

The Challenges of *Amazônia Legal*

“It escapes us, in the Amazon, the vastness only to be measured, if divided; the immensity that needs reducing in order to be appraised; the greatness only unveiled if abridged, through microscopes, and an infinity dosed little by little, slowly and slowly, indefinitely, torturously...”

Earth is still mysterious. Its space, as Milton’s space, hides in itself. Annuls its own hugeness, extinguishing, falling all over; abridged to the geometrical fatality of the earth curvature, or deluding curious eyes with the treacherous uniform of its immutable aspects. Human intelligence would not bear impromptu the weight of that amazing reality. It will have to grow with it, adapting to it, in order to dominate it. To see it, one should renounce the purpose of unveiling it.”

Euclides da Cunha

Humberto Souto

Brazilian Court of Audit
Minister

Euclides da Cunha arrived at the Amazon in 1905, assigned to head a Brazilian commission created to handle borderline issues with Peru. He produced a series of essays, which are still considered one of the best studies ever produced about the Amazon region. Almost one hundred years following that historic moment, we can still feel, with the same intensity as he did, the weight of the forest before us. A century later, the vastness, still not completely explored, intensifies the responsibility we assumed towards its appropriate management. In every Brazilian, lies an inner desire to dominate it, to grow with it, adapting it. More than a desire, I would say this is a responsibility, as the efforts employed today will guarantee that the Brazilian nation can continue to benefit from this asset belonging to all of us.

The Federal Court of Accounts is rendering accounts to society on a share of this responsibility. At the Plenary Session on 14th April this year, I had the grateful opportunity to present process TC n° 017.231/2003-8 for the Collegiate to pass judgment. This process contains the Operational Nature Audit Report, focused on governmental actions aimed at protecting the environment in the Amazon Region and providing its development by means of sustainable forest management techniques.

In my Vote, I highlighted the value I ascribe to initiatives such as this audit, given the strategic importance of the audited subject and its social relevance, in view of the urgent character of our search for sustainable development of the Amazon Forest, without losing sight of the environmental protection.

The present article – written to fulfill the unanimous request of my Colleagues; whom I salute in the person of the President of the House, Minister Valmir Campelo – is based on the Audit Report carried out and on my Vote presented to the Plenary of The Federal Court of Accounts during that session. The commitment I undertook with this initiative is to present you with a brief view of the importance the Federal Court of Accounts devotes to the theme, and our concern regarding the preservation of the Amazon Forest.

CONTEXT OF THE AUDIT: AMAZÔNIA LEGAL (LEGAL AMAZON)

The region defined as *Amazônia Legal*, in numeral VI of paragraph 2, article 1, of the Brazilian Forestry Code (Act nº 4.771/1965, altered by Provisional Rule nº 2.166-67/2001), is outstanding both for its vast territorial dimension and for its social, economic and environmental diversity. Its territory comprises seven States (Acre, Para, Amazonas, Roraima, Rondonia, Amapa e Mato Grosso) and part of another three States (Maranhão, Tocantins e Goiás).

Worldwide, the area is prominent for encompassing the largest tropical forest in the world, covering approximately 400 million hectares, thus representing an important assortment of forest and environmental products. Within the country, the view on the importance of the region and its environment as an asset, was even highlighted in the Federal Constitution in paragraph 4, article 225, as follows:

“The Brazilian Amazonian Forest, the Mata Atlântica, the Serra do Mar, the Pantanal of the Mato Grosso state and the Coastal Zone are national assets, and their utilization shall take place, in compliance to the law, within conditions which ensure the preservation of the environment, including the use of natural resources”.

In the national scenario, the *Amazônia Legal* region has been characterized as an agricultural border, and a rapid expansion of agricultural and livestock-raising activities is being observed. Such occupation process, however, has been based on simplistic models, in which the original vegetation is removed and substituted by a monoculture of grains or pasture. In the process of exploiting new areas, the wood sector has been acting as a catalyst in the expansion of the agricultural border,

once the removal of wood facilitates deforestation for farmers, who can fund the clearance operation of the area with the sale of their produce. According to data from the National Institute of Spatial Research (Inpe), the deforestation rate of the Amazon Forest is around two and a half million hectares per year. At this rate, the region has lost 12% of its vegetation in the last 30 years.

