GLOBAL BIODIVERSITY REGIME AS AN APPROACH TO STUDY LOCAL LEVEL EXPERIENCES. THE MAMIRAUÁ CASE.

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Introduction

My initial puzzle was the realization that there exist many local level experiences around the world that are “in tune” with the spirit of the Convention on Biological Diversity but cannot be considered responses of the national states to the Convention. In this sense, they are not taken into consideration as dimensions of the international biodiversity regime. Such experiences aim at protecting biological diversity whilst promoting local sustainable development, being the results of international, transnational and transgovernmental relations among different actors like international and national NGOs, bilateral and multilateral cooperation agencies, governmental organs, researchers/scientists, grassroots organizations and local populations.

The root of my question lies in the fact that, as far as biodiversity protection is concerned, the global-local dimension has not been considered adequately. The focus of the analysis has been either on interstate processes or on the local initiatives themselves, like studies around the establishment and implementation of the Convention on Biological Diversity (CBD) and the national responses to it, or others that focus experiences/projects implemented in the regional or local levels by conservation biologists, environmental NGOs, grassroots organizations and cooperation agencies. Studies on the creation and implementation of the Convention (Alencar 1995, Elliot 1998, Albagli 1998, McConnel 1997, Pimbert 1997, Prestre 2002) highlight some achievements and the difficulties raising from the attempts to reach agreements among the governments on several issues. On the other hand, reports of international NGOs, and bilateral and multilateral cooperation agencies as well as articles in Journals like Conservation Biology, World Development, The Geographical Journal and so on point to the existence of biodiversity conservation and sustainable development projects implemented around the world at the local level. Many of them can be considered relatively successful like Mamirauá, the case at stake and also examples as Campfire (Zimbabwe), Reserva Comunal Tamshiyacu-Tahuayo/RCTT (Peru), South West Bengal Participatory Forest Management (India), ICDPs (Integrated Conservation and Development Projects) in Brazil as one involving land reform settlements and protected area in Pontal do Paranapanema, or another in Parque Nacional do Jaú, and many others.

My aim is to present a concept of global biodiversity regime trying to integrate the global and local dimensions. The concept was built based on two assumptions. Firstly, from an empirical standpoint, biological diversity is an issue area that encompasses a multiplicity of actors and interactions.

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*This paper was based on my unpublished PhD dissertation and research material.

1 As a part of my research, I sent questionnaire to environmental specialists in Brazil and other countries. One of the questions was to have an idea of how many experiences around the world that aim at conciliating biodiversity conservation and development at the local level were known by them. In average, the specialists know several experiences (from 49 to 21) around the world: 17.2% of them know many (more than 50), 34.5% acknowledge the existence of serveral (from 49 e 21), and 41.4% of the respondents know some (from 20 to 11) experiences. Thus, the majority knows at least 21 iniatives in Brazil and around the world.
with a strong role of nonstate actors (sovereignty-free, according to Rosenau 1990) and high rate of transnational and transgovernmental relations. Moreover, such issue area is intrinsically global-local. Its dimensions go from the global to the local levels. On one hand, the principles and objectives concerning biodiversity protection are globally established and accepted. A large part of the resources for biodiversity protection comes from bilateral and multilateral cooperation agencies and international NGOs. Also, the scientific knowledge on which practice is largely based has been developed transnationally among networks of specialists that closely resembles the concept of epistemic communities (Haas 1992). On the other hand, biological diversity happens at the local level, where a complex web of relations are established between ecosystems and socio-economic, cultural and political systems. Thus, one of the most effective ways to protect biodiversity is preserving and conserving it locally. *In situ* strategies have been considered the most appropriate from the biological as well as the political point of view (Albagli, 1998: p. 80).

Secondly, from a theoretical point of view, the concept of international regime relates to interstate relations and to the national responses to a set of principles, norms, rules and decision-making procedures agreed among states. Even though the definition put forward by Krasner (1983) leaves open the possibility of considering other actors and their expectations, the way such concept has been used in the literature mainly concerns state decisions and actions, what can lead the analysts to leave out dimensions, relations and levels of analysis, that are important to the identification of patterns of biodiversity protection around the world. Thus, there is a need to expand the concept of international biodiversity regime to include non-state actors, transgovernmental and transnational relations and sub-state levels of social organization and action, particularly the local one.

Princen (1994: pp. 135-136) argues, referring to CITES, but it can be applied also to CBD, that this biodiversity regime, its formation, its norm creation and its involvement of non-state actors, is more complex than international regimes conceived as products of interstate or intergovernmental relations. Moreover, prescriptions for improving the institution whose assumptions are state-centric and legalistic tend to miss much of the politics of the regime, especially the transnational, non-state politics and so they tend to skew the prescriptions toward tightening loopholes and strengthening enforcement. The author suggests that to properly understand and prescribe international remedies for species loss and environmental degradation, it is necessary to conceptualize a regime in terms of multiple actors and multiple activities, as traditional diplomacy is only part of the picture.

The expression “global regime” lacks elaboration. It has been used in the specialized literature (Porter and Brown 1991, Princen 1994, Albagli 1998). Also, there has been the recognition of biodiversity as a global issue (Porter and Brown 1991, Elliot 1998). However, I have not found any attempt to conceptualize global biodiversity regime (GBR). In this way, I will build a concept whose starting point is the definition of international regime – IR by Krasner (1982) and some other views on IR (E. Haas 1993, Puchala and Hopkins 1993, Young 1993) but try to go beyond it.

My argument is developed in six parts. First, I present the definition of international regime (IR) and some of its limitations concerning biodiversity local initiatives that implement the Convention on Biological Diversity objectives but are not considered dimensions of the IR. In the second part, I describe the process related to the evolution of the global biodiversity regime (GBR). Thirdly, I present the concept of GBR. In the fourth part, I develop GBR as an approach focusing on the “guiding elements”, actors’s interactions and dynamics concerning biodiversity conservation. So I present the Mamirauá case and in the last part I try to relate it to the GBR approach.

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2 In practice, however, Albagli (1998: p.80) affirms that more resources have been invested in *ex situ* collections, particularly in agricultural biodiversity.
I- Beyond the concept of international regime (IR)

Krasner (1982)’s definition of IR as set of principles, norms, rules and decision-making procedures around which actor expectations converge in a given issue area has been widely accepted. Such definition does not imply that the only actors to be considered are the states. Puchala and Hopkins affirm that regimes serve to channel political action within a system and give it meaning. Also, they constrain and regularize the behavior of participants, affect which issues among protagonists move on and off agendas, determine which activities are legitimized or concerned, and influence whether, when, and how conflicts are resolved. The authors state that a regime is a phenomenon related to attitudes and that the behavior follows from the adherence to principles, norms and rules which sometimes are expressed in legal instruments. In their view, regimes are subjective, that is firstly they exist as understandings, expectations or convictions among the participants about behaviors that are considered legitimate, adequate or moral. Moreover, each regime has a set of elites, who are the practical actors (Puchala e Hopkins, 1993: pp. 62-63). The author recognize the existence of informal regimes which are created and maintained through the convergence or consensus in objectives among participants. (Puchala and Hopkins 1993, p.65). Thus, the authors call the attention to the subjective aspect of regimes. They induce principles and norms from evidence of participants’ perceptions and find rules written in charters, treaties and codes. They do not induce principles and norms from behavior. In this sense, regularity in behavior is evidence that some kinds of principles, norms or rules must exist (pp. 63-64).

