African Parks

Adaptive management of complex systems

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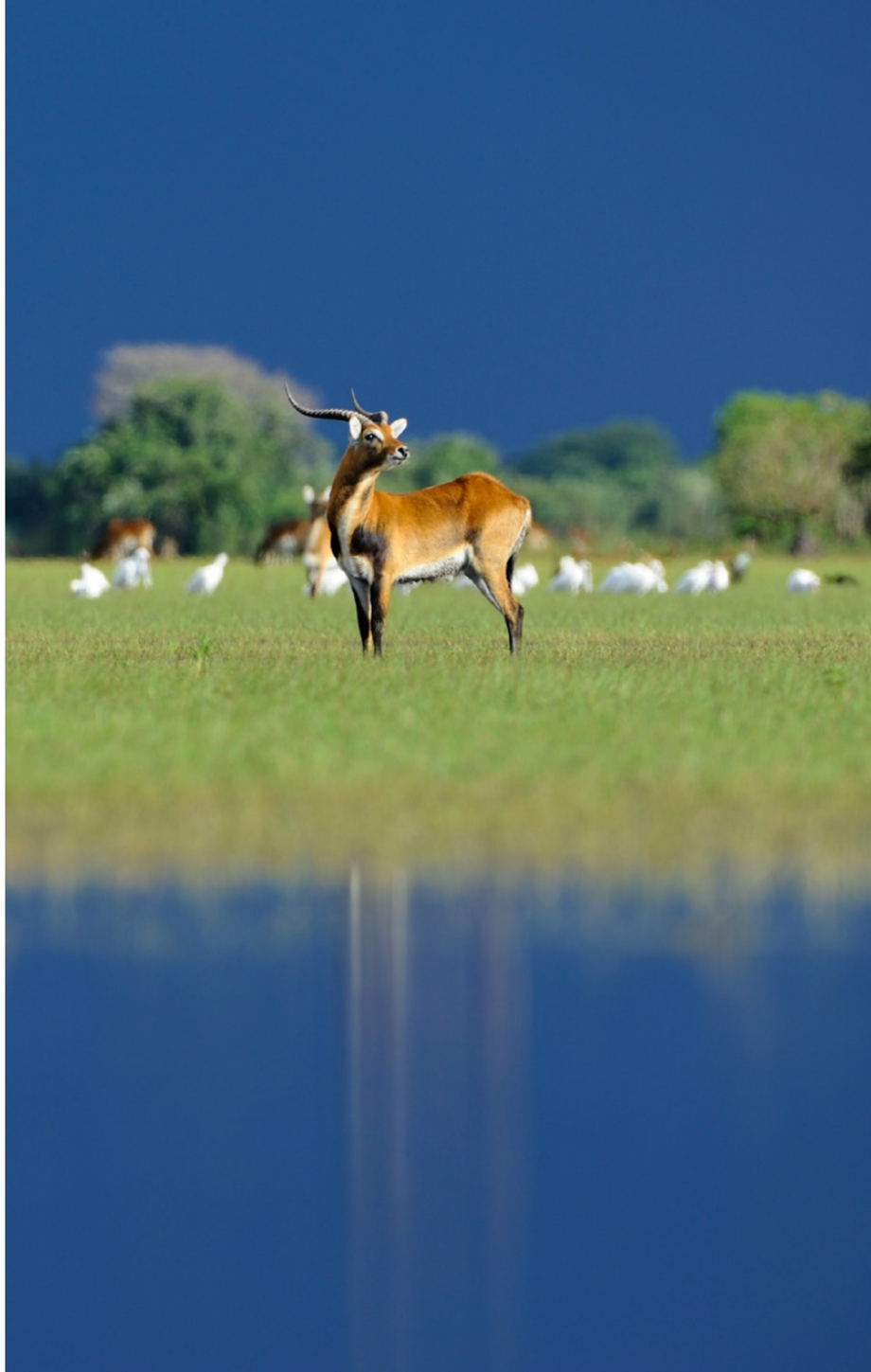
African Parks: Our Origin

- Founded in 2000 as a response to Africa's failing protected areas
- Pioneered the concept of Public-Private Partnerships for protected area management
- Separation of responsibilities to ensure accountability;
  - Government (owner and sets policy)
  - Private partner (execution on the ground)
- Protected area management infused with sound **business** and **conservation** principles



What do we do?

