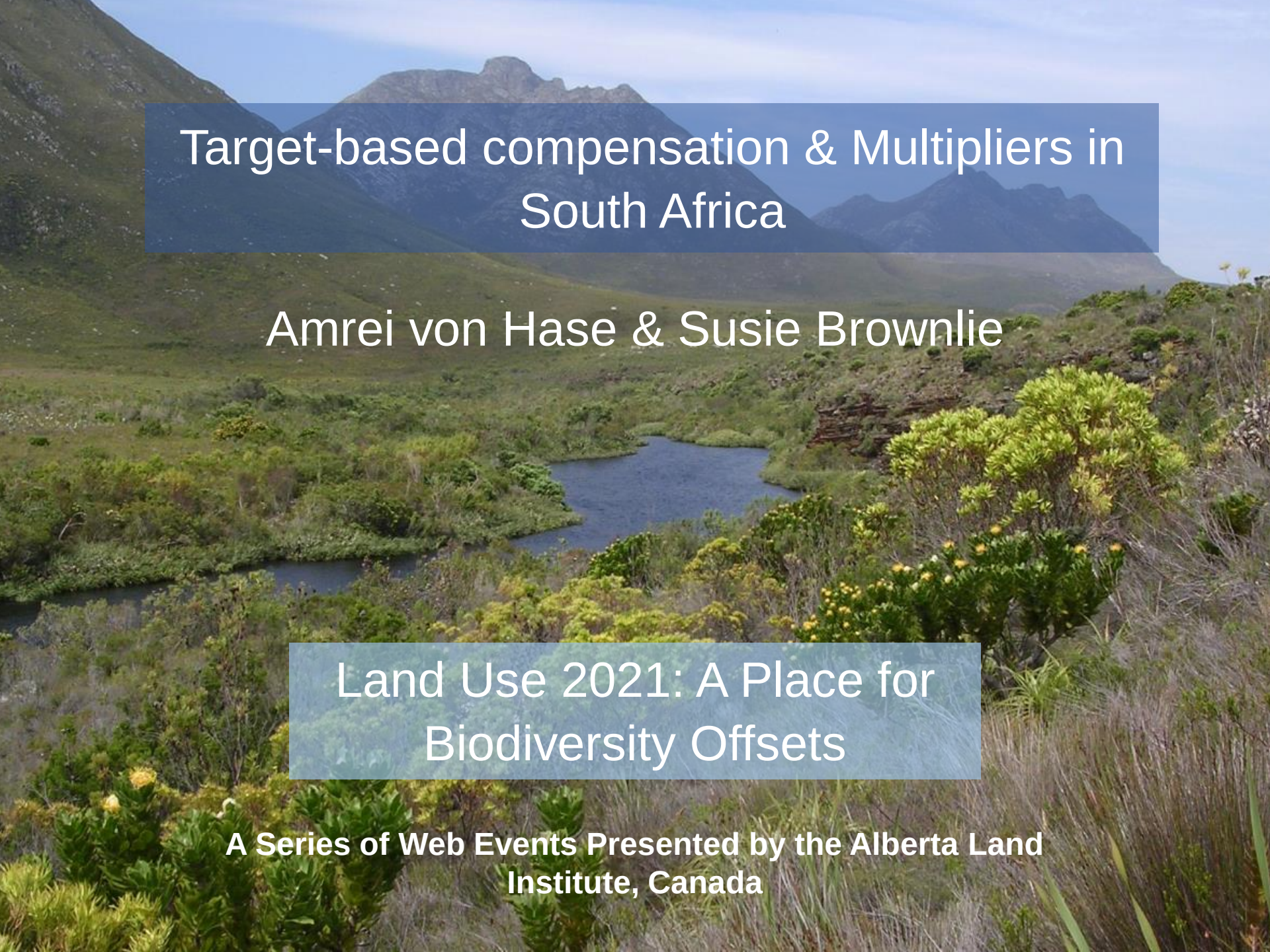


Target-based compensation & Multipliers in South Africa

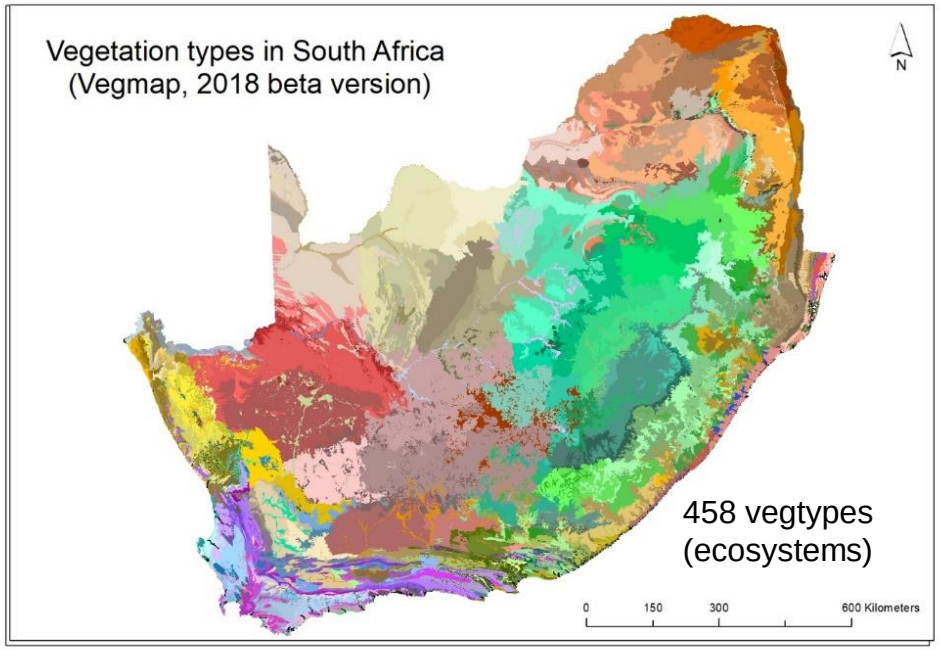
Amrei von Hase & Susie Brownlie

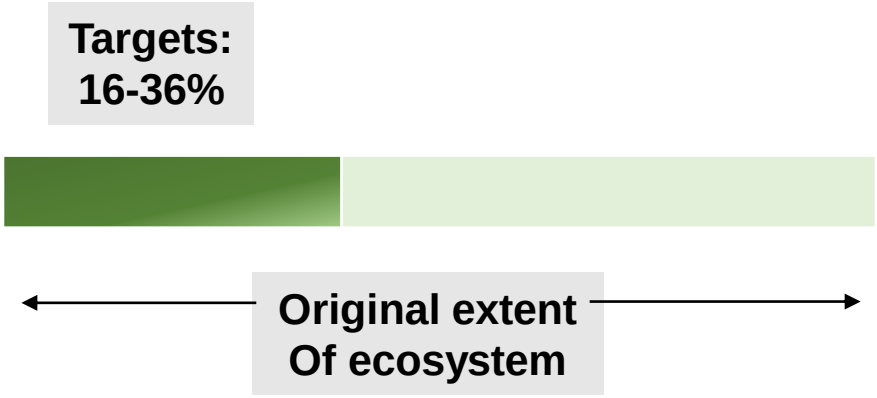
Land Use 2021: A Place for Biodiversity Offsets

A Series of Web Events Presented by the Alberta Land Institute, Canada

Biodiversity targets for ecosystems

- Outcomes-based targets have been set for terrestrial ecosystems across the country
- Aim to represent biodiversity pattern
- Framed as retaining at least x % of the historical extent of each ecosystem
- Vary between 16 – 36% of historical ecosystem extent

