

INTEGRATING CULTURE OF THE AMAZON RAINFOREST INDIGENOUS TRADITIONAL KNOWLEDGE: REGULATION CHALLENGES AND GOOD GOVERNANCE PRACTICES

INTEGRAÇÃO CULTURAL DO CONHECIMENTO TRADICIONAL INDÍGENA DA AMAZÔNIA: DESAFIOS REGULATÓRIOS E EXEMPLOS DE PRÁTICAS DE GOVERNANÇA

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Abstract: The research aims to analyze some challenges and good governance practices in using Amazon rainforest indigenous traditional knowledge. After studying the subject, one of the issues is the sparse protective regulation, which does not allow this knowledge to generate progress and economic benefits for any Brazilian indigenous ethnic. The research intends to achieve the objective using descriptive and deductive methods. The outcomes enable us to understand that the regulation, which was designed to assist the economic development of the Amazon region, hinders the implementation of governance tools. One of the suggestions to support the indigenous traditional knowledge and allow economic benefits for the Brazilian indigenous is to apply the Ethnodevelopment to the public policies.

Keywords: Amazon Rainforest; Ethnodevelopment; Sustainability; Traditional Knowledge.

Resumo: A pesquisa tem como objetivo analisar alguns desafios e boas práticas de governança para o uso dos conhecimentos tradicionais indígenas da floresta amazônica. Depois de estudar o assunto, um dos problemas é a esparsa regulamentação protetora, que não permite que esse conhecimento gere progresso e benefícios econômicos para nenhuma etnia indígena brasileira. A pesquisa pretende atingir o objetivo com a metodologia descritiva e o método

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dedutivo. Os resultados nos permitem entender que a regulamentação, que foi desenhada para auxiliar o desenvolvimento econômico da região amazônica, dificulta a implementação de ferramentas de governança. Uma das sugestões para apoiar o conhecimento tradicional indígena e permitir benefícios econômicos para os indígenas brasileiros é aplicar o Etnodesenvolvimento às políticas públicas.

Palavras-chaves: Conhecimento Tradicional; Etnodesenvolvimento; Floresta Amazônica; Sustentabilidade.

INTRODUCTION

Traditional knowledge (TK) comprises knowledge developed within indigenous societies, independent of and before the advent of modern scientific knowledge.² Examples of TK such as Ayurveda from India and Acupuncture from China are well known.

While it is true that concern for the Traditional Knowledge has become a social value incorporated into the collective imagery of several countries, nevertheless, the view that environmental considerations are largely peripheral is widely diffused. They are even seen as factors obstructing economic development or progress that must be refuted.

This background is made worse by the low levels of institutionalization of the various preservationist and conservationist policies and the general instability of environmental governance in Brazil. In the framework, the research questions are:

- a) How are the Legal Amazon and its biodiversity-rich areas balancing economic development and cultural heritage?
- b) How can progress ultimately compromise with the emerging potential for profitable use of their natural resources (bioprospecting)?

The paper's aim addresses the challenges arising from sparse regulations on the protection of Traditional Knowledge (TK) and their implementation in Brazil. The scope and limitation of the proposed research are:

- a) to explore the need from Brazilian and other Amazon biodiversity-rich areas to balance economic development; and
- b) to diagnose their cultural heritage, with the emerging potential for profitable use of their natural resources (bioprospecting), whose progress could ultimately compromise the existing a new

² Ellen R, Harris H. Concepts of indigenous environmental knowledge in scientific and development studies literature: A critical assessment. In: East-West Environmental Linkages Network Workshop 3; Canterbury, 8-10 May 1996.

progress achievement that calls etnodevelopment in the Souza Lima and Barroso-Hoffmann conception³.

For a statement of the problem, the qualitative diagnosis comes across a sparse regulation on the protection of Traditional Knowledge (TK) and the lack of uniform implementation in Brazil. The descriptive methodology and the deductive method will be applied in the literary review of the bibliography on the subject so that the research objectives are satisfactorily achieved.

1 TRADITIONAL KNOWLEDGE AS A SOCIAL VALUE IN AMAZON RAINFOREST

Amazon Rainforest encompasses nine countries: Brazil, Bolivia, Peru, Ecuador, Colombia, Venezuela, Guyana, French Guiana, and Suriname, and covers a region of 7 million square kilometers in South America.

