Joint SADC/AHEAD Workshop

Reconciling Livestock Health and Wildlife Conservation Goals in Southern Africa: Strategies for sustainable Economic Development

Relieving the Bottleneck: System Resiliance Human Elephant Conflict, Habitat Connectivity and the Importance of TFCAs

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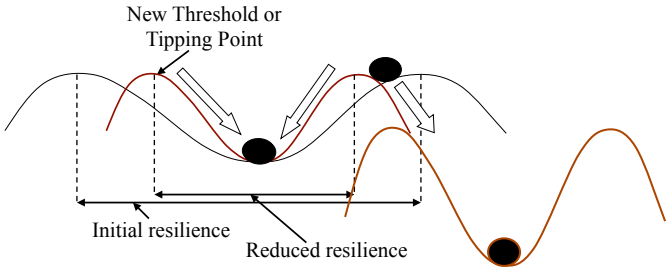
Credits

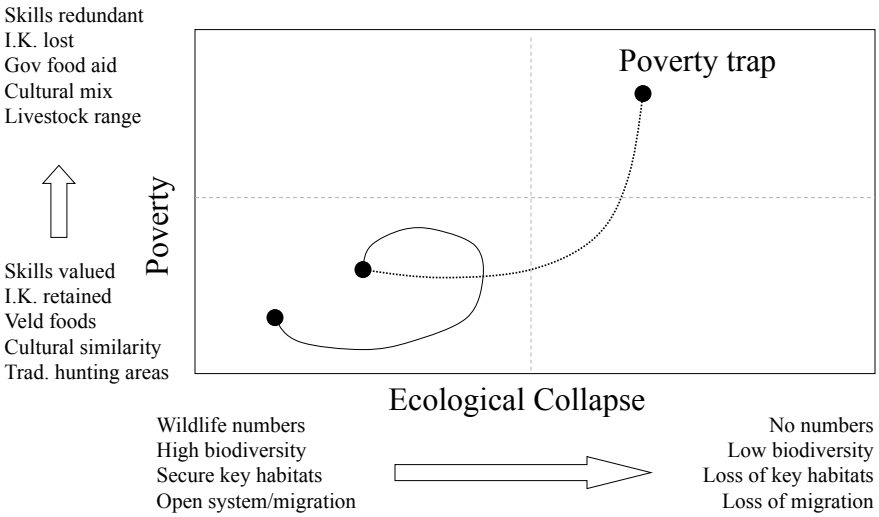
Drawn on work from:

- the Resilience Alliance particularly Dr Brian Walker and Dr David Cumming.
- Strategic assessment of the ODRS and Work with Steve Johnson and Chris Brookes from SAREP
- Elephants Without Borders survey data
- Dr J. Perkins (Kalahari insights)
- Mellissa Marshall

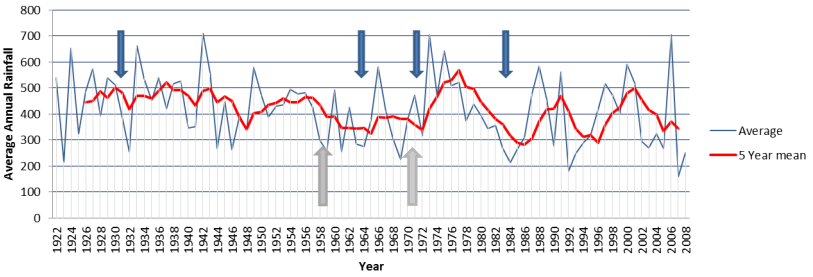
$$\mathbf{U}\text{nderstanding} = \left(\frac{\text{Science} - (\text{Jargon} + \text{Bullets})}{\text{Relevance}}\right) \times \text{Passion}$$



Resilience is the ability of the system to retain its existing identify after disturbance



