Experimental Biodiversity Tourism Estimates (BTE) and experimental Biodiversity Economy Satellite Account (BESA)

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National NCA Forum

19 October 2022

Snapshot of NCA in South Africa

NCA measures SA's wealth of land, water, minerals, ecosystems, biodiversity and ecological infrastructure

Water accounts for SA

1. Small beginnings

Energy accounts for SA

Mineral accounts for SA

2. Little steps added

Fishery accounts for SA

Water accounts for SA

Land and Terrestrial Ecosystem Accounts

Accounts for **Protected Areas**

3. More recently

National **River Ecosystem** Accounts

Accounts for Species: **Rhino & Cycads**

National **Estuary Ecosystem** Accounts

Updated **Water** Accounts for SA

4. Going forward

Biodiversity Tourism estimates

Accounts for **Strategic Water Source Areas**

Marine Ecosystem Accounts

Satellite Account for **Biodiversity Economy**

2000 2015 2020 2021 2022

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Experimental Biodiversity-Based Tourism Estimates

 Progress on the compilation

 The way forward

Experimental Biodiversity Economy Satellite Account

 Progress on the compilation

 The way forward

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Progress on the experimental Biodiversity-Based Tourism Estimates

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NO

- ***The Statistical Framework for Measuring the Sustainability of Tourism (SF-MST) is an organizing structure for integrating statistics on the economic, environmental and social dimensions of sustainable tourism.***
- UNWTO is working together with UNSD and leading country experts, and under auspices of the UN Committee of Experts on Environmental-Economic Accounting (UNCEEA) and the UNWTO Committee on Statistics. The Working Group also counts on the involvement of relevant international organizations.

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Internationally comparable tourism characteristic products and tourism characteristic activities
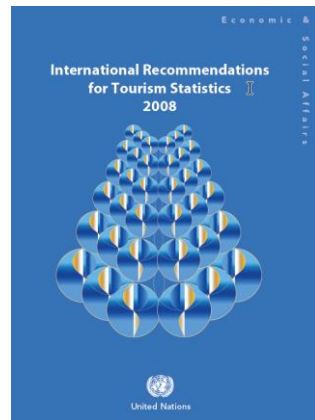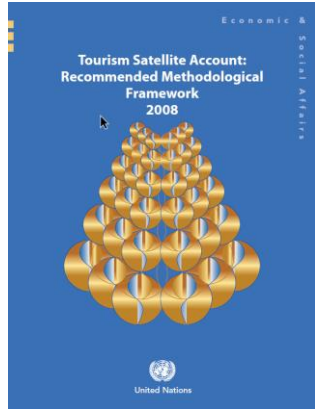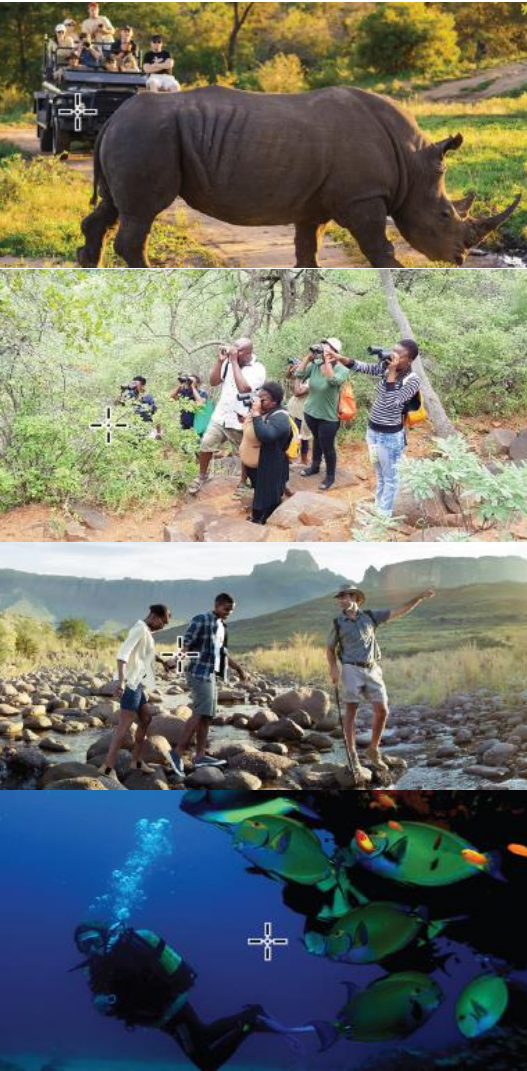
List of categories of tourism characteristic consumption products and tourism characteristic activities (tourism industries)

