



The case of Ntabelanga: building nature's benefits into decision making in the engine rooms



Natural Capital Symposium 2015

Alta De Vos

Email: alta.devos@gmail.com

Rhodes University, South Africa



1. Be relevant, co-produce information
2. Explore multiple benefits, trade-offs, change
3. People matter
4. Where matters
5. Include dynamics, uncertainty



- In South Africa, great opportunity for mainstreaming ecosystem services around development planning, communication
- Particularly true around water infrastructure development

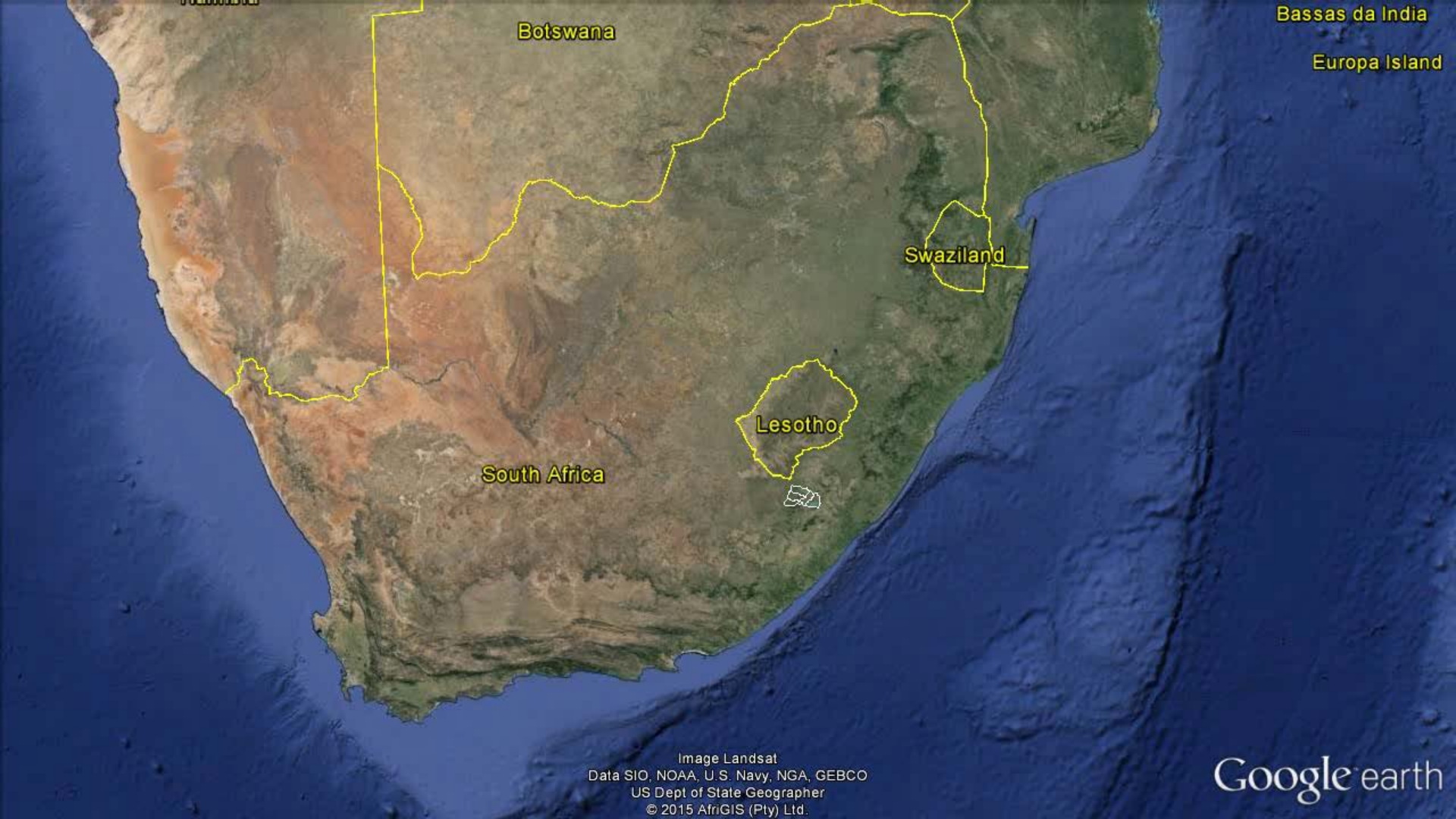
Sitas, Nadia, et al. "Opportunities and challenges for mainstreaming ecosystem services in development planning: perspectives from a landscape level." *Landscape ecology* 29.8 (2014): 1315-1331.