Lessons for the Kalahari

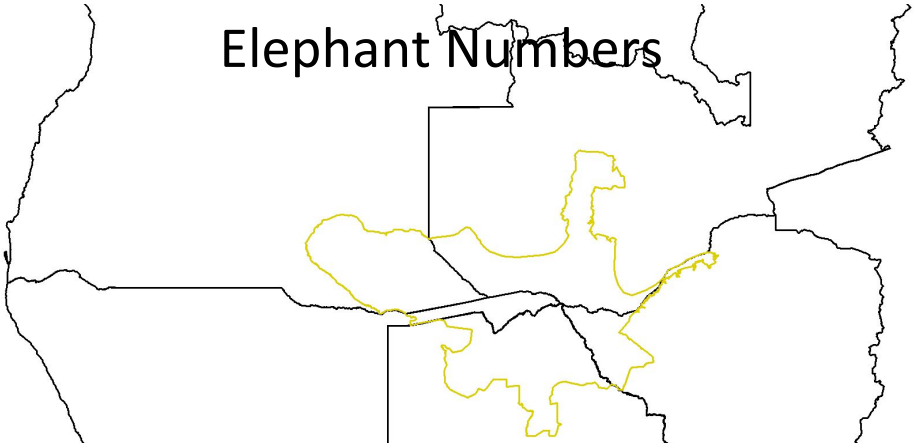


Impacts not immediately felt (J. Perkins)

Perfect storm or combination of events push the system over a tipping point

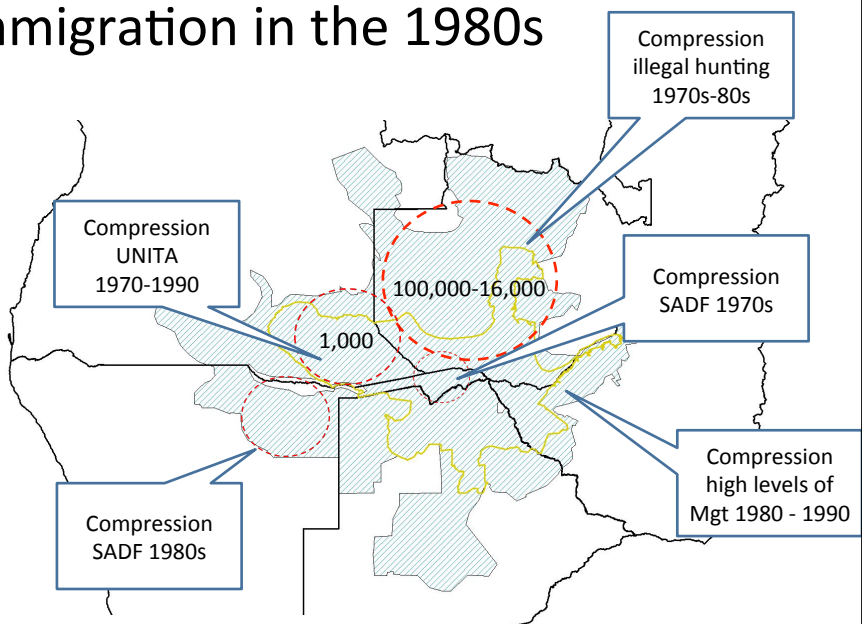
Species	1978	1994	2003 (free)*	2003 (enclosed)^
Wildebeest (Kalahari System)	315,058	17,934	16,698	5,627
Hartebeest (Kalahari System)	293,462	44,737	44,629	1,620
Gemsbok (Kalahari System)	71,423	85,368	91,130	1,576
Eland (Kalahari System)	18,832	11,757	24,024	2,586
Springbok (Kalahari System)	101,408	67,777	24,795	758
Zebra (Makgadikgadi)	100,295	20,863	12,314	-

Elephant Numbers



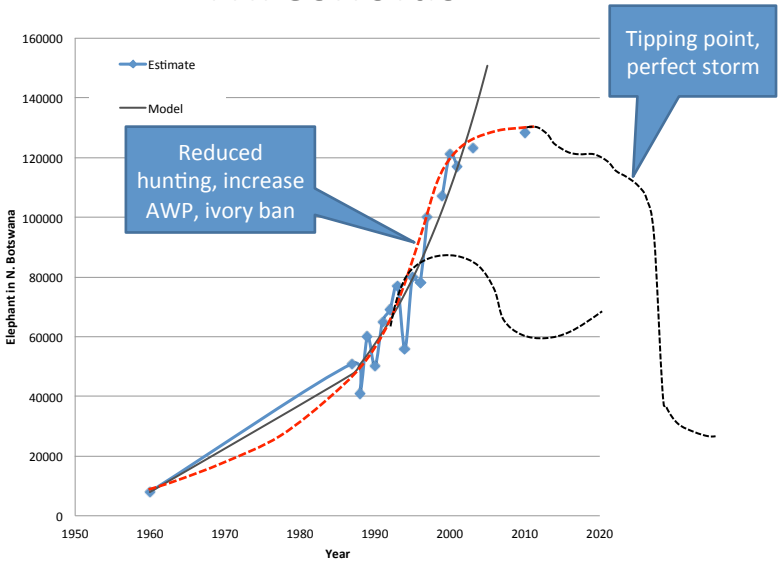
The areas we are talking about were decimated. Estimated at 8,000 in Botswana 1960s There were large numbers in Angola and Western Zambia

