



SOUTH AFRICA

CASE STUDY: NEDBANK NATURE RISK ASSESSMENT JOURNEY

APPLYING THE TNFD LEAP APPROACH TO CREDIT PORTFOLIOS
FEBRUARY 2026

This report was funded by
the International Climate
Initiative (IKI) and UNDP.

Supported by:



Federal Ministry
for the Environment, Climate Action,
Nature Conservation and Nuclear Safety



based on a decision of
the German Bundestag



Authors

Cerin Maduray, Mpoi Ntatsane (WWF South Africa)

WWF editorial team

Wanika Davids

Text editor

Lindsaye McGregor

Proofreader

Marlene Rose

Design

Karen Lilje

Cover photo

© Angus Burns / WWF South Africa

Citation: WWF South Africa. 2026. *Case Study: Nedbank Nature Risk Assessment Journey – Applying the TNFD LEAP approach to credit portfolios*. WWF South Africa, Cape Town, South Africa

Available online at www.wwf.org.za/report/nedbank_nature_risk_assessment_case_study

© Text 2026 WWF South Africa.

All rights reserved.

WWF is one of the world's largest and most experienced independent conservation organisations with over 6 million supporters and a global network active in more than 100 countries.

WWF's mission is to stop the degradation of the planet's natural environment and to build a future in which humans live in harmony with nature, by conserving the world's biological diversity, ensuring that the use of renewable natural resources is sustainable, and promoting the reduction of pollution and wasteful consumption.

WWF South Africa is a national office in the global WWF network. Started in South Africa in 1968, we are a local NGO with a vision of building a sustainable and equitable future in which humans and nature thrive. We work to champion the Earth's capacity to provide a source of inspiration, sustainable food, fresh water and clean energy for all. For Nature. For You.

[wwf.org.za](http://www.wwf.org.za)



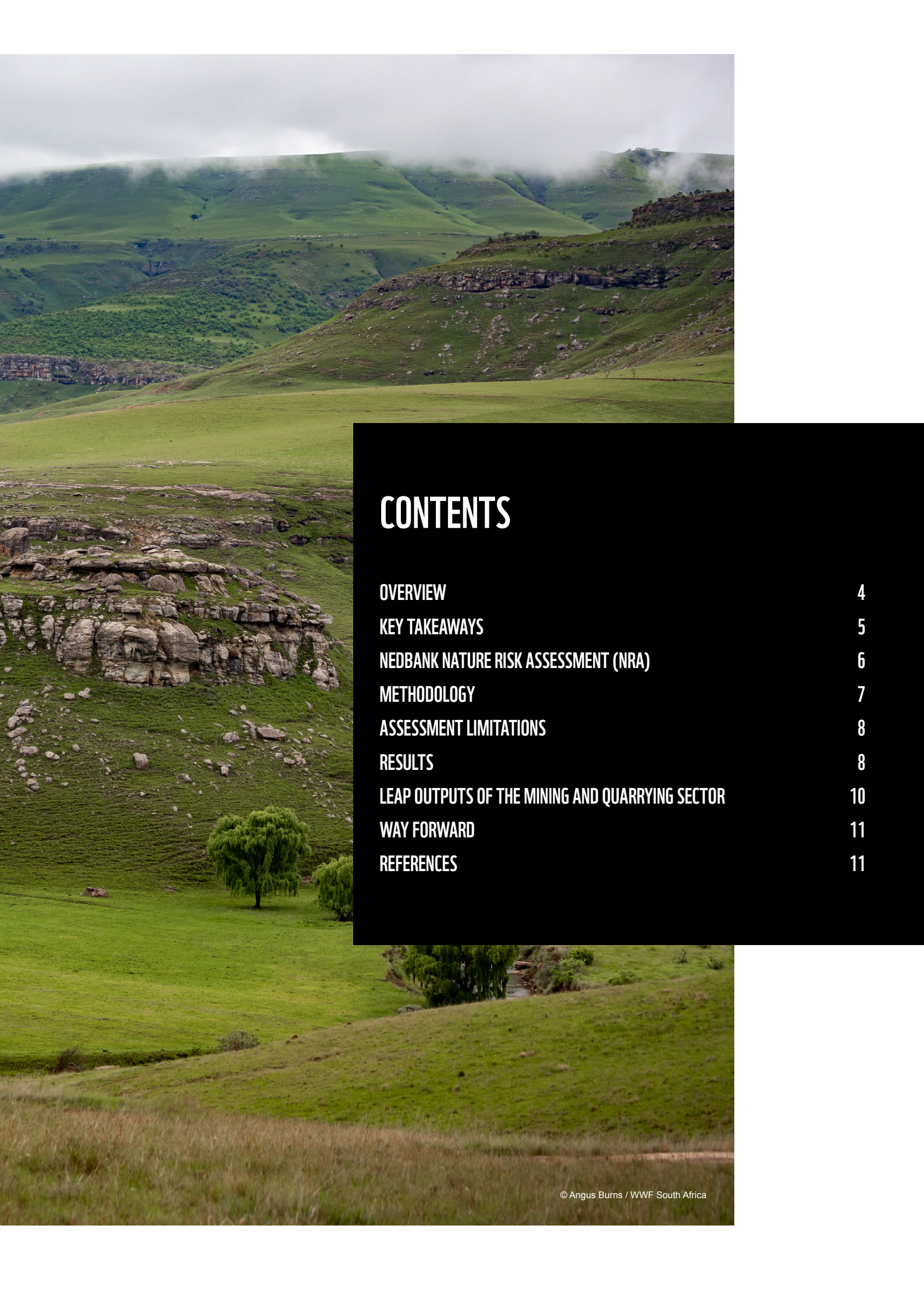
WWF South Africa would like to acknowledge Nedbank for their input and insight into this case study.