Therefore, one can conclude that the Amazon Forest, despite its recognized importance, is being threatened by inadequate occupation, with no consideration for its effective potential, and no concern for the implementation of a productive system compatible with environmental preservation. However, the actions to be taken on this regard cannot be oriented by a radical and blind conservation policy, without taking into consideration all the economic potential of the resources of *Amazônia Legal*, and turning it into a “huge ecologic reserve”. The current constitutional text itself defines an asset and provides for its utilization, nevertheless, establishing that this utilization should be done under conditions that assure the preservation of the environment.

This situation resulted in the approval of the inspection within the previously mentioned process, within the scope of the Federal Court of Accounts Auditing Plan for the second semester of 2003. This effort, developed by this Court of Accounts, aims at identifying effective governmental actions, so as to support initiatives promoting the development of the Amazon region in a sustainable manner. I will briefly present the methodology used in the audit and the results achieved.

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In order to clearly identify the focus of the investigation, as well as the limits and dimensions of the work, the following auditing issues were defined:

1st) Is it possible to guarantee that sustainable forest management is in fact “sustainable” (environmentally sound, socially just and economically viable)?

2nd) Is the implementation of sustainable forest management plans being sufficient to guarantee sustainability in the exploitation of the forest in the Amazon region?

3rd) What is required for the application and dissemination, by the Federal Government, of knowledge acquired from sustainable forest management projects?

SELECTION OF THE OBJECT AND SCOPE OF THE AUDIT

Having as guidelines the concern with forest conservation and the identification of actions to promote the sustainable development of the *Amazônia Legal* region, a lot of attention was dedicated to the wood sector, considering its significance for the region – the sector circulates around USD 2.5 billion a year, totaling around 20% of the agribusiness exports in the country. The focus of the operational audit was, therefore, directed towards the identification and examination, within the wood sector, of techniques and actions aimed at the maintenance of the sector in a socially fair manner and reducing the environmental impact it generates.

The scope of the audit was then defined: to study successful experiences related to the employment of techniques of sustainable forest management in the Amazon, identifying successful actions promoting the sustainable development of the region and that could be supported and adopted by the Federal Government, as well as presenting recommendations to improve the governmental performance in the area of environmental protection.

Decree n° 1.282/1994, in paragraph 2 of article 1, regulates the provisions of the Brazilian Forestry Code related to the Amazon Forest. It defines sustainable forest management as the management of a forest so as to obtain economic and social benefits, respecting ecosystem sustainability mechanisms. Such definition makes clear that, in order to be sustainable, this management should be economically viable, ecologically correct and socially just.

AUDIT FINDINGS

THE FIRST QUESTION

In reference to the first question, with regards to the possibility of guaranteeing that sustainable forest management is, in fact, “sustainable”, the first observation was that results obtained with the adoption of sustainable forest management in forest exploitation contributed to improving socio-economic and environmental conditions in the region.

Part of this conclusion was taken after some visits to wood companies with certified forest areas. Forestry certification is granted in Brazil by the Brazilian Forest Management Council (private entity) according to norms and standards internationally established. It guarantees the origin of forestry products, attesting that the wood used in the product originates from an appropriately managed forest, i.e., is ecologically sound, socially just and economically viable, and in conformity with current legislation. Certified enterprises are subject to external audits which evaluate and monitor the activities developed.

In Brazil, forestry certification covers over 1.3 million hectares, approximately 36% of which (460 thousand hectares) in the Amazon. Within the nine Brazilian wood companies with certified forest areas in the region, four were visited: Cikel Brasil Verde S.A., Gethal Amazonas S.A., Mil Madeireira and Juruá Florestal Ltda. The conclusion was that the requirements established by the certification body in order to guarantee the sustainability tripod (environmental soundness, social justice and economic viability) are effectively met. Labor and safety laws are observed, in addition to some extra benefits offered to workers, such as a private healthcare plan, assistance with the purchase of medicines and the basic food basket. In the visit, one could observe that, with the compliance to certification requirements, there was an increase in job posts and income.

