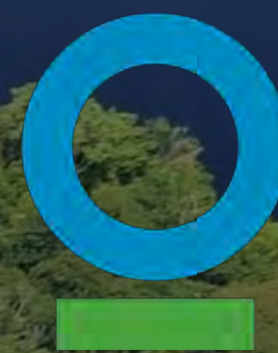


WHY PROTECT RIVERS?

(AND WHAT DOES PROTECTION EVEN MEAN?)

CONSERVATION
INTERNATIONAL



NAVIGATION

- Why should we care?
- What can we do?
- **What's next?**

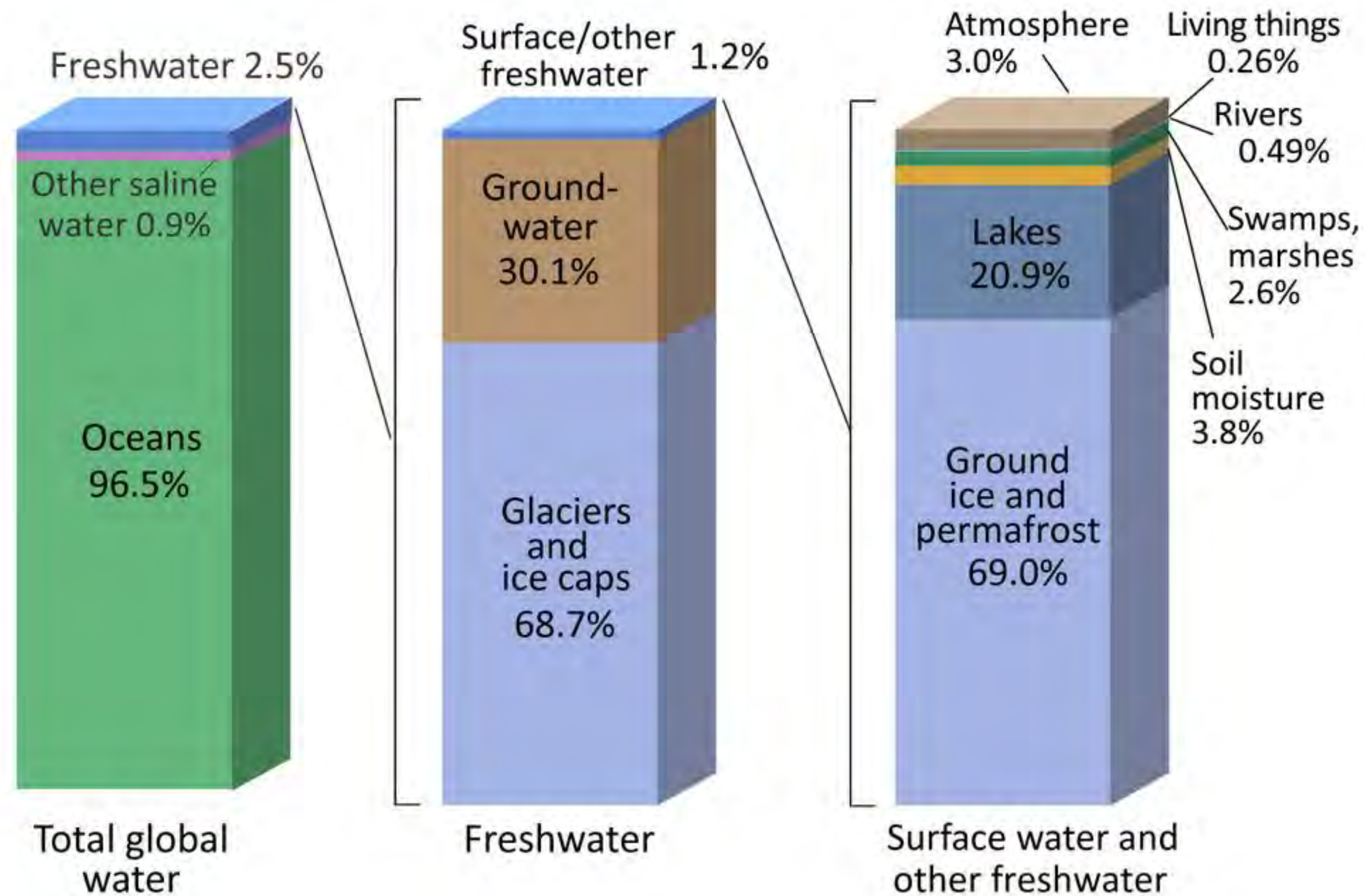


The image is a vertical composition. The top half shows a man in a white shirt and shorts sitting on a log in a river, fishing. The bottom half shows a large school of piranhas swimming in the water. The text "WHY SHOULD WE CARE?" is overlaid in the center.

WHY SHOULD WE CARE?



