Using experimental methods to measure involvement in illegal wildlife trade and response to policies

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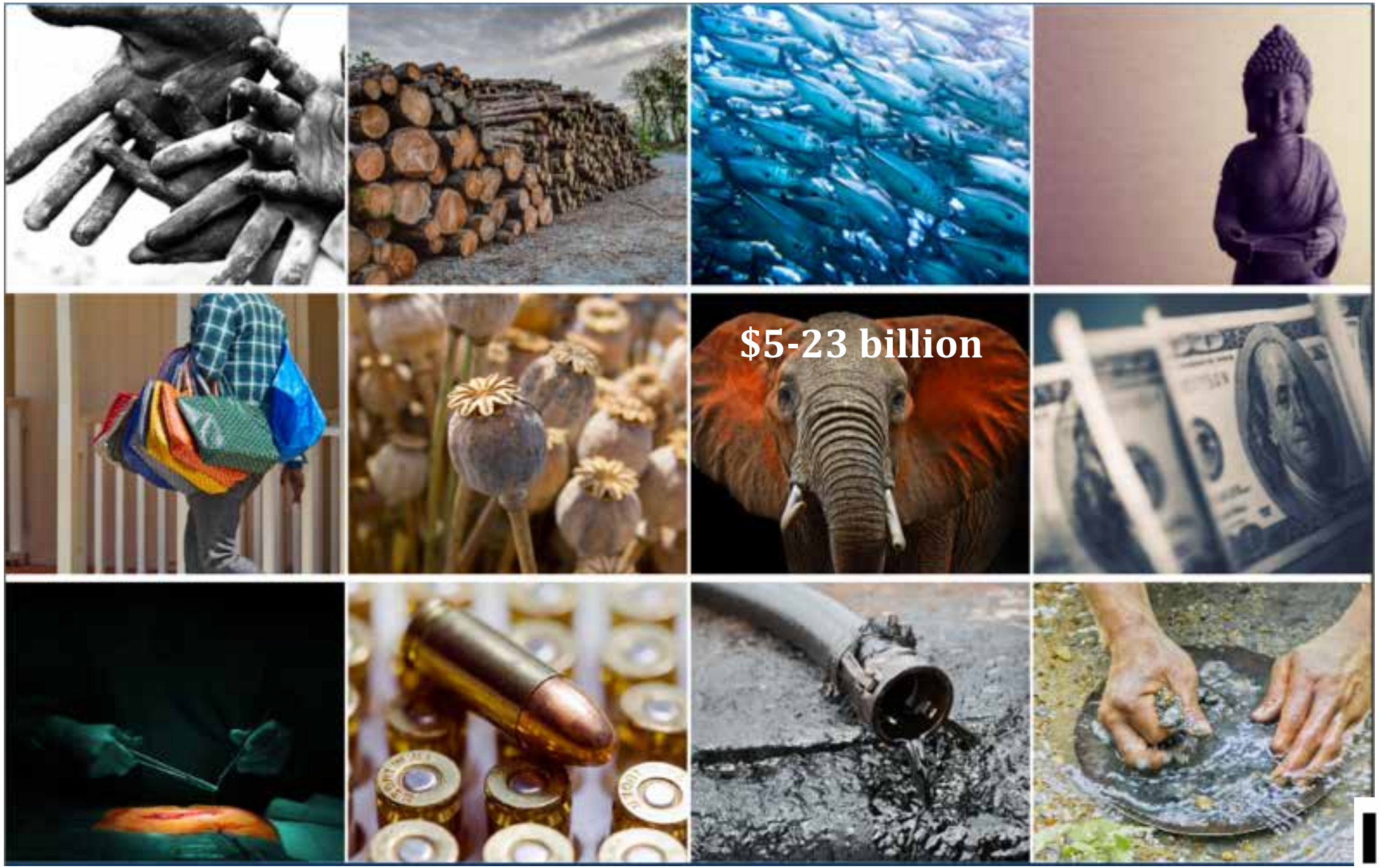

May, C. (2017) Transnational crime and the developing world.

