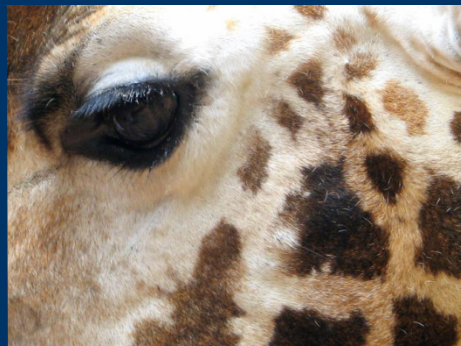
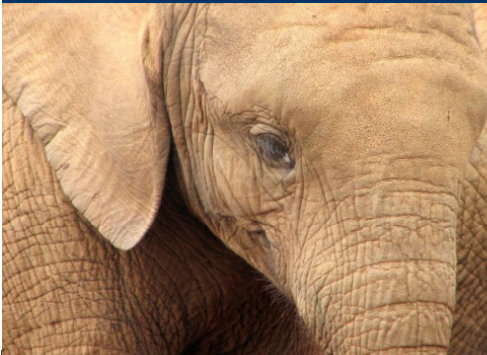


Protected Area Costs in Context



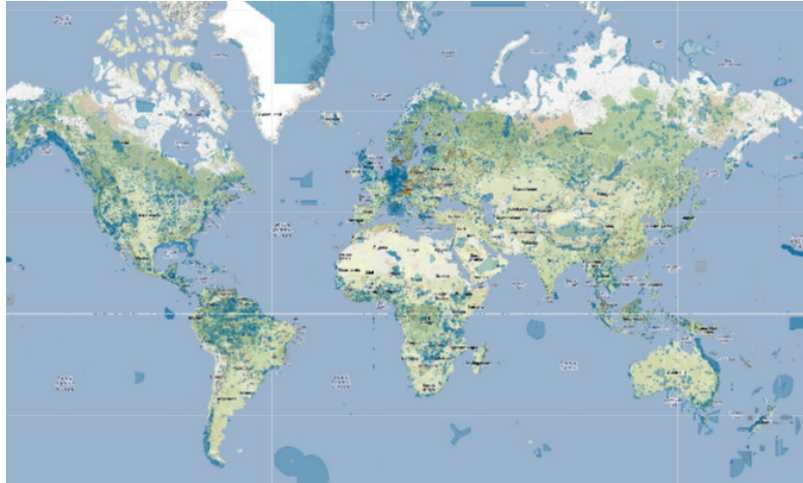
Jamison Ervin, UNDP and Sarat Gidda, CBD

METHODOLOGY - COVERAGE



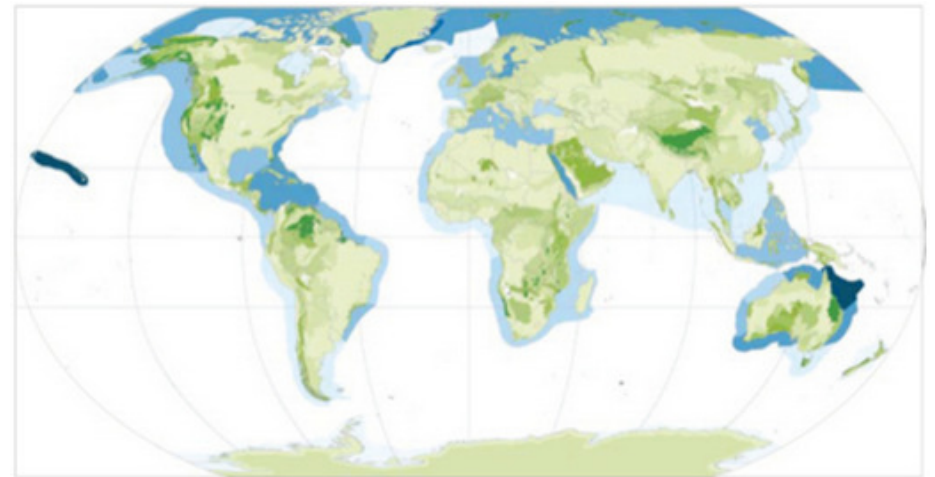
BIOME	CURRENT	GOAL	GAP
Terrestrial	12.85%	17%	5.5 mm km²
Marine	1.6%	10%	30.3 m km²

METHODOLOGY - COVERAGE



BIOME	CURRENT	GOAL	GAP
Terrestrial	12.85%	17%	5.5 mm km ²
Marine	1.6%	10% (all)	30.3 m km ²
Marine	3.88%	10% (0-200)	8.4 mm km ²
Marine	7.46%	10% (0-12)	.49 mm km ²

METHODOLOGY - COVERAGE



BIOME	CURRENT	GOAL	GAP	ECOREGIONAL GAP
Terrestrial	12.85%	17%	5.5 mm km ²	10.8 mm km ²
Marine	1.6%	10% (all)	30.3 m km ²	
Marine	3.88%	10% (0-200)	8.4 mm km ²	9.7 km ²
Marine	7.46%	10% (0-12)	.49 mm km ²	

METHODOLOGY - COVERAGE

How much does it cost to establish a new protected area?