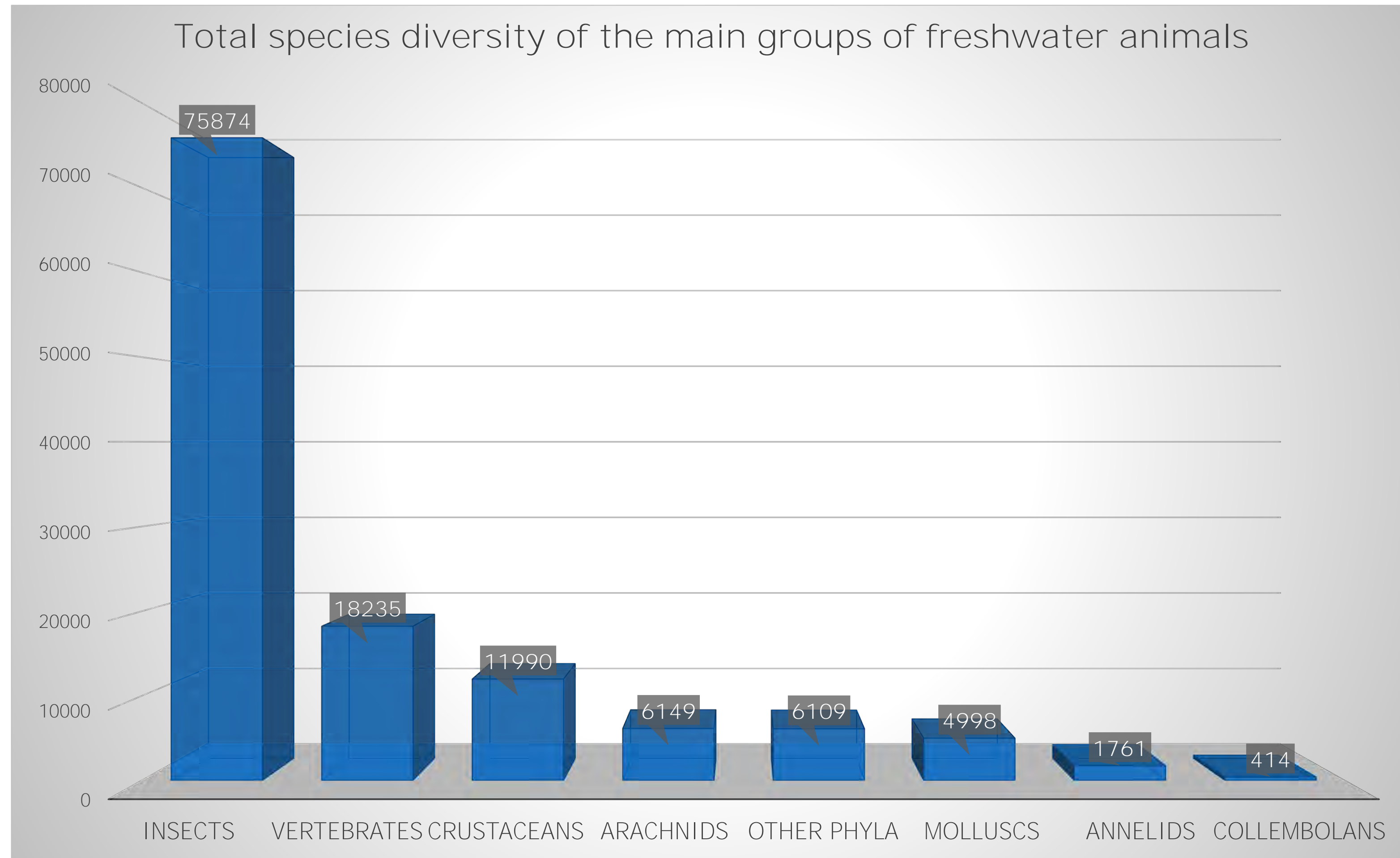
FRESHWATER ECOSYSTEMS ARE CONCENTRATED



Source: US Geological Survey,
Water Science School



FRESHWATER SPECIES ARE NUMEROUS



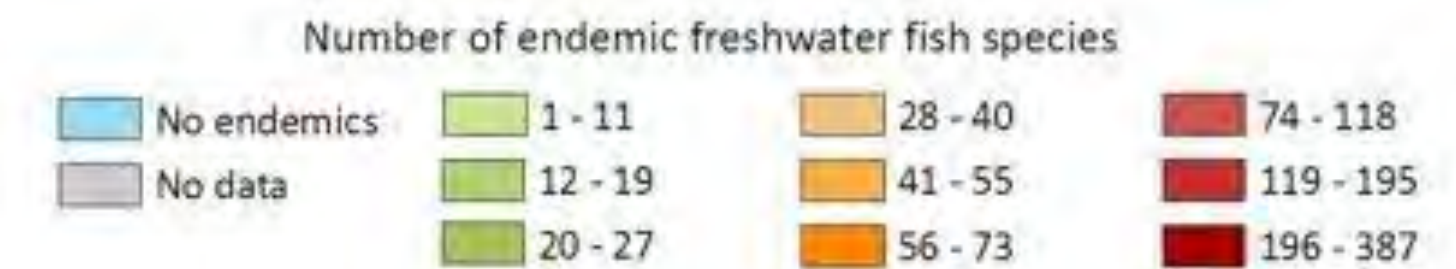