The authors’ concept of regime is important in several senses. For the purpose of this work, I emphasize the subjective aspects of regimes, which refers to their existence as understandings, expectations or convictions among participants, and to the possibility to create and maintain them through the convergence or consensus in objectives. Another relevant aspect is the recognition of elites as practical actors. Also, their view that wherever we can observe patterned behavior a regime must exist to account for it. Such perspective opens the possibility of looking at the local level, finding regularity there and trying to relate it to a regime. However, the authors themselves do not focus the local level, neither the role of networks and transnational relations. Thus, my attempt is to relate regularities happening at the local level with global processes, emphasizing the role of a particular kind of elite network that are the epistemic communities.

According to Young (1993: p. 93), regimes are social institutions that govern the actions of those interested in specifiable activities, or accepted sets of activities. So they are recognized by patterns of behavior or practice around which the expectations converge. In the author’s perspective international regimes are those pertaining to activities of interest to the members of the international system. The adjective “international” can lead the analyst to consider only the states as actors, for it will depend on whom she/he includes as member of the international system. Therefore, my argument for the concept of global biodiversity regime carries out the claim to expand the notion of international system to a global one, so that, expanding Young’s view, a global regime would pertain to activities of interest of the members of the global system. So, it would relate to activities of the actors of the globalized system, reflecting a convergence of expectations and objectives. Hence a global regime could be recognized by patterned behavior in transnational, transgovernmental and international relations with multidimensional and multilevel implications. That is illustrated by Mamirauá case, which is a local level project in Brazil that implements the Convention for Biological Diversity, but cannot be considered a response from the Brazilian state to the Convention. Mamirauá resulted from transnational and international relations, multiple actors and interactions.
II- Process

Another relevant aspect is the process of regime construction. There, we find out how common principles, norms, objectives came about as well as the evolvement of the cognitive elements. The relevant actors can be identified, as well as their interactions, conflicts, convergences and the configurantion of networks. Also, and most importantly, we can understand why we should broaden the scope beyond the Convention for Biological Diversity in order to construct an approach based on the concept of global biodiversity regime.

The World Conservation Strategy can be considered the starting point of the global biodiversity regime. It was put forward by IUCN, UNEP, WWF, FAO and UNESCO in 1980 and was the first step for the diversity of genes, species and ecosystems to be considered in a comprehensive manner at the global level. Moreover, the Strategy represented the recognition by important organizations of the impossibility of conserving nature without taking into consideration peoples’ needs. “(...) People whose very survival is precarious and whose prospects of even temporary prosperity are bleak cannot be expected to respond sympathetically to calls to subordinate their acute short term needs to the possibility of long term returns. Conservation must therefore be combined with measures to meet short term economic needs (...)” (IUCN, UNEP, WWF, 1980: Introduction, item 11). In this sense, the World Conservation Strategy was the first relevant transnational attempt to conciliate conservation and development. Its relevance comes from the involvement of key organizations and from the fact that it was launched simultaneously in 30 countries.

The expression “biodiversity” was made public in the National Forum for BioDiversity, held in Washington D.C. in September 1986. It was sponsored by the Academy of Sciences and by the Smithsonian Institution (Wilson 1988). According to Wilson (1988: pp. v-vi) the Forum had a large participation and noticeable impact in the public. More than 60 leading biologists, economists, agricultural experts, philosophers, representatives of assistance and lending agencies, and other professionals participated. It coincided with the increasing interest among scientists and portions of the public in issues concerning the biological diversity and problems of international conservation. In the author’s view, this attention was evident by 1980 and grew steadily, so that it reached its momentum in the period of the Forum. The explanation for that can be found in the accumulation of enough data about deforestation, species extinction and tropical biology to bring global problems into sharper focus and warrant broader public exposure, as well as in the growing awareness of the close linkage between biodiversity and economic development.

One of the results of the Forum was the publication of the book *Biodiversity*, edited by Wilson (1988), which is a landmark. Also, the Society for Conservation Biology was created in 1986. It was not a coincidence but reflected the mobilization of scientists and researchers interested in conservation and that there was accumulated knowledge to allow for the formation of a disciplinary field apart from biology. Mostly important, it marked the increasing involvement of scientists in conservation policies and the rise of public concern with global environmental issues, like species extinctions and tropical deforestation, particularly the Amazon forest.

During the 1980s, issues concerning the links between conservation and development started being discussed among conservationists transnationally. It happened in academic institutions, IUCN commissions, international meetings. Thus, protected areas and local population participation, the need to incorporate human needs in conservation approaches, and so on began to enter in the agenda of NGOs and international organizations. That period was important for the development of the ideas and shaping of the principles, norms, rules and the cognitive elements of the global biodiversity regime. We should highlight the “paradigmatic shift” in the conservation thought to include development and human needs. This change can be defined as the attempt to integrate the
socio-economic and cultural dimension into conservation issues, the search for the understanding of
the role of human populations in ecosystems and the awareness about the need to link conservation
and development. By the end of the 1980s, approaches like CBC (Community Based Conservation),
ICDP (Integrated Conservation and Development Projects), CWM (Community-Based Wildlife
Management) CBNRM (Community-Based Natural Resources Management) started to develop,
reflecting the realization by NGOs, IOs, scientists and other actors that it was necessary to work
with human populations to enable conservationist initiatives and policies.

In this sense, the Convention for Biological Diversity can be considered a result of a process that
has its roots in the early days of the environmental movement, when the motivation was nature
preservation/conservation. However, it gathered other forces linked to the new environmentalism³
and reflected a synthesis of many different views. Swanson (1997) considered it an agreement that
represents the global convergence of different actors and movements. Moreover, it reflected the
shift in the conservation paradigm when recognizes the problem of poverty and the challenge of
development for all and when it states its objectives as biodiversity conservation, its sustainable
uses and the equitable distribution of benefits coming from genetic resources. Hence, the
Convention represented an attempt to conciliate preservation, conservation and development as well
as a compromise among governments, NGOs and grassroots organizations.

The Convention on Biological Diversity (CBD)

Alencar (1995), McConnell (1997) and Elliot (1998) describe and analyze the process of elaboration
and negotiation of the CBD. The initial proposed was put by the USA during the 14th Meeting of
UNEP Governing Council in 1987. The idea was to combine the existing international
conservationist conventions (CITES, Bonn, Ramsar, World Heritage and others) in one document
and to create new rules to fill the gaps. Thus, proposal was to have an umbrella convention only to
rationalize the activities in the area (McConnell, 1997: pp. 47-48).

