GLOBAL WEBINAR · 15 JULY 2026

BOTSWANA NATIONAL ECOSYSTEM ASSESSMENT

From Evidence to Policy and Implementation

The first integrated national ecosystem assessment for Botswana — six priority ecosystems, their condition and trends, and the pathways to a resilient, nature-positive future.

DELIVERED BY & WITH THE SUPPORT OF

UN environment programme | WCMC | NEA National Ecosystem Assessment Initiative | SGA Network | Republic of Botswana | BUAN Botswana University of Agriculture and Natural Resources — Inspiring Sustainable Growth | BESNet Biodiversity and Ecosystem Services Network

Supported by:
Federal Ministry for the Environment, Climate Action, Nature Conservation and Nuclear Safety
based on a decision of the German Bundestag
IKI International Climate Initiative

THE WEBINAR

TODAY'S JOURNEY

From how the assessment was built, to what it found, to how its evidence drives national decisions.

OPENING REMARKS

Prof. Patricia Kefilwe Mogomotsi
Deputy Permanent Secretary – Environment, Ministry of Environment & Tourism, Botswana

01

THE ASSESSMENT

Scope, framework, process and the partnership behind the BW-NEA.

Dr Tiroyaone Albertinah Matsika
Ecoexist Ph.D fellow, BUAN

02

THE FINDINGS

Biodiversity status, trends, drivers of change and future scenarios.

Prof. V.K. Muposhi
Data & Knowledge Management Lead, BUAN

03

WEAVING TRADITIONAL KNOWLEDGE

Community dialogues, trialogues and knowledge co-production.

Dr Nelson M. Tselaesele
Traditional Knowledge Lead, BUAN

04

EVIDENCE TO POLICY

Turning findings into readiness, opportunity and national planning.

Ms Mokgadi Monamati
BW-NEA Project Manager (Govt), MET / DEP

BEFORE WE BEGIN

HOUSEKEEPING

RECORDING

This webinar is being recorded and will be uploaded to the NEA Initiative website and the UNEP-WCMC YouTube channel. Please let us know if you have any concerns.

MICROPHONE & CAMERA

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To comment or ask a question, please use the **Q&A feature** at the bottom of your screen.

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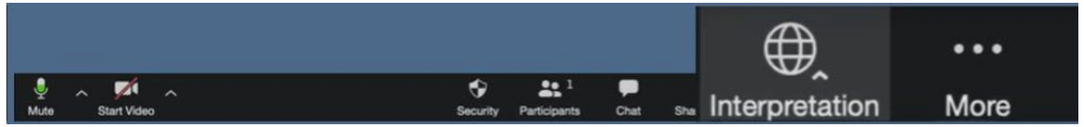
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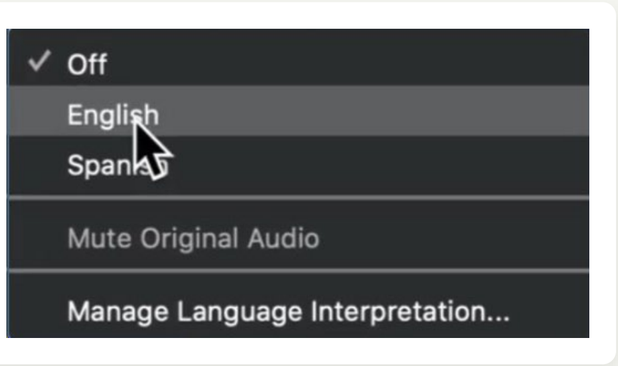
BEFORE WE BEGIN

INTERPRETATION

This session has live interpretation in French and Spanish.

1. Click the **Interpretation** globe icon in your meeting toolbar.
2. Select your preferred language — English, French or Spanish.
3. Optionally mute the original audio to hear only the interpretation.





WELCOME

OPENING REMARKS

Prof. Patricia Kefilwe Mogomotsi

Deputy Permanent Secretary – Environment
Ministry of Environment & Tourism, Botswana

01

THE ASSESSMENT

How the BW-NEA was scoped, framed and delivered — a science–policy–people pathway.

— **Dr Tiroyaone Albertinah Matsika,**
Ecoexist Ph.D fellow, BUAN

01 · THE ASSESSMENT

TEMPORAL SCOPE & ECOSYSTEM COVERAGE

The BW-NEA evaluates the condition, trends, drivers, ecosystem services and future sustainability pathways of **six priority ecosystems** across Botswana from **1990–2036**.

1990 — **2036**

Historical baseline → present condition → modelled futures

- **Grassland & Shrubland**
- **Forest & Woodland**
- **Aquatic & Wetland**
- **Desert**
- **Agroecosystem**
- **Hill**

PRIORITISATION WAS INFORMED BY

- **Biodiversity importance**
- **Ecosystem service provision**
- **Socio-economic value**
- **Vulnerability to climate change & other threats**

01 · THE ASSESSMENT

ANCHORED IN NATIONAL POLICY

The BW-NEA connects decades of national commitment to nature — providing the evidence base to deliver on Botswana's development vision.

1990 **National Conservation Strategy**

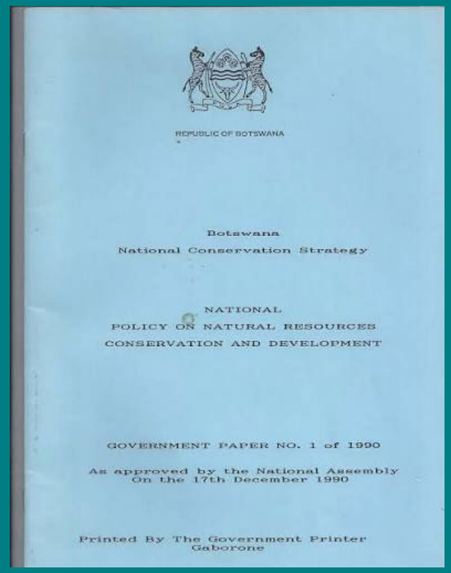
Government Paper No. 1 — the foundation for natural-resource conservation and development.

2036 **Vision 2036 — Prosperity for All**

Sustainable use of natural resources as a pillar of national prosperity.