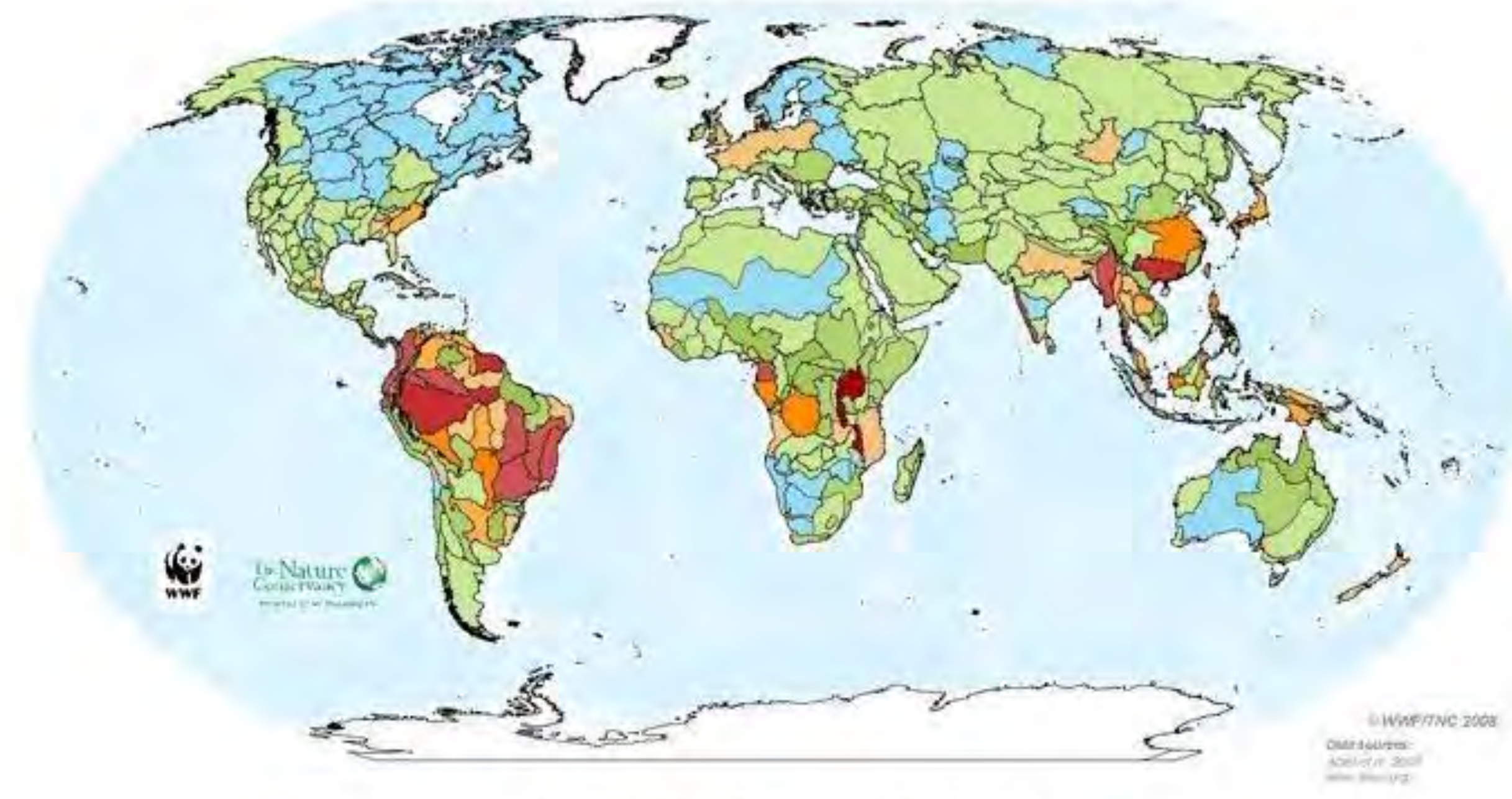
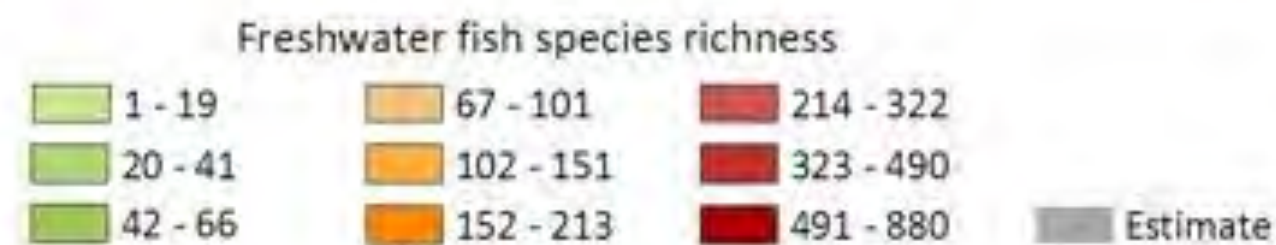
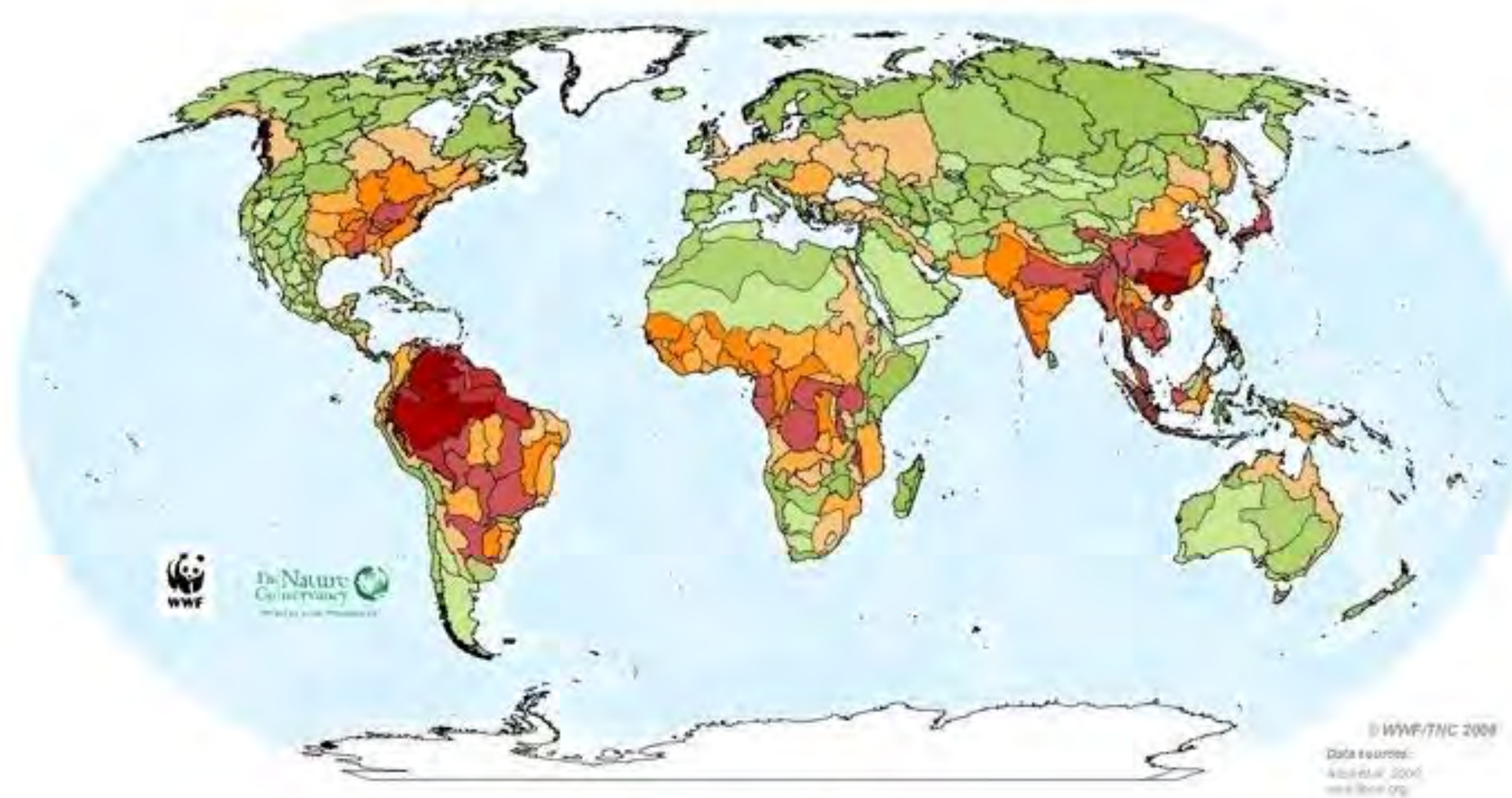
126,000 described animal species (excluding micro-organisms)