Products	Activities
1. Accommodation services for visitors	1. Accommodation for visitors
2. Food and beverage serving services	2. Food and beverage serving activities
3. Railway passenger transport services	3. Railway passenger transport
4. Road passenger transport services	4. Road passenger transport
5. Water passenger transport services	5. Water passenger transport
6. Air passenger transport services	6. Air passenger transport
7. Transport equipment rental services	7. Transport equipment rental
8. Travel agencies and other reservation services	8. Travel agencies and other reservation services activities
9. Cultural services	9. Cultural activities
10. Sports and recreational services	10. Sports and recreational activities
11. Country-specific tourism characteristic goods	11. Retail trade of country-specific tourism characteristic goods
12. Country-specific tourism characteristic services	12. Other country-specific tourism characteristic activities

A tourism-characteristic product/activity is a product/activity that will cease to exist in meaningful quantity, or for which the level of consumption would be significantly reduced, in the absence of visitors.

The BTE uses a typology of products and activities for tourism that is comparable with the TSA

Tourism Satellite Account: Recommended Methodological Framework 2008
United Nations

International Recommendations for Tourism Statistics 2008
United Nations

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Tourism

Tourism refers to the activity of visitors. A visitor is a traveller taking a trip to a main destination outside his/her usual environment, for less than a year, for any main purpose (business, leisure or other personal purpose) other than to be employed by a resident entity in the country or place visited. These trips taken by visitors qualify as tourism trips.

Biodiversity assets

Biodiversity is the variety of life, including the genes of individual plants or animals, the huge number of species and the different ecosystems in which they live. Biodiversity assets includes species, ecosystems and other biodiversity-related resources that generate ecosystem services, support livelihoods, and provide a foundation for economic growth, social development and human wellbeing.

Biodiversity-based tourism

Biodiversity-based tourism is tourism that involves the use or enjoyment of biodiversity assets, including trips and visits by domestic and inbound same-day visitors and tourists to partake in and experience South Africa's ecosystems and species. This includes making use of these biodiversity assets for recreational or leisure purposes. Thus biodiversity-based tourism activities occur in or with one or more natural ecosystems and/or with one or more indigenous species.
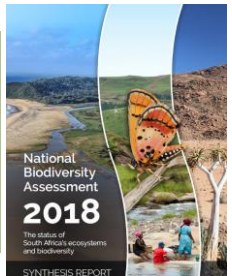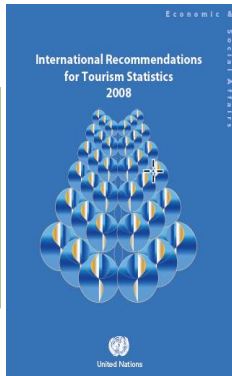
No formal definition or internationally agreed standard. SA definition used from previous SANBI NBA exercise

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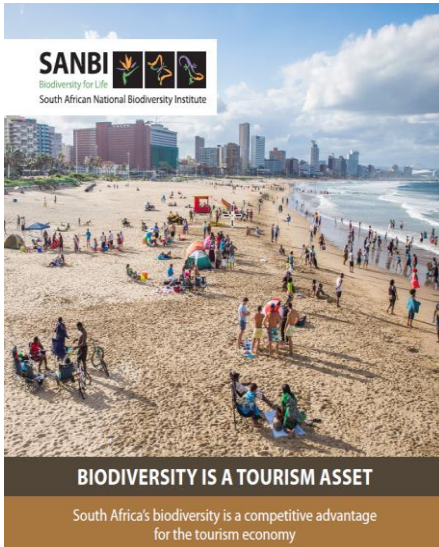
Stats SA and SANBI partners in South Africa's National Natural Capital Accounting (NCA) Co-Ordination Unit – support the implementation of the National NCA Strategy:

- Stats SA and SANBI working together.
- Did an initial model that was used in the NBA 2018.
- Experimental BTE estimates were developed for 2013 to 2017.
- New benchmarked National Accounts and Tourism Satellite Accounts became available in 2021.
- Decided to update and expand BTE time-series (2013 to 2019) to feed into the compilation of the experimental BESA and to publish in future in the Stats SA Natural Capital series.