NDP **National Development Plans & NBSAP**

Direct entry points for assessment findings in planning and biodiversity strategy.


REPUBLIC OF BOTSWANA

Botswana
National Conservation Strategy

NATIONAL
POLICY ON NATURAL RESOURCES
CONSERVATION AND DEVELOPMENT

GOVERNMENT PAPER NO. 1 of 1990

As approved by the National Assembly
On the 17th December 1990

Printed By The Government Printer
Gaborone



01 · THE ASSESSMENT

POLICY SCOPE

~20 policy questions identified during scoping, addressing four themes:

01 Existing ecosystem-related policies & legislation in Botswana

Gaps · alignment to international conventions · transboundary issues

02 Priority ecosystems

Inventory · mapping · accounting · valuation · contribution to livelihoods & economy

03 Drivers of biodiversity & ecosystem services degradation

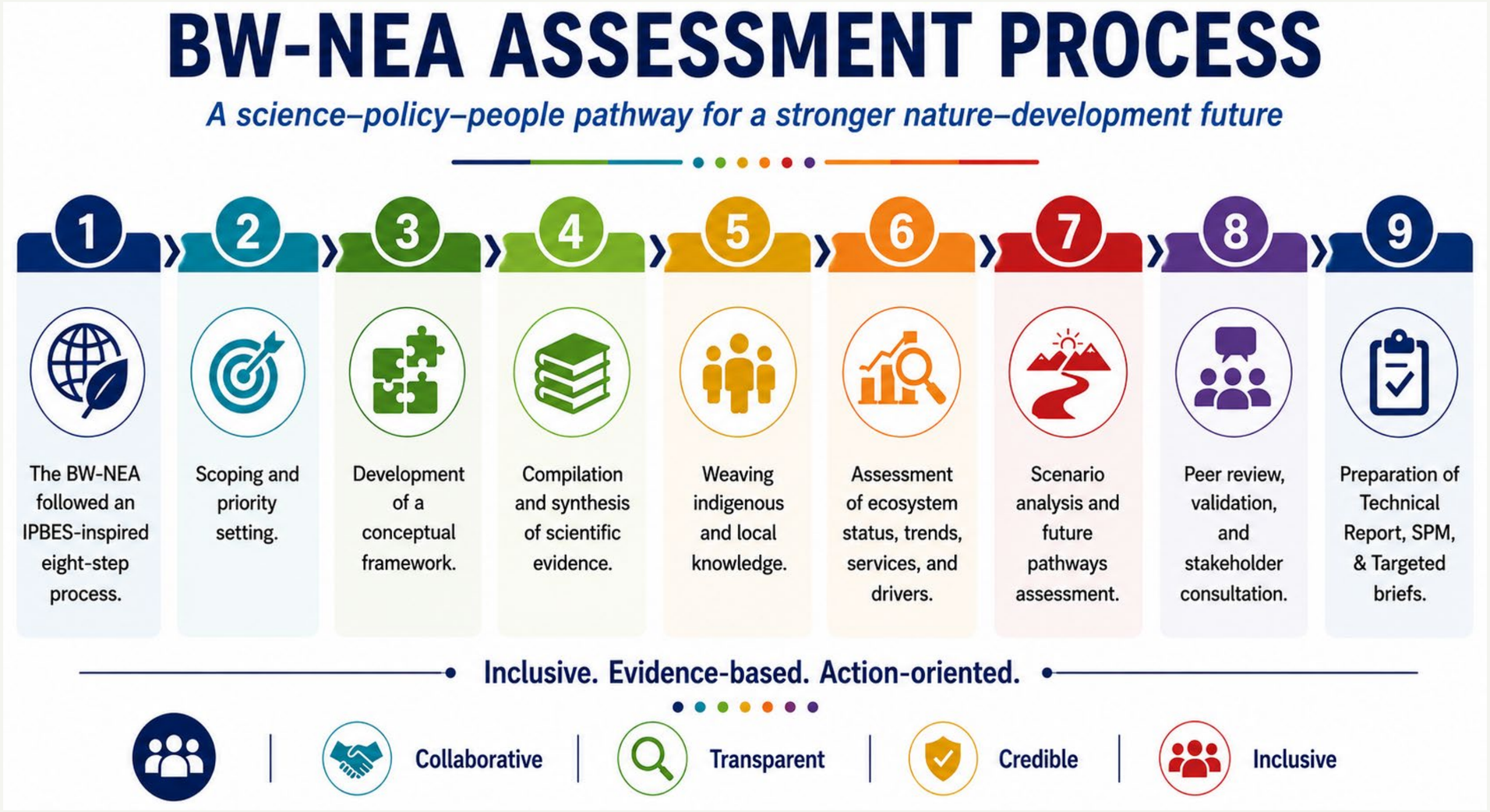
Understanding pressures and pathways of change