9.5% of all described animal species

40-45% of all fish species are freshwater



FRESHWATER BIODIVERSITY IS UNEVENLY DISTRIBUTED



Source: Abell et al. 2008



FRESHWATER HEALTH UNDERPINS HUMAN WELL-BEING...

Source: Millennium Ecosystem Assessment, Wetlands and Water, 2005

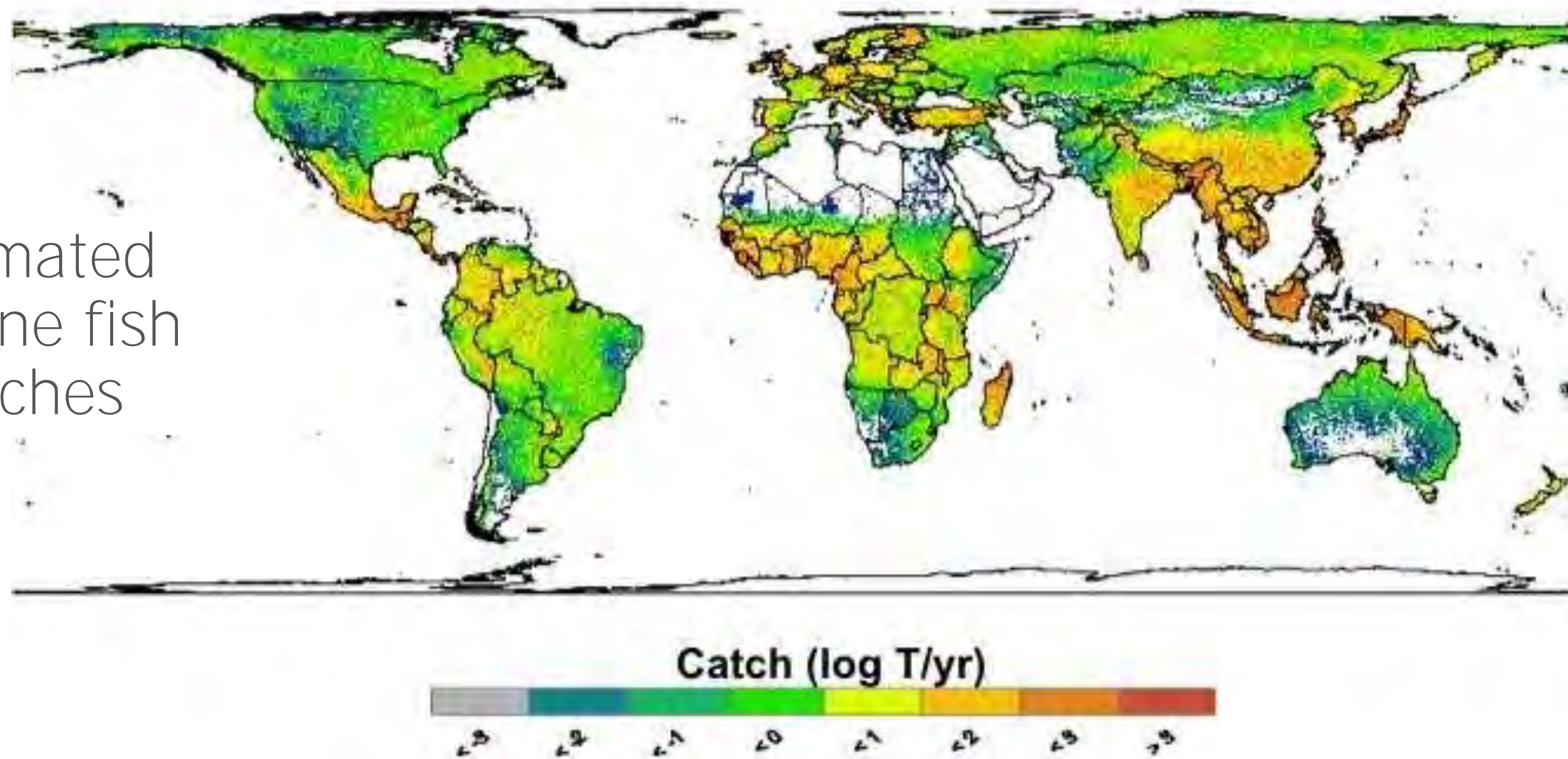


Table 1. ECOSYSTEM SERVICES PROVIDED BY OR DERIVED FROM WETLANDS

Services	Comments and Examples
Provisioning	
Food	production of fish, wild game, fruits, and grains
Fresh water ^a	storage and retention of water for domestic, industrial, and agricultural use
Fiber and fuel	production of logs, fuelwood, peat, fodder
Biochemical	extraction of medicines and other materials from biota
Genetic materials	genes for resistance to plant pathogens, ornamental species, and so on
Regulating	
Climate regulation	source of and sink for greenhouse gases; influence local and regional temperature, precipitation, and other climatic processes
Water regulation (hydrological flows)	groundwater recharge/discharge
Water purification and waste treatment	retention, recovery, and removal of excess nutrients and other pollutants
Erosion regulation	retention of soils and sediments
Natural hazard regulation	flood control, storm protection
Pollination	habitat for pollinators
Cultural	
Spiritual and inspirational	source of inspiration; many religions attach spiritual and religious values to aspects of wetland ecosystems
Recreational	opportunities for recreational activities
Aesthetic	many people find beauty or aesthetic value in aspects of wetland ecosystems
Educational	opportunities for formal and informal education and training
Supporting	
Soil formation	sediment retention and accumulation of organic matter
Nutrient cycling	storage, recycling, processing, and acquisition of nutrients
^a While fresh water was treated as a provisioning service within the MA, it is also regarded as a regulating service by various sectors.	

