EDUCATING FOR HUMAN PREDICAMENT: PROPOSING A CIRCULAR BIOECONOMY

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Learning Objectives:

- Human Predicament
- Human Education
- Economy & Circular Bioeconomy models
- Conclusion

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Human Predicament

Planet Earth
Biocapacity
exhaustion is on

would say
that

Humanity is in a predicament
- see the tag

“Infinity is ended, and mankind is in a box”

Kenneth E Boulding

- He was talking about nature’s biocapacity ,man’s lifeline support
- Climate Change & Sustainability Basics,Kenya, is exploring the African biocapacity measurement case story

Africa’s case examples;

1. African resources e.g wildlife in danger-Lindsey,2020
2. Africa is the epicentre of food crisis due to climate change-Horton-2008
3. Africa’s biodiversity loss due to agricultural expansion is worrying-Craig Leisher,2020
4. Africa’s land use change due to agriculture & settlements is on the rise-Herrmann,2020
5. Hunger is acute in Africa,1 in 4 people face chronic hunger-Fraval,2020

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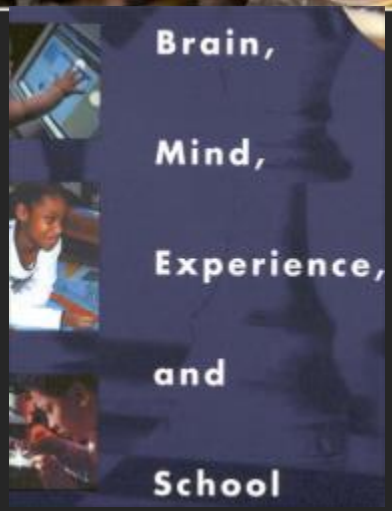
Human Education



People Learn through the

The power of learning is:

- Learning gives us culture identity
- We then adopt culturally situated technology to live
- The way of life is transferred inter-generationally
- Nature restoration REQUIRES a paradigm shift in education model that inspires a dream towards wellbeing of all

