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**Environmental Protection in Practice: Protected Areas in the Upper River Paraguai Basin**

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## INTRODUCTION

The project "Socio-economic structure and environmental impact in the Upper River Paraguai Basin" examined both summarily and in detail the connections between the structural change in the study site within the last decades and the resulting environmental problems (cf. Coy's article in this volume). The studies showed that the regional approaches to environmental and regional planning would also be an important topic for analysis. Will these measures solve environmental problems? Are they valid in terms of "sustainable development", which nowadays is demanded everywhere, even in Mato Grosso? Which relations are there between the analysed socio-economic transformation processes, their social actors and the structures for politics and planning? These questions are especially important in terms of the application of the findings for the regional and environmental planning.

This paper will discuss some of the aspects and problems of this topic with regard to the implementation and management of protected areas. The latter is part of the large field of environmental protection, which played an important role in programmes for regional and environmental planning in the study area during the past years.

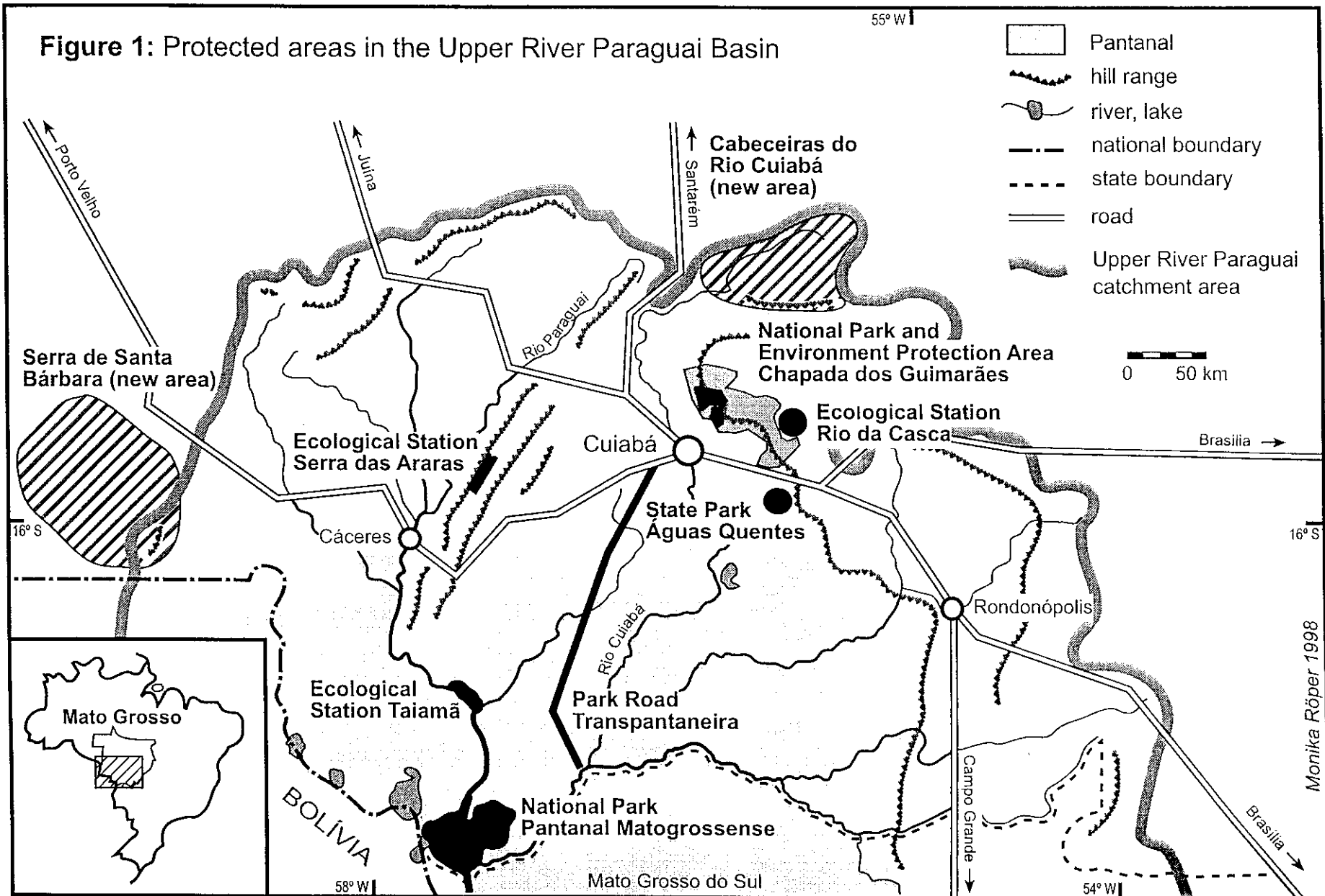
The river basin was chosen as the basis of the analysis because the environmental problems in the Pantanal area are caused by socio-economic transformation processes which influence the whole catchment area and, in some cases, have an even more intensive effect in the areas around the flood plains (cf. figure 1). As a result, the Upper River Paraguai Basin was established as a category of planning. It was used a few times during the past years as a basis for regional planning projects<sup>1</sup> (e.g. in the programmes PCBAP and Projeto Pantanal).