...ESPECIALLY FOR THE MOST VULNERABLE

Estimated
riverine fish
catches



Source: McIntyre et al. 2016





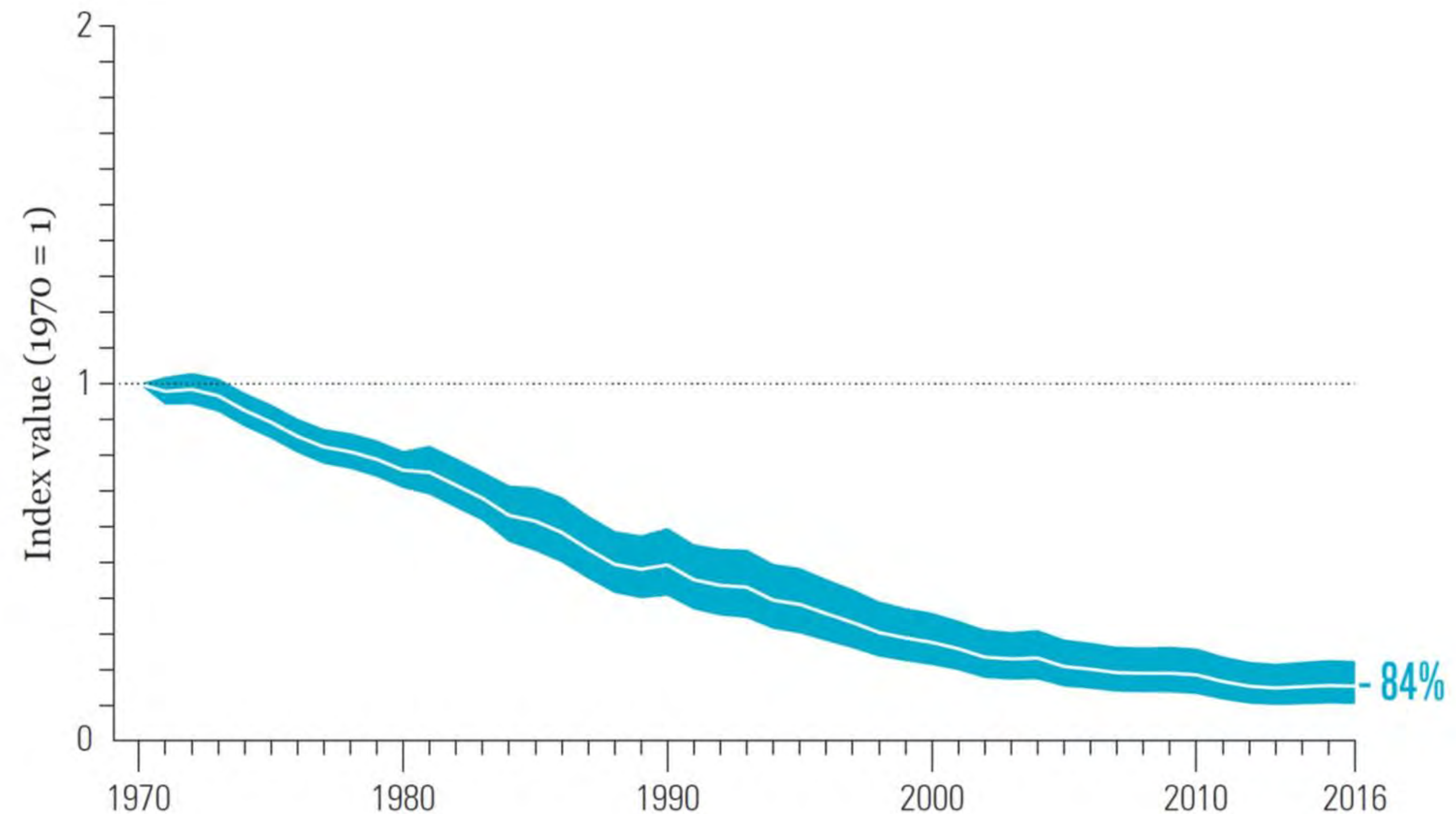
FRESHWATER BIODIVERSITY IS COLLAPSING

Figure 3: The Freshwater Living Planet Index: 1970 to 2016

The average abundance of 3,741 freshwater populations, representing 944 species, monitored across the globe declined by 84% on average. The white line shows the index values and the shaded areas represent the statistical certainty surrounding the trend (range: -89% to -77%)³⁸.