Immigration in the 1980s

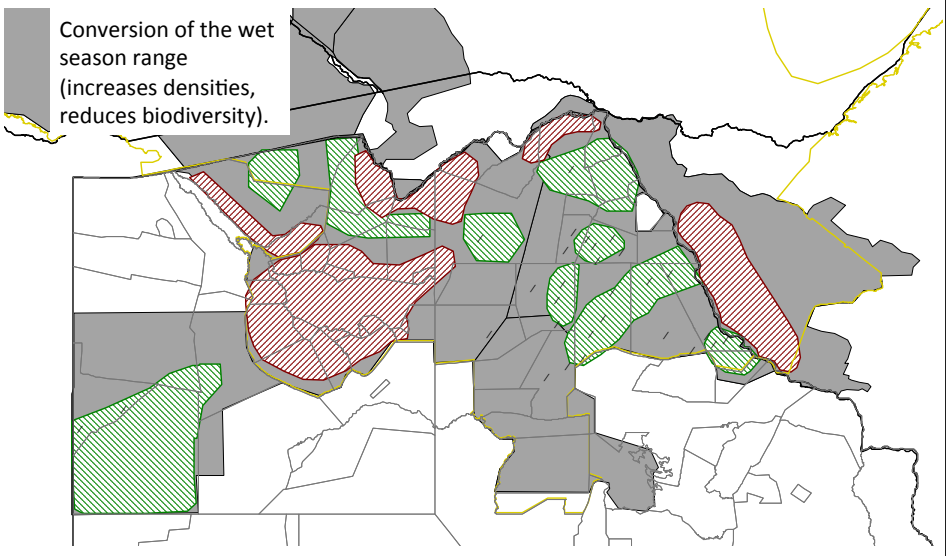


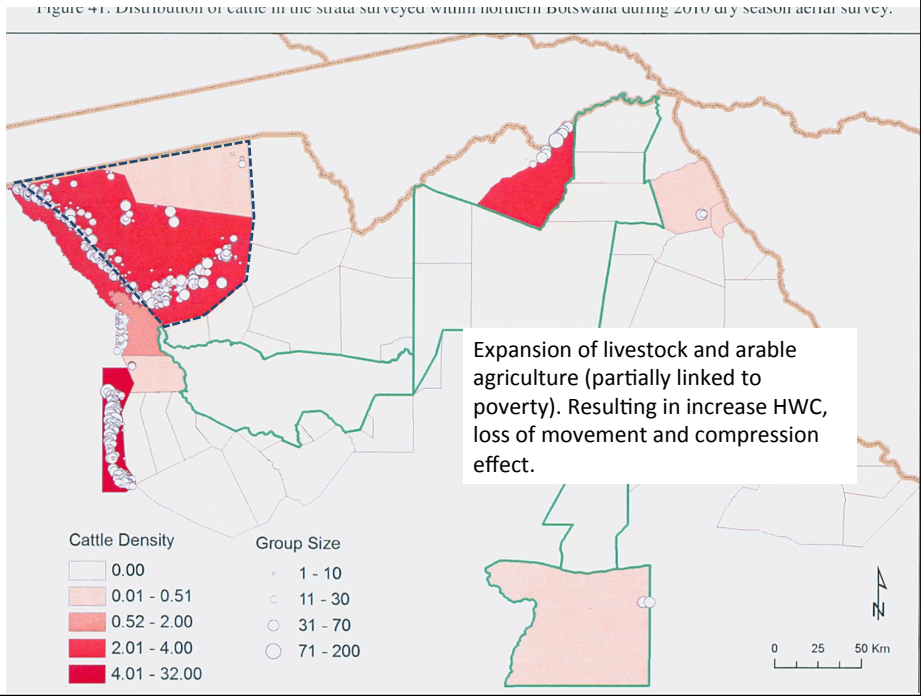
Little to constrain movement with few physical barriers and low hum population (Botswana population was **

