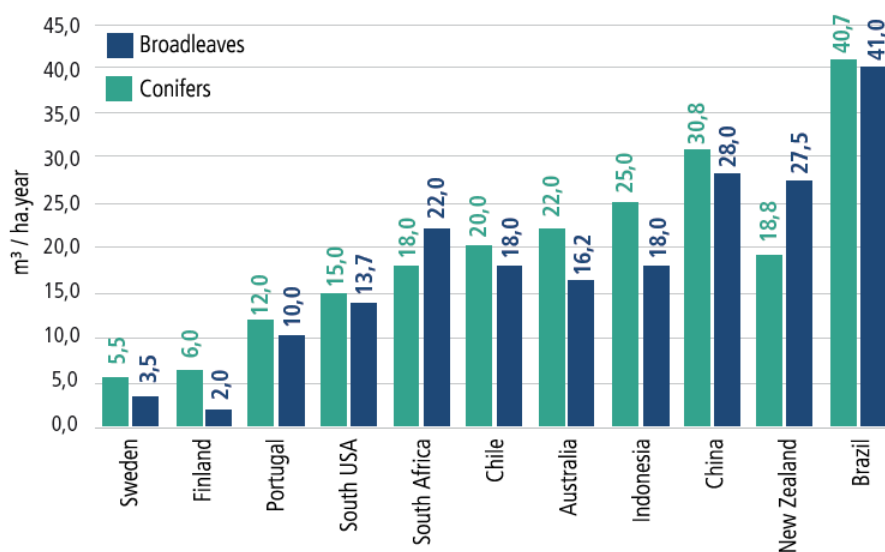
Source: Brazilian Association of Planted Forest Producers, 2013.

For the remaining products, we have a significant production volume, but with incipient international participation.

This low global market share is even more surprising when one observes the significant comparative advantages of Brazil in aspects such as climate, land availability and water resources, in addition to the wide range of native forests.

These comparative advantages, associated to scientific and technological development, have been incorporated by the planted forest sector in order to achieve the highest productivity rates in the world for the two main forest species planted in the country (chart 3). This association, therefore, points to the great potential that the country has in order to raise its global market share.

Chart 3. Comparison of forest productivity of selected countries for broadleaves (Eucalyptus) and conifers (Pinus).



Source: Brazilian Association of Planted Forest Producers, 2013.

## SOCIAL AND ENVIRONMENTAL RELEVANCE

Worldwide, there is a significant evolution of the understanding of the social and environmental benefits that planted forests provide to society, especially regarding rural and regional development and their environmental benefits.

Forest plantations are very important to support livelihoods, food security and poverty reduction. As in most developing countries, small and medium landowners and farmers in Brazil have forested areas and depend upon them for their livelihoods. The jobs of a large number of people depend on working in nurseries and forest-based industries, site preparation, establishment and maintenance of plantations, etc. And yet it is important to note that fuelwood is a major energy source for domestic use in rural properties in Brazil.

The interface of the planted forest sector with the rural development of the country tends to be increasingly dynamic, and this synergy has been increasingly incorporated by farmers with consequent impact on public policies. Models include reforestation per se, but also the strengthening of integration between production processes, for example, crop-livestock-forestry or agroforestry systems.

Brazil has more than 60% of its planted forests with forest certification, being the 5th largest certified area in the planet, which shows the high level of compliance with international standards of social-environmental responsibility.

Taking into account the requirements from new Brazilian forest law, planted forests will have an important role in the recovery of degraded areas and environmental liabilities,

helping crop rotation, generating increased incomes and improving the quality of life in the countryside. Also, they have an important contribution in minimizing both the emissions of greenhouse gases and the impacts of global warming.

## **PERSPECTIVES OF THE PLANTED FORESTS SECTOR**

Considering the great social mobility observed in Brazil over the past 12 years, an increased demand for forest products is expected. This trend is valid for various industry branches linked to the sector, like steel, furniture, renewable energy, packaging, pulp, paper and other forest products. Simulations carried out by Ferreira Filho (2013)<sup>4</sup> using general equilibrium models suggest that the pulp and paper, and wood products, will present in 2025 a cumulative growth of 391% and 210%, respectively, compared to 2005.

For such a growth to occur, it is essential to increase the area of planted forests in the country. Projections have already been undertaken by SAE/PR and theUFMG<sup>5</sup> and suggest that this area will more than double between 2020/2030 depending on the impact of public policies that favor the growth of reforestation. This increase also depends on the impulse generated by the improved macroeconomic conditions that gave access to the poorer population to products derived from the planted forests production chain, such as books, housing, furniture and toiletries.

New products and innovative processes have the potential to change an entire market, as in the case of the reconstituted wood panels used in the furniture industry, for example. The increased use of wood as a structural element in house building and the dissemination of the use of biomass energy and biofuels may be the next wave of technological innovations. This also includes the genetic engineering and nanotechnology advances and their potential for great innovations in the production of planted forests.

One also needs to consider that market demand requirements will increase in terms of standards and prices, with lower profits, leading to the need for increasing competitiveness not only in order to expand our participation in the international arena, but also to meet the future domestic market.

Another relevant point of view is related to the spatial distribution of the sector, which in its first development phase (implemented from the mid-1960's) took place near the national consumer markets and the main ports. More recently, there has been a strong "interiorization" movement, with the implementation of large forestry-industrial projects in the Mid-West, North and Northeast, incorporating regional development opportunities, as well as new challenges for the sector, such as adaptation and productivity of forestry species, infrastructure and logistics, and labor qualification.

This process will certainly have to count on the participation of all actors involved in the sector, but it is essential that a planning model be established addressing the major sectoral

demands, ranging from a clear understanding of the past and present conditions and future scenarios. Thus the proposal by SAE/PR of creating a National Development Plan of Planted Forests as a basic component of that process. Some key elements in that Plan should include:

- Increasing the area of planted forests in the country.
- Integrating forest production with crops and livestock.
- Improving the research, development and rural extension system in order to consolidate and improve the scientific and technological gains achieved in the last decades.
- Creating a favorable business environment by encouraging investments in the sector through, for example, the reduction of transaction costs, related fees, licenses and other land policy rules, and also reducing excessive regulation.
- Ensuring a proper credit and funding system to the growth of the sector, as well as stimulating private fundraising mechanisms.
- Articulating and coordinating related public policies, such as climate change, industrial and agricultural policies.
- Implementing information and analysis systems, improving the statistics, especially the public ones.

## FINAL CONSIDERATIONS

As shown in this note, the planted forests sector in Brazil has a great potential to leverage a forest-based economy, both nationally and internationally. In order to transform this into reality it is essential to have an adequate and long-term planning framework that takes into account the complexity of the sector and its inter-relations with other production and supply chains.

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