Key

-  Freshwater Living Planet Index
-  Confidence limits

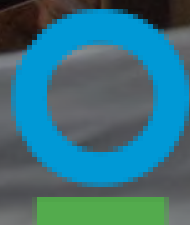


Source: WWF 2020 Living Planet Report

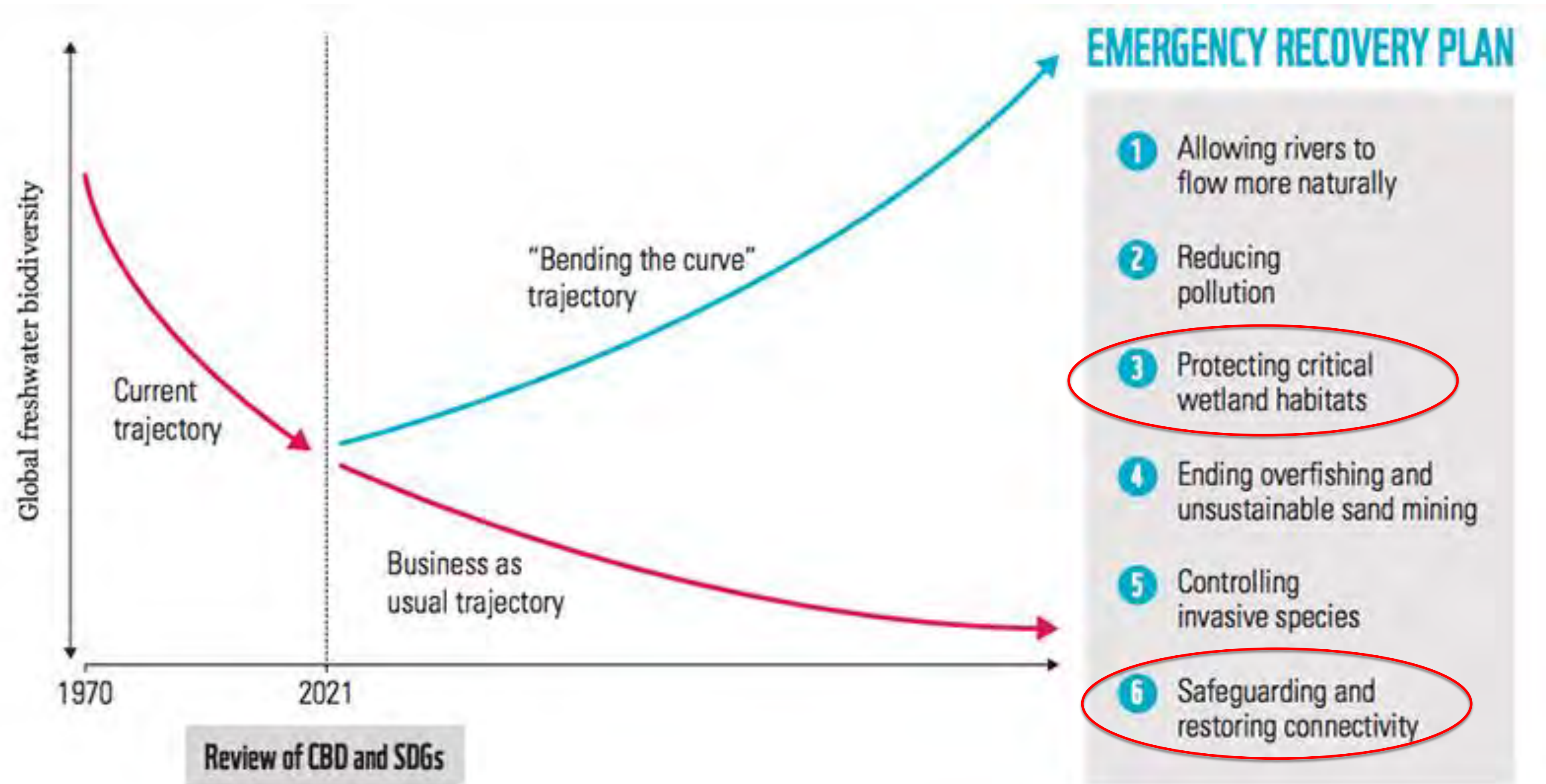




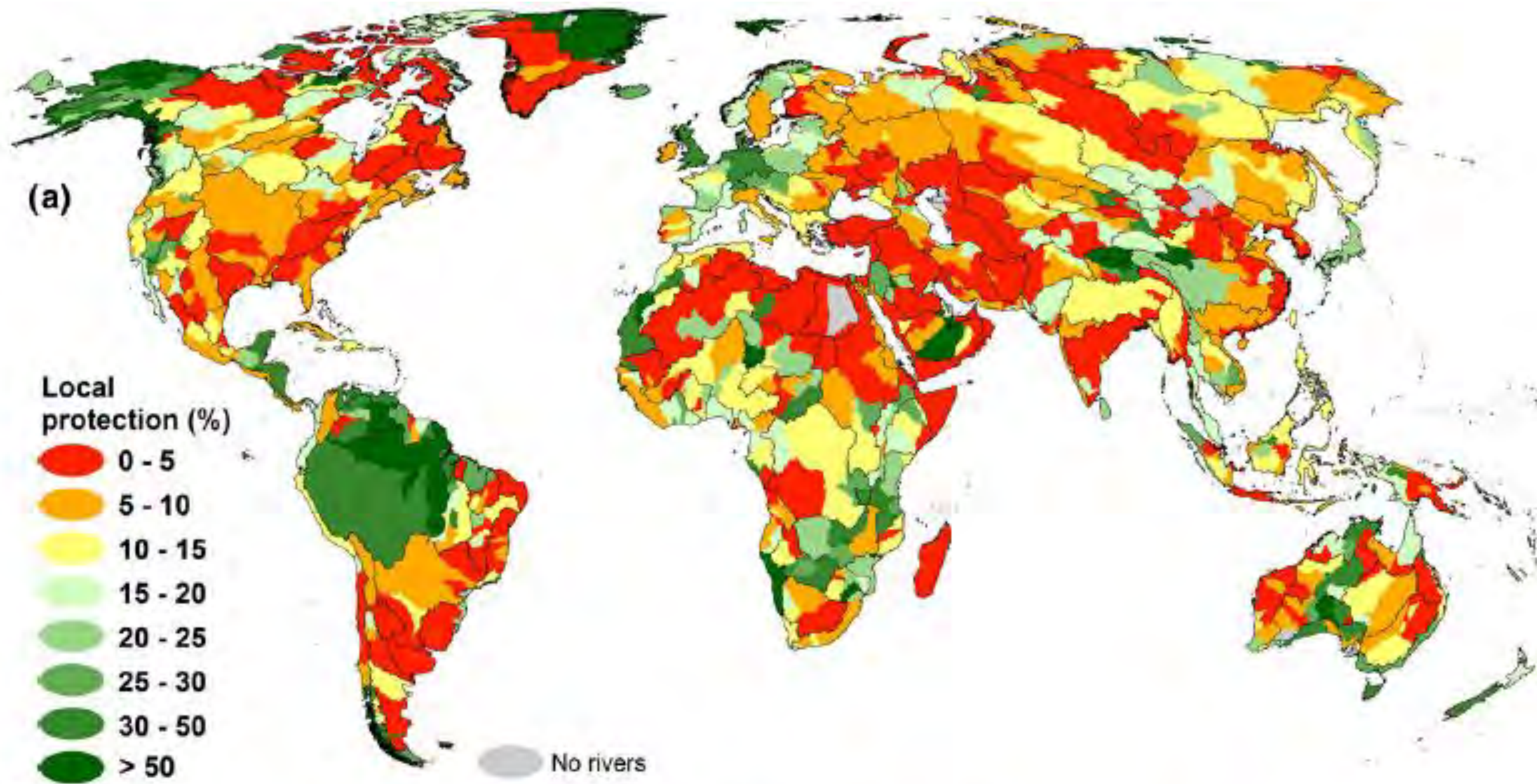
WHAT CAN WE DO?