BIOME	LOW	MID	HIGH
Terrestrial*	\$8,000/km ²	\$16,000/km ²	\$24,000/km ²
Marine**	\$500/km ²	\$1,000/km ²	\$2000/km ²

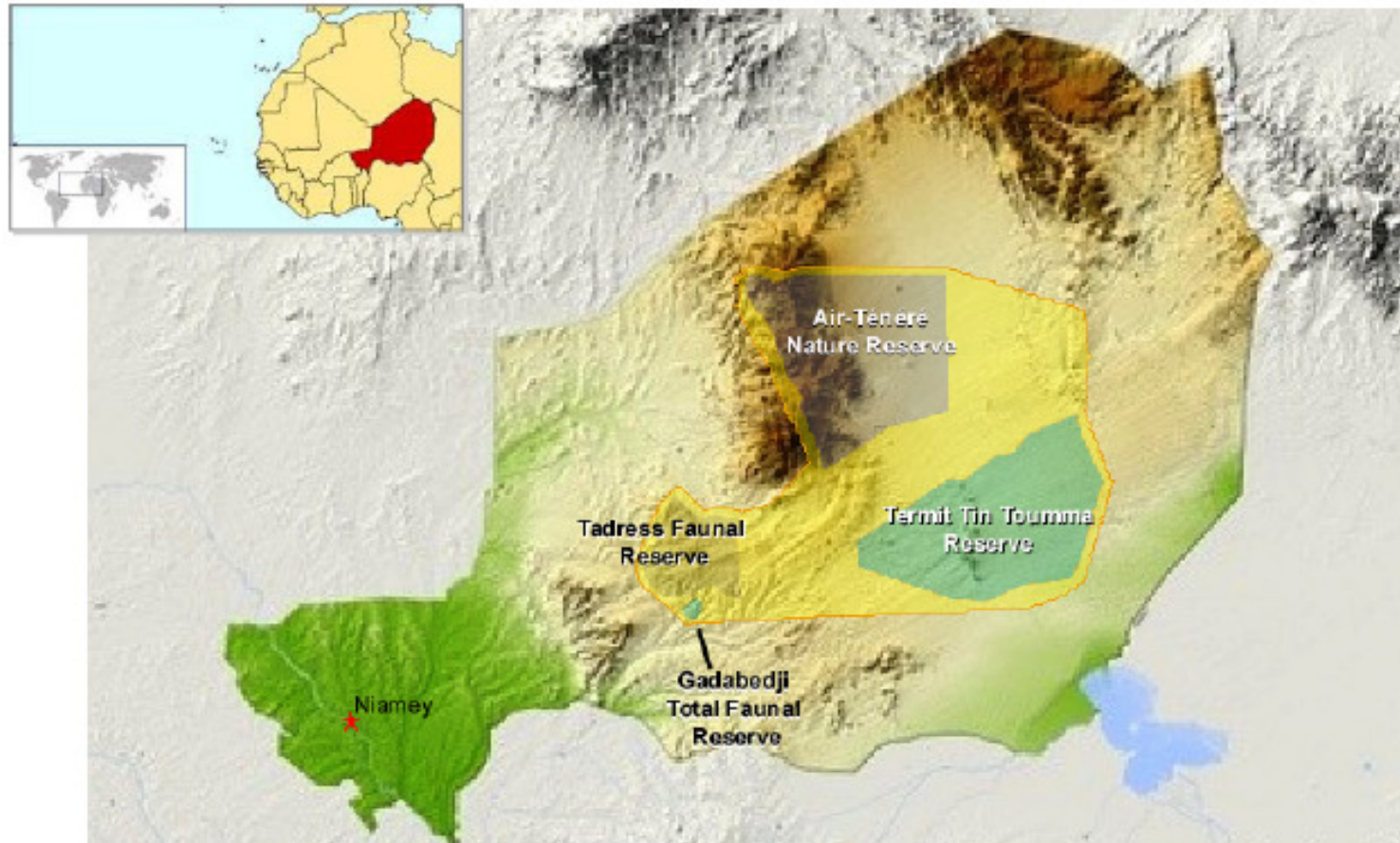
BIOME	GAP	ECOREGIONAL GAP
Terrestrial	5.5 mm km ²	10.8 mm km ²
Marine (0-200)	8.4 mm km ²	9.7 km ²
Marine (0-12)	.49 mm km ²	

