

A close-up photograph of a green leaf, showing a detailed network of veins. The veins are a lighter green color, contrasting with the darker green of the leaf's surface. The veins form a complex, branching pattern across the leaf. The background is dark, making the leaf's structure stand out.

Biodiversity Risk Assessment

Naspers Group

Final

July 2024

Contents

1.	Executive summary	03
2.	Introduction and context setting	07
3.	Assessment methodology	14
4.	Risk assessment results	21
5.	Implications	58
6.	Conclusion	61
7.	Glossary	63

Executive Summary | Overview

EY was engaged by Naspers to conduct a qualitative biodiversity assessment which was guided by the Taskforce on Nature-related Financial Disclosures (TNFD) framework and utilised the World Wildlife Fund’s (WWF) Biodiversity Risk Filter (BRF). The assessment mapped out the biodiversity dependencies, impacts, risks and opportunities faced by the Naspers’ group and the following subsidiaries to document a nuanced understanding of the operational context and the broader environmental implications.

1. iFood	2. eMAG	3. M24 Logistics	4. PayU
5. OLX	6. GoodHabitZ	7. Takealot	8. Corporate Offices

Despite the identification of certain biodiversity risks, the overall implication to the Naspers group and subsidiaries remains relatively low, given the operational context of each subsidiary and the dependency levels of direct operations. Additionally, key context was incorporated from the Climate Risk Assessments performed for the respective subsidiaries, acknowledging the link between climate and biodiversity risks and the overarching need for integrated solutions.

One other key framing consideration for the analysis was the respective business models and digital nature of Naspers’ subsidiaries which also informed the Climate Risk Assessments. Specifically, as most of Naspers’ subsidiaries have very few physical assets and mainly run digital/ virtual processes, the exposure to biodiversity risks and dependency on ecosystem services is deemed minimal compared to other business sectors. In addition, where the subsidiaries do have physical assets, these are often set in urban/ commercial areas that have already experienced drastic biodiversity shifts, supporting the view of minimal specific direct biodiversity risks.

The biodiversity assessment conducted did not include the supply chain of the subsidiaries. However, within iFood and eMAG’s extended supply chains, there is dependency on biodiversity and ecosystem services. For example, iFood and eMAG’s extended supply chains rely on regulating and supporting ecosystem services that enable production processes, including the cultivation of crops or breeding of animals which are key inputs for the food and beverage production within restaurants and for grocery stores and could result in higher costs of inputs within iFood and eMAG’s extended supply chain or disruption/ impacts on availability for certain goods. This is an area identified for future investigation and research due to the pervasive impact ecosystems have on the respective supply chains of iFood and eMAG, from both a risk perspective as well as the potential opportunities present for Naspers’ subsidiaries in shifting to sustainable supply chain management.

The following sections of this report provide key insights into biodiversity from a global perspective, shifting towards a focused assessment on Naspers-specific considerations and implications.



Executive Summary | Methodology and Risk Identification

METHODOLOGY

- Through inputting the co-ordinates of the subsidiaries and corporate offices into the WWF BRF and assigning specific sectors thereto, the output generated provided quantitative biodiversity risk ratings per operational city, encompassing location and sector specific considerations.
- These ratings were used to identify the main drivers of biodiversity risk across the Naspers Group operations, namely 1) Provisioning Services, which refer to the vital natural inputs, 2) Regulating & Supporting Services - Enabling, which refer to essential ecosystem services that facilitate and regulate various production processes within industries, 3) Regulating Services - Mitigating, which refer to the occurrence of natural hazards can disturb or disrupt projects, operations, or entire value chains 4) Pressures on Biodiversity, referring to direct drivers or pressures are drivers that unequivocally influence biodiversity and ecosystem processes and lastly 5) Reputational Risk arising from a company's negative impacts on biodiversity and people, both actual and perceived
- The main drivers of risk were then qualitatively assessed by applying specific operational perspectives and considerations to each subsidiary respectively to inform the direct biodiversity risk rating to which each subsidiary is exposed to. Please see the table below for further detail on the qualitative considerations.

RISK IDENTIFICATION

- Based on the WWF BRF ratings as well as the qualitative assessment performed per main driver, the risks identified were assessed in accordance with the associated dependencies, impacts and opportunities. This assessment was done considering how biodiversity has the potential to impact Naspers and the relating subsidiaries as well as how the companies can impact biodiversity. This was guided by the TNFD.

Table 1: Qualitative considerations per subsidiary.

Subsidiary	WWF BRF Biodiversity Risk Rating based on location and sector	Specific qualitative considerations informing the final rating for Naspers subsidiaries	Adjusted Final Risk Rating
iFood	Medium	<ul style="list-style-type: none">Digital nature of operationsUrbanisation status of physical assets locations (limited dependencies on ecosystem services)Diverse product offerings reducing dependencies on specific commoditiesDiverse geographical locations for some subsidiaries	Low
eMAG	Low/Medium		Low
PayU	Medium		Very Low
OLX	Medium		Very Low
GoodHabitZ	Medium		Very Low
Takealot	Medium		Very Low
M24 Logistics	Medium		Very Low
Corporate Offices	Medium		Very Low

Executive Summary | Broad consideration of value chain risks

HOW VALUE CHAIN CONSIDERATIONS IMPACT THE OVERALL BIODIVERSITY IMPLICATIONS

- Guided by the identified risks, the biodiversity considerations for the Naspers Group as well as the subsidiaries and corporate offices stem predominantly from the extended supply chains and the extent of the subsidiaries' dependencies on high-risk commodities. The scope of the study did not encompass the subsidiaries value chains; however, it is likely that the dependencies and potential impacts on biodiversity would stem predominantly therefrom, e.g. iFood, as reseller of food and beverages would have dependencies on the agricultural, forestry, fishing and aquaculture sector which supplies the restaurants for which iFood delivers. These potential links have identified in line with the SBTN's high impact commodity list (HICL), which is categorised according to the following socio-economic systems: 1) built environment, 2) energy and extractives, 3) food system/food land and ocean use. These were then mapped to the subsidiary-specific sectors to identify any potential link.

Table 2: Potential link to high-risk commodities within the supply chain

Subsidiary	Sector	Potential link to high-risk commodities within the supply chain	Overall implications
iFood	Food & Beverages	<ul style="list-style-type: none">Food system / Food land and ocean use (e.g., cattle, maize, sugar cane and corn)	The diverse service or product offerings and lack of dependencies on any single commodity reduces the overall reliability of the Naspers operations on any single biodiversity factor. Therefore, the overall direct implications are deemed significantly lower than that of sectors such as agriculture.
eMAG	E-commerce	<ul style="list-style-type: none">Food system / Food land and ocean use (e.g., cattle, maize, sugar cane and corn)Energy and extractives (e.g., precious metals such as copper)	
PayU	Fintech	No direct link	
OLX	Wholesale and retail trade	No direct link due to second-hand trade	
GoodHabitZ	E-learning	No direct link	
Takealot	Wholesale and retail trade	<ul style="list-style-type: none">Food system / Food land and ocean use (e.g., cattle, maize, sugar cane and corn)Energy and extractives (e.g., precious metals such as copper)	
M24 Logistics	Transportation/Logistics	No direct link	
Corporate Offices	Corporate Services	No direct link	

Executive Summary | Overall considerations and conclusions

Based on the initial assessment, desktop review and qualitative considerations, the overall biodiversity risk for Naspers and the in-scope subsidiaries appears limited, with higher impacts and dependencies potentially existing in the supply chains. The TNFD showcases the linkages between nature, dependencies, risks, impacts and opportunities on business. These four concepts are collectively referred to by the TNFD as nature-related issues and include: Dependencies of the organisation on nature; impacts on nature caused, or contributed to, by the organisation; risks to the organisation stemming from their dependencies and impacts; and opportunities for the organisation that benefit nature through positive impacts or mitigation of negative impacts on nature. It is essential to evaluate dependencies and impacts on nature to assess the risks and opportunities to an organisation (please see Figure 1 below). Naspers’ dependencies and impacts on biodiversity primarily exist within the extended supply chain. For example, some of Naspers’ subsidiaries have suppliers that will directly use or consume high impact commodities when producing products.

POTENTIAL OPPORTUNITIES

- Naspers could have a positive impact on biodiversity, for example by ensuring that their supply chain engagement aims to minimise negative impacts on natural habitats and ecosystems, including engaging with suppliers that implement responsible sourcing policies
- Additionally, biodiversity considerations could form part of Naspers’ investment decision-making process, partnering with suppliers that have sustainable practices and contribute positively to the conservation of natural resources.
- Through its ventures, Naspers could support the development and deployment of technologies that contribute to biodiversity monitoring, conservation, and restoration.
- As a significant player in the global market, Naspers has the potential to engage in partnerships with non-government organisations (NGOs), government bodies, and other organisations engaged in biodiversity conservation.

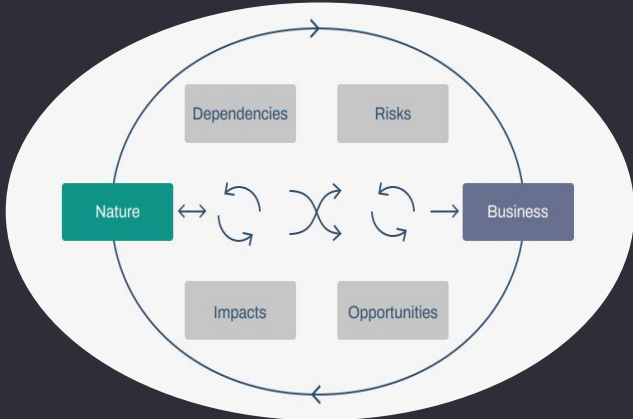


Figure 1: Nature-related dependencies, impacts, risks and opportunities per the TNFD

SUMMARISED OVERALL OUTCOME

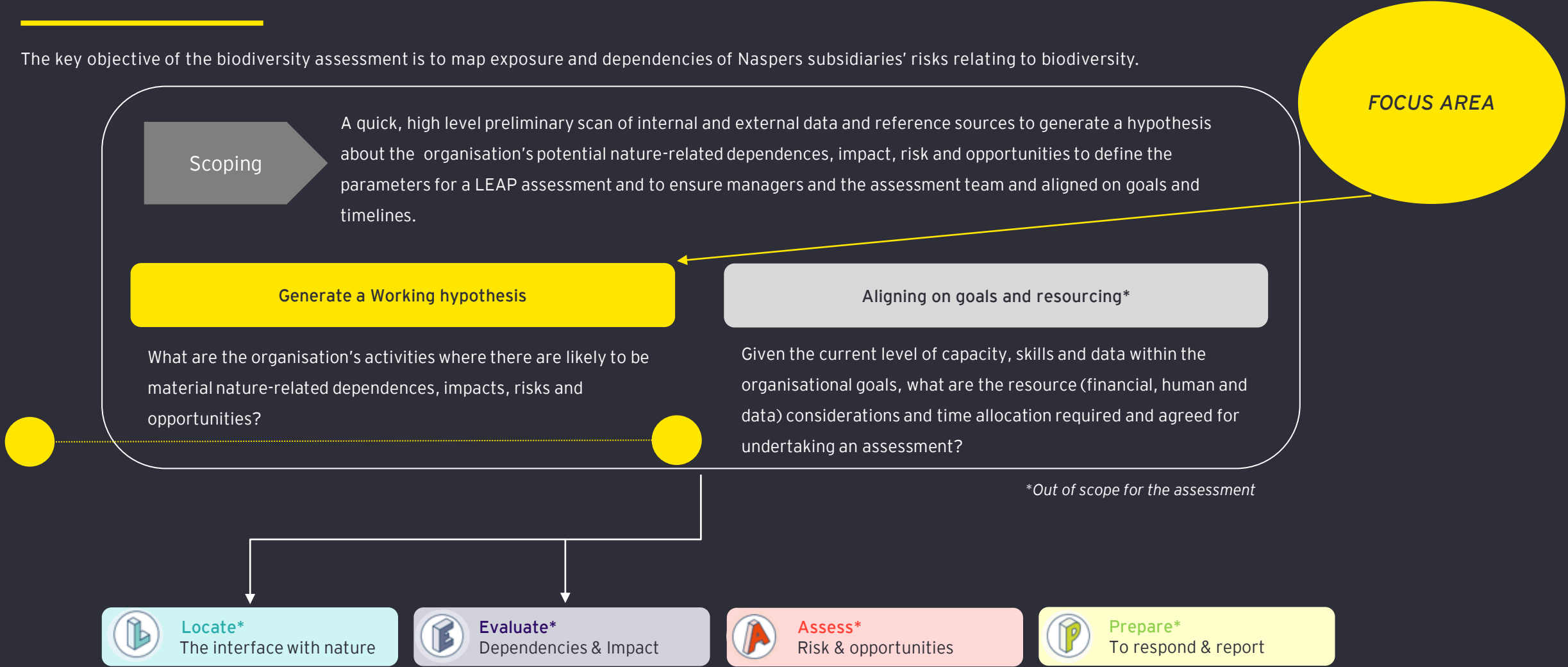
- LIMITED DIRECT BIODIVERSITY RISK
- SUPPLY CHAIN DEPENDENCIES ARE KEY AREAS OF FOCUS, WITH THE POTENTIAL REQUIREMENT FOR FURTHER INVESTIGATION

The following sections of the report outline the interconnectivity of biodiversity with climate and business operations, forming the underlying foundations on which the detailed risk assessment was performed.

Introduction and context setting

Introduction | Objectives of the biodiversity risk assessment

The key objective of the biodiversity assessment is to map exposure and dependencies of Naspers subsidiaries' risks relating to biodiversity.



As part of this assessment, there are essential background details that shape the basic parts of the tasks carried out. This includes taking into account global considerations, regulatory evolution, and the changing nature of operations.

Introduction | Biodiversity is becoming an imperative topic for business

Natural capital

Biodiversity

Ecosystem services

Ecosystem services, like pollination, water purification, disease control, and climate regulation are critical to the functioning of humanity and all life on earth. Healthy biodiversity ensures the resilience of ecosystems, which in turn underpins the sustainability of the businesses that depend on these services. Furthermore, a diverse biosphere* can act as a buffer against extreme climate events, in times when climate change is a paramount concern.

Human activities, including deforestation, pollution, overfishing, and the climate crisis are some examples of activities accelerating the rate of biodiversity loss. This loss jeopardises not only the natural world but also the economic sectors that depend on healthy ecosystems, and there has been a shift in global focus to conserve and sustainably manage biodiversity.

“

The greatest threat to our planet is the belief that someone else will save it.”

- Robert Swan

*Biosphere: the regions of the surface and atmosphere of the earth occupied by living organisms.

Given the complexity of nature-related risks and the rapidly evolving global concerns, there is increasing evidence that the risks faced by businesses and economies are increasing in severity and frequency.

For the Naspers Group, the current materiality assessment of environmental impact per the 2023 annual report highlights biodiversity as material for the corporate operations, the groups' supply chain and the investment portfolio, with biodiversity featuring as a focus theme for the group. Due to the diverse operational context of Naspers' subsidiaries, varying considerations need to be brought in when assessing the dependencies and impacts relating to biodiversity.

On that basis, each subsidiary was assessed individually, considering the specific operational context as well as the conclusions from the individual climate risk assessments previously performed.

Introduction | Focused global action towards addressing biodiversity concerns

Significant advancements are occurring in the regulatory space for biodiversity, similar to the earlier development of regulations established for climate issues. While biodiversity, on an overall basis, has been assessed as relatively low risk for the Naspers group, the importance of continued consideration is key (as indicated by biodiversity being a material topic disclosed in the 2023 annual report).

The 15th meeting of the Conference of the Parties (COP) to the Convention on Biological Diversity (CBD) was held, aiming to outline a global framework for preserving and protecting nature. COP15 adopted the “Kunming-Montreal Global Biodiversity Framework” (GBF) which is intended to set clear, measurable targets for biodiversity conservation and sustainable use, similar to how the Paris Agreement under the UNFCCC sets targets for climate change mitigation and adaptation. The goal is to encourage international action to halt and reverse the loss of the Earth's biodiversity. Additionally, COP15 highlighted the crucial link between biodiversity and climate change by evidencing nature’s role in the journey to meet the Sustainable Development Goals and to limit global warming to 1.5 degrees. (Source: [UN Biodiversity Conference \(COP 15\) \(unep.org\)](#)).