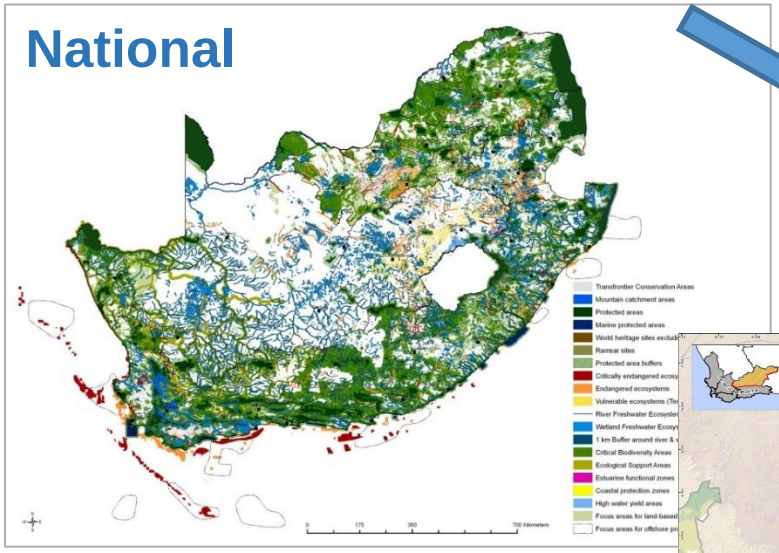




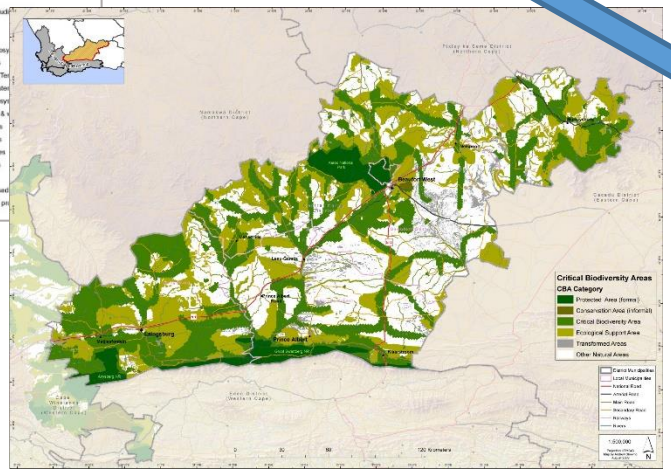
How are targets and other thresholds used?

1. In biodiversity plans to identify **priority areas**

National



Provincial



Local

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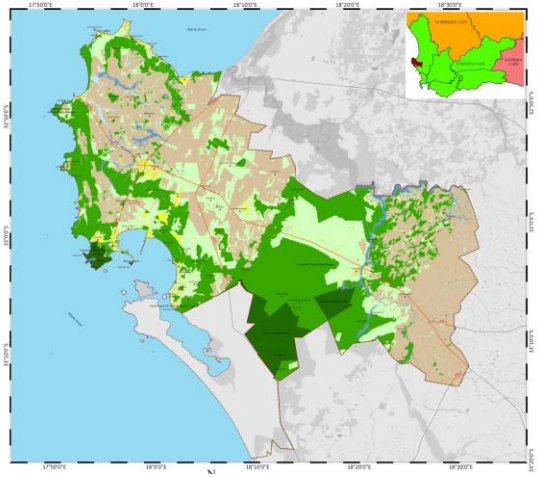
CRITICAL BIODIVERSITY AREAS MAP



Underpinned by a range of TARGETS

How are targets & other thresholds used?

2. In **biodiversity assessment** & to report **headline indicators**

i) Ecosystem protection level (EPL)

Not protected: <5% of target met

Poor: 5-49% of target met

Moderate: 50 – 99% of target met

Well-protected: >= 100% target met

ii) Ecosystem threat status (ETS)