- African Parks is a non-profit conservation organisation that **takes on the complete responsibility** for the rehabilitation and long-term management of (mostly) national parks **in partnership with governments and local communities**.
- Currently manage **22 national parks and protected areas** in **12 countries** covering **20 million hectares** and representing **10 of the continent's 13 ecological biomes**.
- Largest and most ecologically diverse area in Africa under conservation management for any one NGO.
- Annual budget in 2022 of $105 million
- 4000 permanent staff employed (96% nationals/local regions)

The model

Macro

- **Government (Sovereignty)**
- Owner of natural asset, determines legislation and statutory oversight

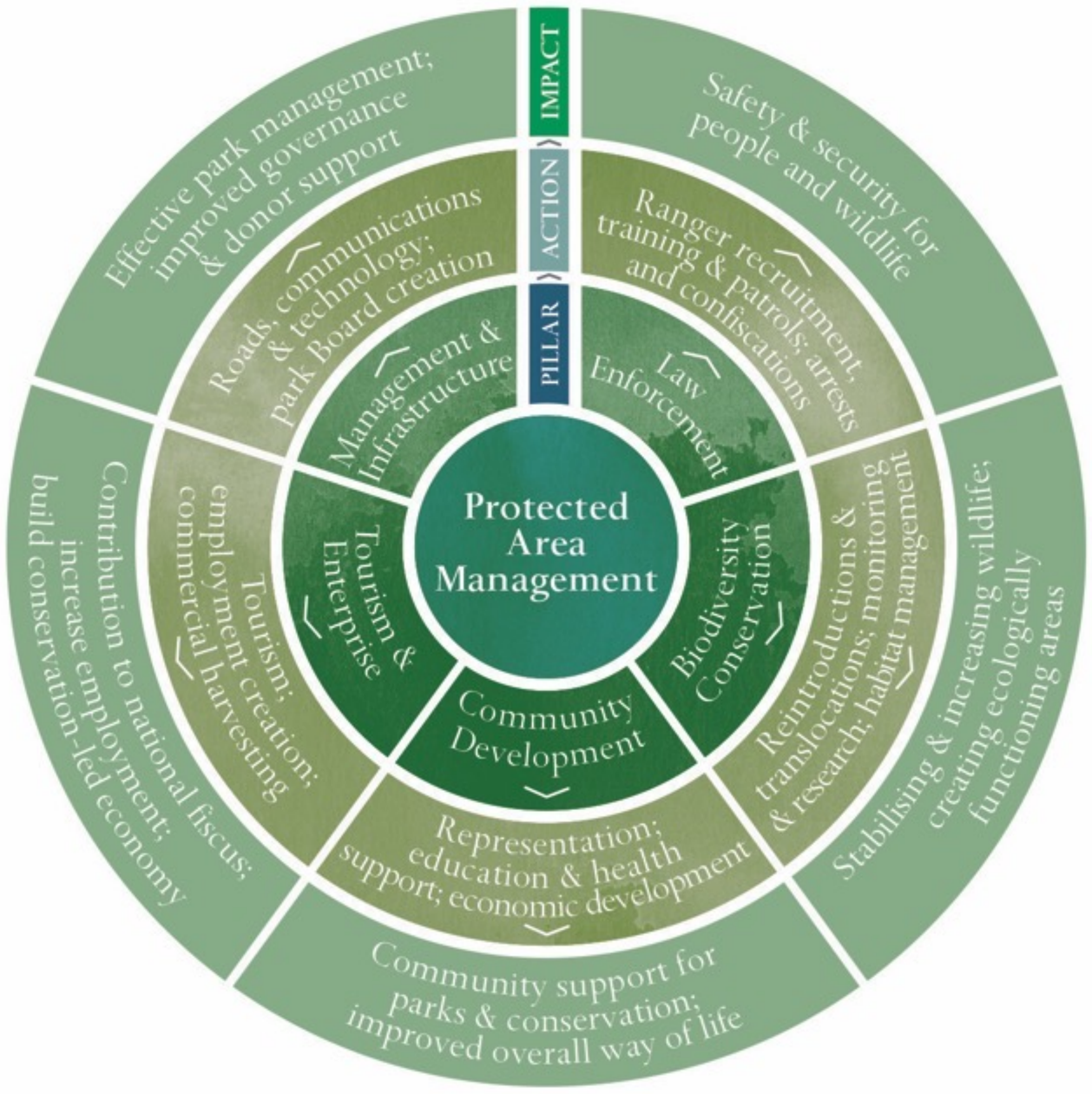
Meso

- **Park Board (Governance)**
- Strategic oversight and approves the framework within which management operates

