

# COMMONS RESOURCES IN BRAZIL: BIOPIRACY, BIOPROSPECTION, BIOTECHNOLOGY

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## 1 – Globalization, Information and Access to Common resources

The globalization permitted to overcome cultural barriers and inserted in many places of the world the same products and ways of life. However it enhanced differences and stimulated the traditional communities' organization in the defense of their rights and interests.

To Giddens the globalization is a phenomenon that affects all the relationship areas among countries, and not only in the economic and financial areas.

This process is on the increase in the economic area, stimulating the exploitation of some countries and it occurs through appropriation of the knowledge of these countries, which have big knowledge potential related to social, cultural and environmental areas. Hence it isn't only the capital that became globalized, but also the culture, communication, technology, etc. However the author forgets to mention the globalization of poverty, pollution, environmental destruction, and crimes. For instance: black market of guns and biodiversity, the armament technology transnationalization, organized crime, etc.

This global development model helps the concentration of the wealth in the hands of the minority located in the developed countries, generating/creating a social apartheid, stimulating the racism and the ethical conflicts, undermining the women rights and encouraging destructive confrontation among nations. (Chossudovsky, 1999, p.27).

For the study of globalization Giddens suggests three currents. The first would be the skeptic, in which they believe the notion of globalization is an ideal spread out to the free commerce defenders that wish to end with the welfare system guaranteed by the State. Another position would be the traditionalist, that defends that phenomenon of globalization isn't different from what has been occurring for a long time. It is just an enlargement of this process that began in the 60's and the 70's. Ricupero also adopts

this position. And the author adopts an intermediary position, facing the globalization as a phenomenon that affects the political, technological, cultural and economical processes. Besides it built a double way process, that all participant countries influence each other, independently if they are developed countries or not, this phenomenon has been modeled as an inverse colonization, because a non occidental country could influence in the development of another occidental country.

Ricupero (2001, p.29) exposes that the goals of the globalization process can be of two orders. The first reduces the globalization aspects to the economic order, reducing amplitude of this process, associated to the first current proposed by Giddens. The second is associated to the continuity of the precedent historic phenomenon, indicating that the globalization as a continuity of the previous moments, as the second current exposed by Giddens.

To Ricupero (2001, p.29/39):

*The most common version of globalization, that seems exclusive in the everyday living, is considered as a purely economic transformation. Under this angle, it would be almost a synonymous of the intensification of the economic interchange and of the interdependency as result of the world economic liberalization in the last decades; through the elimination or reduction of the goods barriers and circulation, the most visible manifestations and apparent changes, the ones that have greater impact in peoples' daily life, and it is still natural to see them making part, in practical terms, the essential of what is occurring. Also, the excessive concentration in the economic dimension of the globalization leads to a kind of reductionism by which leaves aside the scene, other factors of political and cultural order that draw all the wealth and complexity of the concept.*

The emphasis of the globalization process in the economic area holds back the interruption of the exploitation of the economically poor countries. On contraire, it heightens when we verify that these very countries that possess a great social, cultural and environmental knowledge potential could be easily transformed in investments and incite a fever to take for their own this knowledge, as we can see with the crescent interest of the pharmacy industries in Brazil. (Prensa, 09 October 2002).

However the globalization process can strengthen the intolerance between two cultures, as it can strengthen the bonds that connect each other, forming a third culture (Featherstone, 1999, p.17). So that the future of these social relations is still open depending on the decisions to be taken by the governments and by the society.

Multi cultures is a current reality and must be accepted and preserved by the world society, for the recognition of the right to be different followed by their practices, mark the many identities reinforcing the impossibility of a global homogenization (Viola, 1997, p. 190).

With the globalization the interchange of information and products stepped up and in some aspects it is harmful to the environment and to the traditional people that depend on their environment to survive.

## 2- A little bit about: biopiracy, bioprospection and biotechnology

The knowledge associated to the biodiversity is closely connected to the traditional knowledge of all people that compose the Brazilian culture. This knowledge helps them to find alternatives to use the common biodiversity resources, and also helps in disease treatments, health care, etc.

But in Brazil, we live a never ending withdrawal of national biodiversity products. Some for simple contemplation like animals and plants smuggled for one's individual delight. While hundreds of thousands specimen die in the attempt to send them overseas.

As if it was not enough, Brazil is also a target of a new threat known as biopiracy. It is the illegal consignment of national fauna and flora products and byproducts to other countries. With the purpose of permitting this natural knowledge be appropriate by international corporations.