Top-Down Approach to measurement

Stats SA DTS and SAT departure survey data used to extract BTE from TSA

Stats SA DTS - information on the number of same-day trips and overnight trips undertaken by South Africans visitors that include one or more of the following activities which are considered to incorporate biodiversity assets:
- Trips that include wildlife activities such as game viewing, whale watching, birdwatching, etc;
- Trips that include hunting activities;
- Trips that include beach activities;
- Trips that include visits to parks/ gardens;
- Trips that include a visit to a mountain area;
- Trips that include outdoor or nature-based activities;
- Trips that include water sports such as diving, snorkelling, sailing, surfing; and

SAT's annual departure survey provides information on the number of overnight trips undertaken by inbound tourists visiting South Africa that include one or more of the following activities which are considered to incorporate biodiversity assets:
- Number of inbound tourists visiting a nature-based attraction;
- Number of inbound tourists partaking in wildlife activities;
- Number of inbound tourists visiting a beach; and
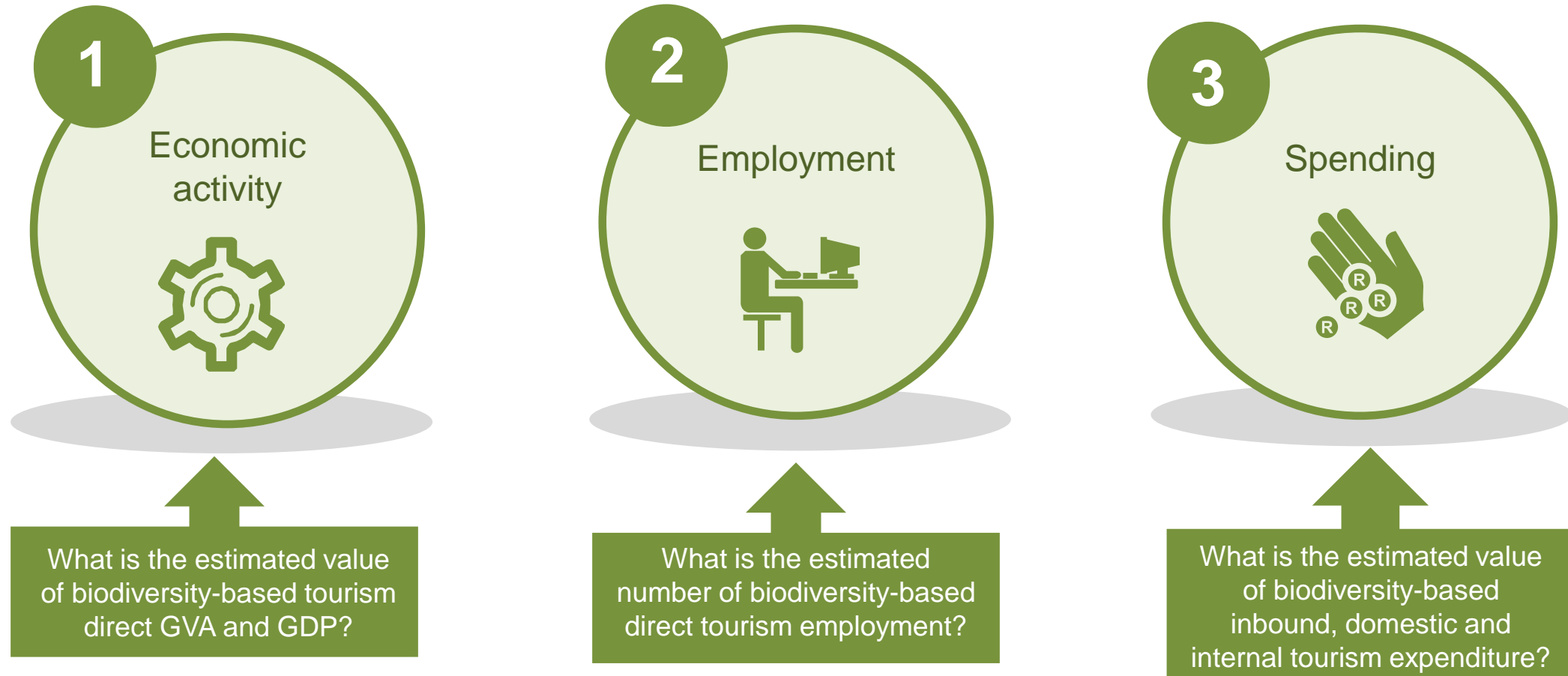- Number of inbound tourists participating in an adventure activity.