This first observation was also based on the analysis of the business model implemented by Maflops - *Manejo Florestal e Prestação de Serviços* (Forest management and Services Rendering), based on wood production in settlement communities. The model provides settled families with a road network and forest management plans for each property, in addition to payment for the sale of part of their wood to the company. Maflops employs community members in forestry inventory and woodcutting, using low-impact techniques. Small farmers are made aware of the negative aspects of the cut-and-burn type of agriculture, and are encouraged to market non-wood products. The company also helped building houses for the settled families using resources provided by Incra.

With regards to the sustainability aspect of the management employed, the team concluded that low-impact exploitation assures long-term maintenance of the forest structure, reducing cutting cycles and costs, and increasing productivity.

Low-impact exploitation systems (or stewarded exploitation) have been developed as a response to social demands for forest conservation and environmental protection. Such systems, aim to make use of the best exploitation techniques available, so as to reduce harm to residual forests, soil depletion and erosion, protect water quality, mitigate the risk of fire and help, at least potentially, maintaining biodiversity regeneration and protection.

Recent research carried out in Eastern Amazon by Embrapa, by the Tropical Forest Institute and by Imazon have shown that low-impact exploitation systems (EIR - *exploração de impacto reduzido*) offer financial, market and human resources advantages, when compared to conventional exploitation (EC - *exploração convencional*). According to BARRETO, P. e AMARAL, P., op. cit., 1998, in stewarded exploitation the volume of wood obtained is 30% higher than in non-stewarded exploitation (38.3 m³/ha *versus* 29.7 m³/ha). This higher productivity of EIR results from a lower degree of waste during tree cutting and logging.

In addition, higher costs with EIR planning are fully offset by waste reduction (in conventional exploitation 6.8% of the volume cut is wasted) and by significant increase in productivity of the dragging and storage operations. Data from the Tropical Forest Foundation showed that the total cost per m³ is US\$ 15.68 in conventional exploitation, and US\$ 13.84 in stewarded exploitation. Therefore, even if the same gross revenue were to be obtained with the wood, profitability would be higher with the use of low-impact exploitation. The increase in productivity observed in EIR, resulting in a cost reduction per m³, allows the increase of labor utilization in the operation.

The audit conclusion regarding the first question is that sustainable forest management is effectively sustainable, that is, environmentally sound, socially just and economically viable. The traditional model of wood logging generates waste of usable wood and harms the future productive capacity of the forest, as it is not planned. With appropriate management, wood logging can be a sustainable economic activity, ensuring job and income generation, and at the same time, conservation of forest characteristics.

Consequently, it is worth pointing out the key role of the Federal Government in the induction and dissemination of management techniques that allow appropriate development of forestry activity. Therefore, it is necessary to continue and expand governmental actions encouraging the adoption of sustainable management by actors in the sector, who are often unaware of the benefits brought by this type of exploitation. As positive examples, one can mention ProManejo and the Management Project of the Tapajós National Forest.

SECOND QUESTION

Regarding the second question, relative to whether “the implementation of the plans for sustainable forest management is sufficient to guarantee the sustainability of forestry exploitation in the Amazon region”, the results of the audit showed that wood exploitation in the Amazon is not being carried out in a sustainable fashion due to flaws in the implementation and inspection of the management plans.

With regards to control regulation on forest management in Brazil, several measures were adopted in the 80's and 90's aiming at controlling harmful forest logging. Theoretically, these regulations should result in the sustainable management of the Amazon, but reality is different. Despite comprehensive rules controlling forest management, deforestation and illegal logging still remain in the region.

There have been slow advances on forest management. In 2001, the amount of wood originated from management plans (according to IBAMA's criteria) represented only one third of the total amount of wood extracted from the Amazon region. Certified forests produce only 2% of the total amount of logs

extracted. According to LENTINI, M, op. cit, 2003, only nine out of 2.570 wood companies own certified forests.

It was also observed that IBAMA's reviews on forest management plans (PMF - *plano de manejo florestal*) have resulted on the halt or cancellation of a significant part of these plans (63% in 1998 and 43% in 2001). According to leaders of the Institute, such situation is caused mainly by the lack of standardization of technical assessment criteria for the approval of PMFs. Furthermore, PMF approvals by IBAMA or affiliated institutions have been significantly slow, disregarding by far the 60-day limit imposed by the Normative Instruction MMA nº4, 4/3/2002.

