

Mental models of sustainability: the degrowth doughnut

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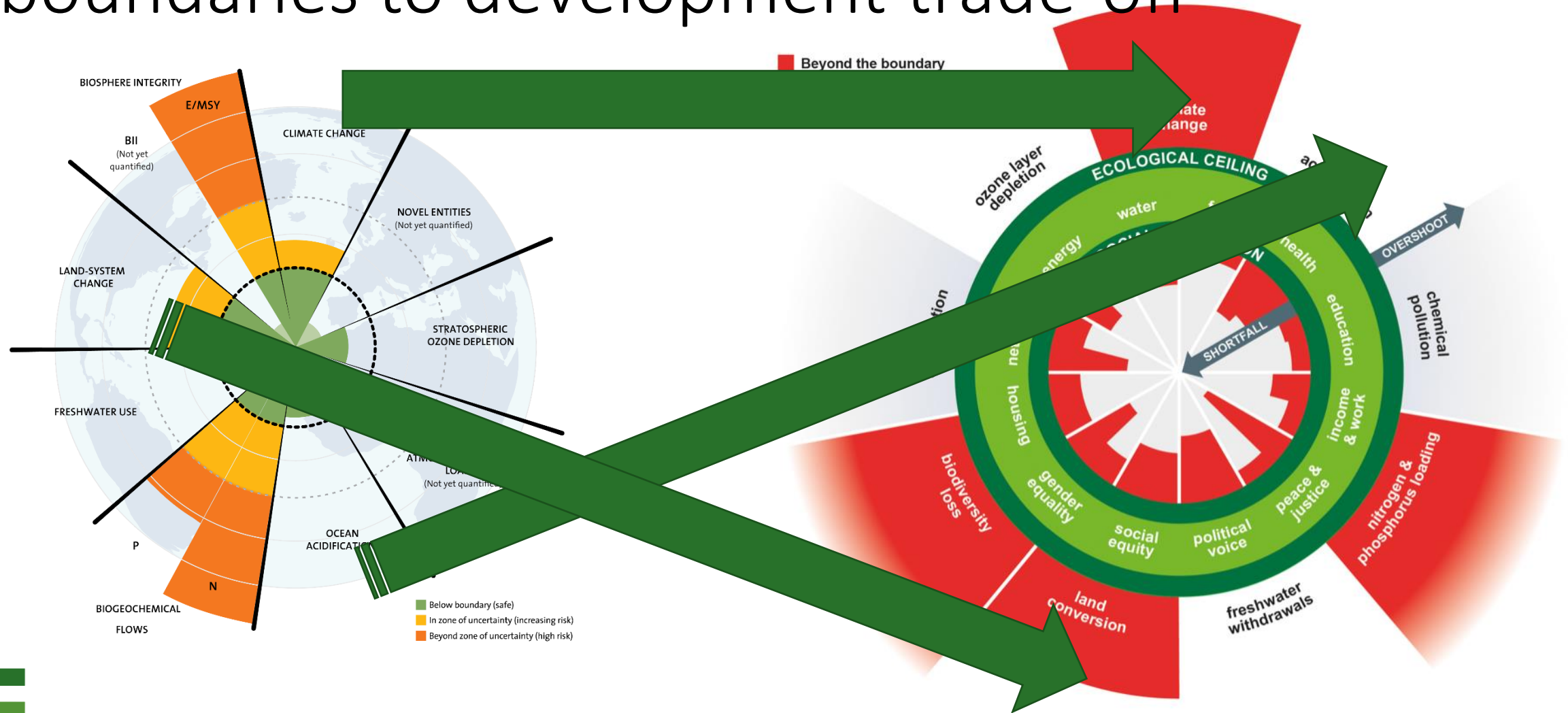


ISEE-ESEE-DEGROWTH 2021

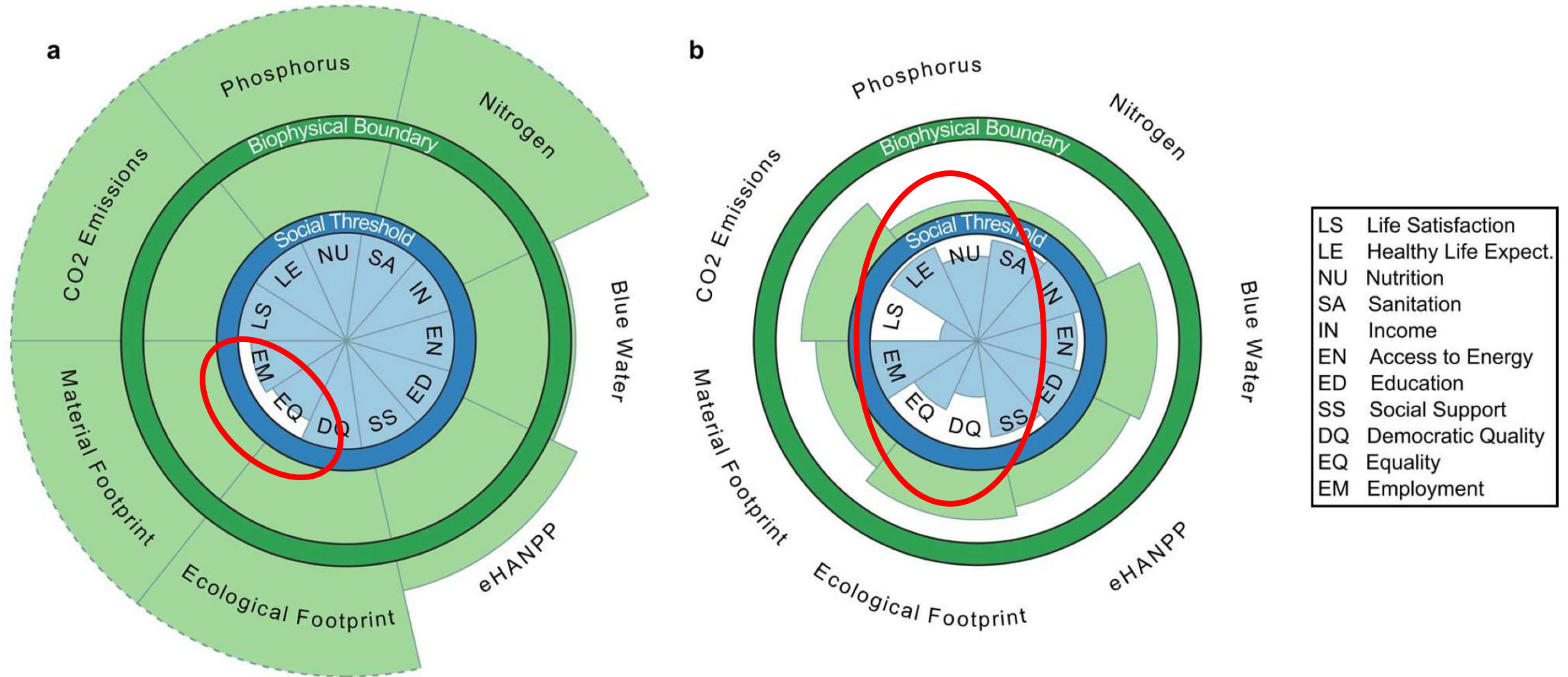
Online Joint Conference
5-8 July 2021

The social resilience of Croatian society in the midst and aftermath of the COVID-19 pandemic - SOCRES

