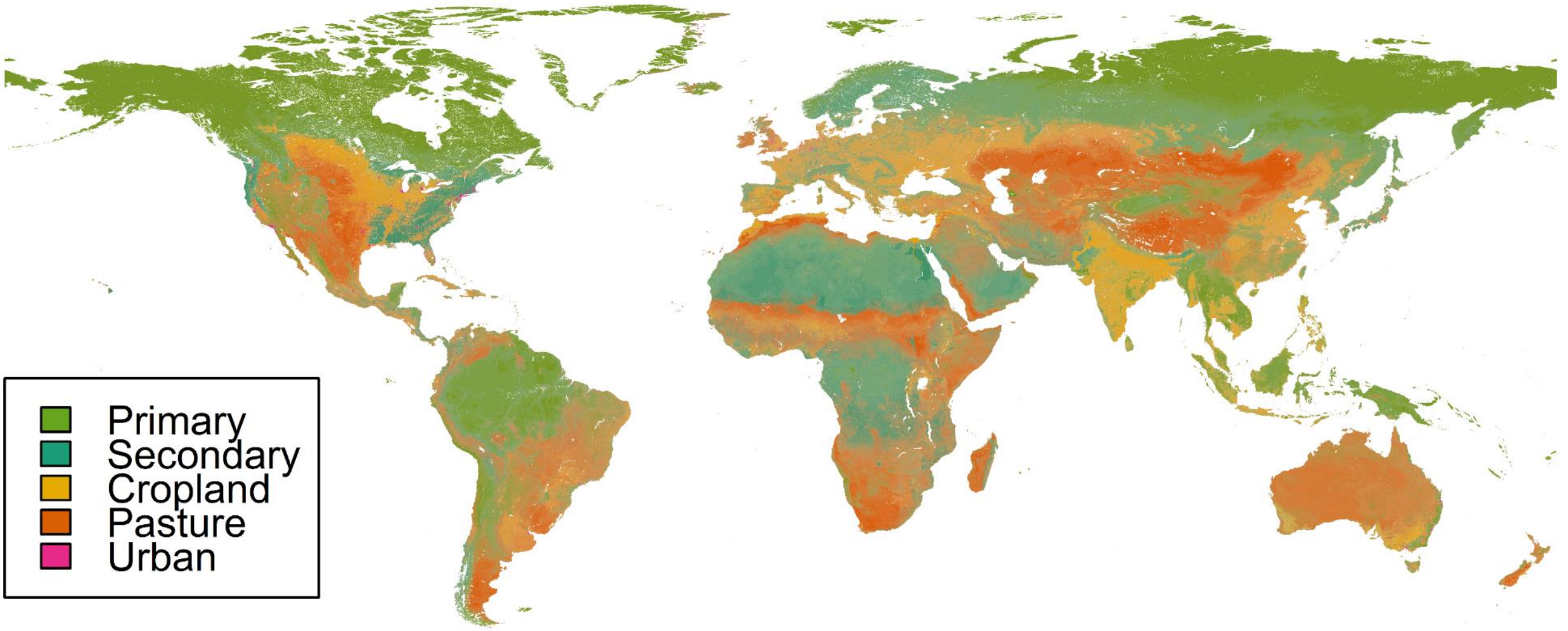


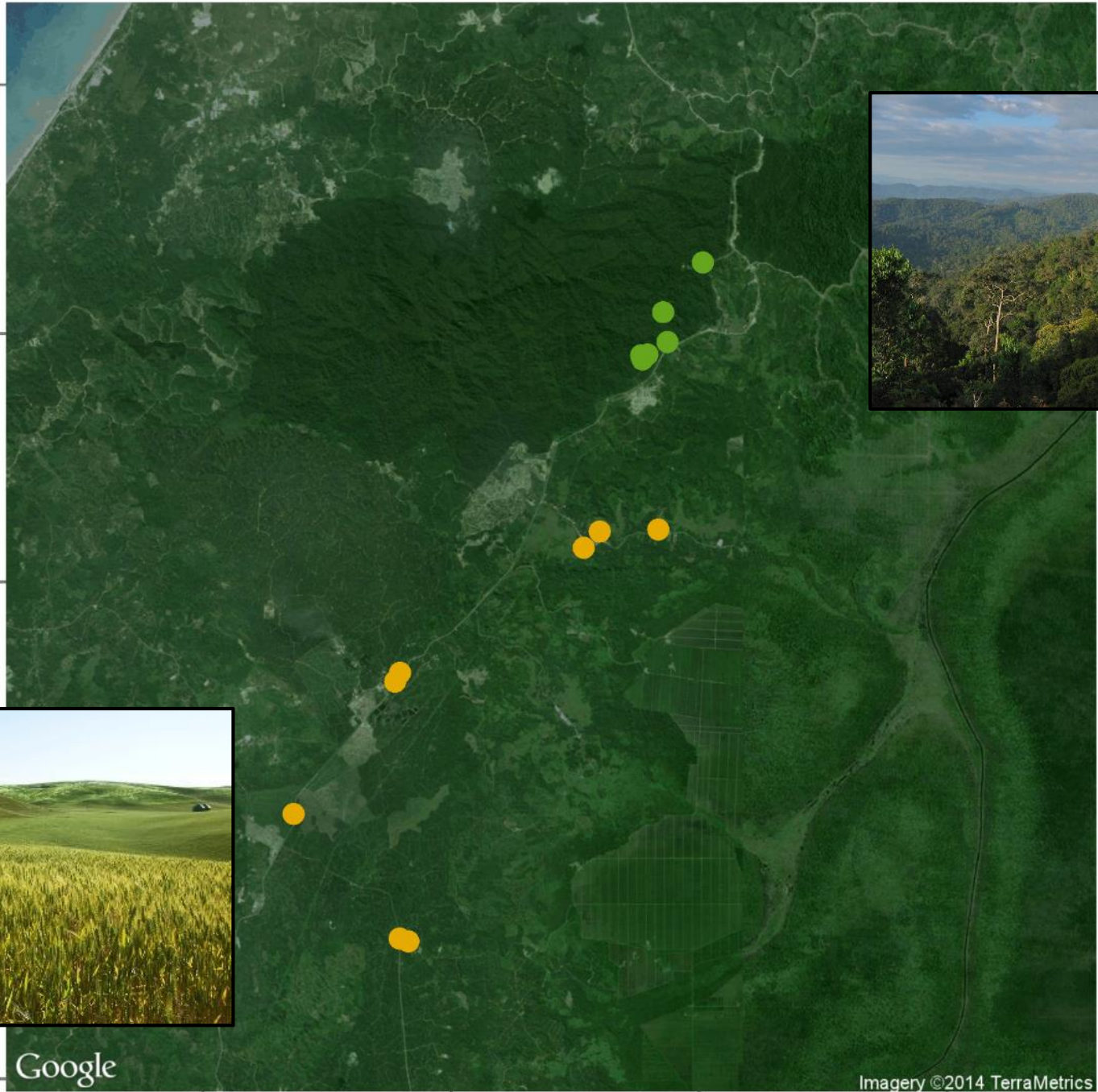
Assessing the global biodiversity impacts of land use

Tim Newbold, Centre for Biodiversity and
Environment Research
University College London



- Primary
- Secondary
- Cropland
- Pasture
- Urban





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Imagery ©2014 TerraMetrics

The Value of Primary, Secondary, and Plantation Forests for a Neotropical Herpetofauna

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APPENDIX. Species of amphibian and lizard caught by standardized trapping methods in the Jari landscape, northeastern Brazilian Amazonia