COP15:	COP27:	COP28:
<ul style="list-style-type: none">• Agreement on the Biodiversity Framework’s 23 commitments, to protect 30% of the planet’s land and oceans for nature by 2030 (the 30x30 pledge) and to restore 30% of the plants degraded ecosystems.	<ul style="list-style-type: none">• Establishment of a loss and damage fund• Agreement to create a fund for countries dealing with climate disasters and hold this as a future standing agenda item• Definition of a framework to measure the goals achievement and enable reviews of progress.	<ul style="list-style-type: none">• Completion of the world’s first “global stocktake” to assess global progress and efforts to keep the global temperature rise below 1.5 degrees Celsius.• Pledge \$2.6 billion for food systems transformations.• Allocation of \$2.6 billion towards nature protection.

While Naspers does not currently have any targets associated with biodiversity, the outcomes of COP15, COP27, and COP28 have significant implications due to increased scrutiny on corporate impacts on ecosystems, potentially affecting Naspers' supply chain management and corporate social responsibility strategies.

The growing global support for the climate agenda and the increasingly stringent regulations will heighten expectations for companies like Naspers to incorporate climate and biodiversity factors into their business strategies and decision-making. Additionally, companies will be expected to disclose their environmental performance transparently. Understanding the forthcoming reporting obligations and expectations necessitates an evaluation of the prevailing regulations and the key industry bodies that are influential in this area.

Introduction | Regulatory landscape and industry bodies

While the global trajectory of increased biodiversity and climate focus has been integrated into global actions, companies have yet to completely incorporate biodiversity into their risk management and non-financial reporting systems, despite the subject receiving increased regulatory and investor focus.

REGULATIONS	EU Taxonomy <ul style="list-style-type: none">From FY2022, the “Do no significant harm” (DNSH) principle on biodiversity required when assessing the alignment of activities with climate-related objectivesFrom FY2023: Alignment with Objective 6 on “Biodiversity and Ecosystems”	 	<div>REGULATORY VIEW EXPECTATIONS OF COMPANIES</div> <p>Companies are going to be required to:</p> <ul style="list-style-type: none">Evidence a clear understanding of their dependencies, risks, impacts and opportunities as related to biodiversity and climateConsider targets and metrics to report on biodiversity and to provide accurate and understandable information on governance, strategy and risk (as well as risk management processes)Highlight and clearly evidence the interconnectivity of biodiversity, climate and the business operations (as well as the link to the financial reporting suite) as guided by the ISSB standards, TCFD and TNFD. <p><i>The interconnectivity between climate and biodiversity was a key focal point in this assessment. Further detail will be provided on this in the sections that follow.</i></p>
	CSRD <ul style="list-style-type: none">From FY2024: Mandatory reporting standard on biodiversity and ecosystems (ESRS E4) to ensure more ambitious, relevant and harmonised reporting.		
RATING AGENCIES	CDP <ul style="list-style-type: none">From 2023, the CDP questionnaire contains a new biodiversity module.		
REPORTING STANDARDS	TNFD <ul style="list-style-type: none">From FY2023: The TNFD final framework was released, guiding companies on how to assess, incorporate and report on nature-related risks and opportunities.		
	Science-based Target Network (SBTN) <ul style="list-style-type: none">From FY2024: Draft methods and tools disclosed in 2023 for assessing the materiality of pressures on biodiversity and for setting-up targets associated with land use and freshwater (to be finalised in 2024).		
	ISSB <ul style="list-style-type: none">Informed by its recent consultation on future priorities, the International Sustainability Standards Board (ISSB) will commence projects to research disclosure about risks and opportunities associated with:<ul style="list-style-type: none">biodiversity, ecosystems and ecosystem services; and human capital.		

Introduction | Interconnectivity between climate and biodiversity, specifically focused on physical climate risks

Biodiversity risks are intrinsically linked to the climate risks already identified for the Naspers subsidiaries. Given the increasing focus on biodiversity for businesses, and in recognition of the interrelationships between biodiversity and climate change, major international commitments such as the Paris Agreement include biodiversity aspects aimed at safeguarding the natural environment. Additionally, the Task Force on Climate-related Financial Disclosures (TCFD) and the Task Force on Nature-related Financial Disclosures (TNFD) are two initiatives that aim to provide frameworks for companies to disclose information about their environmental risks and impacts. They are linked by their shared objective of promoting greater transparency and informing investors and other stakeholders about the sustainability-related aspects of organisations.



Figure 2: Nature's four realms per the TNFD

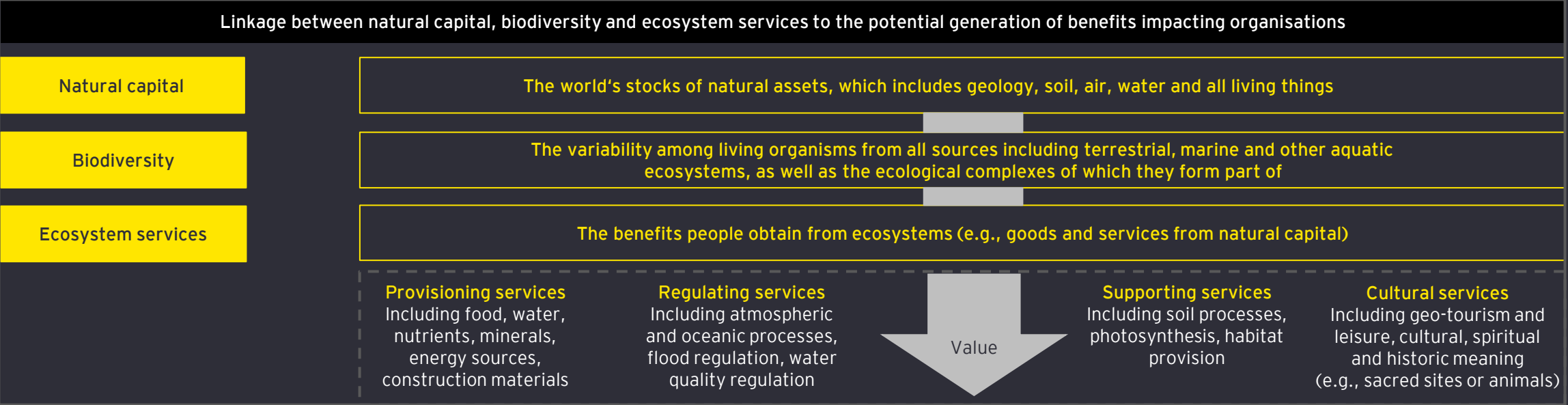
The TNFD takes inspiration from the structure and approach of the TCFD, extending the focus from climate to include other aspects of nature. Both task forces highlight the interconnectedness of climate and nature: climate change is both a driver of nature loss (affecting biodiversity and ecosystems), and natural systems significantly influence the climate by either emitting or absorbing greenhouse gases (e.g., forests as carbon sinks). Together, the TCFD and TNFD are part of a growing set of environmental disclosure frameworks that reflect an understanding of the systemic nature of environmental challenges.

The linkage between biodiversity and physical climate risk analysis can play a critical role in informing biodiversity risk assessments. The insights gained from understanding the physical risks and impacts of climate change provide a basis for anticipating and managing potential biodiversity risks, which are vital for maintaining the health of ecosystems and the sustainability of business operations. The higher the diversity, the higher the resilience of an ecosystem to shocks and crises. Just as diversity within a portfolio of financial assets reduces risks and uncertainties, diversity within a portfolio of natural assets – biodiversity – directly and indirectly increases nature's resilience to shocks; reducing risks to the services on which we rely.

Introduction | Linkage between biodiversity and physical climate risks for Naspers

From a Naspers’ perspective, given the diversity of the business operations throughout the subsidiaries, the investment portfolio as well as the key operational context (being predominantly digital/virtual/asset-light), the biodiversity risks are located primarily within the extended supply chain. The physical climate risks previously identified include temperature increases, drought, heavy precipitation, floods, extreme weather, and wildfires (for further detail, please refer to the individual climate risk assessment reports). In considering these risks from a biodiversity perspective, the integration of the dependencies, risks, impacts and opportunities are considered from the perspective of natural capital (please see figure 3 below the integration of natural capital considerations). The impact of these risks on natural capital will drive the variability of natural resource productivity, with biodiversity loss being recognised by the World Economic Forum as a key global risk, with environmental risks accounting for 5 of the Top 10 Global Perceived Risks over the next 10 years, with specific mention made to biodiversity loss and ecosystem collapse as one of the top 5 threats to humanity, which could impact Naspers’ suppliers’ ability to manufacture products. The flow of value from natural capital to ecosystem services is depicted below.

Figure 3: Integration of natural capital considerations



With the detailed understanding of the landscape associated with biodiversity, the global focus and subsidiary-specific considerations, the sections that follow unpack the detailed methodology that was followed in performing the biodiversity assessment.

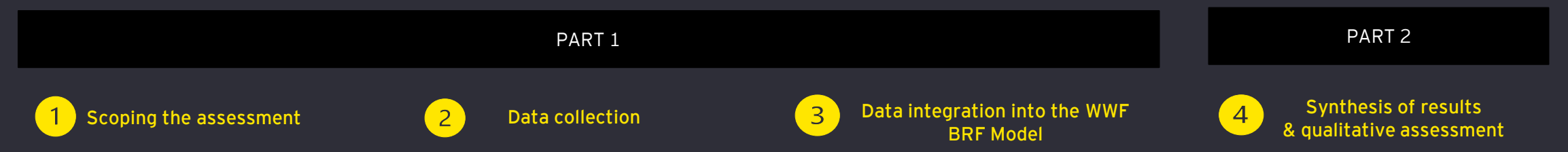
Assessment Methodology

High-level considerations

There are 3 basic considerations for the methodology, being:

- 1. The methodology was aligned to the TNFD initial scoping
- 2. The assessment was focused on the coordinates of specific locations, their exposure to biodiversity risks and the associated dependencies or impacts
- 3. The supply chain lens was not in scope, however; considering the reliance of the Naspers' subsidiaries on their supply chains, it was considered at a high-level where likely relevance was identified based on the SBTN high impact commodities.

The assessment was conducted in accordance with below:



Part 1 forms the core content of the risk assessment, as the output of the WWF BRF Model indicates the relevant risk drivers per subsidiary location and assigned a rating thereto.

In part 2, these risk drivers are then qualitatively analysed to unpack the underlying implications when considered with reference to specific operational and business context, leading to an adjusted risk rating. Aspects forming part of the qualitative assessment for the adjusted risk rating include the urbanisation of operational locations, the nature of the businesses, the extent of potential impact as well as the key outcomes of the climate risk assessments. Generally, the exposure to physical climate risks was deemed to be high across the Naspers subsidiaries, but the overall impact was limited given the nature of the operations. On this basis, a similar result is expected for the biodiversity assessment.

The following section provides the detailed methodology of the WWF BRF Model and process as well as the specifics associated to the risk drivers.

Biodiversity Risk Assessment Process

- The WWF BRF was used to support an initial biodiversity risk assessment to evaluate Naspers’ potential impacts on biodiversity as well as the dependencies of group operations on ecosystem services and the natural environment. The WWF BRF assesses the potential risks and impacts on biodiversity associated with a company's operations as a location specific approach.

Critical inputs required to run the risk assessment:

- The biodiversity risk assessment run through the WWF BRF relies on specific geographical coordinates to determine exposure to climate-related hazards.
- As such, the company name, site name, industry and the city coordinates are a critical requirement that needs to be included.

Note: This assessment ensured the privacy of company names by not disclosing them on the WWF platform. Before inputting data into the tool, all information was sanitised to maintain confidentiality

Optional inputs available for the risk assessment (*not within scope of assessment*):

- Business importance - This is the economic importance of the site in relation to the overall company performance.
- Group - grouping the sites according to Supply Chain Management (SCM) classification
- Commodity

Table 3: WWF Biodiversity Risk Filter levels

LEGEND					
Score	1.0 - 1.8	1.8 - 2.6	2.6 - 3.4	3.4 - 4.2	4.2 - 5.0
Type	Very Low Risk	Low Risk	Medium Risk	High Risk	Very High Risk
Definition	Unforeseeable, improbable likelihood or no risk and impact: no implications for profitability of the business, even if risk occurred, the impact would be immaterial to Naspers.	Minimal likelihood and impact (taking mitigating actions into account): minor implications for the profitability of the business.	Moderate likelihood and impact (taking mitigating actions into account): some implications for the profitability of the business.	High likelihood and impact (taking mitigating actions into account): significant implications for the profitability of the business.	Very high likelihood and impact (taking mitigating actions into account): severe implications for the profitability of the business.

1 Scoping the assessment

- Insight into operating model
- Asset structure (owned vs. leased)
- Input material details

2 Collecting location specific company

- Specifying site’s location
- Classifying industry
- Identifying business importance

3 Assessing biodiversity related risks

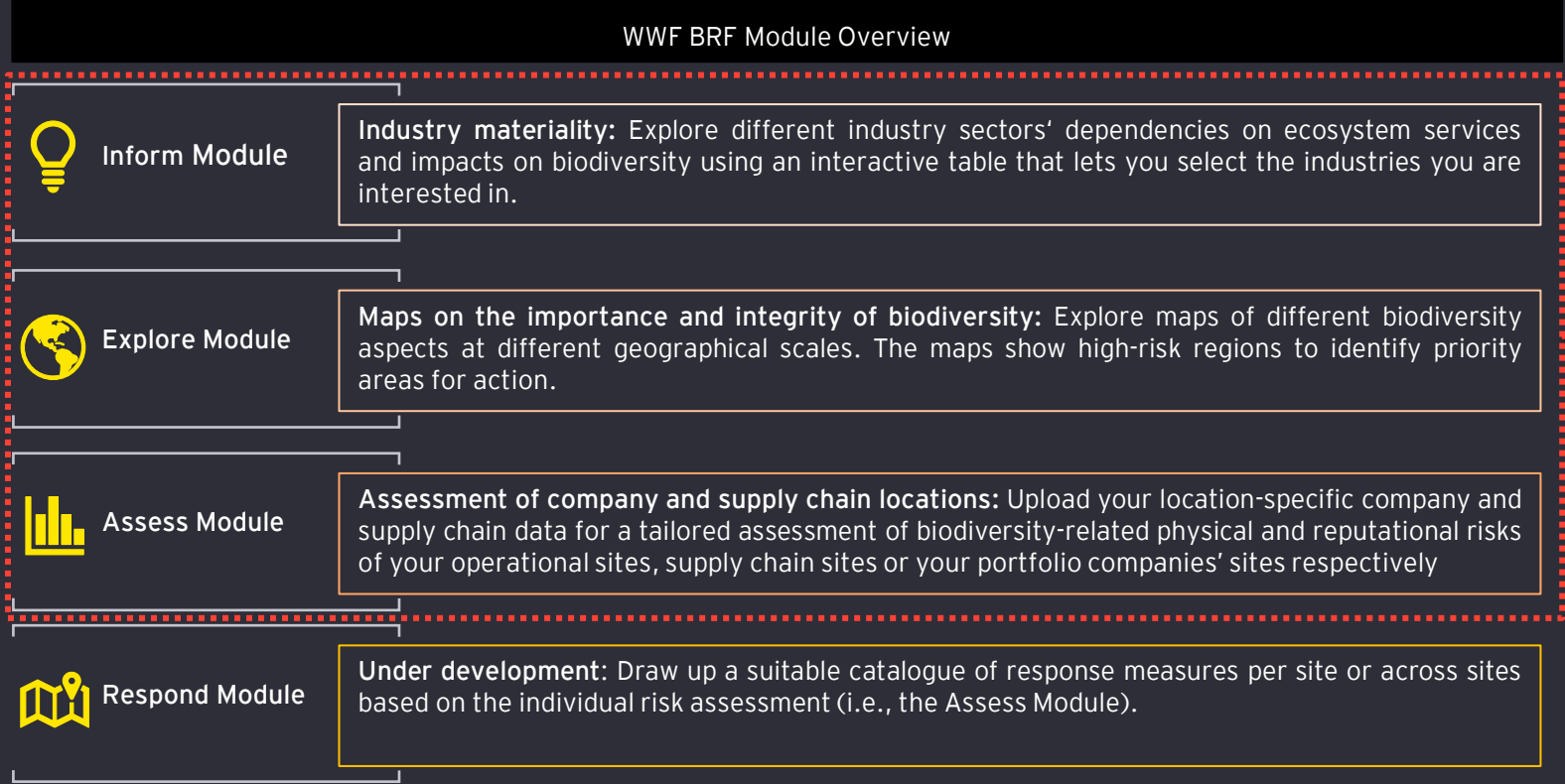
- Identifying biodiversity risks

4 Aggregating biodiversity risk to the company and portfolio level

- Integrating the identified biodiversity risks into the company’s risk management processes

WWF Biodiversity Risk Filter

- ▶ The WWF BRF assists with assessing and prioritising biodiversity risks at the corporate and portfolio levels. It helps companies evaluate risks at operational and supplier locations and develop response plans. The tool also allows financial institutions to assess biodiversity risks for companies in their portfolios.
- ▶ As per figure 4 below, the current version of the WWF BRF tool consists of three key modules: **1) the Inform Module**, which provides an overview of the industry-specific dependencies on ecosystem services and impacts on biodiversity; **2) the Explore Module**, which is a collection of spatially explicit maps of the importance and local integrity of biodiversity; and **3) the Assess Module**, which contains a tailored physical and reputational risk assessment for which users need to input location-specific company and/or supply chain data. A fourth module, the Respond Module, is currently under development



The assessment for Naspers' current biodiversity risk assessment spanned the three live modules of the WWF BRF. However, the assessment of the third module was only partial, focusing solely on company locations in line with the approved scope for the project.

