

Sustainable Development:



Costa Rica in Perspective

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Earth Education International

Costa Rica



Development: Perceptions

Technological Development (material things)

‘Progress’ (advancement, improvement)

Economic Development (work, growth, GDP)

International Development (technology transfer)

Community Development (social-cultural)


Human Development



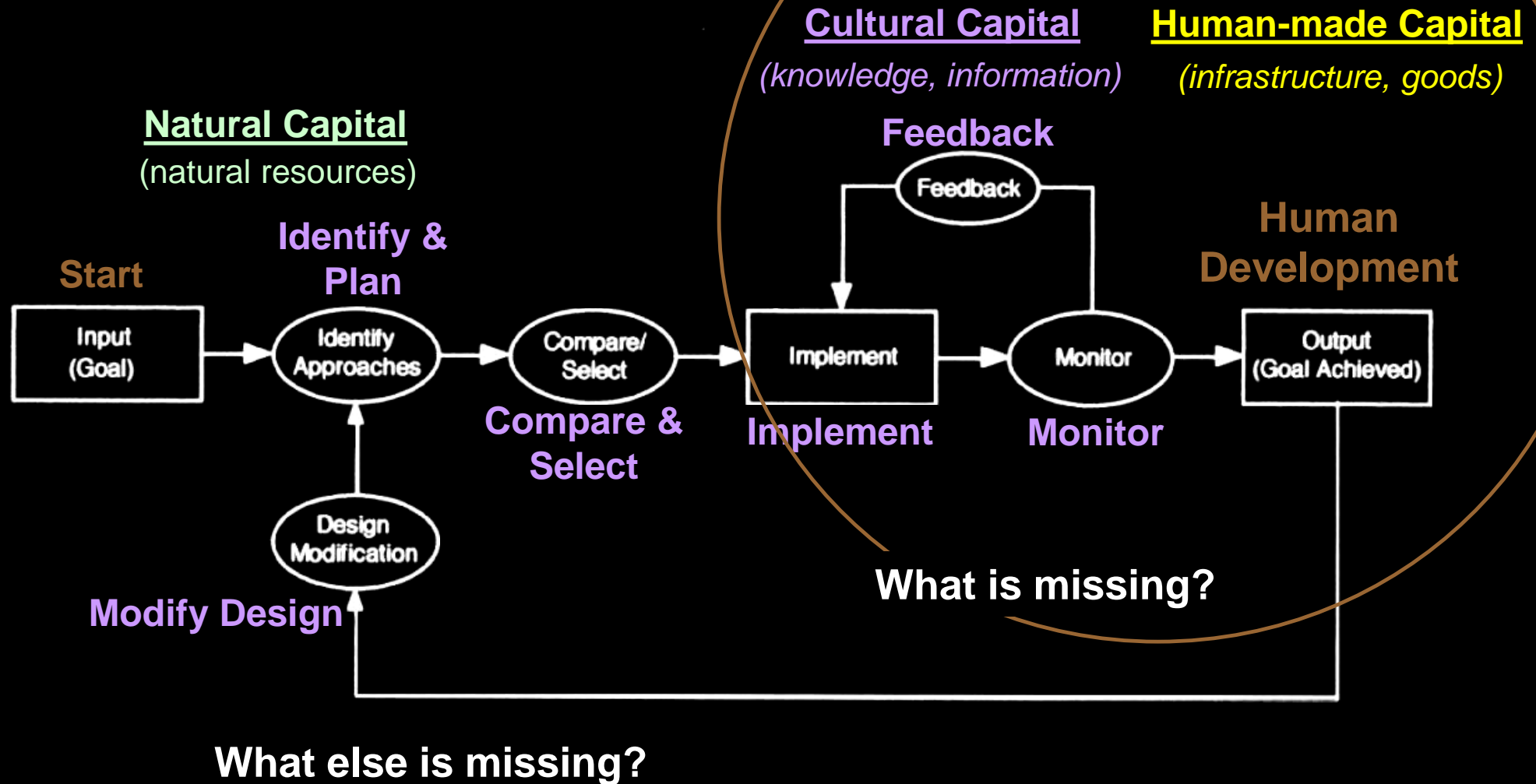
Development Defined

An on-going process used to extend potential including tangibles and/or socio-cultural systems

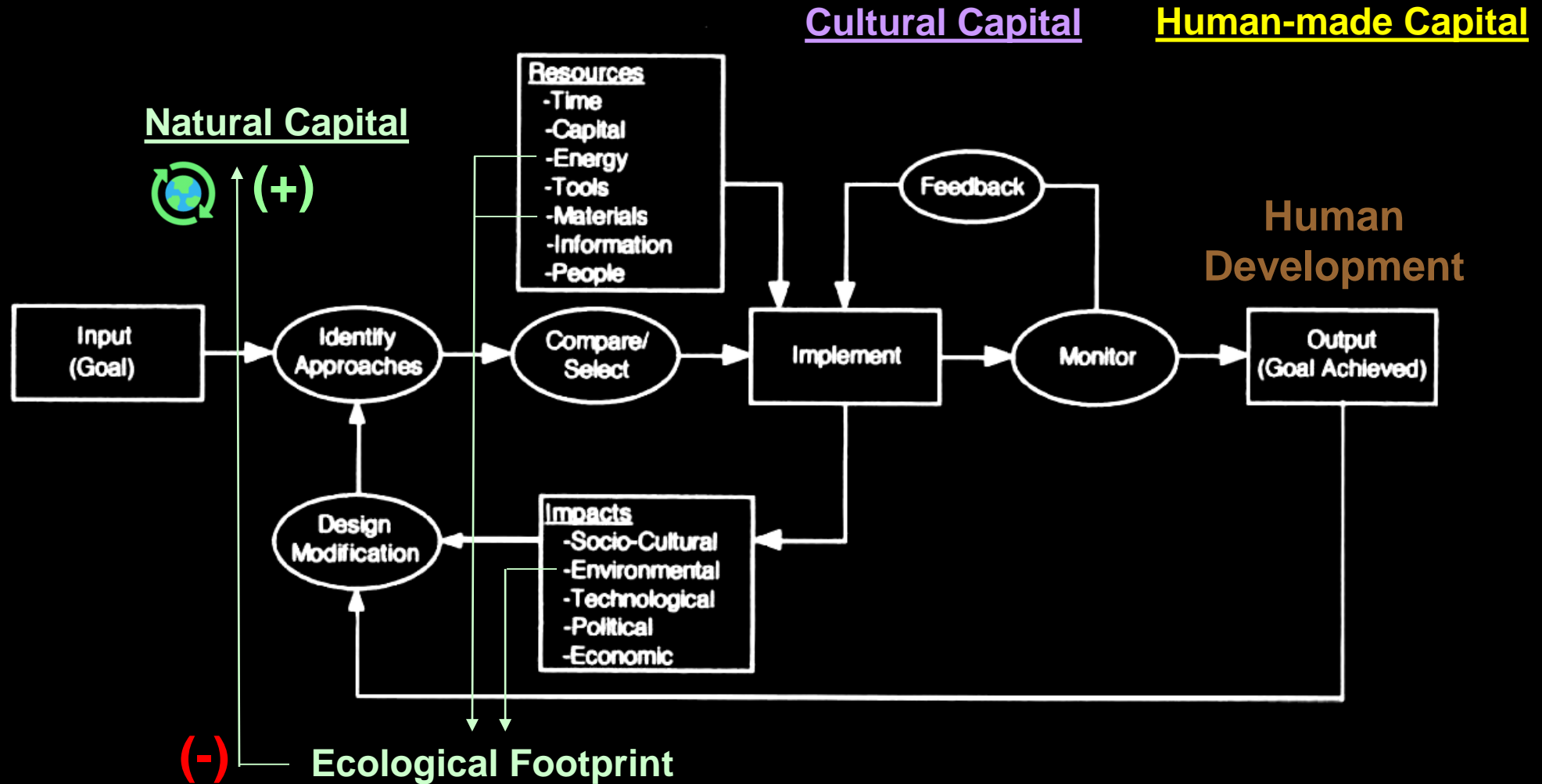
Key points

1. It is a process, not a destination
 2. Can employ an infinite number of models
 3. May include technology and/or socio-cultural arrangements
- 

Development: The Process



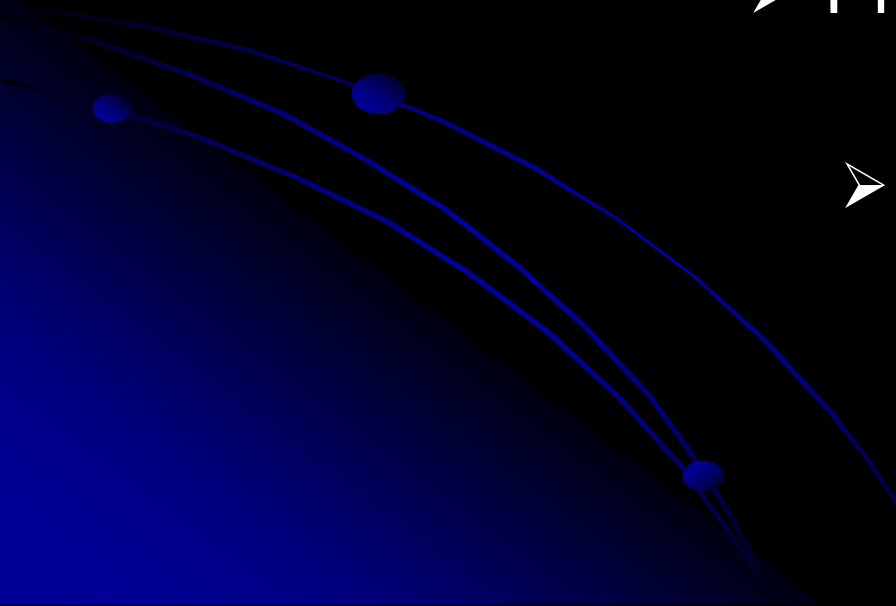
Development: The Process



Ecological Footprint Defined

“A tool for measuring and analyzing human natural resource consumption and waste output within the context of nature’s regenerative capacity”