Adding to these factors, it was observed that the wood utilized by industries in the Amazon coming from natural forests, could also be originated from another legal source: the authorized deforestation, in spite of being restricted to 20 % of the rural property, when situated in forest areas within *Amazonia Legal*. However, it was verified that in several cases of authorized deforestation, the techniques adopted for the extraction of wood caused great negative impact on the environment. Also, it was observed that legal deforestation through these means represents a source of even cheaper wood than the one coming from the PMFs.

Thus, the conclusion reached by the audit regarding this second topic, is that legal deforestation and illegal logging are still prevalent in relation to forest management plans, and this predominance is directly related to governmental action, or to the absence of it, once governmental control has not been able to guarantee the effective sustainability of approved forest management plans, and besides that, the excessive bureaucracy for the approval of forest management plans and the lack of inspection end up inevitably affecting investments on sustainable forest management.



THIRD QUESTION

Regarding the third topic about “what is necessary for the application of the know-how acquired with forest management plans by Federal Government”, there is such complexity involved, that it unfolds into at least two variables. The first is with regards to rural land policies implemented in the *Amazonia Legal* area. According to the audit, they jeopardize the implementation of forest management for the reasons demonstrated as follows.

A study carried out by Imazon and the World Bank, reported by SCHNEIDER *et al*, 2000, concluded that regions with rain precipitation above 2.200 mm/year - a characteristic that is observed in about 45% of the Amazon area - are not recommended for farming and livestock raising. Nevertheless, governmental projects for rural land distribution implemented during the 60's, disregarded the potential of the Amazonian ecosystem and developed, with government funding, production systems incompatible with environmental limitations (mainly monocultures in vast areas of land).

The problem persists, as INCRA is currently implementing settlement projects in the region, which do not offer basic conditions so that settlers could develop sustainable economic activities, making them an easy target for wood loggers who co-opt them in, buying the wood from their land for insignificant prices, depleting the forests. Unable to use appropriate techniques, the settlers use burning for “clearing” the area, frequently causing the fires showed in the media. The absence of a sustainable productive system, makes small farmers leave their plots or sell them to big farmers, contributing, therefore, to the concentration of land ownership in the hands of a few.

The Brazilian Forestry Code (Law nº 4.771/1965, with alterations made by Provisional Measure nº 2.166-67/2001), in its article 16, establishes rigorous limitations for deforestation of rural properties in the Amazon region. It introduces legal reserves, consisting of compulsory maintenance of the native vegetation in 80% of each property situated in forest areas and 35% for those situated in areas of *cerrado*. Clear felling is not permitted in legal reserves, therefore not allowing for their use as grazing or cultivation areas, leaving a low-impact forestry exploitation as an alternative for its utilization. Therefore, one can conclude that rural land policies in the Amazon should consider, mainly and previously, the natural potential of the settlement area.

Based on the economic aptitude of the area, governments should implement or encourage projects compatible with the existing environmental restrictions (for example, the previously mentioned community forest projects developed by Mapflops), dedicating attention to providing financial and structural conditions for the sustainability of the enterprise. With regards to financial conditions, it is important to highlight that the low availability of credit lines for forestry activities and the excessive requirements to approve the funding, may result in encouragement to other activities with more credit availability, as is the case with agriculture.

Forest management, as previously mentioned, is economically viable and allows for the conservation of forests, and can be used as a predominant option for production systems in settlements, replacing farming activities that frequently contribute to increasing deforestation rates and result in the consequent loss of the environmental asset.

legal reserves

The second variable in the third question, relates to the audit conclusion stating the need for the implementation of a sustainable forestry policy.

According to data published in *Indicadores Rurais* (Rural Indicators), year VII, n°49, wood logging and its byproducts generated a trade balance surplus of 2.5 billion dollars from January to September 2002, with exports reaching US\$ 3,069 billion and imports totaling US\$ 491,8 million. This sector ranks in the third position among the most exported products. Data in the period from January to September 2003 showed a positive variation of 28,3% on exports, while imports decreased 10,4% in relation to data from 2002. Therefore, not only the material aspect of the wood sector is quite relevant, but also its potential to generate income for the country.