In Alencar’s view (1995: pp. 121-122, 123) the Convention was initially conceived as a global
conservationist document, directed to the protection of biological resources, so that it was named
Convention on the Conservation of Biological Diversity. Its dynamics was established within the
legal conservationist world of IUCN. From 1991, it became a global agreement about sustainable
development, as a result of its inclusion in the Rio Conference agenda. Its negotiation process was
converted into a debate forum for sensitive North/South issues, becoming highly politicized as the
North wanted biodiversity to be considered a common heritage while the South wanted to guarantee
its sovereignty over the resources, access to biotechnology and equal share of the benefits of the use
of genetic resources.

According to Elliot (1998: pp. 73-76) the concern about the loss of biodiversity developed from the
species and habitat conservation agenda of the 1960s and 1970s. During the Convention negotiation
process, tensions and differences were driven mostly by questions of ownership of and intellectual
property rights of genetic material and biotechnology. The issue behind such tensions is that
biodiversity is not evenly distributed on earth surface. Of the 12 richest biological diversity
countries, 11 are in the developing world (Brazil, China, Colombia, Congo, Ecuador, India,
Indonesia, Madagascar, Malaysia, Mexico and Peru). On the other hand, the “biotechnology rich”
countries are in the North. Thus, the conflicts were not those of conservation strategies but those
related to the ownership of genetic resources, to intellectual property rights and to the distribution of
benefits from genetic exploitation. The cleavage was then between Southern gene-rich and Northern
(bio)tech-rich countries.

³ The concept of new environmentalism was developed by McCormick (1992)
In the end, according to Albagli (1998: p. 177), despite the efforts of USA in one side and Malaysia in the other, the countries reached a compromise. However, the trade off was a document that does not establish obligations but principles to be considered by the parts. Alencar (1995: pp. 123-124 and 133) argues that the Southern countries benefited from the fact that their participation was really decisive. Thus, the idea of biodiversity as a common concern was included, as well as that it was not a common heritage but belonged to the national states where it occurred. The author considers that the Convention reflects a balance of the the majority of the parts’concerns, representing an advance in the North/South negotiations. The decision was for ruled access to natural resources, conditioned by the principle of equity in the distribution of the benefits coming from the use of genetic material.

According to Alencar (1995: p. 134), two factors can be highlighted to characterize the CBD as a framework convention: 1) it establishes global principles, goals and commitments, creating a frame for the global biodiversity policies, but it does not present lists of endangered species or appendices of protected areas, thus, in the majority of the cases, the decisions are left to be taken within the national states and regional and local administrations; 2) its function is to initiate processes to establish new international acts (e.g. protocols), dealing with more specific issues.

The CBD can be considered one of the most important pillars of the global biodiversity regime. In Pimbert’s perspective (1997: p. 415), for the first time, an international treaty adopts a wide approach about the conservation and the sustainable use of the Earth’s biological diversity. However, little progress was reached in desaccelerating the biodiversity loss around the world. If the Convention was evaluated in terms of its effectiveness, or of the responses of the states as elaborated national legislation and implemented public policies, we would find very few results. The negotiations have been slow and difficult everytime the COP meets in search for agreements on its implementation (Pimbert, 1997: p. 415). In general, the COP has not acted as a coordinator of national-local actions for biodiversity protection, and the national states have been postponing decisions.

The perceptions about the Convention among some environmental specialists from NGOs, Brazilian government and some universities tend to be that it is little effective (41,4%) or reasonably effective (44,8%). John Robinson – Wildlife Conservation Society-WCS (interview through e.mail, August 8th 2002) affirms that the Convention "...has immense potential, but to date has had relatively little impact ". Among the respondents, one of the specialists from an important Brazilian NGO made an interesting point about the Convention’s effect, which to a certain extent is related to my argument. In her view, the fundamental question concerning international instruments is not so much if they are effective. She continues stating that if one considers effectiveness as implementation, s/he has to realize that the processes are slow and in this sense such instruments will only make a difference when they are implemented in a significant number of countries. Thus, their main role is to make the debate become public and to establish new paradigms. She recognizes that in Brazil there is a visible distance between the formal implementation (e.g. regulations) of the international agreements, that rarely are put into practice, and the set of experiences, like Mamirauá, that have a local impact towards reverting environmental degradation and social exclusion. She states that such experiences are the best synthesis of “thinking globally, act locally”.

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4 As mentioned, I sent one questionnaire to environmental specialists identified by other recognized environmentalist (reputation technique of identification). The sample is small but it has a variety of people from different organizations. Thus, even though the numbers cannot reveal any probabilist tendency, they can give a rough idea of how some actors perceive the Convention on Biological Diversity.
It is important to keep in mind the important role of the states. However, local actions do not always involve their direct participation. Throughout the world, there are innovative experiences in biodiversity conservation and sustainable use, that have been implemented at the local level, being “in tune” with the Convention’s objectives, but cannot be considered responses from the states to it. Such experiences cannot be apprehended through the concept of international regime.

III- The concept of global biodiversity regime (GBR)

Global biodiversity regime (GBR) comprehends the set of normative and cognitive “guiding elements” around which the actors interact from global to local levels, producing decisions, actions and dynamics of resource and knowledge exchange, all of them being in tune with the spirit of the Convention on Biological Diversity.

Such concept only makes sense in the present globalization context, caracterised by the global interconnectivity (Held et alii 1999) and by the rise of new actors, among them individuals and NGOs which are particularly relevant in the biodiversity issue area. In order to develop the concept of global biodiversity regime, I had in mind the approach proposed by Keohane and Nye (1989) of complex interdependence, and their definition of interstate, transnational and transgovernmental relations. The GBR concept differs from the one of IR for having incorporated the cognitive elements that guide the decisions and actions related to biodiversity. It emphasizes the existence of multiple actors and interactions other than the interstate and recognizes the importance of the local level in the implementation of the regime.

The “guiding elements” are normative and cognitive parameters concerning biodiversity. The first set encompasses formal and informal principles, norms, rules and decision making procedures related to biodiversity. While the second includes the theories and methodologies, concepts and approaches which have developed from researches and from the advance of knowledge about biological diversity and the relationships between social and natural systems. The cognitive elements are fundamental, as they comprehend the common understandings about biodiversity and its values and about the relations between conservation and development which preceded the Convention and were prevalent among transnational conservationist networks. They help us to understand how many actions are in accordance with the Convention principles even though they are anterior or contemporaneous to it and are not initiated by states.

The cognitive and normative guiding elements shape the activities of actors that are not only states, but also individuals, groups, NGOs, IO’s, or even firms. In their interactions such actors produce decisions and actions in several levels: internacional, transnacional, transgovernmental, nacional, regional and local and can constitute transnational networks as epistemic communities. From these processes, dynamics of resource and knowledge exchange emerge. All of them, decisions, actions and dynamics are “in tune” with the spirit of the CBD.

Within the global biodiversity regime, local projects, initiatives, or experiences that aim at conciliating biodiversity protection and sustainable development are the results of processes that go from global to local, involving multiple actors and interactions. Thus, the GBR concept allows us to capture actions that evidence the implementation of the regime at the local level around the world.

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5 IOs refer to international governmental organizations, that is organizations created by an agreement among national states. The multilateral organizations fall into this category.