SIX WAYS TO BEND THE CURVE



A PICTURE OF RIVER PROTECTION



Source: Abell et al. 2016



WHAT COUNTS AS PROTECTED?

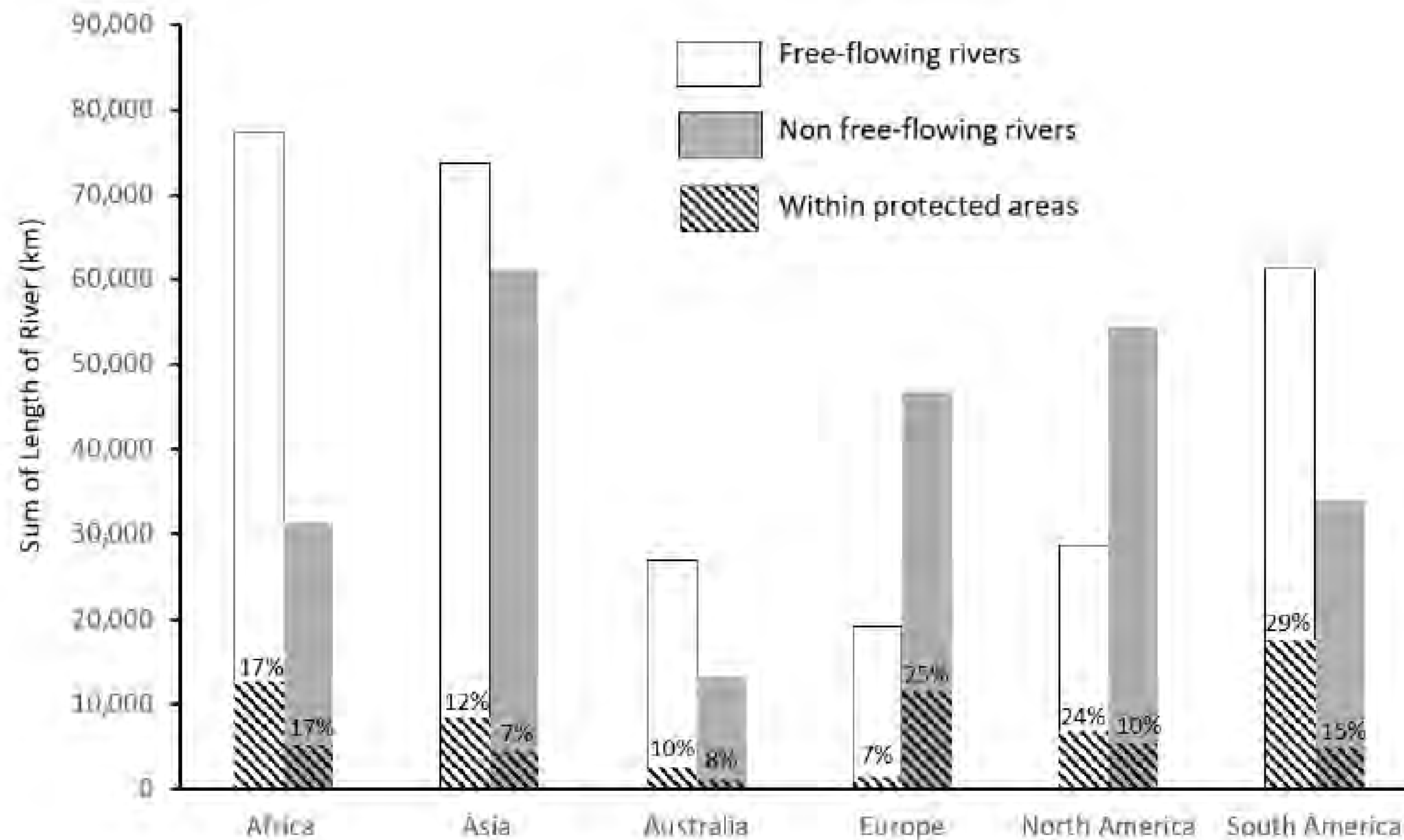
Table 1 Average local versus integrated protection levels (%) calculated globally, by continent, and for a selection of large river basins. Asia excludes European part of Russia; North America includes Central America and the Caribbean.

Spatial unit		Total protection	By streamflow size (m ³ /second)					
			0.1–1	1–10	10–100	100–1,000	1,000–10,000	> 10,000
Global	<i>Local</i>	16.0	15.5	16.8	16.9	16.7	15.2	11.6
	Integrated	13.5	13.9	13.8	11.2	9.8	9.5	9.6
Africa	<i>Local</i>	13.8	13.9	13.1	15.4	14.3	7.3	0.0
	Integrated	11.2	12.3	9.6	8.1	7.2	4.9	0.0
Asia	<i>Local</i>	10.8	11.0	10.7	10.6	8.3	7.5	7.1
	Integrated	8.9	9.7	8.3	6.2	3.7	3.1	4.6
Australia	<i>Local</i>	14.6	14.4	14.9	15.3	12.5	12.7	
	Integrated	12.1	12.5	12.1	10.4	6.9	9.5	
Europe	<i>Local</i>	13.1	12.2	14.3	15.0	17.6	18.8	
	Integrated	8.3	8.7	8.1	6.1	5.9	8.9	
Middle East	<i>Local</i>	9.2	9.8	7.6	6.0	7.3	0.0	
	Integrated	7.6	8.6	6.0	1.8	0.6	0.0	
North America	<i>Local</i>	13.5	12.9	14.5	15.0	14.8	15.3	9.2
	Integrated	10.8	11.1	11.4	8.7	5.8	6.3	3.3
South America	<i>Local</i>	29.3	28.8	30.4	29.5	30.5	27.3	17.6
	Integrated	27.5	27.8	28.4	25.3	24.2	20.5	16.2
Amazon	<i>Local</i>	44.2	44.7	44.1	44.8	43.9	33.5	18.4
	Integrated	42.5	43.8	42.3	40.1	37.3	27.9	17.4
Yukon	<i>Local</i>	33.2	33.2	34.2	36.1	19.5	29.0	
	Integrated	30.2	31.3	30.2	27.1	15.9	23.0	
Zambezi	<i>Local</i>	25.7	25.7	23.3	28.4	37.1	30.6	
	Integrated	21.5	23.2	17.5	14.9	26.9	26.8	
Mekong	<i>Local</i>	17.9	18.3	18.0	17.8	14.7	11.3	0.0
	Integrated	15.8	17.1	15.6	12.4	7.9	8.8	0.0

