Shifts from passive to active and from competitive to collaborative learning

WAAS
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SAPIRR
Systems Approach of Public Innovation and Responsible Research

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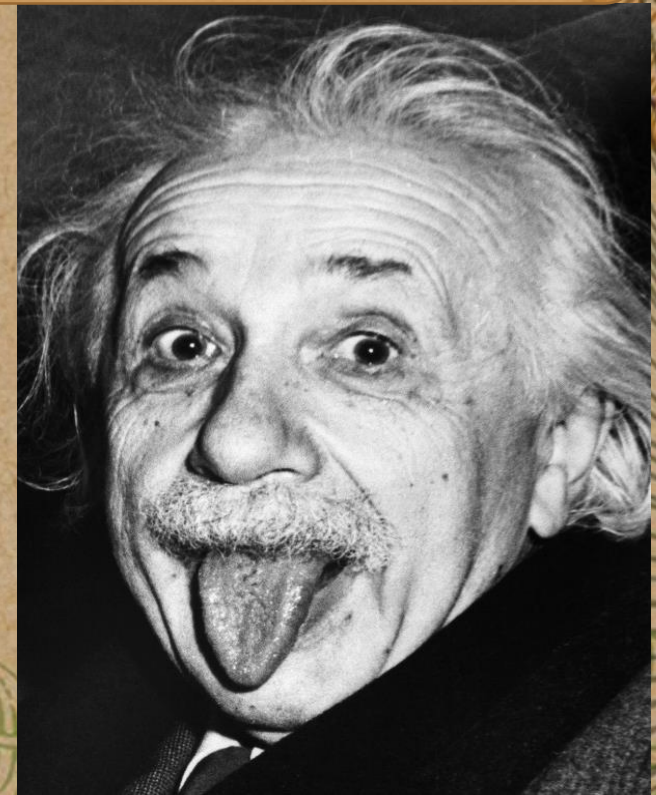
THE CLUB OF ROME | EU CHAPTER CoR-EU

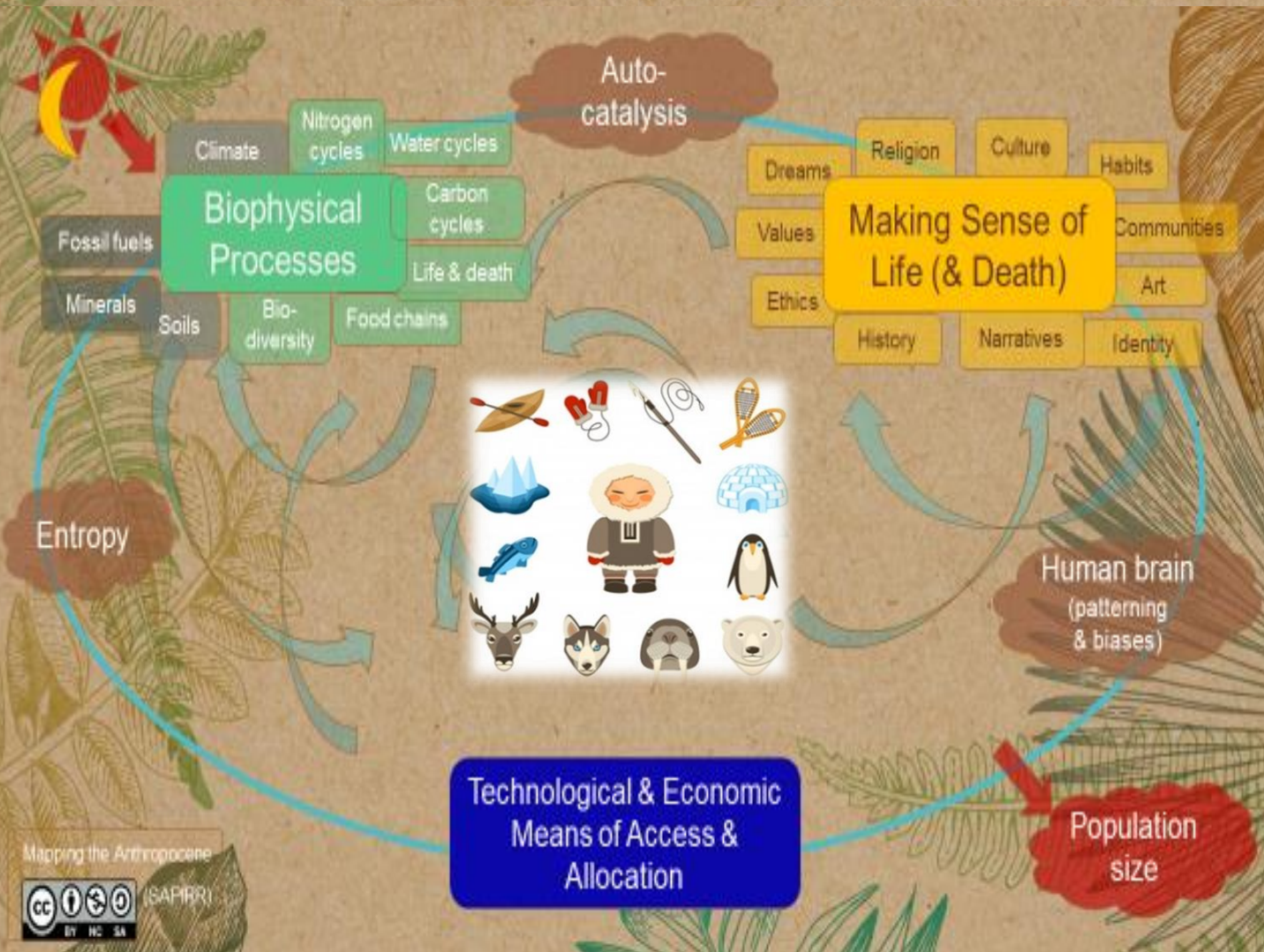Can we use our own thinking to detect and correct the errors in our own thinking?