Historically, from planetary boundaries to development trade-off



United States and Sri Lanka



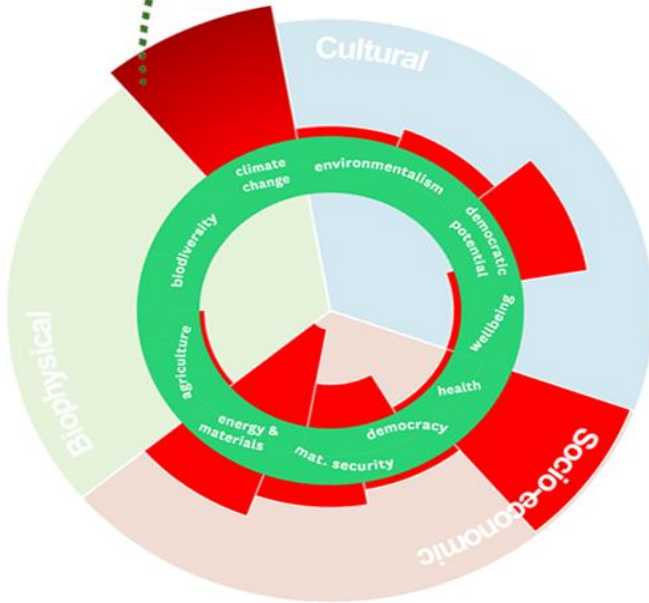
O'Neill et al, 2018



CO2 emissions: bad

RAISE/INCREASE
/GROW

REDUCE



Croatia

Per capita energy
use: good



Constructive vs. principle theories → Causal vs. relational modelling

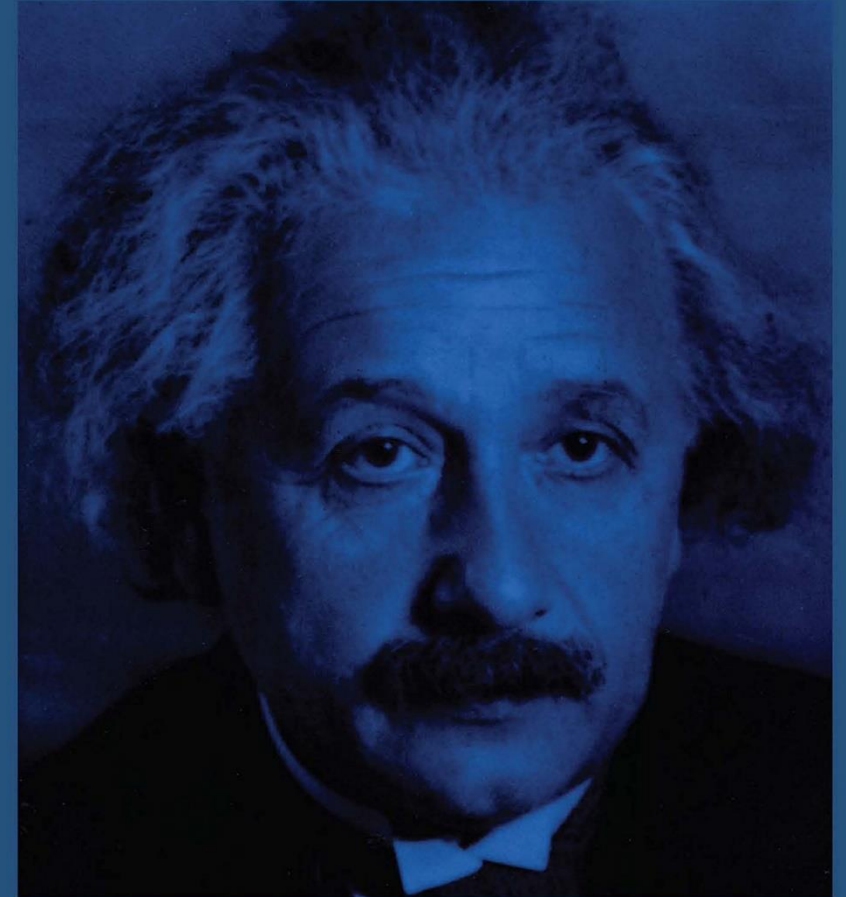
[the] conservation of energy predicts that a stream of water cannot flow uphill. But the conservation of energy by itself is powerless to predict what will be the **actual course** of a stream of water, [...]

and in precisely the same way the [principle of relativity] is powerless to predict what will be the [exact future path of a planet]. Before this or any other **positive gravitational predictions** can be made, **additional hypotheses** must be introduced. (Jeans 1921, p. 793)

The principle of relativity [. . .] is not to be conceived as a “complete system,” in fact, not as a system at all, but merely as a heuristic principle. . . . It is only by **requiring relations between otherwise seemingly unrelated laws** that the theory of relativity provides additional statements. (Einstein [1907] 1989, pp. 236–37)