Jeanne Nel: Pathways to Impact session

Outline of the talk

- Background to the Ntabelanga Dam & Restoration project
- What government wants
- What NRM wants
- Opportunities & Challenges
- A (too) simple plan for placing decision making in the engine room

Background: The Ntabalenga & Lalení Dam Restoration Project



Botswana

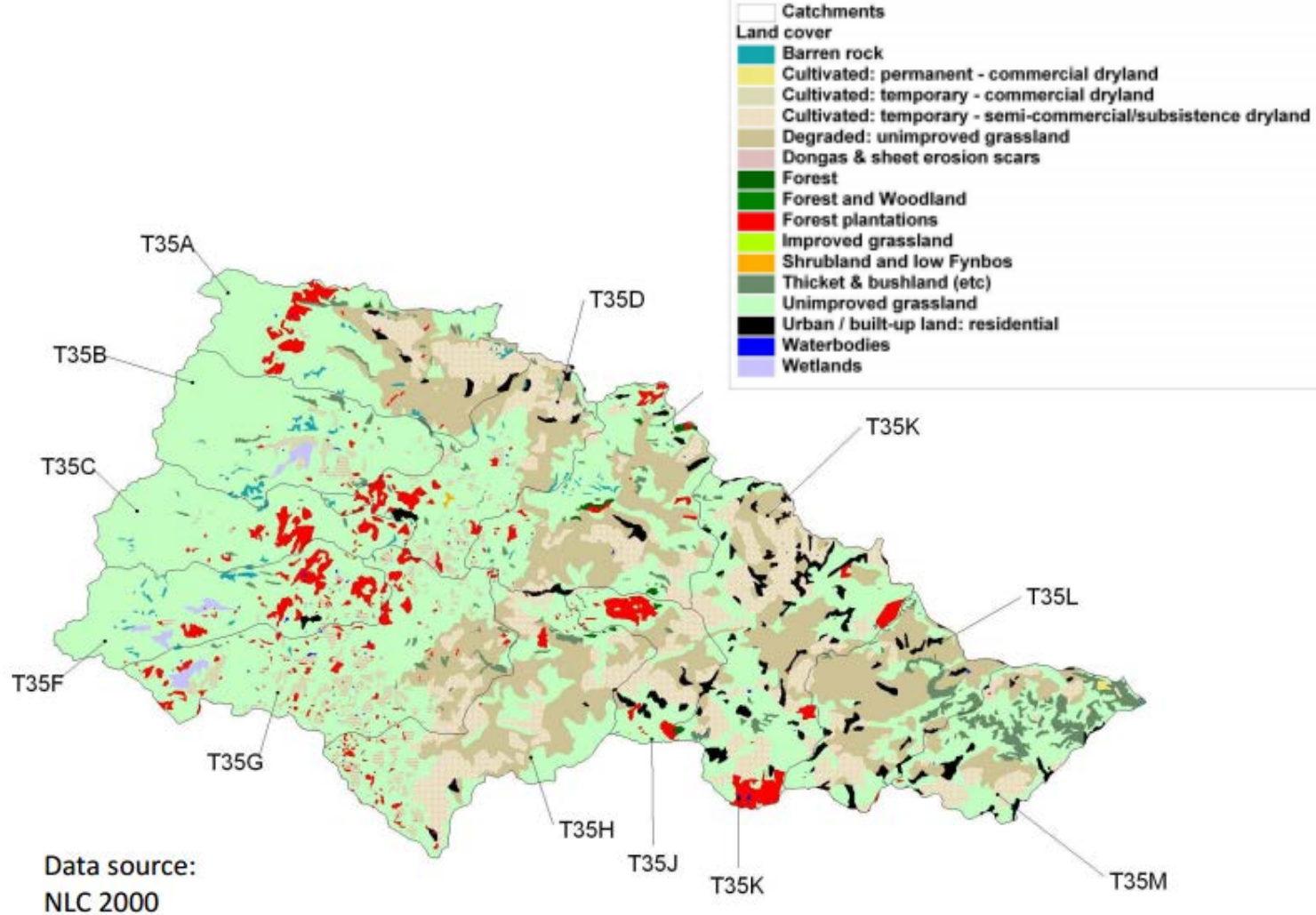
Bassas da India

Europa Island

Swaziland

Lesotho

South Africa



Background

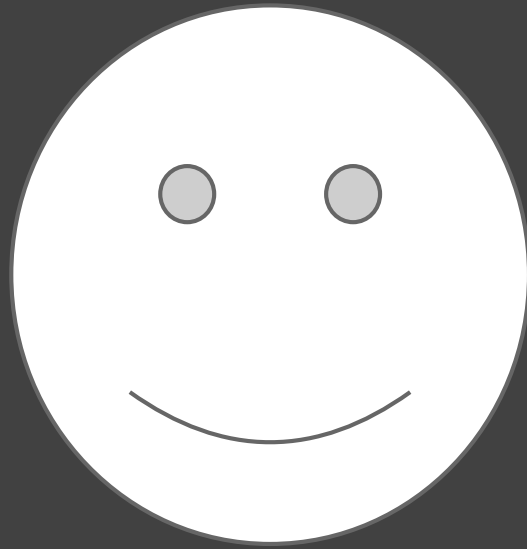
- ▣ SIP 3 & 19
- ▣ Tsitsa River = Largest undeveloped SA river
- ▣ High Unemployment Rates
- ▣ High Erosion
- ▣ 490 million cubic meter dam: earmarked for Development
- ▣ US\$1.25 billion project

NRM's Brief:

