

A PETROBRÁS* OF THE FORESTS?

*(Petrobrás = Brazilian State Oil Company)

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Abstract

The urgent need to preserve the largest forest stocks in the world involves the search for a model targeted to the perpetuation of these forests through its rational use — or at least a portion of such use — bound to a program of employment and income generation, and also the cooperation in the solution of society’s key issues, such as popular housing. Continuous burnings across the Amazon forests not only destroy the ecosystems and the local biodiversity, but also destroy timber and non-timber resources that could be being fully exploited. Despite the fact that the occupancy of the Amazon region by means of a rational exploitation system represent a complex and difficult task, from our standpoint, it passes through the creation of a forestry civilization or a forestry community for which the existence of the forest itself is the means, the manner and the reason for the existence of the communities living either within or on the outskirts of their boundaries. The research on the ecology of tropical rainforests carried out over the last decades, provides some alternatives for the creation of utilization systems, in which the forest — even if already harvested — will regenerate locally, creating a permanent cycle of utilization and maintenance of the biodiversity of these forests. We propose a new paradigm, with the creation of a “Petrobrás of the Forests”, as a useful and sovereign instrument to help building this knowledge and defining policies for their application, enabling the resolution of key issues, such as income generation for these marginal communities, thus contributing for the solution of the popular housing deficits, and especially, for the maintenance of the remaining biodiversity of the Amazon Rainforest. *(Petrobrás = Brazilian State Oil Company)

Key words: Amazon Forest, Sustainable Forestry, Biodiversity, Forest Regeneration

Resumo

Considerarmos que a necessidade urgente de preservar o maior estoque de florestas do mundo, envolve a busca de um modelo que resulte na perpetuação dessas florestas através do seu uso racional, pelo menos numa porção desse estoque, uso esse vinculado num programa de geração de empregos, de renda e de cooperação na solução de questões fundamentais da sociedade, como a construção de habitações populares. As contínuas queimadas das florestas na Amazônia, não apenas destroem ecossistemas e a biodiversidade local, mas igualmente destroem os recursos madeireiros e não madeireiros, que poderiam estar sendo aproveitados. Embora a questão da ocupação da Amazônia e do seu uso racional seja difícil e complexa, ao nosso ver, ela passa pela criação de uma civilização da floresta ou uma comunidade da floresta, em que a existência da própria floresta seja o meio, o modo e a razão da vida das comunidades que vivem no seu interior ou na sua periferia. A pesquisa sobre a ecologia das florestas tropicais, realizada nas últimas décadas, sugere algumas alternativas para a criação de sistemas de aproveitamento, nos quais a floresta mesmo depois de cortada se regenere localmente, criando um ciclo de permanente utilização e de manutenção da biodiversidade dessas florestas. Propomos um novo paradigma, a criação de uma “Petrobrás das florestas”, como um instrumento útil e soberano, para ajudar na construção desse conhecimento e na definição de políticas para sua aplicação, permitindo atenuar questões fundamentais, como geração de renda para essas comunidades marginalizadas, contribuir na solução do déficit de habitações populares, e fundamentalmente na manutenção da biodiversidade remanescente da Floresta Amazônica.

Palavras-chave: Floresta Amazônica, Aproveitamento Sustentável, Biodiversidade, Regeneração Florestal

ARTICLE

Given the lack of space, we must point out that any suggestion made for the Amazon region should acknowledge that there is not a single Amazon, but rather several “Amazons”, resulting from the huge physiographical, social, cultural and economical diversity, so that any potential or possible suggestions are not equally applicable to this area as a whole.

The ideas we are trying to develop could be presented under several formats, but a good yarn to unwind this ball could be that. The continuous burnings of the Amazon forests not only destroy ecosystems and the biodiversity, but also destroy thousands of potential houses, schools, bridges, silos, chairs, doors, windows, stakes, poles, etc., which could become real if the timber they contained had been properly exploited before such burnings; and such a situation taking place on a land sheltering people deprived of any housing, assets or hope!!

One of the arguments sustaining the attention to the urgent need of preserving the largest stock of forests in the world, regardless how strange it may seem to some researchers, is the search for the maintenance and perpetuation of these forests by means of their rational exploitation, coupled with employment and income generation, and the cooperation in the solution of society’s key issues, such as popular house construction, making use of the timber harvested in the forest, like anywhere else in the world. This approach obviously considers the conservation of strips of different forestry situations existing in the different conservation units.