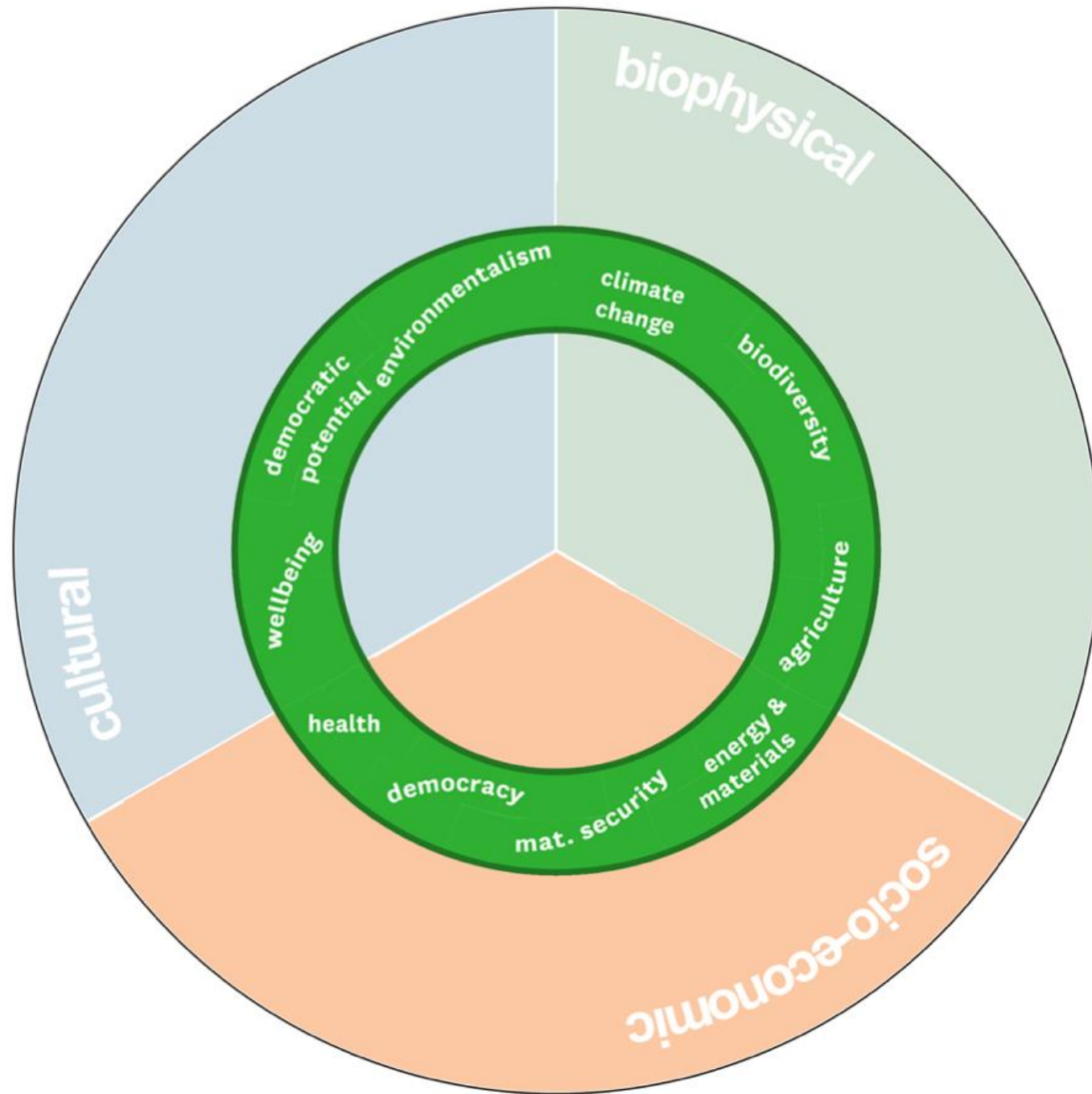
EINSTEIN H. A. LORENTZ
H. WEYL
H. MINKOWSKI