Micro

- **African Parks (Management)**
- Management execution on the ground within defined framework, directly accountable to Government

DELEGATED MANAGEMENT RATHER THAN CO-MANAGEMENT

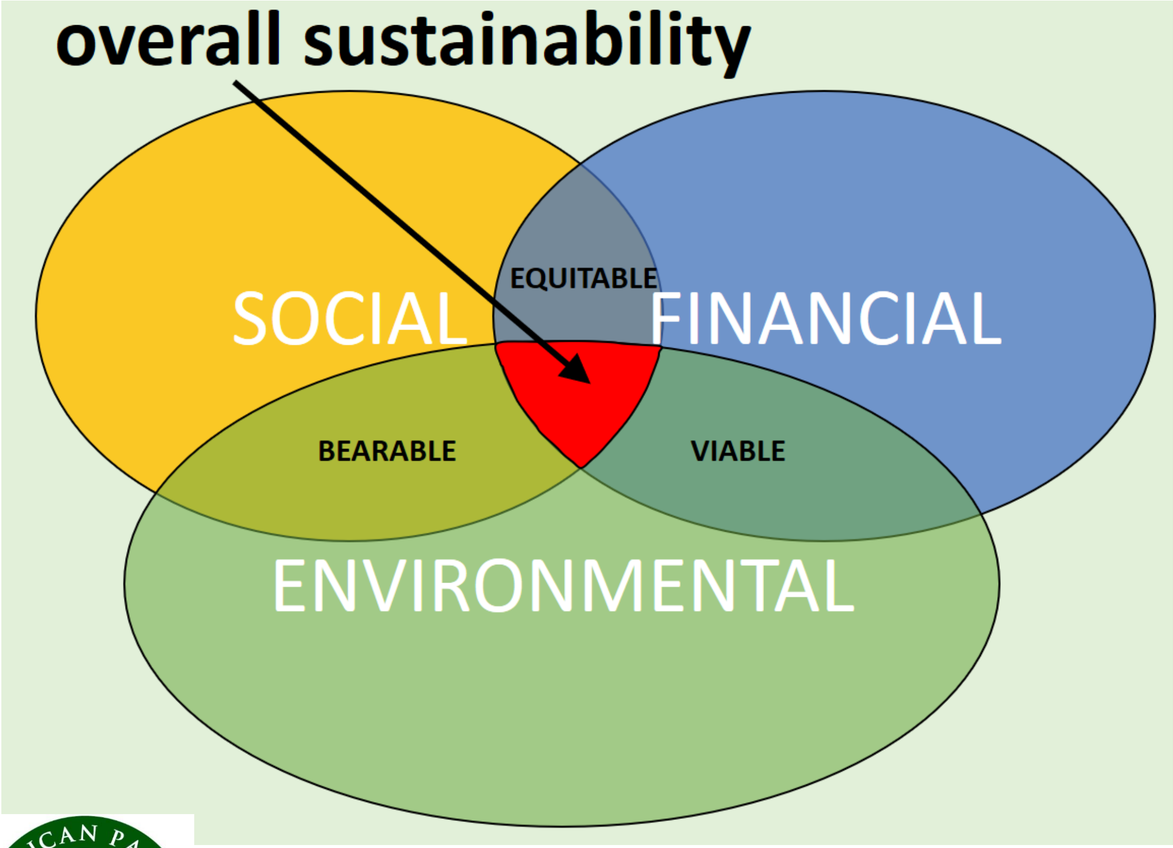


AP's 5 Pillars of Park Management

Integrated approach to conservation to ensure long-term **social, ecological and financial sustainability**

1. Law Enforcement
2. Community Development
3. Biodiversity & Conservation
4. Tourism & Enterprise
5. Management & Infrastructure

