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SUSTAINABLE DEVELOPMENT GOALS

UNIDO's strategy and action on supporting just transitions to inclusive, resilient and low-carbon circular economies

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June 29, 2021

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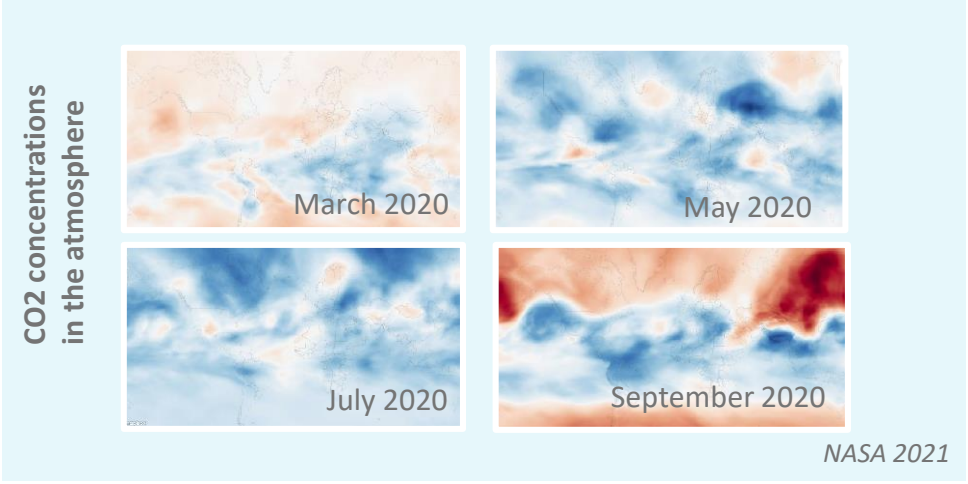
Green recovery

Looking at post COVID-19 pandemic: any change?



NASA 2021

A **green COVID-19 recovery** could cut GHG emissions by up to 25% by 2030. Related measures could include supporting zero-emission technologies and infrastructure, reducing fossil fuel subsidies, stopping new coal plants, promoting nature-based solutions and adopting telecommuting working modalities.

UNEP Emissions Gap Report 2020

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Industry and Climate Change: 3 in 1

INDUSTRY

Role 1: A root cause (the bad guy)

- GHG emissions from industrial processes
- GHG emissions from unsustainable product design
- Extraction and inefficient use of raw materials
- Waste generation
- Facilitating irresponsible consumer behaviour

Role 2: A vulnerable sector (the victim)

- Loss and damage of infrastucture and profit due to climate-induced disasters
- Stranded assests
- Reduced access to water and other resources

Role 3: A solution (the hero we need)

- Innovative technologies and business models
- Just transition of the workforce
- Change in consumer behaviour
- Healthy and productive ecosystems

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How to address Climate Change

Climate change needs both mitigation and adaptation.

With the role of industry, possible avenues of intervention become clear:

Mitigation

- Improving GHG footprint of
  - ✓ Individual enterprise
  - ✓ Group of enterprises, e.g. In a park
  - ✓ Along value chains
  - ✓ Sector
- Improving product GHG footprint

Adaptation

- Increasing resilience of industries
- Ensuring sustainable access to resources for industries

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Climate change and UNIDO's work area

Energy to facilitate zero-carbon growth

- Normative role
- Renewable energy, energy grids
- Energy efficiency
- Framework for energy infrastructure

Circular Economy

- Normative role
- Agro-ecology
- Resource and energy efficiency
- Renewable energy
- Food preservation
- New business models: Green design, extending product lifetime, recycling, secondary markets

Decarbonization of Industry

- Normative role
- Renewable energy
- Energy efficiency
- Process innovation
- Emissions from sources other than fuel

Ecosystem based adaptation for industry

- Normative role
- Sustainable access to water
- Sustainable access to nature-based resources

