



WWF

FACTSHEET

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# CERRADO

## BIRTHPLACE OF THE WATERS

### OCCUPATION AND OPPORTUNITIES

Half the original vegetation has already been lost because it is the target of agricultural expansion, and less than 3% is under effective forms of conservation in protected areas.

### SUSTAINABLE DEVELOPMENT

The second largest Brazilian biome after the Amazon, it is home to rare species of animals and to plant species of importance to local and urban populations and the economy.

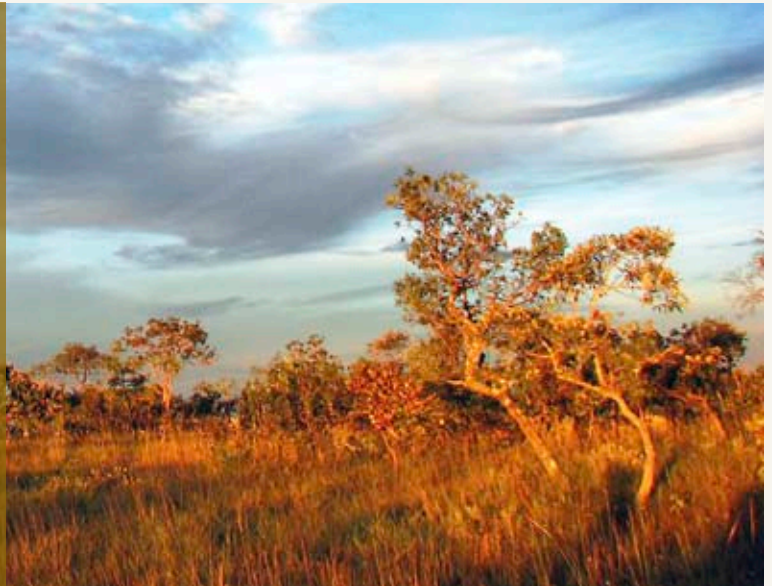
### NATURAL WEALTH

Major source of water. The deep-root type savannah richest most abundant in forms of life on the planet, it is home to 5% of all known species in the world and three out of ten Brazilian species.



# CERRADO

The Cerrado extends into ten Brazilian states and the Federal District, but parts of it can also be found in the middle of the Amazon and in the states of Roraima, Amapá, Amazonas and Pará



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## Occupation and economy

It is the second largest vegetation formation in the South America with an area of two million square kilometres, surpassed only by the Amazon. Originally about one quarter of the entire Brazilian land surface was dominated by this vegetation with its grasslands, palm swamps, forests and savannahs with deep-rooted species. Such environmental variety associated to the variety of soil types and the abundance of water explain the extraordinary abundance of life in the Cerrado.

The first signs of human presence in the region date back 12 thousand years. Occupation by non-indigenous populations, however, only began in the 18<sup>th</sup> century driven by the search for gold and precious stones. In the 1930s the building of the São Paulo-Anápolis railway further stimulated settlement. Mineral prospecting was soon

substituted by open range cattle raising which strongly marked the regional economy up until the 1950s. Then, in the wake of the construction of two capital cities, Brasília (Federal District) and Goiânia (state of Goiás), government incentives brought in more roads and railways, and government agricultural policies installed what came to be called the 'Green Revolution'.

Around six out of every ten hectares of Cerrado land are suitable for mechanised agriculture. That natural aptitude has led to the occupation of 850 thousand square kilometres (over 40%) of it by crops and planted pastures.

Half of the original Cerrado vegetation has been lost to make way for soy, cotton, sugar cane, free-range cattle farming, energy production and built-up urban areas. It is believed that a mere 20% of the Cerrado is still intact and the rest is in highly fragmented stands.

The Cerrado is responsible of one fourth of Brazil's overall production of grains and four out of every ten head of cattle. Furthermore, almost half of the almost ten million tons a year of charcoal produced in Brazil actually comes from native Cerrado, most of it consumed by steelworks.

Brazilian legislation allows proprietors of Cerrado areas to clear vegetation from up to eight out of every ten hectares of their land while in the Amazon forest lands, proprietors are obliged to conserve native vegetation on eight out of ten hectares.

