



IS THE TIMBER PRODUCTION REALLY CONDEMNED

This text aims to elucidate certain facts related to logging activity based on Sustainable Forest Management. With this, it is intended to provide concrete information about the fundamentals that involve the activity, promoting a more prudent and rational debate, abandoning the prejudices and alarming contents that surround forest-based activities in the Amazon.

In recent articles, the hypothesis was raised that forest concessions would not meet the wood market demand. In a way, the article “condemns” the sustainability of this market. The article is right and wrong at the same time. Let's understand why.

For that, let's start by explaining who Cipem is.



THE CIPEM

Founded in 2004, the Center for Wood Producers and Exporters of the State of Mato Grosso (CIPEM) is the result of the union of eight business unions in the Forest Base Sector. Its primary objective is to organize and strengthen the native forest sector, by encouraging productivity and the conscious consumption of wood and its by-products in a sustainable way, with respect to current legislation and in harmony with the environment.

The actions undertaken by Cipem seek to promote and improve the techniques that guide the activity of the forest-based sector. For this, successive investments are made in scientific research related to Sustainable Forest Management, to guarantee the perpetuity of the native forest, considering the forest stock of each commercial species used, contributing to the sustainable growth of the forest-based sector in Mato Grosso, through serious, transparent and honest work.

SUSTAINABLE FOREST MANAGEMENT (SFM)

Sustainable Forest Management is an economic activity of selective forest exploitation through the harvest of previously selected trees, with the use of low-impact techniques that reproduce the natural mechanisms of ecosystems, in a planned manner and without damaging existing biodiversity. With this, ecosystem services continue to be provided by the forest, perpetuating the fauna and flora, in addition to promoting a better quality of life and development for society.

With Sustainable Forest Management, the forest remains standing, as only about 12% of commercial-sized trees of the species used are removed. On the other hand, most of the remaining trees have already reached maturity, preventing genetic erosion of the managed species.


The dynamics of sustainable forest management is quite unique, being possible to identify it even by satellite images. When preparing a Sustainable Forest Management Plan (SFMP) to be submitted for analysis, inspection, approval and monitoring by the competent environmental agency, there are fundamental prerequisites, foreseen and Law, to be followed, such as:

The planning of the road network, yards and infrastructure are designed to cause the least possible impact, respecting the existing natural mechanisms, including measures to prevent and combat forest fires. This infrastructure related to courtyard and roads cannot, by law, exceed 2% of the total managed forest area;

Photo: Forest Management x Agriculture

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WITH SUSTAINABLE FOREST MANAGEMENT, THE FOREST REMAINS STANDING [...]



The definition of the cutting cycle, which corresponds to the period in which the harvested area must remain untouched until a new harvest can take place, varies from 25 to 35 years. This means an average “fallow” of 30 years, where various plant and animal species will be protected. This transforms the managed area into a true ecological sanctuary;

Execution of the **100% Forest Inventory**, which consists of locating, identifying, measuring and evaluating the trees and their species, considering commercial or potentially commercial characteristics. Prohibited cutting species are also measured, so that protection measures can be established during planning and harvesting.

Do you know what this means? If you want to know where these trees are, just search for their geographic coordinates (of each tree!) and you will be able to identify the locations in satellite images or even go to the location to check. Do you know of any other land use activities with these guarantees?

Permanent plots are also installed, which will be used to evaluate and monitor the growth and production of the forest. These permanent plots are made in representative samples of the forest. Making a parallel, it would be like taking blood samples periodically to assess health, but in the case of the forest, they are used to assess the “health” and vigor of the forest;

Thus, once all these management conditions are met, only a part of the existing trees in the forest is removed. It should be noted that a tree of a certain species can only be harvested upon proof that there are enough individuals, both to recompose the basic structure and to produce new individuals in the medium term.

The SFMP serve as an important tool for monitoring, protecting forests and also as a source of information for the development of a database on the current situation of the Brazilian Amazon forest.

BRAZIL

Brazil has an extensive territorial dimension and leads the ranking of countries that have the most forest protection areas in the world, according to the study on “Protected Areas on the Planet”, developed by the United Nations Environment Program.