04 Governance issues

Institutional arrangements · informal institutions

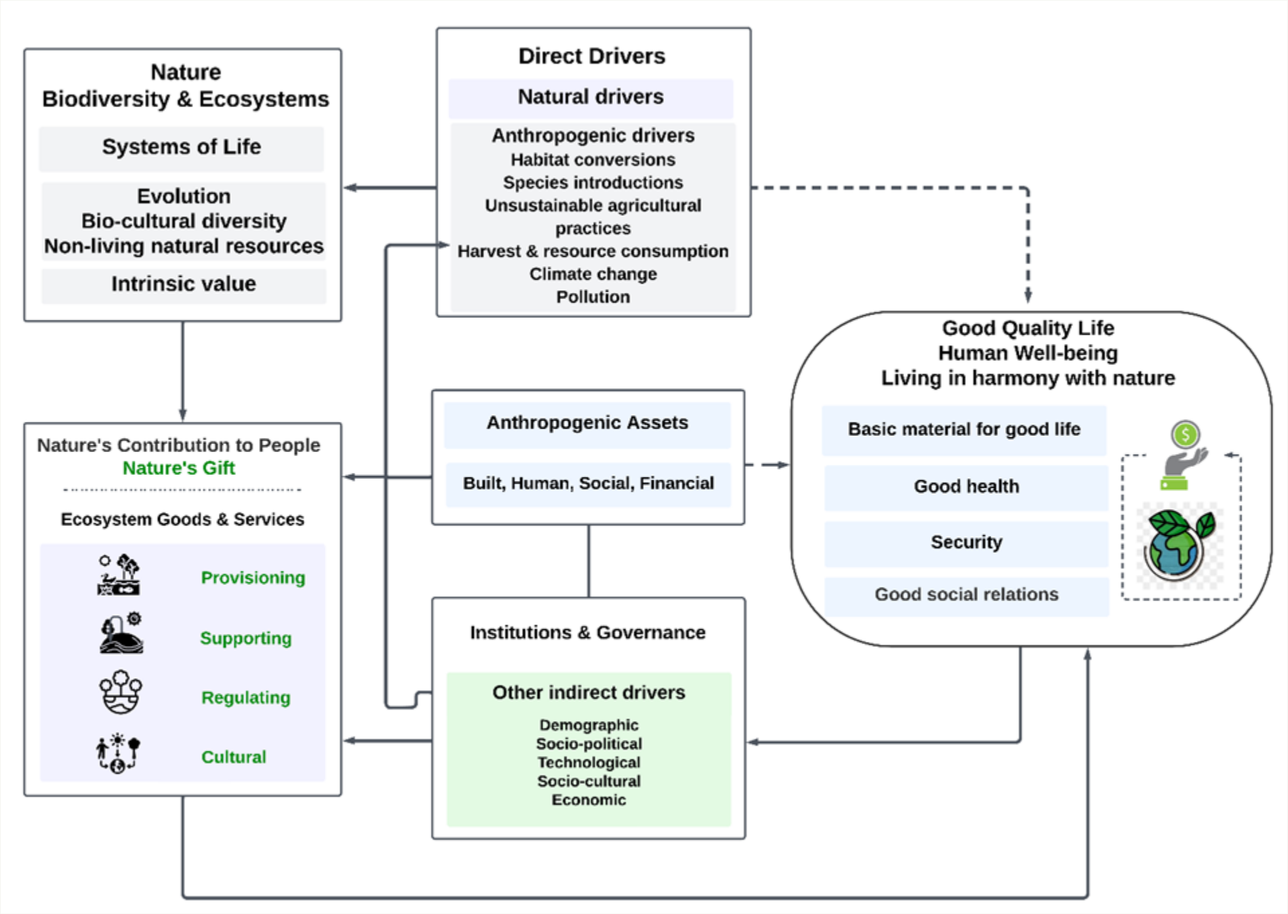
Policy scope links ecosystem evidence to decision-making, governance and livelihoods.

THE BW-NEA ASSESSMENT PROCESS



CONCEPTUAL FRAMEWORK

Linking nature, nature's contributions to people, and a good quality of life — shaped by drivers, anthropogenic assets, institutions and governance.



IMPLEMENTING ARRANGEMENTS

FUNCTION	RESPONSIBLE INSTITUTION
Overall implementation & coordination	Botswana University of Agriculture & Natural Resources (BUAN)
Government oversight & policy linkage	Department of Environmental Protection
Technical support	UNEP-WCMC, UNESCO, BES-Net partners
Funding	International Climate Initiative (IKI), Germany
Assessment preparation	Multidisciplinary author teams
Validation & knowledge integration	Government, communities, traditional knowledge holders, academia, civil society & private sector

COMMUNITY CONSULTATIONS

THE TEAM

Community consultations through a culturally rich & engaging process

PEOPLE-CENTERED
We engaged.
We listened.
We learned.

RESPECTFUL
We valued diverse voices and local knowledge.

CULTURALLY GROUNDED
We honoured cultures and local ways of knowing.

STRONGER TOGETHER
We co-created solutions for a sustainable future.



Working together with communities for evidence-based decisions and lasting impact.

COLLABORATIVE | RESPECTFUL | ENGAGING | INCLUSIVE | IMPACT-DRIVEN

STAKEHOLDER ENGAGEMENT & KNOWLEDGE CO-PRODUCTION

Stakeholder Engagement & Knowledge Co-Production



01 Government institutions: environment, forestry, wildlife, tourism, agriculture, land & water affairs, spatial planning - alignment with national policies & regulatory frameworks

02 Academic & research institutions: universities and research organizations - scientific data, methodologies, & long-term ecological monitoring data

03 Local communities & traditional knowledge holders: community-based organizations & traditional leaders - ecological observations, sustainable resource management practices, traditional knowledge

04 Private sector & industry stakeholders (tourism, agriculture, mining, & forestry): aligning dependencies & impacts on ecosystems for an inclusive & sustained nature-based economy

05 NGOs & conservation groups: on-the-ground conservation projects, policy advocacy, & capacity-building initiatives

06 International partners & funding agencies: UNEP-WCMC, UNESCO - technical expertise, & funding for biodiversity research & conservation efforts

The Trialogue, Gaborone, October 2025



END OF SESSION

THANK YOU

We welcome your questions and reflections in the discussion to follow.