The latest version of the integration idea is the government's stance whereby the use of Amazon's resources.⁴ Most of the population from Legal Amazon are indigenous descendants. They need to preserve their heritage culture and highlight international cooperation to accelerate the sustainable development of the developing countries⁵ by integrating cultural challenges and good governance practices and offering an ongoing modification of the environmental and patent legislation in the future. See below the application of Indigenous Knowledge on the list below:

- a) tradicional medicines;
- b) forest conservation;
- c) animal and crops productions;
- d) integration post management;
- e) environment management;
- f) fisheries management;
- g) education;
- h) combating desertification;

3 SOUZA LIMA, Antonio Carlos de, e BARROSO-HOFFMANN, Maria (orgs.). **Etnodesenvolvimento e políticas públicas; Estado e povos indígenas; e Além da tutela: bases para uma nova política indigenista**. Rio de Janeiro: Contra Capa Livraria. 2002. Disponível em: <http://laced.etc.br/acervo/livros/etnodesenvolvimento-e-polit/> Acesso em 12 jan. 2019.

4 BALÉE, W. The culture of Amazonian forests. In: **Advances in Economic Botany**, v. 7, p. 1-21, 1989, p. 18-19.

5 KHOZA, Manvester Ackson. Harnessing Indigenous crops: adapting to climate change with traditional knowledge. Publish on 30 April 2019. Disponível em: <https://www.slowfood.com/harnessing-indigenous-crops-adapting-to-climate-change-with-traditional-knowledge/>. Acesso em 12 jan. 2019.

- i) plant and genetic resource management;
- j) combating desertification, among others.

With deforestation and few governance practices, the Amazon indigenous people of Brazil can lose their livelihood, and the rainforest will not be as abundant as it is now.⁶ Most indigenous herbs, nuts, fruits, and animal varieties from the Amazon Rainforest require the rainforest's climate and are naturally from there, without having to be harvested. Look at the herbs' diversity in the Amazona Rainforest (Photo 1).

Photo 1

Indigenous herbs, nuts, fruits, and animal varieties from Amazon Rainforest include: Breadfruit, nuts, bananas, cacao, guava, mango, berries, kola nut, snails, fish, turtle eggs, plantains, coffee, and many more.



Source: WHRC - The Woods Hole Research Center. Brazil environmental Issues. Available at <https://hist204.wordpress.com/2014/04/22/foods-of-the-amazon/> It was accessed on Jan 15th, 2019.

Medicines, drugs, and herbal supplements from the Amazon Rainforest are still largely “underdeveloped,”⁷ Only a few may be known to the local people, for harvesting is indispensable for Brazil's economic growth. Still, that affirmation is voiced against a background notorious for the illegal

6 SHARMA I.P., KANTA C., DWIVEDI T., Rani R. Indigenous Agricultural Practices: A Supreme Key to Maintaining Biodiversity. In: Goel R., Soni R., Suyal D. (eds) Microbiological Advancements for Higher Altitude Agro-Ecosystems & Sustainability. In: Rhizosphere Biology. Springer, Singapore. 2019 DOI: https://doi.org/10.1007/978-981-15-1902-4_6

7 BECKER, B. K. New territorialities in the Amazon: challenge to public policies. In: *Bulletin of the Museu Paraense Emílio Goeldi: Human Sciences*, v. 5, n. 1, p. 17-23, 2010, p. 20.

exploitation of the land, significant social and economic inequality, violence in the rural areas, and the glaring absence of the installations and services of the state.

2 FROM ECONOMIC DEVELOPMENT TO ETCNODEVELOPMENT

Economic development, considered a category of ontological study, is based on the book *The Theory of Economic Development*, first published in 1911, belonging to the economist and author of the work, Joseph Schumpeter.⁸ After declaring that his method and objective were “frankly theoretical,”⁹ the author affirms his conviction that “our science (economic science), more than the others, cannot dispense with this refined common sense that we call ‘theory’ and that gives us instruments to analyze the facts and practical problems” (inclusion of term by the author).¹⁰

Another economist, Nali J. Souza, explains that “... the current discourse on economic liberation, privatization, trade opening, etc. represents the conclusion of long debates carried out by the literature on inward or open growth”.¹¹ He suggests that trade opening is fundamental to “economic development,” noting, however, that “no economy in the history of capitalist development has been completely open to outside.”¹² So he concludes with a proposal for a new orthodoxy,

which comprises an external development strategy, through the liberalization of imports (Reductions in quantitative restrictions and tariffs), a unified and floating real exchange rate, privatization, and the reduction of the State in the economy, should therefore not be taken to the letter, but considered with a certain degree of application.¹³

(...)

