



DAC+TCOM

An Integrated Technology
Concept for Decarbonization,
Waste Remediation & Resilience

NuCarbon Industry Task Force
Kickoff Meeting

Patrick Furlotti
Founder & Chairman
Nu Carbon LLC
January 5, 2021



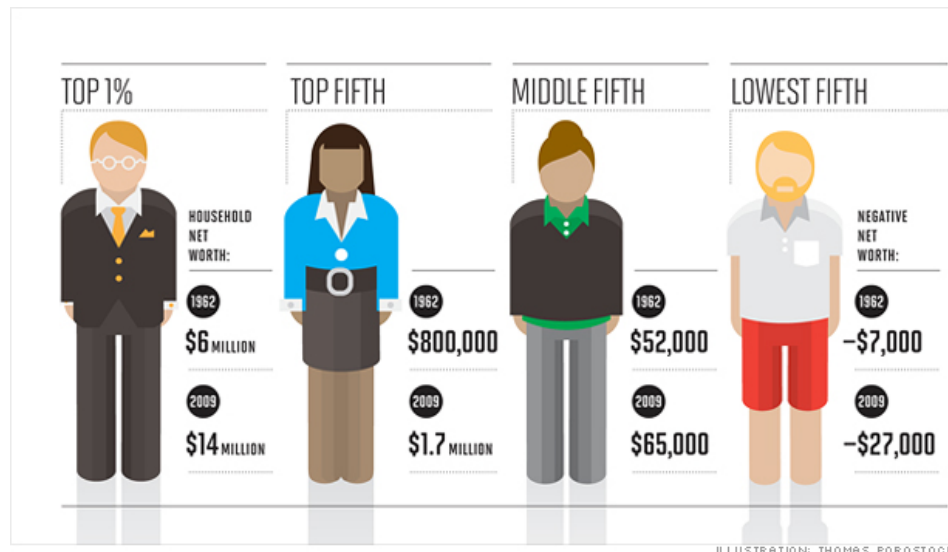
Industry Task Force Team - Intro

- Patrick Furlotti – Founder & Chairman, Nu Carbon LLC
- Eskopolis, LLC
 - Kevin Evans, Advisor, Nu Carbon, LLC
 - Erfan Ibrahim, Advisor, Nu Carbon, LLC
- Global Thermostat
 - Peter Eisenberger
- Phoenix Carbon LLC
 - Michael Lurvey
 - Cheyenne Lurvey
- Nadia Kock – Elk Institute
- David Seaborg – World Rainforest Fund
- Brett Weichers – Iowa Grade LLC



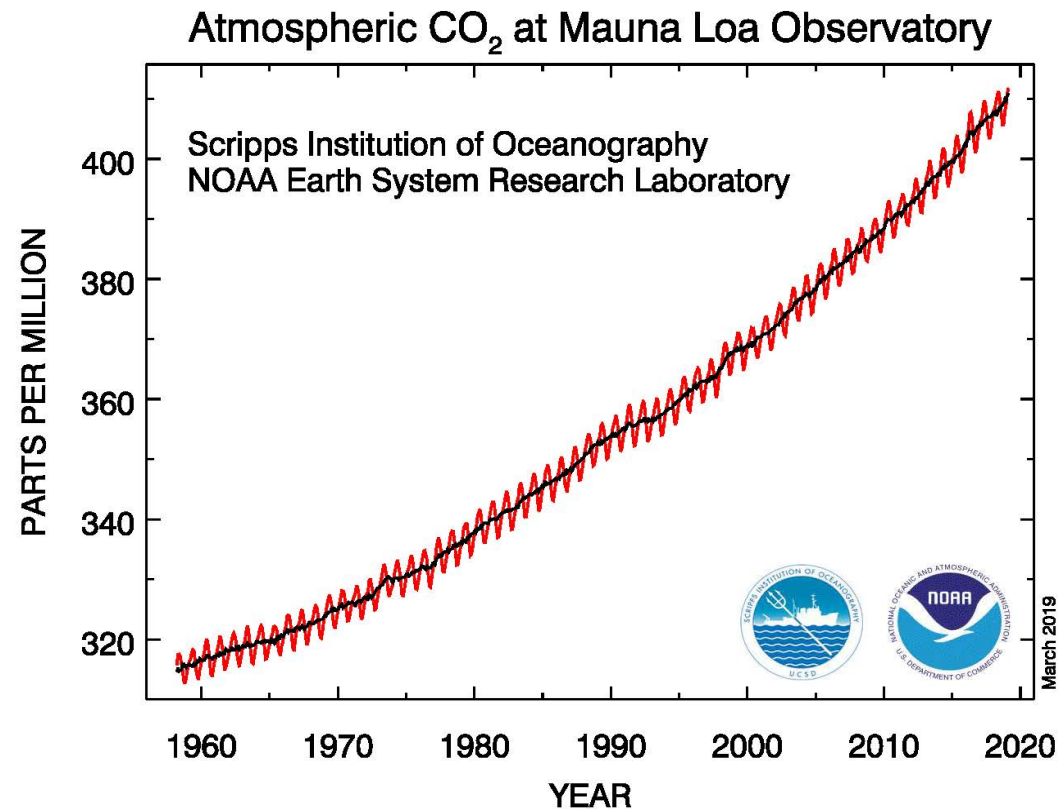
Critical Global Drivers Necessitating Change