Quoting Hathaway (2002, p. 95) biopiracy is:

*"It is the collection of biological material for industrial exploitation of their genetic or molecular components, in disagreement with the current national law. The biopiracy can be illegal when a law prohibits it, or simply immoral when there isn't a formal law to control it, (...). The biopiracy, thus, is robbery – or, more formally, the undue appropriation – of the biological and genetic materials and/or communal knowledge associated to them in disagreement with the social, environmental and cultural laws, and without the previous consent of the all interested parts."*

The term biopiracy was first used in 1993 by the non-governmental organization RAFI (nowadays ETC-Group) with the goal of alerting about the fact that biological resources and indigenous knowledge were being collected and patented by

multinationals enterprises and scientific institutions, without the authorization of the Brazilian Government. They intended also to denounce the abuses that communities involved were suffering. Those communities used during centuries the resources and created the knowledge but they were not participating of the profits obtained with the commercialization of the pharmaceutical and cosmetic products that were developed from their original ideas. That destroys the possibility of a sustainable development of those communities by the degradation of their environment and by the vulgarization of their traditional knowledge.

Or as to the Brazilian Institute of International Commerce Law for Technology Information and Development – CIITED, the biopiracy consists in the act of transfer genetic resources (animal or vegetal) and/or traditional knowledge associated to the biodiversity, without the authorization of the State from where the resource was extracted or without the authorization of the traditional community that developed and maintained such knowledge through the ages. It contradicts the very purpose of the convention of the biological diversity. The CIITED also includes the not-sharing fair and equitable – among States, corporations and traditional communities – of the resources from commercial exploitation or not from the resources or knowledge transferred, as a complementation of the biopiracy (MESQUITA, 2003, p.18).

The Convention of Biological Diversity – CBD, establishes in its article 15 – access to the genetic resources that:

*“§ 5.º The access to the genetic resources should be submitted to the prior consent from the hiring part owner of these resources, or by another way determined for the owner part.*

*§ 6.º Each hiring part should seek to conceive and to accomplish scientific researches based in the genetic resources provided from others hiring parts with their full participation and as far as the possible, in the territory from the hiring parts.”*

So, it is obviously against the CBD the withdrawal of genetic material from the provider countries or from the countries with much diversity.

The reverse is the sense of the bioprospection, because in this case the provider country of the genetic material and the interested country in the access to these resources are full conscious of the material collection. The Brazilian legal instrument determines that bioprospection is the “exploratory activity that aims identify the components of the genetic patrimony and the information about the traditional

knowledge associated with the commercial potential use". To Hathaway (2002, p. 95) the bioprospection consists in the collection of biological material destined to the industrial exploitation of their genetic components in conformity with the national legislation, becoming this way a valid alternative inside the national territory and economically interesting to the country.

The interest to access this genetic material is closely associated to biotechnology. To understand the meaning shows up that biotechnology can be defined as: "technical and scientific knowledge or a set of practice methods that allows the utilization of living beings, as active part of the industrial process of production of services and goods". (VARELLA, BORGES, 1998, p.244/245 and CARVALHO, 1994, p.72). For this study is necessary the interpolation of many subjects, because it requires knowledge of many research areas.

For the CBD article 2<sup>nd</sup> biotechnology means "any technological application that uses biological systems, living organisms, or their derived, to manufacture or modify products or processes to specific utilizations.

On the other hand Dr. Maria Artemíase Arraes Hermasn (1999, s/n) says in her text "Biotechnology and Intellectual Property" the relation between indigenous and traditional people with the biodiversity, that is the focus of the illegal commerce. In her text she establishes: "biotechnology as the uses of the knowledge and experiments and experiences relative to biology for the production of goods and services".

Hence it is of great importance the participation of the traditional and indigenous people in the formation of biotechnology resources that come from their common use resources. The knowledge accumulated of these communities can help the sustainable development with no interference. It means the traffic of biological material that inhibits the traditional and indigenous people to insert themselves in the national and international markets as research material providers, as well the receipt of benefits under their National State protection. But for this to occur there is the need to impel the illegal commerce of the biodiversity and traditional knowledge.

### 3 – The illegal commerce of the Brazilian genetic patrimony, biodiversity and social diversity

The sustainable development is a viable alternative to the traditional people that survive using the common use resources of the biodiversity, from the knowledge acquired of their uses, customs and traditions. It permits them to get in the biotechnological market as stockists so having rights to receive benefits, in conformity with the CBD.