THE PRINCIPLE OF RELATIVITY

A COLLECTION OF ORIGINAL PAPERS ON THE SPECIAL AND
GENERAL THEORY OF RELATIVITY. NOTES BY A. SOMMERFELD





overshoot ▲



▼ shortfall



overshoot ▲



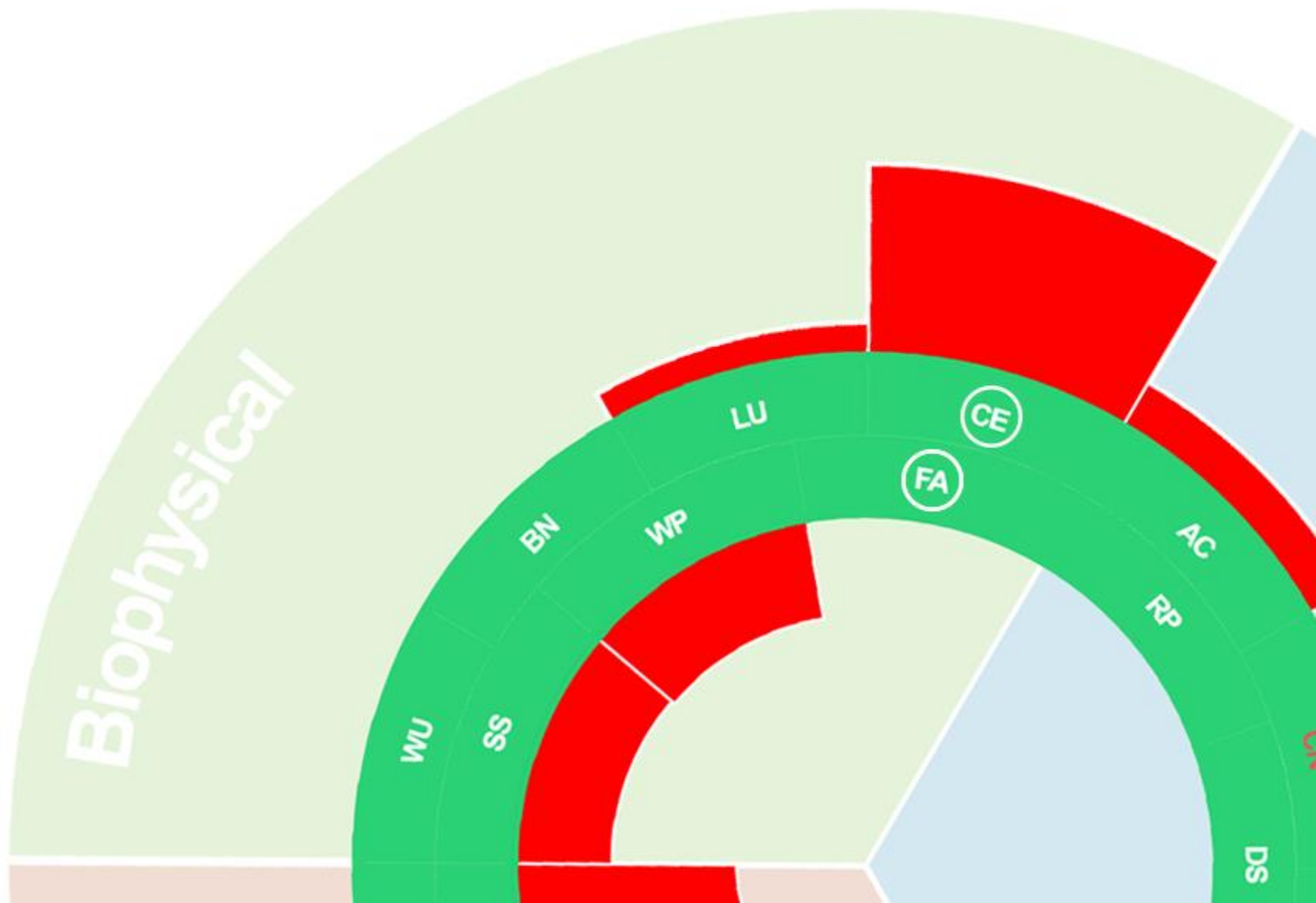
▼ shortfall



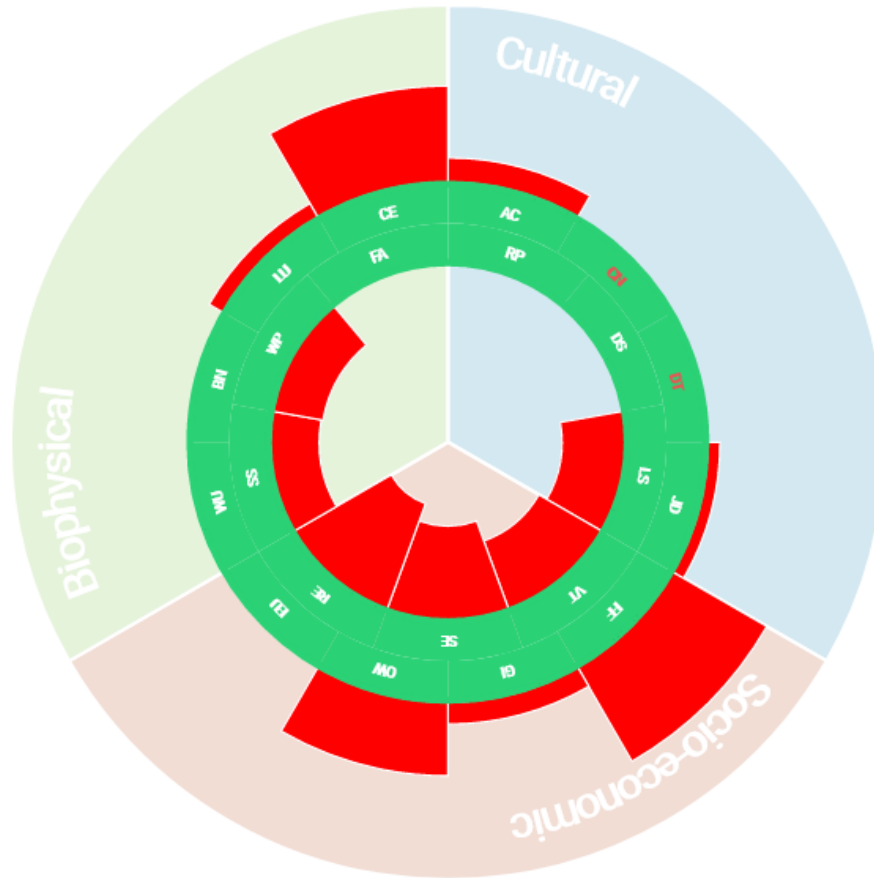
▲ overshoot



▼ shortfall

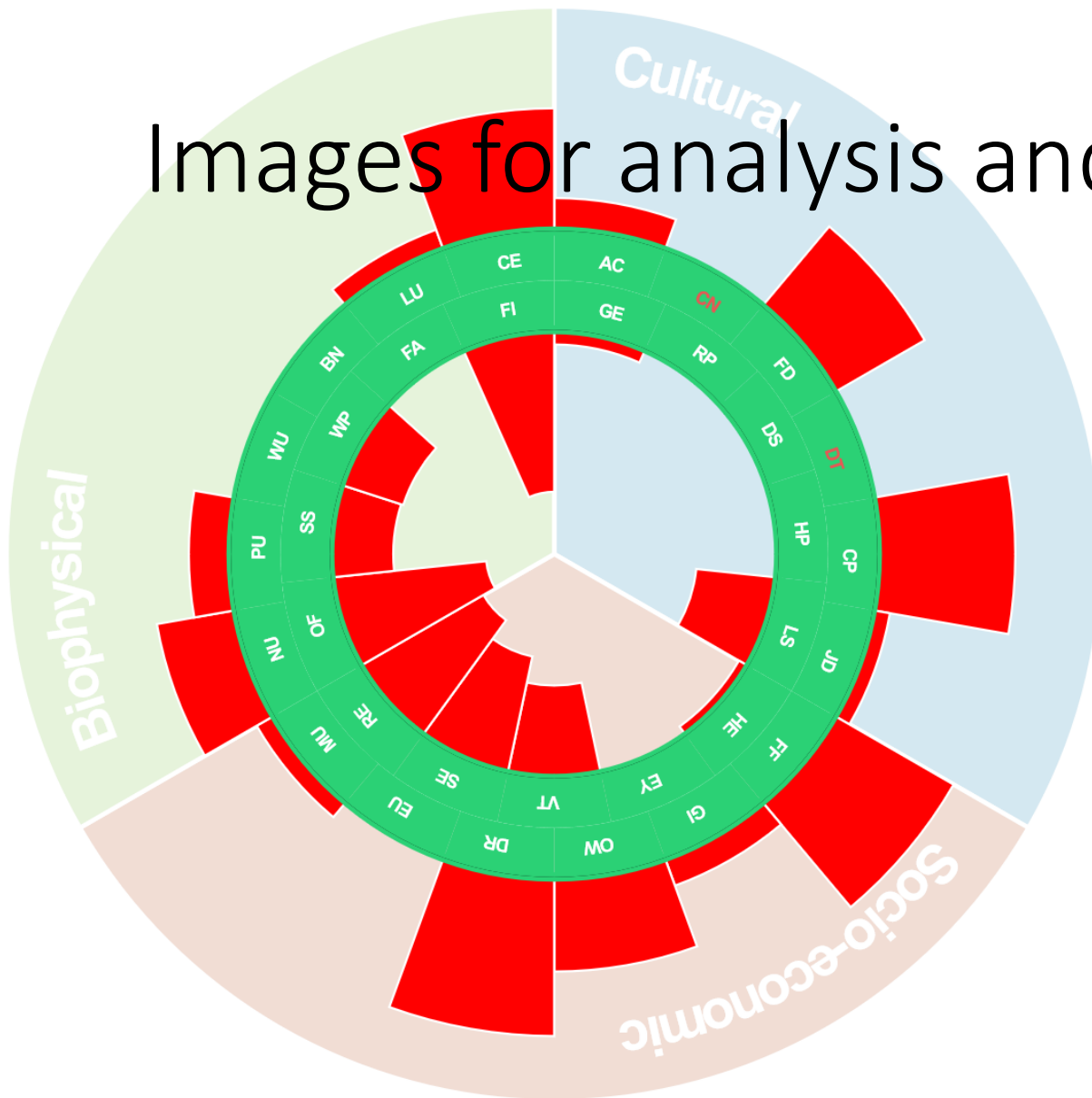


Croatia

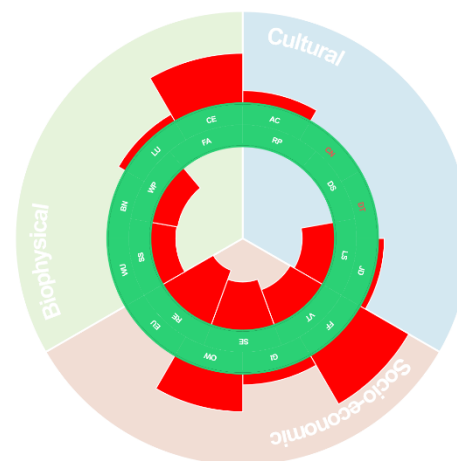