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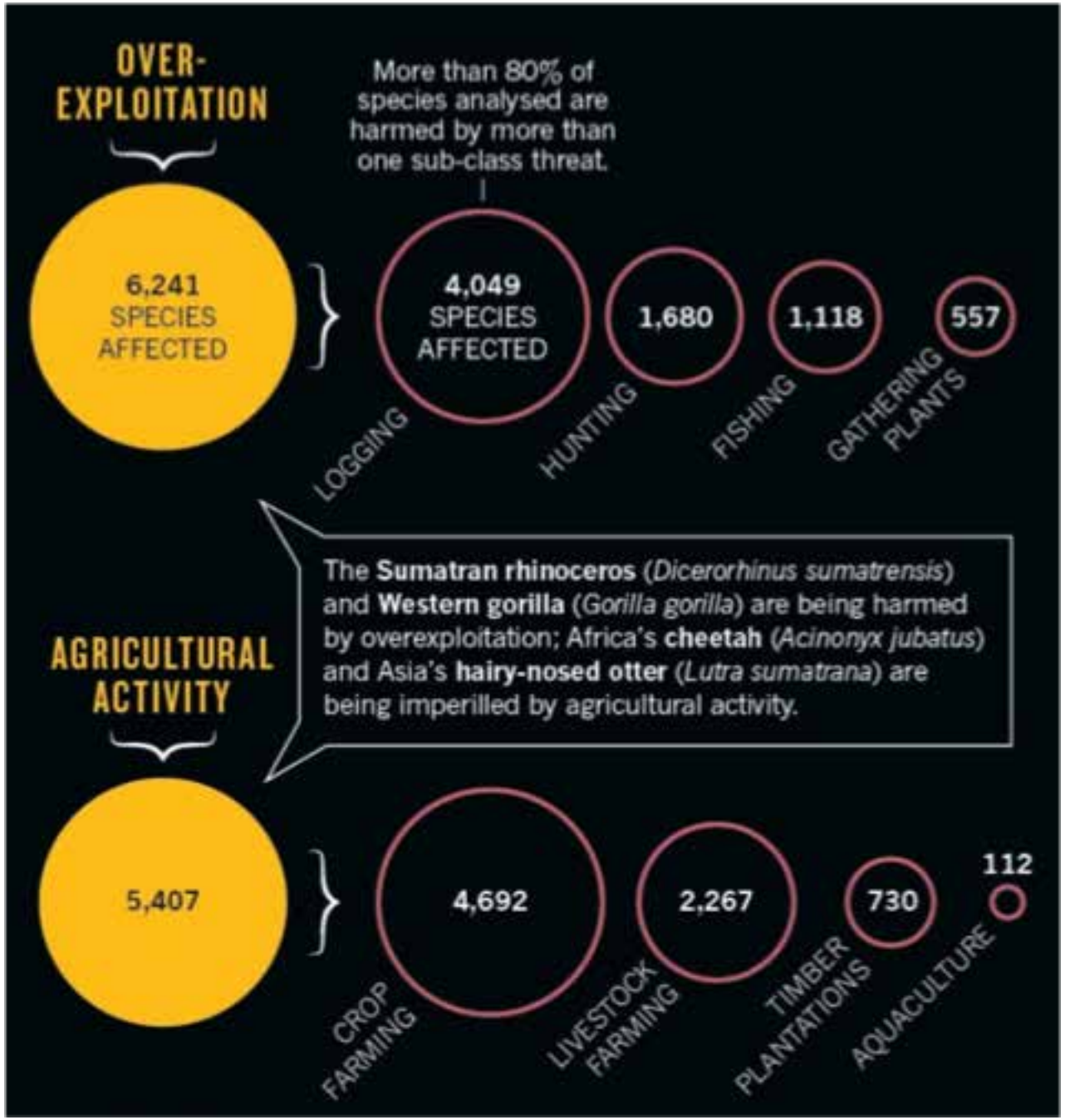
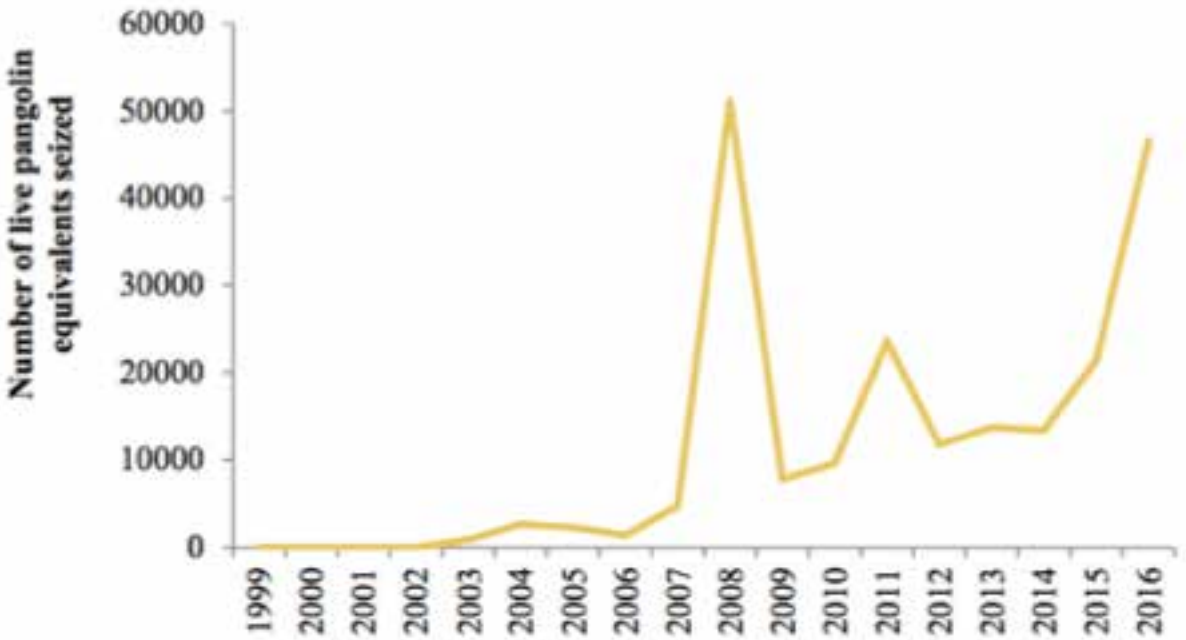
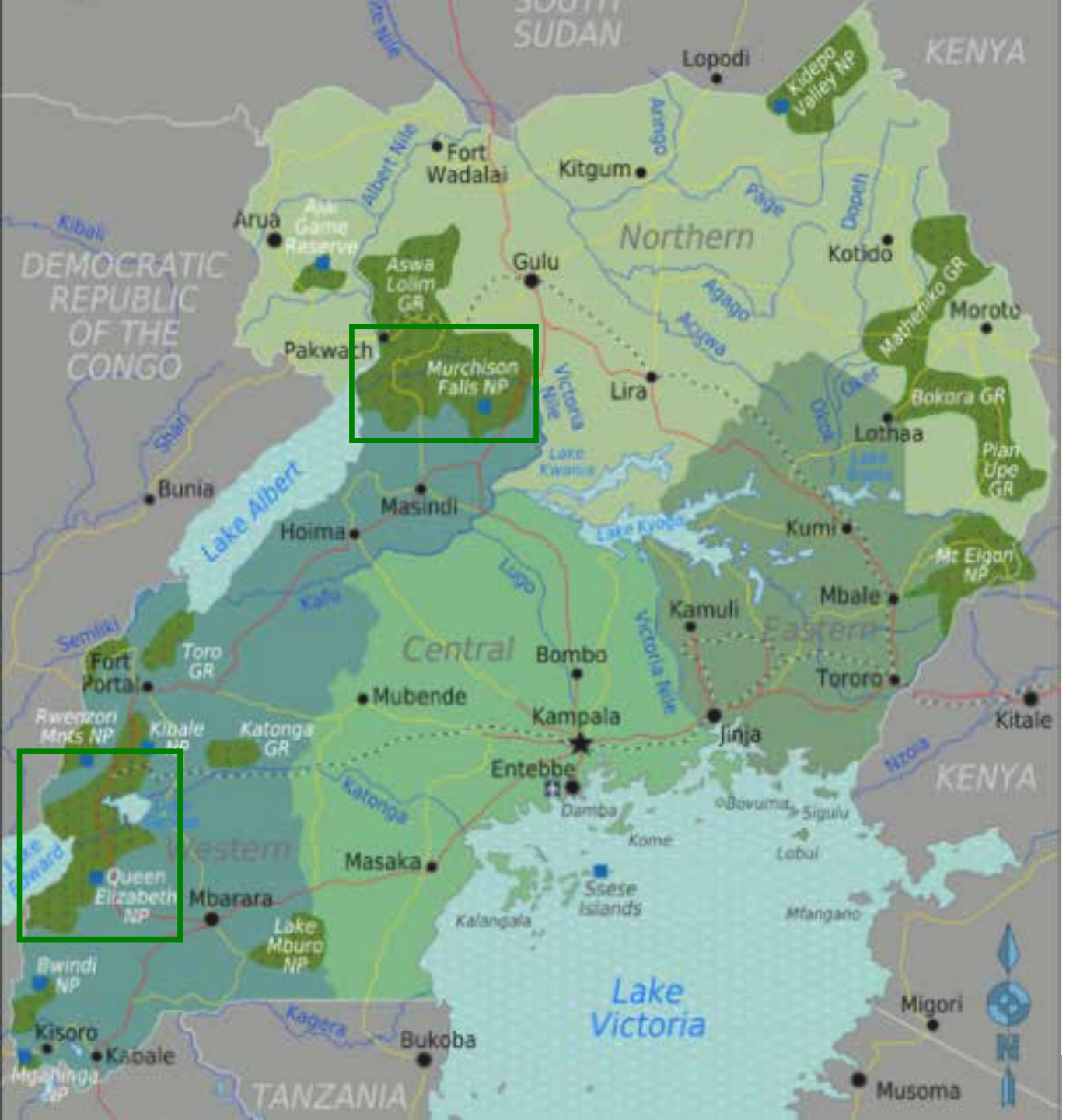