From this perspective, it is worth emphasizing the role of Sustainable Forest Management for the conservation of the Amazon forest, as the main active agent in the mission of keeping the native forest standing, guaranteeing the maintenance of ecosystem services and biodiversity.

In the states of Rondônia and Pará, there are Brazilian public forests under a Sustainable Forest Management regime through Forest Concessions, whose execution of contracts is closely monitored by the Brazilian Forest Service. All municipalities and communities neighboring the concession areas are favored by the generation of direct and indirect jobs and investments in infrastructure. All the SFM techniques used in the concessions serve to ensure that the forest remains healthy and standing.

The creation of concessions was made with the intention of protecting the forests more and the way chosen was the management of natural forests.



HOWEVER, OUTSIDE THE CONCESSIONS THERE IS A “UNIVERSE” OF FORESTS WAITING TO BE PROTECTED THROUGH MANAGEMENT. BY THE WAY, DID YOU KNOW THAT THE WWF (WORLD WIDE FUND FOR NATURE), IS AN INTERNATIONAL ORGANIZATION THAT PROTECTS THE ENVIRONMENT AND CONSIDERS MANAGEMENT AN IMPORTANT TOOL FOR CONSERVING FORESTS AND THEIR BIODIVERSITY?

THE STATE OF MATO GROSSO



In Mato Grosso, SFM takes place on private properties, using the same techniques for impact reduction and forest conservation care used in concessions, and more than that, required by legislation. Remembering that beyond the limit of areas for courtyard and secondary roads (2% maximum), the drag pattern is monitored. With this, the state benefits from the positive effects of the activity, both for the environment and for the socioeconomic aspect.

Currently, there are 4.7 million hectares managed in the state of Mato Grosso, with a goal of reaching 6 million by 2030, in line with the State Government's goal, materialized by the Produce, Conserve and Include Institute (PCI). Around 90,000 direct and indirect jobs are also generated, with forestry-based activity responsible for the 4th economy in the state. This will mean 6 million hectares under forest cover protection.

To further endorse the defense of the sustainability of Forest Management, Cipem, in 2021, sent a Letter to the State Secretariat for the Environment (SEMA), requesting "Support for the defense of the activity of Sustainable Forest Management and the reliability of the System of Commercialization and Transport of Forest Products – SISFLORA/MT regarding the guarantee of the perpetuity of forest species", which was answered by Order No. 041/2022/CCRF/SUGF/SEMA, as follows extract from the document:

"Considering the request, it is reported that the SFMP activity has become one of the most sustainable activities, both in terms of conserving native forests and controlling climate change in the world. Therefore, there is no doubt that the State Secretariat for the Environment not only supports but also promotes all mechanisms to ensure the development of sustainable practices in forest-based activities in the State of Mato Grosso, with investments in systems for control and monitoring, in an application that helps in collecting information in the field and in improving procedures.



Regarding the SISFLORA System, in terms of reliability, it is one of the best control and monitoring systems, as well as the database of forest essences, authorized for forest exploitation and transported to different regions of the country and the world.

In this way, SEMA prioritizes all sustainability and efficiency criteria in the control and monitoring actions and database.”

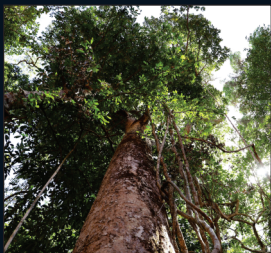
In addition, Mato Grosso has about 62% of its territory preserved, and was responsible for 50% of all legal wood produced in the country and made available on the market. These numbers are the result of hard work carried out by the forestry sector, in partnership with command and control bodies, such as IBAMA and SEMA.

It is essential to clarify that dozens of management areas in Mato Grosso are entering their 2nd exploratory cycle, proving the sustainability of the activity through the perennial supply of raw material, conserving all the natural resources of the managed areas.

According to data provided by SEMA, there are 487 Forest Exploitation Authorizations (AUTEX) in progress, with 120 authorizations for the 1st cycle, and 1 (one) for the 2nd cycle released in 2021. The managed forest makes wood a renewable good. In addition, research is constantly being carried out to improve management.

It is often mentioned that the natural forest has a large number of hollow, rotten trees and generally has a low growth rate. Is this true and do you know why? Because there are many old, senescent trees, without any growth. And it is exactly these trees that management will remove. The new forest that the management will provide will be stronger trees, with better growth and health. This renewed forest will be able to store large amounts of carbon.