Land area needed in global hectares (gha) to:

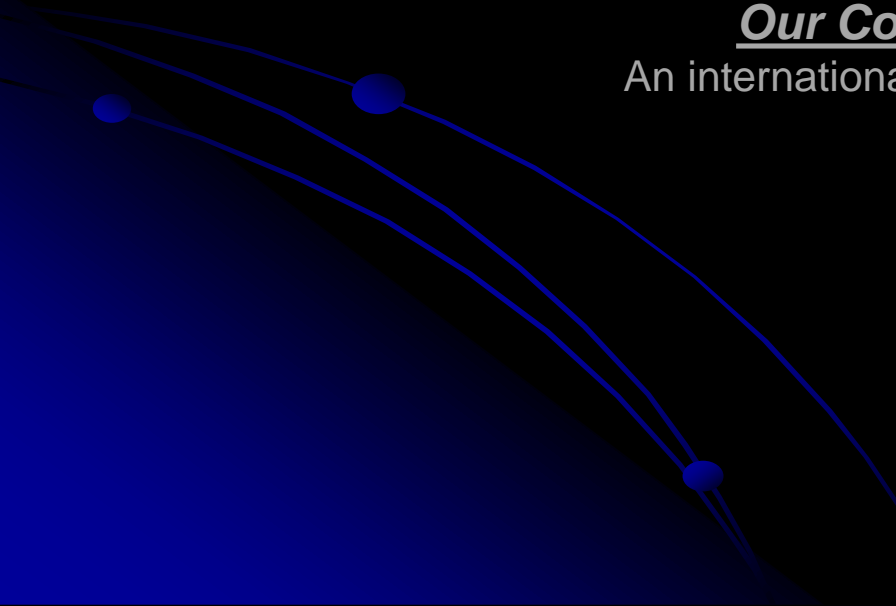
- Produce resources consumed
(food, energy and materials)
 - Absorb waste generated
- 

Sustainable Development Defined

“Development which meets the needs of the present without compromising the ability of future generations to meet their own needs”

Our Common Future (Brundtland Report), 1987

An international group of politicians, civil servants and experts on the environment and development



U.N. Sustainable Development Goals (SDG's)



**Adopted
by all U.N.
States in
2015**

Costa Rica Sustainability Programs



BLUE FLAG ECOLOGICAL PROGRAM

Created in 1996 by the Costa Rican water company (AyA), Tourism Institute (ICT) & others

Originally to reduce beach pollution
Thereafter expanded to various other categories



SUSTAINABLE TOURISM CERTIFICATION

Created in 1997 by Costa Rican Tourism Institute (ICT)

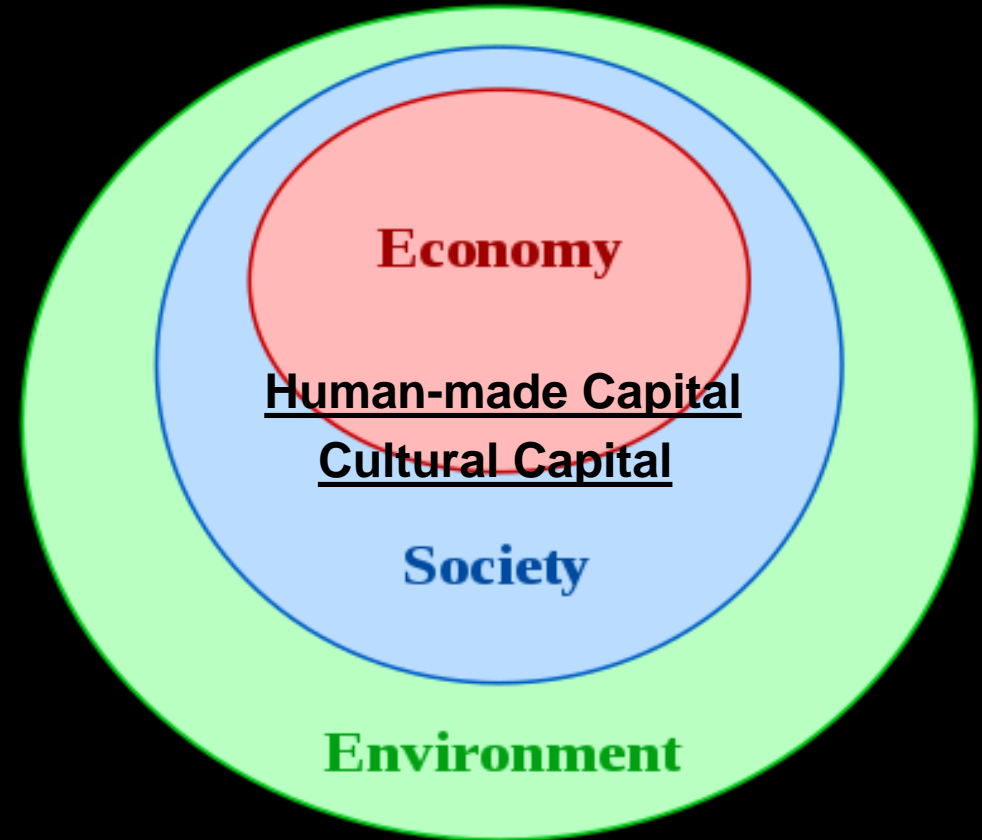
Provides tourism companies with guidelines to manage their business sustainably

Sustainable Development Components

➤ Depletable vs. Renewable Resource



➤ Biocapacity

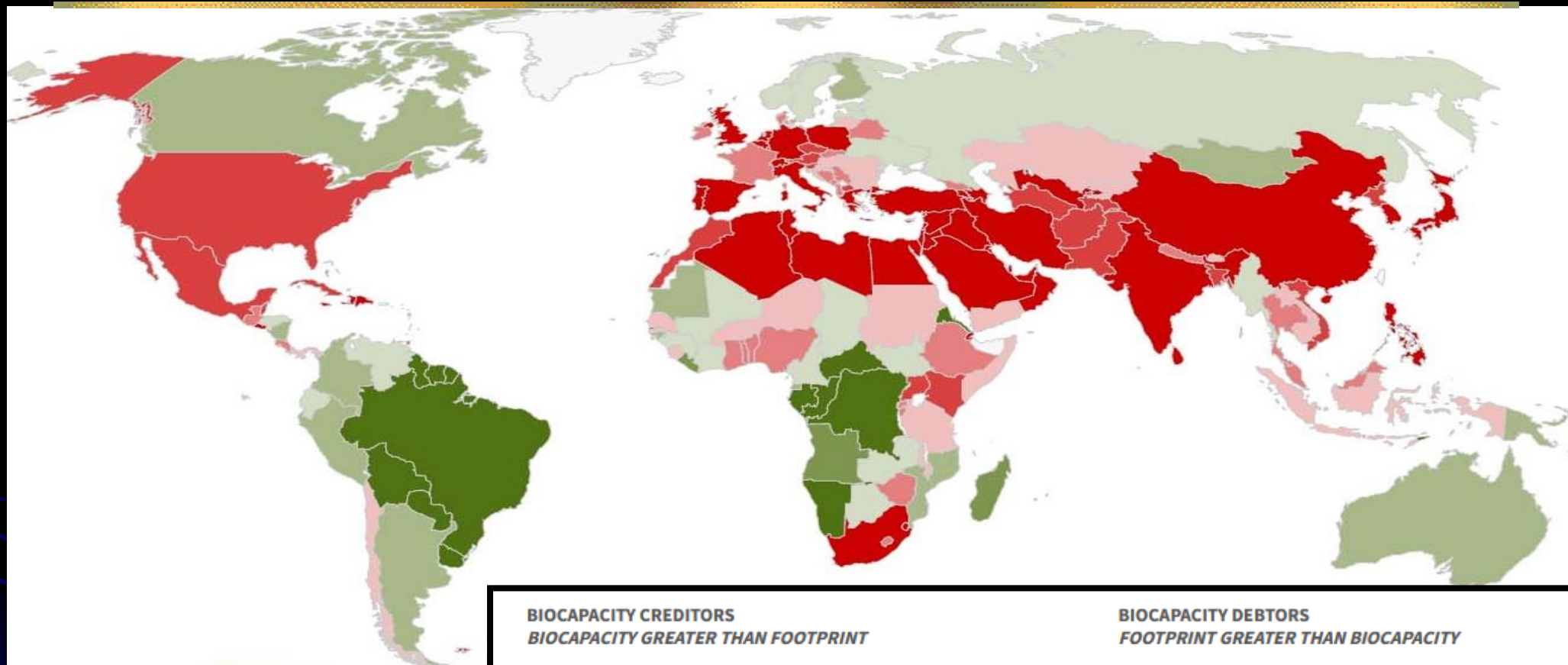


Biological Capacity (Biocapacity)

Amount of productive area available to generate renewable resources & absorb waste