Complex systems & integrated conservation management

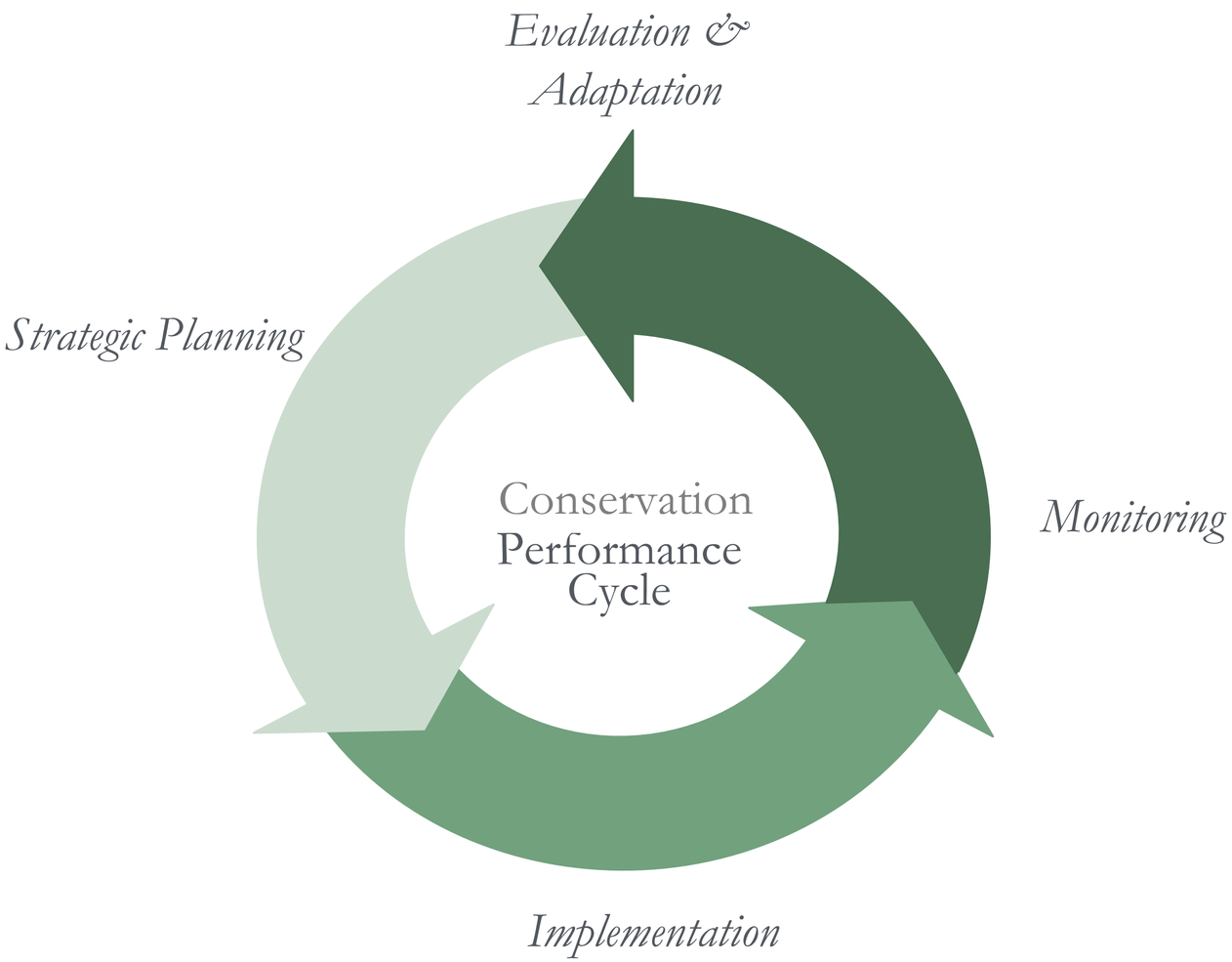


COMPLEX SYSTEM

- many interacting factors
- high levels of uncertainty
- unexpected outcomes

Strategic adaptive management for managing complex systems

Conservation Performance Cycle
framework for performing against expectations



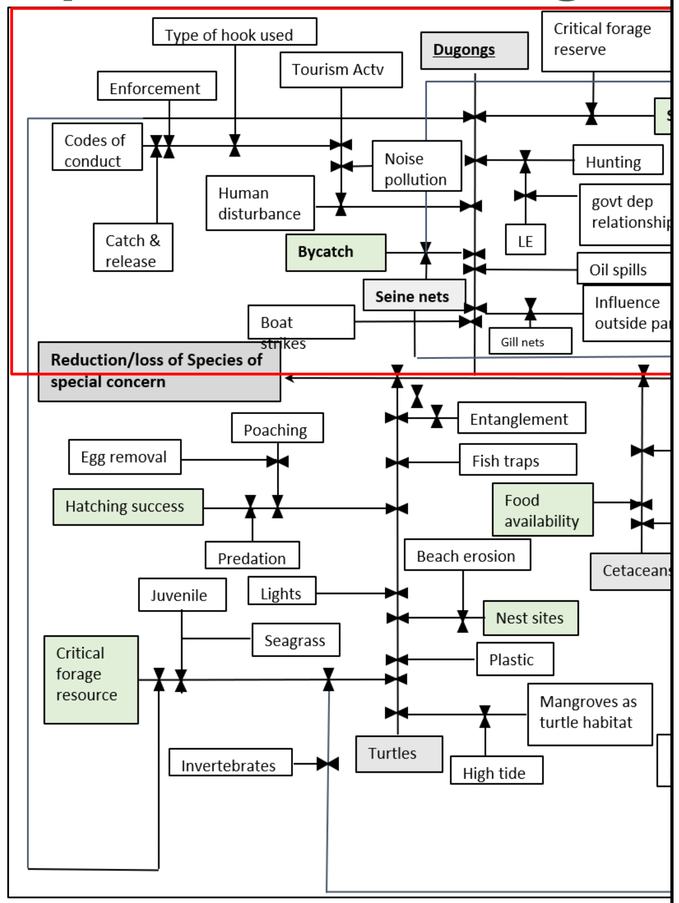