Supported by:



based on a decision of
the German Bundestag





CONTENTS

OVERVIEW	4
KEY TAKEAWAYS	5
NEDBANK NATURE RISK ASSESSMENT (NRA)	6
METHODOLOGY	7
ASSESSMENT LIMITATIONS	8
RESULTS	8
LEAP OUTPUTS OF THE MINING AND QUARRYING SECTOR	10
WAY FORWARD	11
REFERENCES	11

OVERVIEW

Nature underpins human life and economic activity. It provides essential ecosystem services such as clean water, fertile soil, pollination and climate regulation. These services are under pressure from human activity, creating nature-related risks that affect economies and livelihoods.

Financial institutions play a central role in managing these risks. They influence capital flows and can help shift investment away from nature-negative outcomes. Nedbank recognises this responsibility and is responding to the recommendations of the Taskforce on Nature-related Financial Disclosures (TNFD). Through the recommended disclosures, the taskforce aims to redirect global capital flows from nature-negative to nature-positive outcomes.

Nedbank operates primarily in the Southern African Development Community (SADC), a region with rich biodiversity and high socio-economic dependence on natural resources. The region faces environmental challenges such as water scarcity, land degradation and climate vulnerability. To support this, Nedbank applied the TNFD's LEAP (Locate, Evaluate, Assess and Prepare) approach to its credit portfolio.

THE TNFD LEAP FRAMEWORK

The LEAP framework (see Figure 1) is a structured, repeatable process that helps organisations to assess, manage and report nature-related risks and opportunities.

This case study outlines how Nedbank applied the TNFD LEAP approach to conduct Phase 1 of its Nature Risk Assessment (NRA) across the credit portfolio. Phase 1 of the NRA focused on identifying sectors and clients with significant dependencies and impacts on nature. Phase 2 will assess risks and opportunities in these sectors and prepare the bank to respond. Like other financial institutions, Nedbank's exposure to nature-related risks comes mainly from its financing activities, not its direct operations. The case study also outlines the limitations and constraints encountered during the assessment.





Source: TNFD, 2025

Figure 1: The TNFD LEAP Approach

KEY TAKEAWAYS

- Nedbank used the TNFD LEAP (Locate, Evaluate, Assess, Prepare) approach to assess nature-related dependencies, impacts, risks and opportunities (DIROs) in its credit portfolio.
- The Nature Risk Assessment (NRA) was conducted through a double materiality lens which considered the material impact and financial dependency of the Nedbank credit portfolio on natural capital.
- Six sectors are prioritised: real estate, manufacturing, wholesale and retail trade, mining and quarrying, energy and agriculture.
- These sectors were selected based on their high impact and dependency scores on nature, ranked by the bank's financial exposure.
- Phase 2 will assess the risks and opportunities within each of the prioritised sectors and clients.
- Phase 2 outcomes will also support Nedbank's ability to report on nature-related DIROs in its lending portfolio.