Natural Capital Credit/Debt by Country



BIOCAPACITY CREDITORS
BIOCAPACITY GREATER THAN FOOTPRINT



>150%



100% -
150%



50% - 100%



50% - 0%

BIOCAPACITY DEBTORS
FOOTPRINT GREATER THAN BIOCAPACITY



>150%



100% -
150%

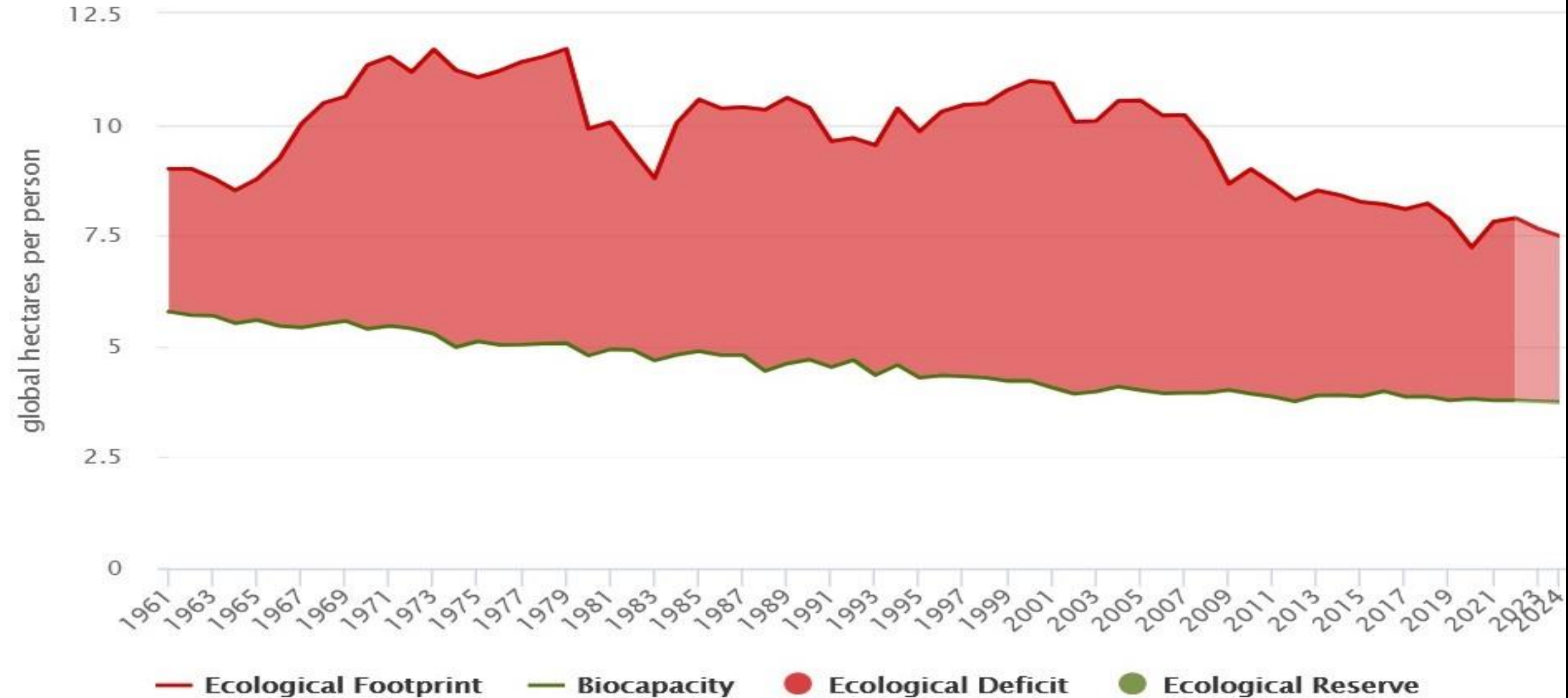


50% - 100%

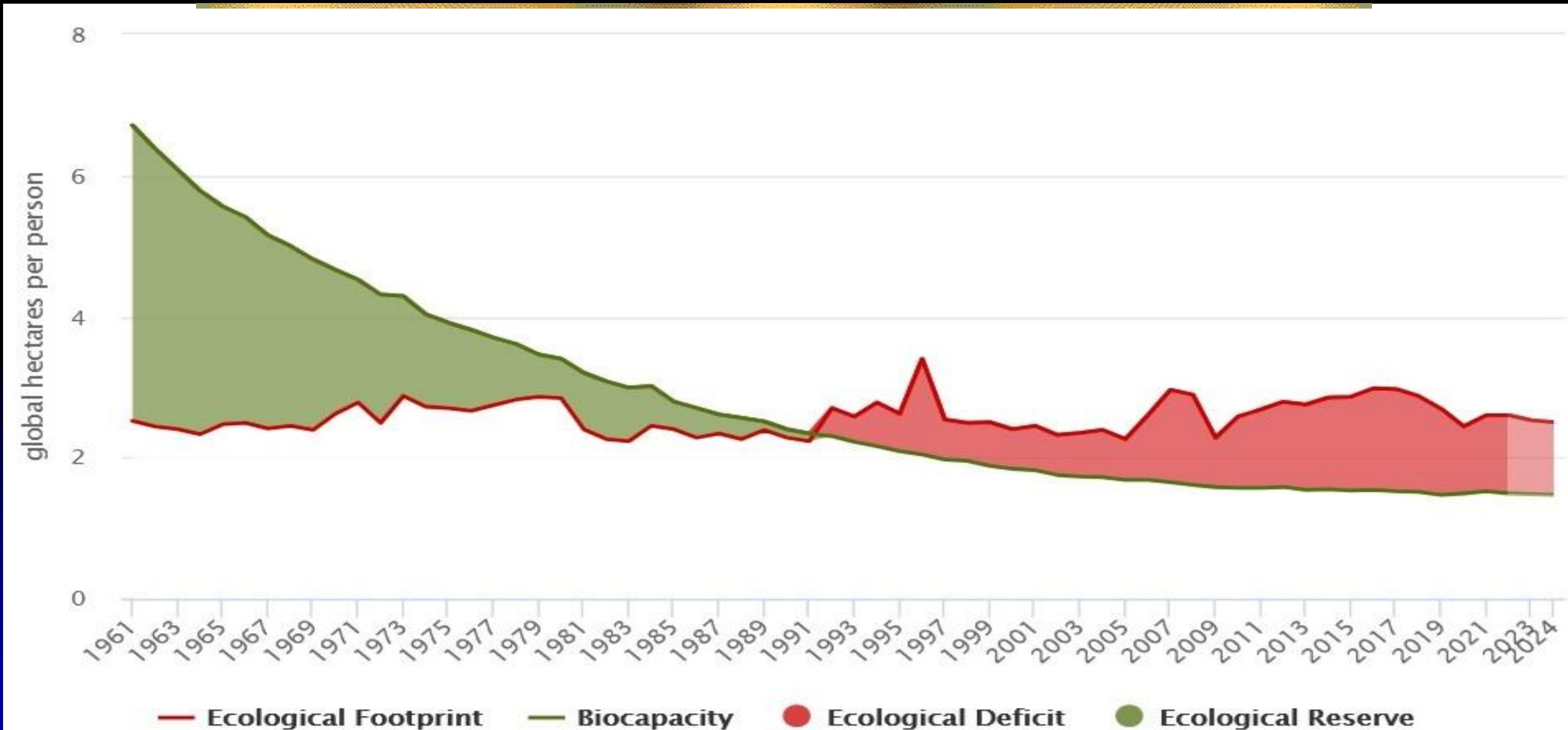


50% - 0%

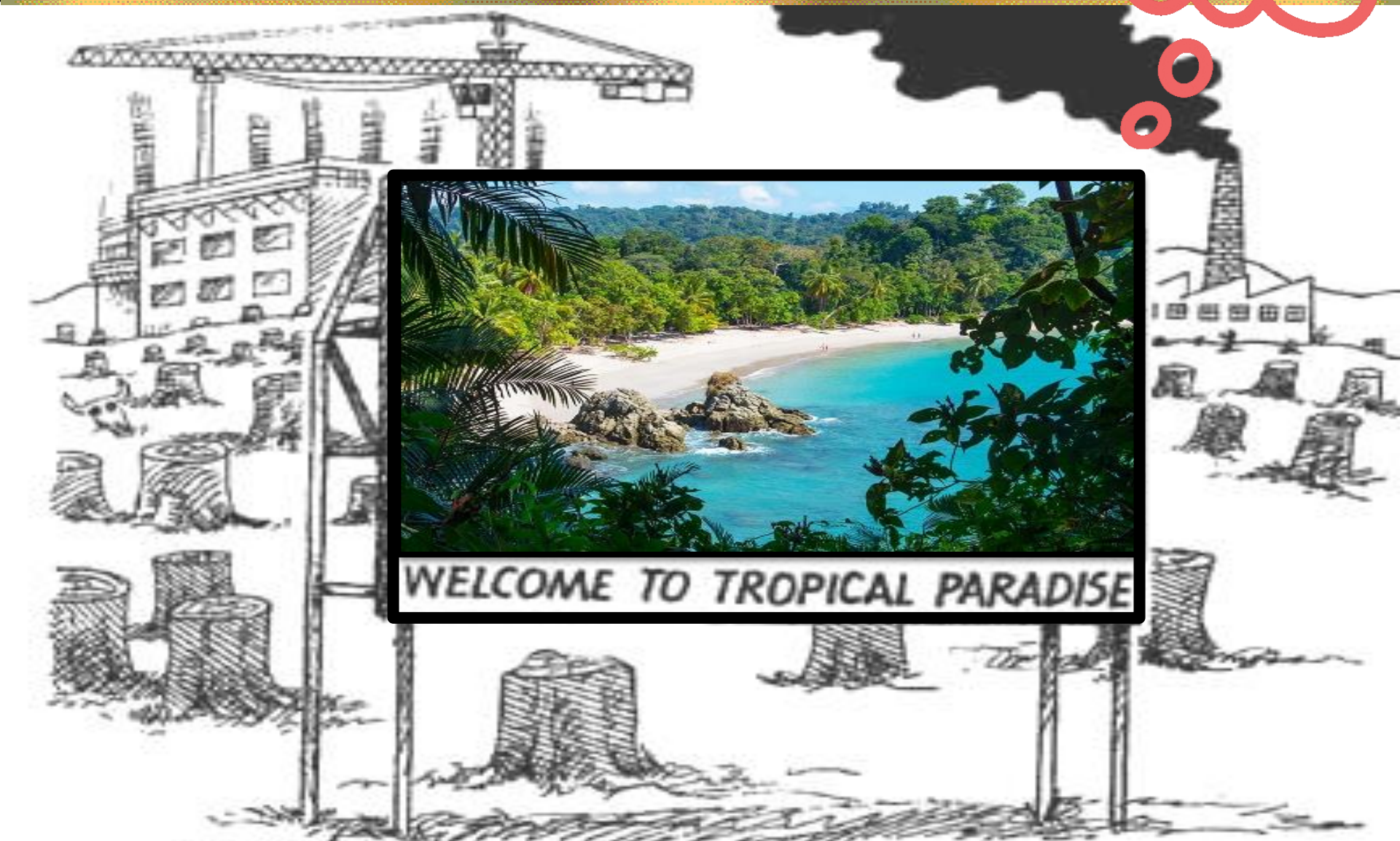
Natural Capital Debt: United States



Natural Capital Debt: Costa Rica



Costa Rica: The Green Republic?



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Costa Rica: The Green Republic?

1. Yes or no?



2. One example to support your answer

Costa Rica: Air Quality

- Vehicles make up 75% of air pollution (*remainder from industry*) & up to 60% of all GHG emissions
- San José pollution double those established by Ministry of Health
- Vehicle inspection system, San José vehicle restriction, EV's (15%), etc.



More vehicles per capita than any other country in Central America

- **1 car for every 2 adults**
- **359 new vehicles/day**

85% petroleum vehicles
= 305/day

Costa Rica: More New Vehicles Than Births

En solo tres meses de 2025, ya se inscribieron 50 mil nuevos carros

Más autos que nacimientos: Costa Rica inscribe un vehículo nuevo cada 2.4 minutos.