It is strange to think that the country runs a large enterprise for the exploitation of a non-renewable resource, oil, while the exploitation of a renewable — or even permanent — resource, the forest, remains untapped.

Regardless of the favorable (or unfavorable) arguments for the existence or the efficacy of Petrobrás, it is mandatory to recognize that nobody exploits oil by itself, indiscriminately perforating wells or burning deposits — there are rules and procedures to be followed specifically for such an activity.

So, why not creating an organization equivalent to a “Petrobrás of the Forests”, targeted to organize, define and execute — or outsource the execution of — the exploitation of the Amazon forests? An entity that would enable the transformation of burnings, the current process of selective logging or the alleged sustainable management, highly inefficient as far as sustainability is concerned, though less degrading than the traditional exploitation, into more suitable and cost-effective ecological procedures.

Why not coupling the resolution of the lower classes housing deficits with state-owned companies exploiting these forests, so as to produce proper wooden houses?

Why do we, in spite of the huge timber stocks and the variety of products offered by rainforest biodiversity, immersed in a scenario of social destitution and stagnation, are bound to merely witness the useless burnings that have already consumed semideciduous forests and are still consuming the *cerrados* (Brazilian savannas)?

The Amazon region occupancy is surely a rather difficult and doubtlessly complex issue, but, from our point of view, it should address, whenever possible, the creation of a forestry civilization that would not necessarily require the presence of all its inhabitants within its boundaries, but where life and the permanence of the forest itself should be the means, the manner and the reason for the existence and the improvement of the conditions of the communities living either inside or in its outskirts of its boundaries.

A civilization based not only in exporting a number of hardwood logs, but also on the creation of productive complexes, supported by technical and cultural developments and well targeted investments, in Brazilian currency, not American dollars, to be used by the internal and external markets.

It is still worth remembering that the country has thousands of sawmills and loggers, a great number of which under frenetic, disordered, illegal and predatory activities, whose supervision and repression has not been actually successful.

If part of these agents is an issue to be addressed as crime and corruption, there those who represent a “raw” workforce, just performing their jobs, aiming at generating income and ensuring the survival of their families, rather than depriving forests from their resources, owing to an atavist drive.

Those who live marginally, with no job registration, medical care, old-age pension, nor taxpayer registration could be instrumental for a major social, economical and ecological transformation, if they could accomplish their jobs in a organized and adequate manner and at pre-determined places, so as to generate effective economical gains, allowing for the local regeneration of the harvested forest.

It is not a critical or a core issue whether this work should be carried by the employees of a state-owned company, by outsourced employees of small timber cooperatives, or by small forestry companies; what really counts is that such exploitation be made under guaranteed labor relations, collecting taxes and performing their work as technically pre-determined, as the only way to ensure a strategic national planning for this matter, and the only way to ensure that the exploited forest regenerates into a new harvesting cycle in forthcoming decades.

As a consequence of timber exploitation, hundreds or even thousands of direct or indirect jobs would become available, owing to the development of new technologies; at the same time, these new technologies would enable the

development of other forestry products such as resins, tints, pharmaceutical products, etc, originated from the fantastic biodiversity prevailing in the Amazon region. The careful and rational use of such products, favored by the magic attraction the Amazon region exerts upon the national and international scenario, would add to the sustainability concept.

Following such a statement, the reader might doubt about the feasibility and the effectiveness of our suggestions, asking whether after being exploited, the forest could grow again, how long this growth would take and if the new forest would allow new harvesting cycles.

Let's clear out some points. Over the last 25 years, scientific research on regeneration of tropical rainforests have produced a broad range of information that demonstrates the forests have continuously and imperceptibly regenerated through a mechanism of overture and regenerating small gaps. When a tree or a group of trees die and fall, a gap is formed in the forest; such gap undergoes progressive cycles of occupancy and new occupancy, during which different types of trees grow and die; after a certain period of time, until trees that are typical of a mature forest grow again. Thus, not all of the trees of a forest are alike; some grow faster and have a shorter lifecycle; they live for a few years because of the light that filters through the open space; others, more adapted to darker areas, grow more slowly, but have a longer lifecycle; these trees gradually replace the former ones, until the gap is filled by those which have a longer lifecycle, the so-called hardwood trees.

Based on this mechanism, a native tropical rainforest grows through a continuous process of opening and closing gaps; the time period necessary for the regeneration of a gap depends mainly on the extension of such gap, and on the natural impacts the gap will be subject to, throughout its regeneration cycle. Likewise, when part of a forest is harvested, a gap is created and its regeneration will depend on the extension of the gap, the impacts upon this area during and after the harvesting season, and on the characteristics of the trees surrounding the gap, among several other factors.