"We cannot solve problems by using the **same kind of thinking** we used when we created them."

Re-thinking education = 'thinking about thinking'

Stories to foster historic awareness & reflection on values

Greenland, about 1.000 years ago
Viking settlement - considered their own culture & E.T. means *superior* to the Inuit ones (wooden vs ice dwellings, cattle vs fish, foreign trade vs commons)

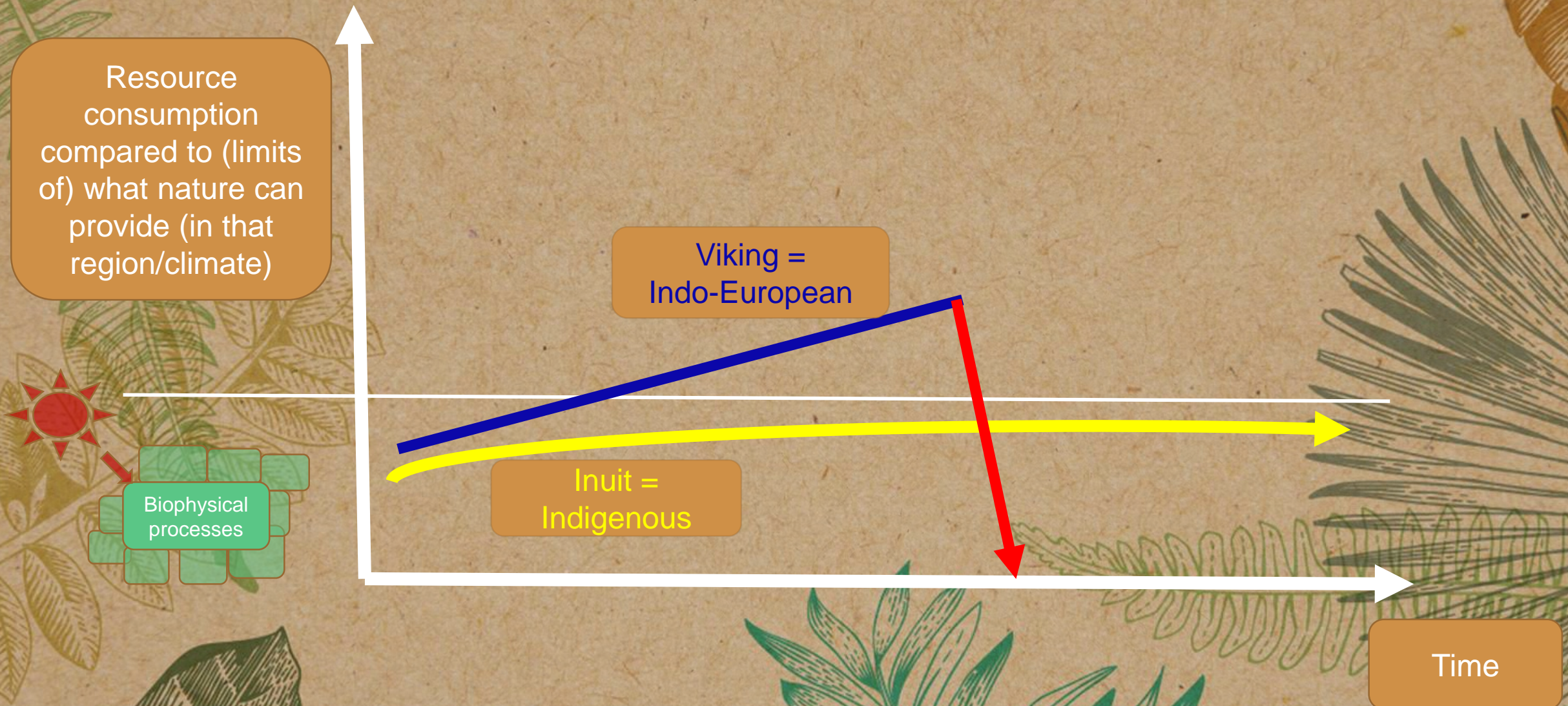Starved to death after about 450 years – while Inuit community continued to thrive