Reducing non-energy GHG emissions

- Normative role
- Ozone depleting substances
- Process emissions
- Other

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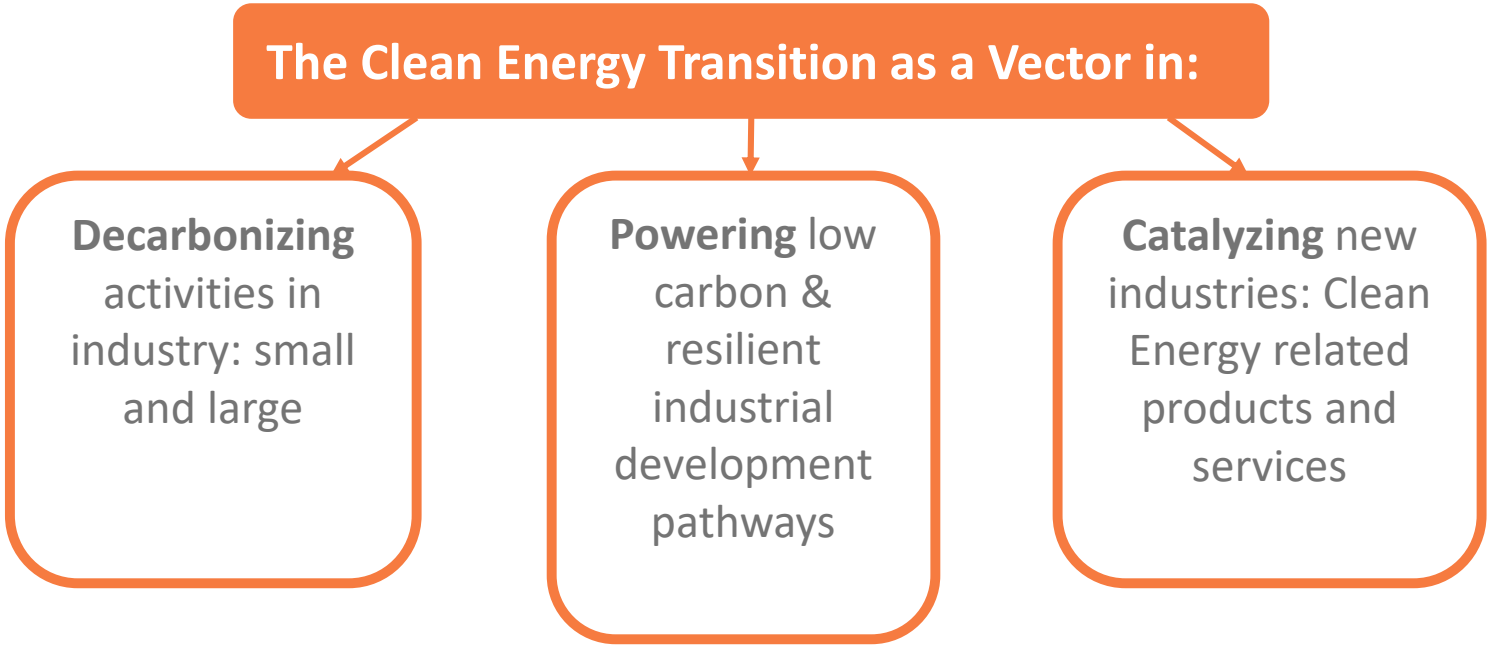
Facilitate Zero Carbon Growth



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Decarbonization of Industry – the Challenge

- Industry accounts for 1/3 of the global emissions and 1/3 of the global energy demand

- **27** countries consume **81%** of the energy consumed by industry globally (11 are emerging economies and non-OECD)

- **4** energy intensive sectors account for **1/2** the industrial emissions

- SMEs and supply chains are another cluster with a big potential for growth

- Energy efficiency can deliver **30%** of the emission reductions but it is not changing fast enough

- Renewable energy uptake in industry is still slow
- Electrification of cooling and heating is key
- Innovation needed for high temperature heat