6 Here the expressions project, initiative and experience are used interchangebly. Usually, the bilateral and multilateral agencies and NGOs use the term
Those are carried out by non governmental organizations or subnational governmental organs and would not be considered through the concept of IR. Such initiatives evidence a pattern of biodiversity protection throughout the world.

GBR encompasses relations among actors at the transnational and transgovernmental levels and also within the borders if they can be related to global processes. Such concept is useful for us to visualize the effects of epistemic communities beyond the creation of international regimes. Here, the concept of epistemic community (Haas 1992) is applied to identify a transnational network of conservation biologists, which is part of a larger transnational conservationist network. Through Mamirauá case, we can observe the impact of the conservation biology epistemic community in the “domestic” political process. The Mamirauá project resulted in the creation of new category of protected area (Sustainable Development Reserve), which was incorporated by the national legislation. Another result was the establishment of a private research institute linked to the Ministry of Science and Technology. In this sense, widening the focus help us seeing the effects of the action of epistemic communities beyond the establishment of international regimes. On the other hand, epistemic communities can be considered the link between local initiatives and the global regime. Thus, we can understand partially why local initiatives are “in tune” with global principles and objectives. Also, they contribute to direct the flows of financial, technical and technological resources and of knowledge from global to local, and vice-versa.
To focus Mamirauá case, I build an approach based on the concept of GBR. As I concentrate on aspects related to the implementation of the CBD objectives of biodiversity conservation and sustainable use at the local level, the approach abstracts from other aspects of the GBR. In this sense, even though the GBR concept is quite encompassing, and its scope is much broader, for the purposes of this work, I focus only on some aspects of the regime in order to demonstrate how to operationalize the concept of GBR.

IV- GBR as an APPROACH : guiding elements, actors and interactions and dynamics concerning biodiversity conservation and sustainable use

Guiding elements

The normative guiding elements encompass the principles and objectives of the Convention on Biological Diversity, as well as of other international treaties that deal with conservation issues, taking into consideration that one of the objectives to propose a global convention on biodiversity was to integrate the existing international conservationist documents. Miller (1997: p. 10) calls the attention to international programs and instruments that are concentrated on the concept of protected areas and are based in the idea of “international value” of certain spaces throughout the world. Accordingly, the Ramsar Convention encourages the participant states to designate areas of their territories to be part of the List of Wetlands of International Importance, becoming committed with the protection of such areas in the long run. The members of the World Convention on Natural and Cultural Heritage choose areas to be part of a World List. It serves as a manifestation of the states’commitment to protect those sites. The Man and the Biosphere Program, run by UNESCO, was initiated in 1972 as an international cooperation program to support scientific research and projects to monitor the nature and the anthropomorphic phenomena. It aims at enhancing and adapting the human uses of the environment. Part of the Program is the Biosphere Reserve Network. It has promoted the designation by the governments of protected areas and their surroundings as Biosphere Reserves, whose goal is to concentrate researches, to exchange information and to foster scientific international cooperation. After 1995, the program enlarged its focus and scope aiming at helping to solve problems related to resource management in the neighbourhood of the Biosphere Reserves.

Thus, even though we consider the CDB as the GBR pillar, the global regime includes other conventions like CITES, the Bonn Convention on Migratory Species, the Ramsar Convention, the World Heritage Convention and so. All of them have some influence on what happens locally or, more specifically, at the local level all of them “meet”. For instance, when observing Mamirauá case, I realized that Mamirauá Sustainable Development Reserve is part of Ramsar list, several
species that exist in Mamirauá are part of CITES lists and there is a proposal to turn it together with other Brazilian west Amazonian areas a World Heritage site. At the local level, such international agreements can act simultaneously and can become part of the strategies of the actors to enhance protection of the areas where the action is taking place.

Besides, the GBR includes the cognitive elements that influence or shape the local initiatives of biodiversity protection around the world. The cognitive elements are theories, concepts, methodologies and approaches that become well known and are spread around by NGOs, international organizations, bilateral and multilateral agencies, groups of scientists. They evolve within networks of specialists or within organizations. Even though they are not part of any agreement, in practice they influence or shape what is going on in the field. Concepts like eco-regions, ecological corridors, hotspots, and so on, methodologies like RAP, approaches as ICDP (integrated conservation and development projects), or even instruments as IUCN red lists, world system of protected areas, based in a certain number of management categories, can be considered examples of cognitive elements that influence or shape local initiatives to protect biological diversity. The conservationist paradigm shift was important in this sense, as it contributed to the change of conservation attitudes and practices in the field towards the incorporation of the social dimension. On the other hand, people involved in conservation initiatives state that the local reality forced them to realize that there was no other way of doing conservation than the one of involving the local populations and incorporating their needs into the strategies (interviews: Márcio Ayres July 23rd 2001, Richard Bodmer November 11th 2002), which highlight the dynamic interaction between theory and practice.

According to Brown (2001: pp. 6-7)

(...) broadly speaking, the conservation-oriented literature traditionally viewed local community welfare and development as directly conflicting with the objectives and practice of biodiversity conservation. Indeed, development was often identified as a problem and a main causal agent of biodiversity loss. In the past two decades, however, there is evidence of a major paradigm shift in conservation thinking resulting in what some researcher have termed a “new conservation” (...)

As mentioned, in the context of change in the conservationist thought, ideas about the involvement of the local populations in conservation initiatives start to evolve. Those ideas incorporated the concept of communities to refer to the locals and approaches like community-based conservation (CBC), community-based wildlife management (CWM), integrated conservation and development projects (ICDP) and so on began to become popular. All of them, try to a certain extent to incorporate the needs of the human populations in conservation strategies as well as try to be bottom-up and with participatory methods. Such kinds of concepts and approaches which have been developed mainly by international organizations and NGOs have been influencing the local initiatives. One example, is the UNESCO program known as “Man and the Biosphere”, that promotes the creation of biosphere reserves. That program raised the issue of human population inclusion in the process of the establishment of protected areas, what still generates much controversy.

The World Conservation Union - IUCN has developed six distinct categories of protected areas, joined by their management objectives. They can influence states in their conception of those areas. Also, it through a mandated of the United Nations, created a world list of national parks and protected areas, and has maintained updated. Such initiative gives an idea of the world situation concerning protected areas, so one can consider it as a strategy that is adopted in the domestic
policy realm but that has a global significance. Thus, one can have a global view of the protected areas in the world, can compare the number, size and categories of those areas in each country.

According to Redford et alii (2003), biodiversity conservation approaches grew in number, scope and complexity. The authors have identified a sample of 21 approaches that have been implemented by thirteen conservationist organizations throughout the world. Some examples are hotspots, ecoregions, landscape approach, Global Forest Watch and so on which are based in “theories developed by international NGOs like CI, WWF, IUCN and WRI.

In one word, the normative and cognitive guiding elements concerning the protection of biological diversity yield the parameters and perimeters for the actors. They make up the framework of the global biodiversity regime (GBR).