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The Tourism Satellite Account (TSA) covers the following related to the tourism sector

1 Economic activity

2 Employment

3 Spending

What is the value of tourism direct GVA and GDP?

What is the number of direct tourism employment?

What is the value of inbound, domestic and internal tourism expenditure?

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Experimental BTE overview

The experimental BTE covers the following related to the tourism sector

1 Economic activity

What is the estimated value of biodiversity-based tourism direct GVA and GDP?

2 Employment

What is the estimated number of biodiversity-based direct tourism employment?

3 Spending

What is the estimated value of biodiversity-based inbound, domestic and internal tourism expenditure?

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The process for the compilation of natural capital accounts

1. Identify who is involved

2. Scoping

Technical Working Groups

3. Compile draft account

4. Validation workshop

5. Submit accounts for NSO editing

6 Release accounts

7. Communi-cation

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- Ongoing internal engagements between Stats SA and SANBI regarding the BTE time-series and timing of the release in the 2023/2024 financial year.
- To organize a validation workshop for the experimental BTE.
- Broader stakeholder group engagement (e.g. SANBI, DFFE, NDT, etc)
- Focus for validation workshop – concepts and definitions, experimental BTE compilation process, what macro aggregates or indicators would be available to stakeholders from the BTE when released in the Stats SA Natural Capital series, etc.

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Progress on the experimental draft Biodiversity Economy Satellite Account

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- South Africa has a wealth of biodiversity assets and ecological infrastructure that can contribute to inclusive growth and development
  - Policy interest and relevance, including National Biodiversity Economy Strategy
- Helps to make the case for investment in biodiversity
  - Including in managing and conserving the biodiversity and ecosystem assets that underpin the biodiversity economy
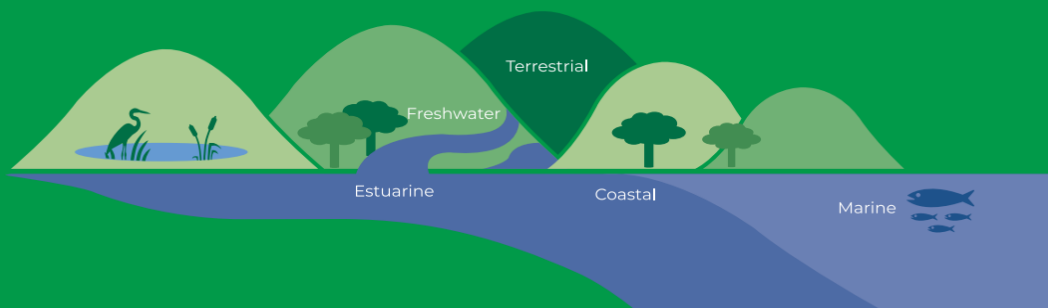
1.2 million km² land ▪ 9 biomes ▪ 485 terrestrial ecosystem types
1.1 million km² sea ▪ 3 oceans ▪ 150 marine ecosystem types
222 river ecosystem types ▪ 290 estuaries ▪ 2 sub-Antarctic islands
1 of 17 megadiverse countries ▪ 3 of 36 global biodiversity hotspots
67 000 animal species ▪ 20 400 plant species
6 transfrontier conservation areas ▪ 26 Ramsar wetlands ▪ 10 World Heritage Sites

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- Defining the biodiversity economy is not straightforward, and there is no international consensus on a definition.