They preferred to hang on to their own thinking (& die), rather than adopt Inuit values & T.E. means (& survive)

Sources:
- Jarred Diamond, *Collapse*
- Jeremy Lent, *The patterning instinct*.
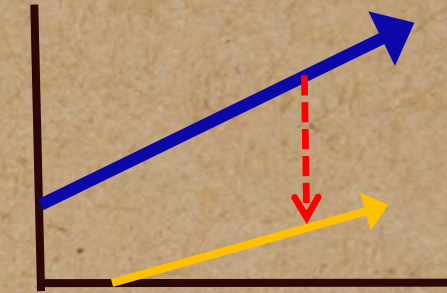
Socio-economic systems over time: non-linearity

Resource consumption compared to (limits of) what nature can provide (in that region/climate)

Biophysical processes

Viking = Indo-European

Inuit = Indigenous

Time

Are we wiser than the Vikings? Re-think 'human development'!

Ecological footprint
Planets needed for 'development'

'Very high human development'

○ EU-28 Member State

Water, forests, oceans, biodiversity climate, resources

Russia

South Africa

Brazil

China

Japan

Ecological deficit

World biocapacity

Sustainability

Indonesia

India

Within limits of the planet

Human Development Index

Education, health, food, housing, safety

Good life

European Environment Agency

(Global Footprint Network, 2012; UNDP, 2014)

Education & health care based on 're-distribution' of % of E.T. growth; this explains why HDI-development always exceeds planetary limits

We have defined & organised "development" in such a way that
- it does not take into account the biophysical processes human life, health and reproduction *depend* on
- it threatens the future of our children and jeopardizes human survival

Real development requires us to 'land on Earth' again (cf. Bruno Latour, *Down to Earth*)
In *that* perspective nations in the global North appear *less developed* than many peoples in the South

What do we have in common with the Vikings?
Western framing of 'development' = lock-in

'Planet' = Natural life as '*resource*'
Depleting, polluting

'People' = Homo *oeconomicus*
Competition & war

Vicious circle ☹
race to the bottom

'Profit/Posperity' =
E.T. growth & progress
as *goal*, using people &
planet as *means*

Indo-Europeans' belief: man is created in the image of god, above nature. Sciences "decipher & rewrite the book of life". Most scientists no longer rely on God to justify their appropriation of Life, yet keep operating within this (not scientifically justified) framework.