The sustainable development can be understood as “what provides the necessities of the present without undertake the possibility of the future generations to provide their own necessities.” It can also be understood as the attempt “to improve human life quality inside the limits of the ecosystems support capacity”. (MILARÉ, 2004, p.149). Hence, the way of rational and conscious utilization of the common resources in the biological order with biotechnology applicability.

The sustainable development of the traditional communities will culminate with the ethnological development, meaning that the race, autochthon, tribal or not, meaning the traditional communities, have the control about their own lands, their biological resources, their social organization and their culture, and they are free to negotiate with the State the establishment relation according to their interests (AZANHA, 2002, p.31) to achieve sustainability without compromising the environment.

To Azanha (2002, p.32) the term, ethnological development applied to the Brazilian indigenous society, involves the following indicators:

- a) *population increase, with security food fully attained;*
- b) *increase of the scholarship level, in the “language” or in the Portuguese of the youngsters;*
- c) *search for the goods of “white” fully satisfied by their own resources created internally in a not predatory way (sustainable), with relative independence of the outer determinations of the market in the pick up of financial resources; and*
- d) *fully domain about the relation with the State and the government agencies, enough for the indigenous society to define these relations, imposing the way how these relations must be established.”*

However these goals are untouchable if there is not an engagement to fight biopiracy, and if there is not a reduction on the pressure for the use of common resources derived from the biodiversity that harms the traditional communities.

In opposition of the tendency to illegality stimulated by biopiracy and by the lack of State control in this area, we can find some partnerships that permit the access to the products developed by traditional communities by the globalized market, as well their relationship with the common resources from the biological diversity.

An example of the possibilities of the sustainable ethnological development of the traditional populations comes from partnerships made with national or international enterprises. This partnership aims beyond the biological preservation and sustainable development of these communities, the awareness of the world population about a better utilization of the common resources and a harmonic living between the nations.

The cosmetics British company Bodyshop, was the pioneer in seeking to associate the traditional knowledge to the use in cosmetics products. The company began in Brighton in 1976 and only from the 80's on it started the program with the traditional communities, with the goal to find products in the cosmetic line that could enter in the market.

The company developed the Community Trade, a buy program of the accessories. It is a knowledge relation with the natural products that can be applied to cosmetic industry, exactly as it was defined by biotechnology.

The natural ingredients are given by the communities considered in disadvantage all over the world. That can improve the relationship of these communities with the others, including them in the world society, and in consequence an improvement of life quality of these populations, without, though, that this relationship causes a lost of local culture. The Bodyshop has native products from over 40 communities distributed in more than 20 countries.

Furthermore, the enterprise uses the nation images, because the names of the communities are indicated in the tags when the cosmetics contain products from the communities' knowledge.

Beside this initiative there is the participation of the Brazilian enterprise Natura Cosméticos S.A., that have the Ekos line of body oils, soaps and perfumes with natural

products created from Brazilian native biodiversity. The Ekos<sup>1</sup> name comes from the tupi-guarani language and it means life, this line of products sought to join the scientific knowledge with the popular wisdom.

The active of this line of products came from cultivated areas and extractives reserves registered in the Brazilian Institute of the Environmental and Natural Renewable Resources (IBAMA). For example: the andiroba came from the Extractive Reserve of Medium Juruá, in the Amazon, the castanha-do-pará is original from the Extractive Reserve Iratupuru, in the Amapá, and Reca<sup>2</sup> Project, in Rondonia is responsible for the cupuaçu catering.

To Azanha (2002, p.35) there is still the alternative:

*“(...) to conduct the indigenous products to ultra-specialized market, as the production of sophisticated handicraft products to collections or to ecotourists. Note that the most important in these experiments is that all set out the historic and cultural vocation specific of the indigenous society and of the inside control with the time for the production to the market, enabling them the domain about the production limits and, by that the outside “necessities”.*

Unfortunately the illegal commerce is growing, hindering that initiatives as these above cited if they become more frequent, making possible the sustainable development of the traditional populations.

The report of the CPI of the biopiracy, created in the House of Representatives that functioned in 2002/2003, concluded that only the traffic of animals is responsible for 2 billion Reais approximately, the wooden commercialization is responsible for other 4 billion Reais every year.

Brazil has a daily impairment of US\$ 16 million, in reason of the biopiracy, it is benefited by the failure of fiscalization and lack of control of the Brazilian native species by the public competent agencies. (MERCONI, ROCHA, 2003, p.92).