From South Africa's **National Biodiversity Economy Strategy**:

The biodiversity economy consists of businesses and other economic activities that either *directly depend* on biodiversity for their core business or that *contribute* to conservation of biodiversity through their activities

Adapted from a WWF definition proposed in 2012

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Biodiversity-related economic activity

A. Conserving biodiversity
(sectors/activities that <u>contribute directly</u> to conserving or managing biodiversity)

B. Using biodiversity
(sectors/activities that <u>depend directly</u> on utilising biodiversity)

A1. Protecting and managing biodiversity assets

A2. Maintaining and restoring ecological infrastructure
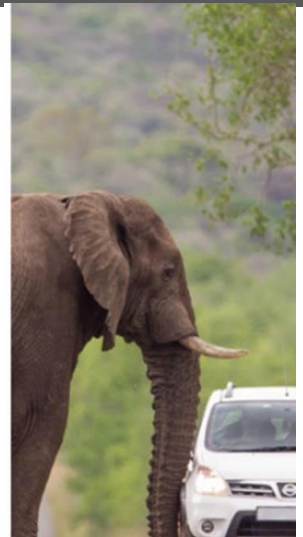
A3. Research and professional services

B1. Non-consumptive use of biodiversity

B2. Extractive use of biodiversity

Focus is on natural or semi-natural ecosystems and indigenous species

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- Biodiversity Economy is **narrower the Green Economy -**

  - Which includes e.g. renewable energy, recycling, green buildings, sustainable transport

- Overlaps with the **Classification of Environmental Activities** in SEEA Central Framework (used to define the Environmental Goods and Services Sector)

  - **Group I Class 6 Protection of biodiversity and landscapes** links closely to Subcategory A1 Protecting and managing biodiversity assets

  - **Group II Resource Management** could be expanded to include Subcategory A2 Maintaining and restoring ecological infrastructure

- **Not all ecosystem services** are related to the biodiversity economy

  - Ecosystem services from (most) intensively modified ecosystem types aren't considered part of the biodiversity economy based on our definition

Benchmarked new SU-tables time-series – released 25 August 2021 by Stats SA

National Accounts: Sources and Methods
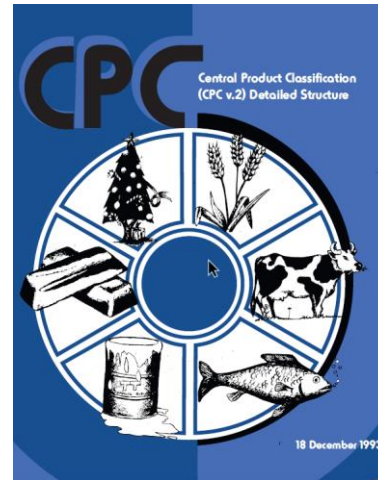
SUT compilation level: 118 product groupings
SUT publication level: 108 product groupings
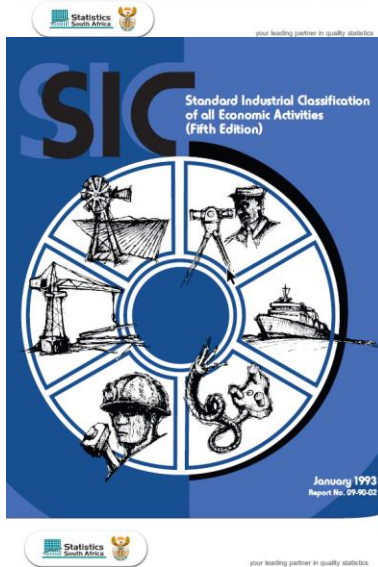
SUT compilation level: 213 industry groupings
SUT publication level: 124 industry groupings

Feb 2020
- Initial one day scoping workshop used for planning of work, identifying key stakeholders, and agreeing on adopting the conceptual framework for the biodiversity economy from the NBA.
- **COVID March 2020 – BESA work only got restarted in 2021/2002 financial year again.**

Apr – Aug 2021
- 12 scoping work sessions with the core working group - roughly two hours per session.
- Invitations to join these sessions were extended to a broader reference group comprising subject matter experts in specific areas e.g. marine ecosystems, agriculture, forestry, biomass and others.
- Focused on linking the conceptual framework for the biodiversity economy to the industry and product classifications used for compiling South Africa's national accounts (SUTs).

