NEW GENERATION PLANTATIONS project

## Mondi

## Creating an ecological buffer to conserve wetlands


### Overview

SiyaQhubeka Forests (SQF) has helped to protect and rehabilitate part of South Africa's essential wetlands by delineating and restoring critical high conservation value (HCV) ecosystems. The result is the creation of a 150km-long "eco-boundary" between its commercial plantations and the iSimangaliso Wetland Park, a World Heritage Site including Lake St. Lucia, one of Africa's largest estuarine systems. The project, the first of its kind, transformed a long history of passionate dispute between local forestry operations and environmentalists into a true partnership.

It demonstrates that New Generation Plantations can maintain or even enhance biodiversity in association with HCV areas in a developed landscape.

### Background

Water is one of South Africa's scarcest natural resources. An estimated 55 per cent of South Africa's wetlands have been significantly damaged due to poorly managed agriculture and commercial forestry, mining, urban development, pollution, dams, erosion and fire. Moreover, an estimated 6 million South Africans do not have access to safe drinking water, relying on streams, rivers, marshes and other types of wetlands to meet their needs.

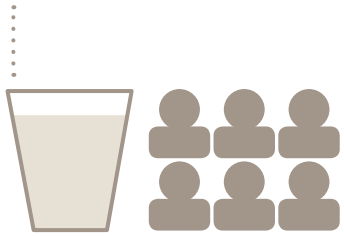
People and nature depend on healthy wetland ecosystems. South Africa's wetlands purify and store water, control erosion, reduce the severity of droughts and floods by regulating stream flow and recharge underground aquifers. They are also vital for biodiversity protection, tourism, environmental education, agriculture and grazing, and as a source of food and plant materials for rural communities.

Mondi's plantations in the Eastern region of South Africa extend over more than 300,000 hectares, of which just over 200,000 hectares are planted with eucalyptus, pine and wattle. Mondi's commercial activities (commercial forestry and processing plants) use significant volumes of water and rely on healthy wetlands and riparian zones. Because of this, the company has taken a leading role in promoting the awareness, better management and protection of remaining wetlands, and the rehabilitation of those that are damaged or degraded.

South Africa's wetlands are vital for people and animals, but more than half have been significantly damaged.

**6 MILLION**

SOUTH AFRICANS
DO NOT HAVE ACCESS
TO SAFE DRINKING WATER



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## The project

When South Africa's extensive government plantation forests were privatized in 2004, Mondi successfully bid for the coastal plantations including the western shores of Lake St. Lucia in Northern KwaZulu-Natal. To manage these areas, it formed SQF, a partnership with black economic empowerment organizations, the government and local communities.

Lake St. Lucia is one of Africa's largest estuarine systems. The lake's natural beauty and history make it a popular tourist destination, and its natural resources have considerable scientific value. Lake St. Lucia is the Mkuze River estuary but receives its water from a number of other smaller rivers and streams. Its associated wetland and marine environments cover an area of just under 290,000 hectares and have long been regarded as having major importance for nature conservation and tourism.

As the only remaining coastal wilderness in the country, the area is vulnerable to disturbances from several quarters, particularly from development along the western periphery. The western shores of the lake contain extensive high conservation value (HCV) wetlands. Historically, plantation forests on these shores had a negative impact on the lake's biodiversity by reducing freshwater flow – especially during the dry season, when salinity levels in the lake escalate.

At the turn of the century, a study of the plantation forests on the western shores of the lake showed natural communities and wetlands important for conservation and other areas well suited for commercial afforestation without causing significant impacts. The study proposed creating a Commercial Afforestation Zone and a Natural Zone, which would also include existing poorly sited plantations restored to their natural state. Criteria for land to be included in the Natural Zone included the presence of important biological communities, water source areas and wetlands. Soil most suited for afforestation was included in the Commercial Afforestation Zone.

The study suggested that the boundary between the zones should follow natural features; Mondi's approach was to use soil boundaries and an experienced pedologist to separate broad soil groupings (essentially separating dryland soils and wetland or hydromorphic soils). The agreed positioning of the "eco-boundary" line between the two zones was based on a scientific ecosystem assessment and a participative approach involving Mondi, SQF, the government, environmental NGOs and the Park Authority.

The eco-boundary agreement paved the way for the transfer of 9,000 hectares (including 4,500 hectares allocated to Mondi) of commercial state plantations with significant potential conservation value to the iSimangaliso Wetland Park. A further 14,200 hectares of SQF's commercial landholdings and associated natural ecosystems were officially included within the park.