However, even in Brazil itself the Upper River Paraguai Basin forms a rather peripheral region. Although initiatives for protecting its most important landscapes - the already mentioned flood plains of the Pantanal area and the plateau of Chapada dos Guimarães - have been working for some time, the systematic integration of these attempts into the broader context of the environmental protection policies has begun only recently. In Brazil, protected areas were discussed most fervently in the Southern and South-Eastern states. Therefore the discussion only concerned regions which have already consolidated their environmental politics, as for example São Paulo und Paraná, where the management of protected areas is seen as being ideal. Of Brazil's peripheral regions, the Amazon area has been the main aim of environmental protection measures for many years. But it seems safe to assume that the growing and even global interest aroused by the destruction of Amazonian rain forests also caused the "discovery" of other endangered ecosystems in Brazil. The increased attempts to protect the ecosystems of the Pantanal area and the *cerrado* formations, which characterize the upper parts of its contributors, can surely be seen in this context.

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<sup>1</sup> At this point, I can only mention the problems of taking a river basin as the basis for regional planning without being able to go into detail on this within the limits of this paper.

**Figure 1: Protected areas in the Upper River Paraguai Basin**



## RECENT DEVELOPMENTS IN THE DISCUSSION ABOUT AREA PROTECTION IN BRAZIL

From the view-point of social sciences, protected areas are not only the result of scientific and environmentally founded assessments, which are put into practice on the basis of existing laws. Rather, they are complex scenarios of the concurrence of different and often conflicting interests of various social actors who are directly or indirectly involved. Protected areas can also be seen as an institutionalization of space. They are of geographic interest, as the perception and evaluation of "nature" by the people who plan protected areas or are affected by them will directly influence the planning approaches and their realization.

A few years ago, the discussion about implementing protected areas was revived in Brazil, as it became clear that in spite of a growing number of protected areas and an increasingly improved management the practical working of most of these areas was inadequate. At the same time both the institutional basis and the theoretical approach to protected areas changed immensely because of new agents being involved.