NEDBANK NATURE RISK ASSESSMENT (NRA)

In 2024, Nedbank launched efforts to develop internal capabilities for the assessment and disclosure of nature-related DIROs. This resulted in the implementation of an NRA guided by the TNFD LEAP approach.

These internal efforts build upon the 2024 publication of the bank's board-approved Nature Position Statement. This statement stands as the organisation's acknowledgement of the climate-nature nexus and a commitment to incorporating nature into its internal decision-making processes (Nedbank, 2024b), aiming to support global efforts to redirect financial flows towards nature-positive outcomes.

Before embarking on the NRA, the bank had already been reporting on nature-related issues under frameworks such as the Global Reporting Initiative (GRI) and CDP. In 2023, Nedbank participated in the UN Development Programme's TNFD pilot that yielded a first view of the bank's nature dependencies and impacts, and the

resulting risks and opportunities that arise from this nature interface with a particular focus on its agriculture portfolio. A heat map, which considers risks and dependencies on land, in freshwater and the atmosphere, as well as physical and transition risk, was developed.

Based on this experience, the bank would be well positioned to engage and respond to the TNFD's recommended disclosures (TNFD, 2023). In addition, between 2009 and 2019, Nedbank consolidated its Social and Environmental Management Systems (SEMS) aimed at identifying environmental risks in its project credit portfolios across Africa.





METHODOLOGY

Nedbank applied the TNFD LEAP approach to assess nature-related dependencies and impacts in its credit portfolio. Following a double materiality approach, the NRA considered the material impact and financial dependency of the Nedbank credit portfolio on natural capital. Departing from the recommended application of the TNFD LEAP approach to first prioritise sectors based on their material nature-related dependencies and impacts (Nedbank, 2024a), the process followed five steps:

Step 1: Identify material sectors and subsectors

Nedbank used the ENCORE tool (Exploring Natural Capital Opportunities, Risks and Exposure – see <https://encorenature.org/en>) to identify sectors and subsectors with material impacts and dependencies on ecosystem services. Because ENCORE uses International Standard Industrial Classification (ISIC) codes, the bank mapped these to its own Standard Industrial Classification (SIC) codes to ensure alignment.

Step 2: Map impacts and dependencies

For each subsector, Nedbank developed heat maps to visualise the level of impact and dependency on nature. These heat maps highlighted which sectors rely most heavily on ecosystem services and which exert the greatest environmental impact.

Step 3: Determine financial exposure

Nedbank used data that was initially compiled for the 2023 SARB Climate Risk Stress Test to assess its financial exposure across all sectors. The analysis identified

sectors with both high financial exposure and high nature dependency. Sectors with a high financial exposure and dependency on nature were prioritised by combining sector and subsector ecosystem heat maps with business cluster financial exposure data. This information was then broken down to the client level to understand how nature-related impacts and dependencies translate into financial risk.

Step 4: Map client interfaces with sensitive environments

Nedbank mapped the geographic coordinates of client operations in high-impact and high-dependency sectors. These locations were overlaid with spatial datasets of natural capital assets to identify where client activities intersect with sensitive ecosystems. This process was supported by engagements with the South African National Biodiversity Institute (SANBI), Department of Forestry, Fisheries and the Environment (DFFE) and the Council for Scientific and Industrial Research (CSIR).

Step 5: Evaluate nature-related impacts and dependencies

Using the mapped data, Nedbank evaluated the nature-related impacts and dependencies of clients in the prioritised sectors. This step followed the guidance from the Locate and Evaluate phases of the TNFD LEAP framework.

The prioritised sectors were real estate, manufacturing, wholesale and retail trade, mining and quarrying, energy and agriculture. The LEAP phases covered in this assessment were Locate and Evaluate, and the components included L1 to L4 and E1 to E4. The tools used were ENCORE and the WWF Water Risk Filter.

ASSESSMENT LIMITATIONS

The nature risk materiality assessment faced several limitations:

- **Data availability and quality**

Some of the data required for a detailed assessment of ecosystem services and financial exposure were incomplete or unavailable. This limited the ability to quantify certain dependencies and impacts.