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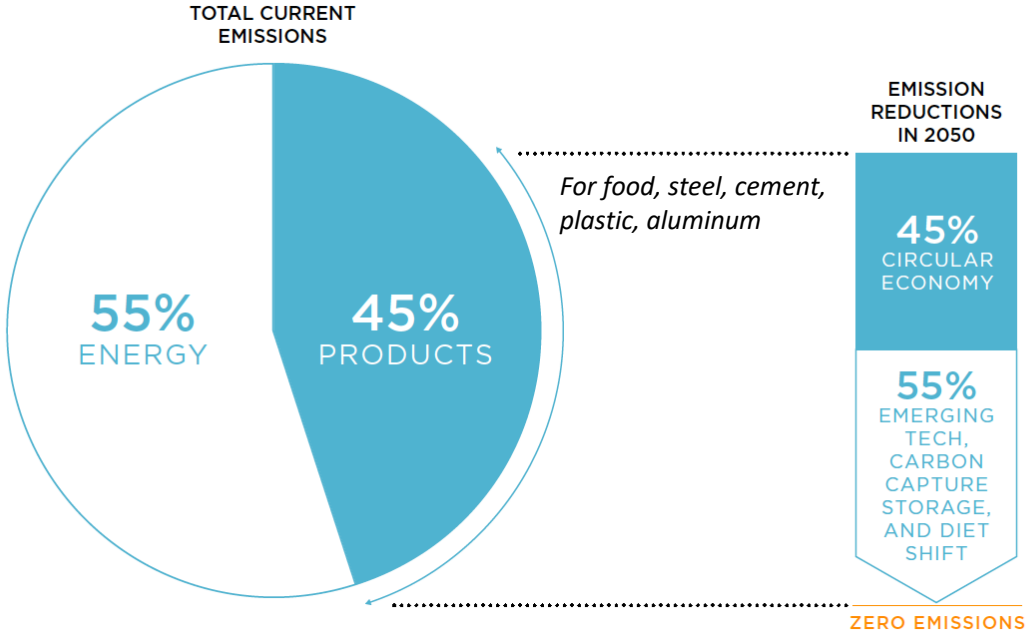
Circular Economy is necessary to address climate change

> If Renewable Energy (RE) & Energy Efficiency (EE) were implemented 100% ONLY 55% of total emissions could be abated.



Source: “Completing the picture”, EMF and Material Economics (Sweden), Sep.2019

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Global Impacts of Resource Extraction and Processing

~50% of **climate impacts**

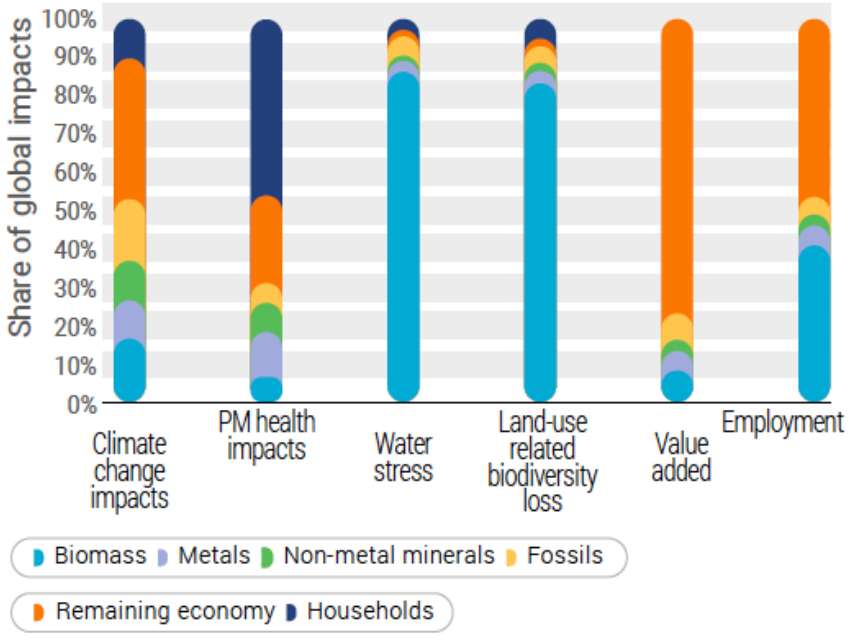
~90% of **water stress**

~90% of **biodiversity loss** due to land use

~35% of **air pollution** (PM)

BUT

Production and consumption also create lots of **value added and jobs**



Global Resource Outlook 2019 (https://www.resourcepanel.org/reports/global-resources-outlook), International Resource Panel, 2019

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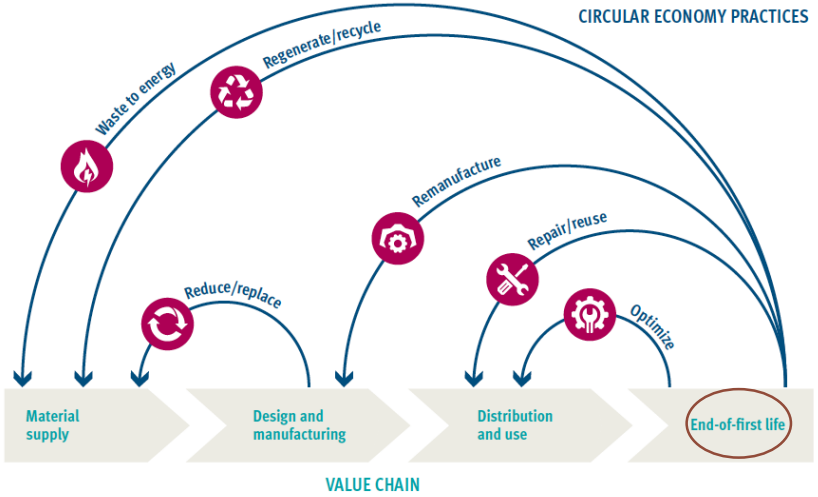
Circular economy is an "industrial economy"