Sources: Harari: *Homo Deus*
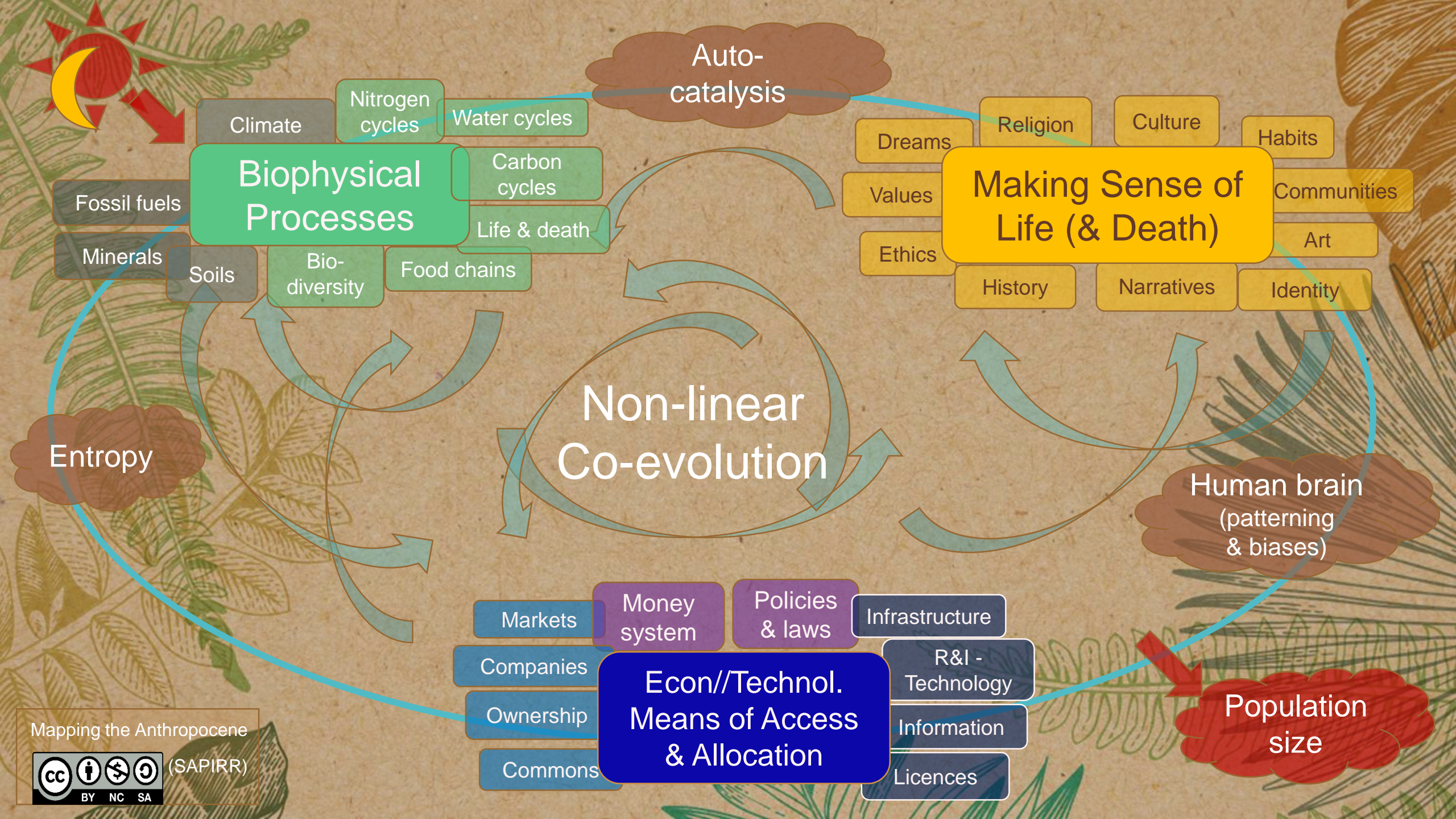Yasanoff: *Can science make sense of life?*
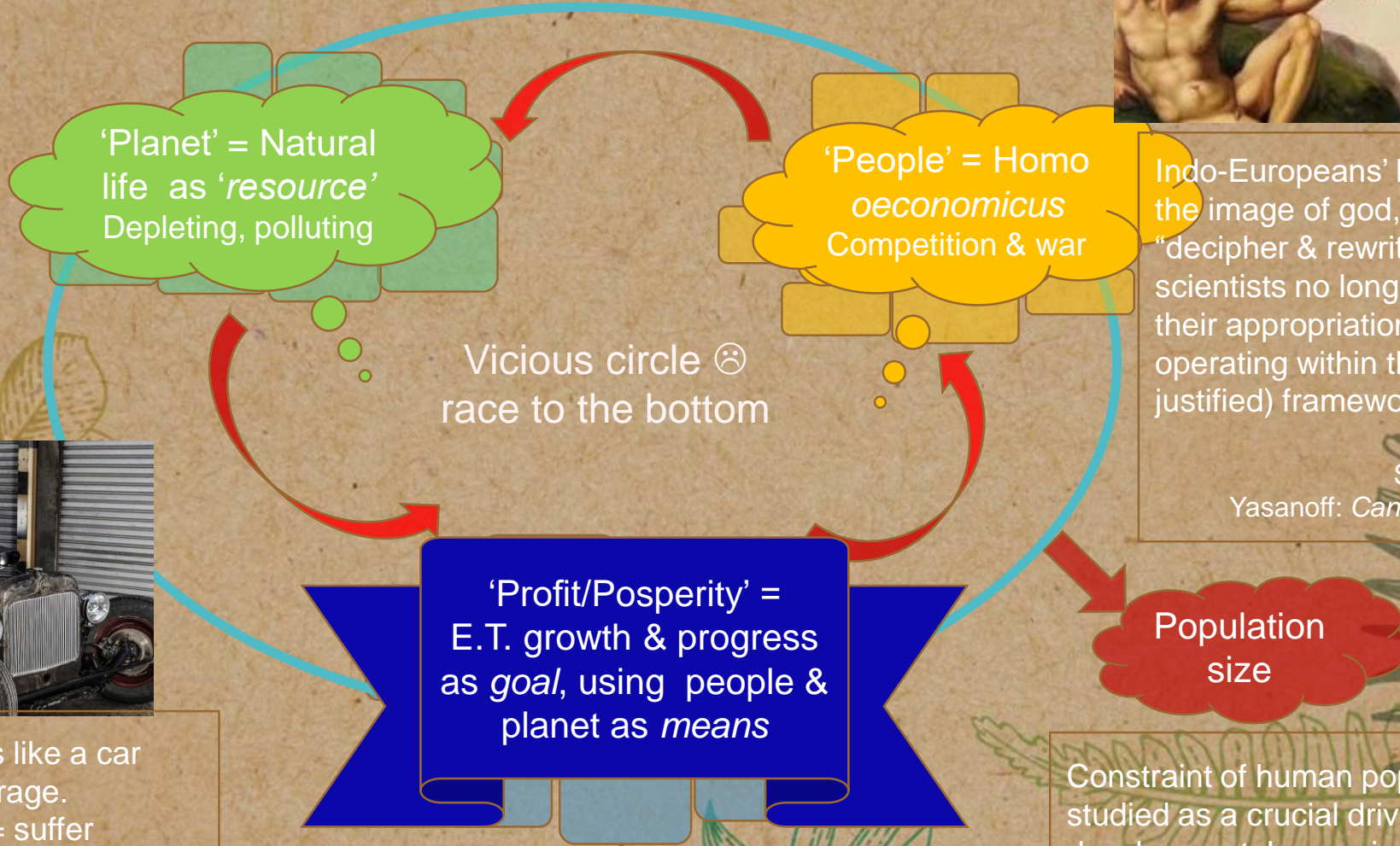
Population size