WWF Biodiversity Risk Filter

WWF BRF establishes a comprehensive risk hierarchy comprising four distinct risk levels (physical, regulatory, reputational, and market risks) covering biodiversity related risks that have impacts onto the geographical locations of company or supply chain sites. The current version of the WWF BRF covers only the physical and reputational biodiversity-related risks. The regulatory and market risks, as well as an assessment of biodiversity-related opportunities, are under development and will be added in due course.

- ▶ Physical risks arise from the dependence of a business and its supply chains on natural and human-induced conditions of land and seas. These risks can negatively impact ecosystem services, potentially resulting in reduced productivity (e.g., lack of fertile soils and pollination) or increased input costs (e.g., scarcity of natural fibers or harvest losses).
- ▶ Reputational risks arise from a company's negative impacts on biodiversity and people, both actual and perceived. These risks are tied to stakeholders' and local communities' perceptions of a company's sustainability and responsible practices regarding biodiversity. Reputational risks can have various consequences, including damage to the corporate brand, decreased sales, increased investor scrutiny, and declining share prices.

From all the risk categories that are considered by WWF, this analysis focused on areas where significant changes were observed and where exposures are high/ very high (see the yellow highlights below).

Table 4: WWF BRF Risk Levels

LEVEL 1: RISK TYPES	LEVEL 2: RISK CATEGORIES	LEVEL 3: INDICATORS:	LEVEL 4: METRICS
Physical Risks	Provisioning Services	4 indicators	Over 50 different data layers are currently integrated into the tool.
	Regulating & Supporting Services - Enabling	5 indicators	
	Regulating Services - Mitigating	6 indicators	
	Cultural Services	1 indicators	
	Pressures on Biodiversity	4 indicators	
Reputational Risks	Environmental Factors	5 indicators	
	Socioeconomic Factors	4 indicators	
	Additional Reputational Factors	4 indicators	

- ▶ **LEVEL 1, Risk types:** Combines the risk categories into the broader risk types (physical risks and reputational risks).
- ▶ **LEVEL 2, Risk categories:** Groups the indicators into higher level risk clusters with more direct relevance to companies and financial institutions (5 physical risk categories and 3 reputational risk categories)
- ▶ **LEVEL 3, Indicators:** comprises information on the importance and local integrity of biodiversity aspects, spatially (dis-)aggregated to an assessment unit and translated to a risk score (33 indicators - 20 physical risk and 13 reputational risk indicators)
- ▶ **LEVEL 4, Metrics:** comprises the raw global data sets that measure different aspects of biodiversity and ecosystems in a specific location that may lead to biodiversity-related risks for companies and financial institutions. Currently, the WWF BRF tool contains 56 global biodiversity data (metrics)

This classification of risks aligns with the risk classification of the Taskforce on Nature-related Financial Disclosures (TNFD), according to which biodiversity-related risks can be classified into physical, transition and systemic risks.

Ref: https://cdn.kettufy.io/prod-fra-1.kettufy.io/documents/riskfilter.org/BiodiversityRiskFilter_Methodology.pdf

WWF Biodiversity Indicators Assessed

From all the risk indicators that are considered by WWF, this analysis focused on areas where significant changes were observed and where exposures are high/ very high (see the yellow highlights below). Other indicators are considered in the assessment, however the ratings assigned thereto are not significant drivers.

Table 5: WWF BRF Risk Levels Descriptions

LEVEL 1: RISK TYPES	LEVEL 2: RISK CATEGORIES	Descriptions	LEVEL 3: INDICATORS:	Description
Physical Risks	Provisioning Services	Provisioning Services refer to the vital natural inputs such as freshwater, timber, wild flora and fauna species, and marine fish, essential for various industries or companies' operations or production.	Water Scarcity	The physical abundance or lack of freshwater resources.
			Forest Productivity and Distance to Markets	Timber availability refers to the physical abundance and commercial accessibility of realizable timber provisions.
			Limited Wild Flora & Fauna Availability	This indicator refers to the stock status of marine fish.
			Limited Marine Fish Availability	This indicator refers to the unavailability of commercially harvested species. Wild species are used in many applications, including for medicinal, cosmetic, aromatic and genetic purposes
	Regulating & Supporting Services - Enabling	Essential ecosystem services that facilitate and regulate various production processes within industries. These services include the maintenance of soil, water, air, overall ecosystem health, and pollination, which are vital for sustaining agricultural practices and other industrial activities.	Soil Condition	Soil condition indicates whether soil can perform basic functions to benefit human use and ecosystems alike. This indicator is based on soil organic carbon (SOC) content.
			Water Condition	Water condition indicates whether the water quality is fit for human use and ecosystems alike.
			Air Condition	Air condition indicates whether the air quality is fit for human use and ecosystems. This indicator is based on PM2.5 concentrations. PM2.5 is the annual global surface concentration (micrograms per cubic meter) of all composition ground-level fine particulate matter of 2.5 micrometers or smaller.
			Ecosystem condition	Ecosystem condition indicates whether the natural environment is intact and connected.
			Pollination	This indicator assesses whether there is enough natural habitat surrounding cropland to support natural pollination
	Regulating Services - Mitigating	The occurrence of natural hazards can disturb or disrupt projects, operations, or entire value chains, and can in some cases result in severe damage to or loss of assets. Intact ecosystems can help to mitigate the impact of some natural hazards.	Landslides	This indicator assesses the potential threat of rainfall- and earthquake-triggered landslides
			Wildfire Hazard	This indicator assesses the potential threat of wildfires due to fire weather intensity.
			Plant/Forest/Aquatic Pests and Diseases	This indicator assesses the potential threat from transboundary animal and plant pests and diseases.
			Herbicide Resistance	This indicator assesses the number of occurrences of herbicide resistant weeds.
			Extreme Heat	This indicator assesses the threat of extreme heat during a 5-year return period
			Tropical Cyclones	This indicator assesses the predicted maximum wind speed (mph) on a 50-year return period.

Ref: https://cdn.kettufy.io/prod-fra-1.kettufy.io/documents/riskfilter.org/WWFBRF_InterpretationGuidance.pdf

WWF Biodiversity Indicators Assessed continued

LEVEL 1: RISK TYPES	LEVEL 2: RISK CATEGORIES	Descriptions	LEVEL 3: INDICATORS:	Description
Physical Risks	Pressures on Biodiversity	Direct drivers or pressures are drivers that unequivocally influence biodiversity and ecosystem processes. Areas with high pressures on biodiversity are likely to decline in the future, independent from whether the current status of biodiversity is intact or already compromised.	Land, Freshwater and Sea Use Change	This indicator measures cropland expansion, river fragmentation and pressures on marine environments through shipping and direct human impact.
			Tree Cover Loss	This indicator measures tree cover loss.
			Invasives	This indicator is based on the presence of the world's worst invasive species.
			Pollution	This indicator is based on nutrient, pesticide and air pollution.
Reputational Risks	Protected and Conserved Areas	This indicator is based on overlap of the assessment units with protected areas (PA).		
	Key Biodiversity Areas	This indicator is based on overlap of the assessment units with Key Biodiversity Areas (KBA).		
	Other important delineated areas	This indicator is based on a range of areas other than protected areas and Key Biodiversity Areas (KBA), that have been delineated due to their contribution to different aspects of biodiversity.		
	Ecosystem Condition	Ecosystem condition indicates whether the natural environment is intact and connected		
	Range Rarity	This indicator is based on range rarity measuring the degree of endemism of mammals, amphibians and bird species.		
	Resource Scarcity: Food - Water - Air	The indicator is a composite of food insecurity, water scarcity and air quality data.		
	Labour and Human Rights	The indicator is a composite of data on internationally ratified human rights instruments and the International Trade Union's Global Rights Index.		
	Financial Inequality	This indicator uses the GINI index to estimate financial inequality. For businesses, systemic financial inequality is a great source of risk. It limits productivity and has the potential to destabilize supply chains, trigger political instability, and jeopardize their social license to operate.		
	Media Scrutiny	Media scrutiny indicates whether there has been documented negative news (e.g., incidents, criticism and controversies) related to environmental and social issues that can affect a company's reputational risk.		
	Political Situation	This indicator is based on four datasets assessing level of freedom, corruption, governance and violence against land and environmental defenders.		
	Sites of International Interest	This indicator is based on overlap of Natural World Heritage Sites and RAMSAR sites with assessment units.		
	Risk Preparation	For this indicator, the World Bank's Index of Risk Preparation was used. This indicator refers to the level of preparedness an area or industry has in managing and responding to risks, particularly biodiversity risks.		

Risk Assessment Results

WWF Biodiversity Risk Filter | Summary View

Subsidiary Biodiversity Risk Assessment: Understanding the environmental/physical and reputational implications across Naspers' operations:

Table 6: Summary view per subsidiary

Subsidiary	WWF BRF Risk Rating	Contributing factors based on location and sector	Specific qualitative considerations	Adjusted Final Risk Rating
iFood	Medium	For iFood the medium biodiversity risk is primarily due to factors such as water scarcity and water condition, limited wild flora and fauna availability. Additionally, there are risks associated with landslides, plant/forest/aquatic pests and diseases and fire hazards. The reputational risk is influenced by environmental factors such as protected areas, as well as socio-economic factors such as financial inequality. Furthermore, media scrutiny and political situations contribute to reputational risk.	<ul style="list-style-type: none"> Digital nature of operations Urbanisation status of physical assets locations (limited dependencies on ecosystem services) Diverse product offerings reducing dependencies on specific commodities Diverse geographical locations for some subsidiaries 	Low
eMAG	Low	eMAG's contributing factors to the low biodiversity risk include potential risks related to provisioning services like water scarcity, risks related to regulating and supporting services such as water and air, conditions. Pressures on biodiversity, including land, freshwater, and sea use change and pollution contributing to the overall biodiversity risk.		Low
PayU	Medium	The main contributing factors for PayU's medium biodiversity risk include factors such as water scarcity, limited availability of wild flora and fauna, regulatory services such as soil, water, air, and ecosystem conditions. Additionally, there are reputational risks related to environmental factors such as protected areas, as well as socio-economic factors like, resource scarcity, and media scrutiny.		Very low
OLX	Medium	OLX's Key contributing factors include water scarcity and forest productivity, regulating services such as soil, water, and air conditions, with higher risks for landslides, fire hazards, and extreme heat in regions like South Africa and Turkey. Pressures on biodiversity, such as land use changes and pollution. The reputational risks, including protected areas and resource scarcity.		Very low
GoodHabitZ	Medium	For GoodHabitZ, the medium biodiversity risk is primarily driven by water scarcity, especially notable in Madrid. Forest productivity and limited marine fish availability are also significant concerns. Additionally, air condition and pollution pressures are major contributors. Land use change and tree cover loss further increases the risks, particularly in Madrid.		Very low
Takealot	Medium	The main drivers of the medium biodiversity risk rating for Takealot's assets/sites are water scarcity, forest productivity, limited wild flora and fauna availability, and extreme heat, with notable impacts in Cape Town.		Very low
M24 Logistics	Medium	M24 Logistics' overall medium biodiversity risk is primarily driven by water scarcity, especially in Cape and Eastport. Additionally, forest productivity and limited wild flora and fauna availability are significant factors, particularly in Cape Town. Air condition and extreme heat also contribute to high risks, with notable exposure in Cape Town and Eastport. Pollution pressures also contributed significantly across all sites.		Very low
Corporate Offices	Medium	The main drivers of the medium biodiversity risk rating for Naspers corporate offices are mainly due to water scarcity, especially in Bengaluru and Johannesburg; pollution in Johannesburg, Bengaluru, and Hong Kong; and extreme heat in Bengaluru. Additionally, financial inequality in Bengaluru also contribute to the high risks.		Very low

WWF Biodiversity Risk Filter | iFood

Given the nature of iFood’s operations and the reliance on their extended supply chain, additional qualitative considerations were given to the risk categories and indicators to assess the company-specific biodiversity risk, such as iFood’s position in the extended supply chain and their reliance on the agricultural sector.

Table 7: iFood’s operational cities biodiversity risk rating per level 2 category with detail evidencing contributing indicators

City	RISK CATEGORIES										
	Provisioning Services		Regulating & Supporting Services - Enabling		Regulating Services - Mitigating		Pressures on Biodiversity		Reputational risk		
Recife	Both water scarcity and wild flora/ fauna availability have high risk exposure ratings which contributes to the overall medium to high-risk rating for provisioning services.		Water condition is the main contributor to the overall risk for iFood, however given the nature of operations, the full exposure to the risks associated with regulating & support services is very low to low.		For mitigating regulating services, the main drivers of biodiversity risk within iFood's operational cities are the risks associated with fire hazards and plant/ forest/ aquatic pests and diseases. The landslide risk indicator contributes to the low- to medium-risk rating for all cities except Sao Jose do Rio Petro, which is more exposed to extreme heat.		Pollution has low to medium risk exposure ratings which contributes to the overall low to medium rating for pressure on biodiversity.		Reputational risk is driven by financial inequality, media scrutiny and political situation for all iFood's operational cities. For Recife, São Paulo, Guarulhos, Sao Carlos and Campinas, an additional risk driver is associated with exposure to the indicator for protected/conserved areas.		
São Paulo											
Guarulhos											
Sao Jose do Rio Petro											
Sao Carlos				For one city - São Paulo - air condition was also a contributing indicator.							
Osasco											
Campinas											
Legend: Risk rating		Very Low		Low		Medium		High		Very High	

WWF Biodiversity Risk Filter | iFood – Qualitative Assessment

As a food delivery company, iFood is not directly involved in food production. iFood operates within a larger food system and extended supply chain that could be affected by various biodiversity risks. Across each operational city of iFood, the biodiversity risks could have a varying impacts due to the level of urbanisation, the ecosystems impacted as well as the extent of reliance on the extended supply chain. Given the nature of iFood operations, the following considerations were applied to unpack the potential impacts per indicator. A detailed supply chain assessment was not performed as part of this assessment and could be something to consider in future assessments for any key areas identified.