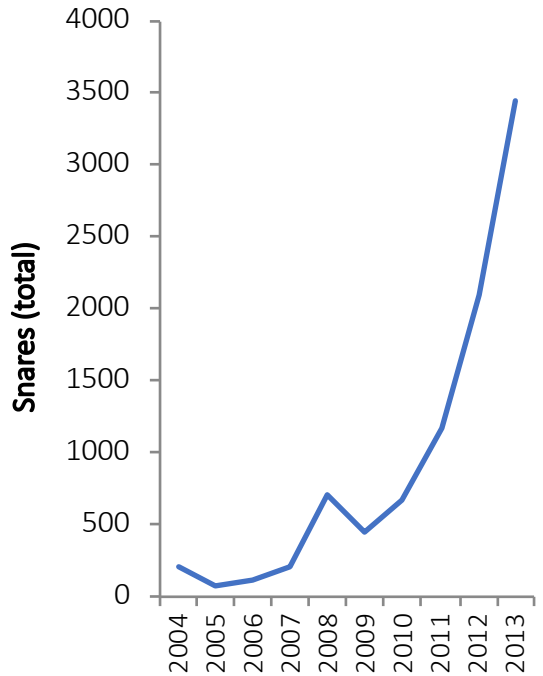
REASON FOR CHANGE	ESTIMATES FROM SURVEYS	
	ESTIMATE	± 95% CL
Repeat Survey	-89,504	±28,943
New Population	+1,572	±2,956
Different Technique	-676	±821
Different Area	+2,288	±2,373
Data Degraded	0	0
Totals	-86,320	±29,202

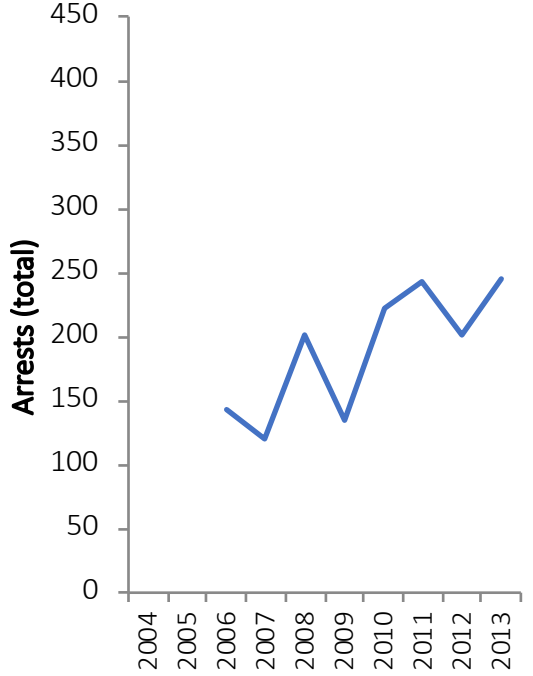


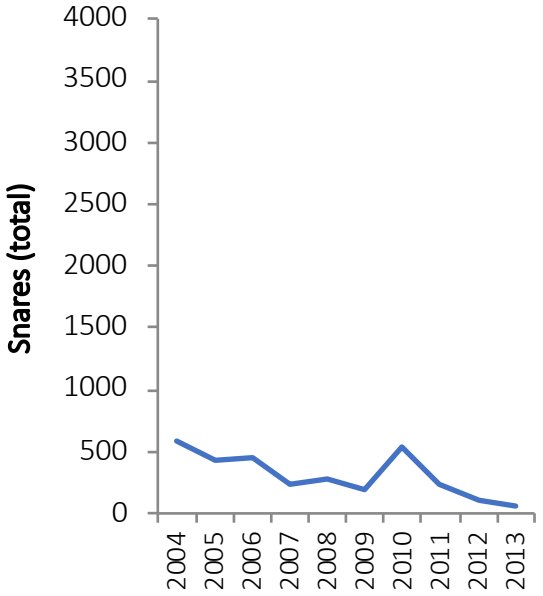
Maxwell, S et al. (2016) Biodiversity: The ravages of guns, nets and bulldozers; IUCN (2016) African Elephant status report; UNODC (2017) Wildlife crime status update;

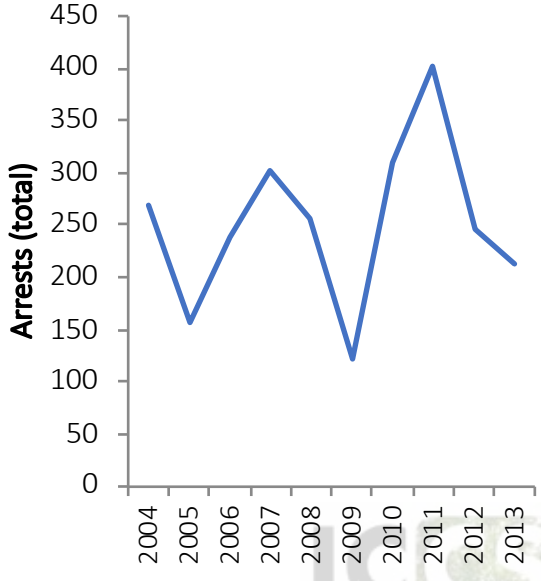
- How big is the problem?
- Who is involved?
- What are the underlying drivers?
- Which interventions are most likely to succeed?











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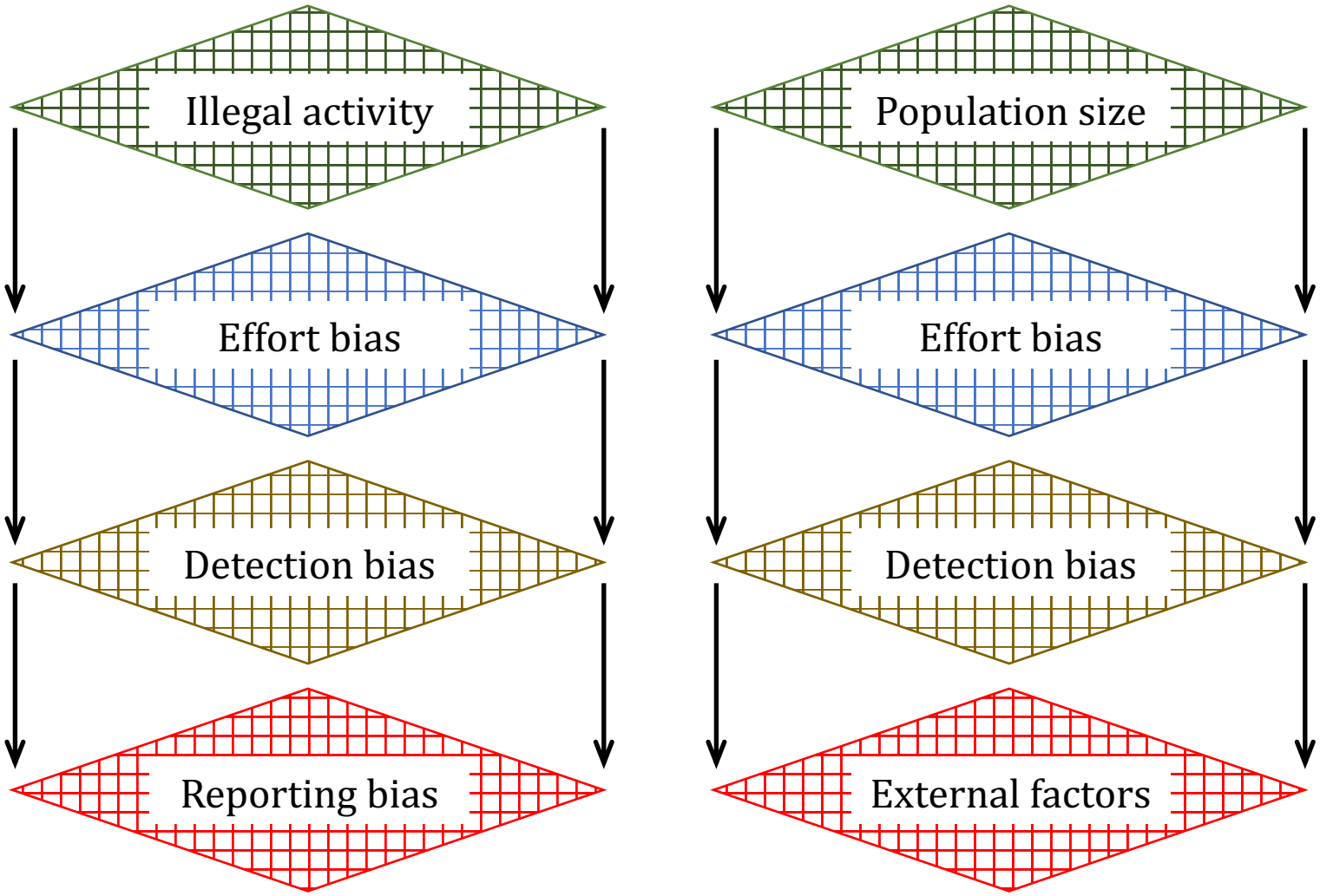