\$130 billion terrestrial, \$5 billion marine

*Bruner et al., 2004; James et al., 2001; **McCrea-Strub et al., 2011

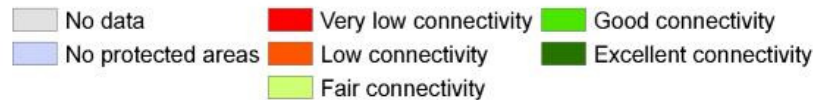
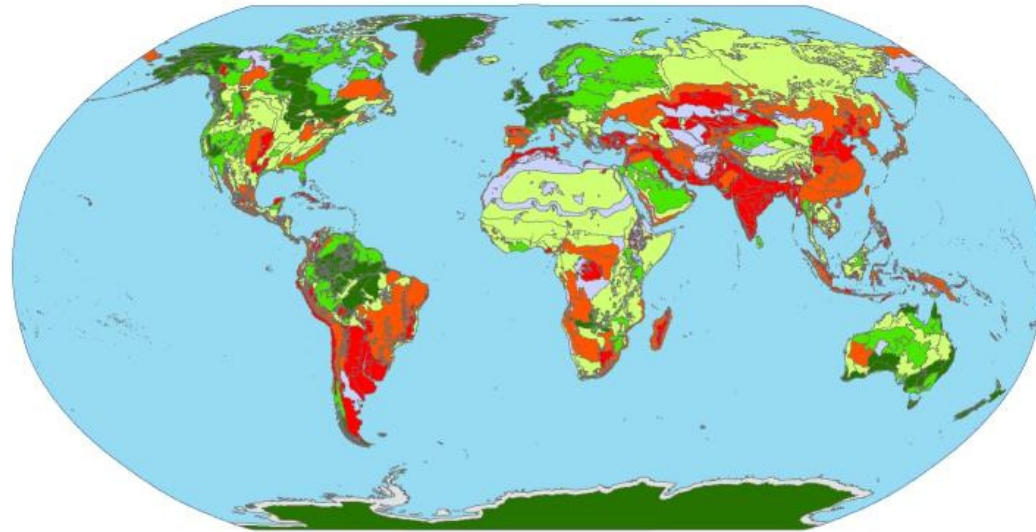
METHODOLOGY - COVERAGE

The 25 largest countries with <7% protection = GDP of <\$6K



Niger: Termit Tin Toumma Reserve
8.7 mm ha; <\$1 mm (\$12/km²)

METHODOLOGY - CONNECTIVITY



Terrestrial
connectivity:

\$106 billion

Marine
connectivity:

\$4 billion

% FOR CONNECTIVITY	BIOME	GAP	ECOREGIONAL GAP
2%	Terrestrial	5.5 mm km ²	10.8 mm km ²
5%	Marine (0-200)	8.4 mm km ²	9.7 km ²
10%	Marine (0-12)	.49 mm km ²	

METHODOLOGY - EFFECTIVENESS

BIOME	LOW	MID	HIGH
Terrestrial and marine*	\$50/km ²	\$150/km ²	\$250/km ²

BIOME	GAP	ECOREGIONAL GAP
Terrestrial	5.5 mm km ²	10.8 mm km ²
Marine (0-200)	8.4 mm km ²	9.7 km ²
Marine (0-12)	.49 mm km ²	

Management effectiveness: **\$5.1 billion/year**

Management effectiveness : **\$23 billion 2013 - 2020**

*GEF, 2008; Bovarnick et al., 2010; Bruner et al., 2004; Balmford et al., 2003; Butchart et al., 2012; McCrae-Strub et al., 2011

METHODOLOGY – POLICY AND FINANCE

	Enabling policy environment	Sustainable finance plans and mechanisms
LOW	\$1 MM / COUNTRY	\$5 MM / COUNTRY
MEDIUM	\$2 MM / COUNTRY	\$10 MM / COUNTRY
HIGH	\$3 MM / COUNTRY	\$15 MM / COUNTRY