- **Geographic coverage constraints**

Global tools such as ENCORE and the WWF Water Risk Filter may not fully reflect the ecological, climatic and regulatory characteristics of the South African context. This could lead to under- or over-estimation of certain risks and dependencies.

- **Classification mismatches**

Aligning ENCORE's ISIC codes with Nedbank's SIC codes required manual mapping. This introduced the risk of misclassification or omission of relevant activities.

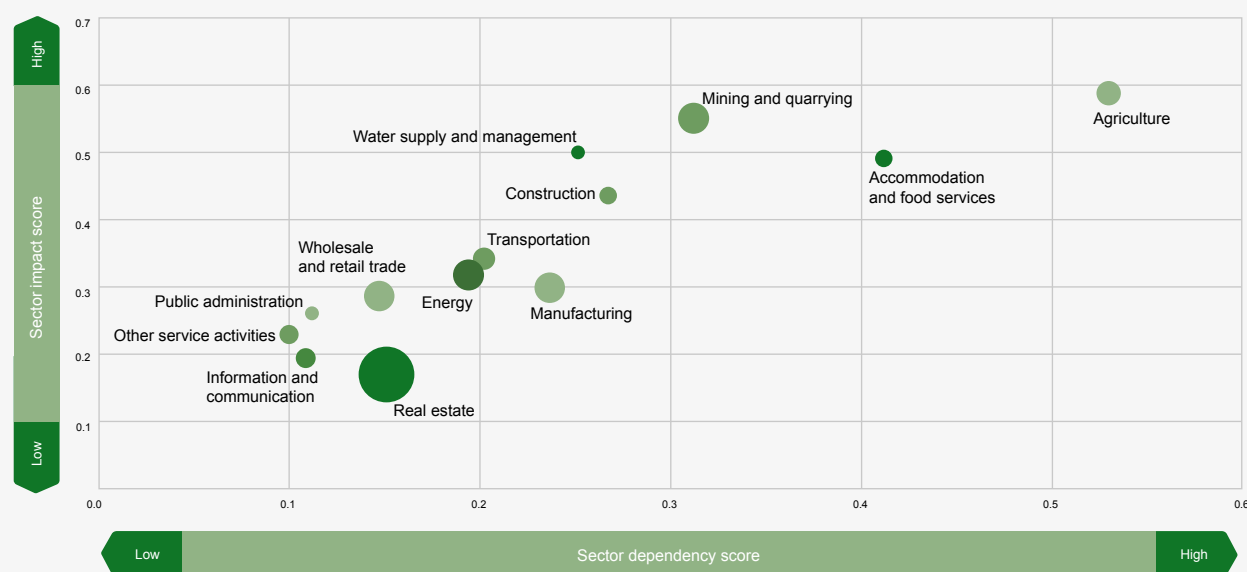
- **Valuation of ecosystem services**

Translating ecosystem service impacts into financial risk metrics remains a methodological challenge. The assessment relied on qualitative scoring and heat maps, which may not fully capture the economic significance of nature-related dependencies and impacts.

RESULTS

Following the initial three steps of the NRA – identifying material sectors and subsectors, mapping key dependencies and impacts, and determining financial exposure – Nedbank produced the results shown in Figure 2. Each bubble represents a sector, with its size indicating Nedbank's total financial exposure. The position of each

bubble reflects the sector's impact and dependency scores. Of the 21 sectors identified by ENCORE, 13 were selected for further analysis. These were chosen based on two factors: the level of financial exposure and the materiality of their dependencies and impacts on nature.



* Bubble size represents total sector exposure

** Sector-level impact and dependency scores calculated using ENCORE

Source: Nedbank, 2024a

Figure 2: Nedbank total sectoral exposure*, sector impact and dependency scores**



Sector	Financial exposure rank	Impact score	Dependency score
Real estate	1st	● Low	● Low
Manufacturing	2nd	● Medium	● Low
Wholesale and retail trade	3rd	● Medium	● Low
Mining and quarrying	4th	● High	● High
Energy	5th	● Medium	● Medium
Agriculture	6th	● High	● High

Figure 3: Nedbank Dependency and Impact Mapping

Source: Nedbank, 2024a

Based on the analysis in Figure 2, six sectors were prioritised for the Locate and Evaluate phases of the TNFD LEAP approach: real estate, manufacturing, wholesale and retail trade, mining and quarrying, energy and agriculture.