- CO₂ emissions rising
- Energy requirements growing
- Raw materials demand increasing
- Rainforests depleting
- Landfills saturating
- Inflation
- Unemployment
- Growing wealth gap
- Political instability



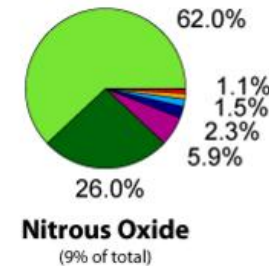
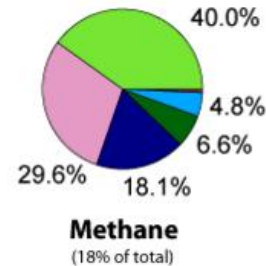
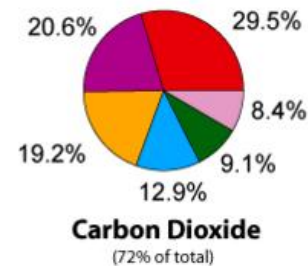
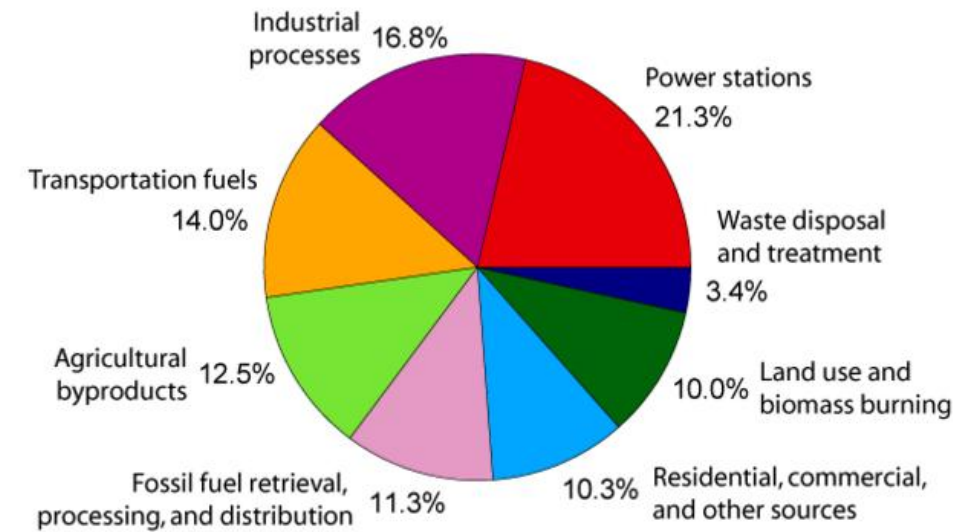
Global Atmospheric CO₂ Content Trajectory