Some remarks

In Dourojeanni and Pádua’s (2001) perspective, the link that was established between protected areas and the issue of biodiversity protection has contributed for them to become part of the global environmental concern, that is demonstrated by the increasing number of international, regional or bilateral conventions, treaties and agreements. The authors state that the greatest benefit of such instruments is their contribution to public awareness raising, especially the politicians. In the author’s view, the Convention (Dourojeanni 1995, quoted in Dourojeanni and Pádua 2001) could have been a powerful instrument for the protected areas. But it has not prioritized them, thus it has had little significance for them up to now. The author’s view reflects their disagreement with the socio-environmental character of the Convention but also that the focus of the analysis has to be widened and to go beyond this document to “capture” some global patterns of biodiversity protection.

Brown (2001: p. 6) considers that protected areas will continue to have a crucial role in biodiversity conservation throughout the world in the near future. However, the experience has demonstrated that traditional top-down approaches that do not include local populations’ concerns known as fortress conservation, or fences and fines are rarely effective to reach conservation goals.

The author’s statement highlights the rise of a “new conservation” thinking, whose principles influenced and were incorporated by the Convention. Mostly important is that the concepts and approaches in which practice has been based have also been influenced by this “new” thinking.

Actors and interactions

In the field of biodiversity conservation, the groups of actors, mainly NGOs, but also scientists, governmental or intergovernmental agencies can come apart according to different views about the links between conservation and development, the relations between nature and society and the role of social or natural factors to configure environmental problems and/or solutions for these problems. If such views could be placed in a color-spectrum or in a continuum, in one extreme we could see dark red, and in the other dark green. The former represents positions that consider nature as something purely socially constructed, in which natural factors and dynamics do not have a weight of its own. The latter refers to positions that do not take into consideration socio-economic and cultural factors, thus ecosystems work on their own, without society/humanbeings interference. As the Convention had a compromising character, it incorporated dimensions of the two sides of the controversy and can be positioned in between the two extremes, tending more to the “red” for
social-economic considerations and the North/South divide played a stronger role in its preparation than it was expected in the beginning.

Anyway, during the negotiation process, bargaining and coalescence of socio-political forces (and few economic forces) resulted in a “socio-environmental” document that did not please the groups located at the two extremes, but joined a wide range actors pursuing different values and interests. In my perspective, the Convention principles can gather groups that go from the “light-green” (those that originated from a more natural sciences, biological view and latter incorporated socio-economic and cultural dimensions) to the “red-green” or “light-red” (those whose origin are in the popular movements, and have been committed with social causes like justice, equity, participation, but have lately incorporated the environmental dimension). Thus, the majority of actors considers both natural and social dimensions. It does not mean that there are no conflicts. The differences are in how they emphasize one or the other. Which result in different cleavages within those groups that are under the Convention.

Individuals can also be considered actors in world politics and they can be empowered through the construcion of transnational networks. Such is particularly true in the global environment political realm. According to Porter e Brown (1991: p. 35), national states are not the only actors that play important roles in the global environment politics. International Organizations (IOs) help to set the agenda, they facilitate the process of regime formation and cooperate with states to develop programs and projects that affect directly the environment. NGOs participate in agenda setting, influence negotiation processes to create regimes and the shaping of environmental policies of donor agencies. Multinational or transnational corporations take part in the bargaining to establish regimes and their actions directly affect the global environment. It should be highlighted that, according to some authors (Porter and Brown 1991, Elliot 1998), the NGOs actions are part of the character of the global environment politics. One of the its characteristics after Stockholm has been the rise and increased participation of NGOs and grassroot movements. Particularly in the biodiversity field, NGOs, individuals and groups of scientists have played important role in the agenda setting, regime formation and implementation. In their interactions, networks are built that reinforce their actions and impacts.

IUCN

The creation of IUCN – The World Conservation Union – is considered by Barreto Filho (2001: p.143) as an evidence of the “internationalization of the national park movement”. Through the GBR perspective, we should highlight its importance in the evolvement of the idea to conciliate conservation and development from 1980, and its role in preparing the first drafts of a global convention on biodiversity conservation. Even though its proposal was not the one that remained, the Union contributed to the acceptance of the idea of a global agreement on biological diversity. Besides, in Porter and Brown’s (1991: pp 58-59) view IUCN has been a fundamental source of influence in most of the global agreements related to wildlife conservation and to species loss. Some authors (Porter and Brown 1991, Keck and Sikkink 1998) point that NGOs have also been influencing the environmental politics through IUCN.

Conservationist epistemic community and the role of conservation biologists

Organizations are constituted by individuals. In general, the NGO leaders are people that have relationships spread around. They compose social relation networks that are transnational and based

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7 A World Conservation Union- IUCN can be considered a hybrid organization, because it joins governmental representatives, governmental agencies, NGOs and specialists from several knowledge areas.
in principled ideas and common objectives. Among environmental NGOs, governmental and intergovernmental organs, linkages can be built by individuals who, besides sharing principles and objectives, have causal beliefs in common. Such individuals constitute epistemic communities or networks of specialists (P.Haas 1992).

Biologists have been involved in nature conservation or preservation issues, with a focus on protected areas around the globe, mainly after World War II and even before in the USA, British colonies in Africa and other places. However, it was from the 1980s that a larger number has become involved in conservation issues. As seen, the expression biodiversity became public in 1986. In that period, the concern with habitat destruction, tropical forests, species extinctions grew considerably (Wilson 1988). Conservation biology as a new field of academic inquiry started to develop. A landmark was the book , edited by Michael E. Soulé, Conservation Biology: An Evolutionary Ecological Perspective (1980) and after the book Conservation Biology. The Science of Scarcity and Diversity (1986) was published. In the preface, it is written that the purpose of the book it to inform the members of the conservation biology community and help them to become more effective. It notices that the concern with biological diversity, genetic resources and extinction had grown among the biologists.

Conservation biology has become a distinct study field. It is based on biology, but has a multidisciplinary character and holds a perspective of applied science. Many of the ones who dedicate to this field are active in the transnational conservationist movement. If we consider the political role of the members of the conservation biology community, or if we see them as a network of specialists that share a knowledge background and a policy enterprise, then we can think about a conservation biology epistemic community. This quote from the Introduction of the book mentioned above gives an idea of the general mood among scientists concerning their political role

“I believe there is a sense that something can be done, and the scientists can and must play an important role in preventing the erasure of the planet’s biological print. (...)” (Soulé, 1986, p.ix)

In the process of constitution of this network of specialists, it is important to keep in mind the role of academic institutions that fostered the evolvement of conservation biology as a independent field of inquiry. A few centers, according to some members of the epistemic community (interviewees) played a role as catalysers in the process. One example mentioned was the University of Florida, Gainesville. It joined conservationists from different countries, and much of the new thinking about conservation biology and policy has evolved there.

