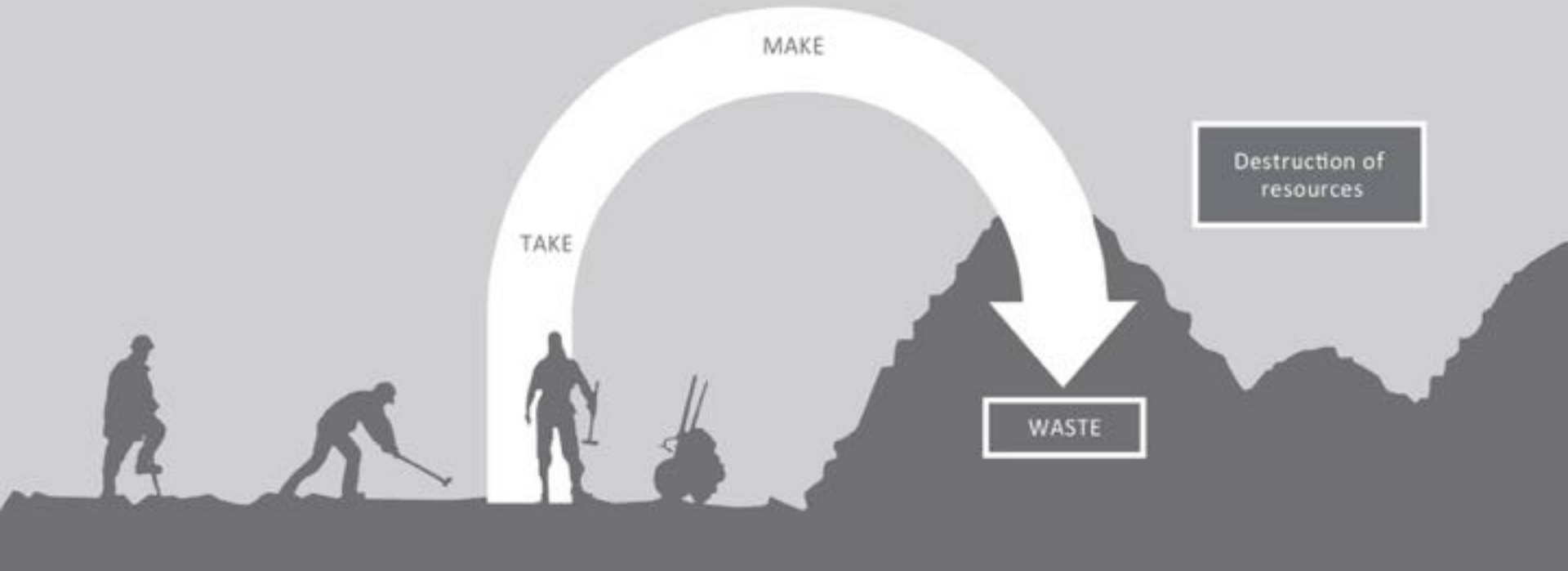


TECHNOLOGY, ENVIRONMENT AND DEVELOPMENT A COMPLEX REALITY



التكنولوجيا، البيئة و التنمية
واقع معقد

Prof. Sherif Delawar



TAKE - MAKE – WASTE

Economy of the Industrial Age



Linear Economy

Take Make Waste!

ONE WAY



Resource
Extraction



Production



Distribution



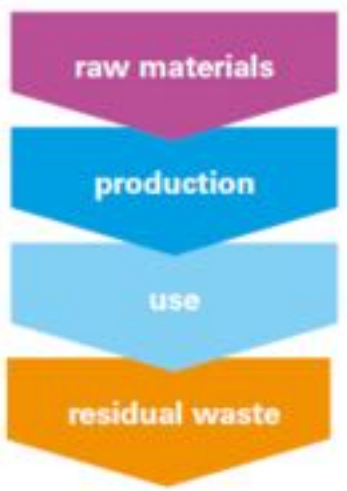
Consumption



The paradigm of sustainable development has emerged as a viable alternative to the (Take – Make – Waste)