Beautiful Lake St. Lucia is important for nature conservation and tourism.

## Benefits

Today, both the plantations and the park are thriving enterprises, animals are free to roam in the plantations, wetland areas have been restored to functionality and trust levels are high.

The transferred land has now largely been rehabilitated to wetlands and grasslands, restoring soil and water conditions and encouraging biodiversity. SQF's plantation areas, including associated wetlands and natural forests, have now become part of the iSimangaliso Wetland Park.

The plantations form an important buffer between the park, local communities and commercial farming areas, protecting the wilderness area from development.

As well as benefiting Lake St. Lucia's many birds and freshwater species, the project has also extended the habitat of elephants, rhinos, buffalos, cheetahs and other game, allowing them to roam freely between the park and the commercial forestry area. Supporting science from Stellenbosch University shows that the ecological networks (biodiversity corridors through the plantations) linking HCV ecosystems are acting as corridors for some species and as source or refuge areas for other species.

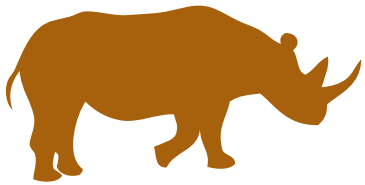
Involving local communities and small growers in the plantation model has raised the levels of skills, education and viable small businesses in the area. In cooperation with the iSimangaliso Wetland Park Authority, SQF has promoted tourism in a portion of the Lake St. Lucia system not previously accessible to the public. SQF has promoted small business initiatives such as honey production, nursery production and firewood collection, improving the livelihoods of local people. Mondi has run timber farming support schemes to enable local communities to grow and manage commercial tree plantations.

Animals roam freely between the park and the commercial forestry plantations.

BENEFITS OF SQF'S PLANTATION MODEL

**RESTORING WETLANDS**
BY IMPROVING SOIL AND WATER CONDITIONS AND ENCOURAGING BIODIVERSITY

**INCREASING HABITATS**
FOR A WIDE RANGE OF SPECIES



**IMPROVING LIVELIHOODS**
BY PROMOTING SMALL BUSINESS INITIATIVES

## Next steps

SQF is committed to "symbiotic forestry" and responsible forest management, and its plantations are certified by the Forest Stewardship Council (FSC). The company continues to strive for sustainable and mutually beneficial relationships between the forestry sector, the community and the environment.

The Lake St. Lucia project is just one example of Mondi's efforts to conserve and restore South Africa's wetlands. Mondi is the principal sponsor of the Mondi Wetlands Programme (MWP). This is a partnership between Mondi and South Africa's two largest conservation organizations – WWF South Africa and the Wildlife and Environment Society of South Africa (WESSA) – together with the Mazda Wildlife Fund. It is recognized as the most successful non-governmental wetland conservation programme in South Africa.

The MWP uses a number of strategies to promote the rehabilitation and wise use of wetlands among public, private and communal wetland users. Its activities include supporting the plantation forestry industry to sustainably manage its wetlands and where possible use wetland resources to improve the livelihoods of local communities.

With MWP, Mondi has developed its own wetland policy, and it reports on the health of all wetlands under its control. It has almost completed the rehabilitation of all riparian or wetland areas on its land. This can include:

- removing all commercial trees on or close to riparian or wetland areas
- closing agricultural drains to encourage the recovery of natural freshwater resources and associated biodiversity
- large-scale civil reconstruction projects.

The process has involved the loss of around 5 per cent of Mondi's productive forestry land – equivalent to some 240,000 tonnes of wood per year. But there are significant compensations, including more water for downstream communities and the re-establishment of important biodiversity corridors. From a business perspective, the work helps to secure Mondi's licence to operate. It also strengthens the company's environmental credibility and relationships in the industry and with NGOs, local communities, the media, investors and the government.

The Mondi-sponsored Mondi Ecological Network Programme (MENP) at Stellenbosch University researches and contributes to the implementation of ecological networks linking protected areas and HCV areas associated with Mondi's plantations. Its substantial data base from work on Mondi's plantations, including SQF, supports the principle that well-designed and well-managed ecological networks can help maintain or even enhance biodiversity in developed landscapes.

Through the NGP project, Mondi will use SQF, other plantations and supporting science to promote the NGP concept in Africa. Mondi will work closely with WWF International and WWF South Africa in promoting these NGP principles for all forestry and agricultural plantations in sub-Saharan Africa.


The Mondi Wetlands Programme supports the plantation forestry industry to sustainably manage wetlands and use them to improve the livelihoods of local communities.