Ranger patrol and population data both subject to significant uncertainty and biases

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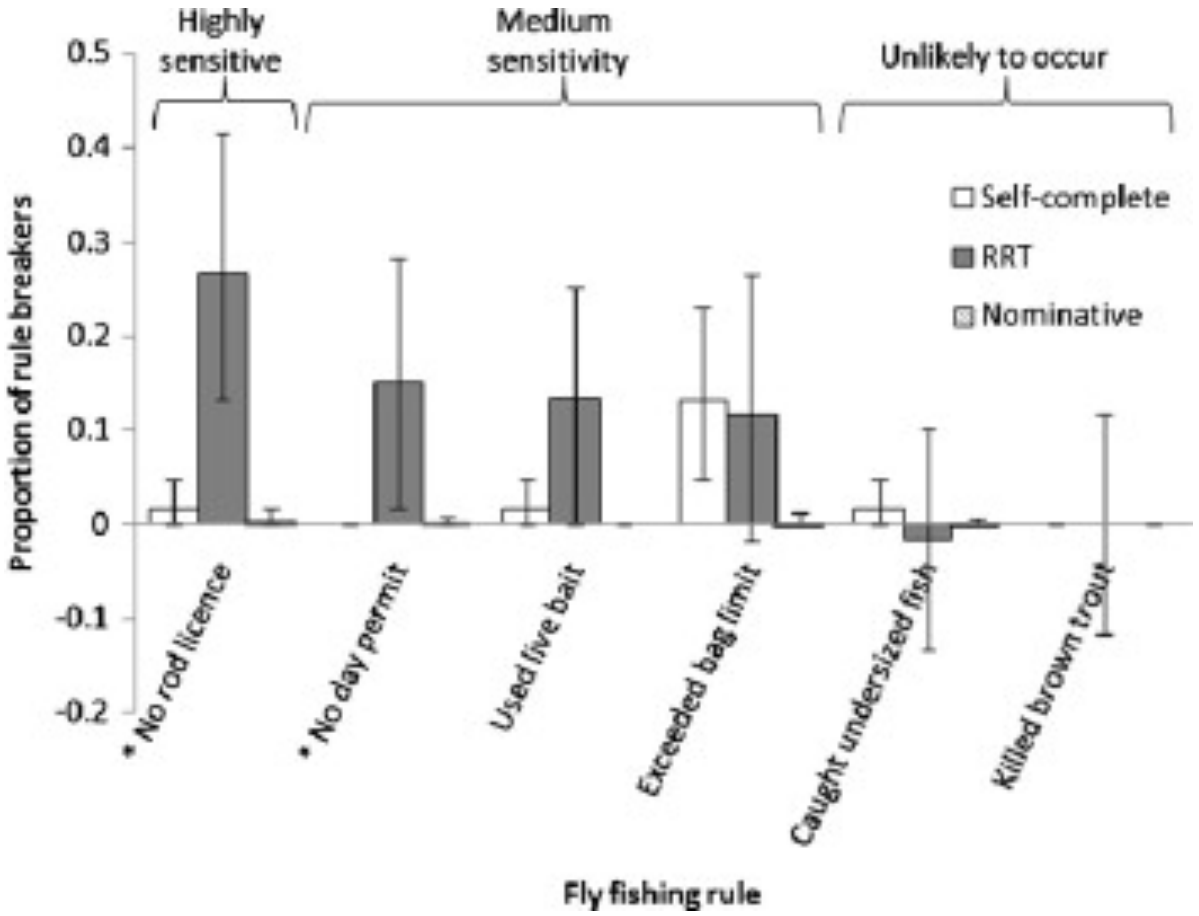

Challenging to get truthful responses to sensitive questions through direct questioning

A more robust approach makes use of indirect questioning

St. John et al. (2010) Testing novel methods for assessing rule breaking in conservation;

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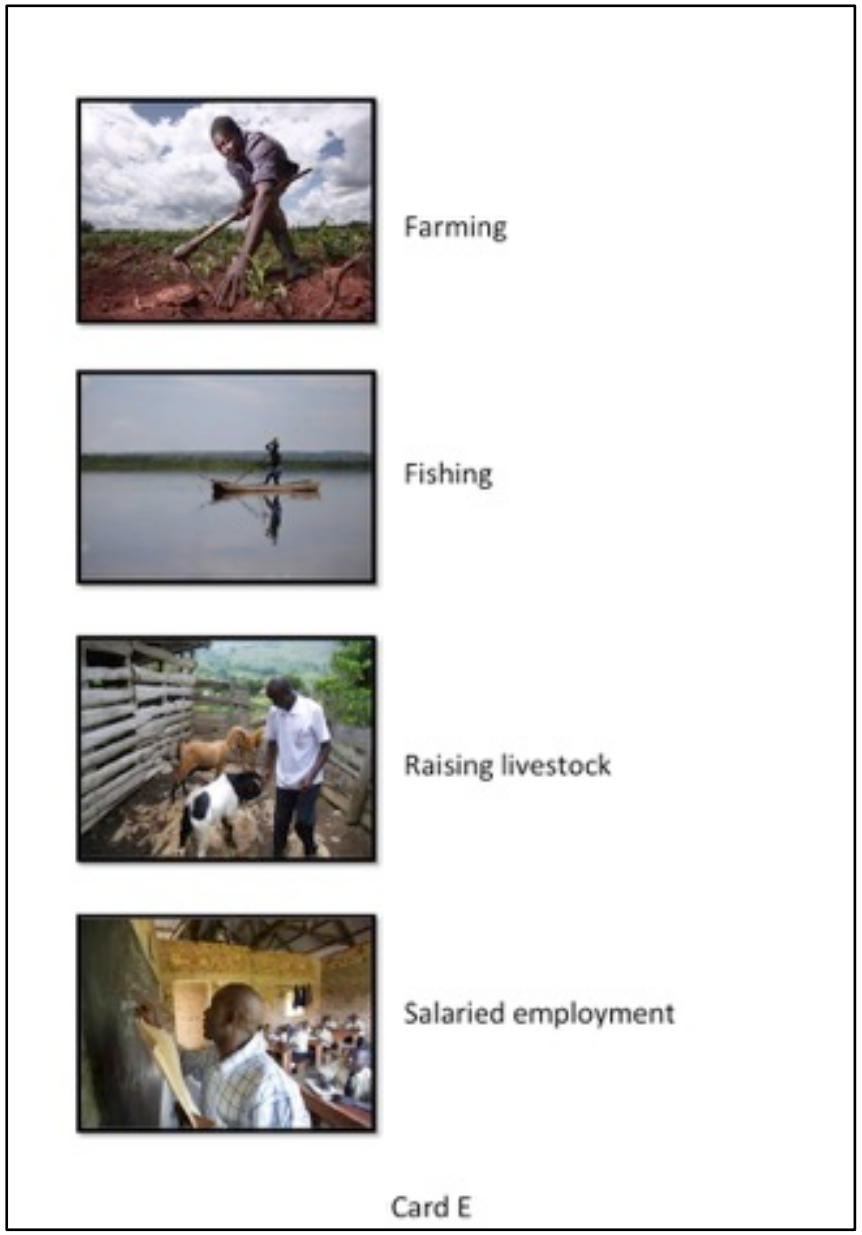