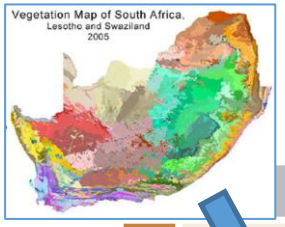
Categories

Evaluated in SA according to 3 of 5 broad criteria, with specific thresholds

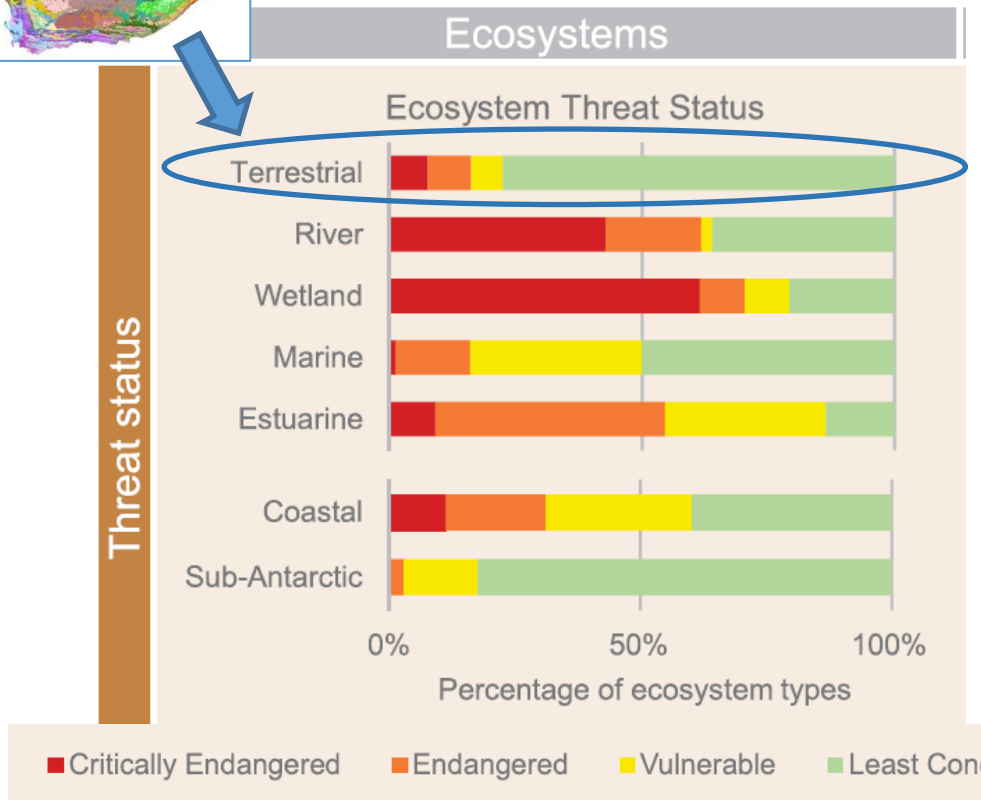
A. Reduction in geographic distribution over ANY of the following time periods:		CR	EN	VU
A1	Past (over the past 50 years)	≥ 80%	≥ 50%	≥ 30%
A2a	Future (over the next 50 years)	≥ 80%	≥ 50%	≥ 30%
A2b	Any 50 year period (including the past, present and future)	≥ 80%	≥ 50%	≥ 30%
A3	Historical (since approximately 1750)	≥ 90%	≥ 70%	≥ 50%