Table 8: Qualitative considerations for all risk categories and indicators

Risk Category	WWF BRF Risk Rating per risk category	Qualitative Assessment	Adjusted Risk Rating per risk category
Provisioning Services Potential indicators: Water scarcity, forest productivity and distance to markets, limited wild flora and fauna availability, limited marine fish availability.	High	Water scarcity can significantly reduce agricultural productivity, leading to decreased availability of agricultural produce or increased cost of food production, for restaurants and food vendors that partner with iFood. The reliability of food supply chains may be compromised by water scarcity, resulting in interruptions and delays in food products for restaurants and grocery stores which iFood partners with. Water scarcity could also result in temporary service disruptions for restaurants and grocery stores due to health and sanitation issues. iFood may experience changing consumer behaviour as consumers demand more eco-conscious and sustainably sourced ingredients which is driven by the availability of limited wild flora and fauna availability.	Low
Regulation & Supporting Services - Enabling Potential indicators: Soil condition, water condition, air condition, ecosystem condition and pollination.	Low	Poor soil conditions can lead to reduced agricultural productivity, impacting the quality and availability of food products purchased by the restaurants or grocery stores that iFood partners with. Contaminated or low-quality water can affect crop health and food processing which can lead to food safety issues, directly impacting the restaurants and grocery stores and indirectly iFood's reputation if food safety concerns arise. Air pollution can lead to health warnings or restrictions that could impact iFood delivery drivers and cause temporary service disruptions. Degraded ecosystems can lead to increased use of fertilizers and pesticides, affecting food safety and costs. A decline in pollinator populations can dramatically affect crop viability and food availability, leading to shortages of certain types of foods. This could impact food availability for the restaurants and grocery stores that iFood partners with.	Low
Regulating services - Mitigating Potential indicators: Landslides, fire hazard, Plant/forest/aquatic pests and diseases, herbicide resistance, extreme heat and tropical cyclones.	Medium	Landslides, wildfires, extreme heat and cyclones could damage agricultural land and infrastructure and impact crop yields and livestock health. This could lead to local shortages of food products and disrupting supply chains that iFood relies on as well as the disruption of key transportation routes, resulting in delayed or missed food deliveries or temporary service disruptions. High temperatures can compromise food quality during transportation if the cold chain is not maintained, posing challenges for iFood's supply chain. Cyclones can also cause disruptions to ports and shipping routes. Pest control measures can be costly and ineffective, which can drive up food production costs and, subsequently, the prices at restaurants/ grocery stores and on the iFood platform. The risks mentioned above could all lead to potential increased costs of food products, leading to increased restaurant and grocery prices as well as iFood delivery costs.	Low

WWF Biodiversity Risk Filter | iFood – Qualitative Assessment continued

Table 8: Qualitative considerations for all risk categories and indicators continued

Risk Category	WWF BRF Risk Rating per risk category	Qualitative Assessment	Adjusted Risk Rating per risk category
<p>Pressures on biodiversity</p> <p>Potential indicators: Land, freshwater water and sea use change, tree cover loss, invasives and pollution.</p>	Medium	iFood operates in urban areas already impacted by environmental changes such as deforestation, urbanisation, and water resource exploitation. These changes can disrupt food availability and diversity, potentially causing supply and price volatility for iFood. Additionally, deforestation can lead to soil erosion and biodiversity loss, compromising food production and quality. iFood may need to address supplier challenges and consumer concerns related to sourcing sustainable ingredients. Pollution also poses risks to food safety and public health, necessitating stringent quality controls for associated restaurants.	Low
<p>Reputational risk</p> <p>Potential indicators: Protected/conserved areas, key biodiversity areas, other important delineated areas, ecosystem condition, range rarity, indigenous peoples & local communities land and territories, resource scarcity: food, water, air, labour/human rights, financial inequality, media scrutiny, political situation, sites of international interest and risk preparation.</p>	Medium	<p>iFood's supply chain, which includes sourcing from key biodiversity areas, may face stricter environmental regulations, potentially increasing costs and affecting its food service partners' operations. Although these factors are beyond iFood's direct control and have not been thoroughly assessed, ecosystem health is vital for services like pollination and water purification essential to food production. Challenges may arise in supply chain reliability and the cost of eco-friendly sourcing. The scarcity of certain species and ecosystems could limit the availability of unique ingredients, requiring sustainable harvesting practices by food suppliers to prevent biodiversity loss. Furthermore, iFood's supply chain could be scrutinised for labour or human rights violations, potentially damaging its reputation, customer loyalty, and legal standing. Economic disparities may affect consumer demand, impacting iFood's business. Environmental and social issues related to biodiversity could attract media attention, influencing iFood's public image and customer trust. Political stability and biodiversity conservation policies can also affect operational costs and supply chain practices.</p> <p>Anticipating and managing biodiversity-related risks is crucial for iFood to avoid supply shortages, increased costs, and decreased customer satisfaction. Effective risk management is key to maintaining a resilient operation.</p>	Low

Key takeaway:

While there are dependencies on biodiversity, iFood's supply chain encompasses a broad range of suppliers spanning numerous commodities, therefore the direct exposure to biodiversity risks is significantly reduced, resulting in a low adjusted risk rating per risk category. iFood's operations have areas of higher priority from a biodiversity perspective, while still having limited direct exposure to biodiversity risks. iFood's extended supply chain could be impacted by a range of biodiversity factors that affect the availability and cost of ingredients, as well as the company's reputation and compliance with regulations. It is essential for iFood to engage in sustainable practices, consider the impacts of the extended supply chain, and be prepared for resource scarcity experienced by food manufacturers, restaurants and grocery stores and biodiversity-related risks to maintain a resilient and responsible business model.

WWF Biodiversity Risk Filter | iFood – Mitigating Factors

Addressing biodiversity risks within an extended supply chain, especially for a company like iFood that operates as a food delivery platform, involves a multi-faceted approach. Below are some mitigating factors that iFood could investigate and potentially implement to address the biodiversity risks identified in this assessment:

Table 9: iFood – Mitigating factors

Internal Mitigating factors	Extended Supply Chain – high level considerations
<p><u>Transparency and traceability:</u></p> <ul style="list-style-type: none">Enhance traceability in the supply chain to ensure the origin of products is known and that they are sourced responsibly.Provide transparent reporting on supply chain practices and biodiversity impacts. <p><u>Business Continuity Planning:</u></p> <ul style="list-style-type: none">Develop robust business continuity plans that include strategies for dealing with disruptions caused by biodiversity risks, such as alternative transportation routes or backup inventory management. <p><u>Sustainable Partnerships:</u></p> <ul style="list-style-type: none">Develop a supplier code of conduct that includes biodiversity protection requirements.Continue engaging with the United Nations Environmental Programme (UNEP) and support plastic-free or plastic alternative solutions.Educate suppliers and consumers about the importance of biodiversity and how their choices impact it.Promote menu items that are more sustainable and have a lower impact on biodiversity.	<p><u>Collaboration with Suppliers:</u></p> <ul style="list-style-type: none">Work closely with suppliers to build their capacity for risk management, including sharing best practices for mitigating biodiversity risks and providing support for implementing sustainable practices. <p><u>Supplier sustainability assessments:</u></p> <ul style="list-style-type: none">Conduct thorough sustainability assessments of suppliers to ensure they adhere to best practices in biodiversity conservation. <p><u>Sustainable Sourcing Policies:</u></p> <ul style="list-style-type: none">Develop and enforce sustainable sourcing policies that encourage suppliers to manage land responsibly, maintain healthy ecosystems, and use resources sustainably to reduce the likelihood of biodiversity-related risks. Encourage the use of certified sustainable products, such as those certified by the Rainforest Alliance or Marine Stewardship Council. <p><u>Supply Chain Diversification:</u></p> <ul style="list-style-type: none">Diversify suppliers geographically to minimize the impact of regional environmental events like landslides or fires. This could involve sourcing from multiple locations or selecting suppliers that are less prone to biodiversity risks.

Key takeaway:

By investigating and potentially implementing these mitigating factors, iFood could contribute to the preservation of biodiversity and work towards reducing its indirect impact on the environment. iFood’s biodiversity risks are distributed across their supply chain; therefore, this could make it challenging for iFood to mitigate any potential risks.

WWF Biodiversity Risk Filter | eMAG

As an e-commerce leader facilitating the online sale of a broad range of products, there is extensive networks within eMAG’s operations and supply chains, including partner restaurants and suppliers for its Tazz and Freshful services, that have implications for biodiversity. However, a detailed supply chain analysis did not form part of this assessment. The indicators are listed below each main risk category and are included to provide context and explain the underlying driver of the associated risk rating level based on eMAG’s operations.

Table 10: eMAG’s operational cities biodiversity risk rating per level 2 (defined on page 11) category with detail evidencing contributing indicators

City	RISK CATEGORIES										
	Provisioning Services			Regulating & Supporting Services - Enabling		Regulating Services - Mitigating		Pressures on Biodiversity		Reputational risk	
Stefăneștii de Jos	The overall risk rating for provisioning services is rated as very low. Water scarcity, despite being a concern for provisioning services, did not significantly impact this risk category, while all other indicators assessed have no dependency or impact for this category.		The main contributor to the overall low risk rating is water condition. None of the other indicators assessed for Regulating & Supporting Services had any dependency or impact on the overall rating of this category.		The main contributors to the overall low to medium risk in mitigating regulating services are landslides, fire hazards, and extreme heat. Szeged stood out as the only city with a low-risk rating in this category..		Pollution has low to medium risk exposure ratings which contributes to the overall low to medium rating for pressure on biodiversity.		All the indicators assessed within this category were rated as very low to low, resulting in an overall low rating for Reputational risk.		
Cluj-Napoca											
Constanta											
Craiova											
Galati											
Iasi											
Oradea											
Dunaharaszti											
Debrecen											
Gyor											
Miskolc											
Pécs											
Szeged											
Legend: Risk rating		Very Low		Low		Medium		High		Very High	

WWF Biodiversity Risk Filter | eMAG continued

Table 10: eMAG's operational cities biodiversity risk rating per level 2 (defined on page 11) category with detail evidencing contributing indicators

City	RISK CATEGORIES									
	Provisioning Services		Regulating & Supporting Services - Enabling		Regulating Services - Mitigating		Pressures on Biodiversity		Reputational risk	
Bradu	The overall risk rating for provisioning services is rated as very low. Water scarcity, despite being a concern for provisioning services, did not significantly impact this risk category, while all other indicators assessed have no dependency or impact for this category.		The main contributor to the overall low risk rating is water condition. None of the other indicators assessed for Regulating & Supporting Services had any dependency or impact on the overall rating of this category.		The main contributors to the overall low to medium risk in mitigating regulating services are landslides, and fire hazards. For Bucharest and Voluntari extreme heat is also a contributing indicator.		Pollution has low to medium risk exposure ratings which contributes to the overall low to medium rating for pressure on biodiversity.		All the indicators assessed within this category were rated as very low to low, resulting in an overall low rating for Reputational risk. For one city, Warsaw, Protected/conserved areas and media scrutiny were contributing indicators the overall low risk rating.	
Ploiesti										
Bucharest										
Joita										
Satu Mare										
Sibiu										
Suceava										
Timisoara										
Voluntari										
Plovdic										
Sofia										
Warsaw										
Budapest										
Bacau										
Brasov										
Buzau										
Legend: Risk rating		Very Low	Low		Medium		High		Very High	

WWF Biodiversity Risk Filter | eMAG – Qualitative Assessment

Across each operational city of eMAG, the biodiversity risks could have a varying impacts due to the level of urbanisation, the ecosystems impacted as well as the extent of reliance on the extended supply chain. Given the nature of eMAG’s operations, the following considerations were applied to unpack the potential impacts per indicator. A detailed supply chain assessment was not performed as part of this assessment and could be something to consider in future assessments for any key areas identified.

Table 11: Qualitative considerations for all risk categories and indicators

Risk Category	WWF BRF Risk Rating per risk category	Qualitative Assessment	Adjusted Risk Rating per risk category
Provisioning Services <u>Potential indicators:</u> Water scarcity, forest productivity and distance to markets, limited wild flora and fauna availability, limited marine fish availability.	Very low	Water scarcity can impact the manufacturing of products sold on eMAG’s platforms, especially for items that require water-intensive production processes, potentially raising consumer prices. Decreased forest productivity may cause paper and cardboard shortages, increasing packaging costs for eMAG’s shipments. For eMAG’s natural product lines, such as supplements or cosmetics, scarcity of natural resources could limit offerings and elevate costs. With growing consumer awareness of biodiversity and sustainability, eMAG might need to adapt its supply chain to ensure sustainable sourcing of its products.	Low
Regulation & Supporting Services – Enabling <u>Potential indicators:</u> Soil condition, water condition, air condition, ecosystem condition and pollination.	Low	eMAG, an online retailer specialising in electronics, household items, and consumer goods, is not directly reliant on natural ecosystems for its products. Nonetheless, the health of these ecosystems can indirectly influence its operations. Degraded soil health can affect the cost and availability of natural materials, such as cotton or wood, potentially impacting the price and supply of related products. Water quality issues may lead to wellness considerations for the workforce. Additionally, as consumer demand for sustainable goods grows, eMAG may face calls to provide eco-friendlier products and adopt greener logistics practices.	Low
Regulating services – Mitigating <u>Potential indicators:</u> Landslides, fire hazard, Plant/forest/aquatic pests and diseases, herbicide resistance, extreme heat and tropical cyclones.	Low	Landslides pose risks to eMAG’s infrastructure, potentially damaging roads and buildings, disrupting landslides, leading to delivery delays and increased costs. Fires could risk warehouse and supplier facility safety, with potential inventory loss and order fulfilment challenges. Wildfires may also obstruct transportation routes, delaying eMAG’s goods movement. Pests and diseases can diminish timber availability, affecting eMAG’s wood and plant-based product supply. Indirectly, herbicide-resistant pests in agriculture can raise food costs, affecting consumer spending and possibly eMAG’s non-essential goods sales. Extreme temperatures may harm electronics and sensitive items, heightening the risk of defects or returns. Heatwaves necessitate more cooling, increasing electricity expenses for eMAG’s warehouses and offices. Severe weather events like storms and cyclones can force temporary shutdowns of eMAG’s operations, including distribution centre closures and delivery disruptions.	Low

WWF Biodiversity Risk Filter | eMAG – Qualitative Assessment continued

Table 11: Qualitative considerations for all risk categories and indicators continued

Risk Category	WWF BRF Risk Rating per risk category	Qualitative Assessment	Adjusted Risk Rating per risk category
Pressures on biodiversity Potential indicators: Land, freshwater water and sea use change, tree cover loss, invasives and pollution.	Medium	Land use changes for agriculture or urban development can affect the availability and cost of materials for eMAG's products, potentially causing supply chain issues and increased expenses. Deforestation can raise the cost of wood and paper, impacting eMAG's packaging costs. Increasing levels of air or water pollution can intensify regulatory oversight on product manufacturing and disposal, affecting eMAG's product range and necessitating compliance efforts. Growing consumer environmental awareness may prompt eMAG to offer more eco-friendly products, potentially at higher costs.	Low
Reputational risk Potential indicators: Protected/conserved areas, key biodiversity areas, other important delineated areas, ecosystem condition, range rarity, indigenous peoples & local communities land and territories, resource scarcity: food, water, air, labour/human rights, financial inequality, media scrutiny, political situation, sites of international interest and risk preparation.	Low	<p>Engaging with suppliers operating in or sourcing from protected areas may impose restrictions and increase compliance costs for eMAG, potentially affecting its supply chain and product availability. Sourcing products that depend on rare materials or species may become challenging, potentially necessitating inventory adjustments or facing higher costs. Sustainable and ethical sourcing from areas with unique biodiversity is crucial for eMAG's reputation and respecting indigenous and local community rights is essential to avoid backlash.</p> <p>Resource scarcity can raise manufacturing and distribution costs, impacting eMAG's sales. Efficient resource use can reduce expenses and showcase corporate responsibility. Labour or human rights violations in the supply chain can disrupt operations and damage eMAG's reputation, while investment in fair working conditions can enhance its image and appeal to socially conscious consumers.</p> <p>Economic disparities influence consumer demand, requiring eMAG to diversify products and marketing strategies. Media portrayal of eMAG's biodiversity impact can shape consumer perceptions and buying habits. Environmental regulation changes due to political shifts can affect eMAG's costs and strategies. As an e-commerce entity, eMAG must comply with international regulations, especially when shipping globally.</p>	Low

Key takeaway:

eMAG’s operations and supply chain could be impacted by these biodiversity factors through regulatory compliance, supply chain sustainability, corporate reputation, and adaptability to changing environmental conditions and societal expectations; however, with consideration being given to the above factors and levels of direct impact, the adjusted risk rating per category has been assessed as low. eMAG can continue to engage in sustainable business practices and risk management to build resilience to environmental changes to ensure long-term success.