- **Returns** products, parts and materials **into use several times** along value chains
- **Based on principles that**
  - Products are **designed to last**
  - **Value is maintained** for as long as possible
  - Generation of **waste and pollution** is minimized
  - **Renewable energy** is used as much as possible

- **Enablers: Innovation, Digitalization, Stewardship, Partnerships**, and **Collaboration** between businesses, governments, and consumers



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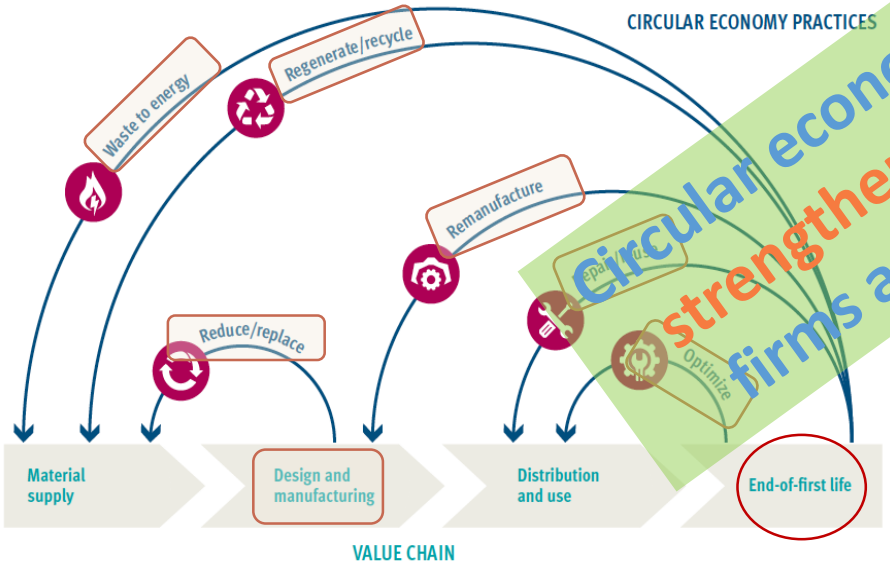
Circular Economy Practices are "Business Practices"



Circular economy practices strengthen resilience of firms and economies!

Along global and domestic value chains

- Eliminate/**replace** the product (-> single-use plastic products)
- **Product design** phase
  - Eliminate/**replace** product or hazardous chemicals
  - **Reduce** materials used
  - Improve **Durability / Reusability / Upgradability / Reparability / Recyclability**
  - Increase **recycled** content in products
  - Ensure products **use energy and other resources** efficiently throughout their lives
- Maximize **resource efficiency** in manufacturing
- **Optimize**/intensify use of products
- Enable **remanufacturing** of products, parts
- **Regenerate** biomass, **recycle** other materials
- After maximizing circularity everywhere else, **recover energy** from remaining waste

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Circular Economy Actors and Benefits

Circular economy actors:

- **Consumers**
- **Businesses**
- **Governments**

Role of governments is to create favorable conditions

- **Enable consumers to buy more circular products**, ensuring they understand their benefits
- **Move businesses to increasingly design & produce more circular and safer products**, which also increase profitability

Economic benefits	Environmental benefits	Social benefits
Increased productivity (with resource efficiency)	Reduced environmental impact	Improved well-being
Reduced production costs and improved competitiveness	Reduced emissions of greenhouse gases (GHG) and pollutants	New jobs and incomes
New business activities and models	Reduced pollution and end-of-life waste	Improved health and working conditions of people
New markets and investment opportunities	Higher quality of ecosystem services	Improved health of animals and plants
Enhanced consumer loyalty	Preservation of natural resources (water, land, materials)	New partnerships and collaborations
Reduced resource scarcity and better protection on resource price fluctuations	Safeguarding biodiversity	Innovations and technologies make life easier


Thank you!