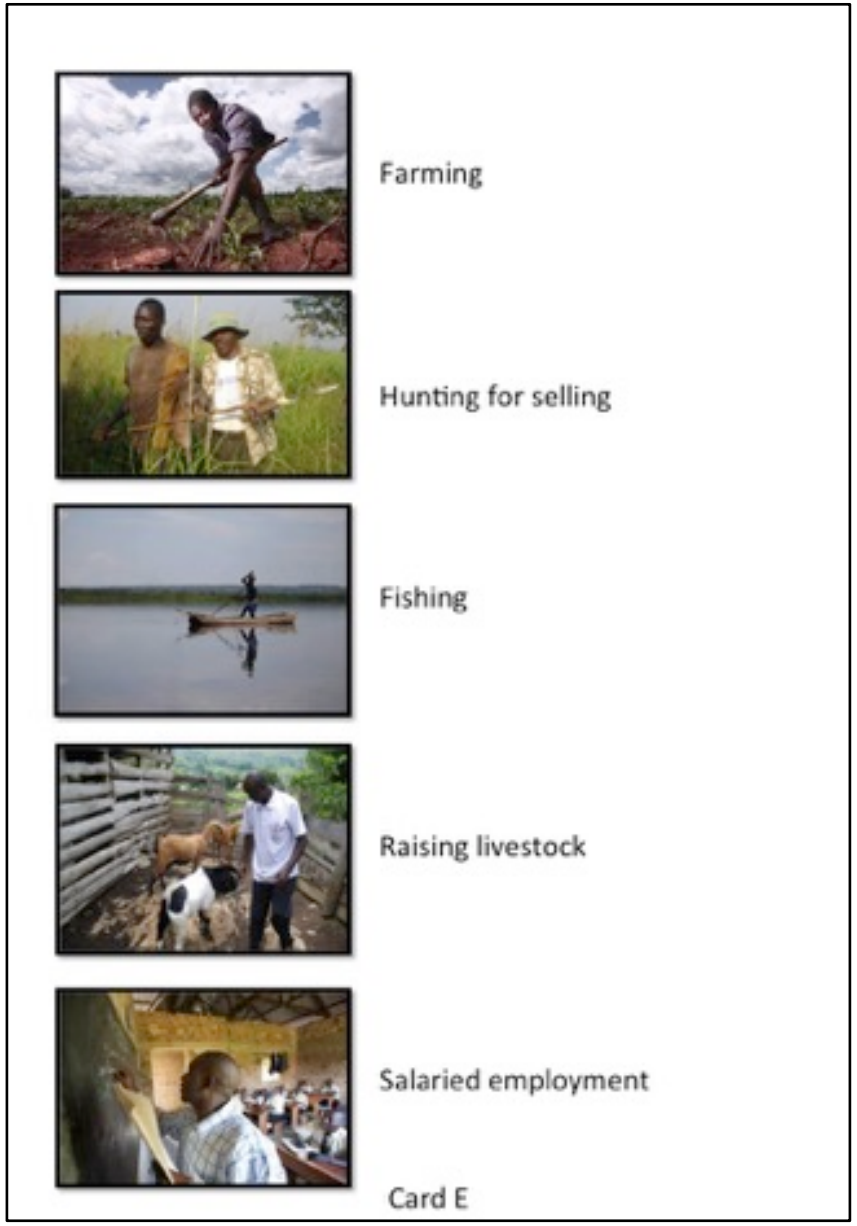

Travers et al. (2017) Taking action against wildlife crime in Uganda;

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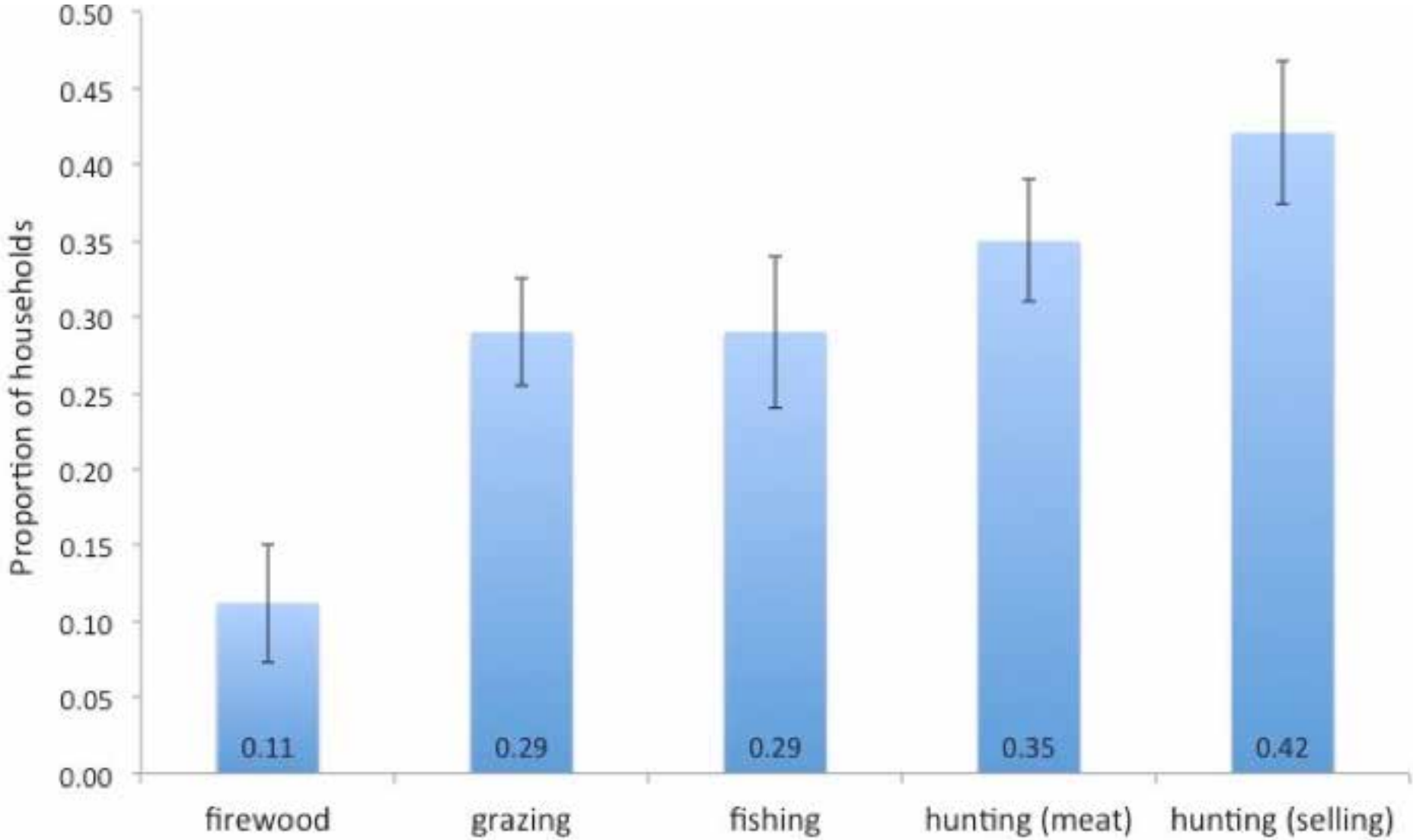