TELETICA.COM



Costa Rica: Carbon-Neutral?

CARBON
BALANCE

x5

➤ 21.7 million metric tons emissions

vs.

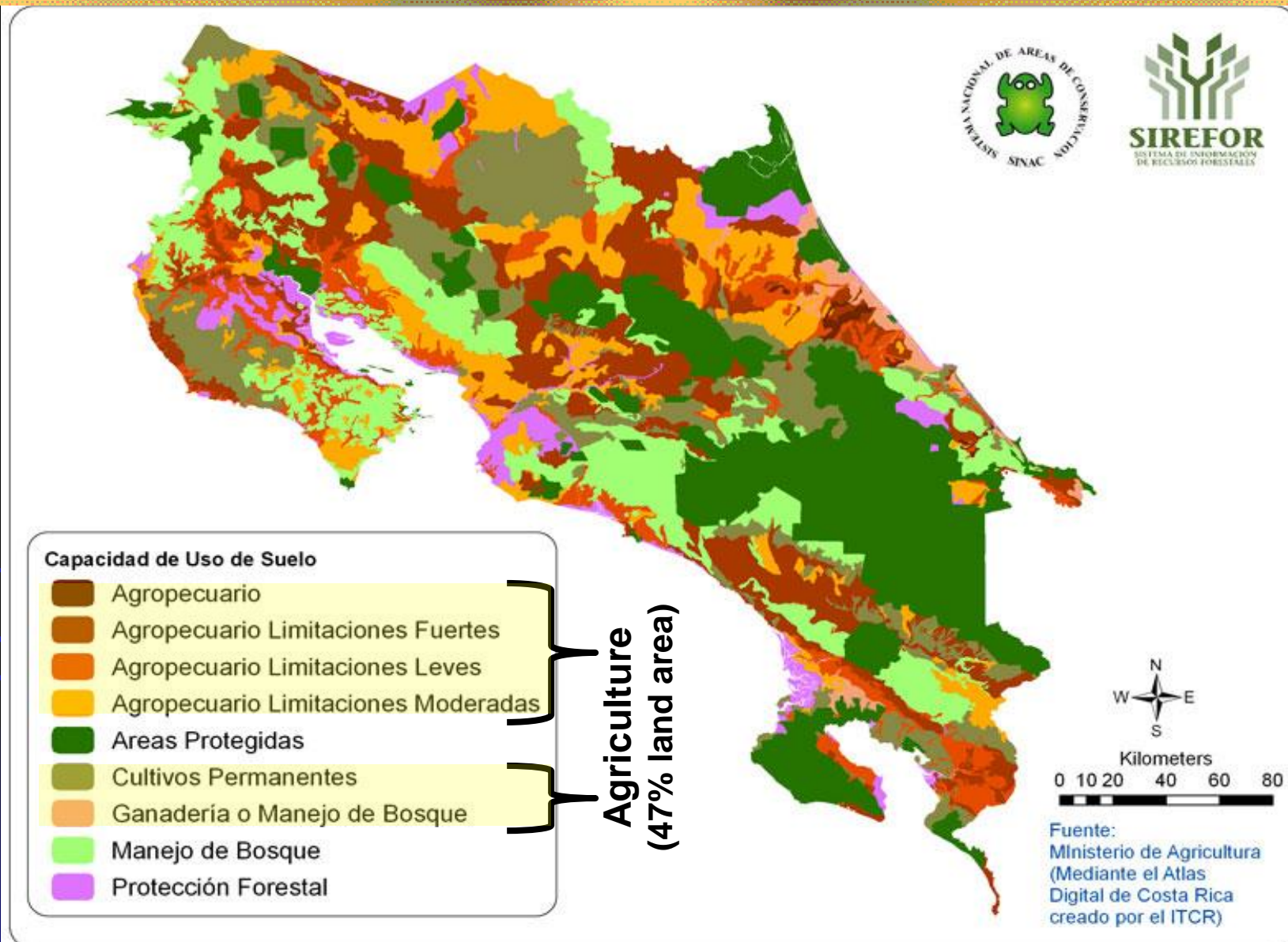
➤ 4.4 million metric tons sequestration



**CARBONO
NEUTRAL**

Reconocido por el Gobierno de Costa Rica

Costa Rica: Land Use



Costa Rica: Agricultural Activities (%)



Ganado
vacuno



Café



Frutas



Granos
básicos



Hortalizas



Otras¹

Did You Know...

Costa Rica Ranks 1st in the world in pesticide use?

Country	Amount (Kg/Hectare of Cropland)
Costa Rica	18.2->35 kg
China	17 kg
United States	2.5 kg

- Highest on important export crops: Banana, pineapple, coffee
- 200+ acute poisoning cases & 100 fatal poisonings/year
- 23% of local vegetables have toxic levels of pesticides

Did You Know...



Did You Know...



Costa Rica: Water Treatment

Until recently only **4% of waste water treated**

2016: National waste water policy established

2020: San José (Los Tajos) Waste Water Treatment Plant

Largest waste water treatment project in Central America

Current public waste water treated: 7%



Costa Rica: Waste Management

1.2 Million tons of municipal solid waste/year

45,000 tons waste recycled = 6.6%

1.2% (2014)