Restore the land in a way that as little as possible sediment ends up in the dam




Photo: Roddy Fox



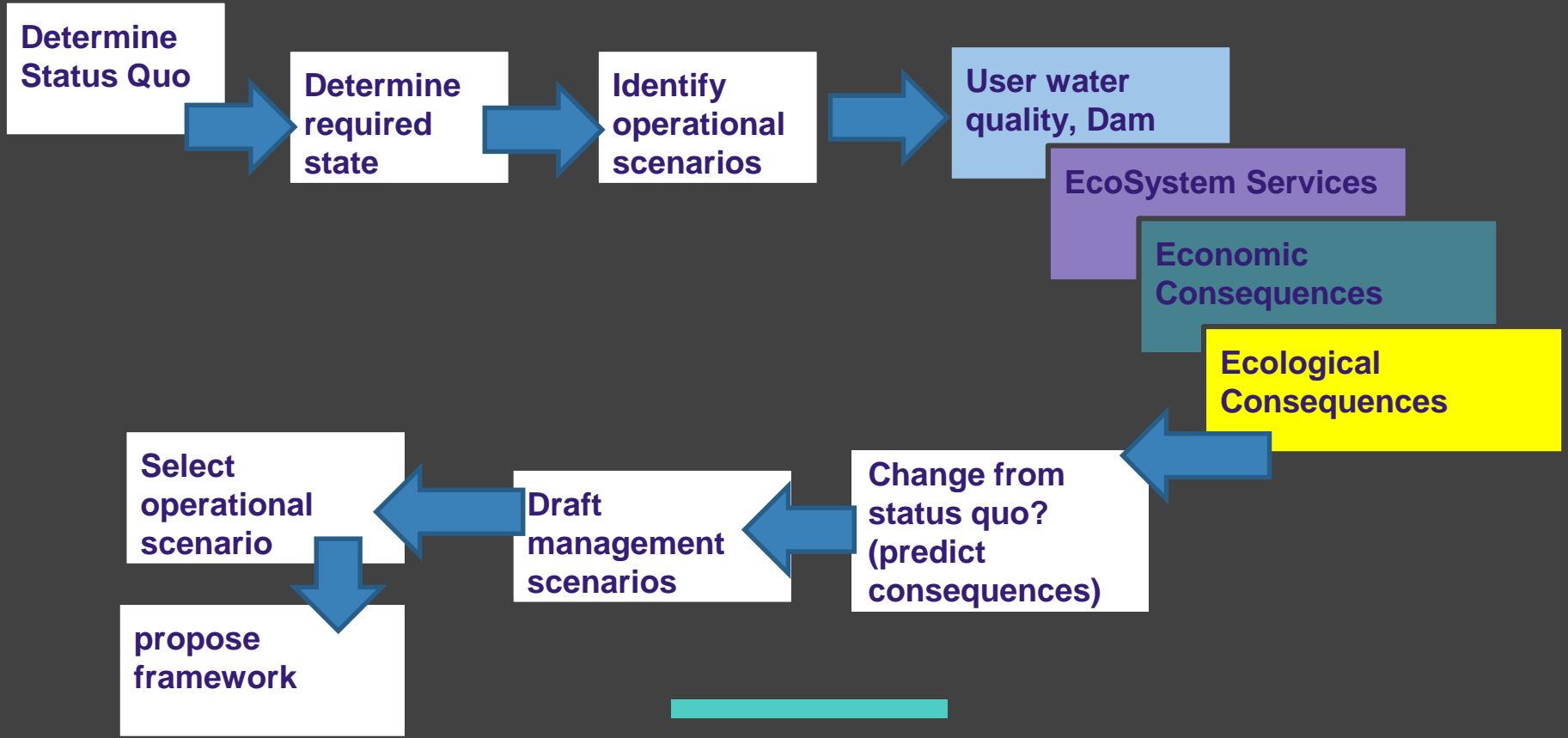
What NRM wants

OPPORTUNITIES