80	120	160
COUNTRIES	COUNTRIES	COUNTRIES

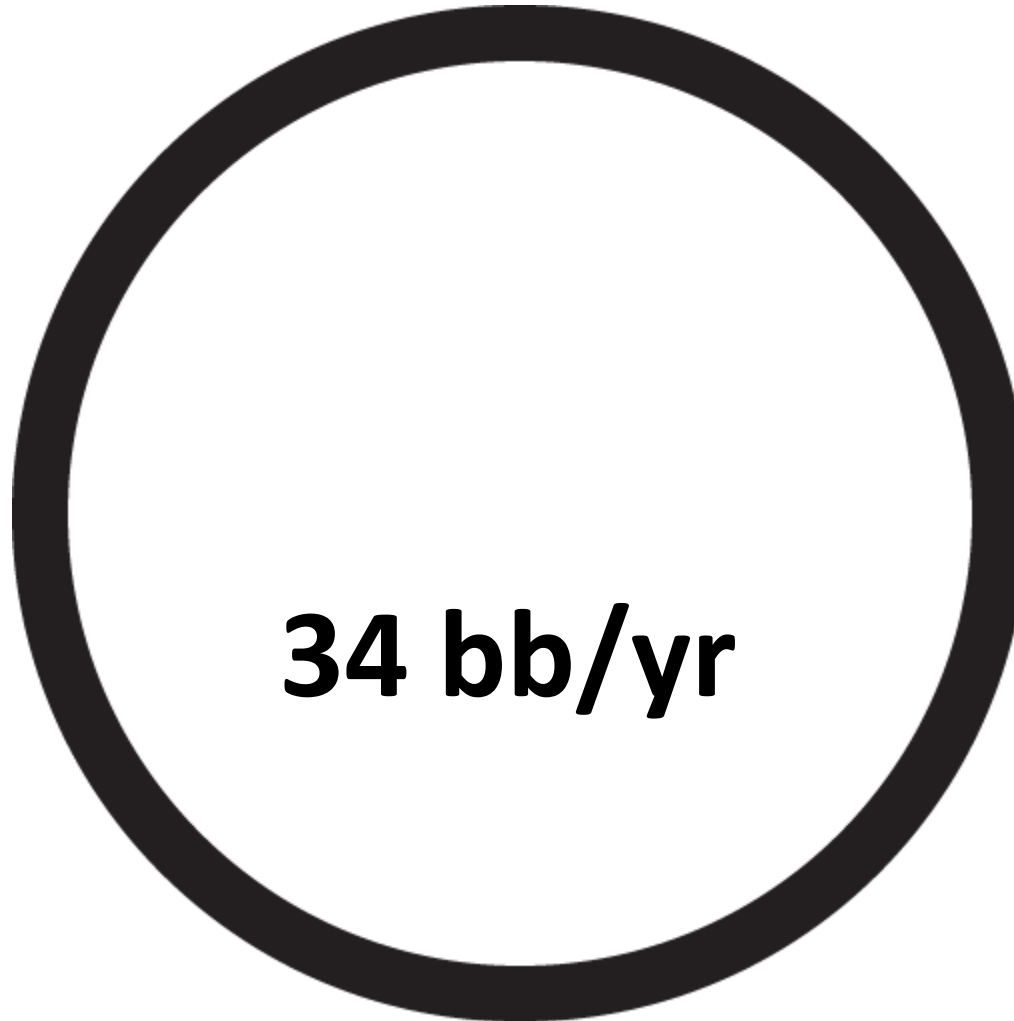
Policy and finance: **\$1.4 billion**

METHODOLOGY - KEY ASSESSMENTS

ASSESSMENT	# OF COUNTRIES	RANGE
Ecological gap	107	\$7.5 – 22.5 mm
Management effectiveness	92	\$11 – 14.7 mm
Policy environment	142	\$7.1 – 14.2 mm
Sustainable finance	142	\$7.1 – 12.8 mm
TOTAL		\$25.4 -78.4 mm