Current E.T. system is like a car running in a closed garage.
- Switch engine off = suffer
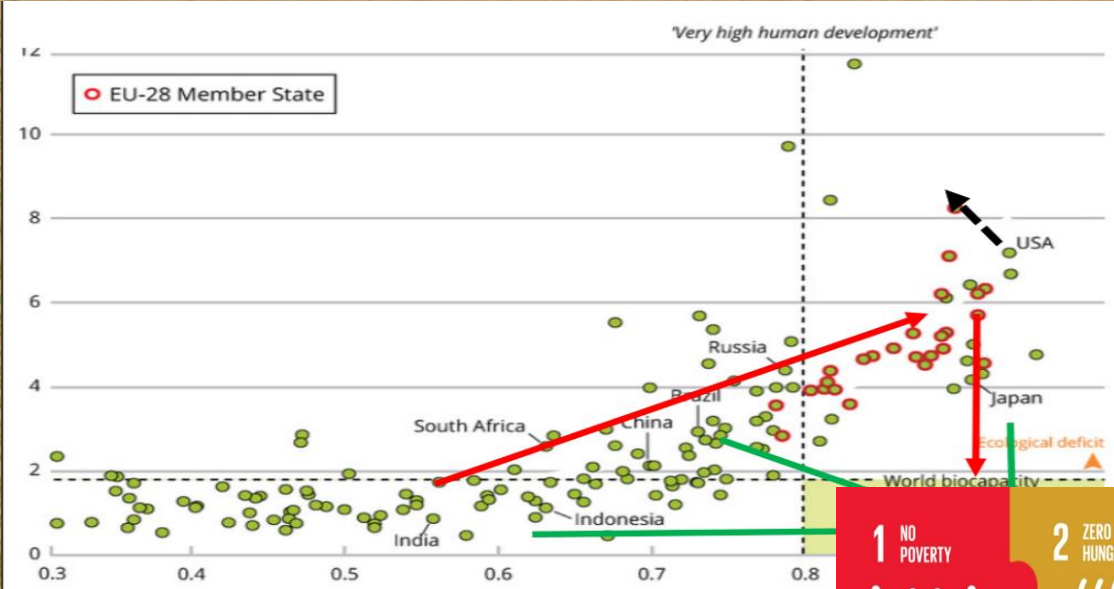- Keep it running = suffer (& die)

Constraint of human population is hardly studied as a crucial driver of sustainable development. Increasing life expectancy and population growth are mostly framed as progress and justification for further E.T. growth.

