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

- 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

Bazaruto example: BANP’s seascape is functionally intact, allowing persistence of high levels of marine biodiversity.
Planning for long-term impact using “system drivers” to develop Theories of Change

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 resources (budget & staff positions)

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

PROGRESSION / THEORY OF CHANGE

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Ecological Impact

Short-term Outcomes

Medium-term Outcomes

Viable dugong population

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

PROGRESSION / THEORY OF CHANGE

Input: Seine net use reduced by 70%
Output: Mortalities in by-catch eliminated
Short-term Outcome: Seagrass meadows maintained
Medium-term Outcome: Viable dugong population
Ecological Impact: BANP’s seascape is functionally intact, allowing for persistence of high levels of marine biodiversity
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
Thank You
www.africanparks.org