Completing all key assessments: **\$53 mm**

PA Global Costs in Context

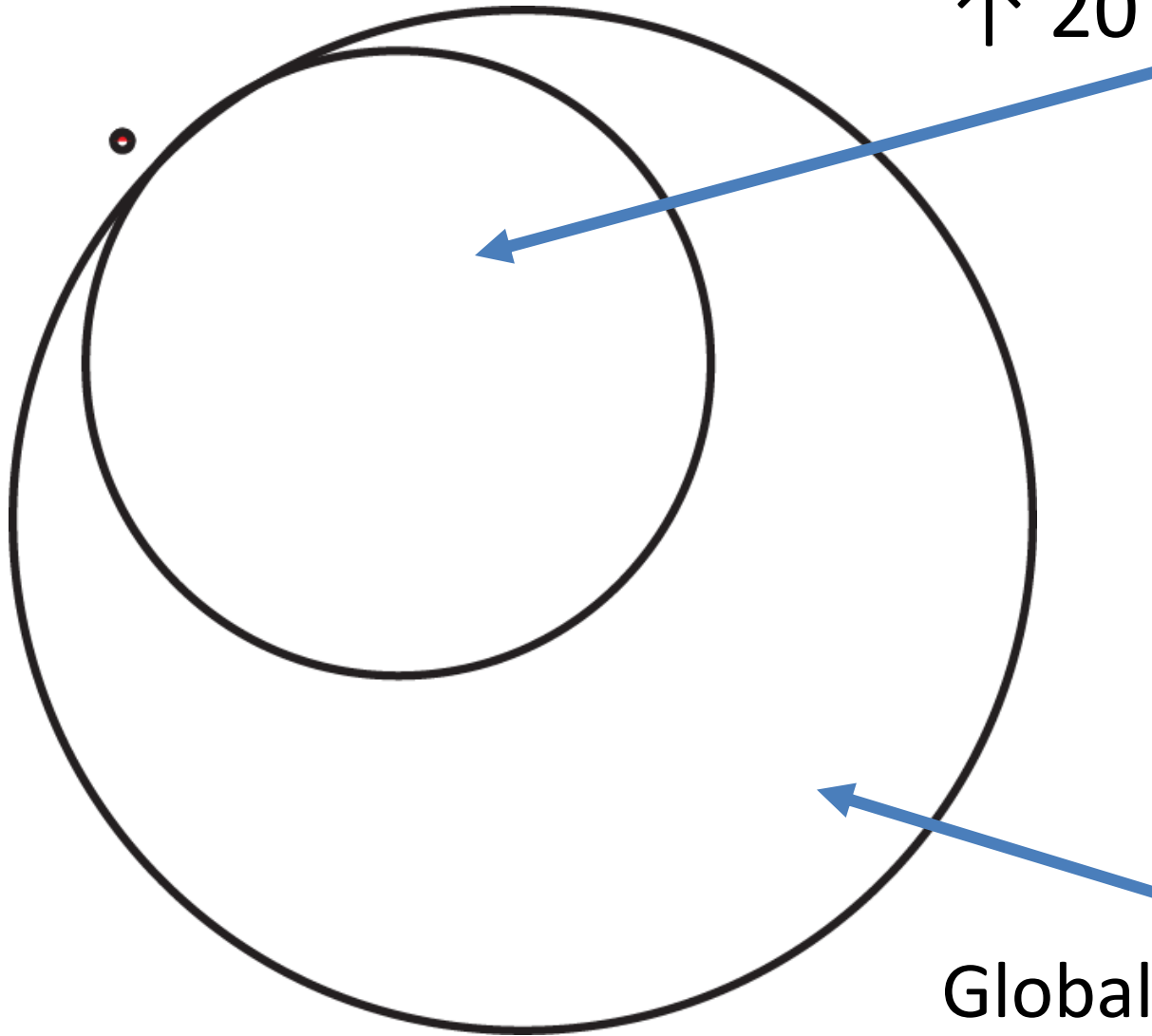


PA Global Costs in Context



PAs as a % of GDP

↑ 20 GDP = <.0013%



Global GDP = <.0005%

PA Return on Investment

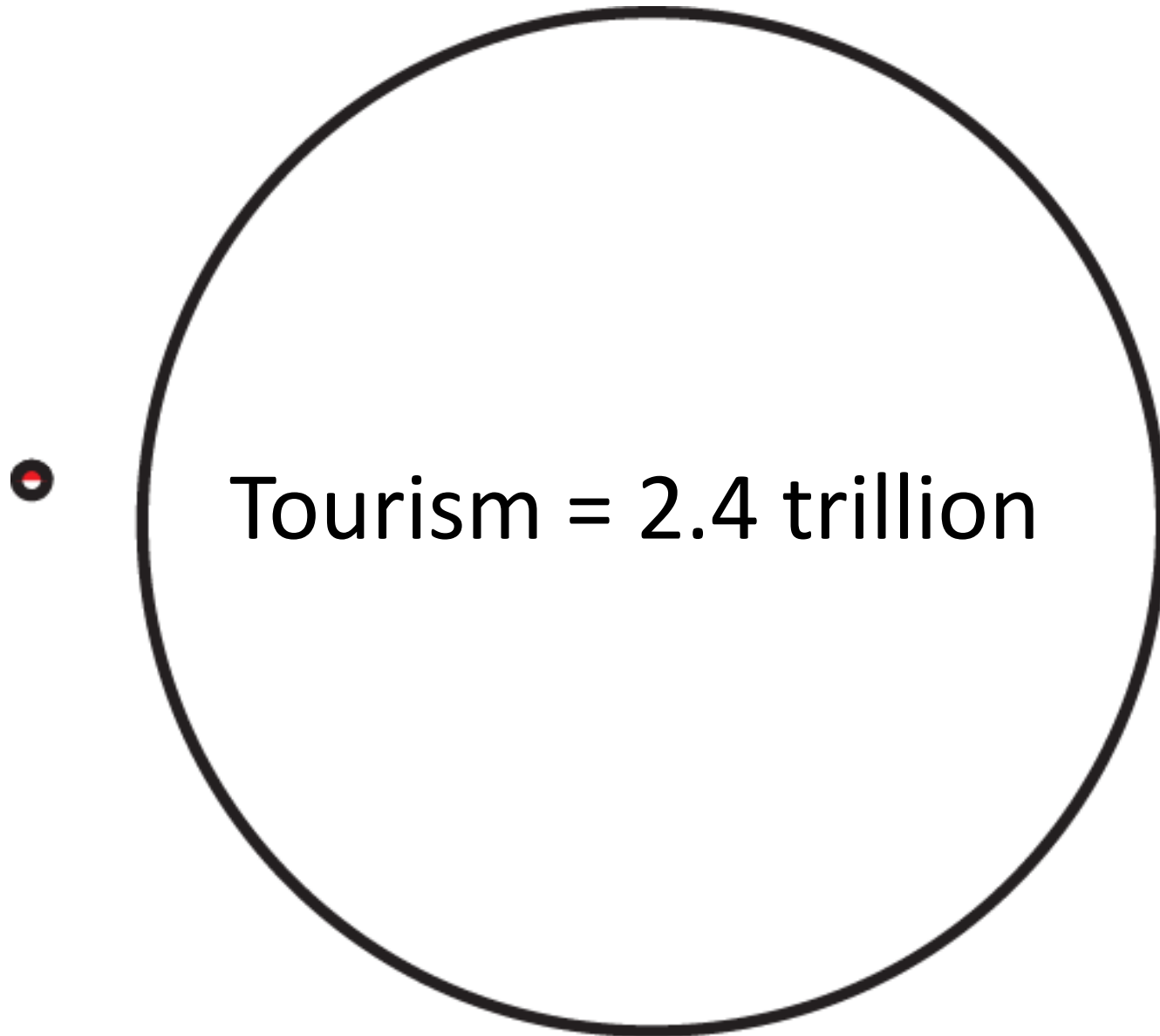


PA Return on Investment



1:50 – 1: 100