... when confronting theory with reality.¹⁴

8 SCHUMPETER, J. A. **Teoria do desenvolvimento econômico**: Uma investigação sobre lucros, capital, crédito, juros e o ciclo econômico. São Paulo: Abril Cultural (Coleção: Os Economistas), 1982.

9 SCHUMPETER, Op. cit., p.22.

10 Tradução livre: “nossa ciência (*ciência econômica*), mais do que as outras, não pode dispensar esse senso comum refinado que chamamos ‘teoria’ e que nos dá instrumentos para analisar os fatos e os problemas práticos” (inclusão de termo pela autora) Idbem, p. 35.

11 SOUZA, N. J. de. **Desenvolvimento econômico**. São Paulo: Atlas. 1993, p. 235.

12 SOUZA, Op. cit., p. 235.

13 Tradução livre: que compreende uma estratégia de desenvolvimento voltado para o exterior, através da liberalização das importações (Reduções de restrições quantitativas e de tarifas), taxa de câmbio real unificada e flutuante, privatização e a redução do Estado na economia, não deve, portanto, ser tomado ao pé da letra, mas considerado com determinado grau de aplicação. Idbem, p. 236.

14 ao se efetuar o confronto da teoria com a realidade. Idbem, p. 239.

According to Cançado et al., It is possible to add to the concept of developing the idea of multidimensionality¹⁵, making the vision come close to that of good living, “in which the ‘citizen’ keeps his existence in the space where he lives, he is part of that environment and tries to be in tune with him.”¹⁶

Citizens are defined according to the theoretical precepts of Jürgen Habermas through the practice of deliberative citizenship. “Two complementary theoretical approaches can be extracted from the thinking system of Jürgen Habermas, based on several works: the descriptive theory, which critically analyzes the evolution of societies, mainly the traditional to the contemporary, both under the individual prism and the wolf of the sphere collective; and prescriptive theory, in which it outlines proceduralist policy as a possible form of government sufficient to guarantee the legitimacy of state institutions, formed from the discursive ethics in communication between subjects.

Therefore, Habermasian aspects are articulated by the nexus of intersubjectivity to promote the solution to the problem of this research. Considering, this time, the need for intersubjective relations for the construction of understanding between the subjects, it is observed that intersubjectivity is also essential for the formation of the subject’s (self) awareness, based on his human condition of plurality, based on for the structural lack of self.¹⁷

From the same views, one sees that the same communicational noises or, in the words of Jürgen Habermas, the pathologies of modern society that prevent intersubjectivity also hinder the awareness of the subjects and the promotion of their development, both in the individual and in the collective sphere.¹⁸

Therefore, the economic development is perceived by the author as

15 The authors conceptualize multidimensionality and studying it as part of the research object in the book CANÇADO, A. C.; SAUSEN, J.O.; VILLELA, L. E. *Gestão social versus gestão estratégica*. In: Fernando Guilherme Tenório. (Org.). *Gestão social e gestão estratégica: experiências em desenvolvimento territorial*. Rio de Janeiro: FGV, 2013, v. 2, p. 22.

16 CANÇADO, A. C.; SAUSEN, J.O.; VILLELA, L. E. *Gestão social versus gestão estratégica*. In: Fernando Guilherme Tenório. (Org.). *Gestão social e gestão estratégica: experiências em desenvolvimento territorial*. Rio de Janeiro: FGV, 2013, v. 2, p. 23.

17 NUNES, Claudia Ribeiro Pereira; GPET Sustentabilidade IESUR. *Jurisprudência do Tribunal regional Federal da 1º Região: Estudo de caso sobre a impossibilidade de extração sustentável dos diamantes das Reservas Indígenas*. In: *Revista AREL FAAR - Amazon's Research and Environmental Law*. Published on 29/11/2013. Vol. 1 (3), pp. 62-77.

18 HABERMAS, J. *Mudança estrutural da esfera pública: investigações sobre uma categoria da sociedade burguesa*. São Paulo: Unesp, 2014 (clipping of several texts and free translation of the author's book).

a set of factors that elevate indexes established in orthodox or heterodox ideological approaches, considered as growth scales experienced in a given institutional historical context of a territory delimited by research, being able to stick to the local, regional, national or international.