THEME	ON/OFF	ABBR.	NAME
Agriculture			>
Biodiversity			>
Climate Change			>
Democratic Potential			>
Environmentalism			>
Well-being			>
Democracy			>
Energy & Materials			>
Health			>
Material Security			>

Images for analysis and comparison...



Croatia



Croatia

$$IV = \frac{c - x}{r}$$

IV = doughnut index value

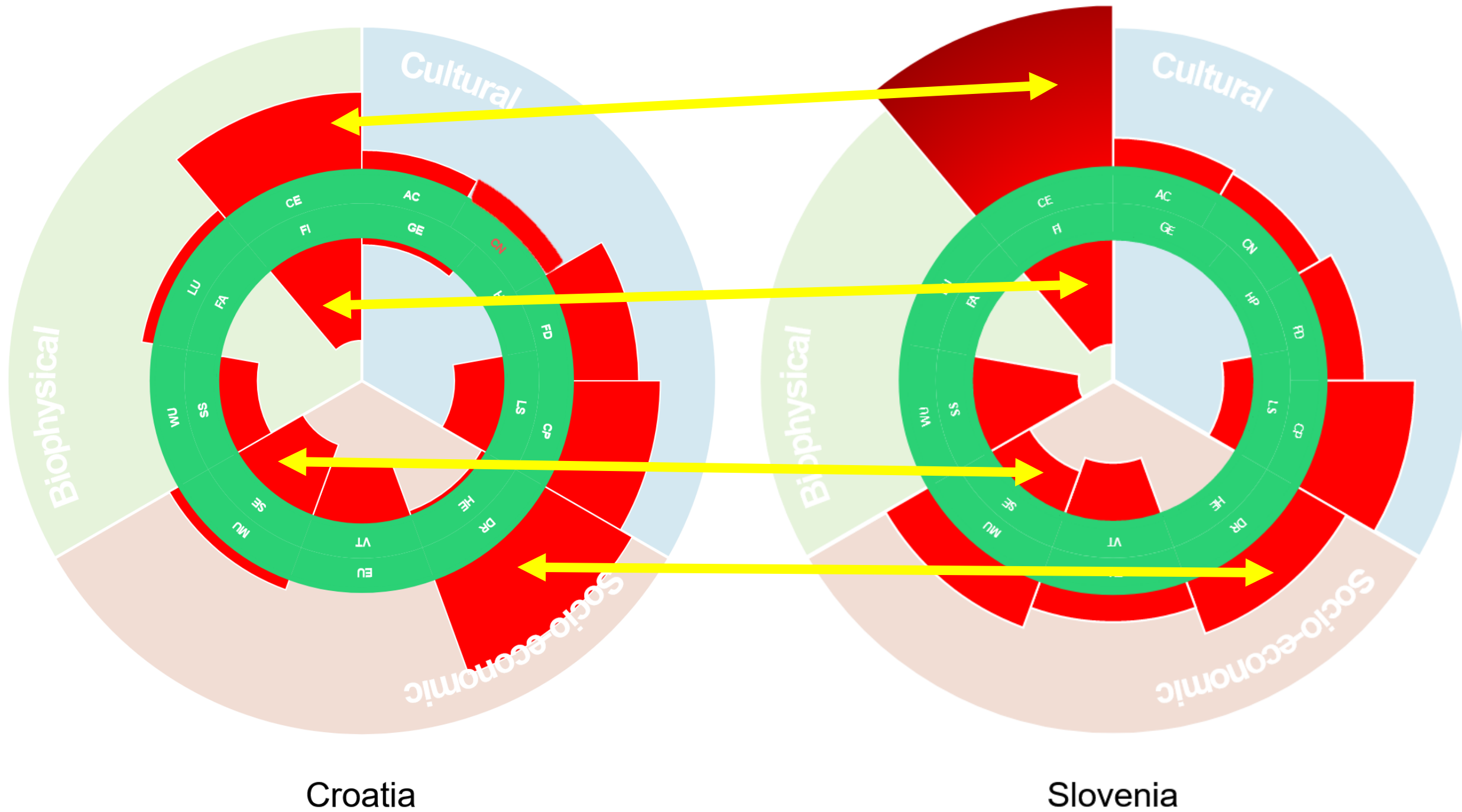
c = constant (threshold or boundary)