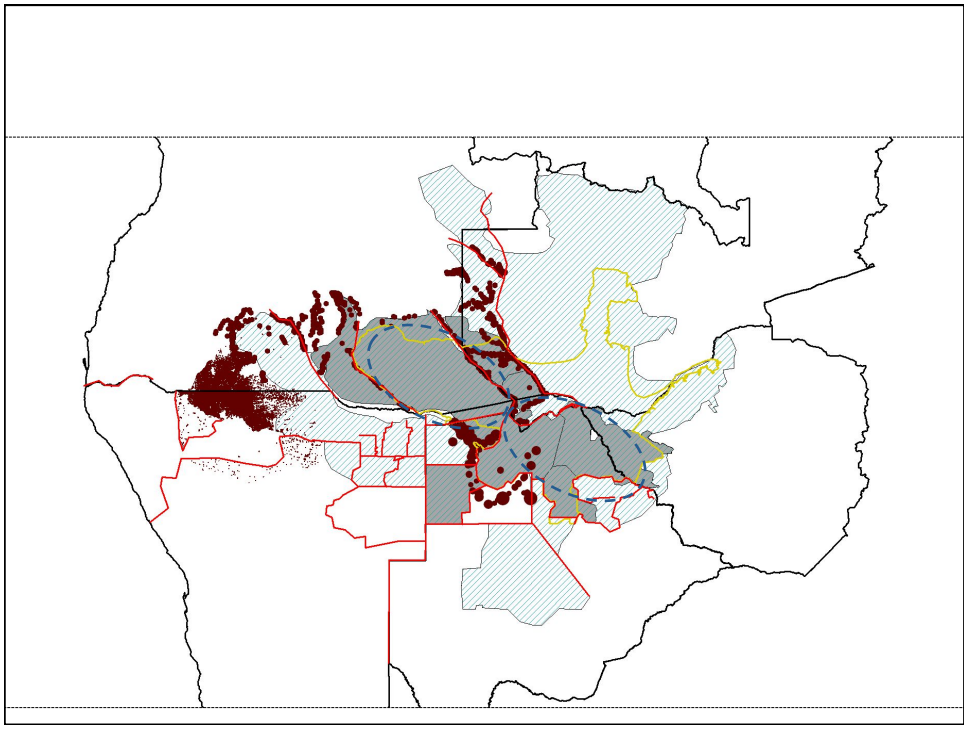
Thresholds

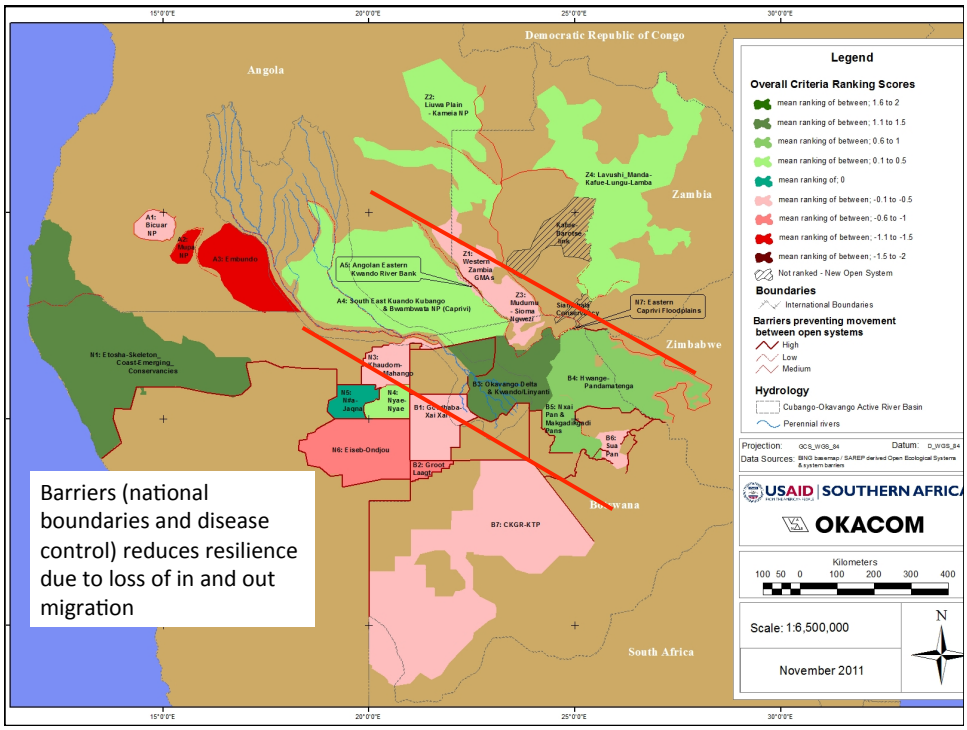


What resilience has been lost?