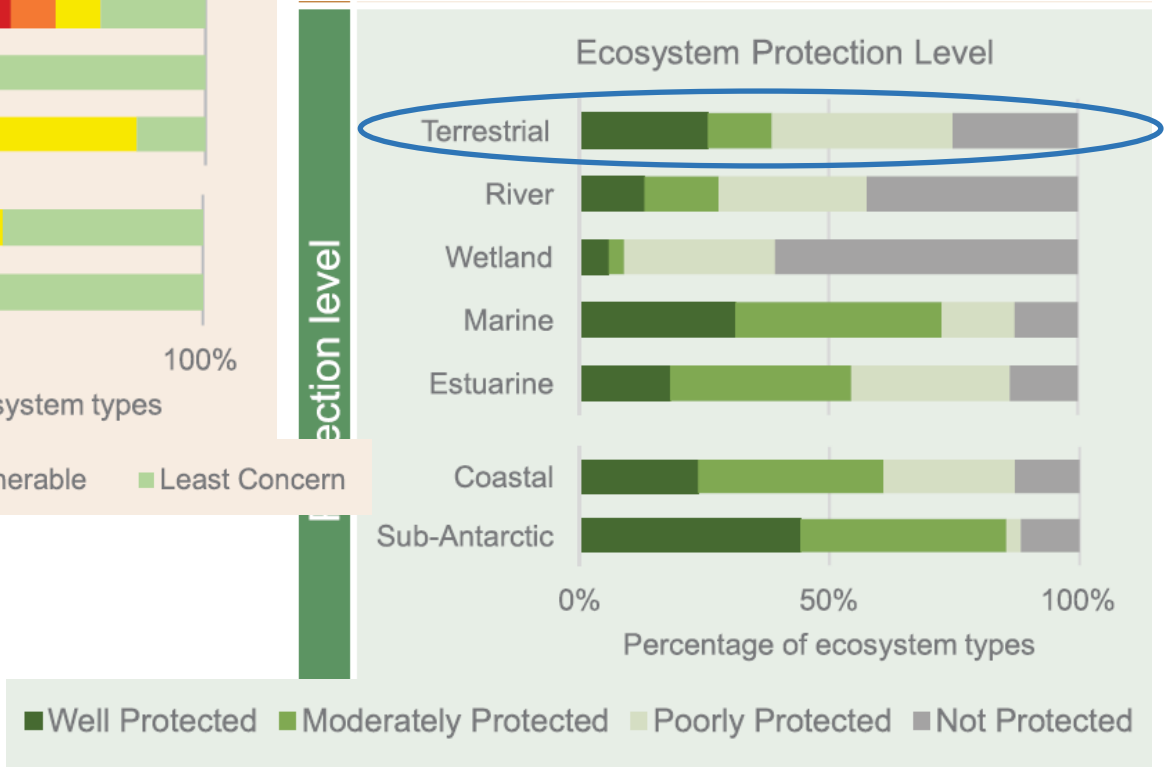
B. Restricted geographic distribution indicated by ANY OF B1, B2 or B3:		CR	EN	VU
B1	Extent of a minimum convex polygon (km²) enclosing all occurrences (extent of occurrence, EOO) is no larger than: **AND** at least one of the following (a-c): (a) An observed or inferred continuing decline in **ANY** of: i. a measure of spatial extent appropriate to the ecosystem; **OR** ii. a measure of environmental quality appropriate to characteristic biota of the ecosystem; **OR** iii. a measure of disruption to biotic interactions appropriate to the characteristic biota of the ecosystem (b) Observed or inferred threatening processes that are likely to cause continuing declines in geographic distribution, environmental quality or biotic interactions within the next 20 years.	≤ 2,000 km²	≤ 20,000 km²	≤ 50,000 km²
	(c) Ecosystem exists at:	1 threat-defined location	≤ 5 threat-defined locations	≤ 10 threat-defined locations

‘Headline indicators’ for ecosystems



https://bgis.sanbi.org/Projects/Detail/221



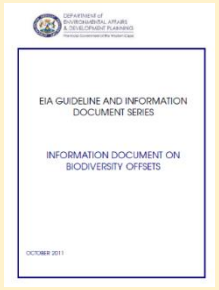


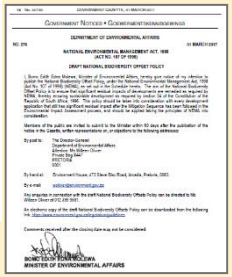
Aims of biodiversity assessment & planning outputs

1. Inform conservation investment and strategy

2. Guide land-use planning and decision making

- Application of the mitigation hierarchy including compensation / offsets
- Guidelines since 2007, e.g.
  - Western Cape Prov: 2007.. 2011.. 2015
  - KZN Province: 2009 .. 2013
  - Draft National Policy 2017 & Guideline





Desired outcome: Protection & good management of priority biodiversity areas (restoration generally deemed unfeasible)

→ **Not trying to achieve No Net Loss, but to counterbalance loss with improved protection so that targets are met or exceeded**

[*exception: wetlands]

Plans and targets inform offsets/compensation:

1. **Whether there is an offset/ compensation requirement**
   - Not required in **LC** ecosystems unless other triggers apply (eg. priority species or important ecological corridors)
   - Impacts on **CR** ecosystems must be avoided (can't be offset)

2. **Type and location of offsets/ compensation**
   - Same type of ecosystem (like for like) or more threatened system
   - Priority areas in the landscape as set out in biodiversity plans.

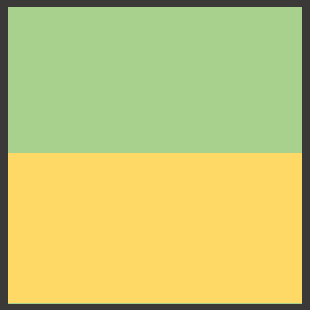
3. **The size of the offset/ compensation requirement**
   - Projects compensate in a proportional way, relative to their residual impacts and what is needed to meet targets for affected ecosystems.
   - Compensation scaled using target-based **multipliers** and taking a precautionary approach so that no ecosystem becomes more threatened than endangered.