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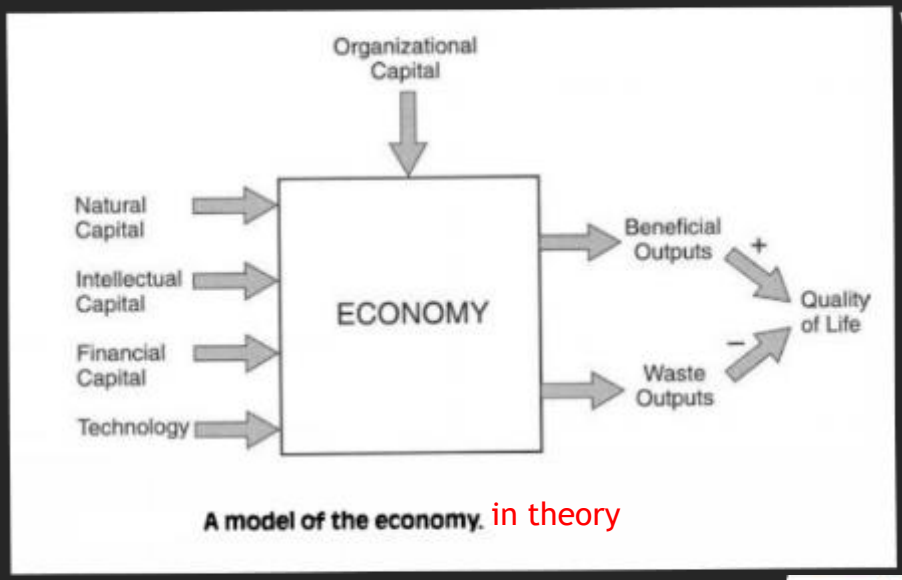
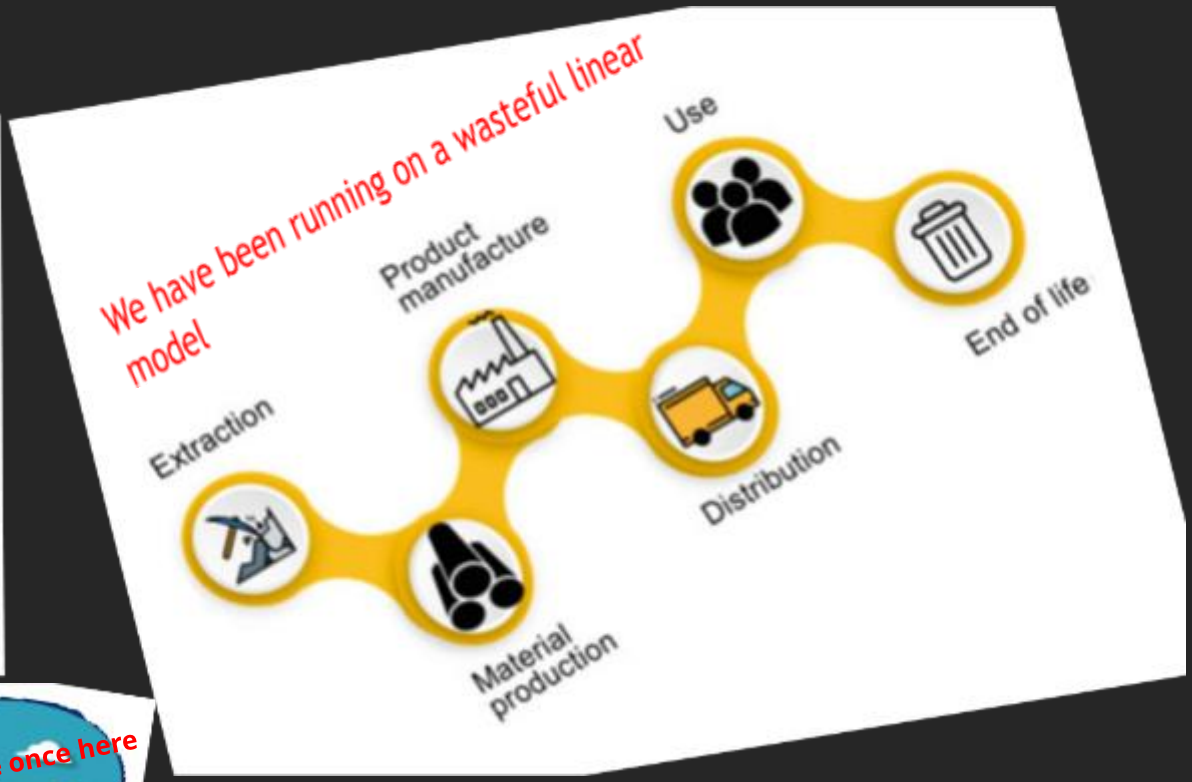
Economy Model



A model of the economy. in theory



Hour glass of environmental degradation

We now face interconnected challenges;man & nature

We must educate towards inclusive growth that restores our environment to a thriving state