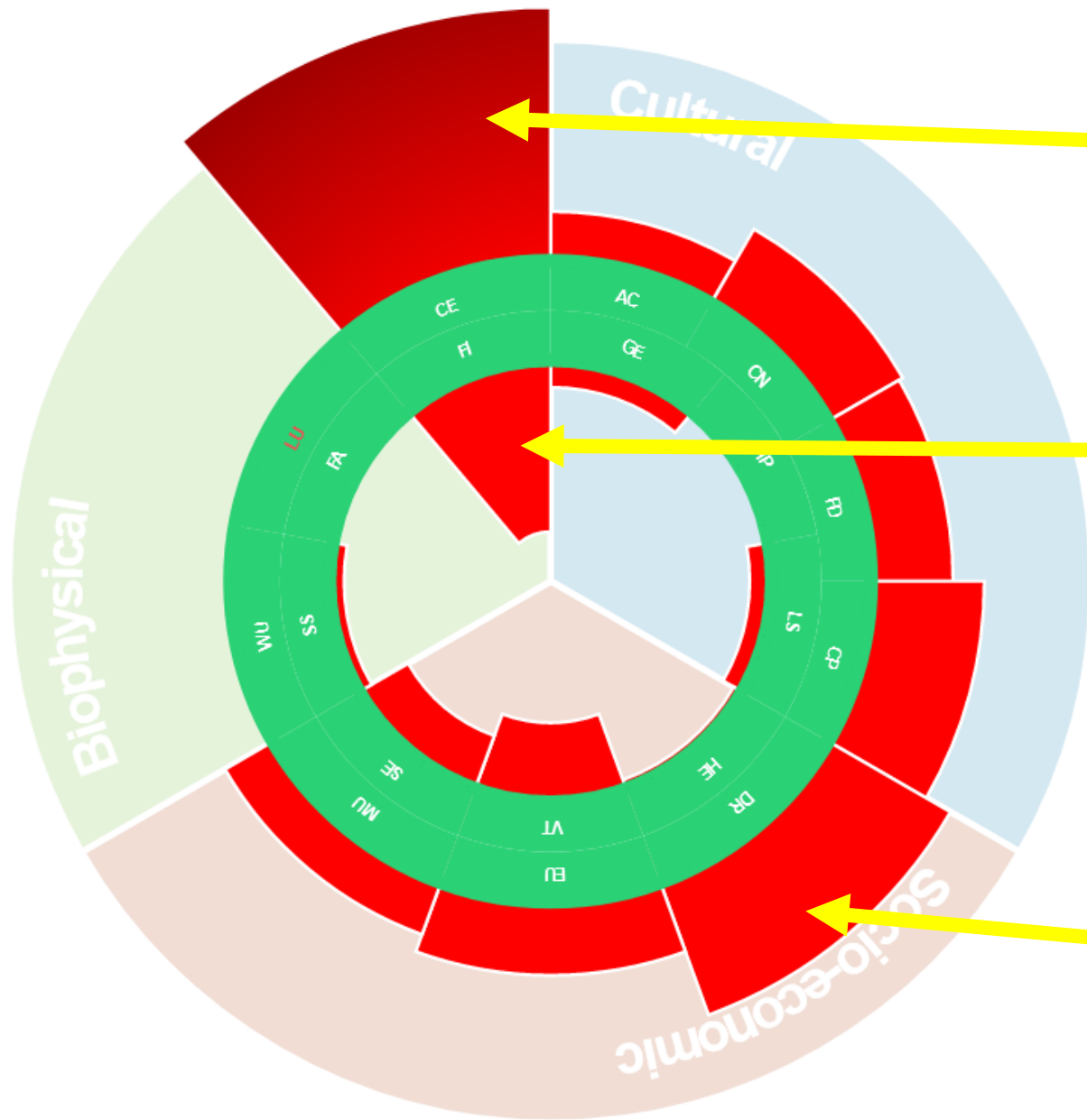
x = indicator input parameter

r = range

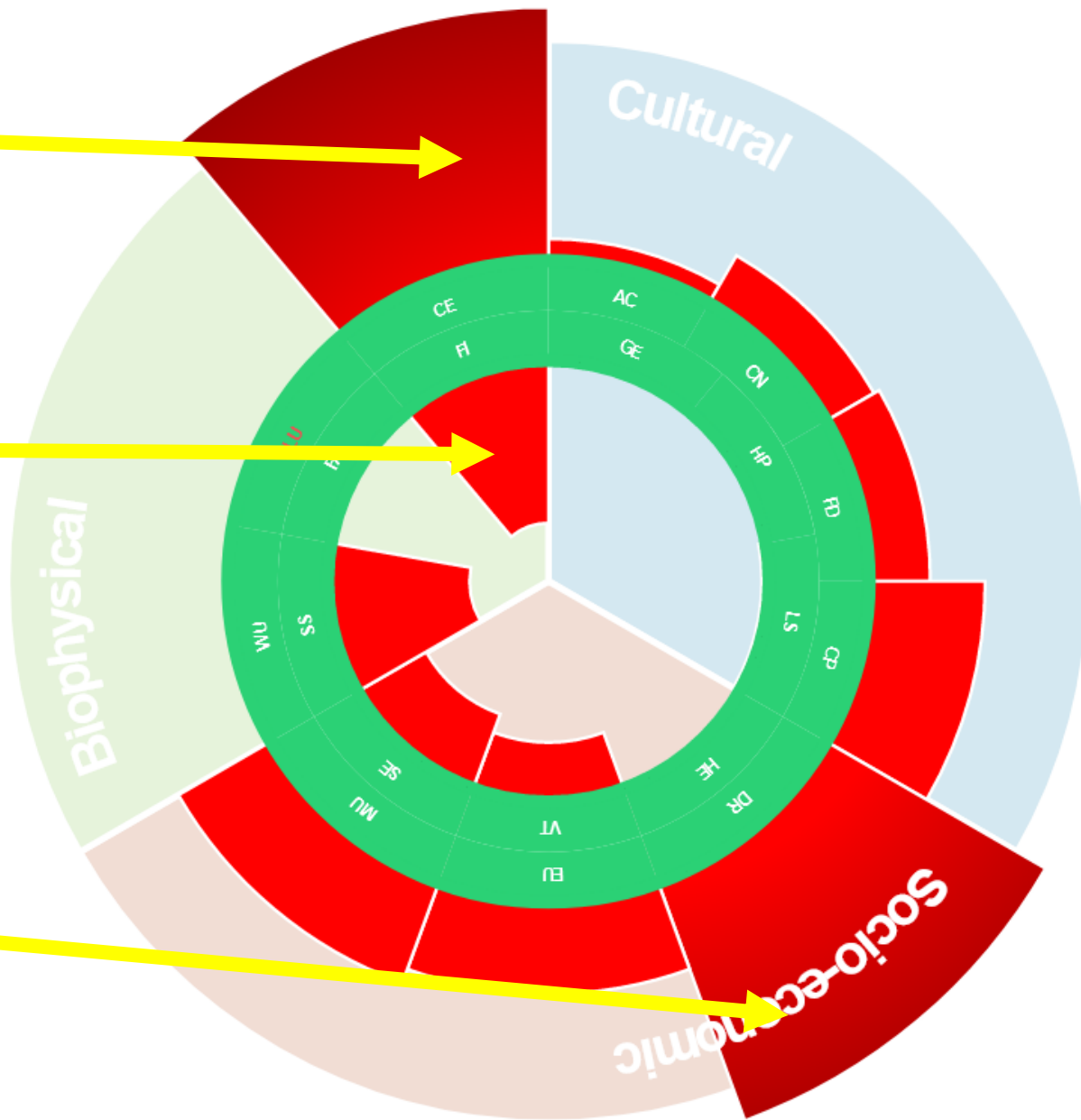
$Index\ Value \leq 0 \rightarrow Index\ Value = 0$

