Biodiversity Offsets in the Pantanal

The MCR mine is located on a mineral-rich massif that emerges from the Pantanal wetland

Location	Corumbá municipality, Mato Grosso do Sul state, Brazil
Rio Tinto company	Mineração Corumbaense Reunida (MCR), Rio Tinto Brasil
Partner organisations	Conservation International; Earthwatch Institute; Fauna & Flora International; Royal Botanic Gardens, Kew
Key people	Steve Potter and Tobias Puhlmann (Rio Tinto Brasil); Douglas Guedes de Oliveira (MCR)
Habitats	Montane savanna, cerrado, cerradão, semi-deciduous seasonal forest
Birds	Blue Finch, King Vulture
Outcomes	Process for attaining Net Positive Impact on biodiversity identified; biodiversity offsets methodology piloted

BirdLife International and a number of other conservation organisations are assisting Rio Tinto to pilot its emerging biodiversity offsets methodology at an iron ore operation in the Pantanal of Brazil. This initiative aims to help Rio Tinto Brasil achieve a Net Positive Impact on biodiversity, and comply with government regulations, by compensating for unavoidable residual impacts on biodiversity through the identification and protection of sites with equivalent or greater biodiversity values outside of the Rio Tinto lease.

Project background and history

Rio Tinto Brasil operates the Mineração Corumbaense Reunida (MCR) iron ore mine in Corumbá municipality of Mato Grosso do Sul state. Rio Tinto Brasil plans to expand the capacity of this mine, and is currently undergoing the environmental licensing processes for the mine expansion, a linked steel centre and the associated logistics. Because the mine, steel centre and associated logistics are located within the Pantanal, an ecosystem of exceptional biological abundance and sensitivity, there are a number of biodiversity risks associated with the planned developments that require particular care and attention to evaluate and manage.

At the global level, Rio Tinto has developed strategic alliances with selected conservation organisation over a period of more than 10 years, through its corporate partnership programme. Rio Tinto and its global biodiversity partners, BirdLife International, Conservation International (CI), the Earthwatch Institute, Fauna & Flora International (FFI) and the Royal Botanic Gardens, Kew, are working together towards achieving Net Positive Impact on biodiversity at Rio Tinto operations around the world.

As an element of this work, a joint Biodiversity Working Group has been created to work with Rio Tinto Brasil, towards the following goal: “to guide and support the project in its progress towards Net Positive Impact, as part of the members’ contribution to biodiversity conservation, quality of life and the broader concept of sustainable development in the Pantanal system”.

Rio Tinto’s standard company practices already include proactively avoiding, minimising and mitigating negative impacts and taking effective rehabilitation action. The Net Positive Impact approach builds on this foundation to include effectively measuring residual impacts and offsetting these effectively, as well as undertaking additional conservation actions to contribute added benefits for the environment and the community. As one component of the overall programme of work necessary to attain a Net Positive Impact, BirdLife International and the other conservation partners have been assisting Rio Tinto Brasil to identify suitable sites for compensating for unavoidable residual impacts on biodiversity through the implementation of ‘biodiversity offsets’.

In addition to helping realise Rio Tinto’s global aim of achieving a Net Positive Impact on biodiversity, implementing biodiversity offsets for the MCR mine expansion and steel centre will enable Rio Tinto Brasil to comply with environmental licensing regulations. Following Brazilian Government Resolution 371, passed in April 2006, developers of major projects are required to contribute at least 0.5 percent of the project budget as a compensatory investment in biodiversity conservation. These funds must be invested in the implementation and maintenance of a strict protected area.

Project details

An initial desktop study of biodiversity offset options for Rio Tinto Brasil was conducted in April and May 2007 by BirdLife and the other global biodiversity partners. This study followed a bespoke methodology, informed by Brazilian legislation on compensatory payments and draft tools for selection of biodiversity offsets developed by the Business and Biodiversity Offsets Programme (BBOP). The desktop study was followed, in August 2007, by a two-day workshop with local experts familiar with the biodiversity values of the MCR mine lease and the wider area. The two exercises contributed to a review of biodiversity offset options the mine expansion and steel centre.

The review began by cataloguing components of biodiversity (species, vegetation communities and ecological processes) recorded or predicted to occur at each project site, and then screened them against a series of filters, to identify those for which offsets were a high priority. The review next prepared a list of candidate offset sites, and reviewed each one to identify sites that supported as many as possible of the components of biodiversity for which offsets were required.

Components of biodiversity for which offsets were assessed as being a high priority included montane savanna, semi-deciduous seasonal forest and the cactus *Arthrocereus* cf. *glaziovii*. A number of candidate offsets sites were identified that support some of the components for which offsets are required, although no one site could be found that supports them all. Some of these sites are unprotected, while others are designated as protected areas (either government or private) but would benefit from additional investment to strengthen their management. Prior to any decision being made about which biodiversity offsets to invest in, there remains a need to consider non-biodiversity factors that may influence the suitability of the offset options identified, such as land tenure arrangements, land prices and opportunity costs.

The future

The biodiversity partners are currently working with Rio Tinto Brasil to undertake outstanding work required to finalise the review of offset options. Next steps include: resolution of outstanding taxonomic and identification issues that are currently preventing a definitive assessment of the conservation significance of certain species found at the mine expansion and steel centre; completion of an Operational Biodiversity Action Plan for the project, to determine the degree to which the conservation of each component of biodiversity will be addressed by mitigation measures; and detailed feasibility studies of each offset option.

Montane savanna is one of the vegetation communities for which offsets are required