WWF Biodiversity Risk Filter | eMAG – Mitigating Factors

Given that eMAG's biodiversity risks largely sit within its extended supply chain, which they may have limited control over, the company can investigate the following mitigating factors to address the risks associated with regulating services:

Table 12: eMAG - Mitigating factors

Internal Mitigating factors	Extended Supply Chain – high level considerations
<p><u>Investment in Resilient Infrastructure:</u></p> <ul style="list-style-type: none">Invest in infrastructure that is designed to withstand environmental stresses, such as fire-resistant materials for warehouses or reinforced structures in landslide-prone areas. <p><u>Business Continuity Planning:</u></p> <ul style="list-style-type: none">Develop robust business continuity plans that include strategies for dealing with disruptions caused by biodiversity risks, such as alternative transportation routes or backup inventory management. <p><u>Insurance Coverage:</u></p> <ul style="list-style-type: none">Secure appropriate insurance to protect against losses from biodiversity risks, including property and business interruption coverage. <p><u>Transparency and Reporting:</u></p> <ul style="list-style-type: none">Maintain transparency in supply chain operations and report on biodiversity risk management efforts to stakeholders, which can improve the company's reputation and consumer trust. <p><u>Consumer Awareness Campaigns:</u></p> <ul style="list-style-type: none">Educate consumers on the importance of biodiversity and how their choices can influence demand for sustainable products. <p><u>Lobbying for Protective Policies:</u></p> <ul style="list-style-type: none">Advocate for government policies and regulations that protect ecosystems and promote biodiversity, which can help reduce the overall risk exposure.Join alliances or partnerships with NGOs, industry groups, or other companies to share knowledge and resources for biodiversity risk mitigation.	<p><u>Supply Chain Diversification:</u></p> <ul style="list-style-type: none">Diversify suppliers geographically to minimize the impact of regional environmental events like landslides or fires. This could involve sourcing from multiple locations or selecting suppliers that are less prone to biodiversity risks. <p><u>Sustainable Sourcing Policies:</u></p> <ul style="list-style-type: none">Develop and enforce sustainable sourcing policies that encourage suppliers to manage land responsibly, maintain healthy ecosystems, and use resources sustainably to reduce the likelihood of biodiversity-related risks. <p><u>Collaboration with Suppliers:</u></p> <ul style="list-style-type: none">Work closely with suppliers to build their capacity for risk management, including sharing best practices for mitigating biodiversity risks and providing support for implementing sustainable practices.

Key takeaway:

By investigating and implementing these mitigating factors, eMAG could proactively manage biodiversity risks within its extended supply chain and contribute to the overall resilience of the ecosystems on which it indirectly relies. eMAG’s biodiversity risks are distributed across their supply chain; therefore, this could make it challenging for eMAG to mitigate any potential risks.

WWF Biodiversity Risk Filter | PayU

The WWF BRF assesses risks based on GPS coordinates and relevant sectors. As PayU is not directly sector-categorised by the WWF BRF, the results are based on PayU's GPS coordinates and relevant sectors. This involves aligning the coordinates with the closest matching sector available in the framework to determine the risk rating. In table 8, the indicators are listed below each main risk category and are included to provide context and explain the underlying driver of the associated risk rating level.

Table 13: PayU's operational cities biodiversity risk rating per level 2 (defined on page 11) category with detail evidencing contributing indicators

City	RISK CATEGORIES										
	Provisioning Services		Regulating & Supporting Services - Enabling		Regulating Services - Mitigating		Pressures on Biodiversity		Reputational risk		
Amsterdam	Water scarcity and wild flora/ fauna availability have high risk exposure ratings for this category which contributes to the overall medium to high-risk rating for provisioning services.		Soil Condition, Water condition, air condition and Pollination are the main drivers for the medium to high-risk rating exposure.		The key contributing indicators of the medium to high risk include landslides, fire hazards, and extreme heat. Additionally, tropical cyclones pose significant risks in cities such as Gurugram, Bengaluru, Dubai, Bogota, Bangkok, and Jakarta.		The main contributing indicators of the low to medium risks for pressures on biodiversity are, land, freshwater and sea use change, tree cover loss in Istanbul, Cape Town, Lagos, and Bucharest, and invasives in Cape Town and Jakarta.		Reputational risk is driven by protected/conserved areas, key biodiversity areas, other important delineated areas, ecosystem condition, range rarity, labour/human rights, financial inequality, media scrutiny, sites of international interest, risk preparation. Political situation is identified as one of the contributing indicator for Istanbul and Lagos. Additionally, Gurugram and Bengaluru have Resource Scarcity: Food - Water - Air contributing to the overall risk rating		
Bangkok											
Bengaluru											
Bogota											
Bucharest											
Cape Town											
Dubai											
Gurugram											
Istanbul											
Jakarta											
Lagos											
Legend: Risk rating		Very Low		Low		Medium		High		Very High	

WWF Biodiversity Risk Filter | PayU continued

Table 13: PayU's operational cities biodiversity risk rating per level 2 (defined on page 11) category with detail evidencing contributing indicators

City	RISK CATEGORIES									
	Provisioning Services		Regulating & Supporting Services - Enabling		Regulating Services - Mitigating		Pressures on Biodiversity		Reputational risk	
Lima	Water scarcity and limited wild flora & fauna availability are the main contributing indicators for the overall low to high-risk rating for provisioning services		The main contributing indicators for the overall low to high-risk rating for enabling regulating and support services are, water condition, air condition, and pollination Soil condition is also a contributing indicator to the overall rating in Pimpri Chinchwad and New Delhi.		The main indicators contributing to the overall medium to very high-risk rating for this category are, landslides, fire hazard, extreme heat and tropical cyclones.		Land, freshwater and sea use change, and tree cover Loss are the two indicators contributing to overall low to medium risk rating for pressures on biodiversity.		Reputational risk is driven by environmental factors, key biodiversity areas, other important delineated areas, ecosystem condition, rage rarity, resource Scarcity: Food - Water - Air, labour/human rights, media scrutiny, and risk preparation. Protected/Conserved Areas is a contributing indicator to the overall rating in Warsaw and Poznan.	
Mumbai										
New Delhi										
Pimpri Chinchwad										
Poznan										
Prague										
Singapore										
Tel Aviv-Yafo										
Warsaw										
Legend: Risk rating		Very Low		Low		Medium		High		Very High

WWF Biodiversity Risk Filter | PayU – Qualitative Assessment

With PayU being an online platform with a range of operational locations, the nature of the risks that will have considerable impacts will be systemic and wide-spread in nature. Given the nature of PayU’s operations, the following considerations were applied to unpack the potential impacts per indicator. A detailed supply chain assessment was not performed as part of this assessment and could be something to consider in future assessments for any key areas identified.

Table 14: Qualitative considerations for all risk categories and indicators

Risk Category	WWF BRF Risk Rating per risk category	Qualitative Assessment	Adjusted Risk Rating per risk category
<p>Provisioning Services</p> <p>Potential indicators: Water scarcity, forest productivity and distance to markets, limited wild flora and fauna availability, limited marine fish availability.</p>	Medium	The increased cost of living from water scarcity may diminish consumer spending power, potentially shrinking PayU's customer base. A decline in forest productivity can disrupt the supply chain of goods and services, affecting merchants using PayU's services and possibly resulting in lower transaction volumes. In areas where local economies rely on biodiversity, limitations could jeopardise the financial stability of PayU's partners and merchants, potentially reducing transactions on PayU's platform.	Very low
<p>Regulation & Supporting Services – Enabling</p> <p>Potential indicators: Soil condition, water condition, air condition, ecosystem condition and pollination.</p>	Medium	Water-dependent businesses, like those in the food and beverage sector, may experience production and sales declines, impacting PayU's related transaction volumes. Local ecosystem deterioration could also restrict PayU's market expansion as economic activities in affected areas may decline.	Very low
<p>Regulating services – Mitigating</p> <p>Potential indicators: Landslides, fire hazard, Plant/forest/aquatic pests and diseases, herbicide resistance, extreme heat and tropical cyclones.</p>	High	Landslides pose a threat to PayU's leased infrastructure, including data centers, office buildings, and telecommunications, which could compromise employee and customer safety, workforce availability, and consumer market stability. Fire hazards require PayU to maintain strong disaster recovery plans to protect its employees at the location of leased physical assets. Extreme heat may increase cooling and energy demands, raising operational costs for PayU's technology infrastructure and potentially affecting employee health and productivity.	Very low

WWF Biodiversity Risk Filter | PayU – Qualitative Assessment continued

Table 14: Qualitative considerations for all risk categories and indicators continued

Risk Category	WWF BRF Risk Rating per risk category	Qualitative Assessment	Adjusted Risk Rating per risk category
<p>Pressures on biodiversity</p> <p><u>Potential indicators:</u> Land, freshwater water and sea use change, tree cover loss, invasives and pollution.</p>	Medium	Land use changes can influence PayU's infrastructure planning for data centres and offices, affecting land availability, cost, and risk. These changes can also reshape local economies and consumer behaviour, impacting PayU's merchant partners and potentially altering transaction volumes and types. New regulations on land and water use may lead to additional compliance costs and policy adjustments for PayU and its partners. Deforestation can intensify climate change, increasing the likelihood of severe weather events that could disrupt PayU's operations and local economies. This loss of tree cover may also affect community resilience, necessitating updates to PayU's risk assessments and business continuity plans. Invasive species can harm agricultural productivity, threatening the financial stability of PayU's agricultural clients and potentially decreasing transaction volumes. Pollution can impair employee health and productivity, creating human resource challenges for PayU. It may also alter consumer spending habits, affecting the financial transactions PayU handles. PayU may face growing pressure to demonstrate environmental responsibility, particularly in managing electronic waste and improving energy efficiency in its operations.	Very low
<p>Reputational risk</p> <p><u>Potential indicators:</u> Protected/conserved areas, key biodiversity areas, other important delineated areas, ecosystem condition, range rarity, indigenous peoples & local communities land and territories, resource scarcity: food, water, air, labour/human rights, financial inequality, media scrutiny, political situation, sites of international interest and risk preparation.</p>	Medium	Poor ecosystem health increases the risk of natural disasters, necessitating stronger disaster recovery and business continuity measures. Ecosystem degradation could affect local industries, altering PayU's customer base and transaction volumes. Resource scarcity may impact employee well-being and productivity, affecting operations. Changes in resource availability could also influence consumer spending and financial transaction patterns. A commitment to labour and human rights may improve PayU's talent attraction and retention. Media scrutiny of PayU's environmental impact could influence brand reputation, with effective management of media relations shaping public perception and client loyalty. Political stability and regulatory environments affect PayU's operational flexibility, compliance requirements, and expansion plans, especially in international operations	Very low

Key takeaway:

As a fintech company specializing in online payment services, PayU's direct impact on biodiversity risks is minimal, therefore the adjusted risk rating per category is assessed as very low. Nonetheless, understanding the importance of biodiversity and social factors is crucial for navigating the operational landscape and shaping corporate responsibility initiatives. By managing these aspects conscientiously, PayU could mitigate risks, build goodwill, and secure competitive advantages in markets that are increasingly aware of social and environmental issues. Although PayU's main business activities are not directly linked to environmental concerns, the company has the opportunity to support sustainability and conservation through its operational practices, strategic partnerships, and corporate social responsibility programs.

WWF Biodiversity Risk Filter | PayU – Mitigating Factors

As PayU continues to scale its operations and infrastructure to meet the demands of a growing digital economy, it becomes increasingly important to assess and address the potential environmental impacts that may arise.

Table 15: PayU – Mitigating Factors

Internal Mitigating factors	Extended Supply Chain – high level considerations
<p><u>Eco-friendly Office Operations:</u></p> <ul style="list-style-type: none">• Implement green office initiatives to reduce water and energy consumption, promote recycling, and support local biodiversity through eco-friendly building designs and operations. <p><u>Transparent Communication:</u></p> <ul style="list-style-type: none">• Maintain transparency with stakeholders about PayU's environmental efforts and challenges, building trust and encouraging shared responsibility for biodiversity.	<p><u>Support for Conservation Efforts:</u></p> <ul style="list-style-type: none">• Collaborate with conservation organizations to support projects that protect and restore ecosystems, particularly in regions where PayU operates. <p><u>Stakeholder Collaboration:</u></p> <ul style="list-style-type: none">• Work with stakeholders, including merchants, local communities, and environmental groups, to develop joint strategies for biodiversity conservation. <p><u>Policy Advocacy:</u></p> <ul style="list-style-type: none">• Advocate for stronger environmental protection policies within the industry and support governmental initiatives that aim to preserve biodiversity.

Key takeaway:

By exploring these mitigating factors, PayU could proactively manage biodiversity risks and demonstrate its commitment to sustainable practices, which can have a positive impact on the environment and the company's reputation. Responsible investing practices and business partnerships could be fostered to ensure that investments or business activities do not negatively impact protected or conserved areas. Given the nature of PayU's business and the business model, there are currently no significant direct biodiversity risks, challenges, dependencies or impacts.

WWF Biodiversity Risk Filter | OLX

OLX's biodiversity risk assessment relies on its coordinates. OLX facilitates trade through an online platform for second-hand goods. Therefore, its risk rating is determined based on the alignment of its coordinates with the closest matching sector within the framework.

Table 16: OLX's operational cities biodiversity risk rating per level 2 (defined on page 11) category with detail evidencing contributing indicators

City	RISK CATEGORIES											
	Provisioning Services		Regulating & Supporting Services - Enabling		Regulating Services - Mitigating		Pressures on Biodiversity		Reputational risk			
Johannesburg	Water scarcity and Limited Wild Flora & Fauna Availability are the main contributing indicators to the overall medium to high-risk rating for provisioning services.		The main contributing indicators for the overall low to medium-risk rating for enabling regulating and support services are, water condition and pollination.		The main indicators contributing to the overall medium risk rating for this category are, landslides, fire hazard, extreme heat and tropical cyclones.		Land, Freshwater and Sea Use Change, Tree Cover Loss and Invasives have a low to medium risk exposure ratings which contributes to the overall low to medium rating for pressure on biodiversity.		Reputational risk is driven by protected/conserved Areas, key biodiversity areas, and other important delineated areas, ecosystem condition (in Barcelona, Istanbul, and Sarajevo), range rarity (in Barcelona and Cape Town), resource Scarcity: Food - Water - Air, labour/human rights concerns, financial inequality (particularly in Johannesburg, Istanbul, and Cape Town), media scrutiny, political situation (in Almaty, Tashkent, and Istanbul), sites of international interest, and risk preparation (in Johannesburg and Cape Town).			
Sofia												
Berlin												
Almaty												
Tashkent												
Barcelona												
Istanbul	Forest Productivity and Distance to Markets is also a contributing indicator to the overall rating in Berlin.											
Cape Town												
Amsterdam												
Poznan												
Warsaw												
Kiev												
Lisbon												
Bucharest												
Sarajevo												
Legend: Risk rating		Very Low	Low		Medium		High		Very High			

WWF Biodiversity Risk Filter | OLX – Qualitative Assessment

Across each operational city of OLX, the biodiversity risks could have varying impacts due to the level of urbanisation and the ecosystems affected. Given the nature of OLX’s operations, the following considerations were applied to unpack the potential impacts per indicator.