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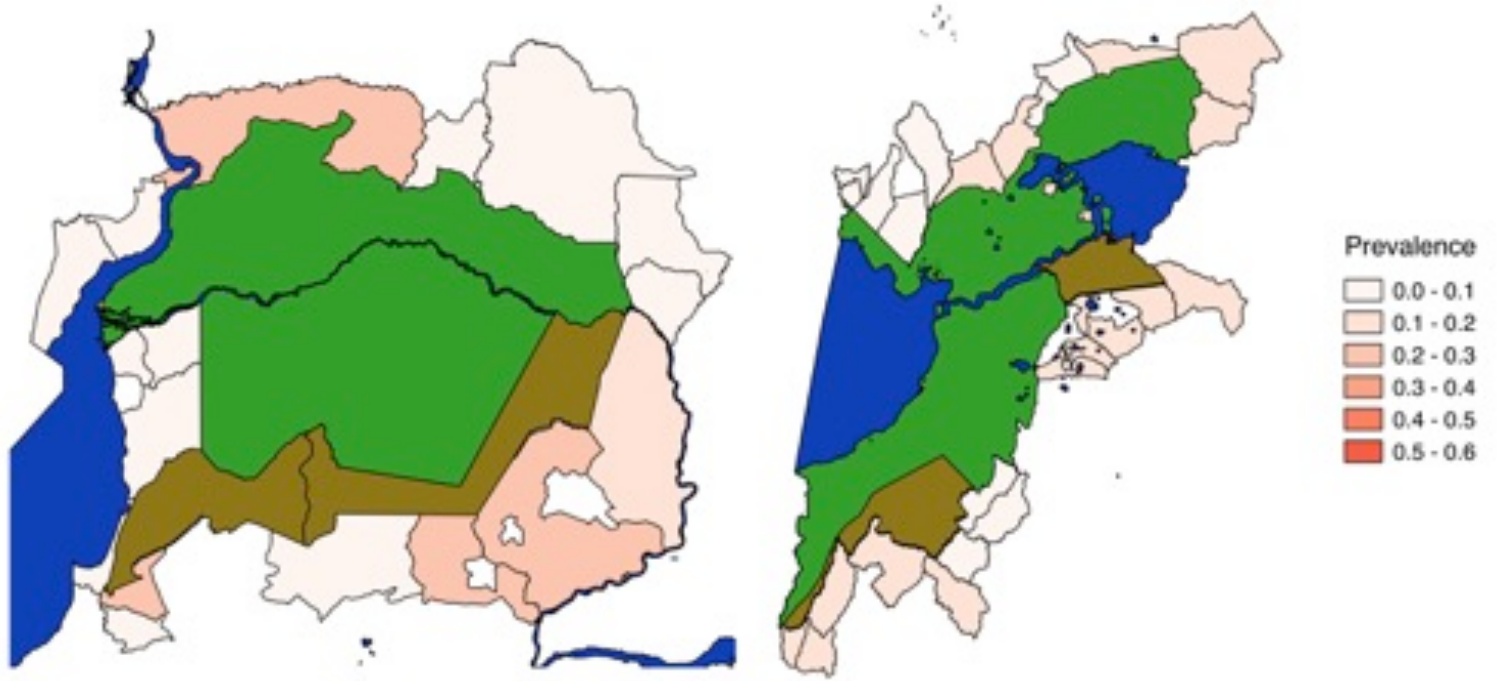
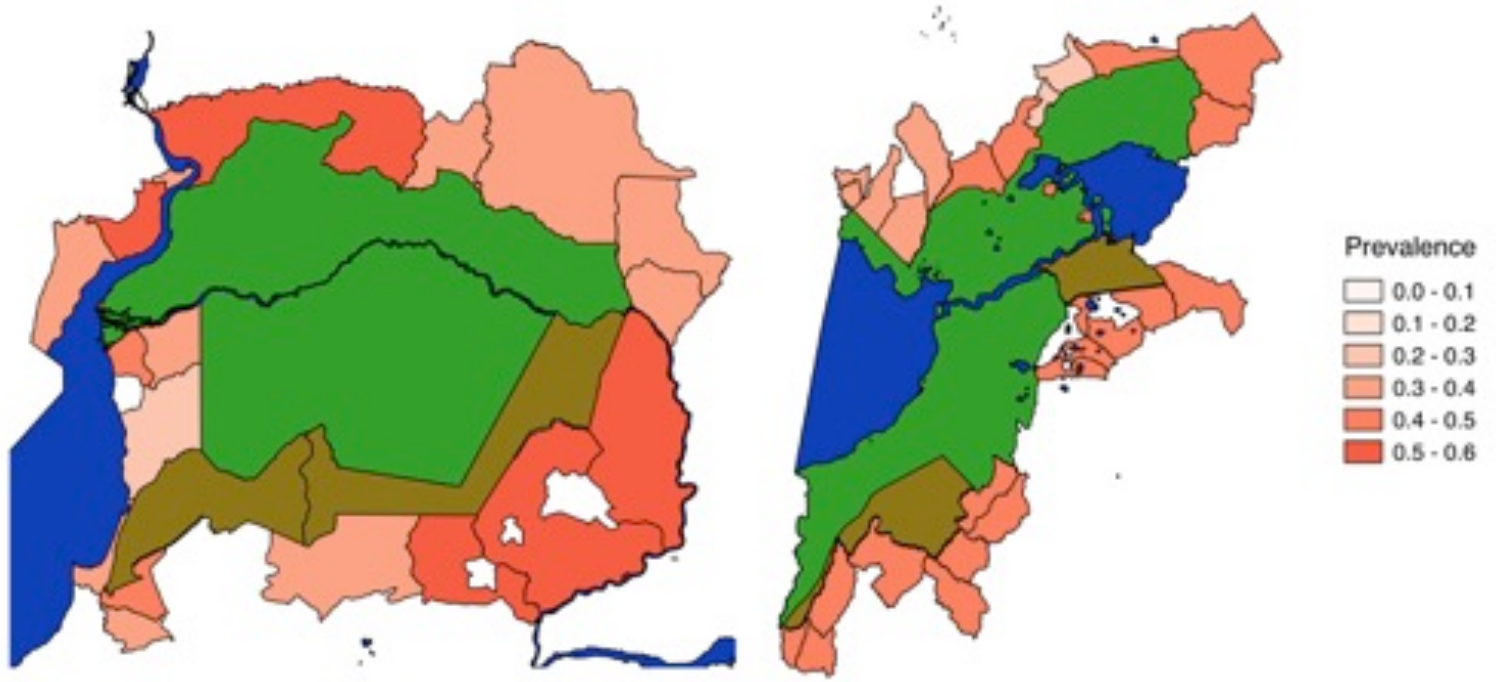
Firewood collection