LINEAR ECONOMY



(a)

ECONOMY WITH FEEDBACK LOOPS



(b)

CIRCULAR ECONOMY



(c)

Sustainable Development



Sustainable technologies helping to construct Ecosystems in different fields

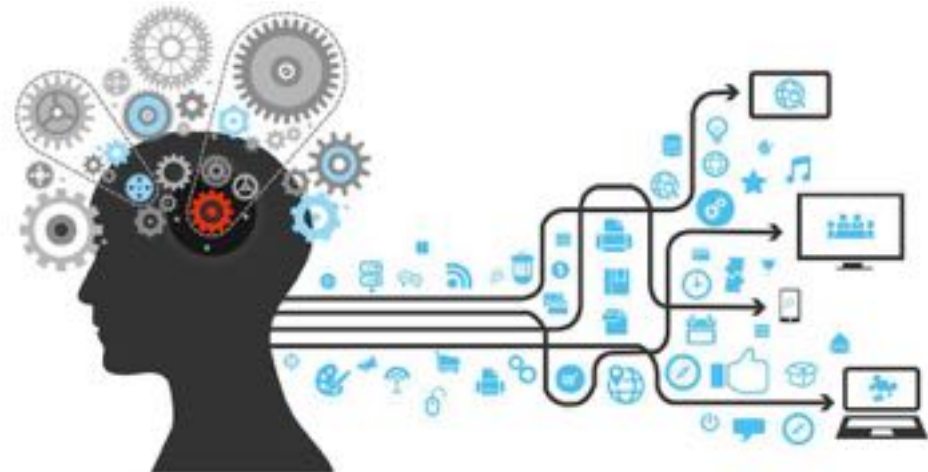


Electrical Cars



Renewable Energies

Artificial Intelligence



3D Printing



Blockchain

Big Data





**The 2030 Agenda for the
17 Sustainable Development Goals and 169 targets**

WRONG ← → **RIGHT**



The Dilemma.....

**Inputs needed for those technologies like
Lithium, silicium , rare earth minerals ..etc**


**are a source of environmental degradation
especially in the African Continent**






Extraction of “COBALT” in Congo

Example 1




**40,000 CHILDREN WORK
IN THE MINES OF CONGO
EARNING AS LITTLE AS RS
60-150. THE COBALT THEY
MINE IS USED IN YOUR
SMART PHONE BATTERY**



sky NEWS

Inside the Congo mines
that exploit children



When I wake up every morning I feel terrible knowing I have to come back here again.