- On the level of the **state** there are two recent developments:
  - Together with attempts to decentralize governmental structures in general, the **states** try to establish their own structures for environmental administration. For the implementation and management of protected areas this meant for example the founding of various programmes, which were mostly financed by international sources (e.g. the National Environment Programme / Programa Nacional do Meio Ambiente (PNMA), which was financed by the German Kreditanstalt für Wiederaufbau (KfW), or the Pilot Programme for the Protection of the Brazilian Rain Forests, financed by the World Bank).
  - On the **national level** there is also a process of restructuring and reorganizing in progress, which is redefining the guidelines of the national environmental authorities and the national system of protected areas (Sistema Nacional de Unidades de Conservação - SNUC) (cf. IBAMA 1997, IBAMA & GTZ 1996, Câmara dos Deputados 1992, Ramos & Capobianco 1996).
- On the level of the **civil society** there are no longer only non-governmental organizations, which have dealt with protected areas for a long time and have continually broadened and deepened their approach (e.g. FUNATURA, SPVS), but also new groups, which take the perspective of the people affected by environmental plans as their starting point (e.g. the Instituto Socioambiental in Brasília and a few further organizations on different regional levels).
- On the **scientific level**, the growing concern on protected areas in the social sciences is striking. In Brazil this interest was aroused by Diegues' study (1993), in which he critically examined the basis of the environmental concepts that were at work until then. This caused quite a few subsequent studies, in which this approach was gradually extended and differentiated (among others: Adams 1996, Britto 1995, Diegues and Nogara 1994, Jesus 1993, Vianna 1996).

## SYNOPSIS OF THE REGIONAL SITUATION

Against the background of this general development the study region has to be examined for the acceptance of new tendencies or the copying of models that were successful in other places, and also for the development of genuinely regional approaches. The analysis is therefore divided into the following topics:

- insertion into the regional and thematic context through the analysis of the development of environmental planning and politics in Mato Grosso and through placing the existing and the planned protected areas in the national and the states' context;
- analysis of the existing protected areas in terms of their management, acceptance and problems;
- assessment of the various interests involved in the above mentioned process of institutionalization, and analysis of the possibilities of organization and intervention for the affected social actors;
- accompaniment of current programmes for the implementation of protected areas within the scopes of regional development and environmental planning programmes in the region.

The analysis was broadened by a selection of case studies, which allow a comprehensive view of the experiences within the region. This should both trace the development of protected areas policies in Mato Grosso and cover the complete range of the natural and administrative conditions within the region so that the necessity of dealing with each case on its own will become evident.

Four protected areas were chosen for a closer analysis. They should reflect the variety of different experiences in planning and management (cf. table 1 and figure 1). As this paper can not give a detailed analysis of the case studies, it will only give an overview on the criteria for selecting these cases.

### *a) Ecological Station Serra das Araras*

This area was chosen as the basis for the analysis because it was implemented at a time (cf. table 1) when the guidelines for planning protected areas were quite different from what they are today. There was, for example, the prevailing opinion that protected areas should maintain "unspoiled" nature. The peasants that inhabited the area were therefore evicted. But soon it became evident that this was not the typical case of a traditional community that was hit by a blow of fate through the implementation of the protected area. The displacement and its destructuralising effects on the community were rather caused by the combination of both governmental intervention and the effects of newly introduced modes of resource use (especially cattle ranching). This shows that environmental measures have no isolated effects but must be viewed in connection with other processes that occur in the region at the same time.

**Table 1:** Protected areas in the Upper River Paraguai Basin

**Federal level** - Management responsibility: IBAMA

Category	Site Name	Legal Title	Area (ha)
Ecological Station	Taiamã	Decree no. 86.081 of 02/06/81	11.200
	Serra das Araras	Decree no. 87.222 of 31/05/82	28.700
National Park	Pantanal Matogrossense	Decree no. 86.392 of 24/09/81	135.000
	Chapada dos Guimarães	Decree no. 7.656 of 12/04/89	33.000
Total			207.900

**State level** - Management responsibility: FEMA/MT

	Category	Site Name	Legal Title	Area (ha)
Not yet implemented areas	State Park	Águas Quentes	Decree no. 1.378 of 13/01/78	1.487
	Ecological Station	Rio da Casca	Law no. 6.437 of 27/05/94	3.534
	Park Road	Transpantaneira	Law no. 6.142 of 17/12/92	1.150
Extension of existing areas	Environment Protection Area	Chapada dos Guimarães	Decree no. 537 of 21/11/95	251.000
New Areas*		Cabeceiras do Rio Cuiabá		352.855
		Serra de Santa Bárbara (only partly located in the study site)		662.852

\* The areas were put under the proviso of public interest in Decree no. 1.353 of 27/03/92. The final areas and categories will be determined by the ongoing feasibility studies.