02

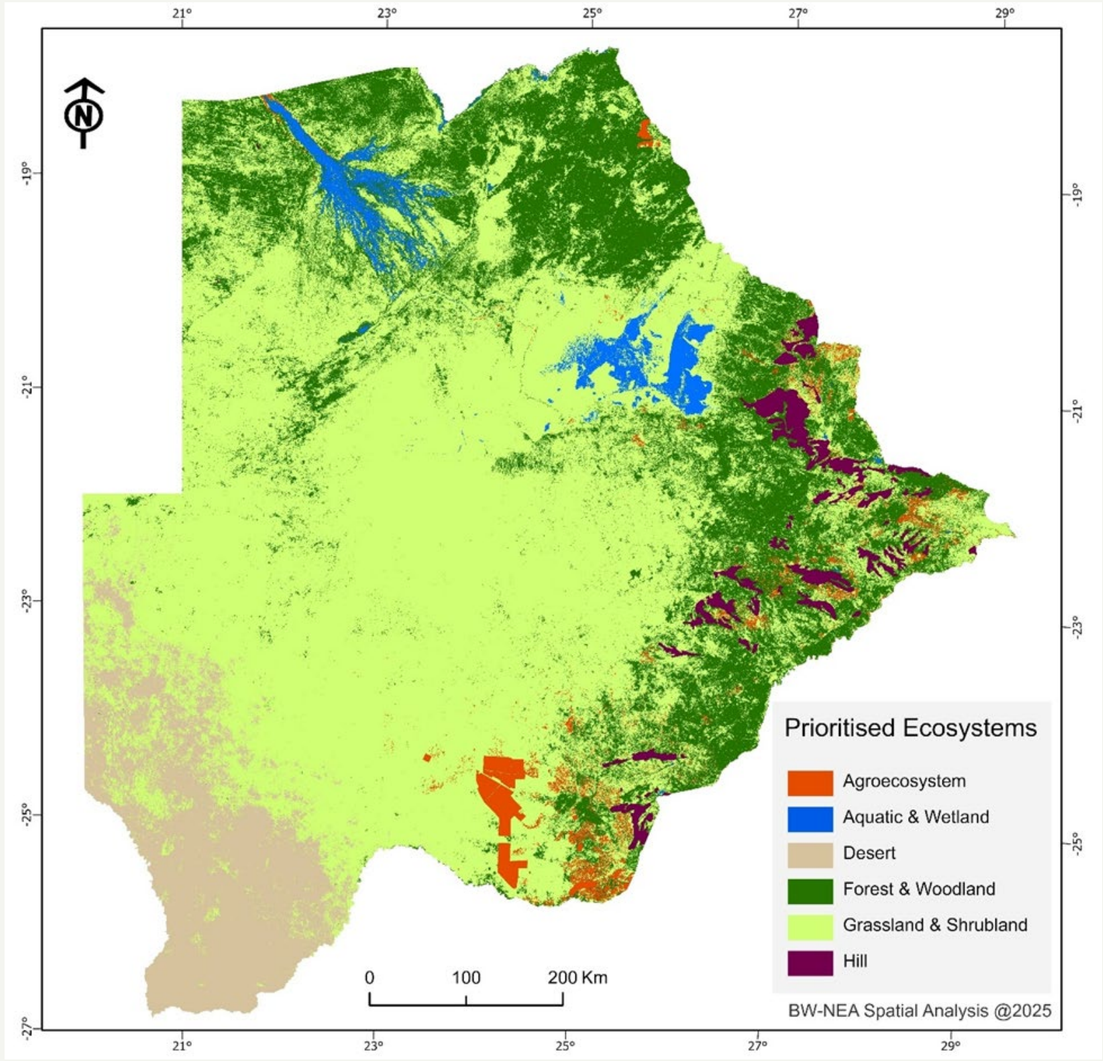
THE FINDINGS

Main findings, biodiversity trends and the future pathways they reveal.

Prof. V.K. Muposhi · Data & Knowledge Management Lead, BUAN

SIX PRIORITISED ECOSYSTEMS

- Botswana's **first integrated national ecosystem assessment.**
- Six ecosystems assessed across **biodiversity, ecosystem services, governance and futures.**
- Re-classified the spatial extent of the **Desert ecosystem.**
- Profiled the significance of the **Hill ecosystem.**



FOUR OVERARCHING MESSAGES

1

Nature underpins Botswana's livelihoods, resilience and development, but accelerating ecosystem degradation is undermining these benefits. Integrating biodiversity and ecosystem services into development and land-use planning is essential to achieving Botswana Vision 2036 and the Kunming-Montreal Global Biodiversity Framework {Ch. 2, KM 2.1}.

2

Botswana cannot manage what it cannot measure. The lack of a functional, integrated environmental information system, together with fragmented data and weak information sharing, undermines evidence-based decision-making — making an open-access biodiversity and ecosystem information system essential for meeting CBD and UNFCCC commitments {Ch. 2, KM 2.2} .

3

Wide conservation coverage does not guarantee effective stewardship. Despite >45% of land under conservation, undervaluation of ecosystem services, sectoral policy biases and limited inclusion of Traditional and Local Knowledge and gender perspectives constrain biodiversity outcomes. Inclusive governance that integrates diverse knowledge systems is essential for ecological integrity and equitable benefits {Ch. 2, KM 2.3} .

4

Nature is an under-used engine for economic diversification. Biodiversity-linked finance, ecosystem service valuation, natural capital accounting, carbon markets and payments for ecosystem services offer significant opportunities to diversify Botswana's economy beyond diamonds while strengthening climate resilience {Ch. 2, KM 2.4}.