$Index\ Value \geq 0 \rightarrow Index\ Value = -0$

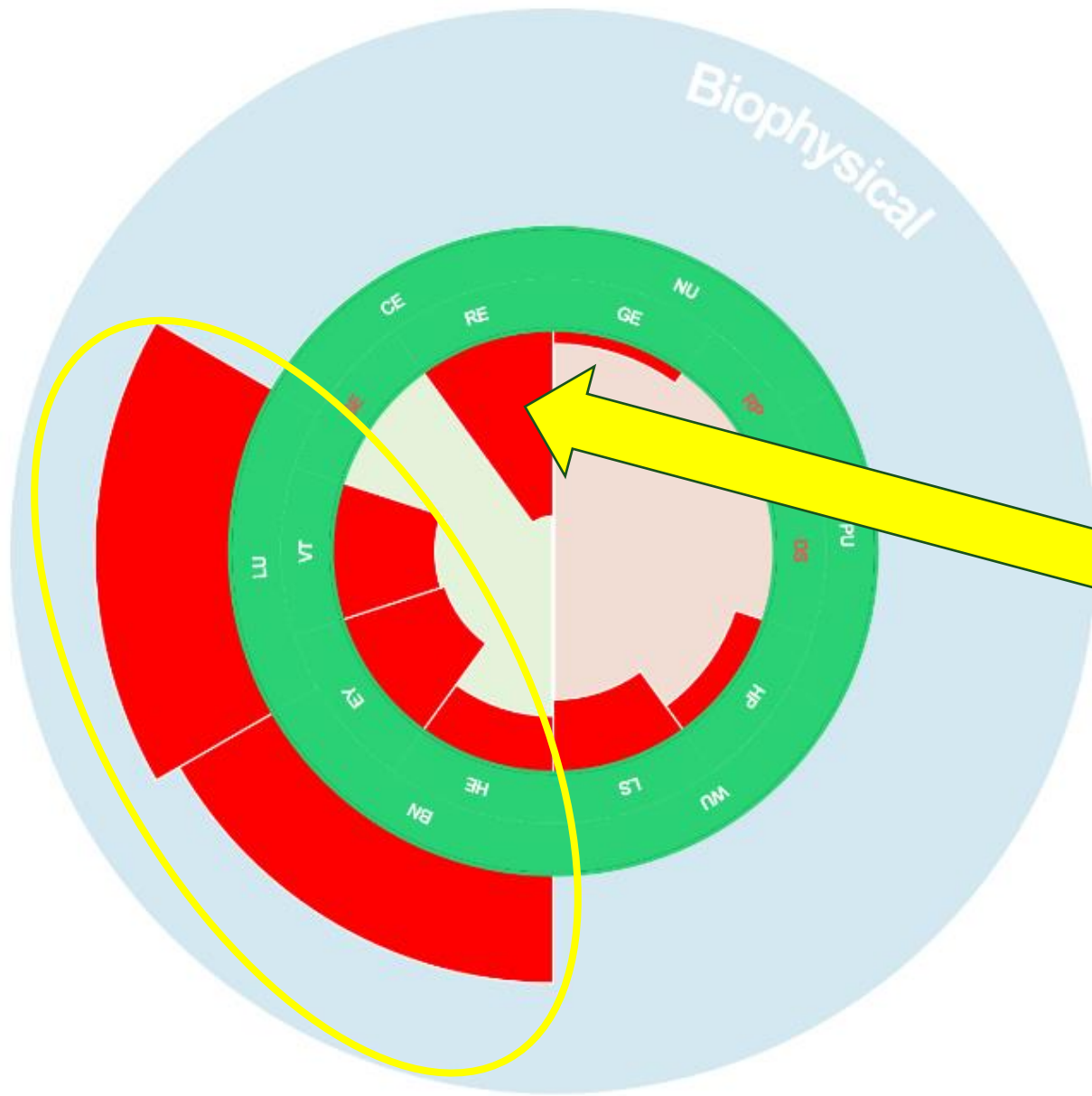




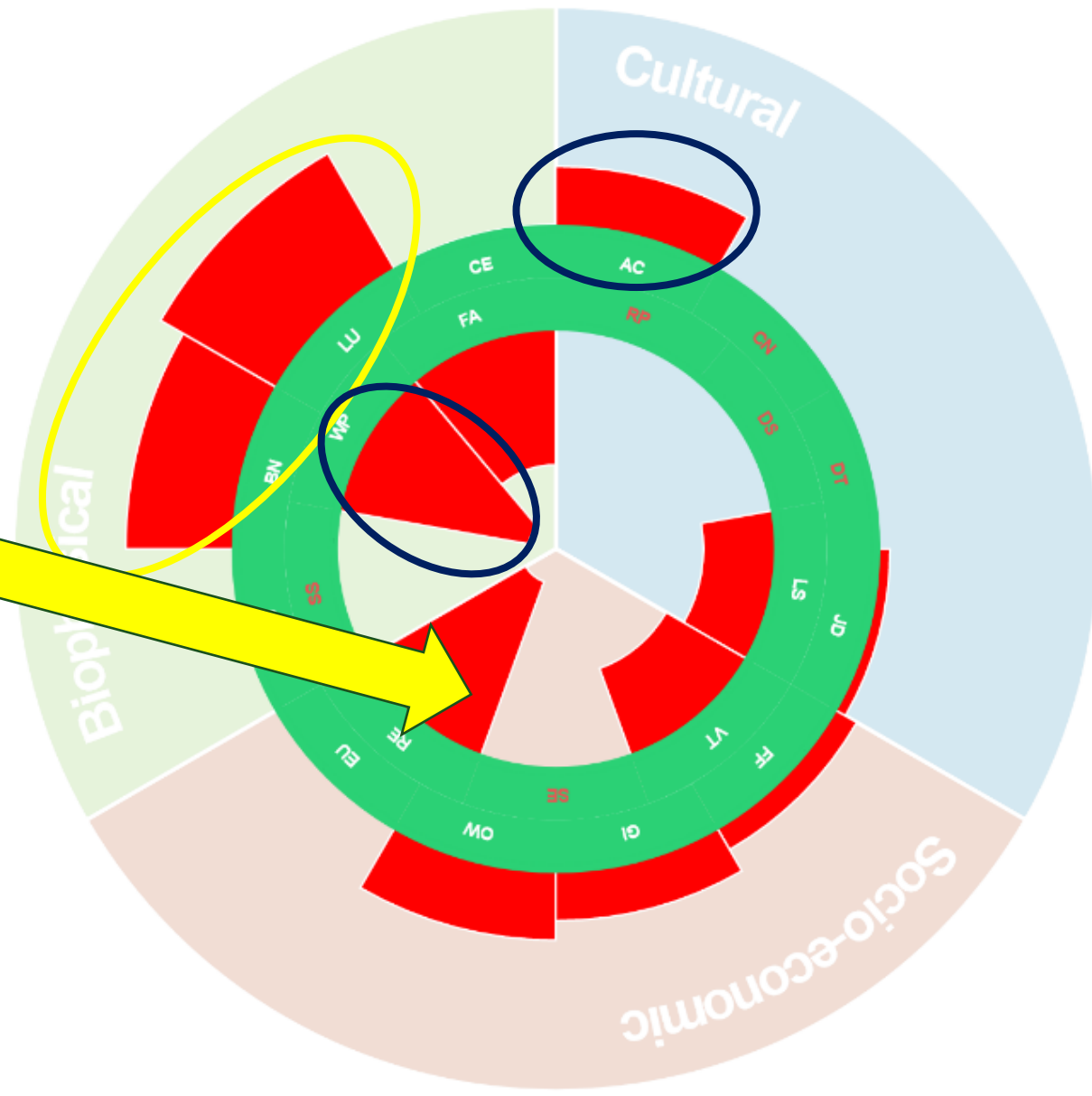
Czech Republic



Austria



Moldova



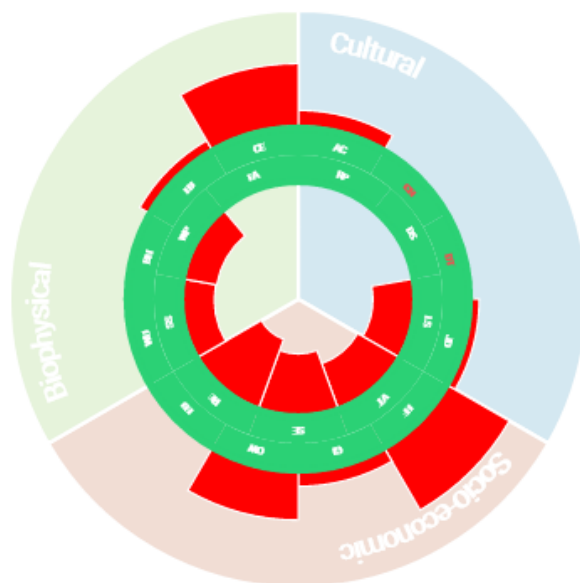
Moldova

DEGROWTH DONUT

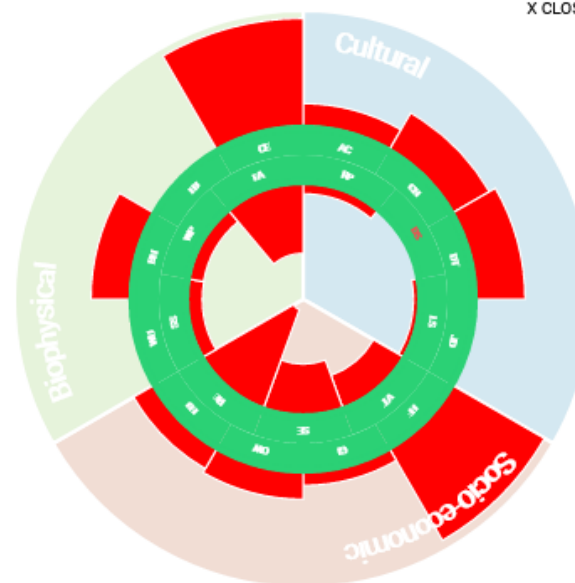
To draw the graph, select a country from the drop-down menu. To