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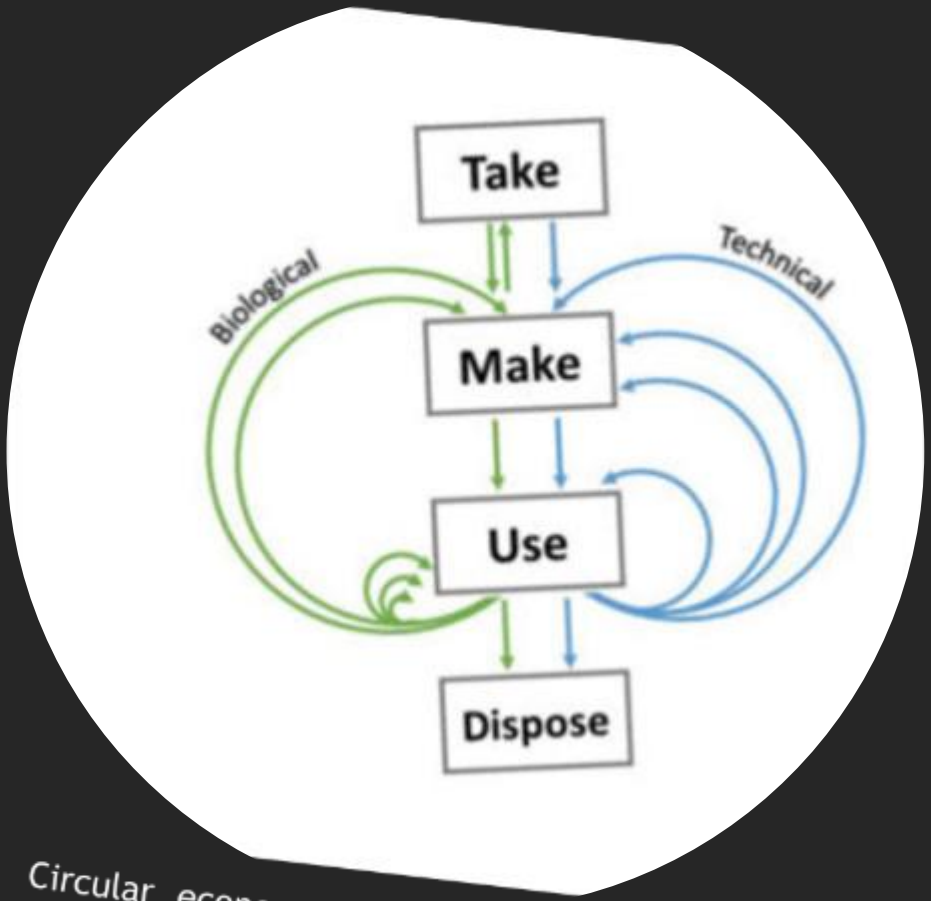
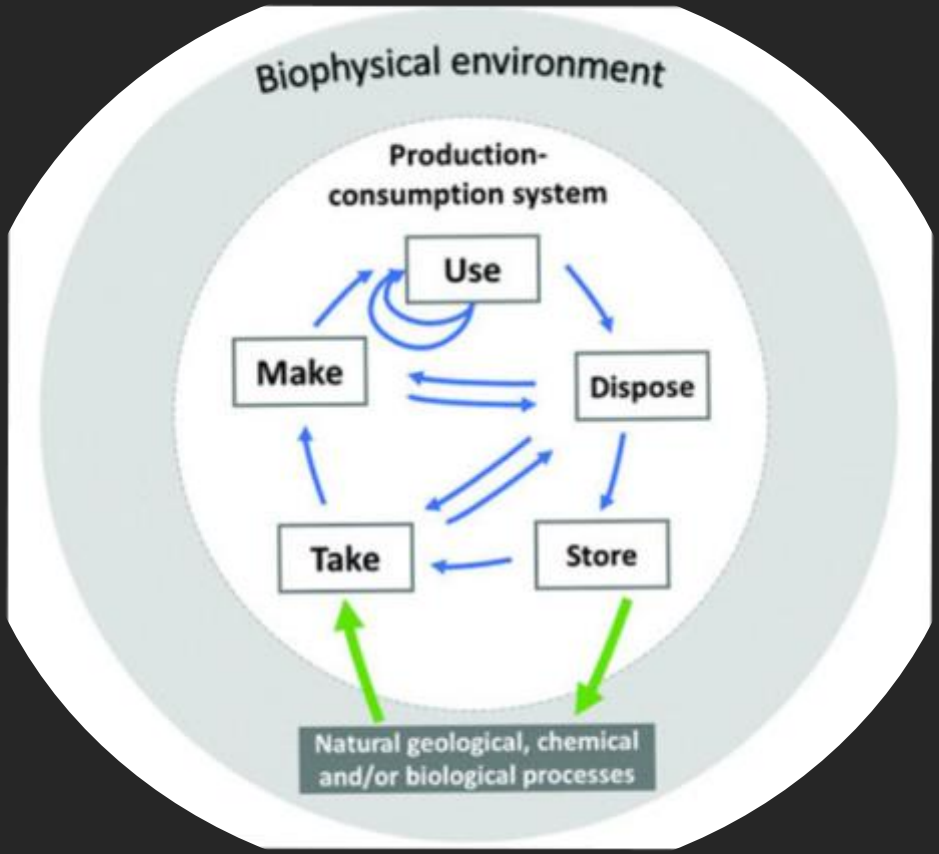
Circular Economy



Circular economy model emerged to make us live within the planetary limts

Circular bioeconomy



- *Circular Bioeconomy is a knowledge-based production and utilization of biological resources, biological processes, and principles to sustainably provide goods and services across all economic sectors. It creates wealth, jobs and reduces wastes at all levels*

