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Mitigation and control measures, monitoring:

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improving safety specifications and increasing mobile water carrying capacity. We also implement risk-based approach to management of logging residues with improved pre- and post-burning assessments at harvesting sites, which is important to prevent larger, catastrophic fires. Our approach to residue burning 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 SA (WWF-Mondi Water Stewardship Partnership, extended 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. These assessments follow the RAM method (Walters & Kotze, 2017). 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** – Mondi has introduced an improved approach to its freshwater monitoring programme. One representative river ecosystem has been identified for each of the three ecoregions within which Mondi's landholdings are located. Monitoring, which involves using external freshwater specialists, includes biomonitoring (SASS5, IHI, VEGRAI, MIRAI, FRAI, DBI, diatoms) as well as measuring critical physical and chemical properties in each sample. Now in its 4th year, key parameters are measured quarterly, semi-annually, annually or biennially. More recently, Mondi with its partners began exploring the use of drone technology for more effective and streamlined monitoring of the habitat integrity of the river and its riparian zone ecosystems.

304-3: Habitats protected or restored

Russian operations

Mondi was one of the first large forest lease holder in the country to become involved in intact forest landscapes conservation. Through the High Conservation Value Forests project with Silver Taiga Foundation and WWF Russia we made significant investments in inventory and definition of the cores of the IFLs in Komi Republic and adjacent territories. Mondi's IFLs conservation efforts began in 2006, when we excluded a territory of the last remaining IFL in the southern taiga in Komi Republic from our forest lease area. Currently the core of this IFL, an area of almost 50,000 ha is designated for the establishment of the Federal Koigorodsky National Park.

In 2009 Mondi, in partnership with Silver Taiga Foundation and WWF Russia, started working on the inventory of Karpogorsky, Pyssky, Verkhne-Vashkinsky and Timansky IFLs in the Udorsky District of the Komi Republic at the border with the Arkhangelsk Region. This 10-year partnership led to signing a precedent setting landscape-level agreement between Mondi, WWF Russia and Silver Taiga Foundation (http://hcvf.ru/sites/default/files/moratorium/mondi_kmlt_agreement.pdf), defining the strictly protected zones of the boreal IFLs in Komi Republic and adjacent territories at a total area of 1.25 million hectares (<http://wwf.panda.org/?326513/Precedent-setting-moratorium-helping-protect-over-a-million-hectares-of-intact-boreal-forest>)

Mondi undertakes logging operations with additional measures to ensure biodiversity conservation in the parts of IFLs outside of the strictly protected zones. We monitor volumes harvested within primary forests (defined by Mondi for Russia as IFLs) annually. Since 2015 we have reported on the related payments to government in line with the UK's Report on Payments to Governments Regulations 2014 (as amended in December 2015), which implements the two EU Directives in the UK mandating annual reports by companies in the extractive and logging industries of their payments to governments in countries in which they operate (<https://www.mondigroup.com/media/9513/2017-logging-industries-report.pdf>).



South African operations

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 some investments in rehabilitating important wetlands on plantation landholdings in Mpumalanga, the Eastern Cape and KwaZulu-Natal (https://www.mondigroup.com/media/7503/wwf-mwp-celebrating-25-years_web.pdf).

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, from the dry mineral soils best suited to plantations. As a result, 9,000 hectares of plantations with significant potential conservation value were transferred to the iSimangaliso Wetland Park (<https://newgenerationplantations.org/en/casestudies/18>).

Currently Mondi manages about 15,000 ha of wetlands within its own and leased land properties. Because 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 and how to better manage them with support from 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 2011 wetlands baseline assessment. Working with an external wetlands specialist, Mondi now carries out assessments on a more regular basis, ensuring that every year, on a structured 4-year rotation, its operational units are being assessed to determine if their wetlands are being managed effectively.

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 recognized 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.

Russian operations

For the Russian operations Mondi uses the Red Book of the Komi Republic (<https://ib.komisc.ru/add/rb/introduction/>), which also includes species defined by the Red Data Book of the Russian Federation and also considered categorization of species due to IUCN criteria. The first edition of the Red Data Book for Komi Republic was published in 1998 and the updated second edition was published in 2008. In 2018 Mondi Syktyvkar provided financial support to the Institute of Biology of Komi Science Center of the Russian Academy of Science for research on updating of a list of red-listed species – it will be a third edition, planned for publication in 2019 (<https://ib.komisc.ru/add/rb/introduction/>).

Categories:	Endangered	Decreasing number	Rare	Uncertain status	Rehabilitated or rehabilitating	Total number of taxa
Kingdom of Fungi						124
• Mushrooms	0	1	31	10	0	42
• Lichens	16	13	41	12	0	82
Kingdom of Plants						311
• Water plants / algae	0	0	4	0	0	4
• Moss plants / bryophytes	0	14	49	8	0	71
• Vascular plants	12	49	125	50	0	236
Kingdom of Animals						100
• Invertebrates	1	4	37	12	0	54
• Fishes	2	2	2	0	0	6
• Amphibians	0	0	1	1	0	2
• Birds	1	9	16	6	1	33
• Mammals	1	2	2	0	0	5
Total number of taxa	33	94	308	99	1	535

South African operations

South Africa has different Red List Data Books for different groups of taxa. In 2011 a National Biodiversity Assessment was conducted (<http://bgis.sanbi.org/nba>), which includes a summary of the most recent Red Lists for the main taxonomic groups with indication of a total number of taxa with 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	# described taxa*	# threatened	% threatened	# extinct	# endemic to SA	% endemic to SA	% of Earth's taxa	Most recent Red List
Plants	20 692	2 505	12%	40	13 203	64%	6%	2011
Inland mammals	307	60	20%	3	57	19%	6%	2004**
Birds	841	122	14.5%	2	68	8%	8%	2000***
Amphibians	118	17	14%	0	51	43%	2%	2010
Reptiles	421	36	9%	2	196	47%	5%	2011
Freshwater fish	114	24	21%	0	58	51%	1%	2007
Butterflies	793	59	7%	3	415	52%	n/a	2011

*A taxon (plural taxa) is usually a species but in some cases may be a subspecies or variety.

** Inland mammals will be reassessed in 2012-2013.

***Figures for birds in this table are based on BirdLife South Africa figures online (www.birdlife.org.za/conservation/threatened-species, accessed December 2011), which are being used in preparation of the new Red List for Birds, currently underway and due to be completed in 2012.