- 450 PPM can be reached by 2040 based on current CO₂ growth trends



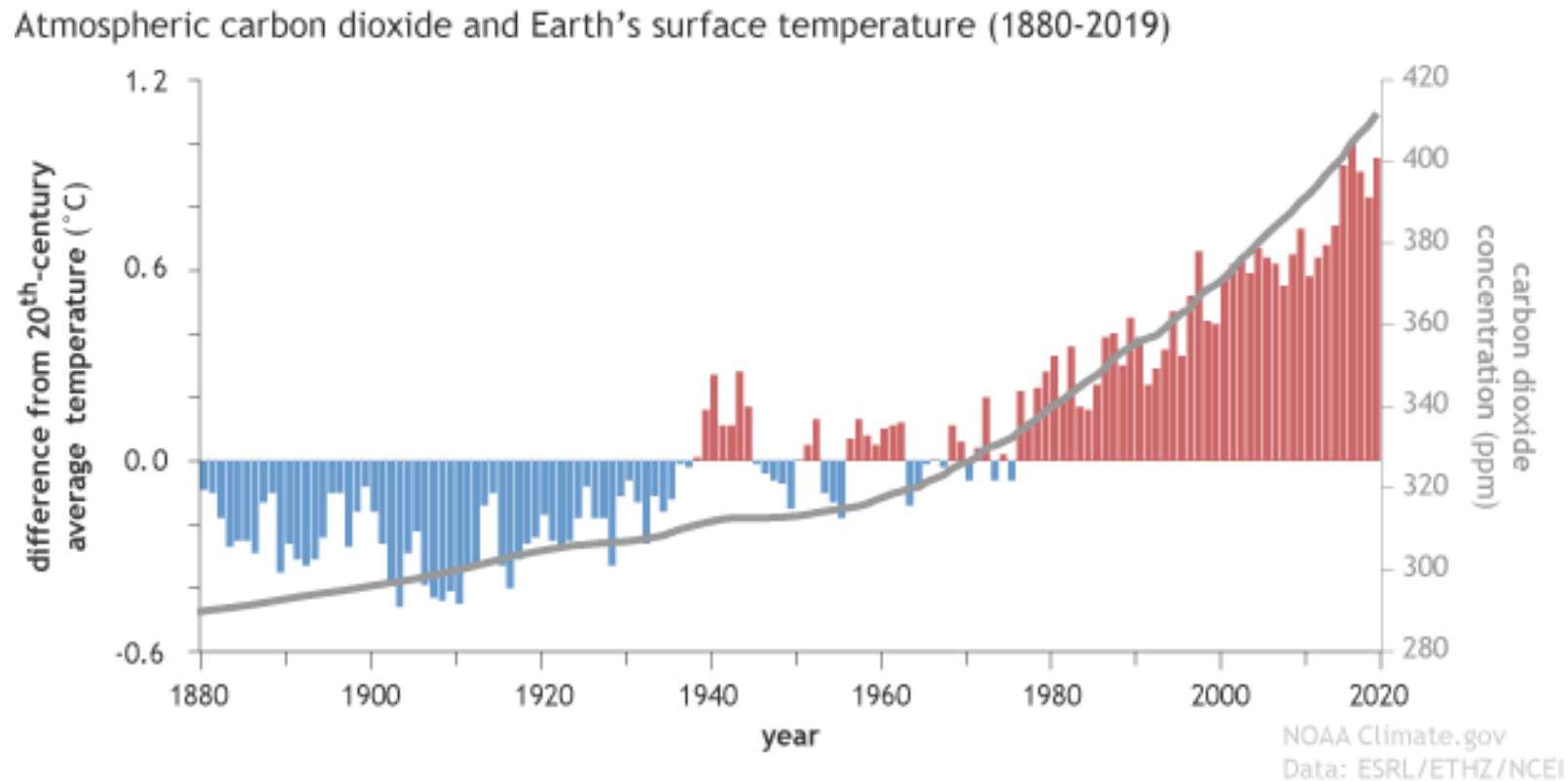
Sources & Contributions of Greenhouse Gas Emissions