How it works?
Setting offset ratios/ multipliers to help meet targets

Minimum TARGET:

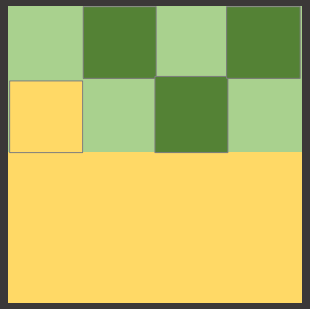
Retain at least **30%** of historic extent of **Limestone Strandveld**

Current state of the ecosystem:



50% of ecosystem's original extent intact **(=VU)**

Project-level compensation approach:



For each 1 ha impacted, 3 ha are protected

Anticipated outcome for ecosystem:

63% developed, 37% of (original extent of) ecosystem

→ Use this proactively to work out multipliers to achieve specific outcomes

→ Not NNL, but 'managed net loss' in this case

Basic multipliers (e.g. WC 2015 Draft Guideline)

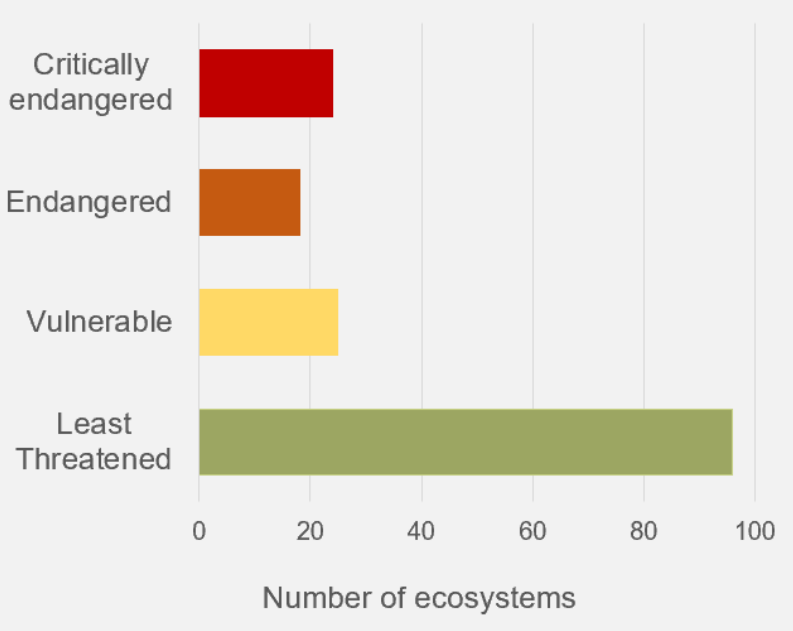
Compensation (offset) : Impact

→ **30:1** for **CR** ecosystems & other areas considered irreplaceable for achieving biodiversity targets

