



Pantanal

Unifying Waters

**The Pantanal and
its rich biodiversity**

**Threats and
opportunities**

**Sustainable
development and
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Threats and opportunities

Situated right at the heart of the South American continent and with its 158,000 km² shared by Brazil, Bolivia and Paraguay, the Pantanal is the largest continental wetland on the entire planet and it is remarkable not only for its natural beauty but also for the important ecological services it provides.

The Upper Paraguay River Basin covers an area of 624,320 km², 70% of which lie in Brazil, 20% in Bolivia and 10% in Paraguay. The environmental services provided by the Pantanal sustain productive activities that are essential to the region and they share space and resources with the native biodiversity.

Those activities however are based on the exploitation of the Pantanal's natural resources and may well inflict increasing damage on them if regional development planning fails to take environmental, social and economic aspects into consideration.

Natural heritage

The Pantanal is a region with a concentration of rich biodiversity. The presence of at least 4,700 species in the region has been registered, including plant and vertebrate species. Of that total 3,500 are plant species (trees and aquatic and terrestrial vegetation) and there are 325 fish species, 53 amphibian species, 98 reptile species, 656 bird species and 159 species of mammals.

Because of its high environmental and biological importance the Pantanal was declared to be a National Heritage in 2000 under the terms of the Brazilian Constitution and the United Nations has granted it the status of World Heritage and Biosphere Reserve. In 1997, 3.9 million hectares of the Bolivian portion of the Pantanal were declared to be a protected area and the entire biome was recognised as a Wetland of International Importance under the terms of the Ramsar Convention in 2001.

Threats

However, this environmental paradise, so rich and diverse, is also a very sensitive and vulnerable region and there are serious threats not only to the lowland floodplain of the Pantanal itself,

but stemming from the highland plateaus where the springs and headwaters that feed the rivers that form it are located, and if steps are not taken to preserve them, it could disappear forever.

That is because the rhythmic flood cycle, whereby the waters rise during the rainy season and dry off during the dry season, plays a vital role in the inter-relations of the species that live there and the existence of the Pantanal as such. Any alteration to that fundamental cycle could jeopardise the ecosystems and totally modify the landscape.

The main threats stem from economic activities undertaken in an irresponsible manner that fail to take into account the fragility of the system. In a similar way, the implantation of large-scale infrastructure projects in the region could have a negative impact if they do not take the natural native characteristics of the region into due account.



“Maintaining the biodiversity of the Pantanal and the ecological processes of the Pantanal Basin means simultaneously promoting opportunities for sustainable development for the region and transforming the Pantanal into an example of the rational use of natural resources of the world’s wetland areas” – WWF’s vision for the Pantanal.



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WWF has been working hard for the conservation of the Pantanal, not just in the flooded wetland area but also in the highland plateaus, making every effort to ensure the maintenance of the hydrological and biological processes and the original landscapes, so that Man and Nature can continue to live together in harmony. To that end it is supporting sustainable development and environmental management initiatives as part of a larger trans-border strategy involving Brazil and Bolivia.

Solutions

By means of its Pantanal Programme, WWF has been active in the trans-frontier basin of the Upper Paraguay river and in the headwaters areas that feed it, addressing the region as an integral whole and proposing solutions that not only seek to preserve natural resources but at the same time manage to benefit local populations and foster sustainable development.

Conservation Units

To conserve the Pantanal's natural landscapes WWF has stimulated the creation of Privately-owned Nature Reserves in Brazil and is supporting the participative management of National Protected Areas in Bolivia. In that way it is striving to guarantee space, conditions and tools for the maintenance of those ecological services that sustain economic production in the region.

Protecting species

For 10 years now, WWF-Brazil has been supporting the Hyacinth Macaw Project, which has so successfully recuperated the population of macaws that it has become a reference mark in spe-



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cies conservation. In 2008, with the aim of protecting the Jaguar, WWF began a partnership with the Pro-carnivores Institute, a Brazilian NGO dedicated to the study and conservation of feline species. The research work involves studying the habits and behaviour of the Jaguar by placing transmitting collars on them to enable their movements to be detected and monitored by GPS. The results are shared with cattle ranchers and they are stimulated to undertake actions designed to protect the species.



The Jaguar • The Pantanal is also home to the largest feline species in the Americas – the Jaguar (*Panthera onca*). This animal, which is both feared and admired, is a fundamental species for the Pantanal. Because it is right at the top of the food chain it serves as a good indicator of the health of the environment and accordingly the protection of natural environments inevitably involves protection of the Jaguar. The presence of this animal shows that the region still contains areas with good levels of conservation.

Land-use and settlement planning

In partnership with public and private stakeholders in Bolivia and Brazil, WWF is contributing towards the design and implementation of land use and settlement plans on the part of Municipal bodies dedicated to environmental management. The aim is to ensure that the analyses of development options for the Pantanal embody an integral vision in regard to forms of land-use and occupation and their respective impacts on the region's seasonal hydrological pulses.

Also aimed at achieving those objectives are the project for the conservation of springs and the recuperation of degraded soils in the headwaters areas of the Pantanal being undertaken in Mato Grosso (Brazil), and the studies of soil vulnerability to the effects of climate change.



Sustainable development and conservation

Sustainable cattle ranching

The articulation with the livestock-farming segment is fundamental to achieving Pantanal conservation objectives because it is the principal economic activity in the region.

Since 2003, WWF has been supporting certified organic beef production in the Brazilian Pantanal, in a partnership with the Brazilian Organic Cattle Ranching Association (ABPO). Organic cattle ranching is aimed at maintaining an ecological equilibrium that embraces the productive, social and environmental components of the activity. In 2010 the programme started to be replicated in Bolivia through an alliance with local producers and the Centro de Investigación Agrícola Tropical – CIAT (Tropical Agriculture Research Centre).

WWF is also stimulating discussion on the beef production chain and has participated actively in the construction of the Working Group on Sustainable Cattle Ranching in Brazil. The WG seeks to widen the discussion of the criteria to be adopted by each element that is part of the beef production chain.

Socio-environmental responsibility

WWF seeks to stimulate key industries in the region to adopt criteria of responsibility in regard to the environmental contamination caused by industrial residues and the inadequate use of water. It also stimulates the responsible purchasing of cattle that takes into account the sustainable management of native vegetation.

Income generating and gender

Support has been provided to projects designed to generate income such as the women's association Amor-Peixe, in Corumbá (MS-Brasil), which produces handicrafts using cured fish skins and is a good example of income generation combined with environmental conservation. Another project conducted by women is the treatment and recycling of solid state

undertaken by the Asociación de Mujeres de Santa Clara (Santa Clara Women's Association), in San Matias, Bolivia. It not only addresses the municipality's problem of solid waste disposal but it also generates income for the families.

Environmental education

WWF also fosters mechanisms to ensure the active participation of the Pantanal populations by means of an environmental education programme and the diffusion of technical information among them. That work is directed at striking a balance between human and industrial development and the simultaneous maintenance of the quality of the Pantanal's natural resources.

Help to conserve the Pantanal

Give your support to WWF's work in the Pantanal. Join us and help to conserve this immensely important natural heritage. Make a contribution towards ensuring that the Pantanal continues to be the site of rich biodiversity, a place where Man and Nature can live together in harmony.



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