Commercial hunting



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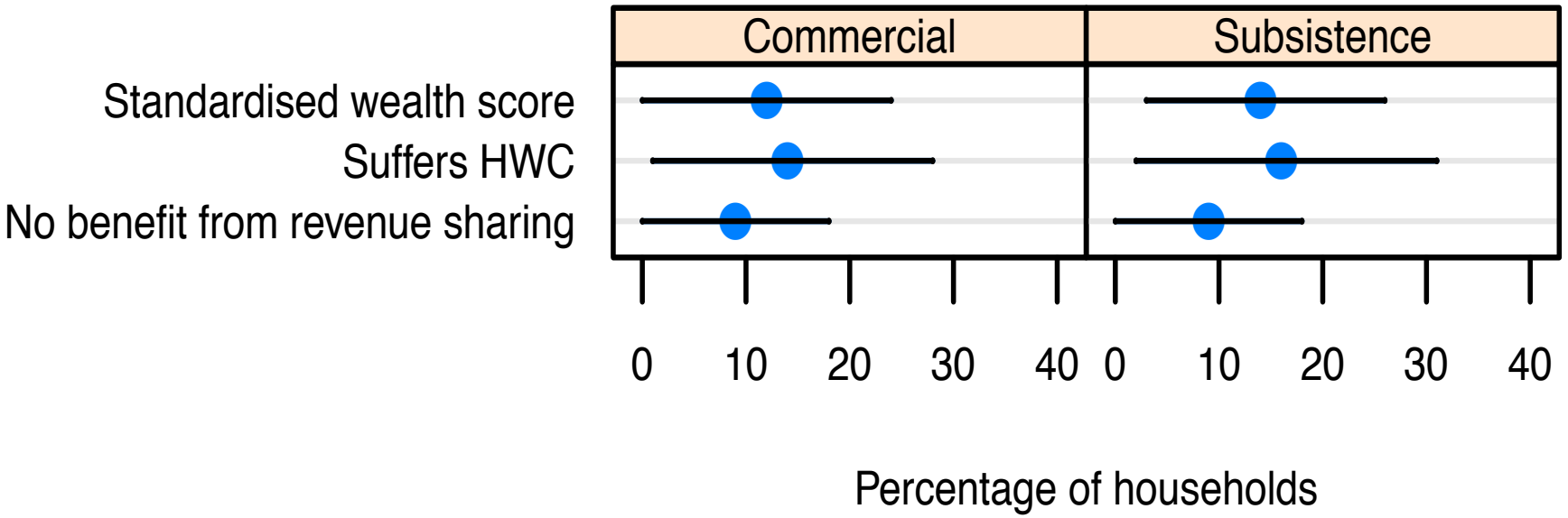

Better-off households and households that reporting suffering from crop raiding or livestock predation or felt that they had not received a benefit from revenue sharing were all more likely to hunt illegally

Travers et al. (2017) Taking action against wildlife crime in Uganda;

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Interventions	Description
HWC mitigation	Designate 25% or 50% of revenue sharing funds specifically to fund human wildlife conflict mitigation
Improve livelihoods	Support wildlife friendly enterprise schemes to improve livelihood options available to offenders
Wildlife scouts	Employ village wildlife scouts to act as link between communities and UWA, respond to HWC
Withdraw resource rights	Withdraw all rights to harvest resources from within protected area boundaries
Regulated hunting	Allow a regulated trade in specific species, provided sustainability of offtake could be ensured
Increase law enforcement	Increase the probability of detection of wildlife crimes within protected area boundaries

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Labour allocation to legal livelihood activities

Perceived fairness of intervention

Provision of information about illegal behaviour

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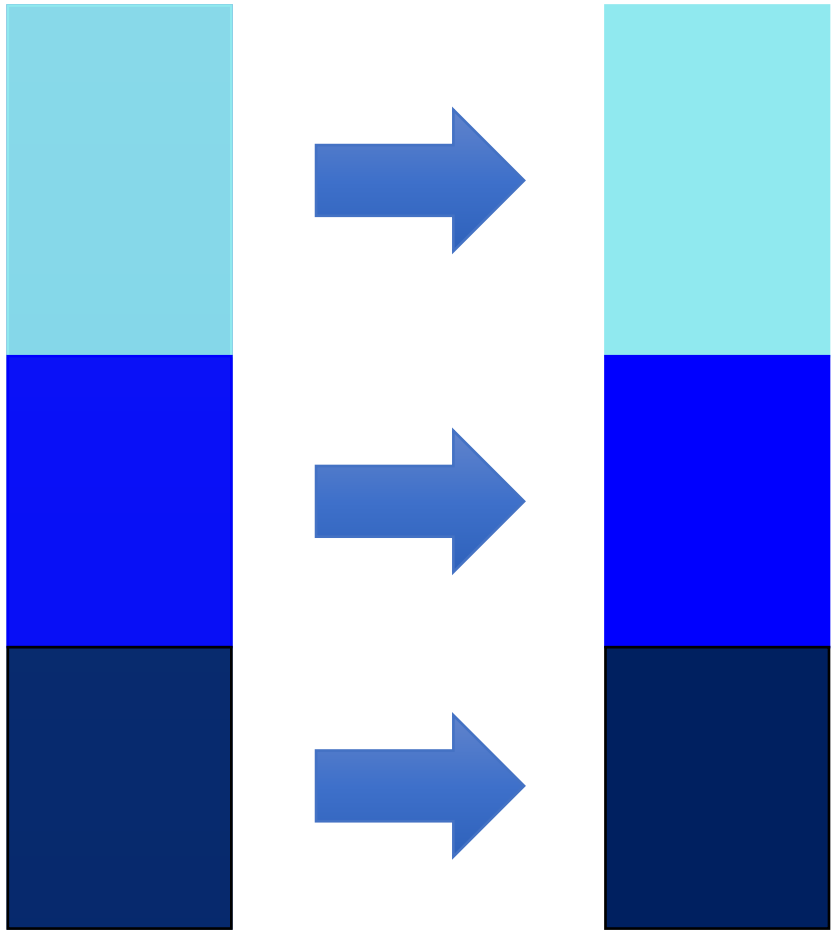