Annual Greenhouse Gas Emissions by Sector



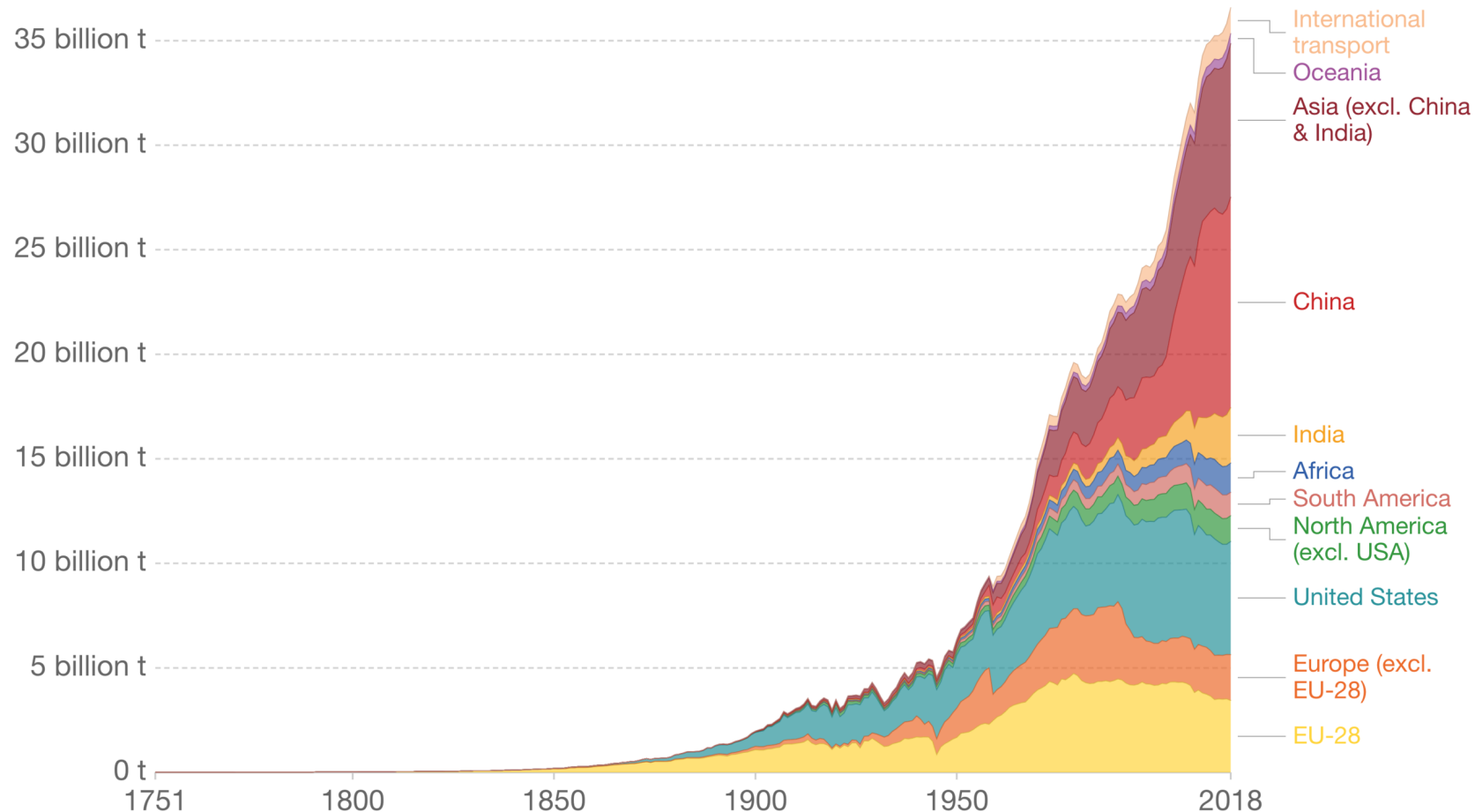
Correlation Between Atmospheric CO₂ Content & Global Temperature Rise

- Trend is clear!