Sept 2021
- DFFE provided Stats SA draft BESA scoping document (EXCEL workbook) in order to start compiling a draft BESA for 2018 according to the scoping requirements provided.

Table 4.   Summary of results of product codes

Proportion related to biodiversity	Number of CPC codes	% of total number of codes
All or most (>80,0%)	3	2,5%
Some (20,0-80,0%)	1	0,8%
Few (<20,0%)	35	29,7%
None	79	66,9%
Total	118	100%

Source:. Driver et al, 2021.

Table 3.   Summary of results of industry codes

Proportion related to biodiversity	Number of SIC codes	% of total number of codes
All or most (>80,0%)	2	0,9%
Some (20,0-80,0%)	1	0,5%
Few (<20,0%)	36	16,9%
None	174	81,7%
Total	213	100%

Source:. Driver et al, 2021.

Table 8.   Proposed proportions to be used to calculate the economic contribution of the industries and products identified as biodiversity-related to GDP and employment

Group to which industry/product code allocated	Proposed proportion to be used to extract data from SUTs	Alternative proportions that could be used for sensitivity testing	
		Conservative	Generous
All or most (estimate >80,0% related to biodiversity)	85,0%	80,0%	90,0%
Some (estimate 20,0-80,0% related to biodiversity)	40,0%	30,0%	50,0%
Few (estimate <20,0% related to biodiversity)	3,5%	1,0%	5,0%

Source:. Driver et al, 2021.

3 different approaches – 3 different answers

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Supply and use tables

-SUT Directorate released updated 2018 SUT and new 2019 SUT end March 2022.

BESA system development

-Draft 2018 BE SUT (automated system), based upon the updated 2018 SUT - and system checking.
-3 Draft 2018 BESA (proposed, conservative and generous) (automated system), based on draft 2018 BE SUT and DFFE, SANBI and Stats SA draft BESA scoping – and system checking

Initial macro indicators

-Draft BE gross value added (GVA) and gross domestic product (GDP) – 3 approaches.
-Draft BE taxes less subsidies - 3 approaches.
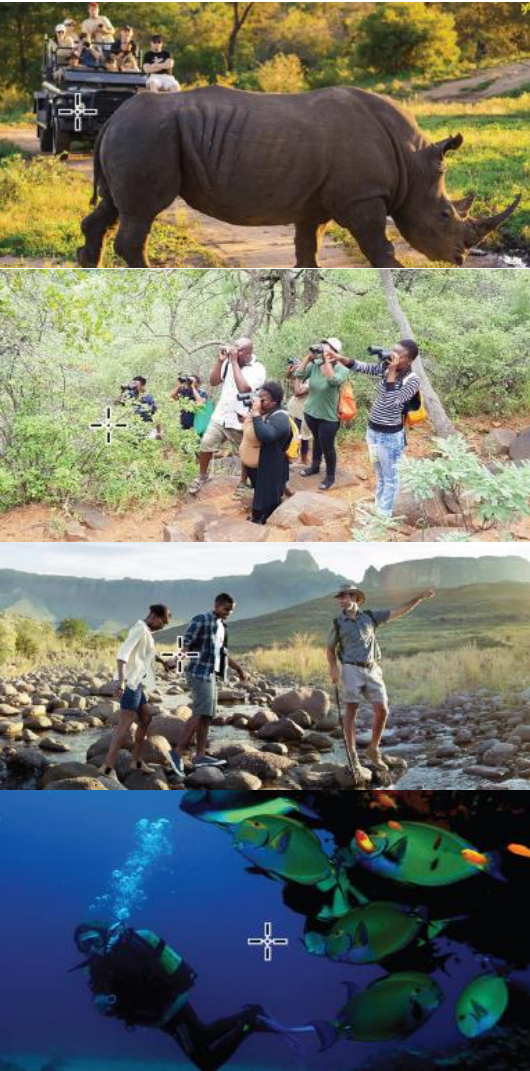-Draft BE exports- 3 approaches.