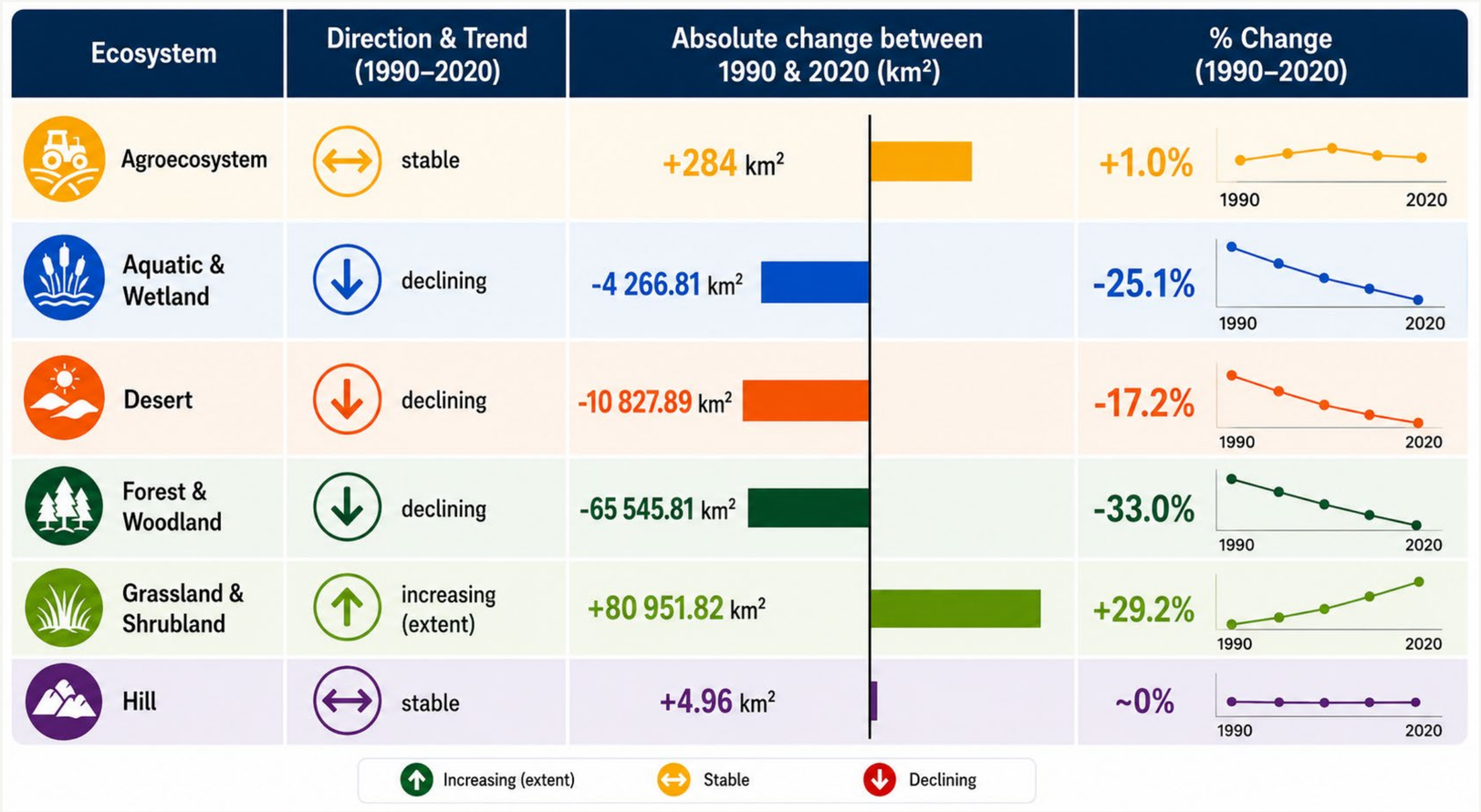
STATUS & TRENDS OF SIX ECOSYSTEMS

01 Spatial extent alone does not reflect ecosystem health.

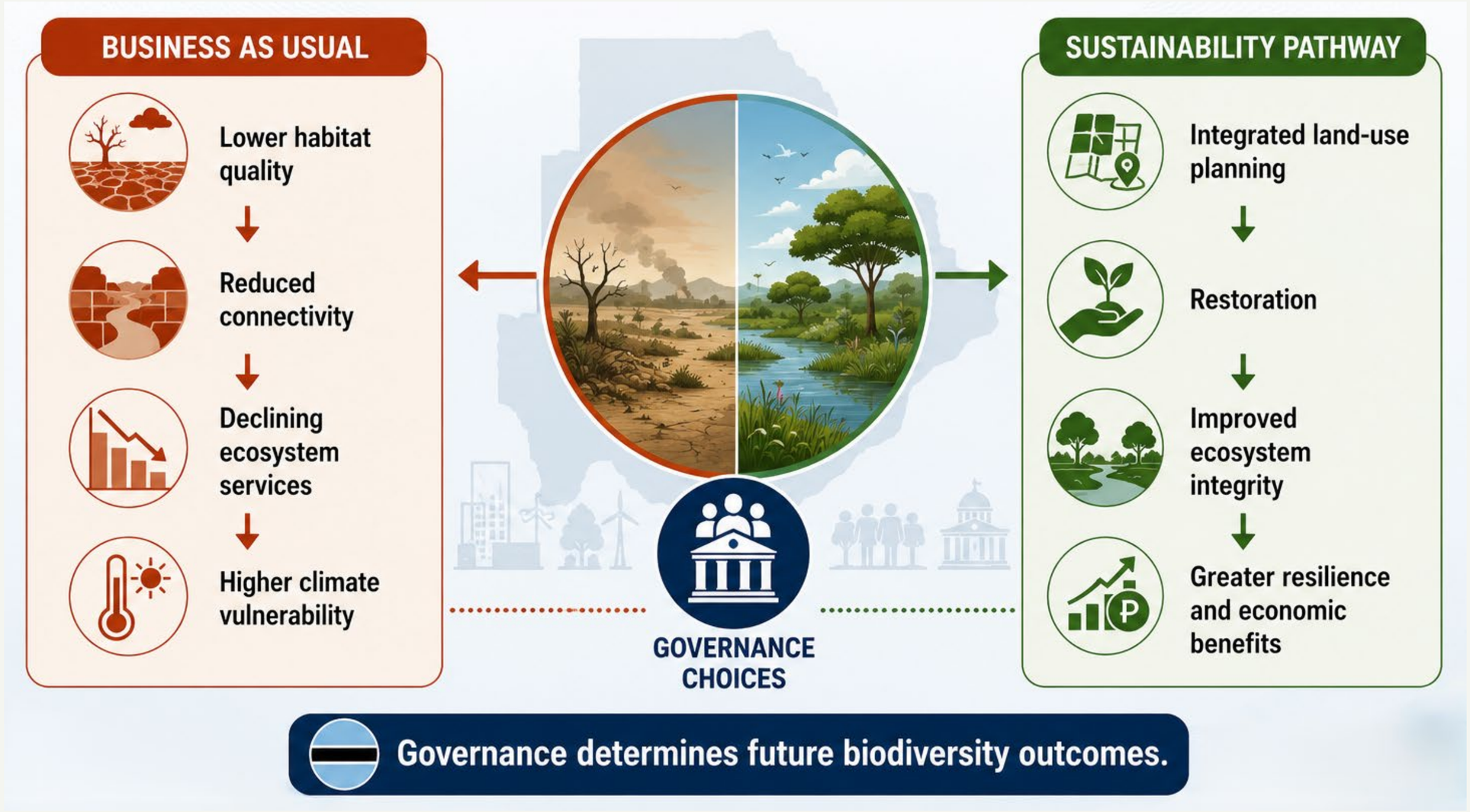
02 Ecosystems show contrasting spatial trends — declining, stable or expanding.