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<sup>1</sup> Information in the text “Viva a sua natureza”, available in: <<http://www.disquenatura.vilabol.uol.com.br/naturaekos.htm>> Access in: 13 out. 2002.

<sup>2</sup> Reca means reforestation (a degraded area is reforested); economic (is the production of what they plant and use to survive); joined (a lot of species of plants are cultivated together); and, accumulated (a lot of trees planted in a small area, like the woods). Information in the site: <<http://www.clab.it/gc/reca/>> Access: 20 out. 2002.



In Brazil it is estimated that 38 million of native animals are sent out the country in secrecy a year. In the world these commerce covers the value of 10 up to 20 billion dollars a year, just in Brazil this flux is about 1 billion and 500 million dollars.

And the movement of the pharmaceutical and biotechnology market is among 400 up to 700 billion dollars/year (HATHAWAY, 2002, p.96). And just with the current value in the world market for the identified medicinal plants obtained with the indications given by the native communities is around of 43 million dollars (SHIVA, 2001, P.103). Collaborating with this market are some products obtained from the national biodiversity that are benefiting particulars instead of the traditional community, in the words of Hathaway (2002, p.99/100):

*(...) is the case of Jaborandi that contains the pilocarpina molecule, fundamental medicine to combat the glaucoma, made by Merck. There is still no way to synthesize the pilocarpina, hence, it is necessary a lot of quantities of the natural raw material to produce the respective medicine that is distributed all over the world. There is the case of the quebra-pedra, or erva-pombinha those contain useful substances for the treatment of B hepatitis, etc. It is found in a lot of Brazilian regions, known and used by the Amazon and Indian populations.*

The smugglers look for areas and that are in the hands of the indigenous and traditional people. This traffic harms any possibility that these communities develop sustainable alternatives to the use of the natural resources, because it is going out illegally of the country, and accumulating an environmental passive to the resident people.

The illegal commerce of genetic patrimony isn't confined in the fauna and flora, but reaches also the very human material. An example of this was evidenced in 1997 when there was the instauration of the External Commission of the House of Representatives, to investigate denunciations about the commercialization of immortalized cells of Karitana and Surí tribes in Rondônia, by the North-American enterprise Coriel Cell.

*"The doctor, anthropologist and biologist Hilton Pereira da Silva, that participated of the collection (...) explained to the commission the economic price of this kind of biopiracy. Quoting the Canadian foundation RAFI, the Dr. Pereira da Silva said that "the industry of the human tissues movements values of the order of 48 million dollar a year, and the market for the cultivation of this products has a medium growing of 13.5% a year, it means an approximately total of 1 billion*

*dollar in 2002. The industry of the human tissues forecasts a growing, in only one generation, of about 80 billion dollar a year.” (HATHAWAY, 2002, p.99).*

There is the imminent necessity that the Public Power / Government implements effective measures to combat the biopiracy, putting into effect the protection of the genetic patrimony in all forms of plants, animals, microorganisms and the human itself.

#### 4 – Brazilian legal aspects

The Brazilian legislation is not enough to protect the common biodiversity resources. It presents as legal bases: The Biological Diversity Convention of 1992, ratified by the National Congress in 1994, but it isn't a legal instrument to give effectiveness. There were a lot of attempts, but the promulgation of the provisory measure 2052/2000, changed to 2186, in 2001, the discuss process was suspended and these traditional knowledge and their common resources, mainly the biodiversity in Brazil are without an efficient protection.

The CBD brings the principles to act in the access area to the traditional knowledge associated with the biological diversity and to the genetic material originated from this diversity. But nothing establishes in terms of control and punishment to the illegal commerce of the biodiversity derived products.

The decree n.º 3.945, of 28/09/2001, created the Genetic Resource Management Council, with all members from the federal government, without the traditional people participation, that are nearest of these threatened resources with the irregular activities development in the national territory. This decree conceived to the Genetic Resource Management Council the possibility to establish: technical rules, pertinent to the genetic patrimony management; criteria for the remittance and access authorizations; guidelines for the contract elaboration of the genetic patrimony use and distribution of benefits; criteria for the data-base creation for the information register on the traditional knowledge. Still competes to the Council following and granting, in joint with other federal agencies, or by means of accord with other institutions, the activities of access and remittance of sample of component of the genetic patrimony and access the associated traditional knowledge; amongst other activities.