BESA employment

-Ongoing engagements - how must BE employment be disaggregated – what would DFFE and SANBI want to monitor and report on for BE employment for policy.

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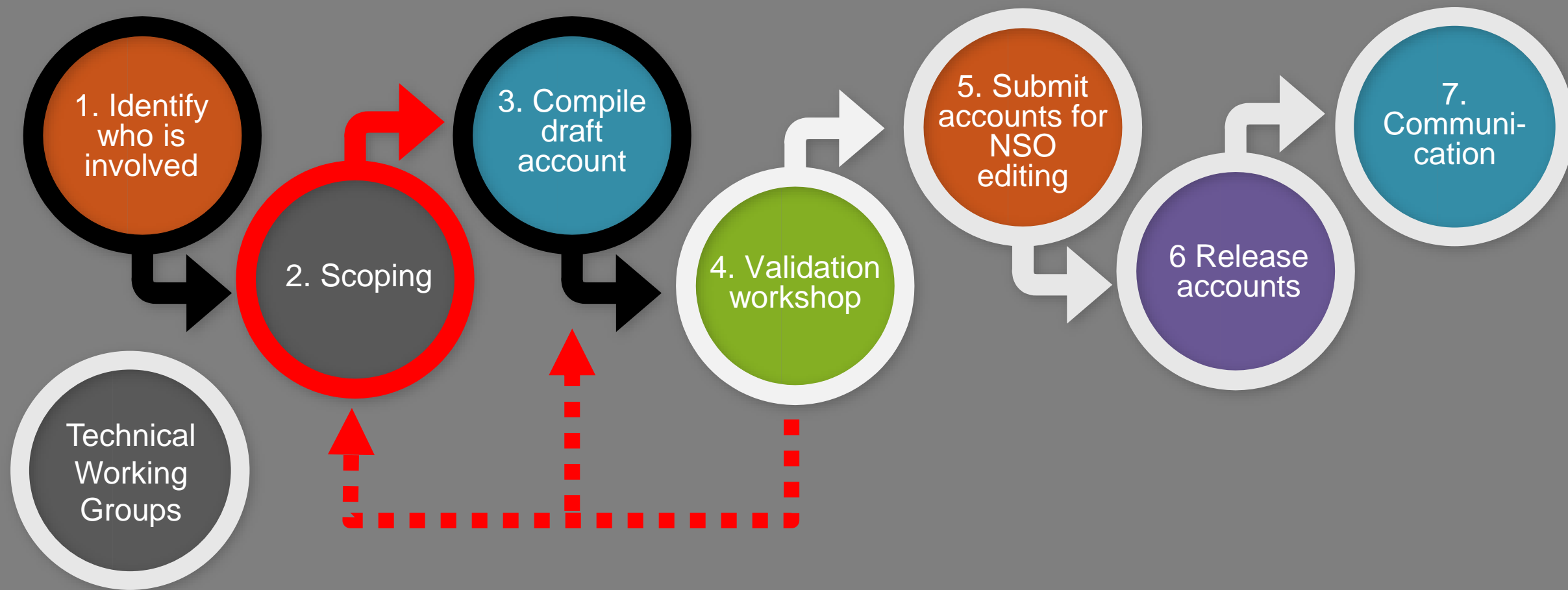
- DFFE, SANBI and Stats SA to re-examine the first draft DFFE, SANBI and Stats SA BE scoping – Feb/March 2023

- DFFE, SANBI and Stats SA to engage further on the labour market related variables which are relevant for the biodiversity economy.

- Employment is disaggregated in the experimental BTE already for the BE tourism sub sector in the BESA.

- Decisions on the inclusion of more detailed employment data will depend on the labour market issues that are considered of special significance for policy and research by DFFE and SANBI for the biodiversity economy.

- BESA for a single reference year (as a start – latest reference year) or a BESA time-series for release (2013 to 2019)?

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Thank you