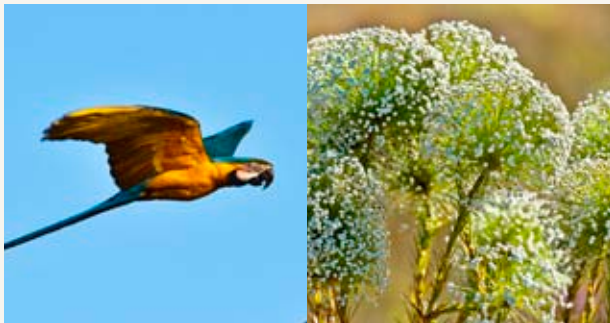


|                 |                               |
|-----------------|-------------------------------|
| Cerrado         | Pantanal                      |
| Amazon          | Amazon - Caatinga transition  |
| Caatinga        | Amazon - Cerrado transition   |
| Pampa           | Cerrado - Caatinga transition |
| Atlantic Forest |                               |

## Biodiversity Conservation

Deforestation, deliberate burning and uncontrolled fires are extremely harmful to the Cerrado's biodiversity. While it is true that 168 thousand square kilometres (8,2%) of the Cerrado are under some form of protection, less than 3% are under more effective protection in the form of Integral protection Reserves or National Parks.

An estimated one in five species endemic to the Cerrado can no longer be found in the protected areas and there are 137 Cerrado animal species and 132 plant species on the Brazilian list of species threatened with extinction.



## THE CERRADO CLIMATE IS 'TROPICAL SEASONAL' WITH TWO CLEARLY DEFINED SEASONS: THE DRY SEASON FROM MAY TO SEPTEMBER, AND THE RAINY SEASON, FROM OCTOBER TO APRIL.

The relatively minuscule area currently under official protection means that urgent measures are needed to create more federal, state, municipal and private protected areas. The federal government has already mapped out over 400 priority areas for conservation.

In addition to nature conservation, protected areas and preserved stretches of Cerrado provide important ecosystem services entirely free of charge, greatly contributing to ecological equilibrium and benefiting human activities. Among such services are maintaining the good quality of the air and soil fertility, supplying clean water and impeding floods and erosion processes.

### Naturally rich

Although it is still not enough to guarantee the Cerrado's perpetuation, the network of Cerrado protected areas is home to incomparable natural beauty and it plays an important role in driving local and regional economies. Local populations, in particular, use round 300 native plants of the Cerrado as food, medicine or raw material for handicrafts.

Its flat relief and typical sparse and scrubby vegetation with low twisted thick-barked trees have inscribed an impression of monotony and little worth on the Brazilian collective imagination; in fact the Cerrado is just the opposite. The Cerrado is home to surprisingly beautiful, exotic landscapes and cultures with great economic and tourism potential. The Cerrado also has over 4 thousand caves, six out of every ten caves registered for the whole country.

The Cerrado is home to a profusion of natural grasslands, savannahs, palm swamps and forests enhanced by many streams and waterfalls with crystal-clear waters. There are vast and impressive tablelands (*Chapadas*) like the Parecis, Guimarães, Pacaás Novos, Veadeiros, Urucuaia and Espigão Mestre Chapadas. They form the watershed divides among

the basins of the São Francisco, Tocantins, Paraná and Uruguay Rivers.

Renowned as the world's the richest savannah in life forms, the Cerrado is home to 120 species of reptiles, 150 amphibian species, 161 mammalian species, 1,200 fish species, 837 species of birds and more 11.6 thousand kinds of plants have been identified in the region. Of those, more than 5 thousand can only be found within the limits of this biome.

It also contains more than 90 thousand insect species of which 13% are butterflies, 35% are bee species and 23% are tropical termite species.

When all that rich variety is added together, it means that the Cerrado protects 5% of all the species in the world and three out of every ten Brazilian species.

### Opportunities

The waters that rise in the Cerrado replenish three important aquifers and are the headwaters of five of Brazil's eight largest river basins – the Amazon basin (Tocantins), Atlantic North-northeast, the São Francisco, the Atlantic East and the Parana-Paraguay basins. This last basin is intimately associated to the survival of the Pantanal, the world's largest continental floodplain.