Species	Code for Figures 3 & 4	Family	Eucalyptus	Secondary Forest	Primary Forest	Total number captured	Microhabitat
Amphibia							
<i>Atelopus spumarius</i>	V	Bufonidae			1	1	Leaf litter
<i>Bufo guttatus</i>	S	Bufonidae	4	2	2	8	Leaf litter
<i>Bufo margaritifera</i>	L	Bufonidae		56	5	61	Leaf litter
<i>Bufo marinus</i>	K	Bufonidae	9	29	5	43	Leaf litter
<i>Bufo</i> sp.	B	Bufonidae	3	51	74	128	Leaf litter
<i>Colostethus</i> sp.	D	Dendrobatidae		1	30	31	Leaf litter
<i>Dendrobates tinctorius</i>	J	Dendrobatidae			6	6	Leaf litter
<i>Epipedobates femoralis</i>	E	Dendrobatidae		5	24	29	Leaf litter
<i>Epipedobates hahneli</i>	C	Dendrobatidae		9	55	64	Leaf litter
<i>Adenomera</i> sp.	A	Leptodactylidae	697	194	265	1156	Leaf litter
<i>Eleutherodactylus chiactonotus</i>	G	Leptodactylidae			8	8	Leaf litter
<i>Eleutherodactylus marmoratus</i>	R	Leptodactylidae			2	2	Leaf litter
<i>Eleutherodactylus zeuctotylus</i>	Q	Leptodactylidae		1	2	3	Leaf litter
<i>Leptodactylus hudsoni</i>	N	Leptodactylidae	1	32	3	36	Leaf litter



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PREDICTS database: observed land-use impacts

A world map showing the distribution of data points from the PREDICTS database. Black dots of varying sizes are scattered across the globe, with a higher density in the tropical regions of South America, Africa, and Southeast Asia. The map uses a color gradient from blue (oceans) to green and yellow (land).