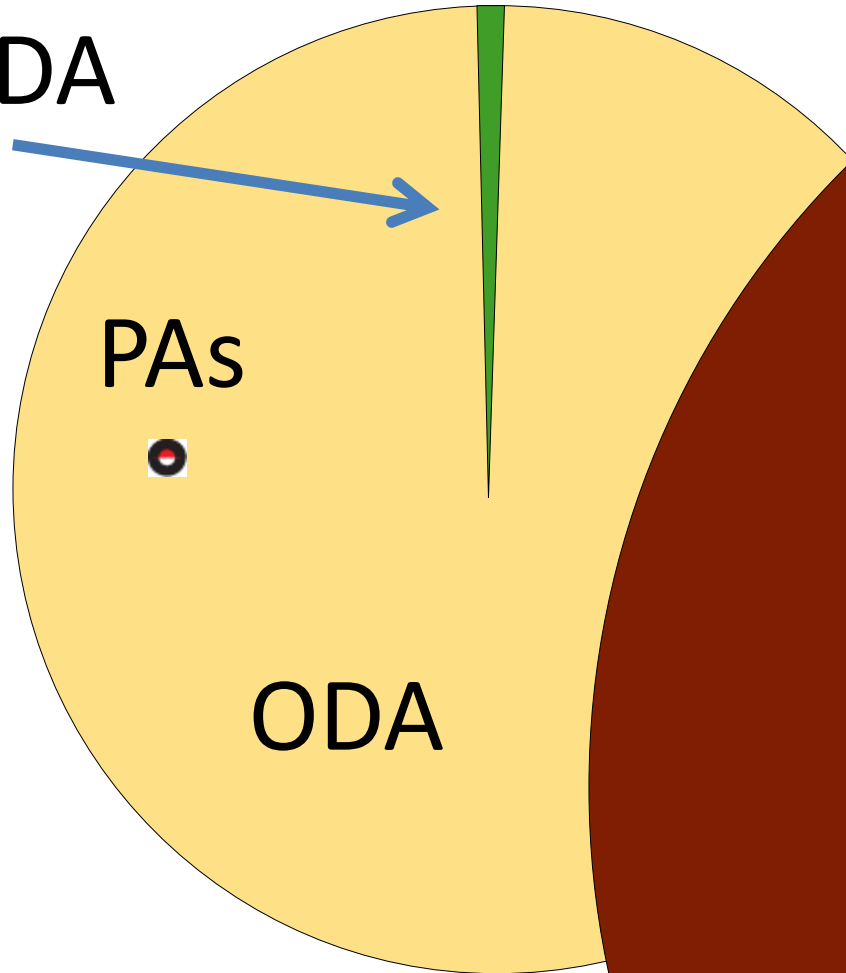
Potential sources of revenue



ODA and Perverse incentives

Environmental

ODA



**Perverse
subsidies
(1.6 trillion)**

Economic Mainstreaming of PAs

**Financing protected areas by
incorporating the value of protected
areas into various sectors using a range
of financial mechanisms**