- APN context **changing** – size, complexity, geographical distribution
- Need organisational **consistency**, **efficiency and effectiveness**
- **Strategic** and **impact-based** focus, instead of activity-based, learning by trial and error

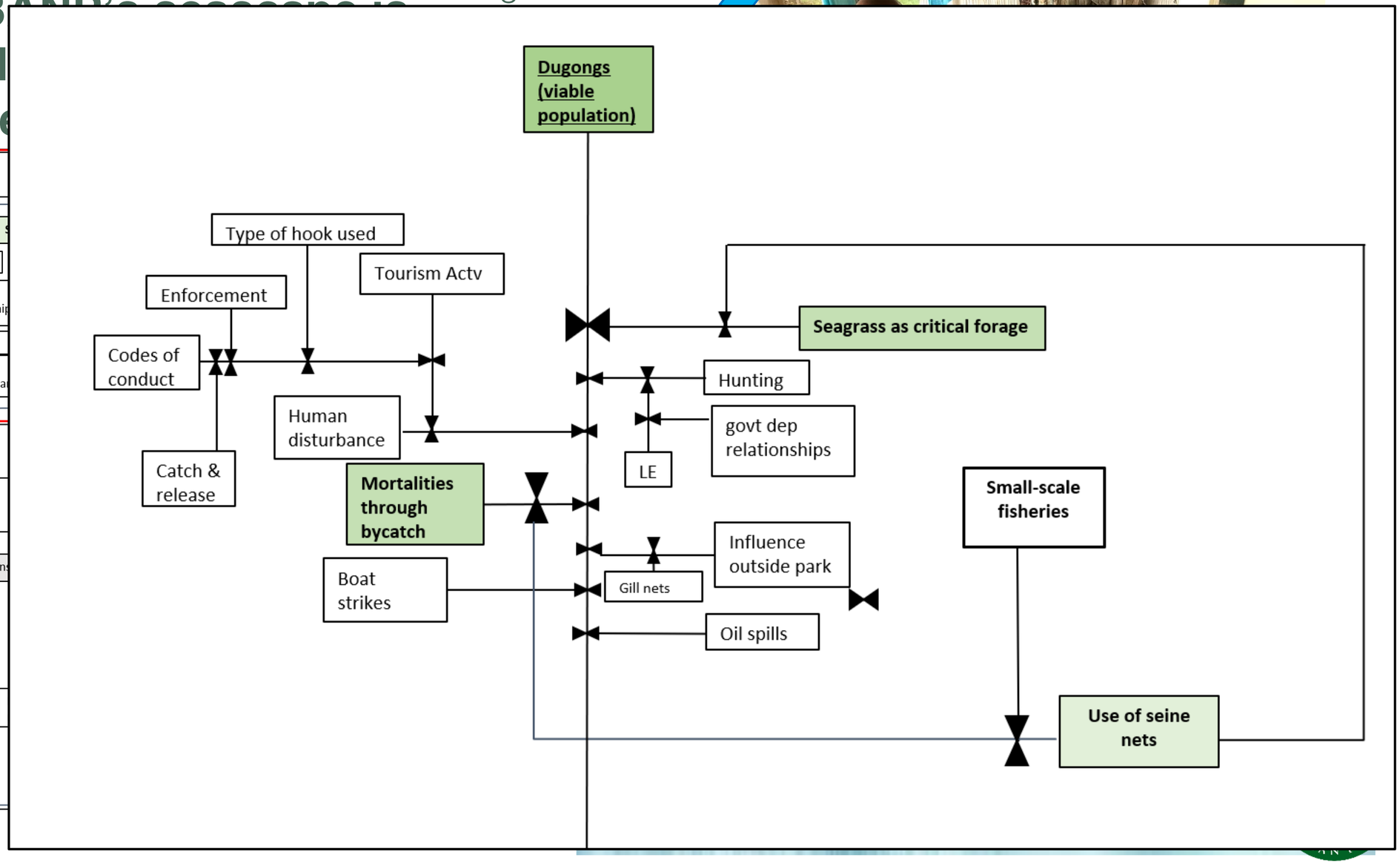
Planning for long-term impact using “system drivers” for each park