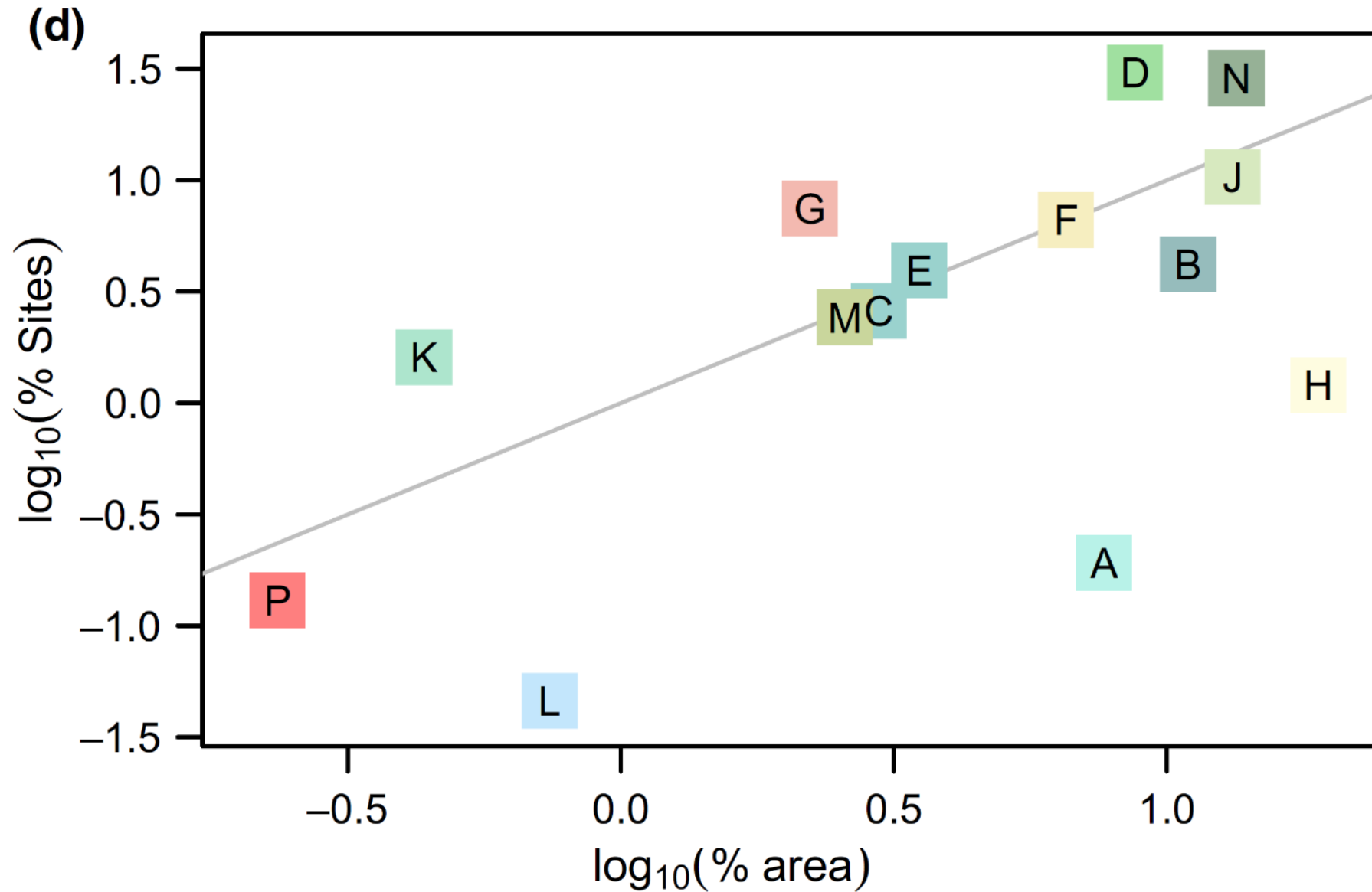
3.2 million records

> 26,000 locations

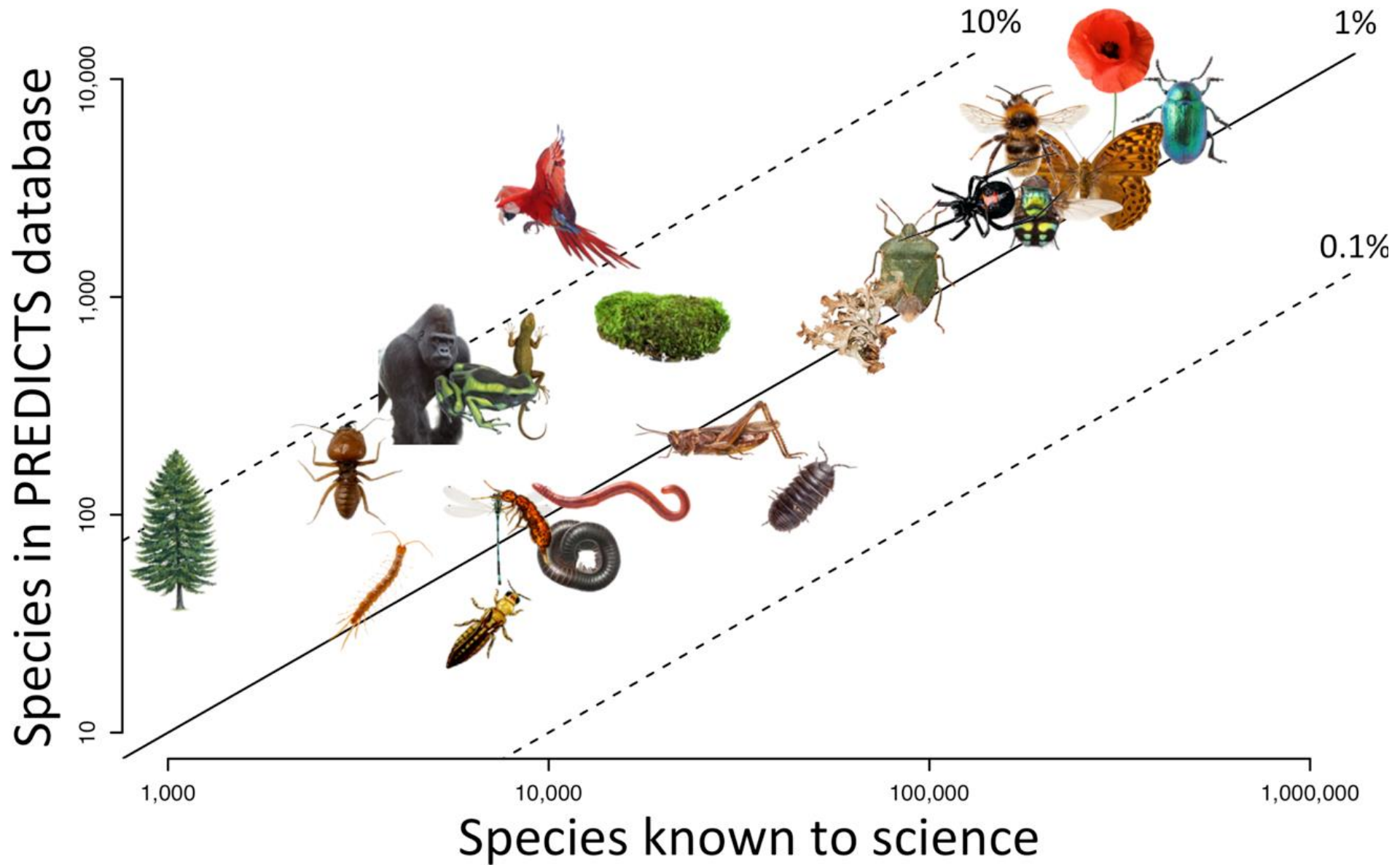
94 countries

> 47,000 species

Sites sampled in all biomes