Natural resource sectors



- Agriculture
- Forestry
- Fisheries, marine
- Freshwater, rivers
- Grazing, grassland
- Wildlife management

Development sectors



- Transportation
- Poverty alleviation
- Tourism, recreation
- Energy
- Climate adaptation
- Food and water security

Economic mainstreaming mechanisms



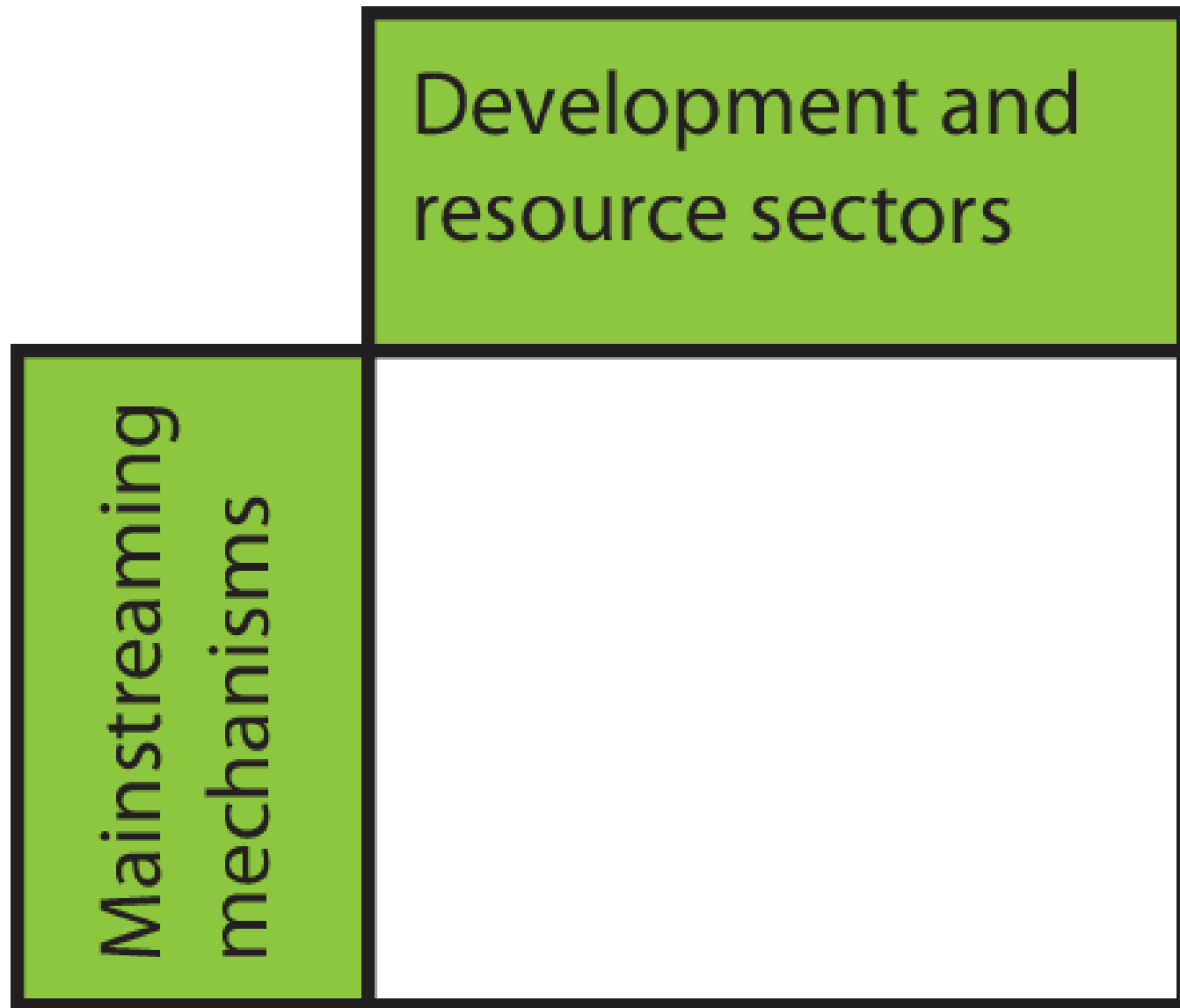
- Certification
- Offsets
- Fines and levies
- Easements
- Voluntary and mandatory fees