The next time you see a truck with a load of wood, think that each harvested species was properly managed, allowing its traceability, and that 100% of the unmanaged species remained in the forest. Try to think of (or compare) another land use activity that protects biodiversity so much. Thought? And now, what's your opinion?





Excerpts taken from the article: PRODUCTION MANAGEMENT IN NATURAL FORESTS IN THE AMAZON: MYTHS AND TRUTHS (Evaldo Muñoz Braz; Patrícia Póvoa de Mattos - EMBRAPA), available in full on the Alice Repository page (Free Access to Embrapa Scientific Information) through the link: <http://www.alice.cnptia.embrapa.br/alice/handle/doc/1032729>

1. Introduction

(...) The management of natural forests is the only land use that guarantees the maintenance of the forest. The number of remaining trees reaches 88%. Despite this, it is an activity penalized in the media as responsible for the destruction or deterioration of natural forests. In addition, research on natural forest management, especially in the Amazon, is often supported by these myths, producing specific research disconnected from the reality of managing “production forest” (...)

Are the best trees removed in natural forest management, harming future trees?

The oldest trees, which are not necessarily the best, are removed. The mistake was caused by considering that the thickest trees would necessarily be the best (correct concept for even forests), but these trees are thicker only because they are older and often already with signs of senescence, such as the presence of hollows. In a management simulation in a primary forest in the Amazon, Schulze et al. (2005) comment that up to 40% of commercial trees can be rejected due to hollow or trunk defects. (...)

If the forest does not recover the volume extracted during the cycle, is the management not sustainable?

The forest should not be expected to recover the volume cut in the first cycle in primary tropical forests without intervention, as in the first harvest many stagnant old trees result in a stock above the carrying capacity of the forest. (OSMASTON, 1968; DAWKINS; PHILIP, 1998; BRIENEN; ZUIDEMA, 2007). (...) That is, each species, individually, has a recovery pattern that can be different from the one extracted, not implying in recovery difficulties.

Should cycles be increased to be sustainable?

Most species from 70 cm in diameter (BRAZ et al., 2012), when kept in the forest, no longer produce net increment, only gross. This occurs due to the reduced increment and increase in the mortality rate, resulting in a net volume originating from these classes that is lower than the previous one (at the beginning of the cycle).





Increasing the cycle would only make the expectation of future volume less cost-effective. As can be seen in any natural forest structure, survival is very low in the larger classes. Most of the cycle increase suggestions would allow some trees to reach the maximum diameters possible for a given species, but which are diameter classes with high mortality rates, resulting in drastic increment reduction or “negative” increment production. (OSMASTON, 1968; NYLAND, 2007). (...)

Is management only sustainable if it recovers the initial diameter distribution?

(...) Waiting for the forest to reach the initial diameter distribution (with the same number of classes) is to wait for the forest to age again and return to its point of almost stagnation. An untouched primary forest can be semi-stagnated for more than 150 years (BRAZ et al., 2015a), causing low increments (...). In addition, it is important to remember that regeneration is compromised in an overstocked forest (NYLAND, 2007) by compromising access to light by trees located in the lower canopy, decharacterizing the inverted-J structure over time (BRAZ, 2010) and the growth of the forest as a whole (DAWKINS; PHILIP, 1998).

(...)

The structure of the forest, considering the optimal production, does not allow an indiscriminate increase in the cycle or cutting diameter, as there is an optimal diameter that maximizes the increase in volume of each species in a given site. The cut rate should be the composition of volumes relative to these optimal diameters by species.

Determining the optimal cut diameter for each species is a tool that needs to be implemented in order to maximize the increment of the production forest.

Another fundamental point to consider in research that assesses the recovery capacity of areas under management is the differences in diameter structure at different sites, as these will respond with different recovery rates.

For future cuts, a sustainable structure must be expected and considered, however, different from the original, which had an excess of trees already in a state of senescence. Thus, the future structure will have fewer diameter classes and probably less volume, not implying non-sustainability.

The criteria determined in the forest legislation for the implementation of natural forest management should be reviewed and improved based on research results.