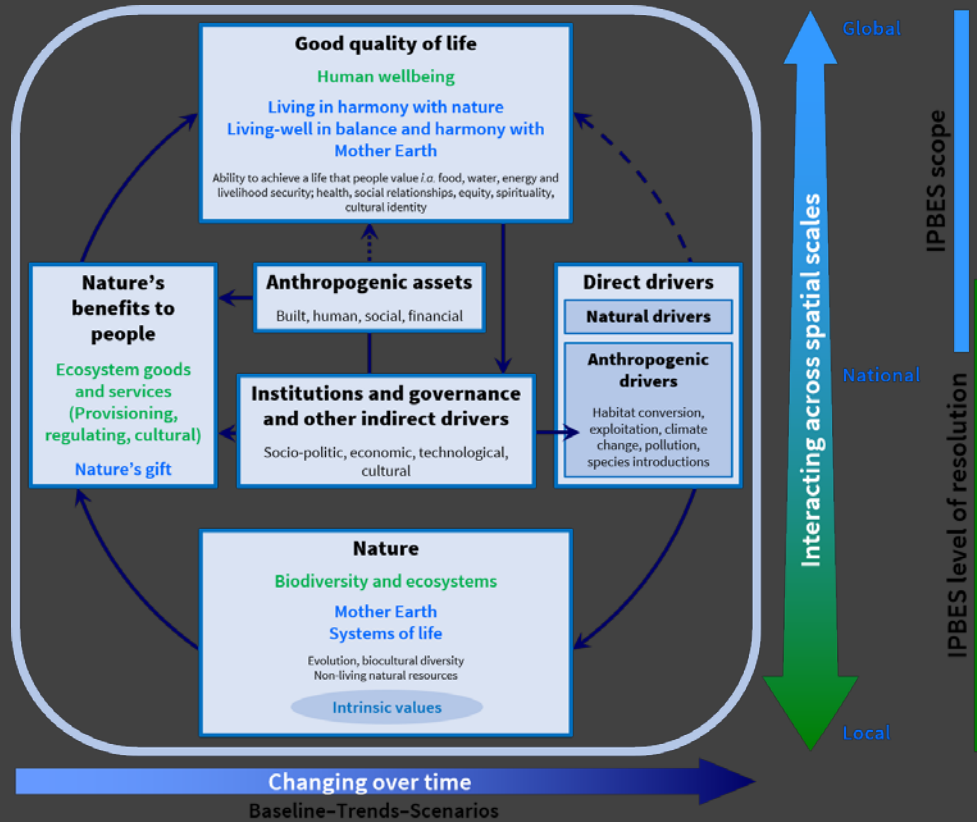




The key to operationalising ES analysis in the decision making process is recognising that people and nature depend upon each other.