03 Ecological integrity & service delivery are declining — reducing resilience, livelihoods and development.

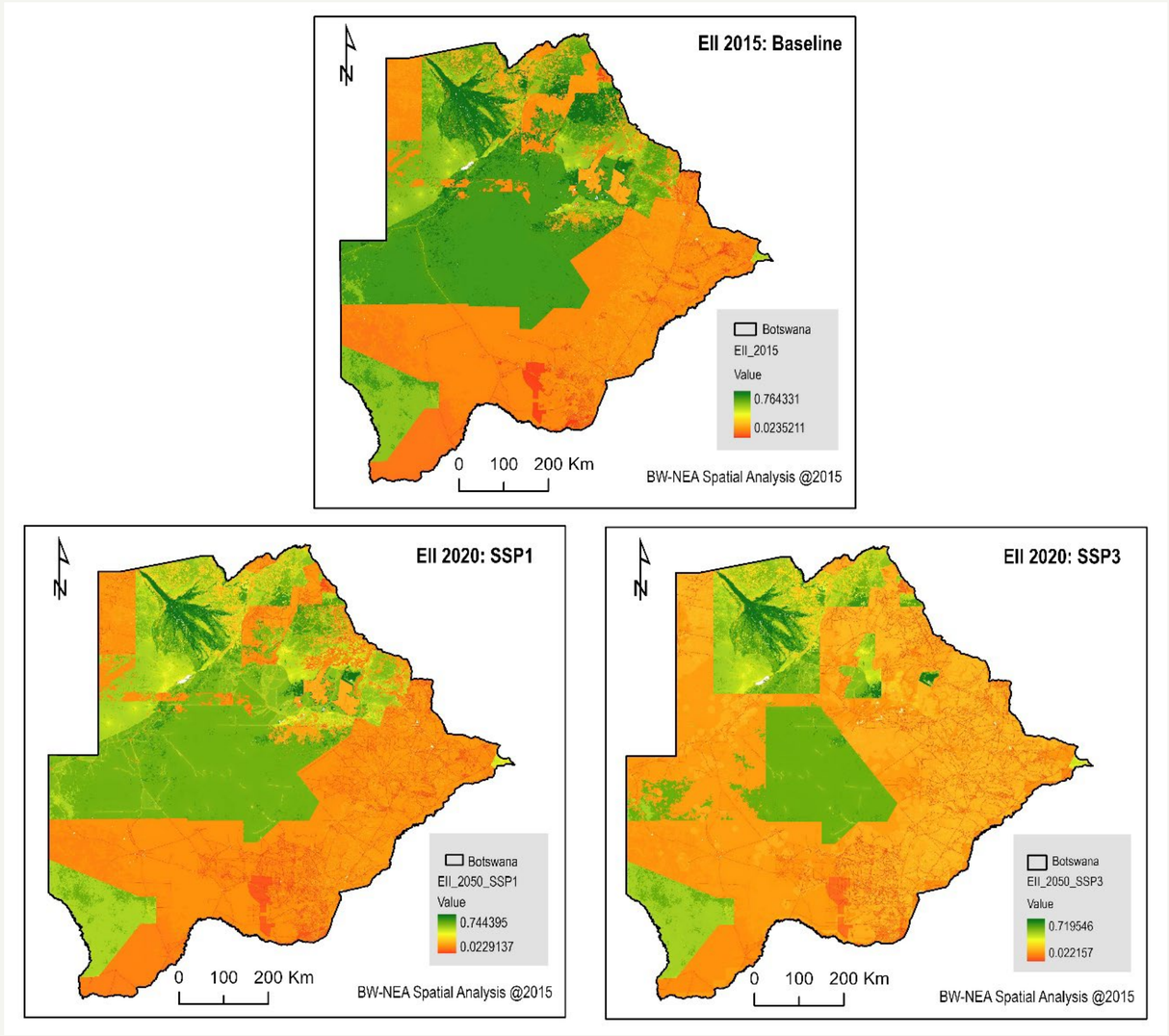
Ecosystem	Direction & Trend (1990–2020)	Absolute change between 1990 & 2020 (km^2)	% Change (1990–2020)
Agroecosystem	stable	+284 km^2	+1.0%
Aquatic & Wetland	declining	-4 266.81 km^2	-25.1%
Desert	declining	-10 827.89 km^2	-17.2%
Forest & Woodland	declining	-65 545.81 km^2	-33.0%
Grassland & Shrubland	increasing (extent)	+80 951.82 km^2	+29.2%
Hill	stable	+4.96 km^2	~0%



FUTURE SCENARIOS: WHAT COULD HOLD



SCENARIO TRAJECTORIES — ECOSYSTEM INTEGRITY INDEX



Scenario modelling (InVEST, GLOBIO 4 and a composite EII) shows Botswana's ecological future is "policy-elastic" rather than environmentally predetermined, governance and land-use decisions, not biophysical limits alone, will decide outcomes (Established but Incomplete) {Ch. 11, KM 11.1}.

Grasslands, shrublands and forests are high-risk, high-impact ecosystems where management yields the greatest gains.

Strong spatial governance restores connectivity and reduces fragmentation.

Managing invasive alien species is highly cost-effective for integrity.

Stabilising ecosystems before expanding development avoids irreversible degradation.

NATURE'S CONTRIBUTIONS TO PEOPLE



Nature's Contributions to People: From Hidden Value to National Wealth

Botswana has globally important natural capital, but much of its economic value remains under-recognised and underutilised.



TODAY → **THE MISSED OPPORTUNITY** → **OPPORTUNITY**

NATURAL CAPITAL IS UNDERVALUED



- ✓ Landmark valuations completed
  - Okavango Delta
  - Makgadikgadi Pans
- ✗ Not integrated into:
  - System of National Accounts
  - Development Planning

Limited ability to manage natural capital as a strategic national asset

FROM RAW RESOURCES TO REAL WEALTH

Value chains remain small-scale and informal

NATURE	RAW PRODUCTS	LOCAL PROCESSING	VALUE ADDITION	MARKETS	INCOME
Rich biodiversity and ecosystems	Plants, herbs, oils, materials, knowledge	Traditional harvesting and basic processing	Products improved, branded and packaged	Local, regional and global markets	Jobs, enterprise growth and community benefits

Without strategic investment, standards, market linkages and enabling policies, this value remains unrealised.