Table 17: Qualitative considerations for all risk categories and indicators

Risk Category	WWF BRF Risk Rating per risk category	Qualitative Assessment	Adjusted Risk Rating per risk category
<p>Provisioning Services</p> <p><u>Potential indicators:</u> Water scarcity, forest productivity and distance to markets, limited wild flora and fauna availability, limited marine fish availability.</p>	Medium	OLX's platform promotes the circular economy by facilitating the sale and trade of second-hand items. This approach contributes to preserving provisioning services and biodiversity. OLX extends the lifespan of products, reduces waste, and encourages sustainable consumption practices.	Very low
<p>Regulation & Supporting Services – Enabling</p> <p><u>Potential indicators:</u> Soil condition, water condition, air condition, ecosystem condition and pollination.</p>	Medium	Degraded soil quality and worsening water quality may negatively impact the health and wellness of employees resulting in increased costs for purification and maintenance. Increased air pollution can heighten health concerns, possibly raising demand for respiratory health products on OLX. Eco-consciousness could steer consumers towards sustainable goods and services on the platform. The decline of pollinators may impact food production, altering the availability of agricultural goods on OLX.	Very low
<p>Regulating services – Mitigating</p> <p><u>Potential indicators:</u> Landslides, fire hazard, Plant/forest/aquatic pests and diseases, herbicide resistance, extreme heat and tropical cyclones.</p>	Medium	Landslides and extreme weather events such as cyclones, pose a risk to OLX's office buildings and outsourced data centers. This can impact employee safety and market stability. Fire safety products and services may become more relevant, potentially affecting market trends on OLX. Extreme heat may affect employee productivity and health.	Very low

WWF Biodiversity Risk Filter | OLX – Qualitative Assessment continued

Table 17: Qualitative considerations for all risk categories and indicators continued

Risk Category	WWF BRF Risk Rating per risk category	Qualitative Assessment	WWF BRF Risk Rating per risk category
Pressures on biodiversity Potential indicators: Land, freshwater water and sea use change, tree cover loss, invasives and pollution.	Medium	Diminished tree cover may decrease timber availability, influencing the supply and pricing of wood-based products on OLX, such as furniture and construction materials. The presence of invasive species may lead to a rise in pest control service listings or products for managing these species on OLX.	Very low
Reputational risk Potential indicators: Protected/conserved areas, key biodiversity areas, other important delineated areas, ecosystem condition, range rarity, indigenous peoples & local communities land and territories, resource scarcity: food, water, air, labour/human rights, financial inequality, media scrutiny, political situation, sites of international interest and risk preparation.	Medium	<p>In response to the challenges posed by environmental and regulatory changes, OLX has proactively embraced the principles of the circular economy to enhance sustainability and support eco-friendly practices. Recognising the constraints on natural resource-based products, OLX has fostered a marketplace for promoting items that contribute to environmental stewardship.</p> <p>OLX has also taken steps to ensure responsible sourcing, through the focus on the second-hand goods market, which has positively influenced the diversity and quality of goods available. This initiative not only bolsters OLX's reputation but also aligns with consumer expectations for ethical practices. To mitigate the impact of economic inequality on purchasing trends, OLX has diversified its product range to include both affordable and luxury goods, catering to a broad customer base.</p> <p>In the face of potential negative media coverage and the need for legal compliance amidst political and regulatory shifts, OLX has maintained open communication channels and demonstrated adaptability. By implementing these measures, OLX has reinforced its commitment to a circular economy, reducing waste and promoting the reuse and recycling of products.</p>	Very low

Key takeaway:

OLX, as an online marketplace, primarily provides a platform for users to buy and sell items, which means its direct impact on environmental factors and biodiversity risk is limited, resulting in an adjusted risk rating of very low per risk category. Overall, these factors could shape market trends, regulatory environments, and consumer behaviour, which, in turn, would influence the types and volumes of products and services offered on OLX. Given the action taken by OLX to date, the company is well positioned to respond positively to biodiversity risks and mitigate potential reliance on high-risk areas due to the drive and focus towards promoting the circular economy.

WWF Biodiversity Risk Filter | OLX – Mitigating Factors

As a prominent player in the e-commerce sector with a vast operational reach that spans multiple continents and ecological regions, OLX must consider its potential impact on biodiversity. While OLX continues to expand its digital marketplace, it is important to assess how its corporate activities may intersect with and affect the biodiversity of the regions in which it operates.

Table 18: OLX - Mitigating Factors

Internal Mitigating factors	Extended Supply Chain – high level considerations
<p><u>Green Office Initiatives:</u></p> <ul style="list-style-type: none">• Implement office policies that reduce water and energy consumption, promote recycling, and support local biodiversity through green spaces and eco-friendly infrastructure. <p><u>Sustainable Marketplace Practices:</u></p> <ul style="list-style-type: none">• Encourage the listing and sale of sustainable products on the OLX platform and discourage items that contribute to biodiversity loss. <p><u>Transparent Reporting:</u></p> <ul style="list-style-type: none">• Maintain transparency in environmental efforts and progress, building trust with consumers and stakeholders	<p><u>Stakeholder Engagement:</u></p> <ul style="list-style-type: none">• Engage with stakeholders, including customers, NGOs, and local communities, to collaborate on biodiversity protection initiatives.

Key takeaway:

By exploring these mitigating factors, OLX could continue to take a proactive approach to managing biodiversity risks within its supply chain and operations, thereby contributing to the preservation of ecosystems and maintaining a responsible corporate image. Given the nature of OLX’s business and the business model, there are currently no significant direct biodiversity risks, challenges, dependencies or impacts.

WWF Biodiversity Risk Filter | GoodHabitz

GoodHabitz is a European-based online education platform, offering comprehensive digital training to companies and individuals, focusing on soft skills and human capabilities. The risk ratings for GoodHabitz are determined by aligning its coordinates with the closest matching sector available in the framework , considers indicators listed below each main risk category to provide context and explain the underlying drivers of the associated risk rating level..

Table 19: GoodHabitz’s operational cities biodiversity risk rating per level 2 (defined on page 11) category with detail evidencing contributing indicators

City	RISK CATEGORIES										
	Provisioning Services		Regulating & Supporting Services - Enabling		Regulating Services - Mitigating		Pressures on Biodiversity		Reputational risk		
Levallois-Perret	Water scarcity is the main contributing indicators to the overall low to high-risk rating for provisioning services. Limited Wild Flora & Fauna Availability is also a contributing indicator in Milan and Madrid		The main contributing indicators for the overall low to medium-risk rating for enabling regulating and support services are, Water Condition, Ecosystem Condition and Pollution in Eindhoven and Madrid		The key contributing indicators of the overall medium risk for mitigating regulating services include landslides, fire hazards, and extreme heat. Herbicide Resistance is also a contributing indicator in Levallois-Perret		The main contributing indicators of the overall medium risks exposure for pressures on biodiversity are, Land, freshwater and sea use change, tree cover loss, and invasives.		Reputational risk is driven by protected/conserved areas, key biodiversity areas, other important delineated areas, media scrutiny, and sites of international interest.		
Frankfurt am Main											
Milan											
Eindhoven											
Madrid											
London											
Utrecht											
Legend: Risk rating		Very Low		Low		Medium		High		Very High	

WWF Biodiversity Risk Filter | GoodHabitZ – Qualitative Assessment

GoodHabitZ, as an online education platform offering training courses for personal and professional development, does not have significant direct biodiversity impacts. The biodiversity risks could have a varying impacts due to the level of urbanisation, the ecosystems impacted and reliance on data centers and digital infrastructure. Given the nature of GoodHabitZ’s operations, the following considerations were applied to unpack the potential impacts per indicator.

Table 20: Qualitative considerations for all risk categories and indicators

Risk Category	WWF BRF Risk Rating per risk category	Qualitative Assessment	Adjusted Risk Rating per risk category
Provisioning Services Potential indicators: Water scarcity, forest productivity and distance to markets, limited wild flora and fauna availability, limited marine fish availability.	Medium	Water scarcity can undermine the economic stability of areas where GoodHabitZ operates, potentially raising operational costs due to investments in water-saving technologies. Employees in affected regions may experience personal hardships, impacting their productivity and well-being, prompting GoodHabitZ to consider employee support programs. If the company uses physical goods, such as marketing materials, reduced forest productivity could increase costs for paper and wood products. Greater distances to markets might also inflate transportation costs and extend lead times.	Very low
Regulation & Supporting Services – Enabling Potential indicators: Soil condition, water condition, air condition, ecosystem condition and pollination.	Medium	Employees in regions with degraded soil may face economic and health challenges, potentially affecting their productivity and well-being. GoodHabitZ might consider offering support or educational programs related to sustainable agriculture. Contaminated water sources can affect the health and stability of communities where GoodHabitZ operates. Poor air quality can lead to health issues for employees, affecting absenteeism and productivity.	Very low
Regulating services – Mitigating Potential indicators: Landslides, fire hazard, Plant/forest/aquatic pests and diseases, herbicide resistance, extreme heat and tropical cyclones.	Medium	Landslides pose a threat to infrastructure, which could interrupt internet and power services essential for GoodHabitZ's online activities and remote work capabilities. Employees in landslide-prone regions may be at risk and encounter difficulties in commuting or working from home. Fire hazards can endanger GoodHabitZ's physical offices, data centers, and employees' residences, risking service disruptions. Although not directly linked to GoodHabitZ's business, herbicide resistance can affect agricultural stability and food security, influencing employees' cost of living and well-being. Extreme heat may compromise employee health and productivity, necessitating more climate control and increasing operational expenses. Additionally, heightened air conditioning use during heatwaves can inflate energy costs and strain power grids, potentially impacting GoodHabitZ's operations.	Very low

WWF Biodiversity Risk Filter | GoodHabitZ – Qualitative Assessment continued

Table 20: Qualitative considerations for all risk categories and indicators continued

Risk Category	WWF BRF Risk Rating per risk category	Qualitative Assessment	Adjusted Risk Rating per risk category
Pressures on biodiversity Potential indicators: Land, freshwater water and sea use change, tree cover loss, invasives and pollution.	Medium	If GoodHabitZ uses paper-based materials or wood products, tree cover loss could lead to increased costs and supply chain issues. Pollution can affect the health of employees, potentially leading to increased sick days and decreased productivity.	Very low
Reputational risk Potential indicators: Protected/conserved areas, key biodiversity areas, other important delineated areas, ecosystem condition, range rarity, indigenous peoples & local communities land and territories, resource scarcity: food, water, air, labour/human rights, financial inequality, media scrutiny, political situation, sites of international interest and risk preparation.	Medium	Deteriorating ecosystems may heighten natural disaster risks, prompting the need for stronger disaster recovery and business continuity strategies to protect its facilities and equipment. Resource scarcity could jeopardise employee well-being and regional stability, potentially disrupting business operations. Changes in resource availability may alter learning and education demands. GoodHabitZ must continue to adhere to various legal and environmental regulations across its operational regions, including those concerning labour and human rights, which can also affect talent attraction and retention.	Very low

Key takeaway:

While GoodHabitZ's core business may not be directly linked to natural resource management (with an adjusted risk rating of very low per risk category), the broader environmental context can influence its operations, costs, and employee well-being. The company could mitigate these risks by adopting sustainable practices, supporting conservation efforts, and integrating environmental stewardship into its business strategy and educational content. Although GoodHabitZ's direct impact on biodiversity risks may be limited, adopting these practices can help manage operational risks, align with regulatory requirements, and contribute positively to employee well-being

WWF Biodiversity Risk Filter | GoodHabitiz – Mitigating Factors

Identifying and implementing measures to mitigate biodiversity risks ensures that GoodHabitiz's operations support the conservation and sustainable use of natural resources, aligning with global sustainability goals.

Table 21: GoodHabitiz – Mitigating Factors

Internal Mitigating factors	Extended Supply Chain – high level considerations
<p><u>Biodiversity-Friendly Operations:</u></p> <ul style="list-style-type: none">• Implement office and facility management practices that minimise water usage, energy consumption, and waste production. <p><u>Green Infrastructure:</u></p> <ul style="list-style-type: none">• Advocate for the inclusion of green infrastructure, such as green roofs and walls, in the office spaces rented, to support local biodiversity and ecosystem services. <p><u>Stakeholder Engagement:</u></p> <ul style="list-style-type: none">• Engage with stakeholders, including employees and customers to promote biodiversity awareness and encourage collective action.	<p><u>Collaboration with Conservation Organisations:</u></p> <ul style="list-style-type: none">• Partner with environmental NGOs or conservation groups to support education, awareness, and training initiatives on biodiversity that protect and restore ecosystems and species affected by the supply chain.

Key takeaway:

By exploring these mitigating factors, GoodHabitiz could help raise awareness through their training and educational materials around the importance of biodiversity risks and dependencies. Given the nature of GoodHabitiz' business and the business model, there are currently no significant direct biodiversity risks, challenges, dependencies or impacts noted.

WWF Biodiversity Risk Filter | Takealot

Takealot is an e-commerce company based in South Africa. Takealot’s risk results are based on the GPS coordinates inputted on the WWF BRF. While Takealot's operations may align with sectors such as e-commerce or retail, its risk rating is determined by matching its coordinates with the most appropriate sector available within the framework.

Table 22: Takealot’s operational cities biodiversity risk rating per level 2 (defined on page 11) category with detail evidencing contributing indicators

City	RISK CATEGORIES										
	Provisioning Services		Regulating & Supporting Services - Enabling		Regulating Services - Mitigating		Pressures on Biodiversity		Reputational risk		
Cape Town	Water scarcity and Limited Wild Flora & Fauna Availability are the main contributors to the overall medium to high-risk for provisioning services.		The key factors contributing to the overall low to medium risk for enabling regulating and supporting services include water and soil conditions (specifically in Kimberly and Colesberg), as well as ecosystem condition (noted in Colesberg).		The main indicators contributing to the overall medium risk for mitigating regulating services include landslides, fire hazards, extreme heat, and tropical cyclones		Land, freshwater, and sea use change, Tree cover loss, and Invasive species are the main contributing indicators of the overall low to medium risks exposure for pressures on biodiversity.		Factors contributing to the overall medium to high reputational risk include, protected/conserved areas, key biodiversity areas, and other important delineated areas, range rarity, financial inequality, media scrutiny, sites of international interest, risk preparation, as well as ecosystem condition in Durban.		
Centurion											
City of Mbombela											
Colesberg											
Durban											
Gqeberha											
Johannesburg											
Kempton Park											
Kimberley											
Kokstad											
Legend: Risk rating		Very Low		Low		Medium		High		Very High	

WWF Biodiversity Risk Filter | Takealot continued

Table 22: Takealot's operational cities biodiversity risk rating per level 2 (defined on page 11) category with detail evidencing contributing indicators

City	RISK CATEGORIES										
	Provisioning Services		Regulating & Supporting Services - Enabling		Regulating Services - Mitigating		Pressures on Biodiversity		Reputational risk		
Komani	Water Scarcity, Forest Productivity and Distance to Markets (Springbok), Limited Wild Flora & Fauna Availability		Soil Condition(Springbok), Water Condition, Ecosystem Condition(Komani).		The main indicators contributing to the overall medium to high-risk for mitigating regulating services include landslides, fire hazards, extreme heat, and tropical cyclones		Land, freshwater, and sea use change, Tree cover loss, and Invasive species are the main contributing indicators of the overall low to medium risks exposure for pressures on biodiversity.		Factors contributing to reputational risk include protected/conserved areas, key biodiversity areas, other important delineated areas, ecosystem condition in Springbok and Umhlanga, range rarity, financial inequality, media scrutiny, sites of international interest in Stellenbosch and Westville, and risk preparation.		
Mamelodi											
Midrand											
Milnerton											
Polokwane											
Pretoria											
Springbok											
Stellenbosch											
Umhlanga											
uPhongolo											
Westville											
Legend: Risk rating		Very Low		Low		Medium		High		Very High	

WWF Biodiversity Risk Filter | Takealot – Qualitative Assessment

Takealot is a major e-commerce company. While its direct impact on biodiversity might not be obvious, Takealot's operations, spanning from procurement to delivery, intersect with environmental concerns that can affect biodiversity. The intricate logistics network that facilitates Takealot's market presence has underlying implications for biodiversity factors.