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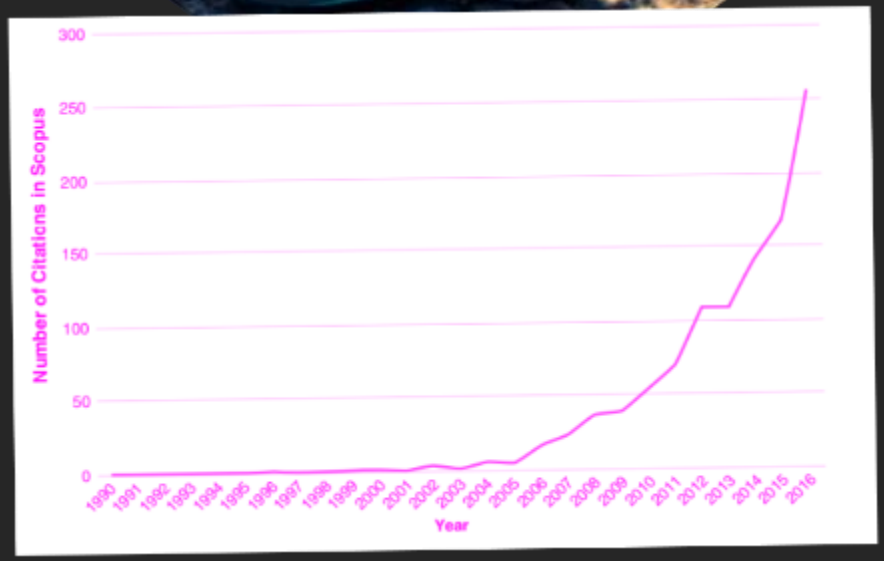
Global Circular Bioeconomy Coverage

Circular bioeconomy is germinating in many parts of the world;USA,EU,ASIA,AUSTRALIA,AND AFRICA

Publications profile



It Circular Bioeconomy involves three elements:

(1) the use of renewable biomass and efficient bioprocesses

(2) the use of enabling and converging technologies,

(3) and integration across applications in all sectors

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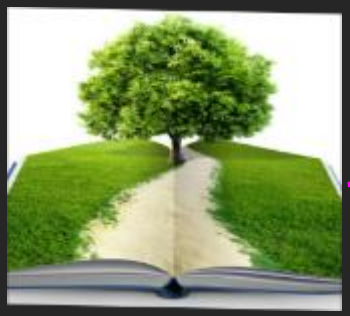
Illustration : 7Ps of Natural Capital Management & Socially Embedded Industrial Ecology

Policy P1

Profit P2

Place P3

Promotion P4



Physical Evidence (Audit) P7

Processes P6

People P5

Policy P1: governance mechanisms are needed to ensure biodiversity products are well suited for ecosystem restoration and damage is eliminated

Profits P2: are gains of natural capital that are obtained from restoration activities

Place P3: is ecosystem specific rehabilitation of IUCN Red List species and beneficial indigenous species for biodiversity

Promotion P4: of natural resource conservation and management principles as knowledge sharing between communities, scientists and industry

People P5: performing industrial activities that are beneficial for the environment, local employment, and systemic health

Processes P6: for ecological restoration must be integrated with industrial processes

Physical Evidence P7: of baseline conditions and quantifiable improvements that can be verified through independent audits

A TYPICAL CIRCULAR BIOECONOMY APPLICATION 7 POINT MATRIX TO GUIDE SHIFT IN EDUCATION

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A new education paradigm for Circular BioEconomy

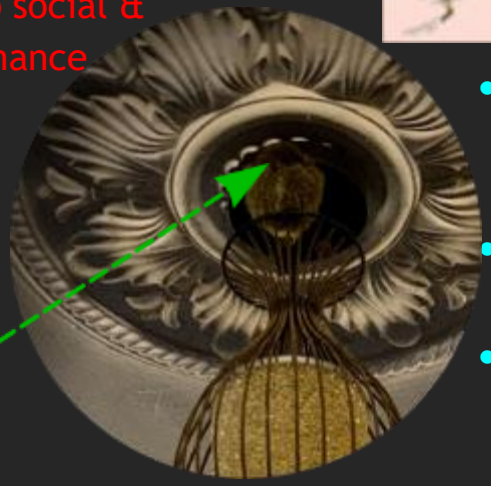
- Existing education model is focused on wealth and less on welfare of people & environment

- Transdisciplinary model that embraces all stakeholders in the production system is best for CBE

- This will require:

(1) System thinking
(2) Strategic planning
(3)Environmenta evaluation
(4) Mindfulness to social & economic performance

And this will result in a just world



- Educating for human predicament must promote inclusive growth

- And it must be industry focused for job placement
- It must teach adaptation to environmental changes

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creating a community of practice across the world

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