Samples for > 2% of described species





Primary vegetation



Secondary vegetation



Plantations



Cropland

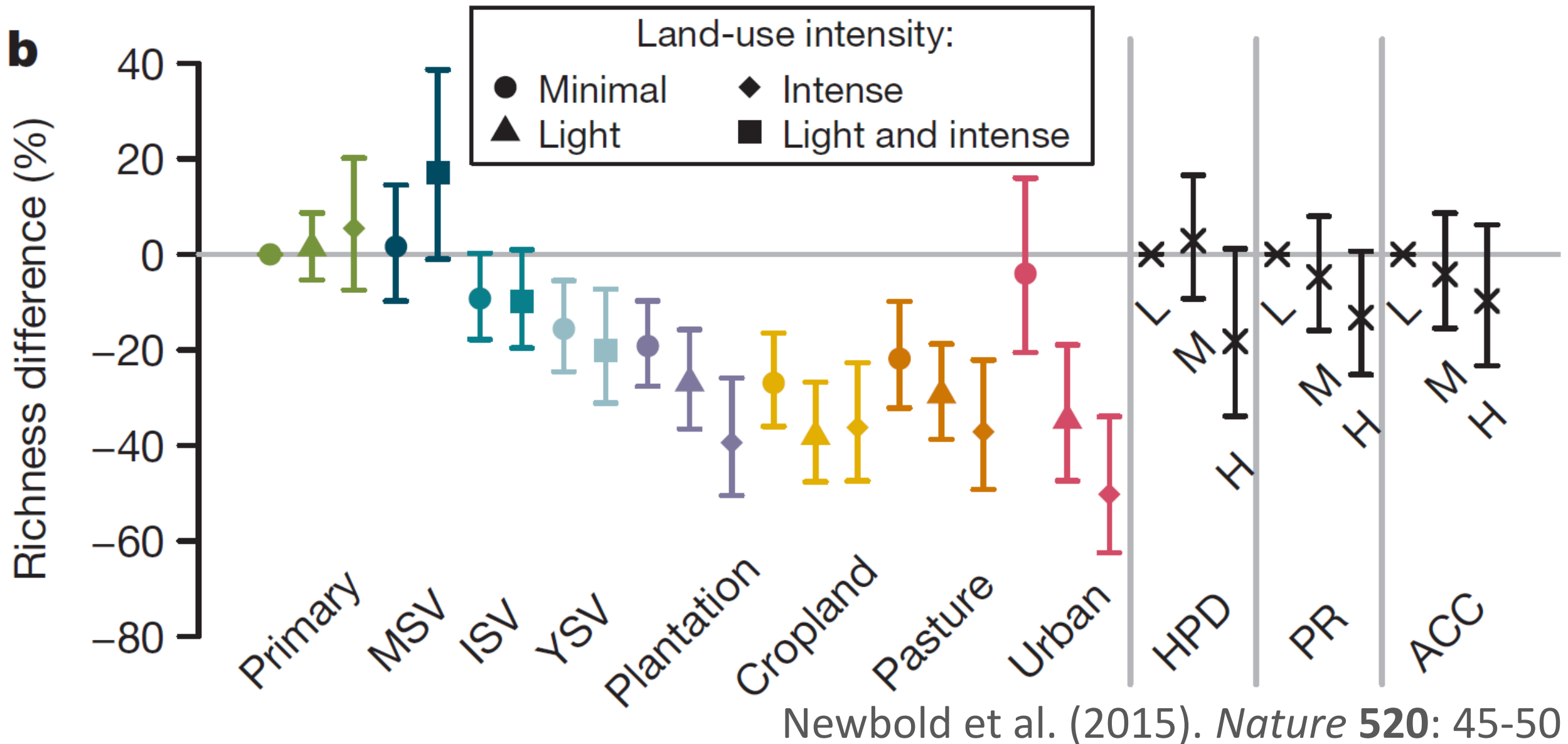


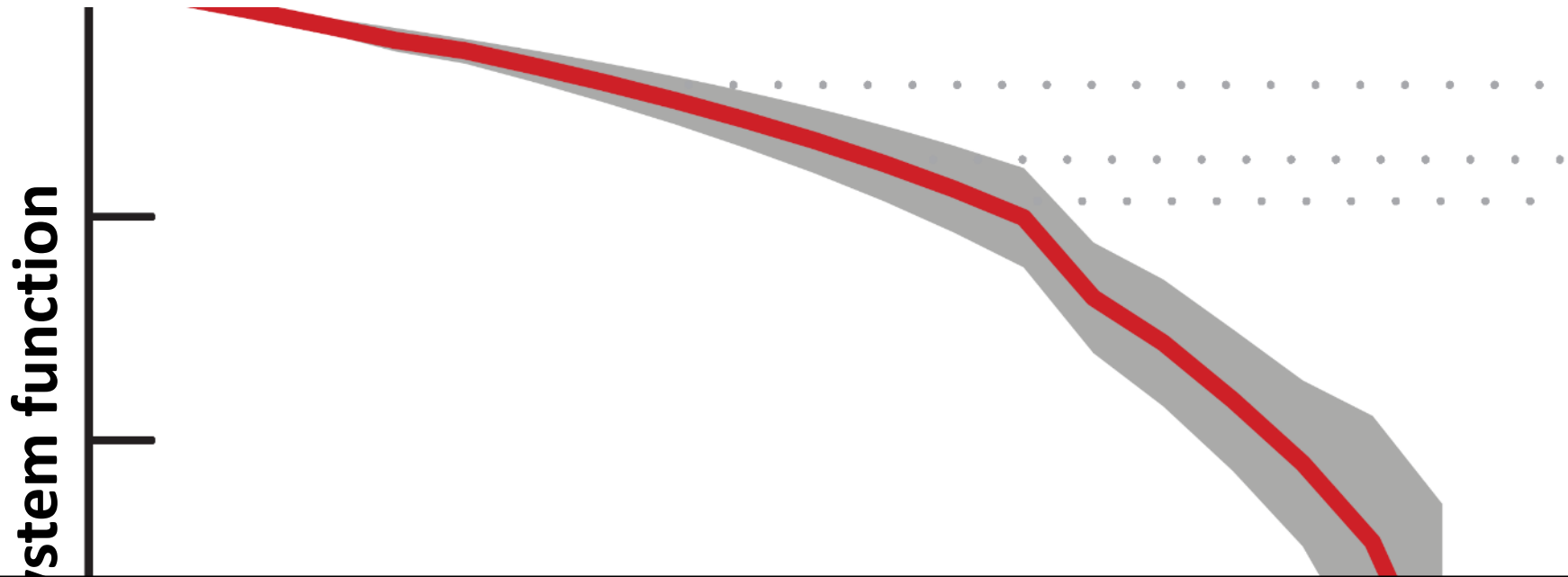
Pasture



Urban

