

*Payment for Environmental Services and the Increase of Life and Environmental Quality: A Study of Brazilian Case*

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**Abstract**

The water crisis around the world, the increased deforestation and the need of finding new industrial solutions make clear the importance of nature. In this context, the State must stand up for sustainable actions and the Payment for environmental services is a good way to stimulate the citizens to act consciously. The Payment for environmental services (PES) aims for a socially desirable behavior by offering economic incentives in return for practices that can preserve, conserve, recover or improve the ecosystem services. The purpose of this research is to identify the main ideas and discuss environmental Law issues related to Payment for environmental services, mainly about how this public policy incorporate a social justice agenda. PES not just helps to preserve the environment and the ecosystem, but also contributes to the low-income people that usually lives in rural areas. In other words, the PES can help both the person that will receive the payment but also all the citizens around with a better life quality, and, mostly, the environment. To prove this point, a lot of Brazilian cases will be used in this paper, such as: Allowance Forest Program; Remnants Forest program; and Bio-Credit Program. In Brazil, chiefly in the poor regions, the PES has contributed a lot to increase the citizens life. And, as soon as the life gets better, more the community wants to preserve and recover the nature

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## **Introduction**

Most of developed nations are adopting, mostly since XX century, the capitalism production model, there is an increase of private exploitation of goods and the accumulation of wealth and the consequent depletion of nature. Thus, the predatory human behavior goes on to become harmful to the environment, especially in the West side of the Globe. The depredation of natural habitats, extinction of animal and plant species and the destruction of ecosystems, water waste and soil pollution are some examples of impacts that threaten the goods distribution such as water and food. The high level of human consumption puts us in collision with a sustainable development. Thereby, the natural resources of our planet show up scarce and finite. Under these circumstances, the need for sustainable consumption and industrial solutions to reduce pollution is more than necessary. In this context of finitude of natural resources and the increase of consumption, the State shall promote public policies to mitigate the harmful effects to the environment. The payment for environmental services (PES) shows up as an alternative to induce consumer awareness by the population.

The PSA goal is to modulate effects in society, to encourage preservation practices and preserve the environment. The initial purpose of this paper is to provide a national overview of payments for environmental services, identify some of the major PSAs adopted by federal government, pointing out the social and economic effects of these economic incentives. In addition to environmental benefits. The reasons that make PSA an ideal instrument for public policies will be highlighted as well.

## **Payment for Environmental Services in Brazil**

The economic incentives for environmental conservation has a great importance in the preservation and restoration of biomes and maintenance of natural resources, as well as being strategic in the fight against poverty in rural communities (small farmers, extractive communities, indigenous people, etc.). When they are adopted as public policy, they have the ability to complement or strengthen the instruments of “command and control”, that are traditionally used by the environmental law to materialize the protection, conservation and improvement of ecosystems.

Among the possibilities of economics incentive, the PES deserves special attention. PES has as defining contractual transaction by which the payer of environmental services – government or private source located on the condition that the user of environmental services in his own in a collective name – transfer funds or other form of remuneration to a provider of these services – individual or legal entity, public or private, family or community group, met the eligibility criteria, maintains, or recovers the environmental conditions ecosystems. Its highlighted the worldwide commercialization of four environmental services with greater intensity and frequency, namely: carbon, biodiversity, water and scenic beauty. Each system has a form of payment for environmental service performed, and, in the PES-carbon systems are generally paid per ton of carbon not emitted into the atmosphere or kidnapped. In PES-biodiversity systems, paid up by species or hectare of protected habitat. In PES-water systems, paid by the maintaining or increasing the quantity and quality of water. In PES-beauty scenic systems, you pay for tourism services and photo permissions.

The first PES experience is from Costa Rica, by the end of the 90s. It emerged because the country has faced the highest deforestation rates in the world. The issue became known in Brazil in the 90s as well. At that time, a law about the National Water Resources Policy has established the need to pay for water use and reinvestment in their own watershed. Later, in 2003, with the initiative of the federal government, began a social and environmental development program called "Proambiente", aiming at harmonizing the environmental conservation and rural development processes in the Amazon.

Currently are several PES initiatives in Brazil, such as the "Bolsa Floresta"(Green Grant) in the state of Amazonas, created in 2007, a pioneer in payment for environmental services to populations living in forested areas of the Amazon, committed to reduce deforestation and value the standing forest; the Conservative Water Project in the municipality of Extrema / MG (rivers that integrate the watershed that provide water to Cantareira System in São Paulo), which determines the reward for the environmental service of adoption of soil conservation practices, effective abatement purpose of erosion and sedimentation. The Ministry of the Environment identified in 2010, only in the Atlantic Forest, forty projects of water producers, 33 of carbon dioxide and five biodiversity market.