Figure 3 presents the impact and dependency mapping, ranking the prioritised sectors based on Nedbank's credit exposure. The bank's highest financial exposure to real estate is characterised by low impact and dependency scores. Figure 3 shows that primary production sectors such as agriculture and mining, along with accommodation and food services (see Figure 2), have high dependency and impact scores, and therefore both a high dependency and a high impact on nature. Sectors like manufacturing and wholesale and retail trade, which rely

on primary sectors for inputs, show medium impact and low dependency scores.

Nedbank plans to review these scores in Phase 2 to better reflect the South African context.

LOW DEPENDENCY AND IMPACT ON NATURE

Real estate

HIGH DEPENDENCY AND IMPACT ON NATURE

Mining and quarrying
Agriculture

LEAP OUTPUTS OF THE MINING AND QUARRYING SECTOR

For the purpose of the case study, a client in the bank's mining and quarrying credit portfolio was selected for further review.

LEAP phases covered: Locate and Evaluate

LEAP components covered: L1–L4 and E1–E4

Tools used: ENCORE, geospatial datasets

The map in Figure 4 shows biodiversity priority areas in South Africa, demonstrating the location of sensitive sites in the country. The Locate and Evaluate phases of the assessment determined that the client's first operational site is located in an Ecological Support Area. Its second

site interfaced with a Critical Biodiversity Area located in a globally recognised Centre of Biological Endemism.

Furthermore, the client's third operational site is in a Strategic Groundwater Resource Area. Figure 5 shows the location and size of South Africa's Strategic Water Source Areas in the Fynbos and Grasslands biomes. The mining and quarrying sector's dependence on nature for water supply has been documented to have a high materiality rating. Given South Africa's status as a water-scarce country and its ongoing water challenges, the client's dependency on water increases their exposure to this nature-related risk. A further assessment of the client's risks and opportunities relating to their operations will be undertaken in the second phase of the NRA.