> 50% loss in most impacted land uses

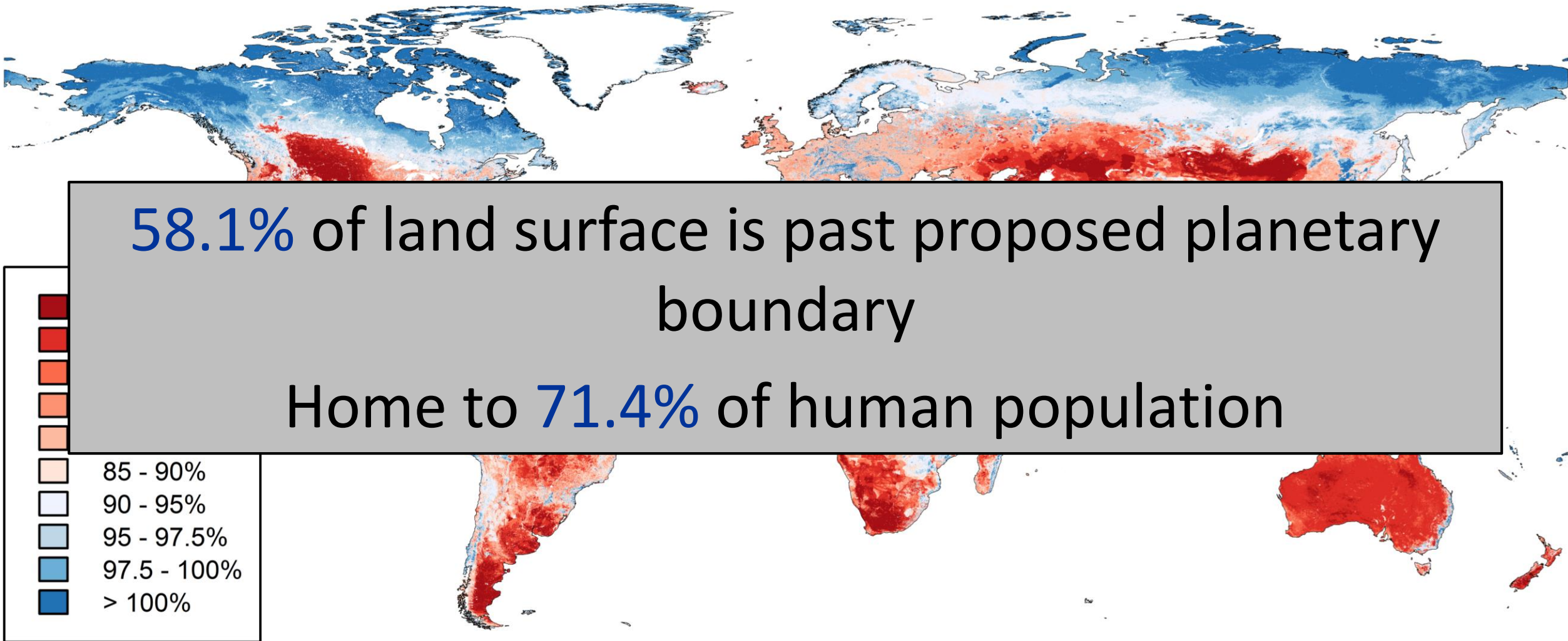




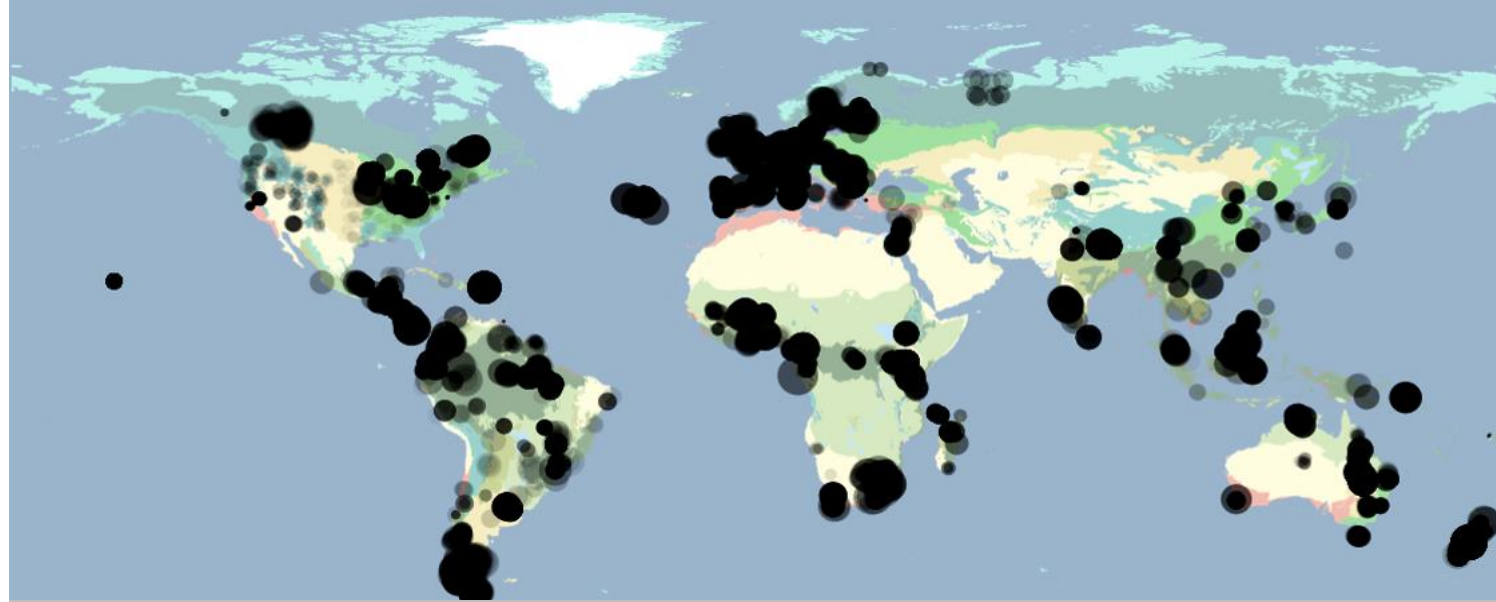
90% intactness of species abundance as proposed planetary boundary



