

Mondi Group

GRI Biodiversity disclosures 2023



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304-1: Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas

Mondi owns or leases approximately 255,000 hectares of land for plantation forestry in KwaZulu-Natal and Mpumalanga provinces of South Africa. The table below lists all forestry sites with an indication of their position in relation to protected areas and areas of high biodiversity value outside protected areas.

Type of operations and land tenure	Location (business units or forest management units)	Coordinates (polygons' centres)	Area ¹ (hectares)	Protected areas and other areas of high biodiversity value which overlap, are adjacent to or in close proximity to operational sites
Mondi South Africa Forestry (owned or leased land)	Iswepe Area	S 26° 44' E 30° 35'	30,998	Overlapping: none. Adjacent: none. Within 5 km: none.
	Piet Retief Area	S 26° 57' E 30° 47'	32,568	Overlapping: none. Adjacent: none. Within 5 km: none.
	Dumbe Area	S 26° 57' E 30° 45'	30,053	Overlapping: none. Adjacent: none. Within 5 km: Witbad Nature Reserve; NPAES ² Focus Areas – Maputaland Delagoa Imfolozi, Moist Escarpment Grasslands.
	Ntonjaneni Area	S 28° 33' E 31° 16'	25,744	Overlapping: none. Adjacent: none. Within 5 km: eMakhosini-Ophathe Heritage Park; NPAES ² Focus Areas – Maputaland Delagoa Imfolozi Thukela.
	Umfolozi Area	S 28° 36' E 32° 04'	23,811	Overlapping: Umlalazi Nature Reserve; Enseleni Nature Reserve; Lake Eteza Nature Reserve; iSimangaliso Wetland Park World Heritage Site (adjacent and one compartment within Greater Game Reserve – cf SQF). Adjacent: none. Within 5 km: Lake Nhlabane Nature Reserve.

¹ Does not include use of subsurface or underground land.

² NPAES – National Protected Areas Expansion Strategy.

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Mondi South Africa Forestry (owned or leased land)	SiyaQhubeka forests	S 28° 28' E 32° 12'	29,158	Overlapping: iSimangaliso Wetland Park World Heritage Site (incorporated into Greater Game Reserve portion of the Park – essentially the part of the buffer zone of the World Heritage Site). Adjacent: Lake Nhlabane Nature Reserve. Within 5 km: none.
	Greytown Area	S 30° 09' E 30° 29'	48,525	Overlapping: Mt Gilboa Nature Reserve (on own landholdings). Adjacent: Blinkwater Nature Reserve; Karkloof Nature Reserve; uKhahlamba-Drakensberg Park World Heritage Site (within buffer zone); Umvoti Vlei Nature Reserve. Within 5 km: Mbona Private Nature Reserve; NPAES ² Focus Areas – Drakensberg and Midlands, Thukela.
	Umkhomazi Area	S 29° 52' E 30° 02'	34,001	Overlapping: none. Adjacent: Impendle Nature Reserve. Within 5 km: KwaYili Nature Reserve; Midmar Nature Reserve; Roselands Nature Reserve; Soada Forest Nature Reserve; Minerva Nature Reserve; Zinti Valley Nature Reserve; NPAES ² Focus Areas – Eastern Valley Bushveld.

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² NPAES – National Protected Areas Expansion Strategy.

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304-2: Significant impacts of activities, products, and services on biodiversity

In South Africa, our forestry landholdings are made up of planted areas (for commercial harvesting), infrastructure (roads and buildings), and conservation areas (unplanted areas). The primary impact of our forestry operations on biodiversity has been the historical conversion of predominantly grassland ecosystems into planted forests (legal, certified). The conservation areas are managed for biodiversity and ecosystem services, whilst the planted and infrastructure areas are managed to prevent impacts on these conservation values. Approximately 24% of our landholdings are managed for conservation purposes. This conservation area network predominantly consists of grassland and wetland ecosystems, with a small portion consisting of woodland and natural forest ecosystems. We adopt an ecosystem approach to manage our conservation areas or ecological networks. Hence, the management objectives for these conservation areas are to maintain or enhance high conservation value areas and to manage other ecologically important areas to maintain ecological integrity.