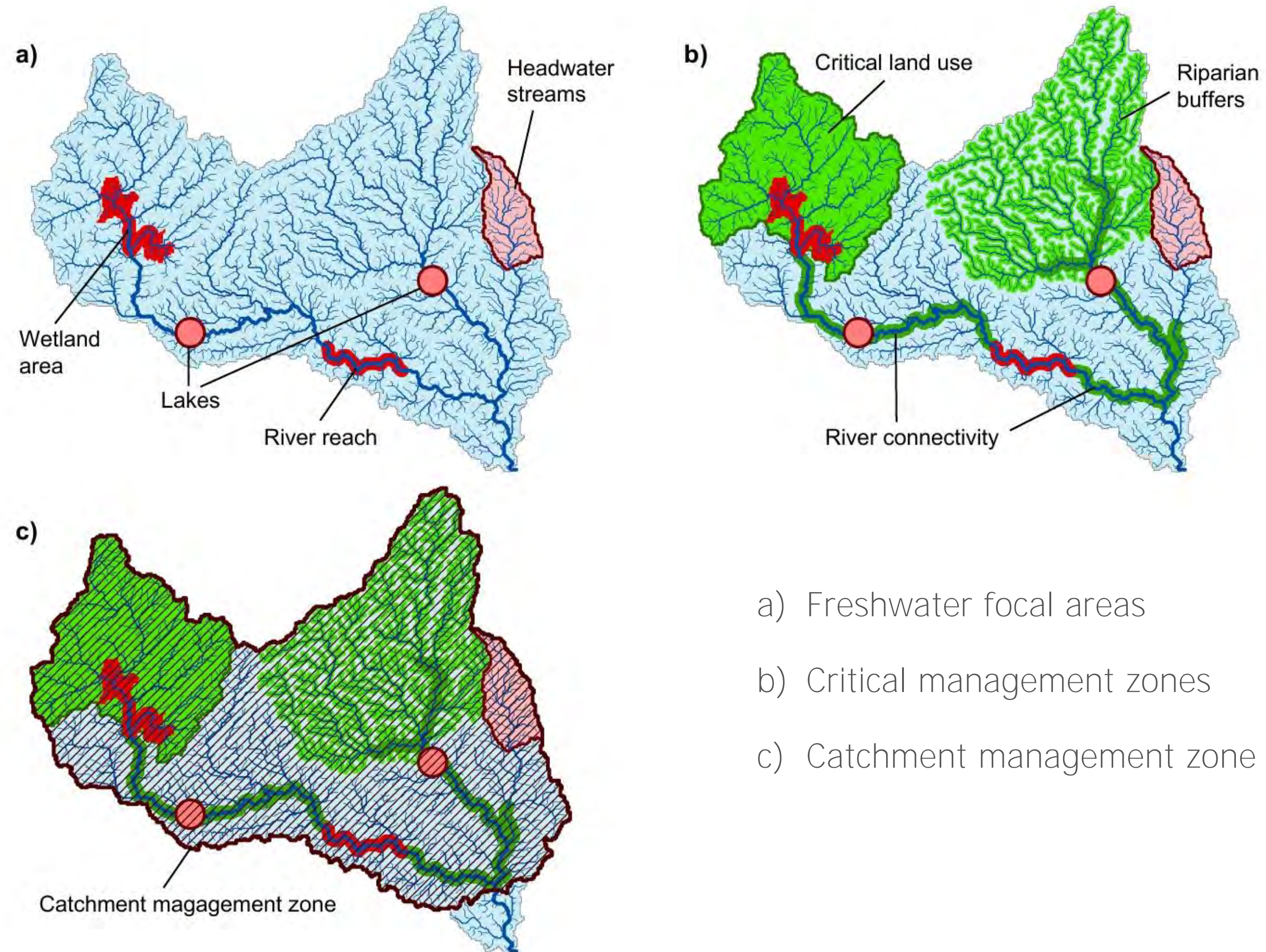
Source: Abell et al. 2016



WHAT NEEDS PROTECTION?



FROM PROTECTED AREAS TO PROTECTION AREAS

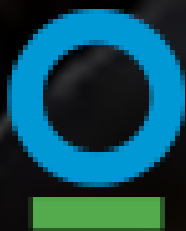


- a) Freshwater focal areas
- b) Critical management zones
- c) Catchment management zone





WHAT'S NEXT?



THE GLOBAL BIODIVERSITY FRAMEWORK

DISCOVER MORE ON OUR WORK FRESHWATER CALL FOR FRESHWATER ACTION: CBD OPEN LETTER



A CALL FOR FRESHWATER ACTION

Failure to elevate freshwater to the same priority as 'land and ocean' would be a fatal flaw in the new global framework for nature



https://wwf.panda.org/discover/our_focus/freshwater_practice/call_for_freshwater_action_cbd_open_letter/

FRESHWATER PROTECTION QUESTIONS

What
counts?

How do we
measure it?

How do we
implement
protections?



THANK YOU

CONSERVATION
INTERNATIONAL

