

ACCOUNTING FOR BIODIVERSITY: A BIT OF THE STORY SO FAR

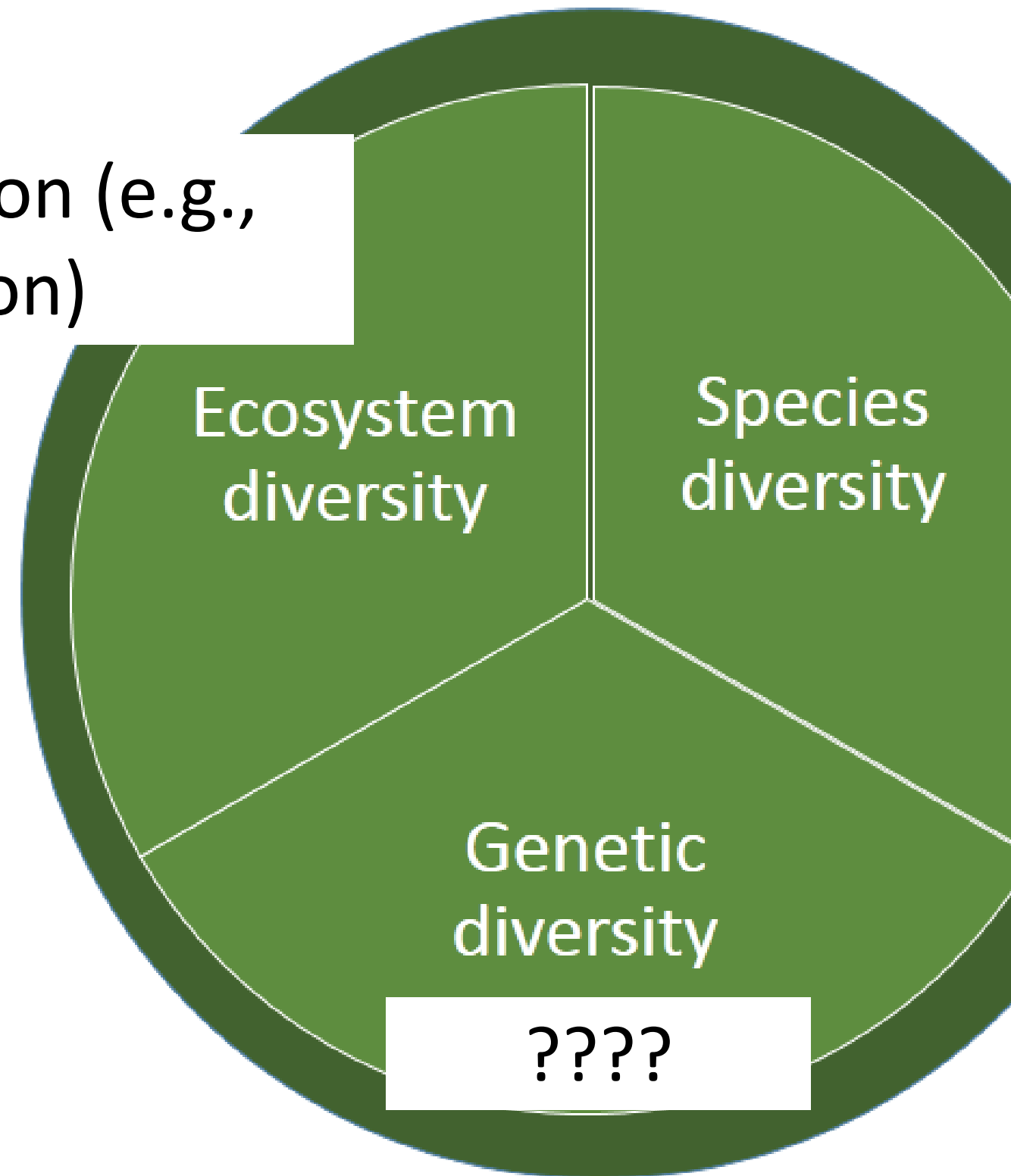
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Biodiversity & Measurement

- Based on 12 studies – Non exhaustive search!

Components of biodiversity

Direct observation (e.g., Earth Observation)



Direct observation (e.g., Species census)

Habitat based (Individual SDM, Discrete Community, Continuous Community / GDM)

Species Measurement: 3 Aspects

- Abundance of species is often the main aspect for ecosystem services
- Richness and evenness are often used to measure aspects of condition but do not directly inform on abundance.

Species name	Population x 10	Population in an ecosystem	Population / 10
Woodpecker	500	50	5
Grouse	1500	150	15
Goshawk	100	10	1
Great Horned Thrush	100	10	1
Wood Thrush	600	60	6
Broad-winged Hawk	100	10	1
Barred Owl	100	10	1
Chaffinch	2000	200	20
Jay	400	40	4
Blackcap	700	70	7
Total Abundance	6100	610	61
Species Richness	10	10	10
Evenness (Simpsons Index)	0.80	0.80	0.80

Biodiversity / Species Accounts

Where	Limburg, NL	San Martin, Peru	Victoria, Aus.	Uganda	EU
Who	WUR	Conservation International	ANU	UNEP-WCMC / IDEEA	UNEP-WCMC / EEA
How	Direct	Habitat	Habitat	Habitat	Direct
What	Abundance and richness (plants, birds, butterflies, dragonflies)	Extent KBA Suitable habitat (monkeys) GDM	Hollow bearing trees (Suitable habitat for Possums)	Suitable habitat (Chimps, Elephants, NTFPs)	Bird abundance, richness and evenness
Why	Conservation & Condition trends	Conservation trade-offs	Conservation trade-offs	Ecosystem services	Condition (for biodiversity)

Ecosystem Extent Accounts

Where	San Martin, Peru	Sweden	KZN, South Africa	Uganda
Who	Conservation International	Statistics Sweden	SANBI / Stats SA	UNEP-WCMC / IDEEA
How	Direct	Direct	Direct	Direct
What	Extent (abundance) of natural ecosystems	Extent (abundance) high nature value land & ownership	Extent (abundance) of natural vegetation	Extent (abundance) of natural vegetation
Why	Ecosystem services (I think)	Conservation responsibilities	Distance from ecological thresholds	Ecosystem services

Ecosystem Condition Accounts

Where	UK	Southern Palawan, Philippines	Mexico
Who	ONS	WAVES	INEGI / PBL
How	Direct	Direct	Habitat
What	Bird Abundance Index	Marine species richness, evenness and abundance	Mean Species Abundance
Why	Condition trend	Land management impacts on coastal ecosystems	Condition trend

Ecosystem Services Accounts

Where	EU	Andalusian Forests, Spain
Who	JRC	RECAMAN project
How	Habitat	Direct & Habitat?
What	Suitable habitat for pollinators	Threat status wild biodiversity
Why	Physical and monetary ecosystem service values	Monetary ecosystem service values

#WeCanMakeChange

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