Auto-catalysis

Biophysical Processes
- Climate
- Nitrogen cycles
- Water cycles
- Carbon cycles
- Life & death
- Fossil fuels
- Minerals
- Soils
- Bio-diversity
- Food chains

Making Sense of Life (& Death)
- Dreams
- Religion
- Culture
- Habits
- Values
- Communities
- Ethics
- Art
- History
- Narratives
- Identity

Non-linear Co-evolution

Entropy

Human brain (patterning & biases)

Econ//Technol. Means of Access & Allocation
- Markets
- Money system
- Policies & laws
- Infrastructure
- Companies
- R&I - Technology
- Ownership
- Information
- Commons
- Licences

Population size

Thinking 'future education' again : UN Agenda 2030

A GLOBAL agenda for sustainable development; not just the South 'catching up' with the North, but above all the North learning to thrive with respect for all life.
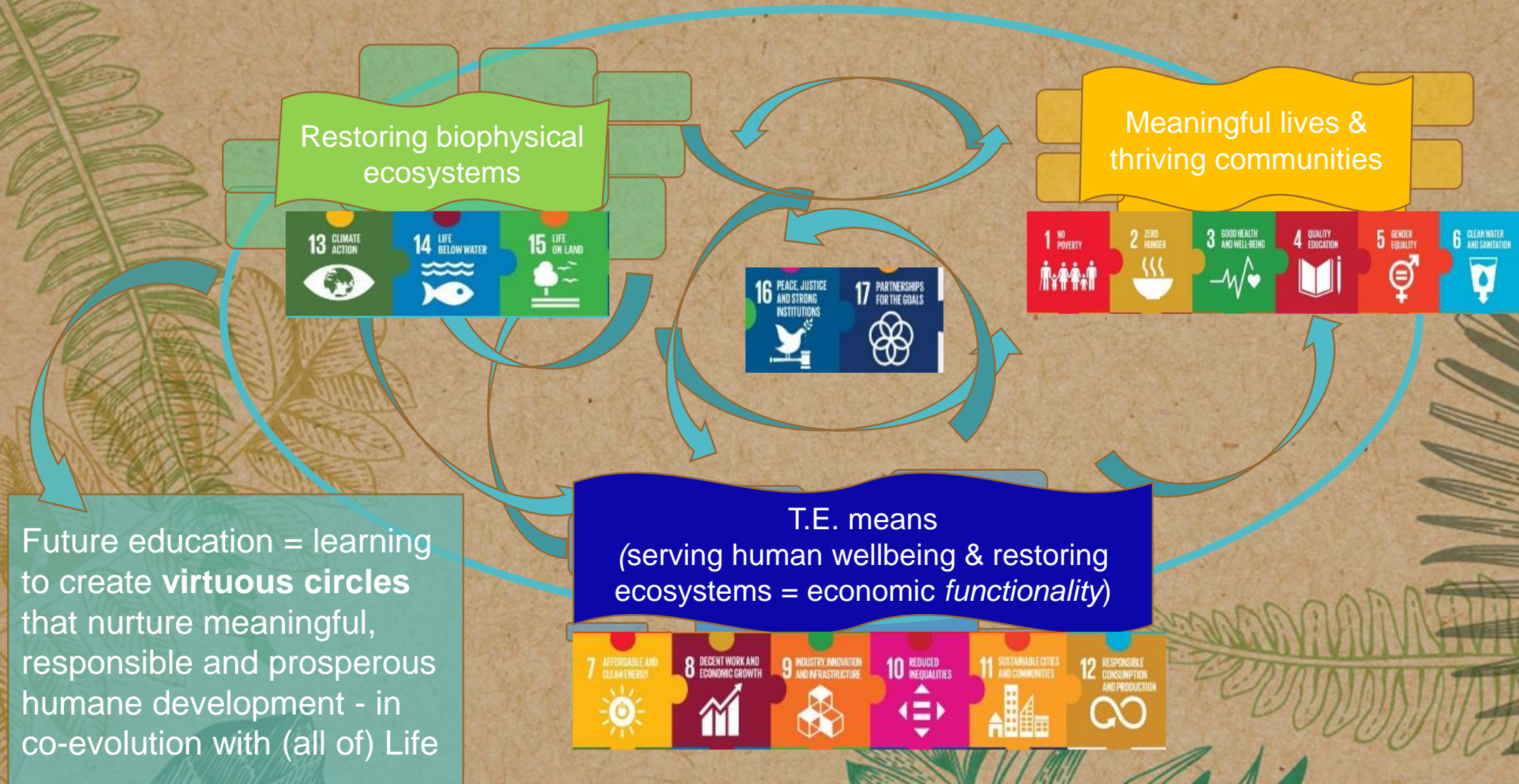
Not a choice menu of goals, but an integrated agenda. E.g. 'how to achieve economic growth (SDG8) while **at the same time** increasing human and planetary well-being?'
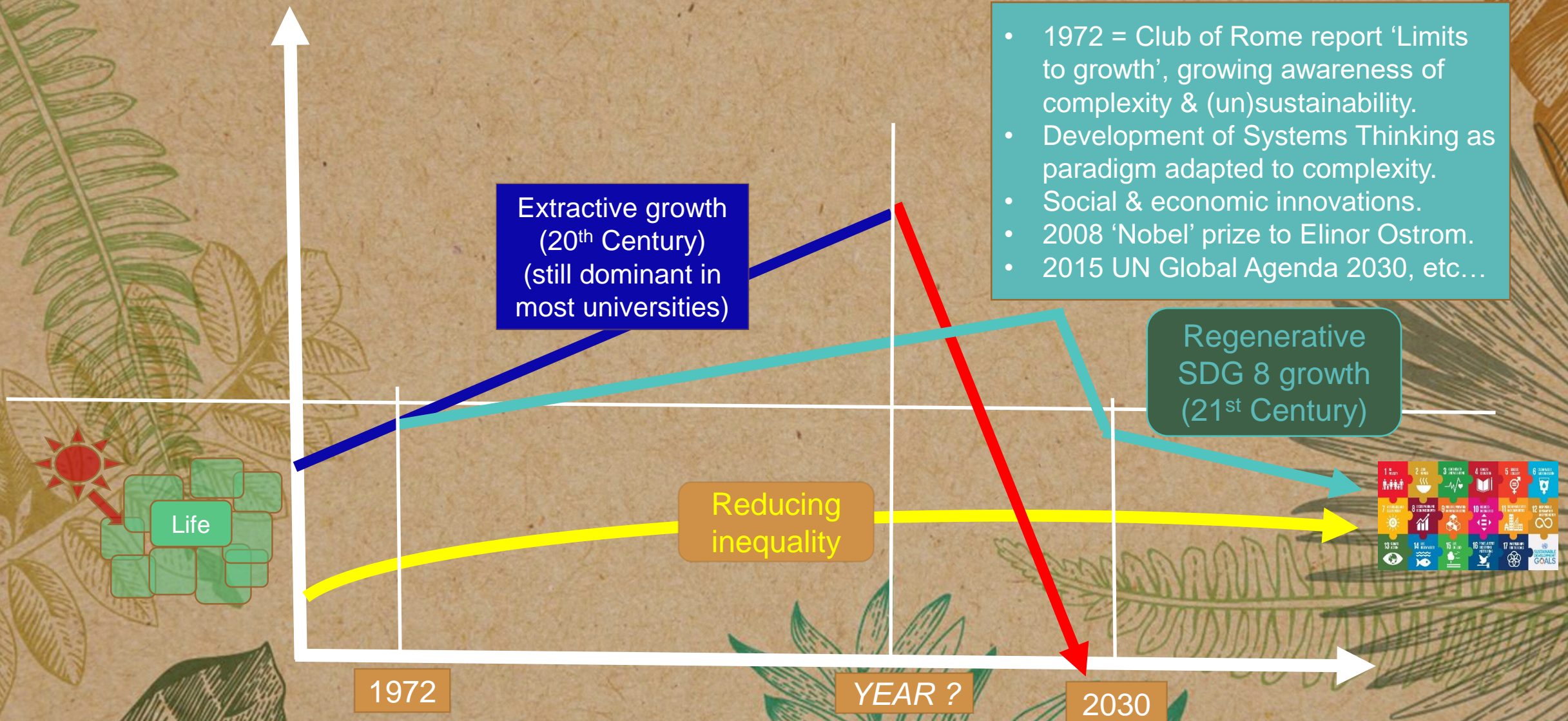
Human wellbeing

