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VALUATION OF SECONDARY FORESTS

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This year 2011, elected by the United Nations Organization (UNO) as the international year of forests, it is important to give attention to Secondary Forests. They are also known as "Capoeira". Arise from natural or man-made disturbance – farming activities and timber – in areas originally occupied by forest formations, whose abandonment leads to the formation of natural vegetation (natural succession), or by handling the vegetation (succession). The first and most common to happen is a low-cost strategy to restore native vegetation. However, the barns, which are many, because the whole municipality has, are very little known and valued – studied to give them value – by the communities.

However, in various stages of their development are able to provide important resources on traditional populations, to the economy of traditional products and provide environmental services. The first by providing resources necessary for their livelihood due to the important functions they perform for nutrition, alternative medicine, food and economic security. The economy of traditional products with fast-growing timber species and good training with high economic value, primarily for use in carpentry and joineries, charcoal works. The role of high importance in terms of environmental services provided – carbon sequestration, biomass accumulation, erosion control, conservation of nutrients, hydrological and maintenance benefits of biodiversity. We fix us in the economy of traditional products and environmental services.

Study conducted in the municipality of Bragança-PA, by researchers-Fabrizia de Oliveira ALVINO, Manuela Ferreira F. da SILVA and Breno Pinto RAYOL, published in *Acta Amazonica*, volume 35, number 4, 2005, in an area of 1.5 hectares, found the species and occurrence of 103 individuals in 1961 a hectare in a secondary forest 30 years, with the following percentages by usage of individuals group: 1) high wood, commercial value 27.4%; 2) low value commercial timber, 3.5%; 3) wood for rural construction, 47.3%; 4) wood for firewood, 3.9%; 5) fruit, 6.2%; 6) spooned material, 0.2%; 7) medicinal, 1.2%; 8) crafts 2.0%. Subtotal, 91.7% and without known use, 8.3%.

If the municipalities have secondary forests, also have some carpentry, joinery, or coal-pit. Are economic activities that utilize natural resources offered by secondary forest, and that if an employee raises labor, employment and income from local raw material and very low cost.

Secondary tropical forests may be more favorable to the sustainable management of forests due to its high total abundance and on useful species, greater proximity to human settlements and age structure more homogeneous. For generations it is likely that these forests become the main source of timber and non-timber resources.

The management of secondary forests with presents and costs reduced. There is virtually investments in nurseries, seedlings, plant protection, plantations and nor fertilizing. Works-if only to encourage more commercial species and the best individuals. Under these conditions, the economic return is high, and depending on the plant species worked can be fast. Can also be introduced native species of high commercial value.

The sustainable management of secondary forests has been postponed because of the abundance of timber in the original forest species – this still today at Amazon, no more in other biomes – causing Woods "less noble" smaller and produced in groves are neglected. But, the growing pressure by the maintenance of primary forests and targeting comes favoring a better use of secondary forests.

As for environmental services, one of the most important and that the secondary forest provides with property is of carbon sequestration. This is due to the growing process of photosynthesis which it elaborates in its growth of biomass.

lthough not a price limit, environmental services are very valuable for the well-being and the very survival of mankind, because of the environmental services depend on human activities such as agriculture (which requires fertile soil, pollination, rains, abundant water, etc.) and industry (that needs fuel, water, raw materials quality etc.). How much work would it cost to the farmer doing the pollination service (that bees are without charge), leading the pollen to all plants of his vegetable garden and Orchard? How much effort and time would be needed to transform any organic matter that exists in a forest in available nutrients to the plants, if there were the beings of nature (decomposers) that make it "free"? How many machines would be required to provide the service to produce oxygen and purify the air, the service that the plants and algae are daily? How much is all these services that nature does? Is the existence of life on the planet.

The continuity or maintenance of these services, essential to the survival of all species, depends directly, conservation and environmental preservation, as well as practices that minimize the impacts of human actions on the environment. Read, for the areas occupied by man, the maintenance and sustainable exploitation of secondary forests.

If all services rendered by nature were counted monetarily, the value of the invoice would be something around \$ 60 trillion, according to a study published in the journal Nature in 1997. In relation to the market for these services, the United Nations Conference on trade and development (UNCTAD), stipulated for 2010, something more than 600 billion dollars.