part of the regional development programme PRODEAGRO

Sources: Bruck et alii 1995: 205-210, FEMA and BT.FLO 1991: 7, FEMA 1997

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### *b) National Park of Chapada dos Guimarães*

The National Park of Chapada dos Guimarães is characterized by the great importance of the local environmental movement during its implementation and by its vicinity to the state capital Cuiabá (cf. figure 1). Therefore, the analysis focused on the implementation process of the park, which was accompanied by a lot of critique about the chosen area, by problems with the land ownership and by various and lasting conflicts between environmental movement groups, land owners, other users and the national environment agency IBAMA. Furthermore, the effects of the urban pressure on the park were analysed, which are caused by uncontrolled touristic use of the national park and by its importance as a recreational area for Cuiabá. This led, inter alia, to the existence of innumerable weekend properties in the park. All of these conflicting uses have grave ecological impacts on the protected area.

The current planning activities take place in an atmosphere in which those affected by the plans gradually begin to claim acceptance of their existence and their rights to participate. The most important reason for conflict is the fact that the legal statute of the national park provides the eviction and expropriation of owners. But this has only partly been realized up until now. Therefore, the park's administration must not only come to an understanding with the still active non-governmental organizations, but also with a number of associations of owners and users whose claims go as far as abolishing the status of national park for the area.

### *c) State Environment Protection Area of Chapada dos Guimarães*

This case study can be seen as an extension of the analysis of the National Park of Chapada dos Guimarães because the area of the current environment protection area had been discussed as a necessary extension of the park for a long time. The reasons for its "transformation" into a state environment protection area are closely linked to the changes in the environmental politics of the state which are characterized by attempts to decentralize and to incorporate it into internationally financed regional development programmes (in this case, into the World Bank-financed PRODEAGRO).

The steps to implement this area, which could be followed since its legal creation in 1995, were planned by the state environment agency FEMA and show first attempts to incorporate participatory approaches. As an environment protection area does not provide any expropriations, but the "combination" of environment protection and other uses, it was hoped that the situation would be less fraught with conflict and the protection measures would be easier to implement. However, the meetings which were intended to meet the demands for participation soon brought up a whole number of new conflicts. The newly constituted section for protected areas of the environment agency is currently unable to solve these conflicts, especially since it is not only in charge of all the state's protected areas but also works on the legal basis of the protected areas policies in Mato Grosso, prepares and tests administrative procedures and has to meet the rigid demands of the World Bank.

#### *d) National Park Pantanal Matogrossense*

Although this national park has also had a long history of criticism, its demarcation took place under completely different circumstances from the case of the National Park of Chapada dos Guimarães. The main reason for this is the location of the area being quite isolated and almost inaccessible so that the majority of people does not know about the existence of the park or has only faulty information. This does not mean, however, that the park is spared from interference. They are mainly caused by the uncontrolled tourist fishing. The difficulties are further increased by legal and administrative squabbling between the two states of Mato Grosso and Mato Grosso do Sul, because the park is situated on their border and their regulations concerning tourist fishing differ.

However, the most interesting aspect of the analysis is a new approach to dealing with the problems just mentioned. A local non-governmental organization has initiated the expansion of the protected area by buying fallow land bordering on the national park and by subsequently having it registered as private protected areas (Reserva Particular do Patrimônio Natural - RPPN). The next step is going to be the drawing up of a joined management plan for the whole area. This example is seen as an innovative strategy of the co-operation of state administration and civil organizations.

### **THE RECENT REGIONAL EXPERIENCES - AN OVERVIEW**

The study so far allows already a number of conclusions. These do not only cover the special topic of protected areas but can be transferred to the broader context of environmental planning and politics on the whole.