Western (2003: p. 11114) suggests that the conservation biology has played a key role in the designing of the global conventions, national policies and management practices. It is a relatively new science, or in the words of the author Western (2003: p. 13) “a newcomer to the modern conservation movement that essentially grew out of a utilitarian and aesthetic philosophy a century ago”. But its importance is fundamental for the shaping of the biologists’and other professionals’ network into an epistemic community. As according to Haas’s (1992) concept, what distinguishes an epistemic community from a movement is that its members share causal beliefs, besides being committed by common principles and political enterprises

Dynamics of the GBR related to the biodiversity conservation and sustainable use strategies

The patterned flows of financial and technical resources to developing and transition countries for conservation initiatives are another aspect of the GBR. It is worth mentioning the GEF (Global Environmental Facility). GEF is the financial mechanism of the CBD and other conventions, as the
members countries did not create a specific mechanism for the Convention. According to Prestre (2002: pp. 93-94), GEF resources for biodiversity have grown and correspond to its largest portfolio. In the fiscal period 1995-2000, GEF approved 339 projects amounted to USD 884 million. In 2001, it supported more than 130 developing countries to elaborate their national biodiversity strategies. In ten years, the Fund channeled USD 4.1 billions from the USA, West Europe and Japan to more than one thousand projects in 150 developing and transition countries. However, it is equivalent to less than 1% of the total flow of international aid and to the global defense expenditure of one day for each year of global environmental protection (Young, 2002: p. 8).

The dynamics of resource and knowledge flows for biodiversity should be understood through a perspective that goes beyond the CBD. They depend on the region of the planet and to what extent it captures the attention of the public opinion, scientists and the donor agencies. Such is influenced by transnational networks, and, more specifically, epistemic communities. As their members are researchers linked to academic institutions and/or NGOs that mobilized to give publicity to the results of their researchs, to raise public awareness and to influence the agenda-setting and public policy making.

The bilateral and multilateral cooperation agencies’ agenda setting is a complex phenomenon. We cannot affirm that it is a simple imposition of the North on the South because of the transnational networks whose members are from both sides. However, it is necessary to identify the winning coalition, that is, the epistemic community, activist network and interest groups that managed to penetrate the cooperation agencies and big international NGOs and which principled and causal ideas they supported. So we can identify how and which subjects, approaches, and priorities have been established.

The knowledge flows are another aspect that make up the dynamics of the regime. As biodiversity is mainly concentrated in the South. Knowledge about it goes from South to North. Knowledge about why to protect it, how to manage and to use it flows mainly from North to South but can goes the other way around too. It is not an international dynamic but a transnational one. As people who are part of the networks within knowledge is produced come from everywhere. Such dynamic and its patterns should be well observed as it is here that most of the distributive conflicts and equity issues can be generated. On the other hand, from the biodiversity knowledge perspective, we can view one of the justifications for the financial, technical and technological transfers from North to South and the issue of biodiversity conservation shared costs. Usually, who pays the highest costs for biodiversity conservation are the local populations who live in and around areas that are considered of global biodiversity value. They are the ones who suffer the restrictions for using biological resources or even are removed from some areas. There is the value of biodiversity itself and the knowledge about it that cannot be measured properly, there is also the financial value that comes from the uses of such knowledge. All of them depend on the conservation and sustainable uses that are implemented locally whose costs are paid locally. Thus, if global resources flow from North to South for biodiversity conservation and sustainable development it only means that the principle of shared costs and benefits have been applied.

**Local initiatives**

Local biodiversity conservation and sustainable development initiatives can result from actors’ interaction around the GBR guiding elements and the dynamics of resource and knowledge flows. Such initiatives represent an integrated approach on biodiversity conservation and development and the GBR perspective allow us to “capture” them. Most are developed by several actors who are connected by transnational networks and supported by international NGOs and/or bilateral or
multilateral cooperation agencies. Integrated biodiversity conservation and sustainable development projects implemented at the local level most of the time cannot be considered direct responses from national states to the Convention. But to a certain extent they implement its objectives and are “in tune” with its principles. Moreover, they receive resources from cooperation agencies, international NGOs, and even national or regional government organs. As stated the dynamics of resource flows are greatly dependent on the trends of the GBR. Thus, they can be considered as dimensions of the global regime that are important to indicate patterns of biodiversity conservation throughout the world.

In this sense, Mamirauá, the case that is going to be related, is not an isolated local initiative. But it represents a transnational trend, concerning the attempt to integrate biodiversity conservation and sustainable development. As stated, throughout the world there exist several similar experiences that evidence the transference of financial and technical resources from the global to the local. They are also evidences of the roles of the conservation biology epistemic community, whose members incorporated socio-economic dimensions to the objective of biodiversity protection. That network can be consider the link between the cognitive guiding elements that develop at the global level and the local realities. The epistemic community can be related as well to the knowledge flows from global to local and vice-versa.

V- Mamirauá Case

Mamirauá is a place at the heart of Brazilian Amazonia, 500 km west from Manaus, in the state of Amazonas. It is a várzea, or white-water flooded forest area. Mamirauá was also a project that aimed at integrating research, biodiversity conservation and sustainable development. It started in 1991 and was ended in 2002. It joined researchers, international NGOs, national and regional governmental organs, one bilateral cooperation agency (DFID), the European Union and local communities. The results were the creation of the Mamirauá Sustainable Development Reserve (MSDR) and the Mamirauá Sustainable Development Institute (MSDI). Besides, Mamirauá has been considered a model for conservation and sustainable uses of biodiversity. It has attracted attention from other parts of the country as well from outside. It innovated because recognised the rights of local traditional populations, known as ribeirinhos (which means "riverine people") or caboclos (which means "people who come from the forests"), not only to remain within and around the reserve, but also to play important roles as actors in the process of elaboration and implementation of the Management Plan of the Reserve. Moreover, it is worth noting that a complex network of people has built international, transnational and inter-institutional co-operation arrangements that have contributed to maintain financially and politically the Reserve and the Institute.

Mamirauá was the first Sustainable Development Reserve (SDR) established in Brazil and was named after an astonishingly beautiful lake in the heart of the reserve. The Reserve is located between Solimões and Japurá Rivers and the Auati-Paraná. Its total area is 11240 square kilometres, entirely located in the várzea, remaining seven to fifteen meters under water for six months of the year. It is a unique place in the planet for both its high degree of endemism among species adapted to the flood-drought seasons year round and also its highly productive areas that have long been used for intensive fishing, logging and some seasonal agriculture by locals.

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8 The flooded forests are locally known as Igapó or várzea. The first are formed by blackwater river poor in nutrients, mostly originated in the Amazon basin, while várzea areas are associated with whitewater rivers that flow from the Andes and carry large amount of sediment (Ayers et al 1999: p.203).
Mamirauá project was initiated by a group of researchers led by Márcio Ayres, a well known Brazilian biologist. His role was crucial as a charismatic person and someone with expanded capacities, who passed through a skill revolution (Rosenau 1990). He did his PhD research about white-uakari monkeys (*Cacajao calvus calvus*) in Mamirauá area. This species is considered “vulnerable” in IUCN red list because of its known distribution restricted to that area. Ayres was concerned with the preservation of the species and designed a proposal to turn its habitat a protected area. Besides, there was Deborah Lima’s anthropological research about the local population and their fragile social-economic situation conditioned by social and environmental factors. She was married to Ayres at that time and contributed to the realization that it was not possible to do biodiversity conservation without taken into consideration the local population that lived in the area.