In face of this competence the Genetic Resource Management Council elaborated the resolutions n.º 5 and 6 on June 26<sup>th</sup> of 2003, establishing guidelines for the attainment of the previous consent for the access of the traditional knowledge associate to the genetic patrimony, for ends of scientific research without potential or perspective of commercial use and the concurrence to the genetic patrimony with potential or perspective to commercial use. These resolutions established the formality that must be fulfilled by the interests in research or exploit economically the traditional knowledge associated to the genetic patrimony, but it doesn't have the character either the legitimacy to establish legal penalties in irregular cases.

There is also in the Brazilian legal decree, the statement n.º 5.450, of July 7<sup>th</sup> of 2005, it disciplines the punishment applicable to the conducts and hurtful activities to the genetic patrimony or to the traditional knowledge associated.

It establishes the next punishment possibilities to the administrative contravention: warning; fine; apprehension of the components examples of genetic patrimony and the instruments utilized in its collection or in its processing or of the products obtained with traditional knowledge information; apprehension of the derived example of the genetic patrimony components or traditional knowledge associated; sales suspension of derived products of genetic patrimony components or traditional knowledge associated and its apprehension; activities embargo; total or partial interdiction of the activities of the enterprise; register, patent, license or authorization suspension; register, patent, license or authorization cancellation; lost or restriction of incentive and fiscal benefit by the government; lost or suspension of the participation in the financial lines in the official credit establishment; intervention; and prohibition to contract to the public administration for a period of up to five years.

This statement forecasts in its articles 15 to 19 the administrative punishment related with the access to the genetic patrimony, to research or bioprospection without the correct authorization, irregular consignment of genetic patrimony, irregular benefit sharing of the economic exploitation of the national genetic patrimony, and give false information or omit them from the public agency when requested for, or in audit and auditorship process.

The statement establishes in its articles 20 to 24 the administrative punishment in face of the irregularity against the traditional people. It describes the next administrative punishments: in the art. 20 the access the traditional knowledge associated to scientific research without the authorization from the competent agency; in the art. 21 the access the traditional knowledge associated to bioprospection or technological development without authorization from the competent agency; in the art. 22 publicize, transmit or retransmit data or information that integrate or constitute the traditional knowledge, without authorization of the competent agency; in the art. 23 the concern is in omit the origin of the traditional knowledge in publication, register, inventory, utilization, exploitation, transmission or any divulgation form in that this knowledge can be direct or indirectly mention; and, in the art. 24 the focus is in omit to the public power essential information about access activities to the traditional knowledge associated, by audit or auditorship occasion or access or consignment authorization application. The occurrence of any of these activities will culminate in a penalty punishment with the value arbitrated conform the case by the standard established in the statement.

However, these legal instruments are not enough to protect the biodiversity and the traditional knowledge associated to it, in Brazilian territory.

## 5 – Conclusion

The globalization could stimulate the diversity or contribute to extinguish it. To avoid a tragic end the globalization should be thought from these two possibilities. In the Brazilian case the biodiversity upkeep is the ideal, however, the economic, politic and international pressure grow up on the biological resources and on the traditional people.

The national legislation has already advanced in the fauna and flora protection, exemplifying criminal behavior involving the destruction, the inutilization, the pollution of the natural resources etc. However, the biopiracy continues without any kind of criminalization, which can happen with the illegal blood<sup>3</sup> transport of the traditional and

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<sup>3</sup> (...) the Iceland (for the same characteristics of the genetic homogeneity and geographical isolation of its population) has already negotiated the genes of all its citizens for scientific researches. Some examples of this kind of piracy are registered, certainly among other unknown cases we can find the Yale University case (USA), it has 703 blood samples of the Kayapó indigenous people, in which the

indigenous Brazilian people, or as well with plant saps, animal furs and bird feathers. All this feeds a billionaire market and, in consequence, it harms the biodiversity, the traditional people development, the resources necessary to recuperate the hurtful environment and the affected communities with the illegal traffic of information and genetic patrimony.

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University is looking for the characteristics related with to HTLV. The National Cancer Institute (NCI), in this cited country, affirms to possess blood samples proceeding from “adults of 13 indigenous tribes isolated of Central and South Americas”, and specially proceeding from Kayapó and Krahô indigenous people in Brazil. HATHAWAY, D. A Biopirataria no Brasil. In: BENSUSAN, N. (org.). **Seria melhor mandar ladrilhar? Biodiversidade, como, para que e por quê.** Brasília: Editora Universidade de Brasília: Instituto Socioambiental, 2002. p.98/99

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