Another important federal PES is the Program to Support Environmental Conservation, known as "Green Grant". This policy provides quarterly grants of R\$ 300.00 for families of settlers, riparian, extractive, indigenous peoples, quilombolas and other traditional communities, living in extreme poverty (monthly per capita income of up to R\$ 70.00). To receive the funds, grantees must maintain on a sustainable basis (including economically) the vegetation cover of your property, explore the environment in order to ensure the sustainability of renewable environmental resources and ecological processes, biodiversity and other ecological attributes. In 2010 a Law Institute has researched about PES and has published the book named: "State System of PES: diagnosis, lessons learned and challenges for future legislation" to assess the experiences and the effectiveness of PES legislation in six Brazilian states (SP, MG, AM, AC, ES and PR). The research showed that developed PES programs were able to induce a change of behavior in the interviewed beneficiaries, resulting in the sustainable use of natural resources and the conservation of natural capital. Thus, for example, in Acre state, the State Program for Productive Units Certification modified the traditional system of agriculture adopted by the beneficiaries (family farmers), the Doing abandon the use of fire and replacing it with the use of agroforestry and other techniques such as "sustainable brushed".

In the same direction in the state of Minas Gerais, as a result of joining the program, beneficiaries showed an increase in environmental awareness and the abandonment of wood burning to produce charcoal as a source of additional income. In the state of Espírito Santo, in interviews with the beneficiaries, they made a point of stressing that the gains were visible because the water body that cut their property stopped dry and water quality has being improved. In addition to the environmental gain, the research found many positive effects of a social nature relating to the development of PES programs in each one of the states. Moreover, because of the priority given to small family farmers and traditional communities, it is clear that these programs have a strong component of social and economic inclusion, without compromising its environmental objectives.

Outstandingly, in the case of Amazonas State, satisfaction with the program is not necessarily linked to the value of monetary incentives received by beneficiaries (regarded by them as too low), but rather with non-monetary incentives. They are receiving a lot besides money with the “Bolsa Floresta”, such as radio communicators, ambulances, boats, generators and wells. The same situation was observed in the state of Acre, where the beneficiaries assigned a much higher value non-monetary incentives they received, such as the construction of dams, seedlings of fruit trees, small animals and materials to build chicken coop. In programs with a strong social core, the diffusion of knowledge of new sustainable techniques was verified by increasing food and economic security of beneficiaries.

From the experience of “Proambiente” and other private initiatives, several draft laws on PES have been proposed within the Chamber of Deputies, the Senate and at the state level, besides being addressed in different policies, laws and government programs. At the same time, it was through local initiatives, led by states, municipalities, basin committees and the private sector that the first practical experience gained strength. Currently, surveys point out that there are over 28 initiatives, including laws and decrees identified at state and federal levels, as well as federal bills still under discussion related to PES and REDD (Reducing Emissions from Deforestation and Forest Degradation) allies, being majority in the Southeast, South and North Brazil.

The establishment of a National Plan for Payment for Environmental Services, currently in the House of Representatives that the PL 792/2007 defines concepts, objectives, guidelines and actions of the National Policy on Payment for Environmental Services (PNPSA) establishes the National Register of payment for Environmental Services (CNPSA), the Federal program for payment for Environmental Services (PFPSA) and the Federal Fund payment for Environmental Services (FFPSA) and provides for the payment of contracts for environmental services. The several types for payment for environmental services are listed in Article 8 of the bill: direct payment provision, community, social improvements previously agreed, compensation linked to emissions reduction certificate from deforestation and degradation, as well as others that should be defined by an specific regulation.

## **Conclusion**

Payment for environmental services has great importance in the preservation and conservation of biomes, but may have a higher scope if the State improves the public policy, both in rural and urban areas. PES current programs have shown, in addition to environmental benefits, positive effects of socio-economic developments for the communities that are the target of this kind of public policy, highlighting the expansion of sustainable techniques, which enhance food security. Besides the direct benefits of PES (social, economic and environmental) that instrument has the ability to democratize access to sustainable technologies.

## References

- Brito, Brenda; Mascheitto, Fernanda; Osório, Guarany; Monzoni, Mário. (2012). *Marco regulatório sobre pagamento por serviços ambientais*. Organização de Priscilla Santos. Belém, PA: IMAZON.
- Lavratti, Paula. (2014). *Relatório Final – Sistemas Estaduais de Pagamento por serviços ambientais. Diagnóstico, lições aprendidas e desafios para a futura legislação*. São Paulo: IDPV.
- Padilha, Norma Sueli. (2011). *Fundamentos Constitucionais do Direito Ambiental*. São Paulo: Campus Elsevier Jurídico.
- Seehuen, Susan E; Prem, Ingrid. (2011). *Por que pagamentos por serviços ambientais?* Brasília: Biodiversidade.
- Teixeira, Carlos G. (2011). *Pagamentos por serviços ambientais de proteção às nascentes como forma de sustentabilidade e preservação ambiental*. São Paulo: IDPV.
- WWF Brasil. (2014). *Diretrizes para a Política Nacional de Pagamentos por Serviços Ambientais*. Brasil: WWF.

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