Costa Rica is the first country to establish the payment of a basic value per hectare preserved by farmer. In Brazil, National Secretary goes in Congress, Bill that provides for the establishment of the national Programme of Payment for Environmental Services. In Sao Paulo already operates the environmental services market. There is a company that identifies potential buyers of ecosystem services, and at the same time, finds rural producers which provide areas for forest plantations. It seeks to enter the market with the conservation effort.

International bodies, Governments of Nations, private companies, non-governmental organizations and academia have tackled the challenge of promoting sustainable development. The search for alternatives of development comes the concept of Payment for Environmental Services (PSA, in Portuguese), which comes improving public policies for environmental conservation in different parts of the world.

However, environmental services, although essential, were never included in the calculations. This is because never in human history, a level of environmental degradation so significant as to this day, i.e. services provided by nature were never noticed because have always been there.

The PSA corrects this omission and the conservation of forests while economic option. The basic idea is to compensate those who preserves (directly or indirectly) the environment, pay a certain amount of money to whoever keeps trees standing.

This way, the owner of a farm with livestock production could replace his economic activity by the provision of environmental services, just as much, retrieve and save the original ecosystem of the property. The Brazilian society always paid for clear – the numbers of rural credit subsidized years of 1960 and 1970 – well mirrors, in the recent past, this behavior. The time has come to pay to keep, or better, to receive environmental services.

In a democratic and just society, the rural producer, to ensure the conservation of natural resources should be rewarded by society that benefits from this. But what is this cost? For the PSA has sense, of course, the preservation of the environment has to be more profitable than its destruction. I.e. the gains earned by ecological service provider have to be more significant than what would be potentially obtained with other economic activities. This equation, however, is not so easy to solve.

It is worth noting, in this sense, a study done by Amazon Environmental Research Institute (IPAM, in Portuguese) and the Woods Hole Research Center, titled "Three Fundamental Strategies for the reduction of deforestation", suggesting that much (something close to 70%) of the deforestation of the Amazon could be contained at a cost of \$ 10 per ton of carbon. The calculation account, important to clarify, assumes a carbon market which gets credits with the reduction of deforestation, something that doesn't exist today.

The market for carbon credits is, currently, PSA project more widespread in the world. It was implemented by the Kyoto Protocol and has direct impacts on the mitigation of global warming, the greatest environmental problem facing society today. But there are several other projects and public policies informed by conservation PSA underway in Brazil and worldwide. See some of them:

PRO-ENVIRONMENTAL. Socioenvironmental Development Programme of Household Production created in 2000 by civil society and incorporated by the Ministry of the Environment (MMA, in Portuguese) in 2003, rewards with a third of the minimum wage farmers and ranchers that incorporate practices less impactful in its production, as, for example, the non-use of pesticides or deployment of agroforestry (SAF 's);

ECOLOGICAL ICMS. The Brazilian States pass, by law, 25% of the proceeds of the Tax on the Movement of Goods and Services – ICMS, in Portuguese. Some municipalities have created regulations that allow you to allocate 5% of this transfer in environmental preservation projects;

ENVIRONMENTAL COMPENSATION. It is a financial "compensation" to the unavoidable environmental impacts-in joint ventures, such as chemical tests at sea for the drilling of oil fields, paid to States which, in turn, invest the money in preservation projects;

REFORESTATION. Suited for timber enterprises, it is a mechanism for promoting the reforestation of areas, whether through compliance with forest management rules (only allowed to cut a portion of trees, and not all), or the payment of an income replacement rate, which will finance the reforestation in other areas;

TAX EXEMPTION for RPPN's. Mechanism that exempts Rural Territorial Tax Payment (ITR, in Portuguese), Owners of Private Natural Heritage Reserve (RPPN, in Portuguese).

In the deployment phase: there are other PSA public policies have not yet deployed, dependent on approval or regulations. This is the case, for example, income tax (IR, in Portuguese), which proposes that a percentage of the tax due by taxpayers can be invested in environmental projects. Also private companies have invested in projects of PSA.

What is really needed is the awareness of society about three basic aspects of this issue: 1) the need for environmental conservation; 2) payment for environmental services; 3) valuation and better use of secondary forests. This awareness must begin by municipalities, because it is there that are Secondary Forests or "Capoeiras".