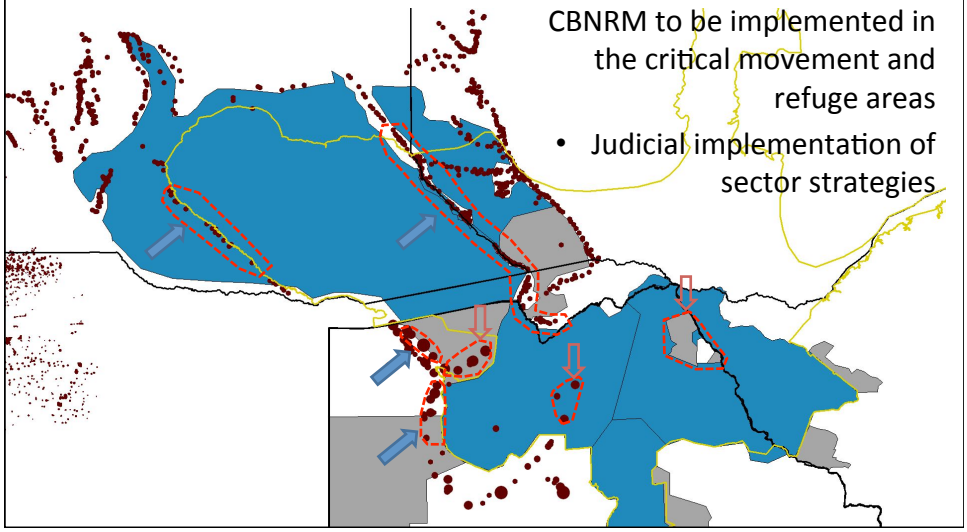





Democratic Republic of Congo
Angola
Zambia
Zimbabwe
Botswana
South Africa
Legend
Overall Criteria Ranking Scores
mean ranking of between; 1.6 to 2
mean ranking of between; 1.1 to 1.5
mean ranking of between; 0.6 to 1
mean ranking of between; 0.1 to 0.5
mean ranking of; 0
mean ranking of between; -0.1 to -0.5
mean ranking of between; -0.6 to -1
mean ranking of between; -1.1 to -1.5
mean ranking of between; -1.5 to -2
Not ranked - New Open System
Boundaries
International Boundaries
Barriers preventing movement between open systems
High
Low
Medium
Hydrology
Cubango-Okavango Active River Basin
Perennial rivers
Projection:
Datum:
Data Sources:
USAID | SOUTHERN AFRICA
OKACOM
Kilometers
100 50 0 100 200 300 400
Scale: 1:6,500,000
November 2011
N
Barriers (national boundaries and disease control) reduces resilience due to loss of in and out migration

Solutions – Increasing Social Resilience

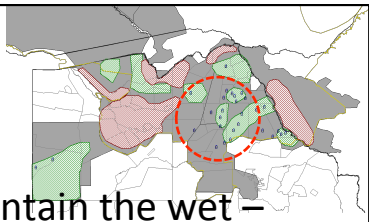
- Focused, appropriate and at the correct landscape scale CBNRM to be implemented in the critical movement and refuge areas
- Judicial implementation of sector strategies