PRIORITISED ECOSYSTEMS, PRIORITISED OPPORTUNITIES

- TRADITIONAL TEAS & COFFEES
- HERBAL MEDICINES
- MEDICINAL OILS
- INDIGENOUS BREWS
- NATURAL COSMETICS
- CONSTRUCTION MATERIALS

INVESTMENT → STANDARDS & CERTIFICATION → MARKET ACCESS → INCLUSIVE ENTERPRISES

Strategic support can turn biodiversity-based value chains into engines of inclusive, sustainable growth.



WOMEN-LED MODELS WORK

Kgetsi ya Tsie Community Trust in Tswapong demonstrates the feasibility of nature-based value chains.

Empowered women. Thriving communities. Sustainable futures.

- WOMEN'S LEADERSHIP
- LOCAL JOBS
- BIODIVERSITY STEWARDSHIP
- SUSTAINABLE LIVELIHOODS

Botswana's biodiversity is more than a conservation asset— it is strategic natural capital capable of driving inclusive, climate-resilient economic growth.

END OF SESSION

THANK YOU

We welcome your questions and reflections in the discussion to follow.

03

WEAVING TRADITIONAL KNOWLEDGE

Weaving traditional and local knowledge with stakeholder perspectives — through community dialogues, Trialogues and knowledge co-production.

Dr Nelson M. Tselaesele · Traditional Knowledge Lead, BUAN

03 · WEAVING KNOWLEDGE

INTRODUCTION

APPROACHES TO COMMUNITY & STAKEHOLDER ENGAGEMENT

Two complementary methods were used to gather evidence and ground-truth findings during the Botswana National Ecosystem Assessment.

METHOD 01

COMMUNITY DIALOGUE

Community-based data collection that surfaces local, lived perspectives on ecosystems and their services.

WHO TAKES PART

- Communities
- Scientists
- Fellows

METHOD 02

TRIALOGUE

A science–policy–practice forum that validates findings and grounds them in real-world decision-making.

WHO TAKES PART

- TK Holders
- Scientists
- Private Sector
- NGOs
- Policy Makers

03 · WEAVING KNOWLEDGE

COMMUNITY DIALOGUES

Direct engagement with communities brought traditional and local knowledge into the assessment from the very start.

THE OBJECTIVES WERE

01

Co-identify relevant traditional-knowledge issues, themes and research questions to inform the assessment's policy questions.

02

Engage community members on how traditional knowledge shapes the conservation and utilisation of natural resources.

03 · WEAVING KNOWLEDGE

COMMUNITY DIALOGUES

An approach used to gather different perspectives during community-based data collection. Participants were divided into sub-groups so every voice could be heard.

FOUR PARTICIPANT SUB-GROUPS

01

WOMEN GROUP

02

YOUTH GROUP

03

LOCAL LEADERS' GROUP

04

MEN'S GROUP

FREEDOM OF EXPRESSION

Separate groupings created safe space to speak openly, where some community norms and values could otherwise hinder participation.

EXPERT FACILITATION

Groups were facilitated by researchers (technical experts) and fellows during data collection, organised by thematic area.

COMMUNITY DIALOGUES OUTCOMES

01

Communities contributed meaningfully to the national ecosystem assessment.

02

Knowledge practices were exchanged between researchers and traditional knowledge holders — transformative learning.

03

Traditional knowledge was woven to the formal sciences during the report writing.

03 · WEAVING KNOWLEDGE

TRIALOGUES

A forum where **scientists, policy-makers and practitioners** — including traditional knowledge holders, the private sector and NGOs — came together. The objectives were to:

01 Validate the main assessment findings and their linkage to the key policy questions identified during scoping.

02 Validate the key messages of the technical report and their associated confidence levels.

03 Strengthen ownership and legitimacy of the outcomes, aligned with new government developmental priorities.

04 Identify the key issues that should constitute the Summary for Policy Makers (SPM).



The Trialogue, Gaborone · October 2025

03 · WEAVING KNOWLEDGE

METHODS USED

Panel Discussion

Interrogating the technical findings across **seven chapters** , with guiding questions developed for each:

- One cross-cutting chapter — Traditional Knowledge, Gender & Vulnerable Groups, and Waste Management.
- Six ecosystem chapters.

Group Work

Participants worked through assigned questions in groups, then presented their conclusions during the plenary — surfacing diverse perspectives and building shared understanding.

03 · WEAVING KNOWLEDGE

TRIALOGUE OUTCOMES

Reinforced the importance of dialogue among the science, policy and practice communities in Botswana.

Practitioners shared the challenges they face on the ground, and policymakers shared insight into real-world decision-making.

Proactive participation of *Dikgosi* (local leaders / chiefs) and community practitioners deepened the assessment's inclusiveness and robustness.

Insights from *Dikgosi* grounded the assessment in local realities and strengthened policy options to better reflect traditional stewardship and community-based ecosystem management practices.

03 · WEAVING KNOWLEDGE

CONCLUSION

The Community Dialogues and Trialogue enabled:

- Gathering of knowledge from multiple sources (communities, practitioners and scientists).
- Highlighted the role played by Traditional knowledge in the policy development process
- Led to transformational change of Traditional knowledge holders and other stakeholders

END OF SESSION

THANK YOU

We welcome your questions and reflections in the discussion to follow.

04

FROM EVIDENCE TO POLICY

Policy-relevant options and opportunities to use the findings in national planning and decision-making.

Ms Mokgadi Monamati · BW-NEA
Project Manager (Govt), MET / DEP

— 04 · FROM EVIDENCE TO POLICY

BW NEA Unveils Botswana’s NEXT DIAMOND

After decades of reliance on diamond revenue, the assessment reveals an untapped natural endowment — and a future that is policy-elastic.

~60%

of Botswana is grassland and shrubland.

−17%

desert ecosystems declining — giving way to more grassland and grasslands.

an opportunity to unlock carbon markets and nature-based value chains.