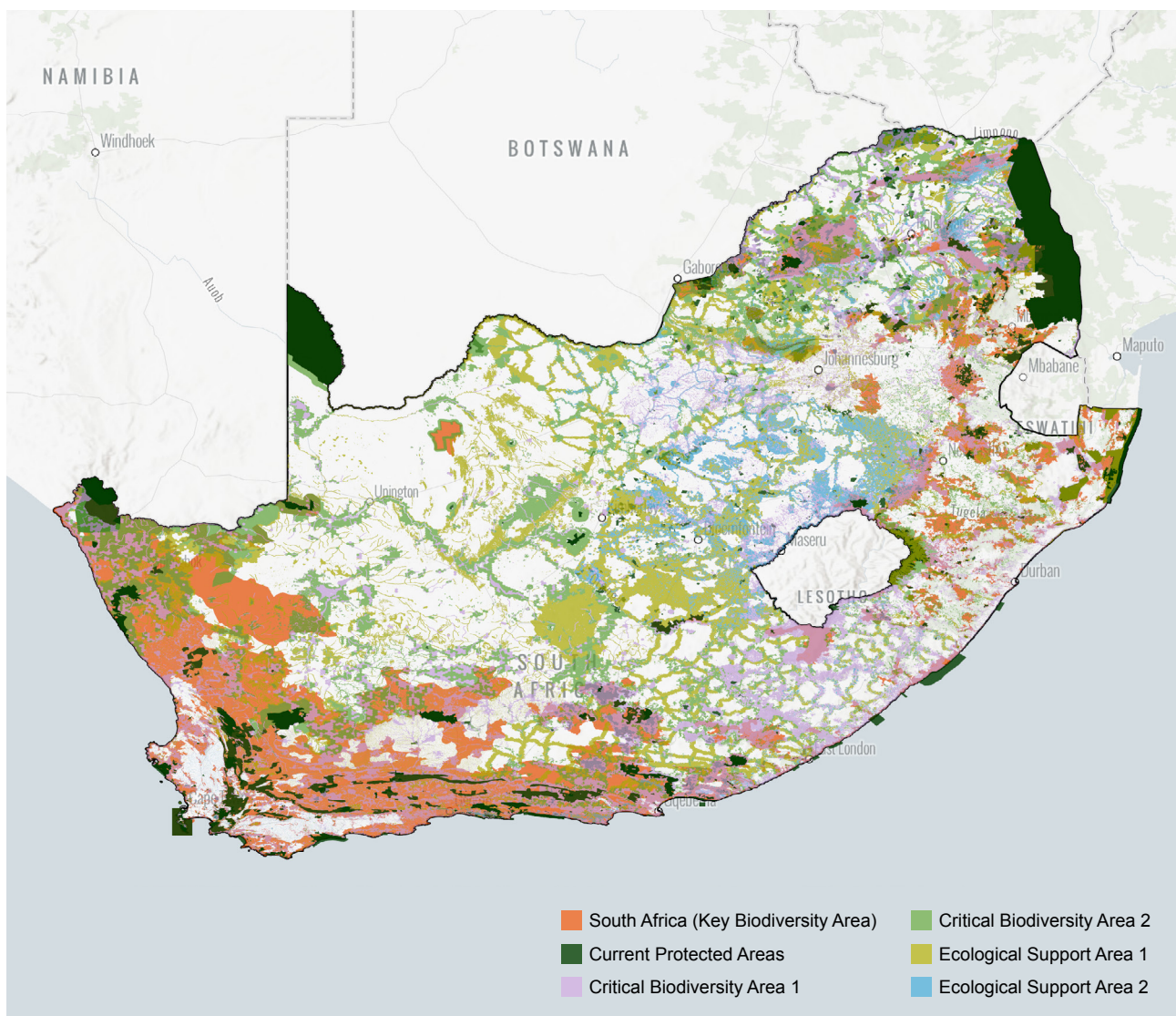
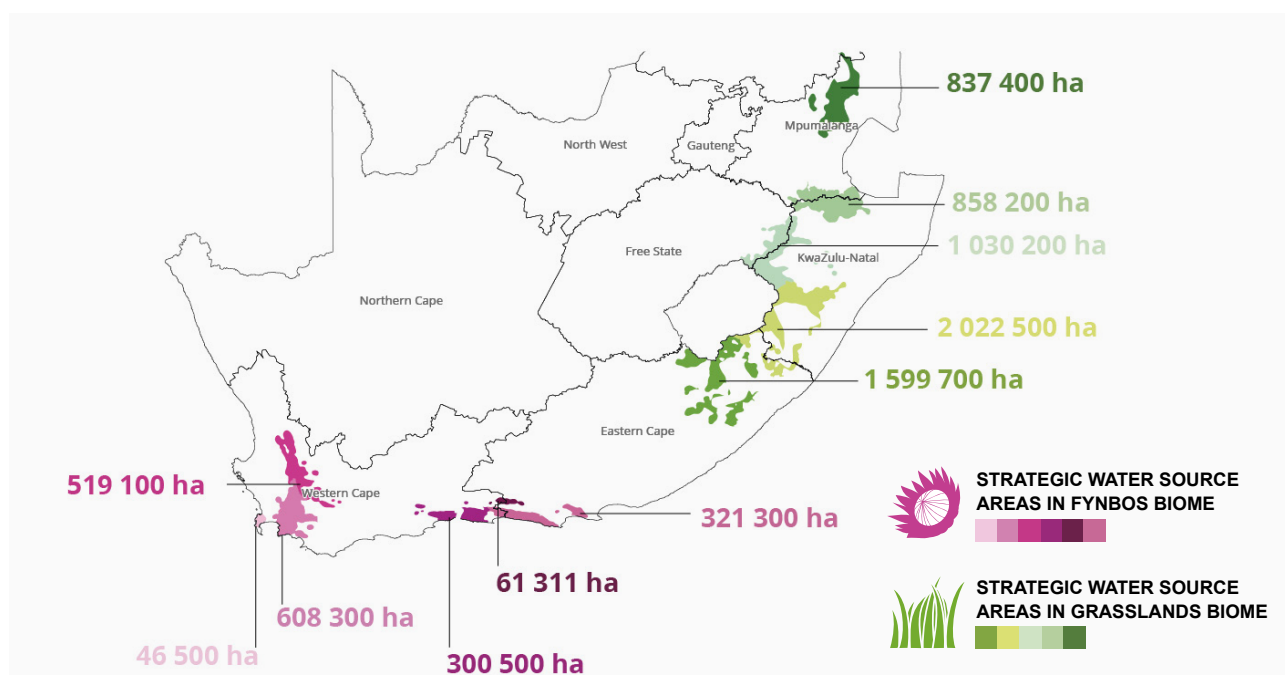