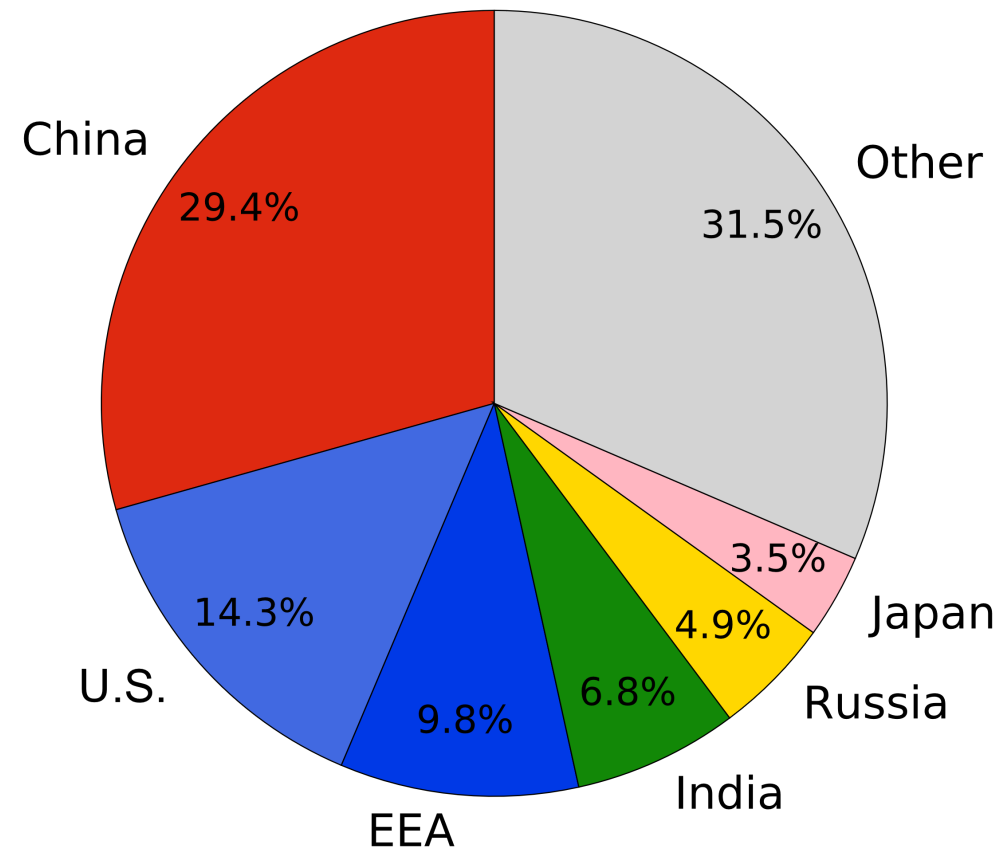


Contribution of Global CO₂ Emissions By Country

- Developed nations leveling, China, India and developing countries increasing

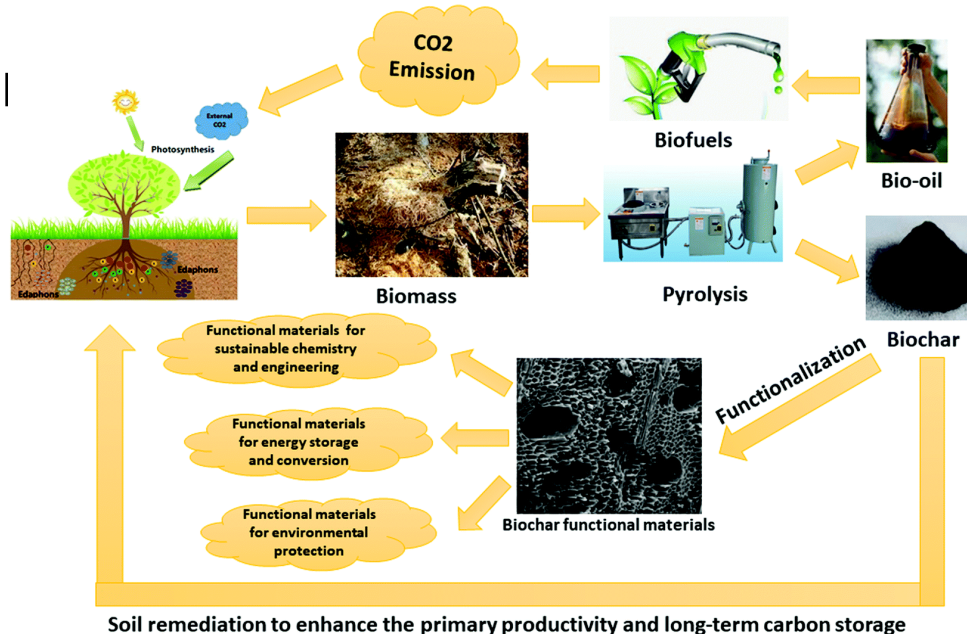


Distribution of Global CO₂ Emissions By Country

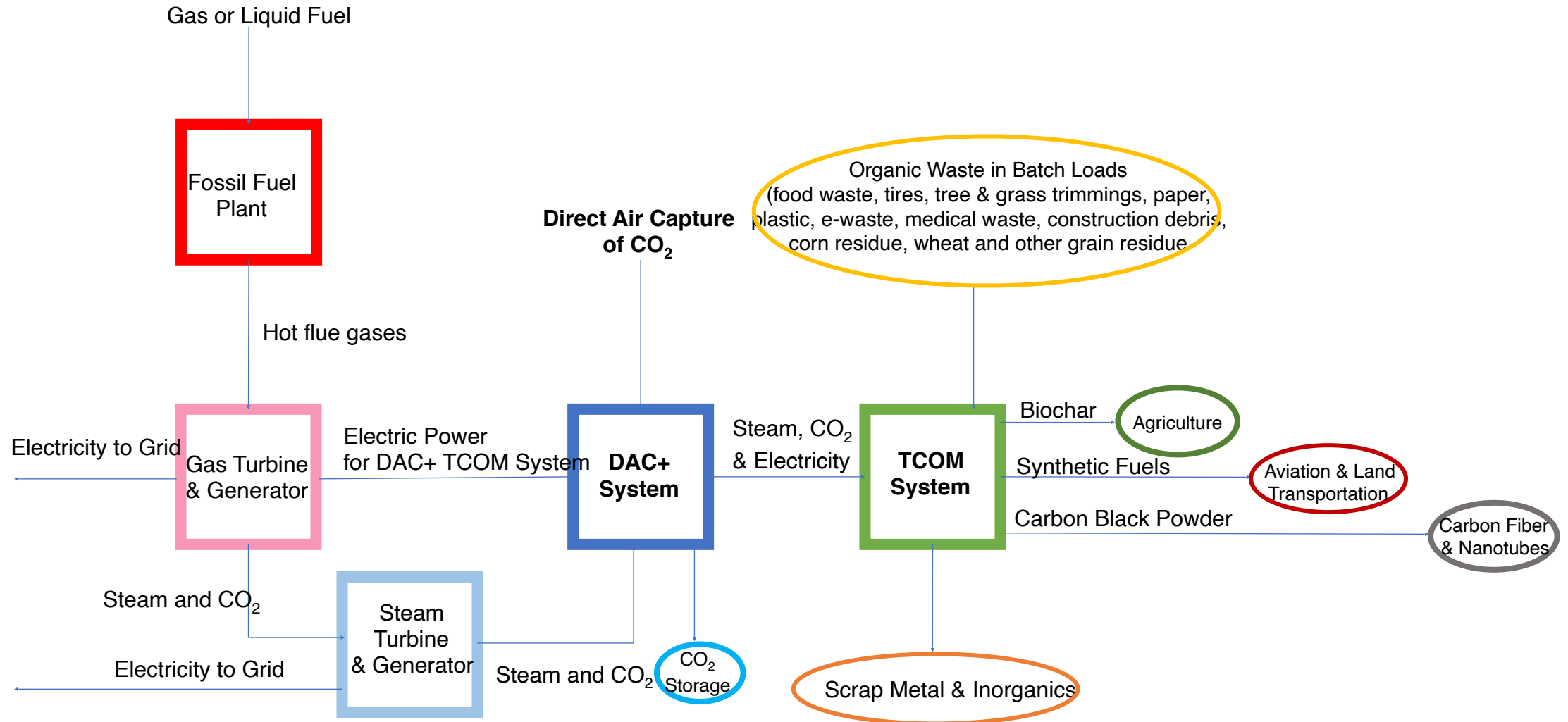


Mitigation for Global Drivers – “REME Vision”

- Powered by renewable energy (solar, wind, nuclear)
- Carbon capture (atmospheric & fossil fuel plants)
- Organic waste remediation
- Manufacturing:
 - carbon-based materials
 - synthetic fuels
 - biochar for agriculture