#### *Decentralisation and international financing of environmental measures*

It is important to take into consideration that the measures concerning the protected areas have to be viewed in the broader context of the implementation and consolidation of state environmental politics. This institutionalising process itself takes place within the general tendency to decentralize a number of political issues. The states as well as the municipalities are therefore now developing their own guidelines and dispute the former authorities' right to deal with these issues. As the states are at the same time in acute financial difficulties, the financing of a large number of long-term projects (e.g. parts of the social infrastructure, regional planning and zoning and especially environmental politics) was transferred to regional development programmes with international financing.

This development has the positive effect of strengthening the institutions that work on the respective issues, as for example the environmental agency FEMA. Especially the supply of general infrastructure, vehicles and computer equipment for these authorities made good progress. Another positive effect of the programmes is the qualification of employees, the introduction of a new legal basis and new administrative procedures as well as the engagement of consultants. On the other hand, the planning and realization routines of the international organizations, which are put automatically into practice in the co-operation, can not always master the problems at hand. In the special case of the management of the protected areas, the



Brazilian experiences show that successful intervention needs a long-term perspective, a considerable financial commitment, which does not depend on short-term or guaranteed success, and last but not least locally adjusted solutions. Contrary to this, the planning procedures, which are in use at the moment, are characterized by rigid and limited schedules so that the continuity of the measures after the end of the financed period is questionable. These procedures also depend on complex bureaucratic structures which often exceed the administrative capacities of the executive authorities so that especially the technical decisions are taken by external consultants. From this follows that the results are mostly limited to the compilation of voluminous reports and concrete effects simply fail to appear.

### *Approaches of participative planning*

The necessity to include the civil society and the people affected in the planning process is commonly agreed on nowadays. Nevertheless, there is still a wide-spread discussion which concrete mechanisms can shape such participation effectively and satisfyingly. Experiences with promising success from other regions are often not easily transferable to the circumstances in Mato Grosso. The weakness of the state is matched by difficulties of civil organizations. After a phase of intensive mobilisation and political commitment<sup>2</sup> the non-governmental organizations in Mato Grosso are now undergoing an institutionalising and professionalising process, which is long before consolidation. Therefore the often observed tendency to have the non-governmental organizations solve controversial questions instead of the state can only lead to growing frustration on both sides.

### *Incorporation into regional contexts*

All in all there is a shortage of regionally adapted models which can adequately respond to the complexity and peculiarities of the cases. Some problems are even increased through the already mentioned transfer of solutions that come from completely different contexts. The difficulties and circumstances in the peripheral regions do not differ fundamentally from those in the central regions, but they do differ in scale.

The incorporation of environmental questions into the broader context of socio-economic change within the region is also a question of regional adaptation. Not only it is important to consider the various social actors who are affected or involved and to understand in which context they are acting, but to examine and use the connection between environmental questions and other fields of politics and social development so that inconsistencies can be avoided and synergies achieved.

It is a speciality of the regional context that the presented approaches to deal with protected areas are really new and just beginning in the study area, while in other states there are different experiences. In spite of all the difficulties mentioned earlier in this paper, all agents involved continue to strive for a possible solution. This is evident in innovations such as the implementation of private protected areas around the National Park Pantanal Matogrossense by non-governmental organizations, but also in the lasting conflicts in Chapada dos Guimarães.

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<sup>2</sup> The implementation of the National Park of Chapada dos Guimarães was an important factor in the forming of an environmental movement in Mato Grosso.

In conclusion one has to note that during the past years progress was made on the analytical and definitory level: in the scientific discussion, within the executing authorities, within the non-governmental organizations, and even in the timid attempts of the affected people to articulate their interests. To transform this progress of the discussion into actual and spatially definable results, however, seems to be more expensive and protracted than first hoped for. Searching for reasons for this dilemma shows that we need to attach more importance to complexity and variety: the number of involved agents is often bigger than it seems at first sight. The necessity to view environmental problems in the broader context of socio-economic change has not been acknowledged adequately yet and the development of regionally adapted solutions has not even begun. The analysis of these questions in regard to the peripheral area shows that the concept of territorialised environmental protection does not allow for standard solutions, which can quickly be put into practice, but demands an intensive examination of the actual ecological, socio-economic and political circumstances and their varied interrelations.

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