Main impacts on biodiversity and ecosystems:

- **For terrestrial ecosystems**, the ongoing risk is habitat degradation. The management activities to address this risk include controlling the extent and spread of invasive alien plants, and balancing ecological requirements for fire with fire protection requirements and with livestock grazing (where Mondi aims to implement livestock management programmes to reduce the risk of overgrazing and/or trampling). Mondi manages its silviculture, harvesting and roads operations to reduce erosion (soil loss) and sedimentation risks to its wetland and river ecosystems.
- **For freshwater ecosystems**, the main impact is the hydrological effect of water use (water quantity) by our forestry operations and the potential impact of upstream land-users and our own forestry operations on water quality. Mondi's management activities include the delineation of plantations, managing commercial areas and infrastructure (such as roads) for erosion and sedimentation, and undertaking health assessments of a representative set of rivers and priority wetlands in the conservation area network.
- **Other relatively minor impacts**, most of which are primarily caused by external factors, include damage caused by grazing animals, utilisation of non-timber products, cultivation and harvesting of non-forestry crops, illegal harvesting of plants (including illegal medicinal plant collection), and illegal hunting. The risks of pollution by chemicals (pesticides) and hydrocarbons (e.g. fuel and hydraulic fluids) are considered to be low. All cases are registered in our environmental incident management system and investigated with appropriate measures for correction and prevention implemented.

Mitigation and control measures, monitoring:

- **Control of invasive alien plants (IAP)** – In South Africa, IAPs are one of the threats to biodiversity as they can have a significant impact on freshwater and terrestrial ecosystems when not well managed. Mondi aims to keep conservation areas in a maintenance phase and monitors and controls the spread of IAPs within the conservation area network of our landholdings. As of year-end 2023, approximately 75% of our conservation area network was in a maintained state.
- **Design and management of the conservation area network** – Mondi has a long-term partnership with the Stellenbosch University Department of Conservation Entomology called Mondi Ecological Networks Programme (MENP). Within MENP, we developed principles for design and management of ecological networks or conservation corridors in our intensively managed plantation forestry landscapes. This partnership also supports the development and testing of new or improved biodiversity monitoring methodologies. Part of this partnership also included research on impacts of management activities on soil biodiversity.
- **Fire management** – Fire protection remains an ongoing challenge for our South African plantations, exacerbated by periodic drought conditions and socio-economic factors. We mitigate fire risks with naturally vegetated conservation areas, which act as fire-breaks between forestry plantations to help prevent large areas from catching fire. In recent years, we have made significant improvements to our firefighting fleet, including upgrading vehicles, improving safety specifications and increasing mobile water carrying capacity. We also implement a risk-based approach to the management of logging residues with improved pre- and post-burning assessments at harvesting sites, which is important to prevent large, catastrophic fires. Our approach was developed in cooperation with the Department of Forest and Wood Science of Stellenbosch University.
- **Livestock management** – community livestock graze the grasslands ecosystems on the conservation areas of Mondi's plantation forestry landholdings. Mondi determines stocking rates according to: the conservation objectives of our conservation areas; the fire regimes of these conservation areas; and the findings from the veld condition assessments. Mondi then engages with the livestock owners to ensure the actual livestock numbers are in line with the required stocking rates. In so doing, the risk of overgrazing and trampling impacts is reduced.
- **Wetlands assessment** – Mondi has a long-term partnership with WWF South Africa (WWF-Mondi Water Stewardship Partnership, originating from the former WWF-Mondi Wetlands Programme), which developed principles for delineation of wetlands and initiated a wetlands monitoring programme. Since 2016, Mondi has carried on this wetlands monitoring programme with the support of experienced external wetlands scientists, using the WetHealth assessment tool. This improved wetland monitoring programme assesses the state of our wetlands at a finer scale (operational units), with the results used to direct future management activities.