Economic mainstreaming mechanisms



- Tax incentives
- Dedicated funds
- Subsidies
- Trade caps & limits
- Procurement
- PES

Economic Mainstreaming PAS

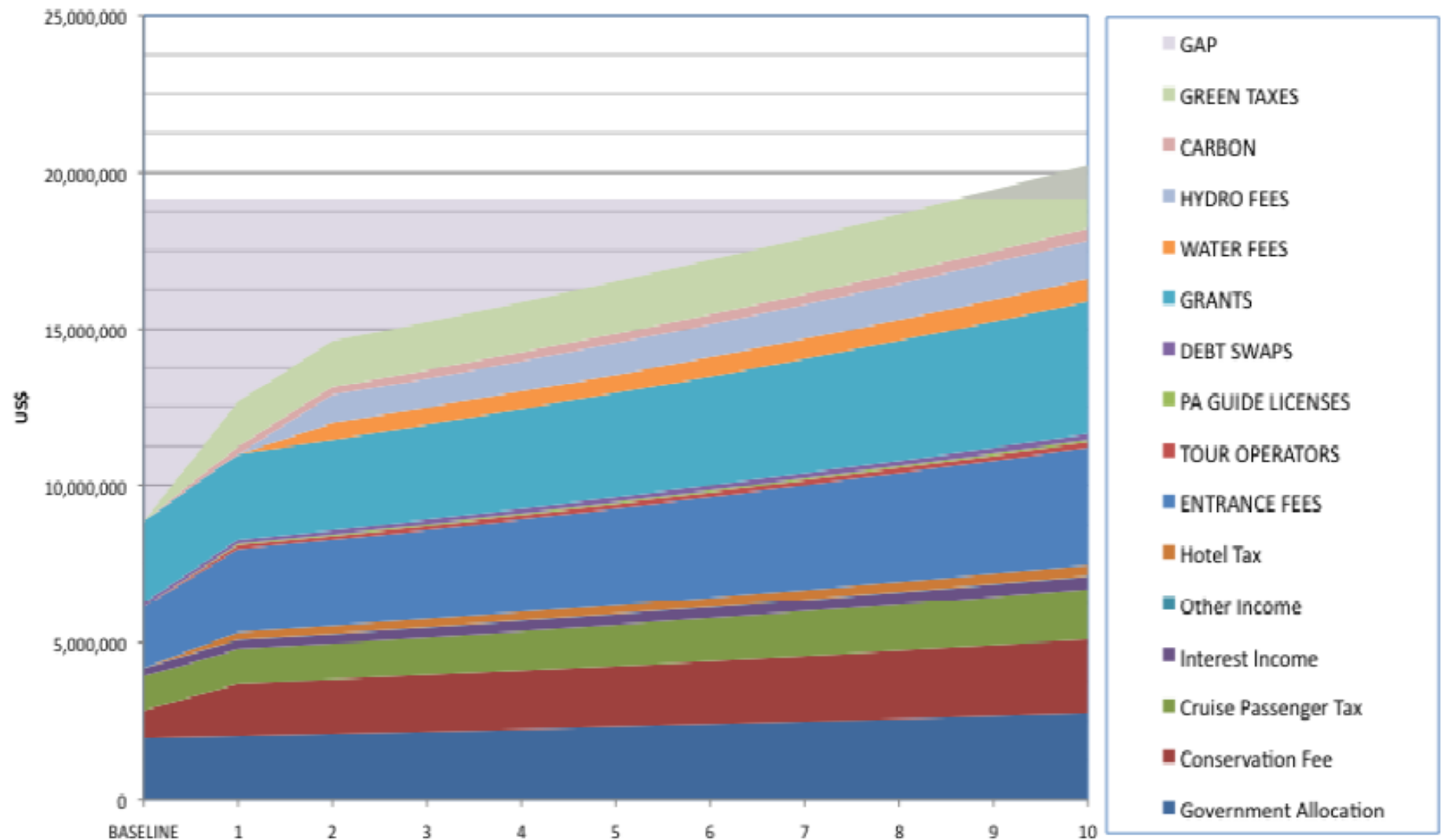


Economic Mainstreaming of PAS in Belize



- Current funding: **\$9mm**
- Current finance gap: **\$19 – 28mm**
- Gap: **\$10-20mm**

Economic Mainstreaming of PAS in Belize



Conclusions

- The costs of PAs are high, but the benefits to society are much higher
- Current funding levels are relatively low
- Valuation and mainstreaming can substantially fill gaps
- Increased global funding, if targeted well, can fill key gaps