NRM's Decision operational decision making framework



Díaz, Sandra, et al. "The IPBES Conceptual Framework—connecting nature and people." *Current Opinion in Environmental Sustainability* 14 (2015): 1-16.

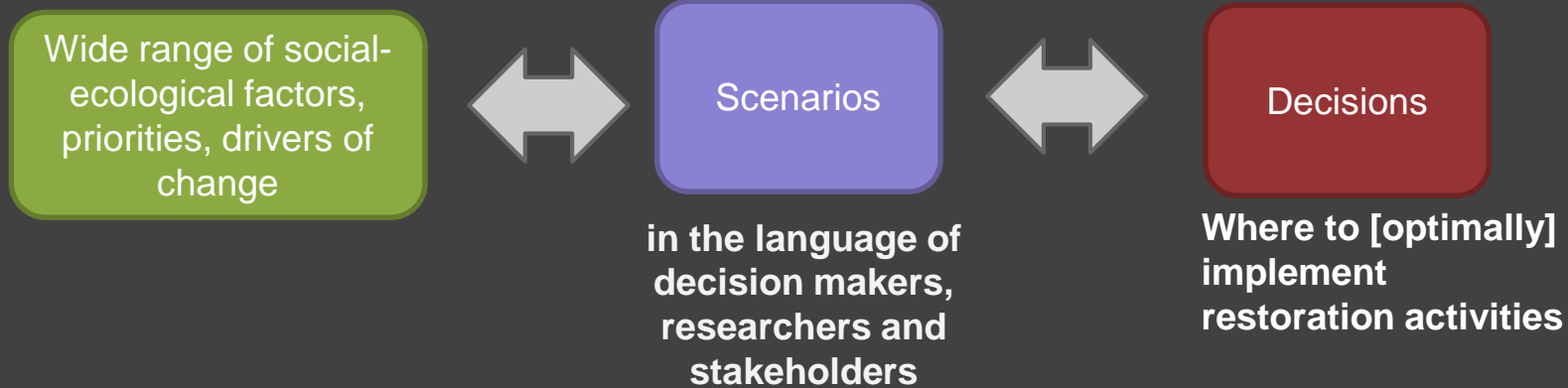


To make decisions, I need to to be able to know and communicate scenarios - 90% of my presentations contain scenario maps