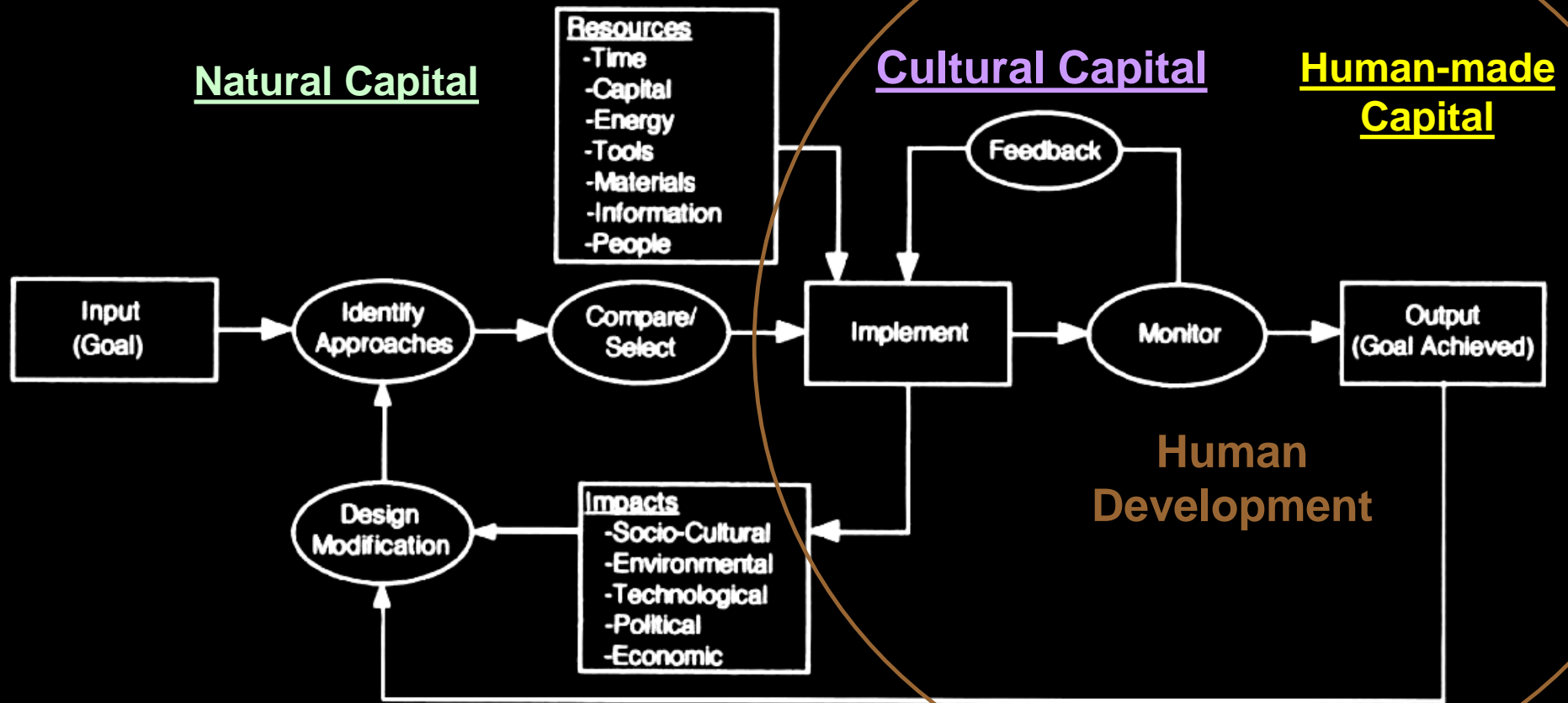
80% to landfills

20% unaccounted for
(deposited in rivers,
empty lots & streets)

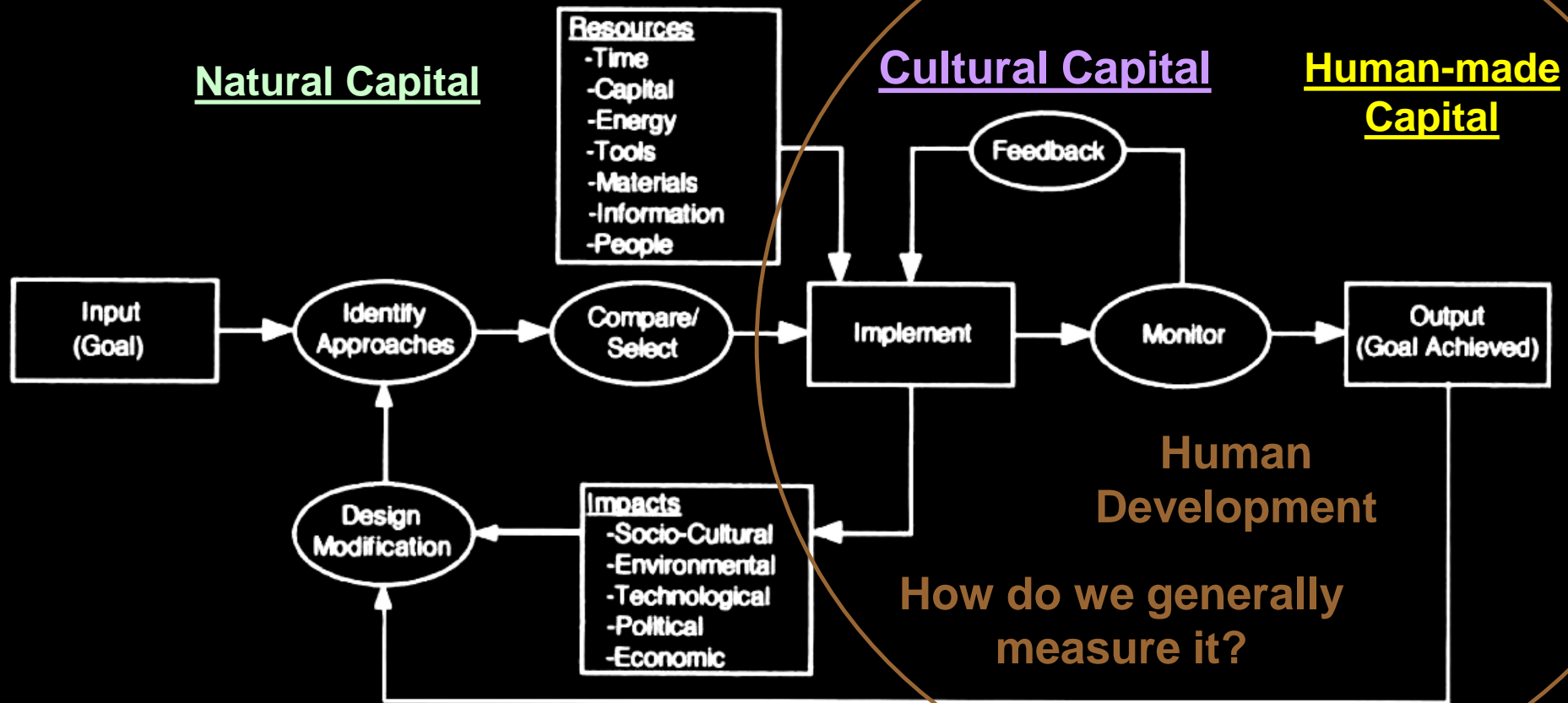
Year in which the country's
landfills will be full: **2030**
(at current rates)



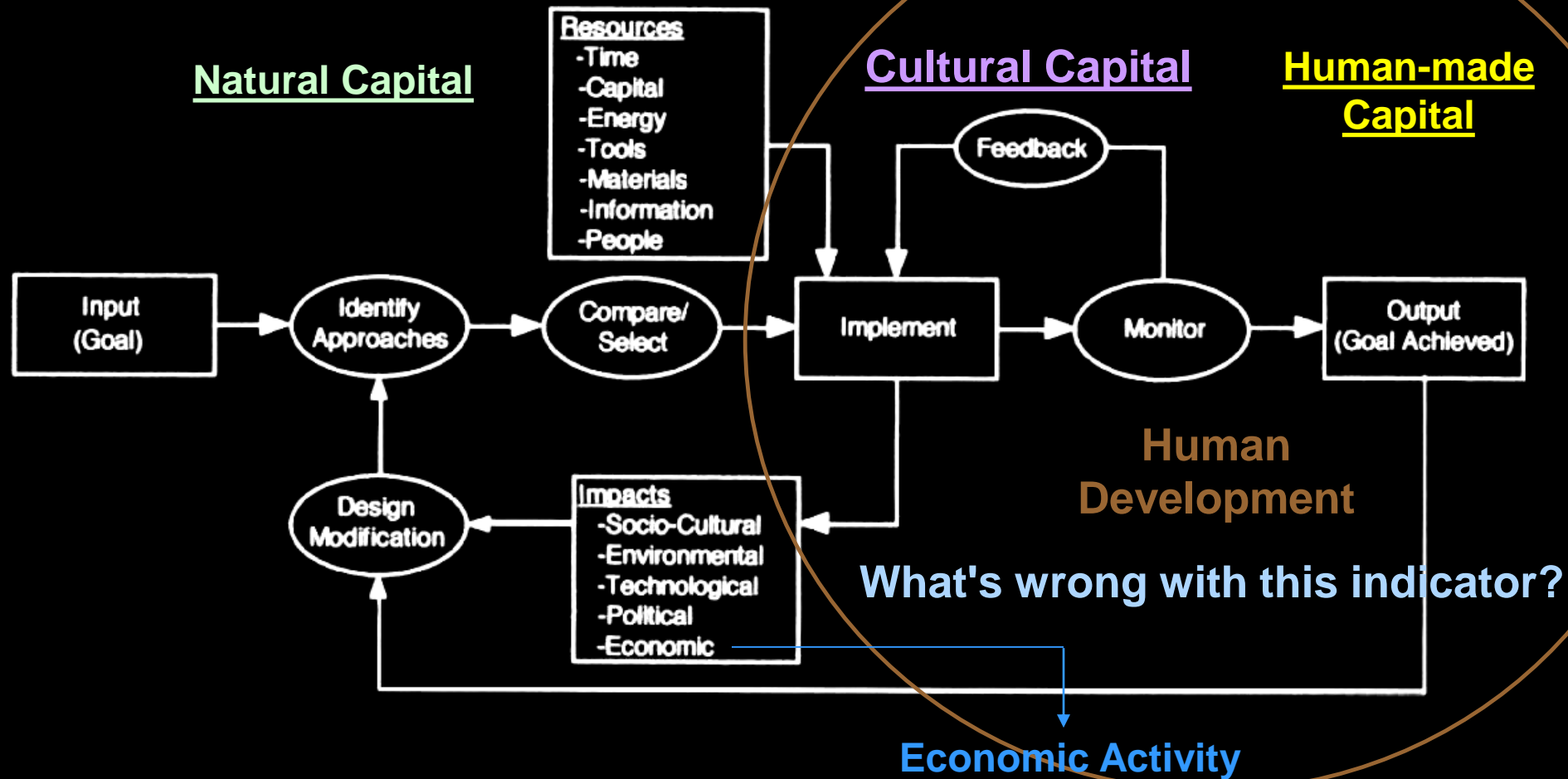
Development Review: Types of Capital



Development Review: Types of Capital



Development Review: Types of Capital



GDP: Retail sales, new housing starts, industrial production...

Measuring Development: Problems with the GDP

1. Ignores wealth distribution

2. Counts tragedies as positive

(e.g., Theft, violence, sickness, environmental disasters, etc.)

3. Ignores social factors

(e.g., Life span, health, opportunity, gender equity, education, safety, etc.)