There are several harvesting techniques regulating the post-harvesting season, which involve economical, social and political aspects; all such regulations are established with the purpose of defining exploitation procedures of the tropical rainforests. No doubt, this involves many difficulties, mainly because between the harvesting and regeneration cycle before a new harvest takes place, there is an intervening period of decades, necessary for the trees to recover; nevertheless, owing to social, political or economical pressures, not always is this period respected.

There are also ecological aspects involved, because not always does the harvested forest regain its original potential; thus, the potential future economical return might

not meet the expectations. Long-term losses regarding the fauna diversity may also occur, resulting in a reduction in the ecological sustainability of the forestry community.

Here, the basic question lies on how should this harvesting be conducted.

Nevertheless, the reality is that a low number of trees is harvested and a large number is burned; most trees that are currently harvested are hardwood trees (cherry trees, mahogany, etc.), which have higher commercial value and can be immediately processed; they can be commercialized *in natura*, that is, they don't require any special processing, but they represent a small portion of the tree species encountered in these areas.

With regard to this aspect, the several harvesting techniques employed nowadays fail to fully take advantage of the economic potential existing in the forest, as they seriously harm the remaining trees, because they don't spare the genetic diversity. Still worse is that in most cases, after being exploited, such forests end by being burned.

Within this context, an interesting possibility was tackled in the 80's; it consisted of an experiment accomplished in Palcazú** valley, in the Peruvian Amazon, where a system called strip clear-cut system was devised. It consisted of logging narrow strips of forest (10 x 50m), which resulted in small gaps; this enabled the forest to promote its own regeneration — much alike the way it happens in natural forest gaps. Regardless of the technical aspects involved, the main point is that this system is by far more productive, as clear-cutting allows harvesting hardwood together with a large amount of timber for construction and the manufacture of poles, fence stakes, coal, wood chips, etc. Although this project was discontinued in the early 90's, owing to terrorist actions, it yielded good results; they demonstrated that right along the second year after harvesting, the strips were fully covered by *capoeiras* (second growth vegetation) and that the density and diversity in these areas were quite significant in relation to the surrounding original forest.

As for the economic aspect, the feasibility of this system depends mainly on the number of strips that will be opened every year, and on the number of years such strips shall remain untouched until a new harvest takes place (30-40 years); this will ultimately depend on the extension of the area within the forest that can be kept as a biodiversity reserve.

Does anybody doubt that there are still enough forests in the Amazon region for this enterprise to be carried out?

Developed in partnership with a native Peruvian cooperative, the system already incorporated the idea of processing timber before trading it as a means of aggregating value to the products extracted.

Although this has not been implemented in Peru, it

would be possible to enrich the strips after the clear-cut, thus increasing their future lumbering potential, or enabling a partial exploitation of non-timber trees (rubber plant, assai, cacao, etc.) along the years such strips of land would have to remain untouched; this would be a possible alternative that might be tried in the Brazilian Amazon, with the purpose of optimizing the system.

Whether this idea is applicable to our Amazon region is something that is still to be verified, but it is worth pointing out that the idea of prospecting oil in ocean deep waters was not born in parallel with the establishment of Petrobrás.

On the other hand, the Tijuca Forest, or the riparian forest planted around 45 years ago, in Jaguari river valley in Cosmópolis, interior of São Paulo, which boasts *Jequitibás* and *Perobas* (kinds of Brazilian hardwoods) with more than 20 meters high, are a live testimony that forests rich in terms of diversity can grow again or can be planted, and also that within a time period of some decades can show a new potential to be exploited; moreover, in the intervals between the harvests, they could serve as fantastic biodiversity reserves.

Tired of witnessing the annual death of thousands of acres of forests, the inhuman conditions of men, women and children who barely survive in shacks or in the dampness, the helplessness and agony that unemployment represents to destitute people, we propose the creation an organism – ‘The Petrobrás of the Forest’ – not as a panacea, but as a useful, equitable, democratic and sovereign instrument to help minimizing such conditions.

In short, we propose a new paradigm to face these problems, from which a large variety of new ideas and formulations may arise.

The ideas herein outlined probably address several interests, while conflicting with several others; but this is a natural path for democratic debates; they were expressed not as a recipe, but rather as suggestions; it might be put on the table for discussion by a society so long deprived from a more effective participation in the definition of its directions and purposes; and this participation can only take place provided that society feels free to search for its own solutions.

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