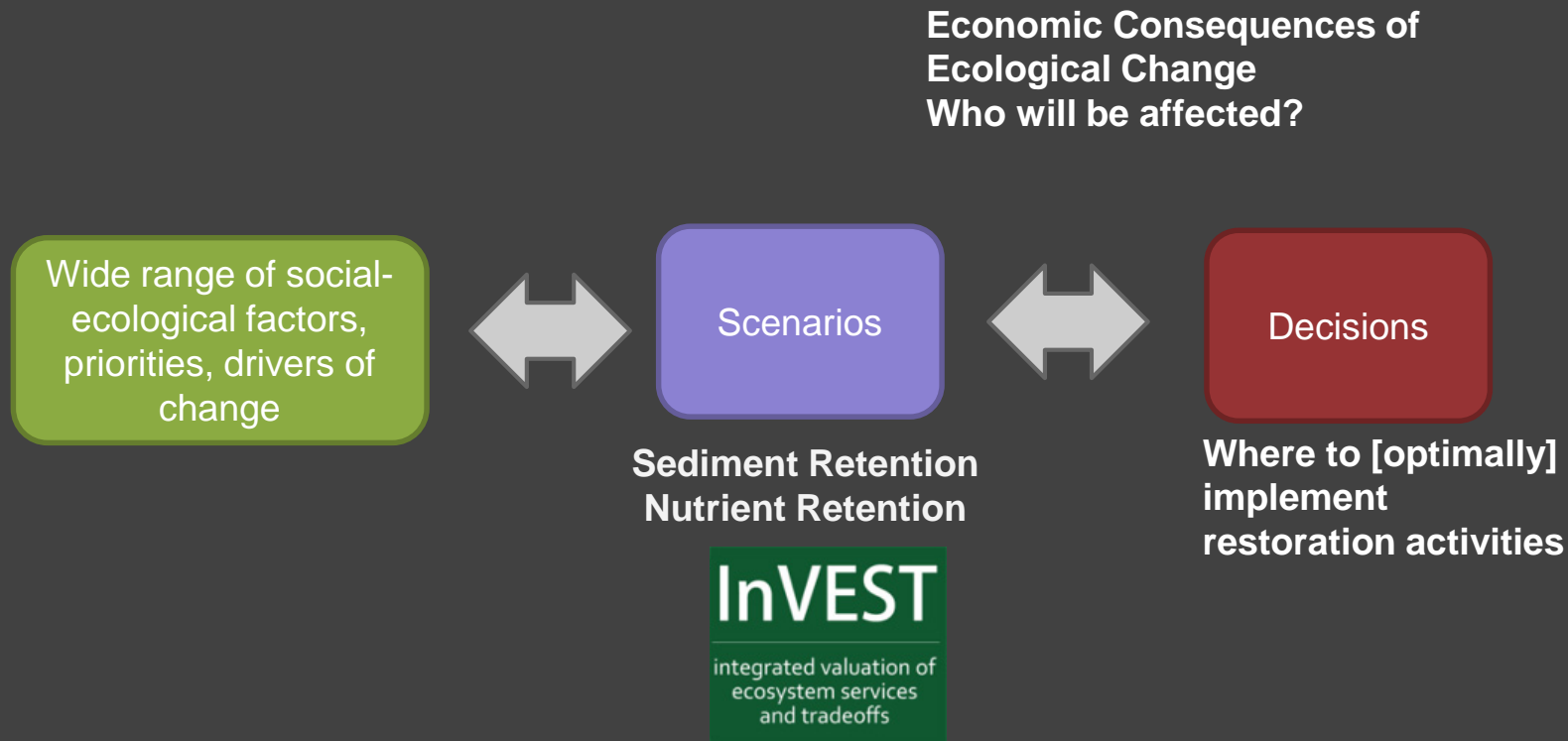
Need for:

- understand what scenarios are likely to result
- Need to be able to talk about those scenarios in a language that is acceptable for **decision makers, researchers and other stakeholders***
- Need to understand what those scenarios really mean
- Need to inform the broader holistic approach

Consequences & Feedbacks

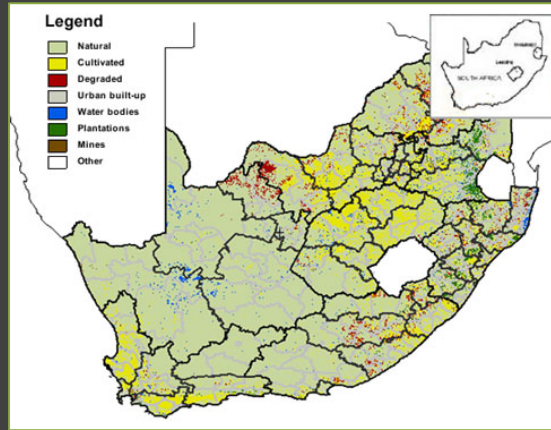


Setting up a decision making system: step 1: which models to use?



Step 2: What data needed?

- Land cover maps
- Land use maps
- DEM
- Census Data
- Other Biophysical data



Step 3: Translation

- What do the models do and how can the input data be tweaked in ways that produce scenarios that can be used in decisions?
- What do the results mean?