Figure 4: South Africa's Biodiversity Priority Map

Source: WWF South Africa, 2025



Source: Le Maitre et al., 2018

Figure 5: South Africa's Strategic Water Source Areas (location and size)

WAY FORWARD

Nedbank's identification of sensitive ecosystems and assessment of key ecosystem dependencies and impacts provide a strong foundation for the next phase of work. During 2025, the bank started implementing Phase 2 of the Nature Risk Assessment (NRA). This phase focuses on assessing nature-related risks and opportunities in each of the prioritised sectors and clients (Nedbank, 2024a). The bank is also re-evaluating the impact and dependency scores from ENCORE to better reflect the South African context. This will help address known limitations in global tools and improve the relevance of the findings.

Phase 2 includes the following actions:

- Conduct a scenario analysis to explore potential nature-related risk pathways.
- Quantify financial risks linked to ecosystem service degradation and regulatory shifts.
- Identify opportunities for nature-positive lending and investment.
- Inform updates to credit policy and risk management frameworks.

These steps will support Nedbank's ability to respond to the TNFD's full disclosure recommendations and integrate nature-related considerations into core decision-making processes.

REFERENCES

- Díaz S, Demisse S, Carabias J, Joly C, Lonsdale M, Ash N, Larigauderie A, et al. 2015. The IPBES Conceptual Framework: Connecting nature and people. *Current Opinion in Environmental Sustainability*, 14: 1–16. <https://doi.org/10.1016/j.cosust.2014.11.002>
- Le Maitre DC, Seyler H, Holland M, Smith-Adao L, Nel JL, Maherry A and K Witthüser. 2018. *Identification, delineation and importance of the strategic water source areas of South Africa, Lesotho and Swaziland for surface water and groundwater*. Report No. TT
- Nedbank. 2024a. Climate Report. Nedbank, Sandton, South Africa. https://group.nedbank.co.za/content/dam/group/pdf/21_integrated-reports/2024/climate-reporting/2024-climate-report-nedbank.pdf
- Nedbank. 2024b. Nature Position Statement. Nedbank, Sandton, South Africa. <https://www.weforum.org/press/2020/01/half-of-world-s-gdp-moderately-or-highly-dependent-on-nature-says-new-report/>
- TNFD. 2023. Taskforce on Nature-related Financial Disclosures (TNFD) Recommendations. Taskforce on Nature-related Financial Disclosures, London, UK. <https://tnfd.global/publication/recommendations-of-the-taskforce-on-nature-related-financial-disclosures>
- TNFD. 2025. Guidance on the identification and assessment of nature-related issues: The LEAP approach. Taskforce on Nature-related Financial Disclosures, London, UK. <https://tnfd.global/publication/additional-guidance-on-assessment-of-nature-related-issues-the-leap-approach>
- 743/1/18, Water Research Commission, Pretoria, South Africa.
- WWF South Africa. 2025. South Africa's Biodiversity Priority Map. Created by Shaquille Benjamin using ArcGIS. WWF South Africa, Cape Town, South Africa. Unpublished.



SHIFTING INVESTMENT TOWARDS NATURE- POSITIVE OUTCOMES.

© Jaques Marais / WWF South Africa



Lasting positive outcomes for people and nature in the places where we work and from priority environmental challenges we focus on.

FOR NATURE. FOR YOU.

wwf.org.za

WWF South Africa is a registered non-profit organisation, number 003-226 NPO
© 1986 Panda symbol WWF – World Wide Fund for Nature (formerly World Wildlife Fund)
® “WWF” is a WWF Registered Trademark.

1st Floor, Bridge House, Boundary Terraces, Mariendahl Lane, Newlands, Cape Town.
PO Box 23273, Claremont 7735 T: +27 21 657 6600 E: info@wwf.org.za W: wwf.org.za