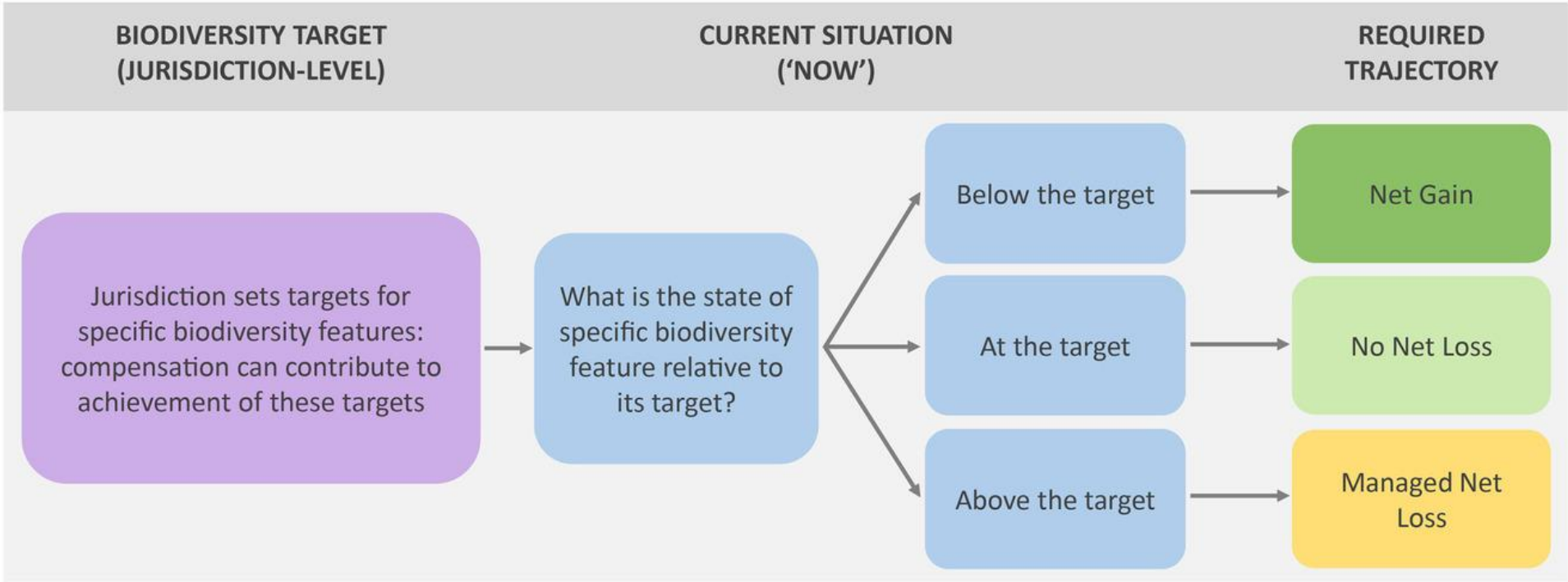
→ **10:1** to **30:1** for **EN** systems

→ **1:1** to **4:1** for **VU** systems

→ **No offset** for **LT/LC** ecosystems



Target-based ecological compensation can be applied to a wider context



Received: 2 July 2019 | Revised: 31 October 2019 | Accepted: 22 November 2019
DOI: 10.1111/conl.12695

REVIEW

Conservation Letters
A journal of the Society for Conservation Biology
Open Access
WILEY

Moving from biodiversity offsets to a target-based approach for ecological compensation

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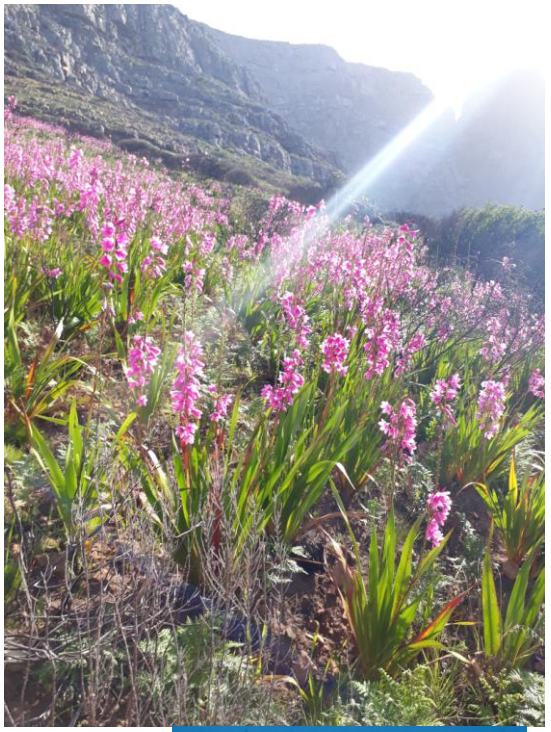
Source: Simmonds et al. 2020. Moving from biodiversity offsets to a target-based approach for ecological compensation. https://conbio.onlinelibrary.wiley.com/doi/full/10.1111/conl.12695

Please see a webinar on this topic here: https://www.impactmitigation.org/webinars

Summary

- Compensation at the project-level can be scaled to help achieve overarching biodiversity targets: this can provide a defensible basis for determining the size of multipliers.
- Such a target-based approach underpins South Africa's 'offset' system with the aim of protecting priority biodiversity areas (NB: in this case it is a 'managed net loss' MNL approach rather than NNL or NG)
- The concept can be applied more widely, however, to different contexts and would improve alignment of mitigation and biodiversity policy