.Despite the economic importance of wood activities, it is observed that current Brazilian forestry policy is not compatible with the economic magnitude of the sector or with the territorial dimensions it should encompass. The Multi Year Plan (PPA) 2004-2007 forecasts the expenditure of R\$ 107,419,298.00 with this area in the next four years, indicating an average yearly availability of less than R\$ 27 million (if no contingent protection comes into place) for a sector that generates more than US\$ 2.5 billion a year and needs urgent and deep transformations in its *modus operandi* in order to evolve from being a wood extractor to becoming a wood producer.

The conclusion reached by the audit regarding this second variable related to the third question is that some points need to be reassessed or improved by government administrators, aiming at the legality and sustainable development of the wood sector: access to forests, funding, policies encouraging sustainable exploitation, fomenting, technical assistance, inspection, publishing sector's data, promotion of Brazilian products abroad, among others.

Norms published by IBAMA in 2003, require land titling documentation of the area for the approval of management plans, no longer accepting only land ownership documents. With this change, several wood loggers have not managed to approve their management plans, therefore, losing the right of access to the forest. However, it must be verified if the rule in place is compatible with the reality of the Amazon region, where according to the work *Fatos Florestais da Amazônia* (Amazon Forest Facts), found at www.imazon.org.br 47% of the land is public land or have no definite titling. Maybe a solution can be found within legality.

Another critical point indicated is that access to funding for the forestry sector has been difficult, and there are other complaints regarding the fact that the stock of wood is not accepted as a collateral.



It is necessary to make equal conditions for the wood originated from legal deforestation and the wood originating from management plans. The current bureaucracy for the approval of management plans, clearly more complex and time-consuming than the one necessary for authorized deforestation, discourages entrepreneurs who end up extracting the wood via legal deforestation or even illegal logging.

The fomenting, technical assistance, publishing data of the sector and promoting Brazilian (legal) wood products abroad are some of the points that should be encouraged by the public sector, in order to induce the growth of sustainable wood activities. It could be mentioned, for example, the fact that data such as production, trade surplus and other indicators of the sector end up being omitted, because they are included in global indicators of the agricultural sector.

The inspection of wood logging activities is also a problem point. The continental dimension of the country compared to the small number of IBAMA inspectors, has led to an inefficient performance. It is necessary to reach out for modern ways of inspection, examining the possibility of using remote tracing techniques, satellite images, monitoring by Inpe, as ways of identifying and focusing on the regions that should be inspected. The introduction of a system similar to that used for the custody chain of logged wood (a tracing process of wooden goods to confirm its origin), shaped in accordance to forestry certification, could confer improved reliability to the origin of the wood.

Certainly, without modernizing the inspection, and considering the current situation of the cadres of IBAMA inspectors, there is little chance that the control of wood activities will increase the expectation that those who violate the law will be punished, and consequently the restraint of illegal logging.

CONCLUSIONS

The audit carried out by the Federal Court of Accounts, that I summarize in this document, demonstrated that forest management comes as the most adequate way for the rational exploitation of native forests, with advantages in relation to the traditional way of wood exploitation, because of its lower production cost, higher productivity, safer market and maintenance of forest structure, as well as providing for the exploitation of non-wood resources in the exploited area.

The Amazon Forest currently represents the largest tropical forest reserve in the world, a fact that mobilizes attention worldwide for the protection of this important ecosystem. The current levels of deforestation and degradation of the area are still worrying and there are several obstacles to an effective and increasing implementation of sustainable forest management in the region. However, if measures are taken with a view to make viable and stimulate appropriate forest management, there are perspectives of sustainable development for the wood sector, creating jobs, tax revenues, social and economic benefits, as well as the possibility of keeping the level of forestry exploitation compatible with the environmental restrictions of the region.

It is imperative and urgent, the implementation of a series of measures by governmental bodies and entities, specially collective actions, in view of the enormous magnitude of the challenge involved in establishing adequate policies for the Amazon region. To this end, I have put forward to the Plenary of the Federal Court of Accounts, the proposal of establishing recommendations, which have received unanimous support from my highly regarded Colleagues.