Ecological factors

Socio-political factors

Bazaruto example: B
functionally intact, al
persistence of high le





Planning for long-term impact using “system drivers” to develop Theories of Change

Bazaruto example*:*

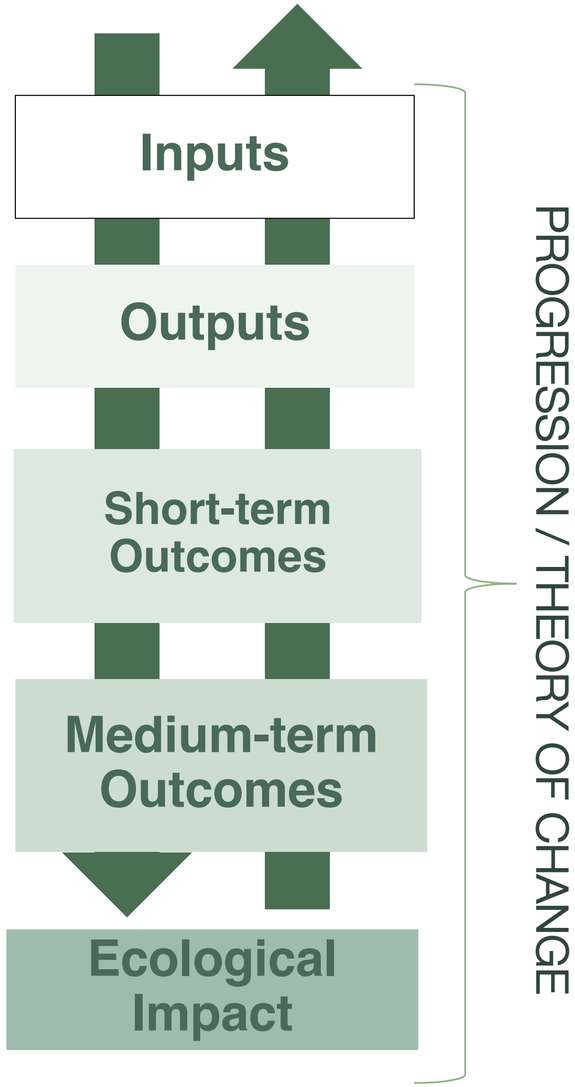
Introduce alternative fishing methods & livelihoods

Seine net use reduced by 70%

Mortalities in by-catch eliminated
Seagrass meadows maintained

Viable dugong population

BANP’s seascape is functionally intact, allowing for persistence of high levels of marine biodiversity