Table 23: Qualitative considerations for all risk categories and indicators

Risk Category	WWF BRF Risk Rating per risk category	Qualitative Assessment	Adjusted Risk Rating per category
Provisioning Services Potential indicators: Water scarcity, forest productivity and distance to markets, limited wild flora and fauna availability, limited marine fish availability.	Medium	Water scarcity may impact Takealot's expenses, mainly in sanitation, although their facilities do not heavily rely on water, Takealot have backup water tanks. This scarcity could also challenge suppliers and manufacturers, risking stock shortages or cost increases for Takealot. Declining forest productivity might inflate the costs of paper and cardboard, crucial for e-commerce packaging. Longer distances to markets can lead to increased fuel and transportation expenses, potentially compromising Takealot's delivery efficiency and increasing customer delivery charges. A decrease in biodiversity could narrow Takealot's product variety, especially in natural and organic categories. With growing eco-awareness, consumer demand for sustainably sourced products may shape Takealot's sourcing strategies and offerings.	Very low
Regulation & Supporting Services - Enabling Potential indicators: Soil condition, water condition, air condition, ecosystem condition and pollination.	Very low	Degraded soil health could reduce agricultural yields, potentially limiting the availability and raising the costs of agriculture-dependent products on Takealot, like food and natural fibres. Water contamination could compromise product quality and safety, especially for items needing clean water during production. This pollution can also disrupt communities and economies, impacting Takealot's employees and market stability. While Takealot's direct impact on air quality might be limited, it might still be urged to lower its carbon footprint and enhance environmental sustainability by adopting sustainable logistics and packaging. Ecosystem degradation can lead to biodiversity loss, potentially decreasing the diversity of natural products Takealot can sell.	Very low
Regulating services - Mitigating Potential indicators: Landslides, fire hazard, Plant/forest/aquatic pests and diseases, herbicide resistance, extreme heat and tropical cyclones.	Medium	Landslides can disrupt Takealot's delivery network by damaging roads and bridges, causing delays and higher costs. If landslides affect supplier locations, they could interrupt the flow of goods, impacting Takealot's inventory and sales. Fires threaten Takealot's warehouses and inventory, risking financial loss and delivery service disruptions. Pests and diseases can reduce the availability of forestry and aquatic-based products, like paper and seafood, possibly increasing costs that may be passed to consumers or affect Takealot's profitability. Herbicide resistance may force Takealot to find new suppliers or products. Extreme heat poses health risks to staff, potentially decreasing productivity and raising costs due to the need for more cooling in warehouses and data centres.	Very low

WWF Biodiversity Risk Filter | Takealot – Qualitative Assessment continued

Table 23: Qualitative considerations for all risk categories and indicators continued

Risk Category	WWF BRF Risk Rating per risk category	Qualitative Assessment	Adjusted Risk Rating per category
<p>Pressures on biodiversity</p> <p>Potential indicators: Land, freshwater water and sea use change, tree cover loss, invasives and pollution.</p>	Medium	Land use changes, like urbanization or agricultural expansion, can affect local ecosystems and supply chains, potentially impacting the availability and pricing of Takealot's products. Deforestation may raise the costs of paper and cardboard, essential for e-commerce packaging, prompting Takealot to seek sustainably sourced materials to uphold its brand responsibility. Invasive species pose risks to agriculture and ecosystems, which could influence the supply and cost of related products. Additionally, pollution may prompt stricter environmental regulations, potentially increasing costs for Takealot and its suppliers.	Very low
<p>Reputational risk</p> <p>Potential indicators: Protected/conserved areas, key biodiversity areas, other important delineated areas, ecosystem condition, range rarity, indigenous peoples & local communities land and territories, resource scarcity: food, water, air, labour/human rights, financial inequality, media scrutiny, political situation, sites of international interest and risk preparation.</p>	Medium	Takealot may encounter sourcing restrictions from conservation-regulated areas, requiring diligent supply chain management for compliance. Adherence to environmental regulations may influence Takealot's operational locations and methods, including logistics and distribution. Ecosystem degradation can affect the availability and pricing of goods, potentially disrupting Takealot's supply chain and product range. The rarity of certain species or ecosystems may restrict access to unique products, impacting Takealot's market distinction and catalogue. Resource scarcity could challenge workforce stability and operations, leading to higher costs and logistical hurdles, and may also alter the availability and cost of resource-intensive products on Takealot's platform. Economic disparities can influence consumer spending power, affecting Takealot's customer demographics and sales. In the event of media scrutiny linked to Takealot's operations, proactive communication will enable clear communication to the respective stakeholders about its environmental and social impacts. Political changes could introduce new regulations, which could impact Takealot.	Very low

Key takeaway:

In summary, biodiversity risks could affect Takealot's supply chain, product availability, and consumer perception. However, given the context of the nature of the operations, the adjusted risk rating per category has been classified as very low. Takealot could prioritise resource management and to navigate biodiversity risks, relevant considerations should be integrated into business strategies, operations, and supply chain management to promote sustainable practices.

WWF Biodiversity Risk Filter | Takealot – Mitigating Factors

While Takealot's direct interaction with natural ecosystems may be limited, the extensive network of offices, warehouses, and distribution channels necessitates a thorough consideration of potential biodiversity risks stemming from the indirect impacts of Takealot's operational footprint on local habitats, species, and ecological processes, as well as associated mitigating factors.

Table 24: Takealot – Mitigating Factors

Internal Mitigating factors	Extended Supply Chain – high level considerations
<p><u>Reducing Operational Pressures:</u></p> <ul style="list-style-type: none">• Continue to optimise logistics and distribution.• Implement policies to reduce waste and pollution, such as using eco-friendly packaging and recycling programs. <p><u>Reputation and Compliance:</u></p> <ul style="list-style-type: none">• Engage in transparent reporting on biodiversity efforts and compliance with environmental regulations.• Develop a biodiversity policy that aligns with international conservation standards and best practices. <p><u>Influence and Advocacy:</u></p> <ul style="list-style-type: none">• Use Takealot's market influence to advocate for industry-wide adoption of biodiversity-friendly practices.• Collaborate with other businesses, NGOs, and governmental bodies to promote policies that protect biodiversity.	<p><u>Sustainable Supply Chain Management:</u></p> <ul style="list-style-type: none">• Partner with suppliers who demonstrate sustainable practices, such as water conservation, sustainable forestry, and responsible fisheries.• Implement a supplier code of conduct that includes biodiversity protection standards.• Conduct regular environmental audits of suppliers to ensure compliance with sustainability criteria. <p><u>Disaster Risk Reduction:</u></p> <ul style="list-style-type: none">• Collaborate with suppliers to develop risk management plans for natural disasters, pest control, and disease management. <p><u>Community and Stakeholder Engagement:</u></p> <ul style="list-style-type: none">• Work with local communities and indigenous groups to understand their needs and support their efforts to protect biodiversity.

Key takeaway:

By addressing biodiversity risks, Takealot could ensure its long-term viability and growth, as environmental sustainability increasingly influences consumer preferences and market trends. Additional considerations around supply chain resilience are important for maintaining stable and resilient operations throughout the value chain. Given the nature of Takealot's business and the business model, biodiversity risks, challenges, dependencies and impacts, are distributed across the extended supply chain.

WWF Biodiversity Risk Filter | M24 Logistics

M24 Logistics is classified under Transportation Services by the WWF. This classification aligns with M24’s core activities, which include providing distribution solutions for business-to-business (B2B) and business-to-customer (B2C) merchants within the African continent. The risk rating for Serates packaging waste, which can affect terrestrial and marine ecosystems if not managed properly). In the table below, the indicators are listed below each main risk category and are included to provide context and explain the underlying driver of the associated risk rating level.

Table 25: M24 Logistics’ operational cities biodiversity risk rating per level 2 (defined on page 11) category with detail evidencing contributing indicators

City	RISK CATEGORIES									
	Provisioning Services		Regulating & Supporting Services - Enabling		Regulating Services - Mitigating		Pressures on Biodiversity		Reputational risk	
Cape Town	Water scarcity is the main contributor for the overall medium to high-risk rating for provisioning services. Limited wild flora & fauna availability is also a contributing factor in Cape Town.		The overall rating for enabling regulating and support services is rated as low. Water Condition is the only contributing factor towards the overall rating.		The main indicators contributing to the overall medium risk rating for this category are, landslides, fire hazard, extreme heat and tropical cyclones.		Land, Freshwater and Sea Use Change and Invasives have a low to medium risk exposure ratings which contributes to the overall medium risk rating for pressure on biodiversity.		Reputational risk is driven by Protected/Conserved Areas, Key Biodiversity Areas, Financial Inequality, Media Scrutiny and, Risk Preparation. For the city of Cape Town, other important delineated areas, and range rarity are contributors to the overall rating	
Eastport										
Olifantsfontein										
Legend: Risk rating	Very Low		Low		Medium		High		Very High	

WWF Biodiversity Risk Filter | M24 Logistics – Qualitative Assessment

Although the direct exposure of M24 Logistics’ operations to biodiversity risks may appear minimal, the geographical footprint of the company's logistics operations brings with it a responsibility to consider the environmental impacts.

Table 26: Qualitative considerations for all risk categories and indicators

Risk Category	WWF BRF Risk Rating per risk category	Qualitative Assessment	Adjusted Risk Rating per category
Provisioning Services Potential indicators: Water scarcity, forest productivity and distance to markets, limited wild flora and fauna availability, limited marine fish availability.	Medium	Employees in water-scarce areas could experience difficulties that impact their well-being and work performance. Declining forest productivity could lead to increased costs for wood-based materials like pallets and packaging. Longer distances to markets may result in higher fuel costs and longer delivery times, challenging M24 Logistics' commitment to timely service. Biodiversity loss could reduce the variety of goods transported, possibly affecting the volume of business. Additionally, M24 Logistics might face new biodiversity conservation regulations that could alter logistics practices and routes.	Very low
Regulation & Supporting Services – Enabling Potential indicators: Soil condition, water condition, air condition, ecosystem condition and pollination.	Low	Degraded soil quality can damage infrastructure, like roads, compromising transportation reliability. Stricter air quality regulations could force M24 Logistics to engage with outsourced courier services that have a more defined alignment to sustainability or access to fleets using alternative fuel sources, which could affect operational expenses for outsourced services. Ecosystem changes, including floods or landslides, can disrupt transportation routes, leading to detours and longer transit times.	Very low
Regulating services – Mitigating Potential indicators: Landslides, fire hazard, Plant/forest/aquatic pests and diseases, herbicide resistance, extreme heat and tropical cyclones.	Medium	Landslides can obstruct key transport routes, leading to delays, detours, and higher fuel costs, as well as causing infrastructure damage that requires expensive repairs and disrupts the logistics network. Fires threaten warehouses, vehicles, and goods, risking asset loss, operational halts, and service interruptions. Pests and diseases may compromise the integrity of transported goods, especially in agriculture and forestry, reducing the need for logistics services and necessitating stricter regulatory compliance for transport. Extreme temperatures can affect vehicle performance, necessitating more maintenance and heightening the risk of malfunctions. Additionally, the well-being of drivers and warehouse personnel can be jeopardized by severe heat, possibly resulting in lower productivity and increased costs	Very low

WWF Biodiversity Risk Filter | M24 Logistics – Qualitative Assessment continued

Table 26: Qualitative considerations for all risk categories and indicators continued

Risk Category	WWF BRF Risk Rating per risk category	Qualitative Assessment	Adjusted Risk Rating per category
<p>Pressures on biodiversity</p> <p>Potential indicators: Land, freshwater water and sea use change, tree cover loss, invasives and pollution.</p>	Medium	Deforestation could raise the price of wood-based packaging, potentially increasing company costs and customer fees. The proliferation of invasive species might prompt tighter regulations on goods transport, affecting M24 Logistics' procedures and compliance expenses. These species can also harm ecosystems, potentially affecting transportation routes and the availability of resources vital to logistics.	Very low
<p>Reputational risk</p> <p>Potential indicators: Protected/conserved areas, key biodiversity areas, other important delineated areas, ecosystem condition, range rarity, indigenous peoples & local communities land and territories, resource scarcity: food, water, air, labour/human rights, financial inequality, media scrutiny, political situation, sites of international interest and risk preparation.</p>	Medium	M24 Logistics may face route restrictions and additional compliance in biodiversity-rich and conservation areas. Ecosystem degradation can cause infrastructure issues and route changes, impacting service reliability M24 Logistics must ensure the continued respect for labour and human rights considerations to continue to protect its reputation and maintain compliance with legal standards. Economic disparities among clients could alter the demand for logistics services.	Very low

Key takeaway:

Given that M24 Logistics has relatively insignificant exposure to direct biodiversity risks and the very low adjusted risk rating per category, it is important to recognise the direct and indirect impacts of logistics operations on biodiversity, including habitat disruption, pollution, and resource depletion. To navigate biodiversity risks, relevant considerations could be integrated into business strategies, operations, and supply chain management to promote sustainable practices.

WWF Biodiversity Risk Filter | M24 Logistics – Mitigating Factors

Implementing mitigating factors demonstrates a commitment to environmental stewardship and the protection of biodiversity. Biodiversity risks could potentially translate into operational, financial, and reputational risks for M24 Logistics if there is a drastic systemic implication in the areas in which M24 Logistics operates. By proactively addressing these risks through mitigation strategies, M24 Logistics could safeguard against potential negative impacts on their operations and reputation.

Table 27: M24 Logistics – Mitigating Factors

Internal Mitigating factors	Extended Supply Chain – high level considerations
<p><u>Eco-Friendly Logistics Operations:</u></p> <ul style="list-style-type: none">Consider engaging with courier and logistics partners to promote transitioning to electric vehicles and alternative fuel sources. <p><u>Sustainable Warehousing:</u></p> <ul style="list-style-type: none">Continue implementing new technologies to increase building efficiencies for owned distribution centres to continue aligning with green building standards and reducing energy and water usage. <p><u>Waste Management and Pollution Control:</u></p> <ul style="list-style-type: none">Continue to implement waste reduction and recycling programs across all facilities to reduce waste and increase the reuse of plastic packaging.	<p><u>Supplier Engagement and Standards:</u></p> <ul style="list-style-type: none">Develop environmental standards for suppliers that include biodiversity considerations.Work with suppliers to help them understand and mitigate their own biodiversity impacts.

Key takeaway:

Due to the nature of M24 Logistics’ operations and the actions already taken at facilities to reduce waste and focus on sustainability, the direct impact the company has on biodiversity is minimal. M24 Logistics could continue to further its progress in focusing on sustainable practices within its direct control as well as sustainable supply chain management. Given the nature of M24 Logistics’ business and the business model, there are no significant direct biodiversity challenges, dependencies or impacts, and the biodiversity risks are very distributed across the supply chain.

WWF Biodiversity Risk Filter | Corporate Offices

Naspers corporate offices are not directly sector-classified by the WWF BRF, the risk evaluation is based on its coordinates and matched to relevant sectors within Administrative and Support Service Activities. The risk rating reflects these coordinates and the nature of its operations, considering its extensive efforts to reduce greenhouse gas emissions across its corporate offices and portfolio companies. The Corporate Offices function as the administrative hub for the Naspers Group across numerous geographical regions that have already experienced a high-level of urbanisation. The indicators are listed below each main risk category and are included to provide context and explain the underlying driver of the associated risk rating level.