download the graph, click on "Download PNG" for a png image. To download a legend in csv format, click on "Download Legend".

[COMPARE \(3 MORE\)](#) [CHOOSE INDICES](#)[DOWNLOAD PNG](#)[DOWNLOAD LEGEND](#)[DOWNLOAD VALUES](#)

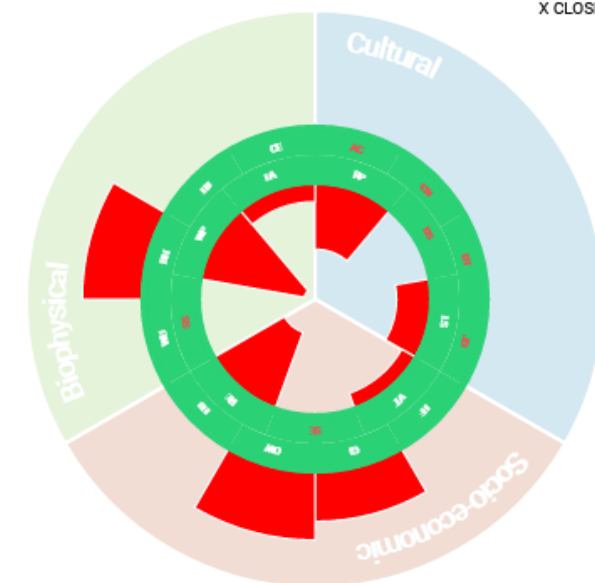
Croatia ▼



United Kingdom ▼



Philippines ▼



Thank you –
questions?