Biodiversity lost

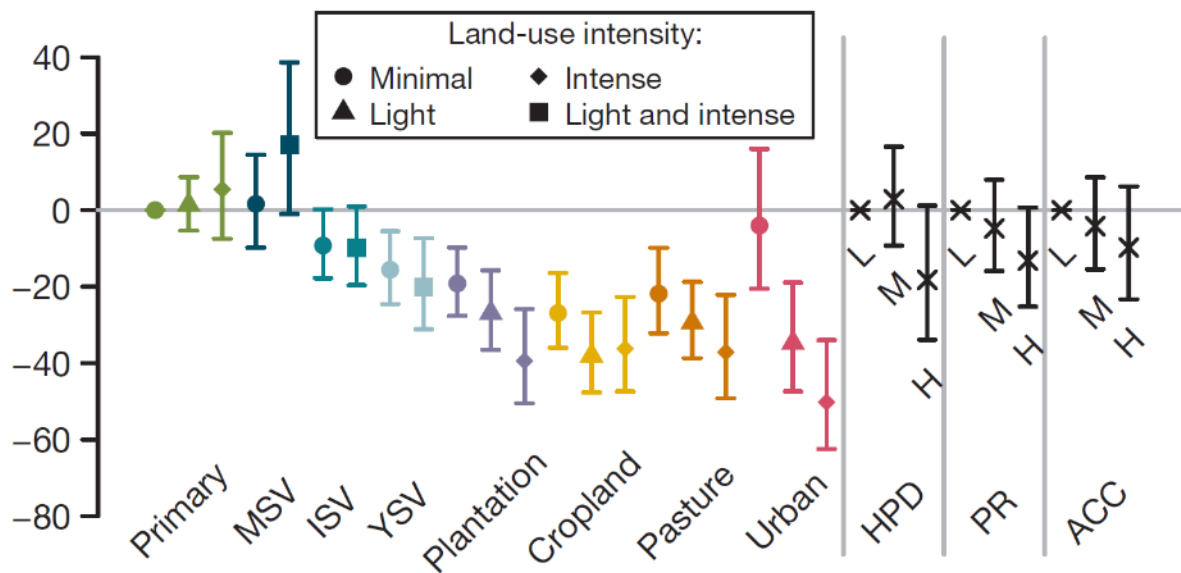


Newbold et al. (2016). *Science* **353**: 288-291



Representative

b



Quantitative

General



Biodiversity outcomes vary depending on
local context

Main contributors/funders



Andy Purvis, Natural
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Lawrence Hudson,
Natural History Museum



Jörn Scharlemann,
University of Sussex