In 1991, a group led by Márcio Ayres, biologist, and Déborah Lima, anthropologist, devised the first version of the project, which proposed to set and an experimental focal area of 2,600 square kilometres between the Aranapu, Japurá and Solimões Rivers. The project was submitted to the British government as well as other international NGOs like WWF-UK, Conservation International (CI) and Wildlife Conservation Society (WCS). Since then, it has been funded by DFID (Department for International Development, former O.D.A, the British cooperation agency), European Union, WWF-UK, CI, WCS, CNPq (with the creation of the MSDI and the conclusion of the project, funds started to come directly from the Ministry of Science and Technology) and others.

Ayres is perceived by all involved with Mamirauá project as well as many environmentalists in Brazil as someone with charisma and endowed with a special talent to attract people, political and financial support to his ideas. Also, he was the person who was related to conservation biologists in other countries, so he was the one who linked transnationally with the conservation biology network. Such links were fundamental to attract attention to Mamirauá and to bring the financial resources from DFID (a governmental bilateral cooperation agency) and other international NGOs like WCS (Wildlife Conservation Society ) and WWF-UK. Márcio Ayres kept relationships with John Robinson-WCS (former WCI) and Russel Mittermeier-CI at the transnational level, and with Jacob Gehard, José Galizia Tundisi - CNPq presidents and Eduardo Martins (who worked for FNMA – National Fund for the Environment, IBAMA- National Environmental Agency and WWF-Brasi) at the national level. Such relationships contributed to “pull the donors inside” (Ayres words in July 23rd 20001). The total amount the project received from 1992 to 2001 was USD 14,247,802 from national and international sources. Besides, the scientific and technical knowledge flowed to Mamirauá through researchers and consultants from different countries. On the other hand, knowledge about biological diversity went from Mamirauá to the scientific and conservationist spheres.

In Mamirauá case, it is important to keep in mind that it represents the encounter of actors from different levels. There are individuals, governmental institutions linked to the Amazonas state and to the federal government, one bilateral cooperation agency (a British governmental organ), international and national NGOs. Besides, the relations established with local community leaders have been important to the initiative acceptance and to create and consolidate the participation

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9 According to Rosenau (1990), individuals can be actors in world politics. Through this perspective, we can say that Ayres, Lima and the group of researchers involved in the Mamirauá project have acted as “private actors”, as they worked on their own, or operated as independent individuals, that did not represent an institution. Friedman (1999) suggests that individuals with Super Powers have risen as a result of the emergence of the globalization system. Such individuals can make a difference in the global political context.

10 CNPq – Brazilian National Council for the Development of Science and Technology is something like the USA National Science Foundation. It gives financial support for researchs and provides scholarships for graduate students)
mechanisms for MSDR management. One problem has been the relationship with local authorities and politicians.

The interinstitutional and international cooperation arrangements have enabled the initiative from the financial, political and legal point of view. The Brazilian NGO, Sociedade Civil Mamirauá (SCM), was created by the group of researchers in order to the international funds to be channeled through it. The federal government was part of it through CNPq and the Brazilian Cooperation Agency. Both signed the cooperation agreement with DFID (British cooperation agency). The Amazonas state government is also an important part, as the MSDR belongs to the state. International NGOs that gave their support in the initial period like CI and WWF-UK, or WCS that have supported the project since its beginning. The interinstitutional arrangements have been the basis for Mamirauá. However, the individuals have prevailed over the institutions for most of the projects history.

The project involved biodiversity research and social extension work in the MSDR. For that there has been a permanent staff based at MSDI, located in Tefé, AM, who stay one period in the reserve and another at the institute, and also many researchers that are based in other institutions go periodically to the reserve.

According to Lima (1999: pp. 250-251), Mamirauá can be referred to as a project known in the specialized literature as "integrated-conservation and development programs" (ICDPs) and "community-based conservation" (CBC). It is an experiment that is still going on. The initiative is very complex because of the combination of the objectives _ biodiversity conservation, sustainable development and research _ and the strategy of involving the local resident and neighbour populations, who should be the ones to benefits from preserving the natural resources and biodiversity (on which their day to day life depend), as well as, to improve their life conditions. Lima (1999: p.255) states that the experience of involving the locals shows the difficulties of developing a new model of conservation unit based on a proposal that did not originate locally. The transformation of a vertically organised project into a horizontal one, with the participation of locals in the management of the resources and in the management plan has been a long process. Mamirauá project took five years to obtain support of almost all of the 60 communities of the focal area.

To make the Project work, it has been necessary to conciliate many different people´s individual interests. Natural science researchers were focused on the species, that is, on their study objects, and many but not all had also interest in biodiversity conservation and preservation, either as a value on its own, as a resource, or as scientific knowledge. Anthropologists and sociologists wanted to know about local population’s lives, and to be able to intervene in social reality. The residents and users of MRSD were interested in maintaining the natural resources needed to their lives.

Mamirauá case represents an innovative experience that tries to overcome the limitations of top-down and fence-off approaches of biodiversity conservation. However, it also brings the ambiguities of including human populations in conservation units (protected areas): understanding and securing the social processes of human reproduction and defining the aimed-for standard of living for its population imply to ask what exactly is intended, and in what areas one has the right to intervene (Lima 1999: p. 252). Anyway, Mamirauá project demonstrated that it is possible to try other biodiversity conservation strategies by the establishment of new models of protected areas. Moreover, it involved innovative co-operation arrangements among people from different institutions and countries. Part of the explanation for Mamirauá existence is found in a transnational network of primatologists and other Amazonian-oriented researchers, who had similar ideas about biodiversity conservation and the need not to exclude local populations from the process. The network of people contributed by bringing financial support from their institutions and acceptance
among conservationists world wide. Such aspect is sometimes overlooked but is essential to make policies to work.

One of the achievements of the Mamirauá project can be considered its institutionalization. The MSDR is legally established and the Mamirauá Institute has been recognized by the Ministry of Science and Technology, which guarantees relatively stable availability of resources from the federal government treasury. Such should create long-term conditions for accomplishing the objectives of conciliating research, biodiversity conservation and sustainable development, which were stated above and that motivated the project elaboration and implementation in the first place. The project had results concerning biodiversity and the welfare of the local communities, but it is not my intention to evaluate them.

Even though Mamirauá cannot be considered a response from the Brazilian government to the Convention for Biological Diversity, it is “in tune” with the Convention objectives and with broader normative and causal beliefs developed transnationally among conservationists. In this sense, it can be linked to global processes considering that its objectives were and have been influenced by normative and intellectual developments within the conservationist transnational network, more specifically the conservation biology epistemic community (an that it has influenced and influences such developments as well). Also, the multiplicity of actors and the multilevel institutional participation connect Mamirauá to the global level. My aim is to relate this local initiative to the GBR, taking into consideration that it does not fit in conventional IR perspectives. As mentioned, Mamirauá reveals a pattern of biodiversity protection that is spread throughout the world that cannot be disregarded.