4. Ignores environmental factors

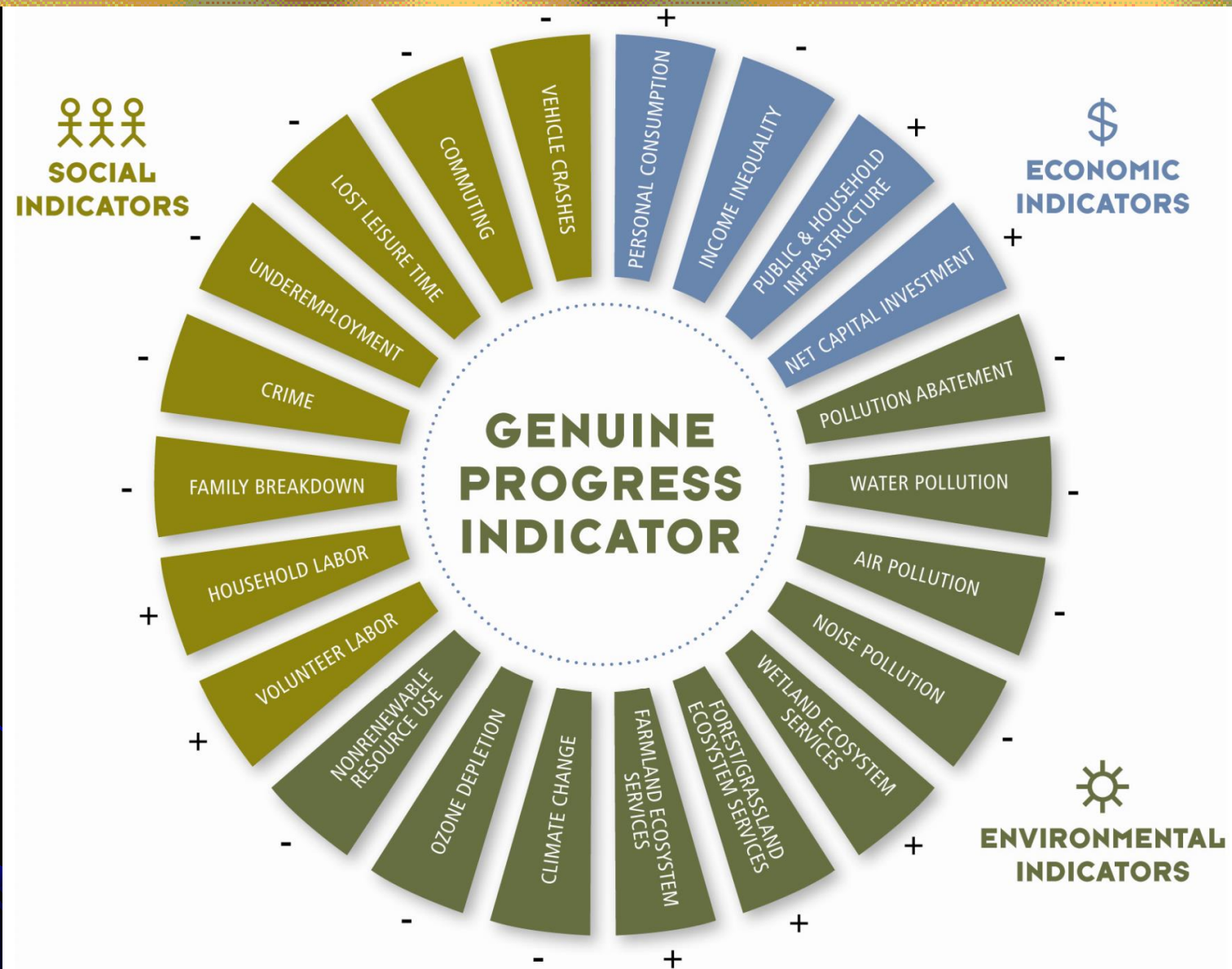
(e.g., Clean air, water, climate stability, environmental services, etc.)

Externalities

GDP Alternatives: GPI

Measures well-being by taking into account economic, environmental and social factors

(United States: MD, VT & others)



GDP Alternatives: HPI & HDI

Happy Planet Index (HPI)

Life expectancy x wellbeing x outcome inequality
÷ Ecological Footprint

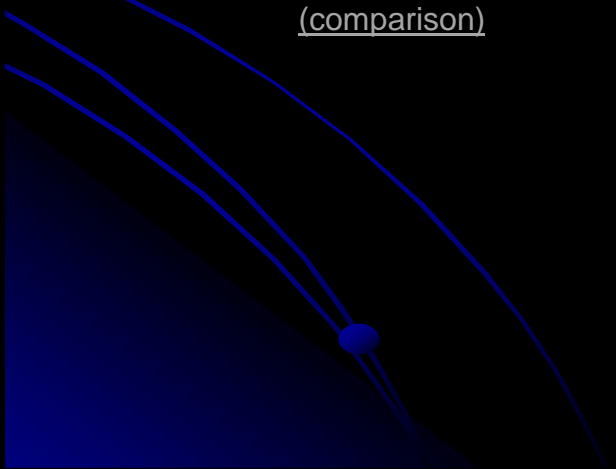
(New Economics Foundation - A British think-tank that promotes "social, economic & environmental justice")

Costa Rica #4

U.S: #102

Central African Republic #147

(comparison)



Human Development Index (HDI)

Economic & other values
not reflected in growth or income:
Health, Education, Living Standards (0-1)

(United Nations Development Program)