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304-2: Significant impacts of activities, products, and services on biodiversity continued

– **Freshwater monitoring** – Representative river ecosystems have been identified in two of Mondi's forestry operational units. The freshwater monitoring programme involves using external freshwater specialists, and includes biomonitoring (such as diatoms, dragonfly biotic index, SASS5 and the Index of Habitat Integrity or IHI, as well as measuring critical physical and chemical properties in each sample (6-monthly). Mondi also explores the use of drone technology with its partners for more effective and streamlined monitoring of the river and riparian zone ecosystem habitat integrity.

304-3: Habitats protected or restored

Historically, Mondi was one of the first large private landowners in South Africa to become involved in wetland rehabilitation. Both directly, and through its partnership with the WWF-Mondi Wetlands Programme (WWF-MWP), Mondi made investments in rehabilitating wetlands on some of its plantation landholdings in Mpumalanga and KwaZulu-Natal.

In 2000, Mondi took over the government-owned and managed pine plantations on the western shores region of the iSimangaliso Wetland Park World Heritage Site. Through its company, SiyaQhubeka Forestry (SQF), Mondi-SQF worked with the park authority, government, and environmental NGOs to determine which areas were suitable for commercial plantations, and which should be returned to their natural state (grasslands, wetlands and savanna). They mapped out a 120-km long "eco-boundary" dividing mostly wetland areas and other important ecosystem components, to be set aside for conservation. This separated them from the dry mineral soils best suited to plantations, where impacts on the natural ecosystems would be minimised. As a result, 9,000 hectares of plantations with significant potential conservation value were transferred to the iSimangaliso Wetland Park.

As South Africa is a water-scarce country with significantly degraded freshwater ecosystems, in 2011 Mondi completed a baseline health assessment of its priority wetlands within the WWF-Mondi Wetlands Programme (now WWF-Mondi Water Stewardship Partnership). This involved identifying wetland types, assessing the condition of significant wetlands and agreeing on management recommendations for the future. Subsequently, in 2016, Mondi launched a more systematic wetlands monitoring programme to build on the wetlands baseline assessment. Currently, Mondi manages about 15,000 hectares of wetlands within its owned or leased land properties. Working with a wetlands specialist, Mondi now carries out assessments regularly on a structured 4-year rotation, and its operational units are assessed every year to determine if their wetlands are being managed effectively.

There are two protected areas on Mondi's forestry landholdings in South Africa, namely the Mount Gilboa Nature Reserve, and the Mount Shannon Protected Environment. These two protected areas play a role in contributing to the protection status of critically important and high biodiversity grasslands and wetlands in the KwaZulu-Natal midlands region.

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304-4: IUCN Red List species and national conservation list species with habitats in areas affected by operations

When the IUCN Red List is applied at national or regional levels, it must be noted that a global category may not be the same as a national or regional category for a particular taxon. For example, taxa classified as 'least concern' globally might be 'critically endangered' within a particular region where numbers are very small or declining, perhaps only because they are at the margins of their global range. Therefore, Mondi uses classification systems specific to where our forestry operations are located.

The South African National Biodiversity Institute (SANBI) is responsible for the National Biodiversity Assessment (NBA), which was initially released in 2004. The latest version of the NBA is from 2018. It includes a summary of the most recent Red Lists for the main taxonomic groups with an indication of a total number of taxa with the proportion of threatened and endemic species. In the South African Red Lists the internationally endorsed IUCN Red List Categories and Criteria are used.

Taxonomic group	Extinct	Threatened	Near Threatened, Data Deficient, Rare	Least concern	Total	Endemic	% Endemic threatened
Birds	0	84	49	599	732	38	24%
Mammals	5	57	56	218	336	57	39%
Reptiles	2	24	25	346	397	209	7%
Amphibians	0	16	17	92	125	62	26%
Butterflies	3	78	62	656	799	418	18%
Plants	36	2,804	3,366	14,195	20,401	13,763	20%
Freshwater fishes	0	42	21	55	118	58	66%
Dragonflies	2	20	13	127	162	28	36%
Seabreams	0	9	9	24	42	15	33%
Linefish (bony)	0	12	36	31	79	2	0%
Linefish (cartilaginous)	0	2	13	11	26	2	0%
Corals	0	9	34	52	95	0	n/a
Total	48	3,157	3,701	16,406	23,312	14,652	20%