VI- Mamirauá and the global biodiversity regime (GBR)

In Mamirauá case, life stories, personal relationships and interinstitutional relations can be linked to the project elaboration, the creation and shaping of the SDR (protected area). Biological and anthropological researchs and the relations established within the academic world contributed for the convergence of peoples´ trajectories and their common ideas and work site. These were fundamental for the evolvement of the new model that combined biodiversity conservation and sustainable development, and that brought together international and transnational relations, and the global-local dimension. Besides, the existence of the conservation biology epistemic community made a difference by contributing to attract resources, and political support for the initiative.

Research can be considered a “meeting point” for many of the involved. Some began as young researchers, undergraduate or graduate students that joined the group through their supervisors and university professors. If we think about these only as post-graduate researchs, the process could end in itself. As PhD dissertations they could remain in the libraries, to become article in journals and the process would be concluded. Instead, reality, personal interactions and principled ideas called the researchers to action, that could have taken several directions. One of them could be simply to push the authorities to protect the vulnerable species and its habitat and to support the proposal that had been sent to the federal government, that would have established an “Ecological Station area”, a nature conservation protected area with very strict, fences-and-fines, management rules. Nobody would be allowed to live there and people who already lived in the area would have to be removed. But another direction was taken by the researchers.

The interactions among Ayres, Déborah Lima, William Hamilton, Richard Bodmer, Peter Henderson and other researchers and professors during their PhD period in the University of Cambridge, England, by the end of the 1980s, constituted a “fertile environment” to conceive the
idea of Mamirauá Project. So, they have become political actors and started to intervene directly. Besides knowing the reality, they decided to change it. As researchers, they knew the biological and anthropological reality. Also, they were aware of the new ideas about biodiversity conservation that were developing transnationally. Moreover, they had contacts with other researchers and NGO people in other countries like WWF-UK, WCS and CI (Conservation International). Thus, they had the knowledge and the means to have access to the resources needed for the initiative and were motivated by shared principles.

It is important to highlight that the Mamirauá researchers’ life stories, who started with research and so got involved with conservation and development initiatives (projects and public policies), are not particular to that group. Their stories are not uncommon among biologists, anthropologists and other professionals in Brazil and around the world. During my interviews, other similar stories came up, for example, the RCTT (Reserva Comunal Tamishyacu Tahuayo) initiative in Peru (interview with Richard Bodmer, November 11th 2003); IPE (Instituto de Pesquisas Ecológicas) experience in Pontal do Paranapanema and other places in Brazil (interview with Cláudio Pádua, January 09th 2003); CI and Biodiversitas work in Brazil started by Gustavo Fonseca (mentioned in several interviews); the Instituto Internacional de Ecologia-IIIE experiences in water management (interview with José G. Tundisi April 2nd 2002). The well-known CAMPFIRE initiative in Zimbabwe also involved researchers. Some of the interviewees reminded that several primatologists from Cambridge University, like Márcio Ayres11 (e.g. Jane Goodal), got involved in conservation projects after their researchs. Hélder Queiroz (interview July 26th, and August 01st 2001) states that it is almost a “natural consequence”… People who had been salient in their biological/environmental researchs end up in conservation work. Such is particularly true for primatological researchers in Brazil.

Primatological research was pointed as the “entry door” for several of the ones involved with biodiversity conservation in Brazil today. Not only Márcio Ayres, but also Gustavo Fonseca (Biodiversitas, CI-Brasil, Center for Applied Biodiversity Science) and Cláudio V. Pádua (University of Brasilia and IPE) started with primatology and so with conservation work from the mid-1980s. These people were connected to biologists in other countries (mainly USA and England), for example, Russel Mittermeier (CI), John Robinson (WCS), Kent Redford, Richard Bodmer (Kent University and RCTT-Peru), Mary Pearl (WPTU- Wildlife Trust). These people can be considered parts of a specialist network that share causal beliefs (a common biological knowledge background) and policy enterprises, and ca be characterized as an epistemic community. Their interactions began with their researchs and have continued through the transnational conservationist movement and to a certain extent they can be linked to big international environmental NGOs (some of them actually work in those NGOs).

Within the conservation biology epistemic community, the idea circulation and knowledge flow dynamics can link cooperatively NGOs, academic institutions, governmental organs and cooperation agencies. The existence of the community can be considered as part of the explanation of why ideas related to biodiversity conservation like the need to work with local populations around protected areas, multidisciplinarity, the importance of influencing public policies, dividing into management zones (core, sustainable, intensive use areas), working in the buffer areas, and so on spreaded around. It helps us to partially understand why some alliances are made among organizations and individuals, and also the trends of resources and knowledge to certain places. In this sense, Mamirauá was in tune with the ideas that circulated within the network and was built with the cooperation of some of network members.

11 Márcio Ayres PhD degree was obtained in Cambridge University.
The epistemic community in Mamirauá case connects it to the GBR. Through the community, the global ideas about biodiversity conservation and development could influence the project conception. It contributed to the compatibility between the local implementation and the global guiding elements. Moreover, the network can be accounted for the dynamics involving the resource flows to Mamirauá and the knowledge exchanges to and from it, as well as to turn it nationally and internationally known. Ayres being a member of the epistemic community expanded the opportunities for his initiative and, certainly, influenced his perceptions about conservation and how to pursue his objectives.

P. Haas (1992) relates epistemic communities to the creation of international regimes. I tried to relate them to local initiatives to promote biodiversity protection. Such initiatives involve actions in all levels (international, national, regional, local). Thus, even though Haas´ perspective applies to the international level, I think it is possible to extend the concept to encompass other policy phenomena. Mamirauá was enabled by resources that came through the influence of the conservation biology epistemic community. The creation of the Sustainable Development Reserve category was incorporated by the national and regional legislations on protected areas, which evidences the impact of the community regional and national policy levels.

My argument, thus, is that local biodiversity conservation and sustainable use experiences implemented in several countries can be related to the existence of the conservation biology epistemic community or other epistemic communities, all of them linked to a larger conservationist transnational network. In this sense, the epistemic communities link up the local initiatives to the global biodiversity regime and Mamirauá can be considered a part of it.

The GBR approach encompasses the global-local dimension. We can look at Mamirauá focusing on its accordance with the normative and cognitive global regime guiding elements. Also we can observe the influence of other international documents like Ramsar and CITES, as all these international instruments meet at the local level. Moreover, we can focus on the actors´ interactions, specially the epistemic community´s role, and on the dynamics concerning the flows of resource and knowledge. In this sense, Mamirauá can be considered a manifestation of the global biodiversity regime. As an approach it helps us to view the case in a larger context and to analyse it through a world politics perspective. Through such perspective, we conclude that it is not an isolated initiative. There are similar attempts around the world, which are local experiences that try to conciliate biodiversity conservation and sustainable development. All of them are “in tune” with the Convention objectives but are not considered dimensions of the international biodiversity regime. The majority is proposed and initiated by non-governmental actors, with funds from international and/or bilateral or multilateral cooperation agencies. They can be considered evidences of a global pattern of biodiversity protection.

Mamirauá initiative, when seen in the context of the GBR, has a global demonstrative value. From local to global, there can be lesson-learning, the strengthening or changing of the normative and cognitive guiding elements. Also if there were more information exchange among local initiatives, that could contribute to new experiences and could reinforce the global regime.