Thank you

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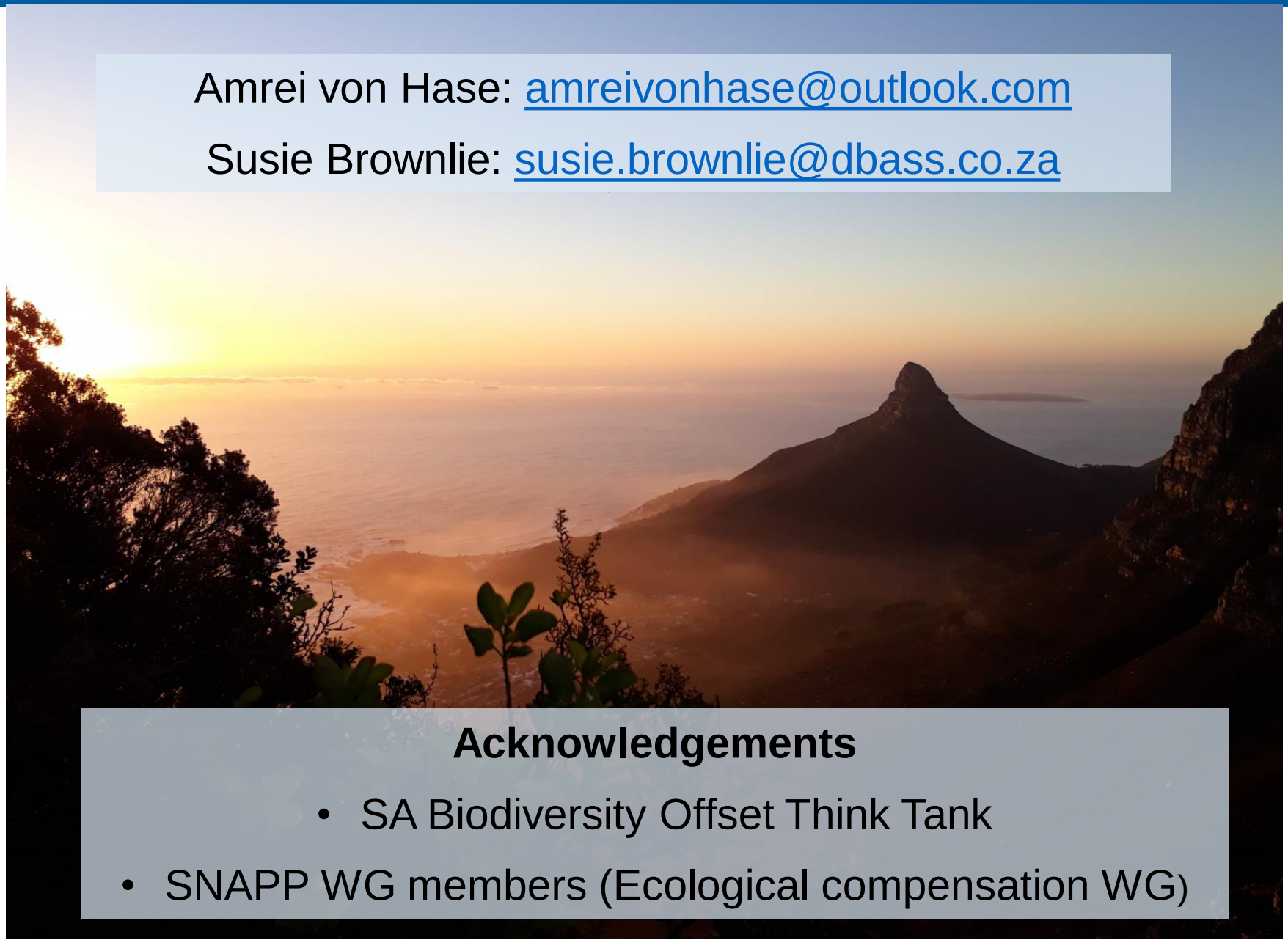

Acknowledgements

- SA Biodiversity Offset Think Tank
- SNAPP WG members (Ecological compensation WG)