Step 4: Setting up a technical system for communicating and record-keeping



For example

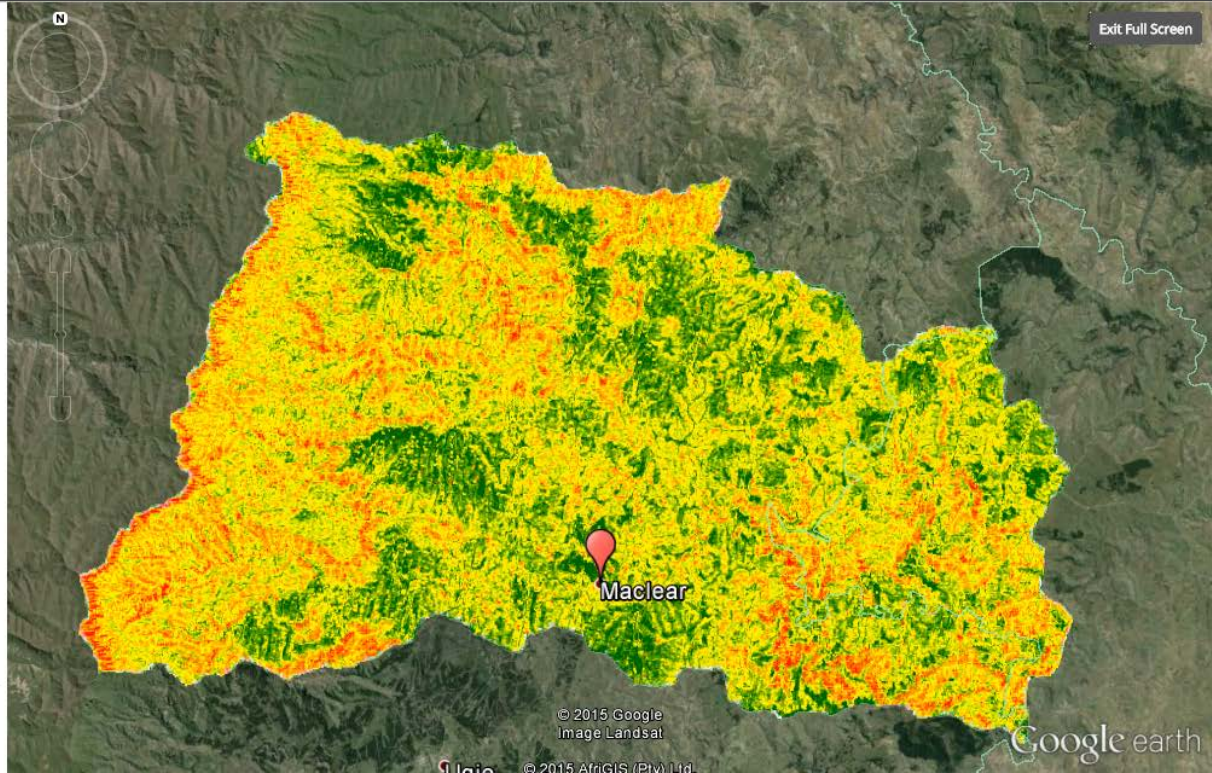
Ntabelanga

In this Scenario, we have tweaked the model show what the likely sediment yield per pixel will be if there is now change in current management practices.

2 of 3

Back

Next



Step 5: Iterative development & training

InVEST +VERSION+ documentation

InVEST User Guide

Table of Contents next

- Main Page
- InVEST User Guide
 - Introduction
 - InVEST Models
 - Supporting Ecosystem Services:
 - Final Ecosystem Services:
 - Tools to Facilitate Ecosystem Service Analyses:
 - Supporting Tools
 - Acknowledgements
 - PDF Version of the User's Guide

Search

Enter search terms


InVEST User Guide

WOODS INSTITUTE FOR THE ENVIRONMENT
STANFORD UNIVERSITY

WWF

The Nature Conservancy

INSTITUTE ON THE ENVIRONMENT
UNIVERSITY OF MICHIGAN
Driven to Discover



General Reflections

- We're at the start, but also not at start
- The infrastructure opportunity
- Placing Ecosystem service analyses in the engine room: technical feasibility and challenges
- The challenge and importance of translation
- Need for capacity building
- Blind spots