3 POSSIBILITY OF ETHNODEVELOPMENT TO PURSUE PROGRESS TOWARDS SUSTAINABILITY

Sustainability as an epistemological category began to be built, according to Brüseke (1994) from the research of Dennis L. Meadows and a group of researchers, in 1972, when they published a study entitled Limits of growth.¹⁹

The concept of sustainable development was further developed by Ignacy Sachs in 1976, formulating the basic principles that would guide this new development idea.²⁰

Sachs had reported that it was in the Stockholm Conference (1972) corridors that put the environment on the world's agenda that the then UN under-secretary general Maurice Strong died last month, just before the Paris Conference - created the word ecodesenvolvimento.²¹

Two years after Stockholm, in 1974, at the Colloquium organized by the UN in Cocoyoc, Mexico, a fight against underdevelopment began, considering the result of a meeting of UNCTAD (United Nations Conferences on Trade-Development) and UNEP (United Nations Environment Program).²²

Developing countries must rely on their strengths, said the meeting's final statement.²³ Studies on eco-development paved the way for the concept of sustainable development.²⁴ Six aspects necessary for development are presented and systematized by the author:

a) the satisfaction of basic needs;

19 BRÜSEKE, Franz Josef. Risco e contingência. In: *Revista Brasileira de Ciências Sociais*. Vol. 22 (63) Fev. 2007. pp. 69-80. p. 72.

20 SACHS, Ignacy. *A Terceira Margem: Em Busca do Ecodesenvolvimento*. Rio de Janeiro: Ed. Companhia das Letras, 1976.

21 SACHS, Op. Cit., 1976, 16-17.

22 BRÜSEKE, Franz Josef. Risco e contingência. In: *Revista Brasileira de Ciências Sociais*. Vol. 22 (63) Fev. 2007. pp. 69-80. p. 72.

23 BRÜSEKE, F. J. A crítica da técnica moderna. In: *Estudos Sociedade e Agricultura*, vol. 10, abril 1998, p. 5-55, p. 40.

24 SACHS, Ignacy. *A Terceira Margem: Em Busca do Ecodesenvolvimento*. Rio de Janeiro: Ed. Companhia das Letras, 1976, p. 45-46.

- b) solidarity with future generations;
- c) the participation of the population involved;
- d) the preservation of natural resources and the environment in general;
- e) the elaboration of a social system guaranteeing employment, social security, and respect for other cultures, and
- f) education programs.²⁵

At the United Nations Conference on Environment and Development, held in 1992 in Rio de Janeiro, the concept of sustainable development was disseminated by understanding the work. As Roberto Pereira Guimarães and Yuna Fontoura highlight, the Conference witnessed the most extensive and most participatory discussion on the topic, transforming it into a new paradigm for global development.²⁶ On the other hand, according to the author, although it is almost consensual that development should consider sustainability, it has not been defined which capital should be sustained: natural capital or built by man. In 1994, the Brundtland Report, which resulted from the work of the World Commission on Environment and Development (UNCED) entitled *Our Common Future*, defines sustainable development as the “development that meets present needs, without compromising the ability of future generations to meet their own needs.”²⁷ Between setbacks and advances, it was consolidated that the economic, social, and ecological problems are complex²⁸ and must be understood globally.²⁹

The concept presupposes equal economic, social and ecological opportunities between current and future generations. It remains to be seen whether the current consumption of natural capital can be replaced by other forms of money to meet the needs of future generations.³⁰

²⁵ SACHS, Op. Cit., 1976, p. 36-49.

²⁶ GUIMARÃES, R. P.; FONTOURA, Y. Desenvolvimento sustentável na Rio+20: discursos, avanços, retrocessos e novas perspectivas. In: *Cadernos EBAPE.BR/FGV*, v. 10, nº 3, artigo 3, Rio de Janeiro, Set. 2012. p. 508-532. p. 517-518.

²⁷ UNITED NATION. *Report of the World Commission on Environment and Development: Our Common Future* (Relatório Brundtland). 1994. Disponível: <https://sustainabledevelopment.un.org/content/documents/5987our-common-future.pdf>. Acesso 20 jan. 2019, p. 48-54.

²⁸ MORIN, E., LE MOIGNE, J-L, *A inteligência da Complexidade*. São Paulo: Petrópolis, 2000.