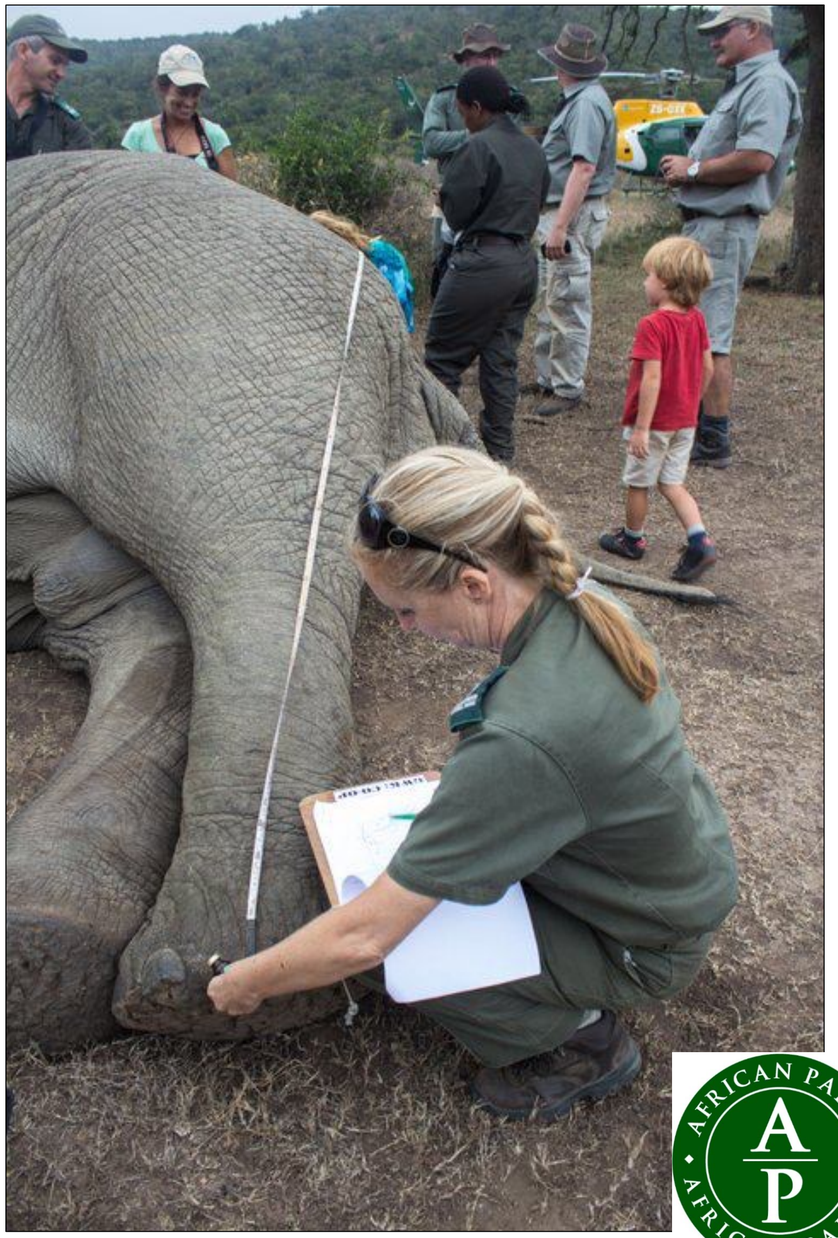
Why structure planning around Theories of Change?

- Working backwards from Impacts helps to identify most efficient interventions (Actions)
- Based on our joint understanding of the factors that influence what we’re trying to achieve
- We can demonstrate how we expect each Action in 5YBP to achieve long-term goals
- We can MEASURE & demonstrate progression towards impact
- Logical progression from Actions to Outcomes provides rationale for 5YBP

Enabling adaptive management

- Understanding system drivers to develop Theories of Change translated into planning – research and predictive modelling to close knowledge gaps
- Monitoring indicator for each step in the Theory of Change - automation/integration from existing systems such as EarthRanger, Sirenic, etc (“system of systems”)
- Analysing monitoring data – requires automation as far as possible – predictive modelling, Google Earth Engine/Microsoft Planetary Computer scripts
- Evaluating progress towards long-term impact and provides early warning signal that adaptation may be required – integration and visualisation of results in dashboards representing Theories of Change

- AI / machine learning and system engineering can play a crucial role in each of the above steps!
- Providing unprecedented means of addressing complexity and complex systems thinking in a way that is practical and feasible
- Enabling evidence-based (defensible), strategic adaptive management for integrated conservation

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