Untapped Gifts of Nature to Botswana (Value Chains); Many years of reliance on diamond revenue

Conclusion: Botswana’s Ecological Future is **Policy-Elastic**

GRASSLAND & SHRUBLAND

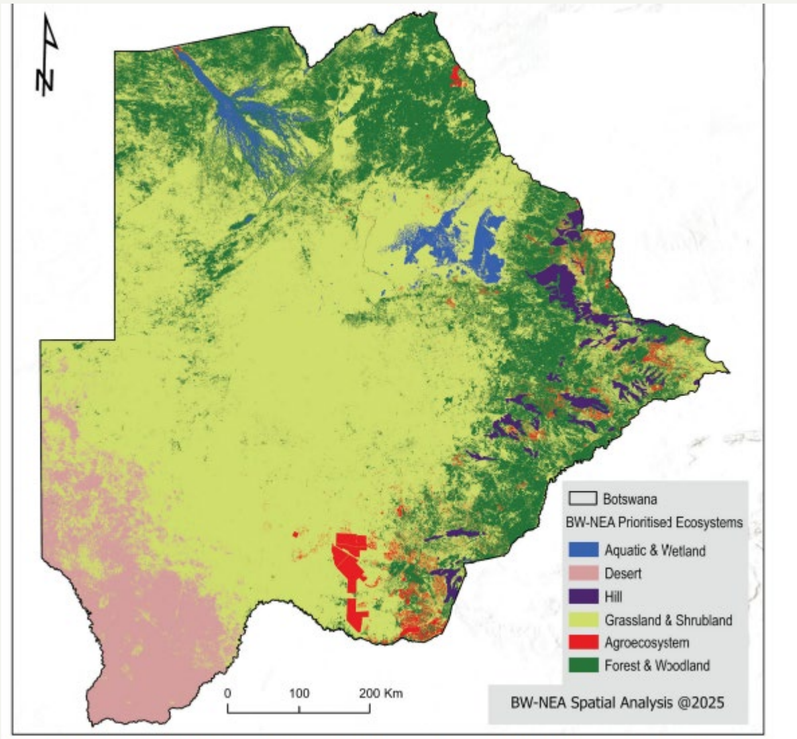


Figure SPM1: Spatial distribution of six prioritised ecosystems for the Botswana National Ecosystem Assessment *(Data source: BW-NEA Spatial Analysis, 2025).*

Grassland & Shrubland claim a large portion of the country.

This vast natural asset can become Botswana's next diamond — a nature-based engine for carbon markets and green value chains, beyond mining

04 · FROM EVIDENCE TO POLICY

POLICY CALL TO ACTION (Readiness)

Building national readiness to turn ecosystem evidence into economic and climate opportunity.

01

Developing the Carbon Credit Framework

02

Developing the Nationally Determined Contributions 3.0

03

Developing Environmental Social Governance (ESG Framework & Strategy)

04

Launched the Sustainable Livelihood Approach (SLA)

POLICY CONSIDERATIONS

Incorporate BW-NEA findings into the National Development Plan 12 Mid-Term Review.

BW-NEA to inform the next State of the Nation Address.

Assessment Findings to update National Biodiversity Strategy and Action Plan (NBSAP).

Build synergies with ongoing projects — Herding for Health, Access & Benefit Sharing Phase II.

04 · FROM EVIDENCE TO POLICY

UNTAPPED VALUE CHAINS

Nature's gifts to Batswana — already valued in global markets, ready to become inclusive community enterprises.



Botswana Baskets

Highly valued in Europe and other countries and now sold online on Ebay — other markets suggested prices over **US$1,000**.



Mongongo Oil

More valuable than extra-virgin olive oil…. Communities to benefit from Mongongo and other natural resource



Traditional Teas

Tea is widely consumed beverage world wide. Mosukujane (*Lippia javanica*) now reaches supermarket shelves — aiming for export.

CONCLUSION

A POLICY-ELASTIC FUTURE

- Effective governance and integrated, ecosystem-based land-use policies are critical for nature to provide positive benefits to people.
- A high-degradation trajectory is likely if spatial planning and land-allocation policy remain unchanged.
- Biophysical limits are real but not the ultimate — environmental Stewardship is important at all levels.
- Traditional Knowledge very critical to National Planning and decision making (Include Chiefs (Dikgosi) & Traditional Knowledge holders in decision Making)

END OF SESSION

THANK YOU

We welcome your questions and reflections in the discussion to follow.

INTERACTIVE EXERCISE

JOIN IN ON MENTIMETER

Share your perspective in real time. Follow the two steps below to add your voice to the discussion.

1. Go to **menti.com** on your phone or browser.
2. Enter the code **4330 7750** and submit your response.

SCAN TO JOIN



Your responses appear live

OPEN DISCUSSION

PANEL DISCUSSION & Q&A

An open conversation with our presenters. We welcome your questions online.

- **Use the Q&A feature at the bottom of your screen**

TO CLOSE

CLOSING REMARKS AND NEXT STEPS

Delivered by UNEP-WCMC

EXPLORE THE EVIDENCE

DOWNLOAD THE ASSESSMENT

Access the full outputs of the Botswana National Ecosystem Assessment — scan a QR code or visit the links below.

FULL ASSESSMENT

TECHNICAL REPORT

The complete evidence base — ecosystems, condition, trends, drivers and future scenarios.

SCAN OR VISIT

https://www.ecosystemassessments.net/content//uploads/2026/05/BW-NEA-2025-FINAL-TECHNICAL-REPORT-5-high-compression.pdf

FOR DECISION-MAKERS

SUMMARY FOR POLICY MAKERS

The concise, policy-focused synthesis of the assessment's key messages and options.

SCAN OR VISIT

https://www.ecosystemassessments.net/content//uploads/2026/06/BW-NEA_SPM_final-25-06-2026.pdf

JOIN THE COMMUNITY

SGA NETWORK

THE SUB-GLOBAL ASSESSMENT NETWORK

A community of practice that connects and supports individuals and organisations involved in sub-global ecosystem assessments.

SCAN TO JOIN & STAY UP TO DATE

Latest news & upcoming events

END OF SESSION

THANK YOU