To the Brazilian Institute of Environment and Renewable Natural Resources (IBAMA), it was recommended the adoption of measures aiming at simplifying the process of approval of forest management plans; to study the possibility of establishing mechanisms to even the competition between the wood originated in forest management and that from legal deforestation; to standardize the technical evaluation criteria for the approval of forest management plans; and the capacitation of employees for the execution of standardized processes of evaluation and inspection of forest management plans.

The Federal Court of Accounts recommended to the Secretariats of Forestry and Biodiversity, of Amazon Coordination and of Sustainable Development, all part of the Ministry of Environment, and to the National Institute for Colonization and Agrarian Reform (*Incra*), that be produced the macro mapping of *Amazônia Legal*, aiming at making land titling issues more evident, as well as the potentials of its ecosystem, in order to guide forestry policies in the region.

It was also recommended to the same entities, in consultation with Ibama and Banco da Amazônia (*Basa - Amazon Bank*) the establishment of a sustainable forestry policy for the *Amazônia Legal* considering the aptitudes of each ecosystem, land regularization, forestry permits, tax incentives for sustainable exploitation, fomenting, forestry technical assistance, recovery of degraded areas and emphasis on modernizing inspections.

Specifically to *Incra*, it was recommended that when designing the Projects of Development and Settlement in the Amazon region, the forestry aptitude of the area should be taken into consideration, providing, whenever possible, the structural and financial conditions favorable to the sustainable exploitation of natural resources, and to promote land regularization, with priority given to conflict areas.

To the Secretariat of Production Development, belonging to the Ministry of Development, Industry and Trade, the Federal Court of Accounts recommended the study of strategies, so as to improve publicity on the potential of Brazilian tropical woods in the world market, with a view to increase the number of species legally traded abroad.

Finally, it was recommended to the Secretariat of Logistics and Information Technology, in the Ministry of Planning, Budget and Management, and also to Ibama, the study of ways to regulate the compulsory verification of raw material origins, specially regarding the legality of the extraction, whenever federal government entities and institutions are to purchase products with wood in its composition..

In summary, as declared on my Vote, expressed in the TC n° 017.231/2003-8, it is conspicuous to realize that forest management, as a way of exploitation, is an example of good practices of protection and promotion of development in *Amazônia Legal*, and can be effectively considered sustainable. On the other hand, the effective implementation of such system, as well as the continuity of existing undertakings and the widespread adoption of such practices, depends on urgent and integrated actions of different governmental bodies and institutions. To this effect, I believe the recommendations made by the Federal Court of Accounts can largely contribute.

Therefore, I believe that the Federal Court of Accounts, by means of this audit, of which I hereby give you an overview, has provided a relevant contribution towards the appropriate development of the Amazon region, a part of the Brazilian territory that at the same time is so rich and so needy.

"(...)there are perspectives of sustainable development for the wood sector, creating jobs, tax revenues, social and economic benefits, as well as the possibility of keeping the level of forestry exploitation compatible with the environmental restrictions of the region."

I could not finish this article without dedicating an honorable word to the effort developed by the team of the Secretariat for Control of Public Works and Assets (*Secob*), the technical unit of this Court, in charge of carrying out the audit. Not only in the intellectual sense, but mainly in the physical one, in its most muscular definition, considering that missions in the Amazon region and the magnitude of the tasks involved, almost always take herculean proportions and are surrounded by adversities.

Well, almost one century after Euclides da Cunha, auditors of this Court repeat that rough journey and face the forest in order to get to know it. It is registered in the reports of the process, that in order to achieve their objectives, the audit team had to take shelter on improvised camps in the forest and travel through long distances on dirt tracks in precarious conditions. These distances, always particularly significant in this region, also represented a serious limitation, and reports show that in the period between 5th and 21st November 2003, the team covered 2,285 km.

This is the struggle Euclides da Cunha spoke of, to reveal the forest, so that we can, based on the findings brought by our auditors, grow with the forest, adapting it, in order to dominate it. This is the contribution of the Federal Court of Accounts, towards the slow and gradual path leading to the discovery of this unknown region, and that is the key to success in the challenge bequeathed by Euclides da Cunha: “to progress or to perish”. ■

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