UNSEEN AFRICA COBALT MINER
RICHARD



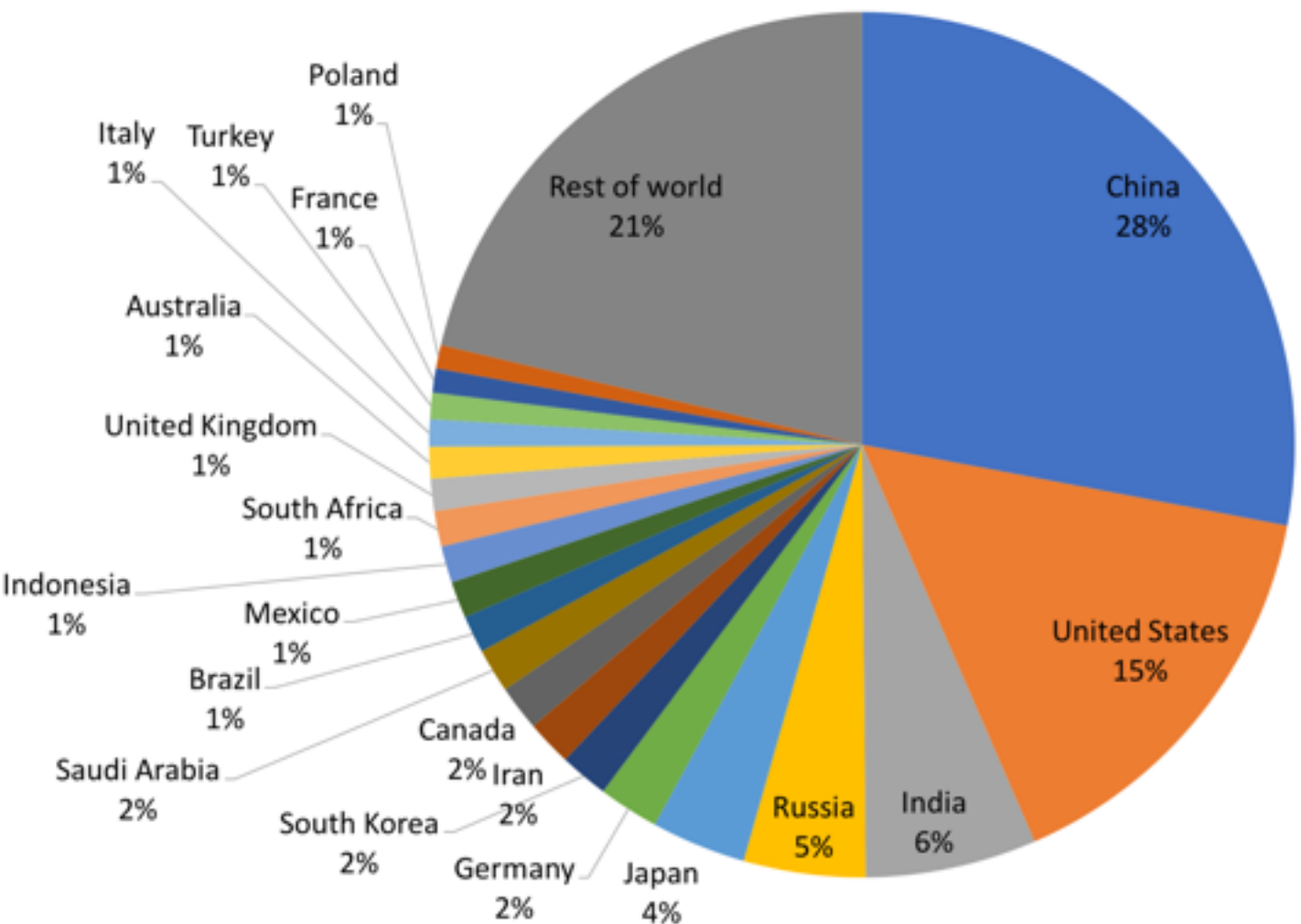
Electronic Waste Shipped from the North and buried in the sands of the Sub-Sahara

Example 2

The USA, China and other economies are racing full speed ahead to maximize the use of “Fossil Fuels”



Share of global carbon dioxide emissions from fuel combustion (2015)



Data: IEA
Image: Union of Concerned Scientists



The trend of environmental threat continues under the powerful business interests of multinationals

**A Systemic new
approach is urgently
required**





New mechanisms for the transfer of **Green Technologies**

Insufficient in the Kyoto protocol



**The reduction of the
duration required
for Property Rights of
Green Technologies**



A new global governance for multinationals

- **A multilateral fund for the green technologies**
- **South- South cooperation in environmental issues**



Changing the consumption practices in advanced economies



A photograph of two hands, one from the left and one from the right, reaching towards each other to form a heart shape. The hands are positioned in the foreground, with the fingers pointing towards the center. The background is a vast, green field of grass under a bright blue sky with light clouds. In the center of the field, there is a single, large, leafy green tree. The overall scene is bright and positive, symbolizing love, gratitude, and care.

Thank you

Sherif Delawar