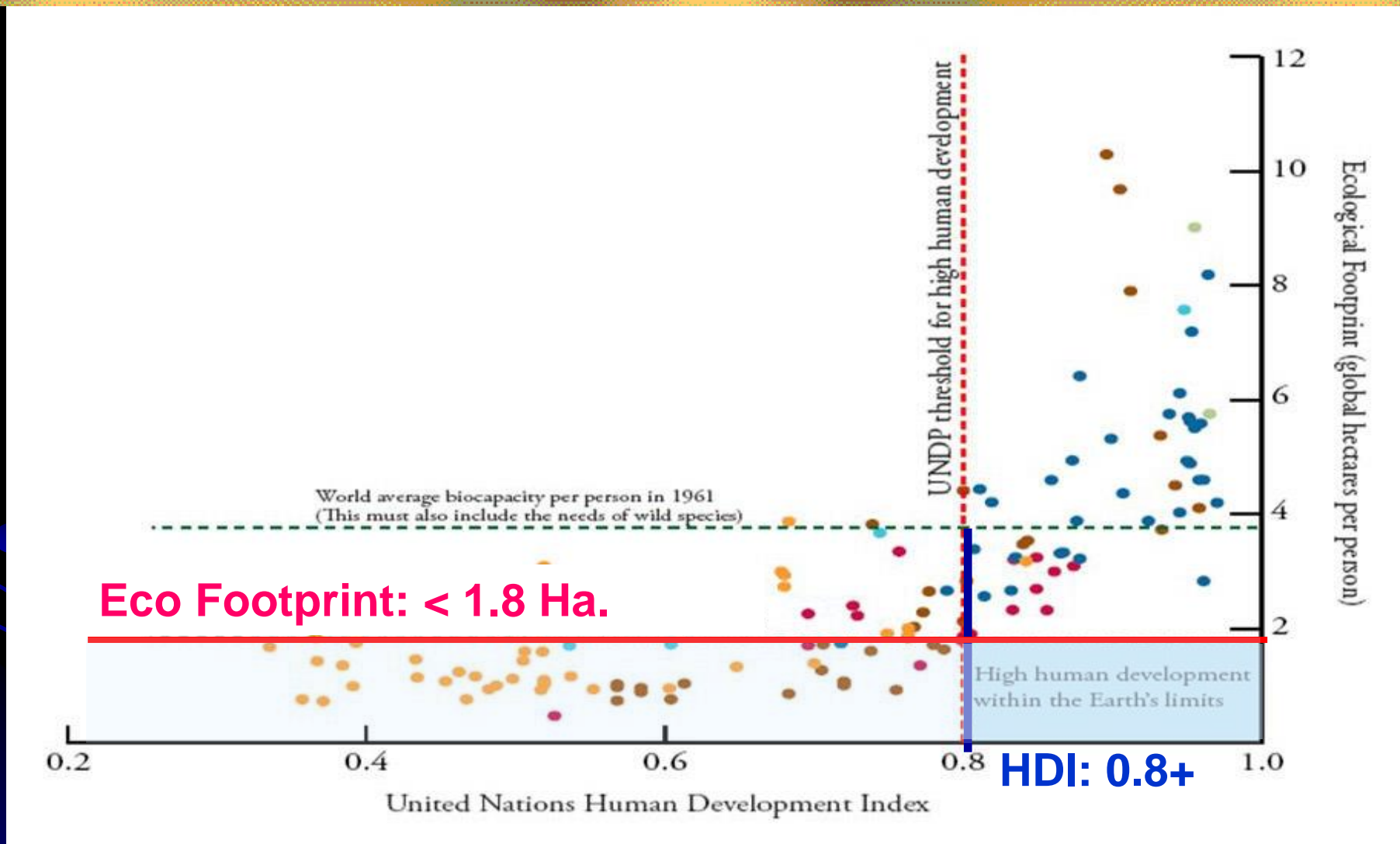
Switzerland #1

U.S: #20

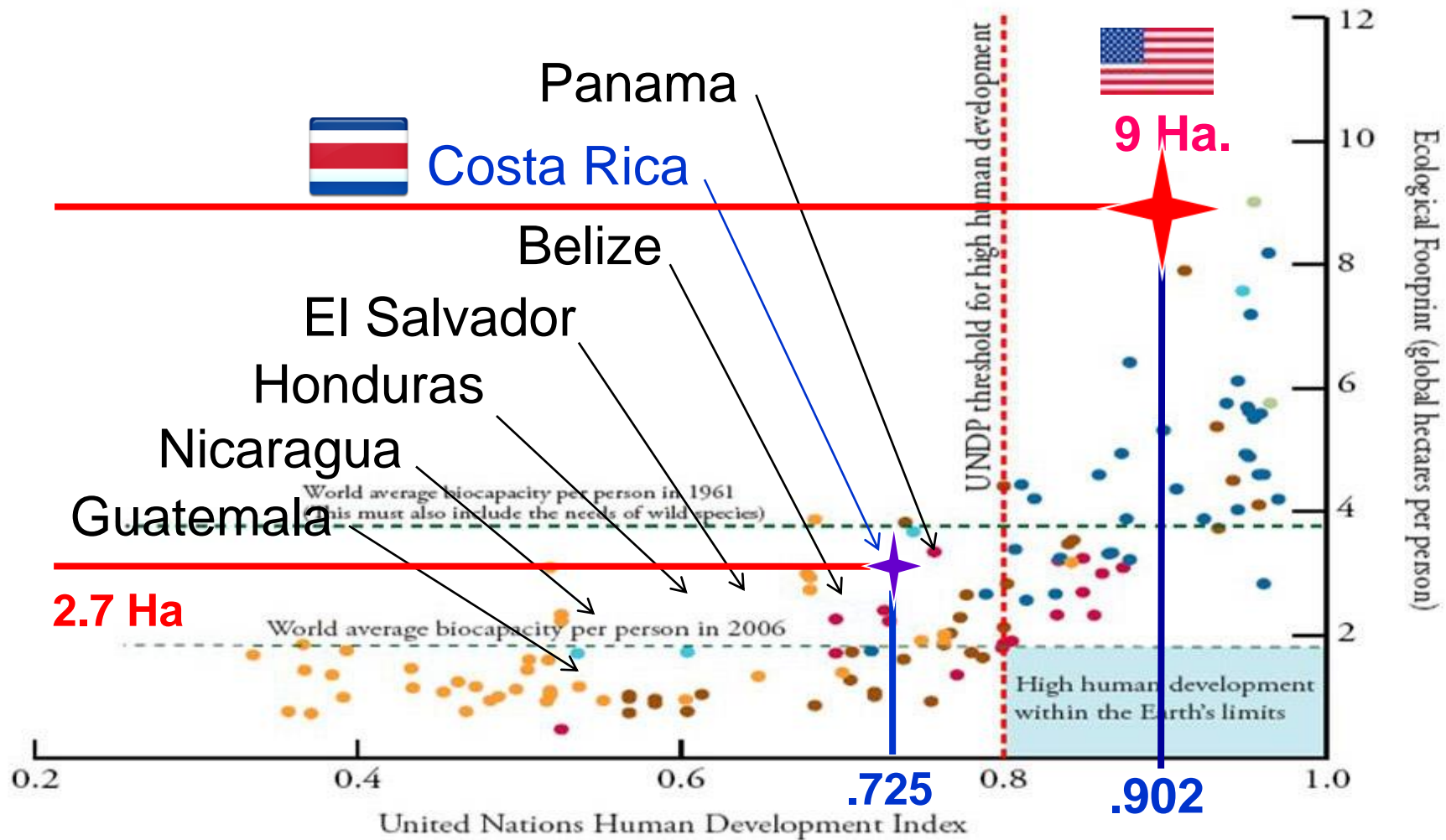
Costa Rica #64

(listing)