With (new) T.E. means of access & allocation

Within planetary boundaries

By peaceful cooperation, not 'economic warfare'

SDG model of 'development'
Using Anthropocene mapping to visualise (non-linear) pathways to complex goals

Restoring biophysical ecosystems

Meaningful lives & thriving communities

T.E. means
(serving human wellbeing & restoring ecosystems = economic *functionality*)

Future education = learning to create **virtuous circles** that nurture meaningful, responsible and prosperous humane development - in co-evolution with (all of) Life

Visualising perspectives & emerging alternative futures

Extractive growth
(20th Century)
(still dominant in
most universities)

- 1972 = Club of Rome report 'Limits to growth', growing awareness of complexity & (un)sustainability.
- Development of Systems Thinking as paradigm adapted to complexity.
- Social & economic innovations.
- 2008 'Nobel' prize to Elinor Ostrom.
- 2015 UN Global Agenda 2030, etc…

Regenerative
SDG 8 growth
(21st Century)

Life

Reducing
inequality

1972

YEAR ?

2030

Holocene solutions:
E.T. means to 'improve' growth

Virtuous circle ☺ regenerative culture

Anthropocene solutions
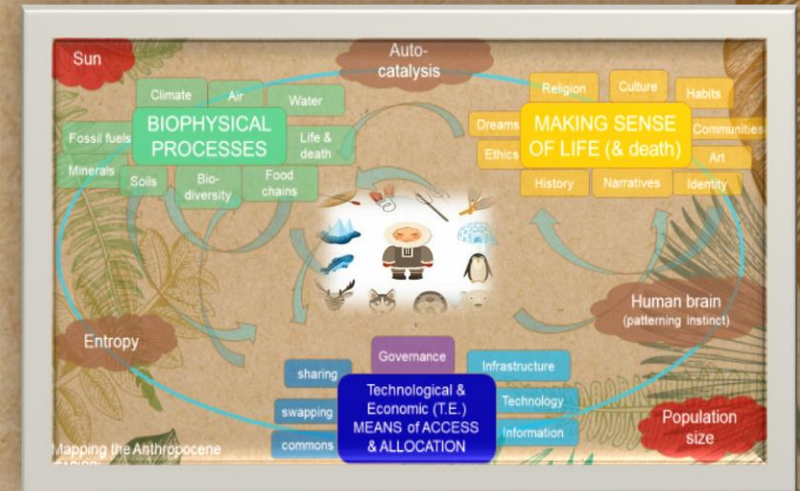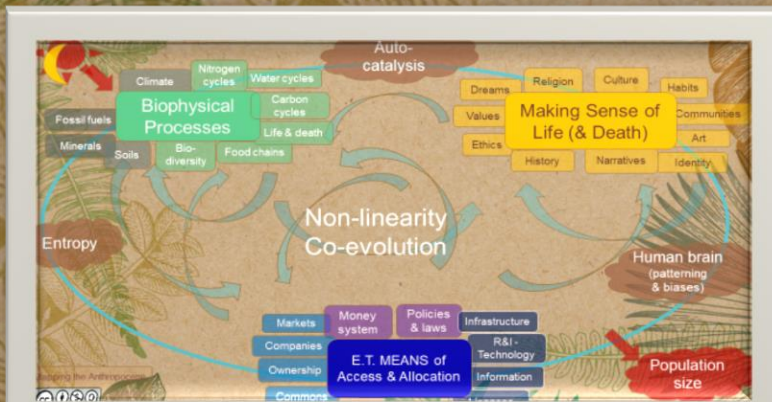Indigenous knowledge
T.E.R.R.A. means
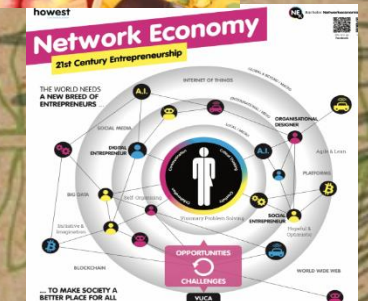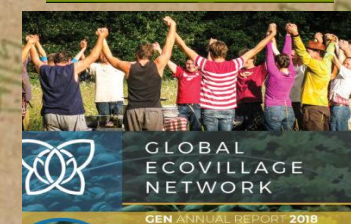
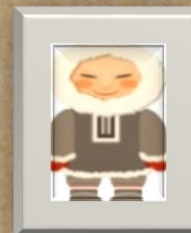# Summary: the 4 Placentas of Future Education
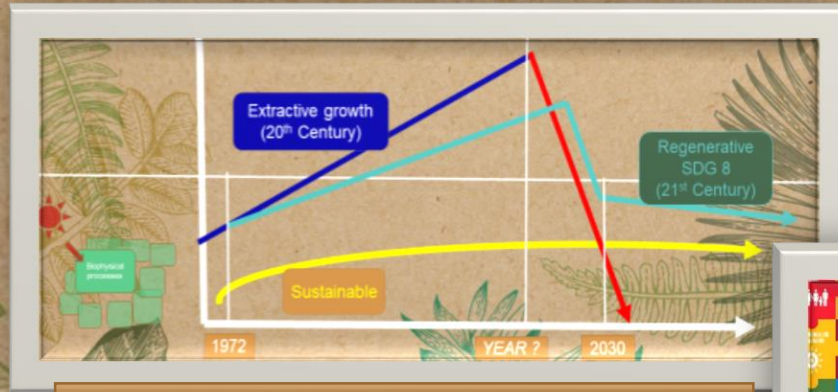
Hope: focus on emergence & resilience (leading to SDGs)

Values & stories core to survival – stimulate reflection & choice

Embrace complexity & uncertainty - foster creativity (Arts)

Co-responsible learning: active & collaborative (space for exploring future-proof solutions)

Thank you

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