²⁹ SHARMA I.P., KANTA C., DWIVEDI T., Rani R. Indigenous Agricultural Practices: A Supreme Key to Maintaining Biodiversity. In: Goel R., Soni R., Suyal D. (eds) *Microbiological Advancements for Higher Altitude Agro-Ecosystems & Sustainability*. In: *Rhizosphere Biology*. Springer, Singapore. 2019 DOI: https://doi.org/10.1007/978-981-15-1902-4_6

³⁰ GUIMARÃES, R. P.; FONTOURA, Y. Desenvolvimento sustentável na Rio+20: discursos, avanços, retrocessos e novas perspectivas. In: *Cadernos EBAPE.BR/FGV*, v. 10, nº 3, artigo 3, Rio de Janeiro, Set. 2012. p.

Therefore, “sustainability” as a theoretical category interdependent on socioeconomic-legal interaction will allow the study of rationality and humanization in the elaboration and application of the standard, without losing sight of the dilemmas of everyday life, primarily through social, economic, political, and legal contexts (by author perceived).³¹

It is possible to assume that the realization of socio-economic rights depends not solely on legality but also on social awareness, education, information, and indicators that maximize each country’s development.³² Thus, the transversality of the theoretical categories is presented - economic growth and sustainability - and the consequent interdependence and socioeconomic-legal interaction in the Brazilian Constitution of 1988.³³

FINAL CONSIDERATIONS

Due to the sparse regulation on the protection of Traditional Knowledge (TK), this issue addresses making suitable recommendations to the Brazilian government and needs contextualizing the subject of integrating cultural; and international principles of good governance practices.³⁴

By *etnodesenvolvimento*, the Indigenous heritage, presents the new developments of the Traditional Knowledge (Convention of Biological Diversity) in Brazil³⁵ and with international cooperation to accelerate the sustainable development of the developing countries, and can make suggestions to improve the current regulatory system in the light of Integrating Cultural Challenges and the internationally recognized principles of Good Governance Practices.³⁶

Due to the complexity of the issues and the sociological approach, the paper is mandatory for this research to look at the impact of the law in action

508-532. P. 520.

31 NUNES, Claudia Ribeiro Pereira; SILVA Camila Barreto Pinto. Discussão entre desenvolvimento econômico e a sustentabilidade no Brasil: projeto fábrica da JAC Motors. In: *Revista Interdisciplinar de Direito*, Faculdade de direito de Valença, Vol.16 (1), 2018, pp. 91-103.

32 HERNÁNDEZ, J. M.; GARCÍA, H. O.; RAMÍREZ, M. L.; VELÁZQUEZ, L. Política y Agroecología: complejidad y diálogos interdisciplinarios hacia la sustentabilidad regional. In: Jaime Morales Hernández (Coord.). *La agroecología en la construcción de alternativas hacia la sustentabilidad rural*. 2009. p. 163- 194.

33 BRASIL. *Constituição da República Federativa do Brasil 1988*. Disponível em: http://www.planalto.gov.br/ccivil_03/constituicao/constituicaocompilado.htm.

34 DÍAZ PERALTA. P. *Legal System of Medicinal Plants: Medicines, food supplements, and other border products*. Madrid: Reus S/A., 2016, p 29-30.

35 DÍAZ PERALTA. P. Op. Cit., 2016, p. 44.

36 BERKES, F.; Colding, J.; Folke, C. Rediscovery of traditional ecological knowledge as adaptative management. In: *Ecological Applications*, v. 10, n. 5, p. 1251-1262, 2000.

and the role played by public policy and ectnodevelopment.³⁷

The significance of the study and the impact are:

- a) to give a better understanding of global law and governance issues in the closely interconnected leading globalized sectors; and
- b) to help create the values of biotechnology law, sustainable development, or global patents for innovative technology concerning the bioprospecting challenges to undertake further study in Brazil.

In the data analysis, the problem of this approach is in providing a single and conclusive definition of the nature and scope of the study. This problem arises out of the sheer volume of studies that have been undertaken within this tradition. It should be appreciated, however, that such research is far more time-consuming than the traditional methodology.

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³⁷ BERKES, F. **Sacred ecology: traditional ecological knowledge and resource management**. Philadelphia: Taylor & Francis; _____. (Ed.). **Common property resources: ecology and community-based sustainable development**. London: Belhaven Press, 1999.

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