Nine out of ten Brazilians consume electricity generated by waters from the Cerrado biome and they generate more than half the electricity consumed by Brazil as a whole. The inhabitants of the Federal capital are supplied by water that stems from around twenty streams and rivers, all of which rise in protected areas of the Cerrado. Surveys indicate that there are more than 7 thousand centre pivot sprinkler systems in operation in the Cerrado, irrigating areas varying from 20 to 150 hectares per unit, concentrated

## TODAY THERE ARE OVER 30 MILLION BRAZILIANS INHABITING CERRADO AREAS, INCLUDING QUILOMBOLA COMMUNITIES (DESCENDED FROM SLAVES), BABASSU PALM GROVE, RIVERSIDE, AND OTHER TRADITIONAL AND INDIGENOUS COMMUNITIES.



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in Cristalina (Goiás), Paracatu (Minas Gerais) and Luiz Eduardo Magalhães (Bahia).

By means of its Action Plan to Prevent Deforestation and Burning in the Cerrado- Conservation and Development (2010) the Brazilian government has committed itself to recuperate at least 8 million hectares of degraded grazing land and to cut gas emissions from deforestation in the Cerrado by 40% by 2020.

## Sustainable Development

In the 1990s, WWF-Brasil undertook activities to foster ecotourism, agro-ecology, education and environmental protection in the Chapada dos Veadeiros tableland in Goiás. In November 2000 the United Nations officially recognised the area as Cerrado Biosphere Reserve II (Goyaz) embracing 26 municipalities in the northeast of the state of Goiás.

WWF-Brasil is also active in the conservation and recuperation of Cerrado areas in the Upper Paraguay River basin on whose healthy environmental state the Pantanal floodplain depends. The WWF Network classifies the Pantanal-Cerrado as one of the 35 top priority conservation regions on the planet.

Joining forces with civil society, private sector and governmental organisations in efforts directed at preserving and recuperating the Cerrado, WWF-Brasil structured a new set of actions for the Cerrado biome to be carried out initially over a period of four years and focussed on the region around the juncture of the borders of three states – Goiás Minas Gerais and Bahia and the areas surrounding the Grande Sertao Veredas and Cavernas do Peruáçu National parks.

The federal government has issued a decree creating a mosaic of 1.5 million hectares made up of a mixture of federal, state, municipal and private protected areas and indigenous lands. The mosaic accounts for 8% of the Cerrado protected areas.

WWF-Brasil's efforts are directed along four lines of action:

- **responsible agriculture and livestock production** – stimulating the adoption of good practices that will make production more profitable, competitive and sustainable, guaranteeing a safe food supply associated to a reduction in greenhouse gas emissions;
- **nature conservation** – reducing impacts in the areas around the Grande Sertao Veredas National park based on establishing dialogues and offering support to rural proprietors involving economic chains and public policies;
- **landscape planning** – developing ecological and landscape planning criteria to provide better guidance for land use and settlement, legal reserve recuperation and the establishment of ecological corridors;
- **Cerrado Rescue** – disseminating figures and information on the situation, impacts and success stories associated to better forms of land use in the Cerrado.

## THE CERRADO IN NUMBERS

|                               |   |
|-------------------------------|---|
| <b>Area</b>                   | Over 2 million square kilometres, or ¼ of all Brazilian territory   |
| <b>Human presence</b>         | Remains date back 12 thousand years   |
| <b>Conservation</b>           | Less than 3% under effective protection   |
| <b>Deforestation</b>          | Half the natural vegetation eliminated by activities like soy plantations and free range cattle raising. Only 20% considered intact and the rest, highly fragmented.      |
| <b>Biodiversity</b>           | Shelters 5% of the planet's species and 30% of Brazilian biodiversity. Around 300 native plants are used as food, medicine or material for handicrafts.                   |
| <b>Water Supply</b>           | Feeds three large aquifers six of Brazil's eight largest river basins, and the pantanal. The Brazilian Federal capital is supplied by water from Cerrado protected areas. |
| <b>Electricity production</b> | Over half the electricity produced in Brazil depends on the waters from the Cerrado and nine out of ten Brazilian use electricity from that source.                       |
| <b>Production</b>             | Answers for a quarter of Brazil's total grain harvest and four out of every ten head of beef cattle in the national herd.   |
| <b>Caves</b>                  | Has over 4 thousand cave, 60% of all caves registered for Brazil  |



### Why we are here

To stop the degradation of the planet's natural environment and to build a future in which humans live in harmony with nature.

[www.wwf.org.br](http://www.wwf.org.br)

\* All the figures quoted in this document have been taken from published scientific studies and/or official Brazilian Government documents

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