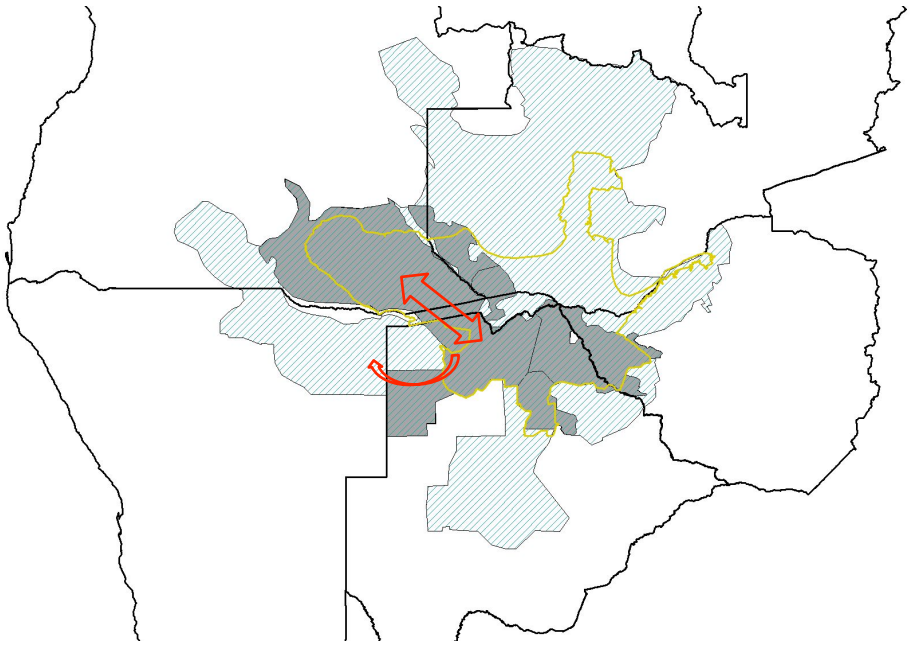
Solutions Socio

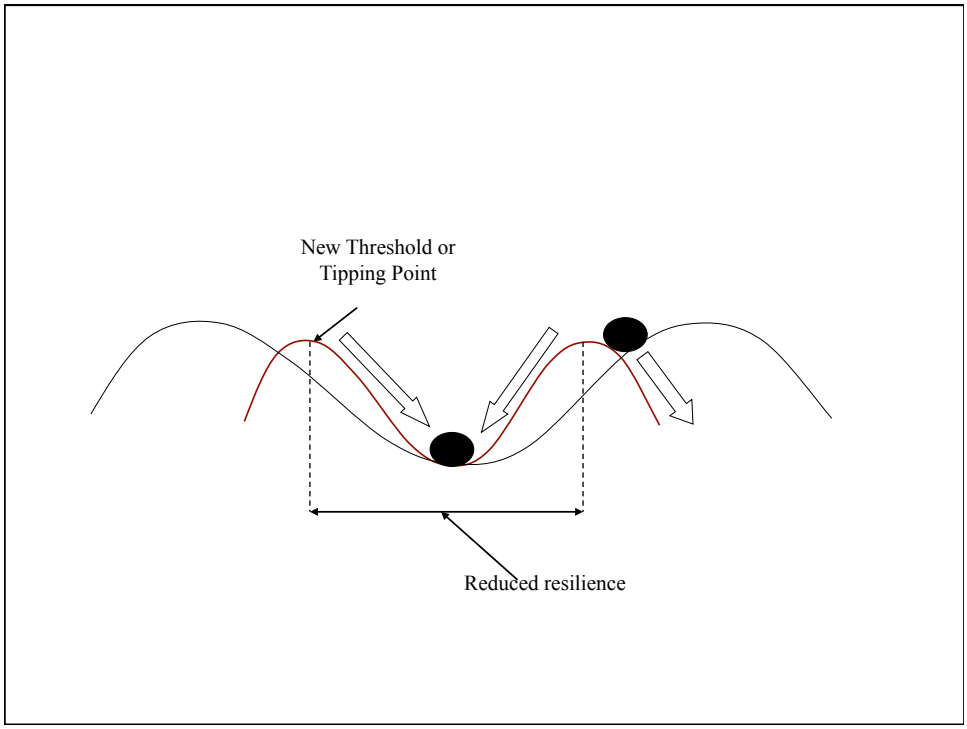
- Remove social barriers by ensuring that Angola and Namibia establish their tourism industries and CBNRM to benefit from the out migration of Botswana's elephant.

Ecological



- **Increase heterogeneity** (Maintain the wet – dry season ranges, limit and judicially remove AWP).
- **Maximise linkages** in all areas which we can control. These linkages will revitalise the tourism industries in neighbouring countries and increase ecosystem resilience when population crashes occur.




New Threshold or
Tipping Point
Reduced resilience