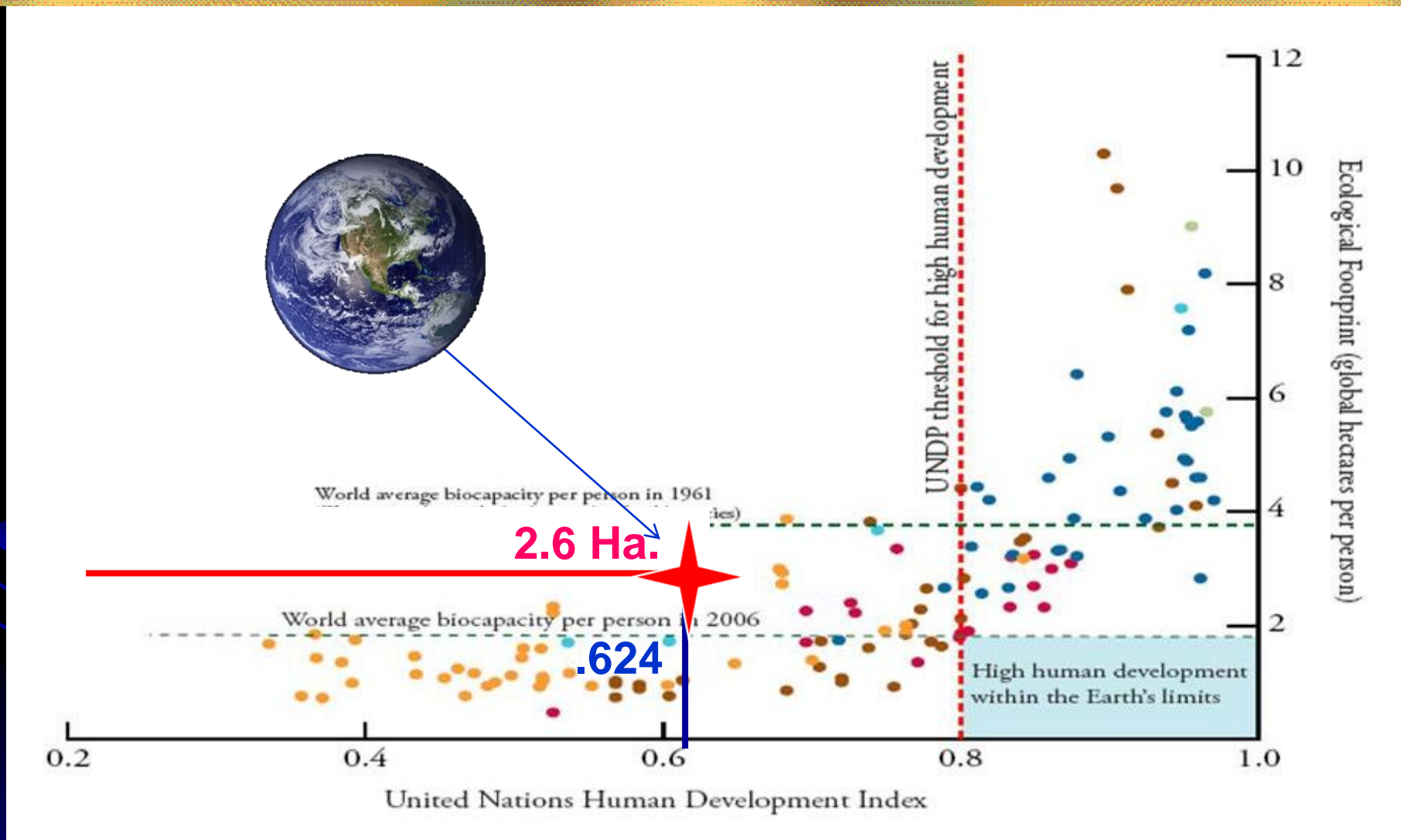
HDI vs. Ecological Footprint



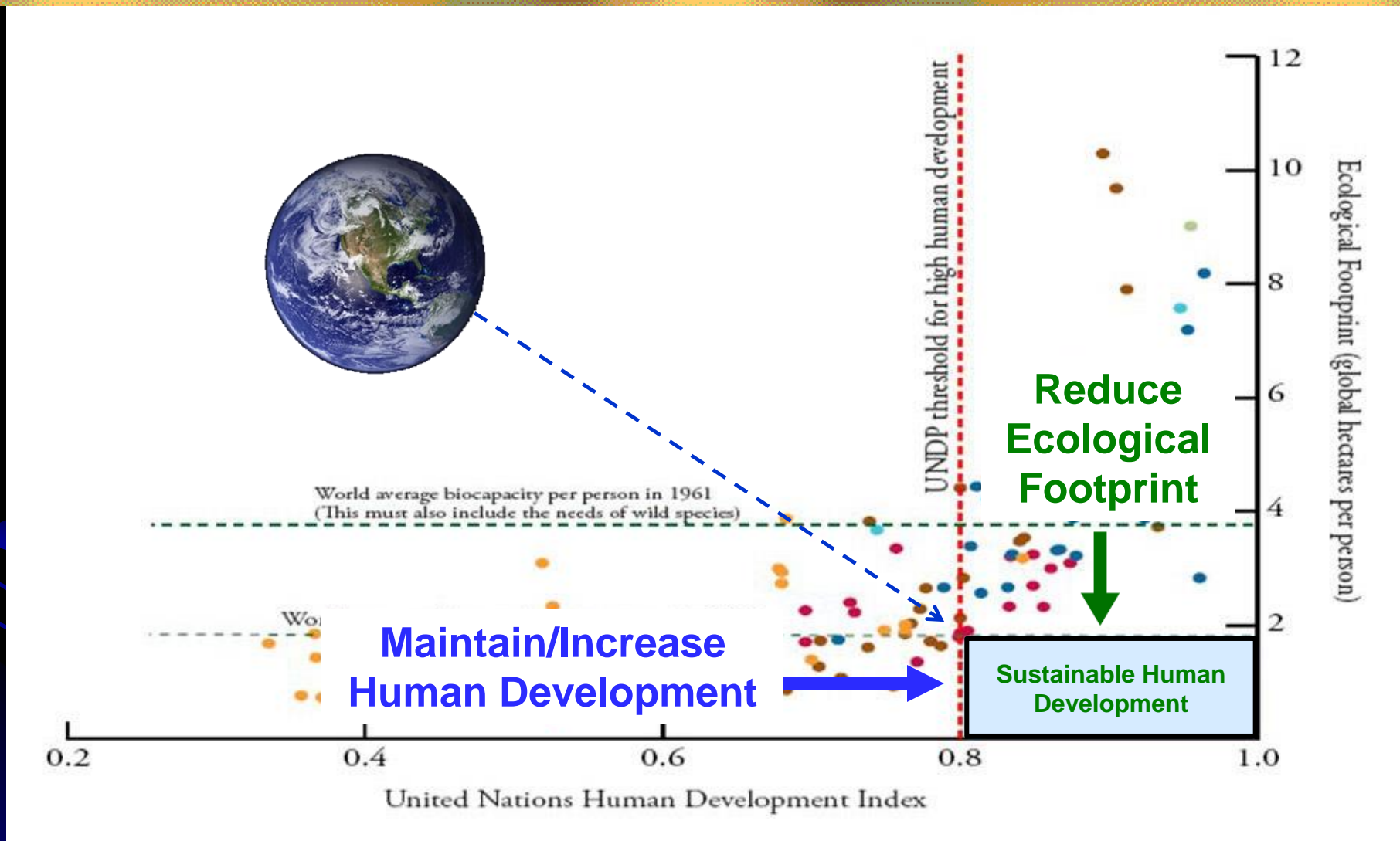
HDI vs. Footprints: Central America



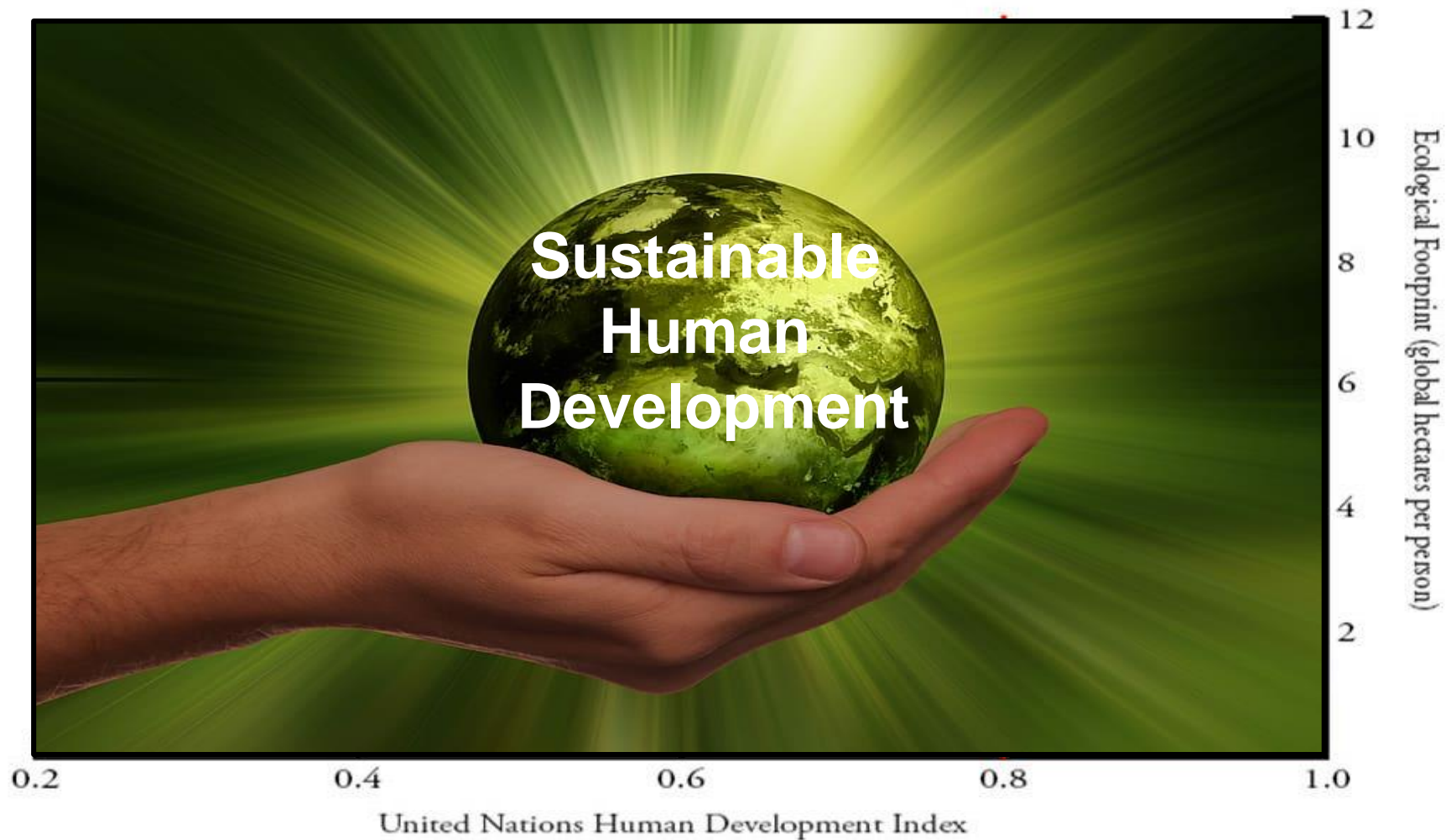
HDI vs. Footprints: Global



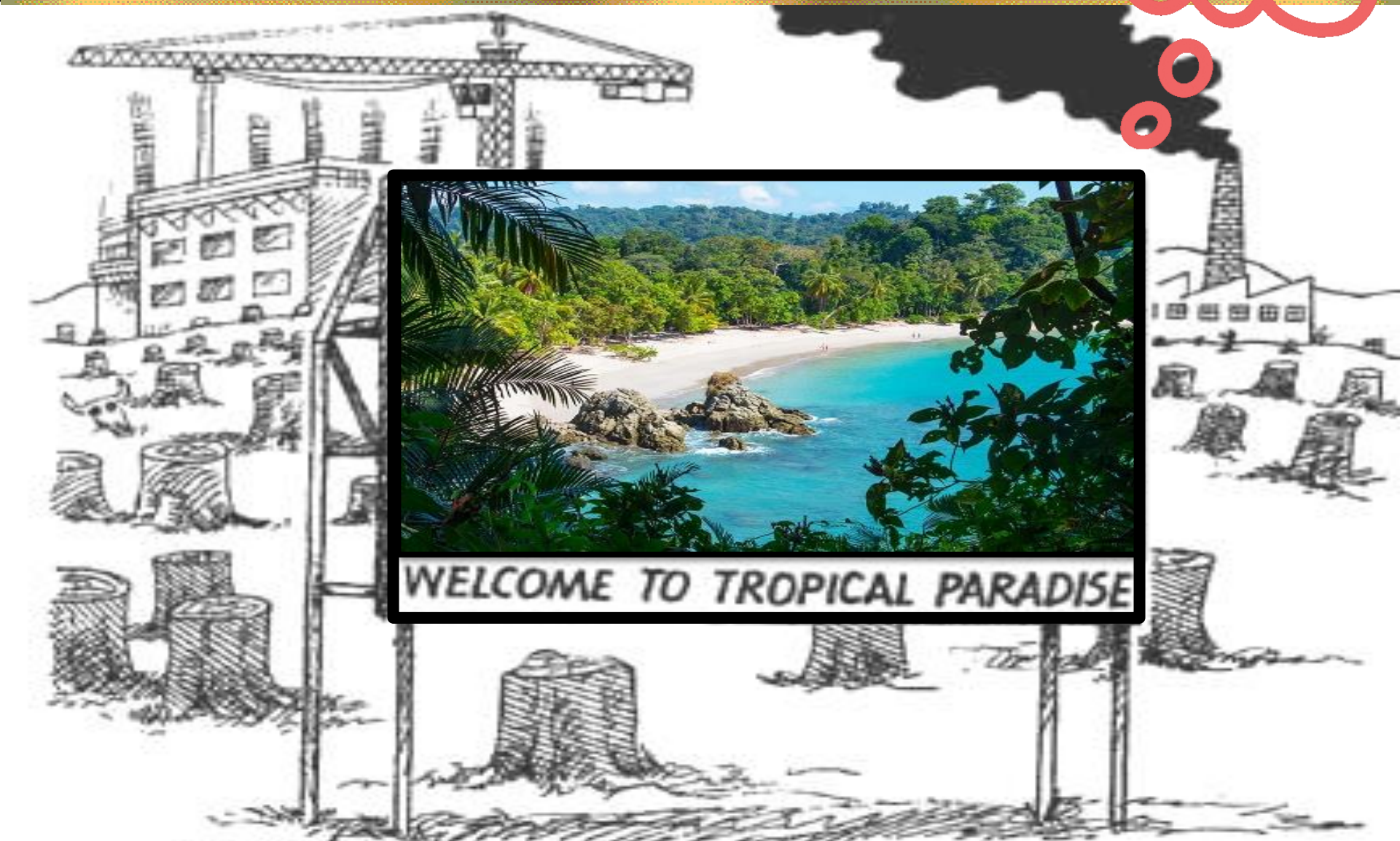
Sustainable Human Development



Sustainable Human Development



Costa Rica: The Green Republic?



WELCOME TO TROPICAL PARADISE

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Up Next:



Uneven Development

Decorative blue lines and dots in the bottom left corner of the slide.