Table 28: Corporate Offices’ operational cities biodiversity risk rating per level 2 (defined on page 11) category with detail evidencing contributing indicators

City	RISK CATEGORIES										
	Provisioning Services		Regulating & Supporting Services - Enabling		Regulating Services - Mitigating		Pressures on Biodiversity		Reputational risk		
Amsterdam	The overall risk rating for provisioning services was rated as very low. Water scarcity, despite being a concern for provisioning services, did not significantly impact this risk category, while all other indicators assessed have no dependency or impact for this category.		The main contributing indicators for the overall low to medium-risk rating for enabling regulating and support services are, water condition and air condition, all other indicators assessed for this category have no dependency or impact		The main indicators contributing to the overall medium to high-risk rating for this category are, landslides, fire hazard, extreme heat and tropical cyclones.		The overall risk rating for pressures on biodiversity was rated as low. None of the indicators evaluated within this category significantly impacted its risk level.		The overall rating for reputational risk is driven by media scrutiny, risk preparation, protected/conserved areas, labour/human rights, and financial inequality.		
Johannesburg											
Bengaluru											
London											
Hong Kong											
Legend: Risk rating		Very Low		Low		Medium		High		Very High	

WWF Biodiversity Risk Filter | Corporate Offices – Qualitative Assessment

Naspers operates a network of corporate offices that span diverse ecological regions. While the direct exposure of these offices to biodiversity risks may not be substantial, the geographical spread of the regions in which the corporate offices are located necessitates a comprehensive understanding of the potential environmental impacts. Biodiversity risks can manifest in various forms, from the degradation of local ecosystems to the broader implications of climate change on global biodiversity.

Table 29: Table Qualitative considerations for all risk categories and indicators

Risk Category	WWF BRF Risk Rating per risk category	Qualitative Assessment	Adjusted Risk Rating per category
Provisioning Services Potential indicators: Water scarcity, forest productivity and distance to markets, limited wild flora and fauna availability, limited marine fish availability.	Very low	Water scarcity may raise Corporate Offices' facility maintenance costs for sanitation, landscaping, and cooling. Employee challenges due to water shortages could impact morale and productivity. The Corporate Offices could adopt sustainable practices like paper reduction and local sourcing to cut environmental impact and costs. The offices could also face calls to support conservation and implement policies for biodiversity, responsible sourcing, and reducing its ecological footprint.	Very low
Regulation & Supporting Services – Enabling Potential indicators: Soil condition, water condition, air condition, ecosystem condition and pollination.	Medium	Degraded soil can diminish the condition of green spaces near corporate offices, affecting aesthetics and employee well-being. Water contamination may compromise office water quality, posing health risks and necessitating costly treatment systems. Poor air quality can cause employee health issues, increasing absenteeism and lowering productivity. The state of local ecosystems may indicate wider environmental issues. Naspers' dedication to ecosystem health can shape its reputation.	Very low
Regulating services – Mitigating Potential indicators: Landslides, fire hazard, Plant/forest/aquatic pests and diseases, herbicide resistance, extreme heat and tropical cyclones.	Medium	Landslides and fire hazards can inflict structural damage on office buildings and roads, incurring repair costs and disrupting business. Employee safety concerns due to landslide and fire risks may impact office attendance and productivity. Supply chain issues and higher expenses may arise if Naspers' offices use materials from pest- or disease-affected ecosystems, like timber for furniture or paper. Growing herbicide resistance could complicate office landscape maintenance, increasing costs. Extreme heat may boost air conditioning use, raising energy costs and affecting employee well-being, which could lead to decreased productivity and a greater focus on heat-related health measures.	Very low

WWF Biodiversity Risk Filter | Corporate Offices – Qualitative Assessment continued

Table 29: Qualitative considerations for all risk categories and indicators continued

Risk Category	WWF BRF Risk Rating per risk category	Qualitative Assessment	Adjusted Risk Rating per category
<p>Pressures on biodiversity</p> <p>Potential indicators: Land, freshwater water and sea use change, tree cover loss, invasives and pollution.</p>	Low	Shifts in freshwater and sea resource management could alter their availability and cost, affecting office upkeep and staff welfare. Reduced tree cover may necessitate more office cooling, raising expenses due to altered microclimates. Invasive species could increase the cost and complexity of maintaining office landscaping. Pollution may harm employee health, potentially increasing absenteeism and reducing work output. Offices in polluted areas may need better air filtration systems, adding to operational costs.	Very low
<p>Reputational risk</p> <p>Potential indicators: Protected/conserved areas, key biodiversity areas, other important delineated areas, ecosystem condition, range rarity, indigenous peoples & local communities land and territories, resource scarcity: food, water, air, labour/human rights, financial inequality, media scrutiny, political situation, sites of international interest and risk preparation.</p>	Medium	Resource scarcity could increase operational costs and pose challenges for office management, as well as affect employee well-being, requiring support measures. Naspers must comply with labour and human rights standards to preserve its ethical reputation. The company should also be ready to address media inquiries about its environmental and social contributions with proactive communication. Political changes may introduce new business regulations, requiring Naspers to remain flexible and compliant.	Very low

Key takeaway:

The Naspers Corporate Offices have a minimal impact on biodiversity due to the offices being located in urban city centres that have already experienced the impacts of biodiversity loss and has an adjusted risk rating of very low per risk category.

WWF Biodiversity Risk Filter | Corporate Offices – Mitigating Factors

Implementing mitigating factors demonstrates a commitment to environmental stewardship and the protection of biodiversity. Biodiversity risks can translate into operational, financial, and reputational risks for the company. By proactively addressing these risks through mitigation strategies, Naspers Corporate Offices can safeguard against potential negative impacts on their operations and reputation.

Table 30: Corporate Offices – Mitigating Factors

Internal Mitigating factors	Extended Supply Chain – high level considerations
<p><u>Green Office Initiatives:</u></p> <ul style="list-style-type: none">• Continue to implement office policies that reduce waste, promote recycling, and conserve energy and water.• Continue to design and maintain office spaces with green infrastructure, such as green roofs and walls, to support local biodiversity. <p><u>Sustainable Procurement:</u></p> <ul style="list-style-type: none">• Adopt procurement policies that favour environmentally friendly products and services for the daily office operations and functionality, including those with minimal impact on biodiversity.• Choose suppliers that have strong environmental credentials and that actively work to reduce their impact on biodiversity.	<p><u>Influence Supply Chain Practices:</u></p> <ul style="list-style-type: none">• Use the company's influence to encourage suppliers to adopt sustainable practices that protect biodiversity.• Include clauses in contracts that require suppliers to comply with environmental standards and to demonstrate their commitment to biodiversity.

Key takeaway:

Through continuing to implement and strive for sustainable business practices at the Corporate Offices and adapting to changing global requirements, the Corporate Offices can continue to address the areas of biodiversity within their direct control, however the overall biodiversity risks applicable to the Corporate Offices are minimal. Given the nature of the Corporate Office’s operations, there are no significant direct biodiversity challenges, dependencies or impacts, and the biodiversity risks are very distributed across the supply chain of the Naspers Group.

Implications

Focusing on biodiversity creates opportunities to create value beyond regulatory requirements

While currently not an area of high direct significance, when addressing the potential challenges posed by biodiversity, Naspers’s subsidiaries may face challenges ranging from data availability and quality, complexity of issues and capacity constraints, appropriate levels of integration into the corporate strategic objectives, and supply chain management. However, in these challenges, there are opportunities for proactive engagement that could create broader value.

Table 31: Areas of opportunity for positive impact

Potential areas of opportunity for positive impact	
Risk prioritisation	Naspers will be able to allocate resources effectively by concentrating efforts on any aspects of their supply chains that are identified to have the most significant level of biodiversity risk that is within the ambit of the control of the entities.
Stakeholder engagement	Through applying this assessment to strategic considerations, it will form a clear basis for engaging with suppliers, investors, and consumers about the commitment to biodiversity and the specific actions being taken to address high-risk areas that are most within Naspers’ control.
Reporting and disclosure	This assessment could contribute to the content and structure of sustainability reports, ensuring that disclosures align with global standards and accurately reflect the company's impact on biodiversity.
Reputation and marketing position	Proactively managing biodiversity risks associated can enhance Naspers’ reputation as a responsible business and can differentiate it in the marketplace.

An additional lens applied in Naspers’ biodiversity risk assessment was to incorporate the Science-based Target Network’s (SBTN’s) high-risk commodities into the risk assessment to further identify specific implications (for example, cattle, maize, sugar cane and corn commodities from the agricultural sector for iFood). This list served as a critical tool to focus risk assessments in areas where the entity could have the most significant positive impact. This integration could lead to more effective risk management, better alignment with global sustainability goals, and the potential to drive industry-wide change towards more biodiversity-friendly practices.

Overall implications for Naspers’s subsidiaries and the corporate offices

The implications are underscored by the exposure to high-risk commodities and the related dependencies thereon (both directly and within the extended supply chains), as well as through consideration of the qualitative biodiversity risk assessments per subsidiary.

Table 32: Overall implications for Naspers’s subsidiaries and the corporate offices

OVERALL IMPLICATIONS				
Subsidiary	Adjusted Final Risk Rating	Sector	Link to high-risk commodities per STBN	Overall implications
iFood	Low	Food & Beverages	<ul style="list-style-type: none">Food system / Food land and ocean use (e.g., cattle, maize, sugar cane and corn)	The diverse service or product offerings and lack of dependencies on any single commodity reduces the overall reliability of the Naspers operations on any single biodiversity factor. Therefore, the overall direct implications are deemed significantly lower than that of sectors such as agriculture.
eMAG	Low	E-commerce	<ul style="list-style-type: none">Food system / Food land and ocean use (e.g., cattle, maize, sugar cane and corn)Energy and extractives (e.g., precious metals such as copper)	
PayU	Very low	Fintech	No direct link	
OLX	Very low	Wholesale and retail trade	No direct link due to second-hand trade	
GoodHabitZ	Very low	E-learning	No direct link	Given the quantitative risk rating, qualitative assessment, and all contributing factors, the nature of business operations reduces the risk. Therefore, a lower risk rating is assigned across Naspers' operations.
Takealot	Very low	Wholesale and retail trade	<ul style="list-style-type: none">Food system / Food land and ocean use (e.g., cattle, maize, sugar cane and corn)Energy and extractives (e.g., precious metals such as copper)	
M24 Logistics	Very low	Transportation/Logistics	No direct link	
Corporate Offices	Very low	Corporate Services	No direct link	

Future considerations and potential opportunities

For the Naspers Group and its subsidiaries, whose digital-centric operations inherently imply a minimal direct ecological footprint, the most substantial biodiversity risks – and opportunities – reside within the extended supply chain. While not included in this assessment, supply chain engagement is often challenging and requires significant allocation of resources. Engaging with suppliers as a matter of due diligence could assist with driving systemic change to yield mutual benefits. By fostering transparency, setting clear internal policies, and collaborating on sustainable practices, Naspers could support the enhancement of their supply chain resilience with respect to biodiversity risk.

Conclusion

Conclusion

For the group, biodiversity risk is sitting mainly within the extended supply chain operations and, due to the nature of Naspers and the subsidiaries being predominantly digital, there is significantly lower biodiversity risk. Considerations for biodiversity risk could include continued supplier engagement and the implementation of sustainable procurement policies and procedures. In addition, Naspers can prioritise biodiversity mitigation actions for those areas and business subsidiaries that have greater exposure to high-impact commodities, such as iFood or eMAG.

Table 33: Risk assessment outcomes

SUMMARY OF RISK ASSESSMENT OUTCOMES				
Subsidiary	Biodiversity Risk Assessment based on location and sector	Specific qualitative considerations informing the final rating for Naspers subsidiaries	Adjusted Final Risk Rating	Implications
iFood	Medium	<ul style="list-style-type: none">Digital nature of operationsUrbanisation status of physical assets locations (limited dependencies on ecosystem services)Diverse product offerings reducing dependencies on specific commoditiesDiverse geographical locations for some subsidiaries	Low	<p>The diverse service or product offerings and lack of dependencies on any single commodity reduces the overall reliability of the Naspers operations on any single biodiversity factor. Therefore, the overall direct implications are deemed significantly lower than that of sectors such as agriculture.</p> <p>Naspers could ensure appropriate risk management and strategic processes are in place.</p>
eMAG	Low		Low	
PayU	Medium		Very low	
OLX	Medium		Very low	
GoodHabitZ	Medium		Very low	
Takealot	Medium		Very low	
M24 Logistics	Medium		Very low	
Corporate Offices	Medium		Very low	

Future Naspers considerations: Goals and resource alignment

With the systemic focus on sustainability considerations across operations, high impact areas within the extended supply chains of the Naspers group - while not directly within the control of Naspers operations - will likely be the priority areas for biodiversity considerations in future.

Glossary

Glossary

Term/acronym	Definition
Biodiversity	The variability among living organisms from all sources, including, among other things, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part; this includes diversity within species, between species and of ecosystems. In other words, biodiversity is the part of nature that is alive, and includes every living thing on earth .
Biodiversity-related opportunities	Activities that create positive outcomes for organisations and biodiversity by avoiding or reducing impacts on biodiversity or by contributing to its restoration. Biodiversity-related opportunities can go beyond common sustainable business archetypes to include actions that companies can take to influence the threats and pressures driving biodiversity loss and degradation globally, both within their value chains and in the places where they operate.
Biodiversity-related risks	Potential threats posed to an organisation linked to its and other organisations' impacts on biodiversity and dependencies on ecosystems. These can derive from physical, transition and systemic risks.
Dependencies on biodiversity	Aspects of ecosystem services that an organisation or other actor relies on to function. An organisation might be dependent upon an ecosystem's regulation of water flow and quality, the resilience it provides against hazards like fires and floods, the pollination of crops it enables by providing a suitable habitat for pollinators, or its provision of timber or fibres
Direct drivers of biodiversity and ecosystem change	Drivers, both natural and human-induced, that unequivocally affect biodiversity, ecosystems and nature directly (also referred to as pressures). These drivers in turn affect the provision of ecosystem services with consequences for people, the economy and society. The main direct drivers of biodiversity and ecosystems loss are land, water and sea change, climate change, pollution, natural resource use and exploitation and invasive species
Ecosystem services	<p>The contributions of ecosystems to the benefits that are used in economic and other human activity. TNFD defines ecosystem services as falling into one or more of the following categories:</p> <ul style="list-style-type: none">▶ Provisioning services represent the contributions to benefits that are extracted or harvested from ecosystems (e.g., timber and fuel wood from a forest, fresh water from a river).▶ Regulating and maintenance services result from the ability of ecosystems to regulate biological processes and to influence climate, hydrological and biochemical cycles, and thereby maintain environmental conditions beneficial to individuals and society. Provisioning services are dependent on these regulating and maintenance services (e.g., the provision of crops depends upon relatively stable climate, hydrological and biochemical cycles).▶ Cultural services are the experiential and intangible services related to the perceived or actual qualities of ecosystems whose existence and functioning contributes to a range of cultural benefits (e.g., the recreational value of a forest or a coral reef for tourism).
High Impact Commodities List	The HICL is a non-exhaustive list of the most common environmental impacts associated with the production of major commodities (i.e., the direct operations stage).

Ref: https://cdn.kettufy.io/prod-fra-1.kettufy.io/documents/riskfilter.org/BiodiversityRiskFilter_Methodology.pdf

Glossary

Term/acronym	Definition
Natural capital	The stock of renewable and non-renewable natural resources (e.g., plants, animals, air, water, soils and minerals) that combine to yield a flow of benefits to people.
Physical risks	Physical risks arise from the dependence of a business and its supply chains on natural and human-induced conditions of land and seas. These risks can negatively impact ecosystem services, potentially resulting in reduced productivity (e.g., lack of fertile soils and pollination) or increased input costs (e.g., scarcity of natural fibers or harvest losses).
Reputational Risks	Reputational risks arise from a company's negative impacts on biodiversity and people, both actual and perceived. These risks are tied to stakeholders' and local communities' perceptions of a company's sustainability and responsible practices regarding biodiversity. Reputational risks can have various consequences, including damage to the corporate brand, decreased sales, increased investor scrutiny, and declining share prices.
TNFD	Taskforce on Nature-related Financial Disclosures
WWF Biodiversity Risk Filter	The WWF BRF is a free-of-charge, web-based, spatially explicit corporate- and portfolio-level screening and prioritisation tool for biodiversity-related risks. It allows companies to understand and assess the biodiversity-related risks of their operational locations and their suppliers and to prepare an appropriate response plan
WWF BRF	World Wildlife Fund's (WWF) Biodiversity Risk Filter (BRF).

Ref: https://cdn.kettufy.io/prod-fra-1.kettufy.io/documents/riskfilter.org/BiodiversityRiskFilter_Methodology.pdf