Proportion of population who respond positively

Proportion of population who do not respond

Proportion of population who respond negatively

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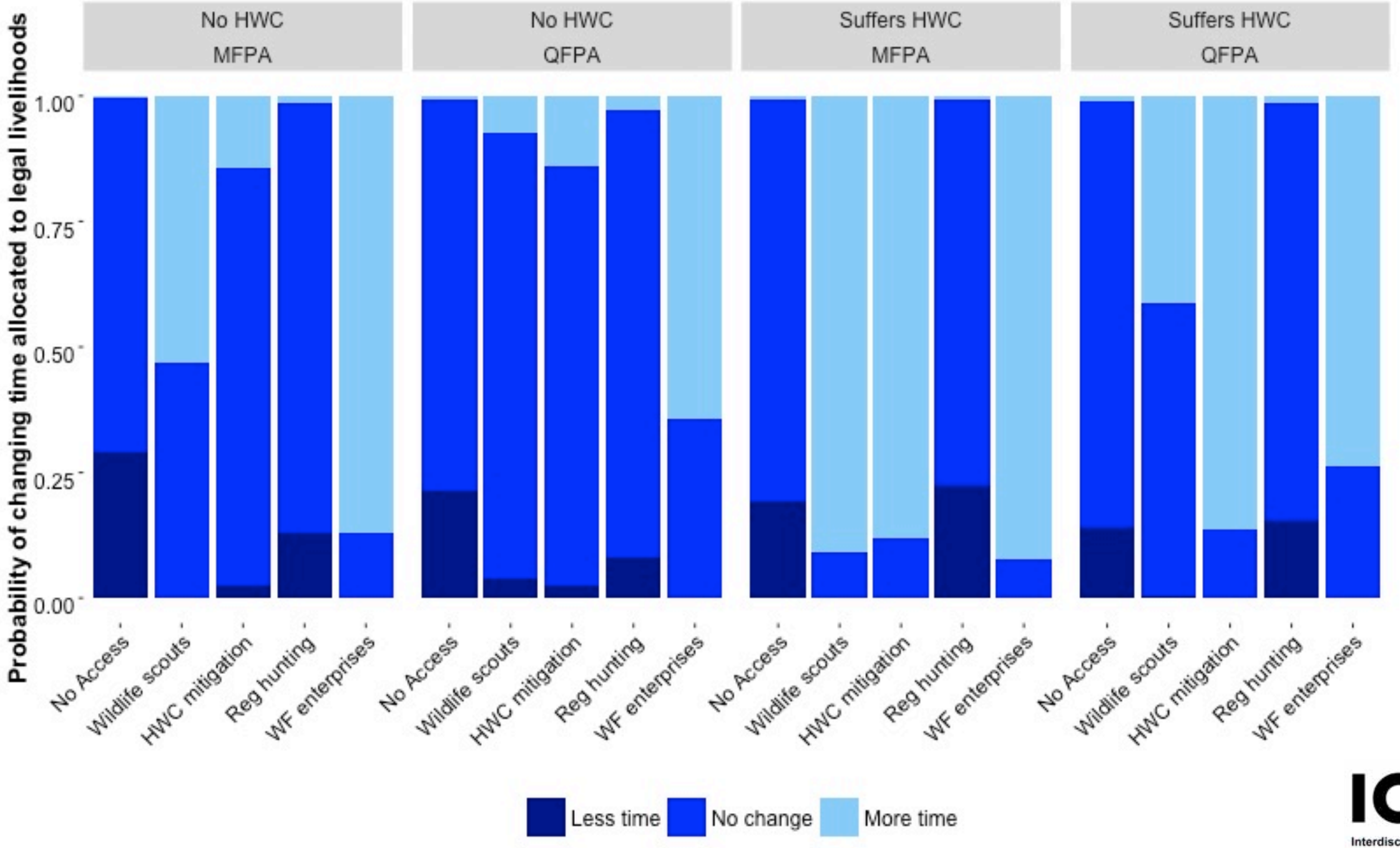

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Attributes		Scenario 1	Scenario 2
	Human Wildlife Conflict	1/2 (50%) RS funds to HWC	No RS funds to HWC
	Employ eco-guards	No eco-guards employed	2 eco-guards in your village employed
	Chances of being caught hunting illegally	1 out of 1000 people caught hunting illegally	1 out of 10 people caught hunting illegally
	Sustainable hunting for meat (domestic use)	Hunting allowed for domestic consumption	Hunting not allowed
	Wildlife-friendly enterprise schemes	No scheme, no benefit	Scheme; participants earn Ugx 5,00,000/yr
Which scenario do you prefer (tick one)?			

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Coefficient	Posterior mean (95% credible interval)	
	Murchison Falls NP	Queen Elizabeth NP
Human wildlife conflict mitigation	0.05 (-0.23, 0.34)	1.0 (0.60, 1.45)
Wildlife scouts	0.38 (0.20, 0.59)	0.64 (0.37, 0.97
Wildlife friendly enterprises	0.49 (0.19, 0.83)	0.35 (0.03, 0.68)
Increased patrol effectiveness	0.09 (0.01, 0.17)	0.23 (0.12, 0.36)
Regulated hunting	-0.14 (-0.28, -0.02)	-0.08 (-0.20, 0.04)

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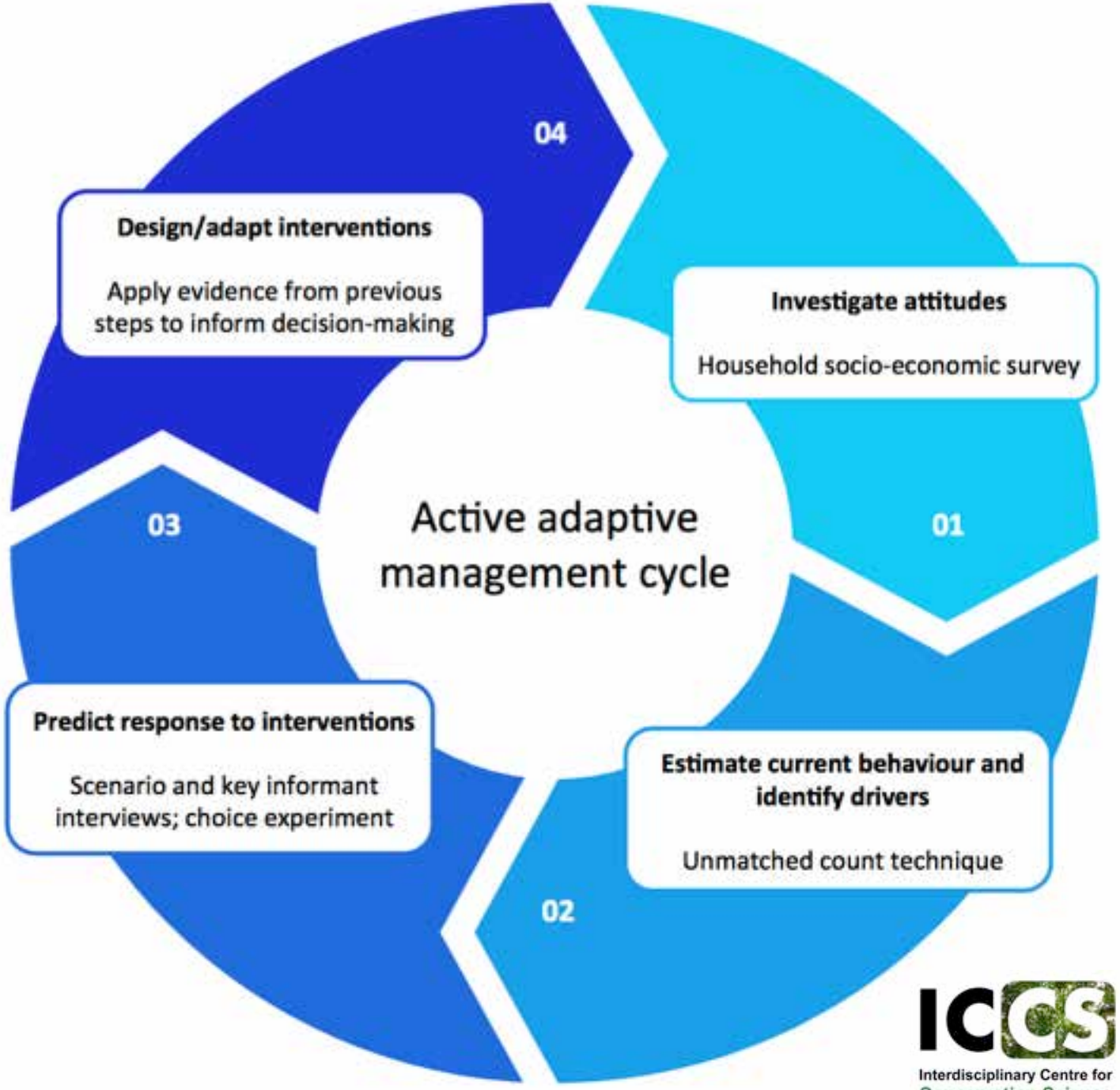

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