



Mondi Group

# GRI Biodiversity disclosures 2022



## GRI Biodiversity disclosures

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

Mondi owns and leases approximately 250,000 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 <sup>1</sup> (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 and leased land)	Iswepe Area	S 26° 44' E 30° 35'	31,594	Overlapping: none. Adjacent: none. Within 5 km: none.
	Piet Retief Area	S 26° 57' E 30° 47'	32,562	Overlapping: none. Adjacent: none. Within 5 km: none.
	Dumbe Area	S 26° 57' E 30° 45'	30,050	Overlapping: none. Adjacent: none. Within 5 km: Witbad Nature Reserve; NPAES <sup>2</sup> Focus Areas – Maputaland Delagoa Imfolozi, Moist Escarpment Grasslands.
	Ntonjaneni Area	S 28° 33' E 31° 16'	25,741	Overlapping: none. Adjacent: none. Within 5 km: eMakhosini-Ophathe Heritage Park; NPAES <sup>2</sup> Focus Areas – Maputaland Delagoa Imfolozi Thukela.
	Umfolozi Area	S 28° 36' E 32° 04'	24,113	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 None of those operational sites imply use of subsurface or underground land

2 NPAES – National Protected Areas Expansion Strategy

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Type of operations and land tenure	Location (Business Units or Forest management Units )	Coordinates (polygons' centres)	Area <sup>1</sup> (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 and leased land)	SiyaQhubeka forests	S 28° 28' E 32° 12'	27,087	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'	48,512	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 <sup>2</sup> Focus Areas – Drakensberg and Midlands, Thukela.
	Umkhomazi Area	S 29° 52' E 30° 02'	34,463	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 <sup>2</sup> Focus Areas – Eastern Valley Bushveld.

<sup>1</sup> None of those operational sites imply use of subsurface or underground land

<sup>2</sup> NPAES – National Protected Areas Expansion Strategy

## GRI Biodiversity disclosures

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

In South Africa, our forestry landholdings are made up of planted areas (where our commercial activities occur), infrastructure (roads and buildings), and conservation areas (unplanted areas of our landholdings). The conservation areas are managed for biodiversity and ecosystem services, whilst the planted and infrastructure areas are managed to prevent further impacts on biodiversity and ecosystem services. Approximately 27% of our landholdings are unplanted, with the majority (approximately 80% of these unplanted areas) set aside for conservation purposes. This conservation area network predominantly consists of grassland and wetland ecosystems, with a small portion set aside for 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 for ecological integrity purposes.

#### Main impacts on biodiversity and ecosystems:

- For **terrestrial ecosystems**, the primary impact is the legally approved conversion of predominantly grassland ecosystems into planted forests. The majority (approximately 80%) of the remaining unplanted areas are managed for conservation purposes. The ongoing threat is habitat degradation. The management activities to address this threat include controlling the extent and spread of invasive alien plants, balancing fire protection requirements with ecological requirements for fire and controlling livestock to minimise or prevent overgrazing and/or trampling. Mondi manages its silviculture, harvesting and roads operations to reduce or mitigate erosion (soil loss) and sedimentation risks to its wetland and river ecosystems.
- For **freshwater ecosystems**, the main threat is the hydrological impact of water use (water quantity) for our forestry operations and the impact of upstream land-users and our own forestry operations impact 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 the undertaking of assessments on the health of a representative set of rivers and priority wetlands in the conservation area network.
- **Other relatively minor impacts**, most of which are mainly caused by external factors, include damage caused by 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 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 recognised as one of the leading threats to biodiversity and they can have a significant impact on wetland ecosystems, as well as on water quantity and quality when not controlled effectively. Mondi has set a goal of having conservation areas in a maintenance phase. Mondi monitors and controls the spread of IAPs within the conservation area network of our landholdings. As of year-end 2022, approximately 72% 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 (ENs) in intensively managed plantation forestry landscapes. This partnership also supports the development and testing of new monitoring methodologies, such as Dragonfly Biotic Index (DBI) and Terrestrial Assessment Protocol (TAP). Part of this partnership also includes a research focus on impacts of ENs and 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 larger, catastrophic fires. Our approach was developed in cooperation with the Department of Forest and Wood Science of Stellenbosch University.
- **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 a systematic wetlands monitoring programme. Currently this monitoring is undertaken by a wetland ecologist and wetland bio-geomorphologist. This study follows the RAM method (Walters & Kotze, 2017), which is used as the standard wetland assessment tool by Mondi in South Africa. This improved wetland monitoring programme assesses the state of our wetlands at a finer scale (operational units), and uses the results to better direct future management activities.
- **Freshwater monitoring** – Within the Mondi's freshwater monitoring programme for each of three Mondi's business units representative river ecosystem was identified. Monitoring involves using external freshwater specialists and biomonitoring, including SASS5, IHI, VEGRAI, MIRAI, FRAI, DBI, diatoms as well as measuring critical physical and chemical properties in each sample (quarterly). 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.

## GRI Biodiversity disclosures

### 304-3: Habitats protected or restored

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 plantation landholdings in Mpumalanga, the Eastern Cape and KwaZulu-Natal.

In 2000, Mondi took over the then government-owned and managed pine plantations on the western shores region of the iSimangaliso Wetlands Park World Heritage Site. Through its company, SiyaQhubeka Forestry (SQF), which includes black economic empowerment partners, 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, separating 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](#).

Currently Mondi manages about 15,000 hectares of wetlands within its own and leased land properties. As South Africa is a water-scarce country with significantly degraded freshwater ecosystems, in 2011 Mondi completed a baseline assessment of the health 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. Working with a wetlands specialist, Mondi now carries out assessments regularly, requiring that every year, on a structured 4-year rotation, its operational units are assessed to determine if their wetlands are being managed effectively.

## GRI Biodiversity disclosures

### 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	na
<b>Total</b>	<b>48</b>	<b>3 157</b>	<b>3 701</b>	<b>16 406</b>	<b>23 312</b>	<b>14 652</b>	<b>20%</b>