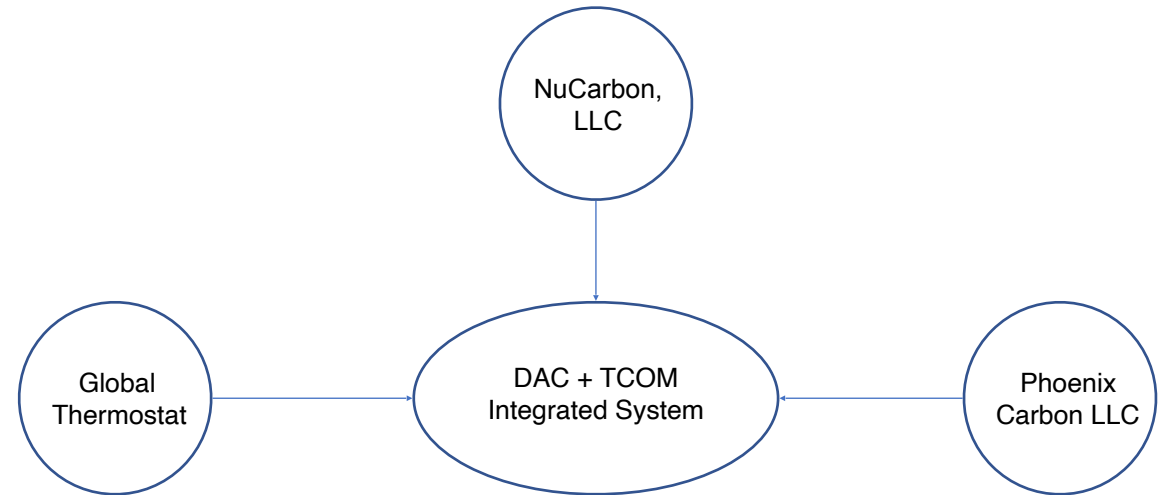


DAC + TCOM Integrated System For CO₂ Emission Control



Tangible Benefits of DAC+TCOM Integrated System

- Effective CO₂ emission mitigation
- Higher energy efficiency (combined heat and power)
- Reduced CAPEX
- Flexible economic model
- Self-sustaining
- Landfill independent
- Modular design (expandable)

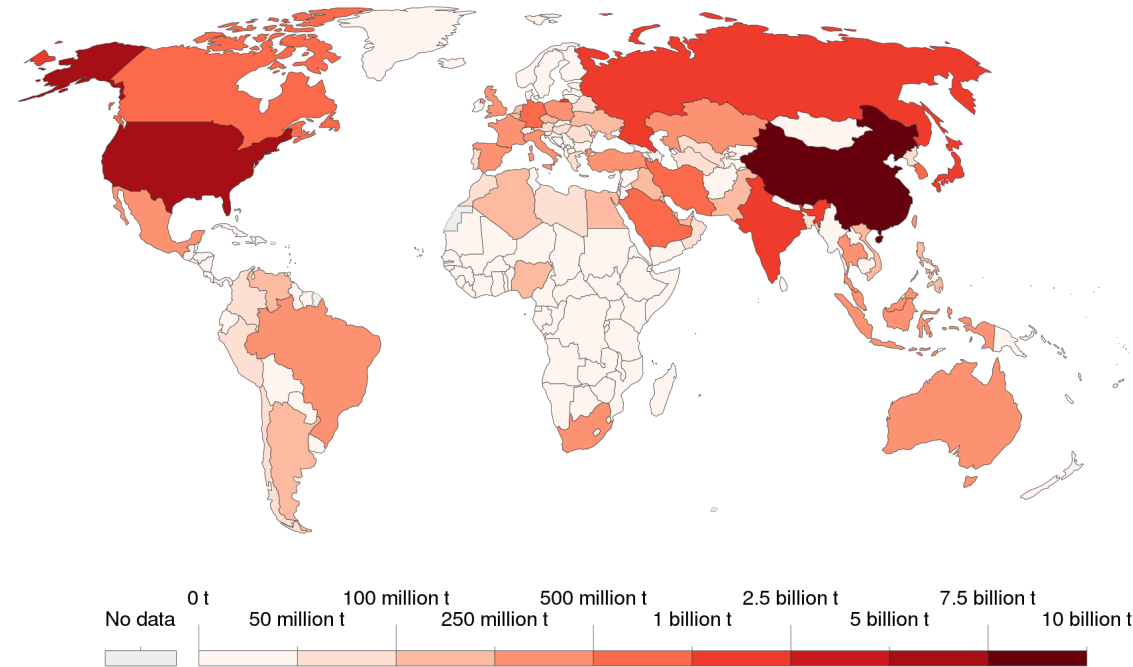


Target Countries for DAC + TCOM System

- Phase 1: Integrate system with fossil fuel plants in countries with highest CO₂ emissions and growing waste management problems (color shaded):

Annual CO₂ emissions, 2017

Annual carbon dioxide (CO₂) emissions, measured in tonnes per year.

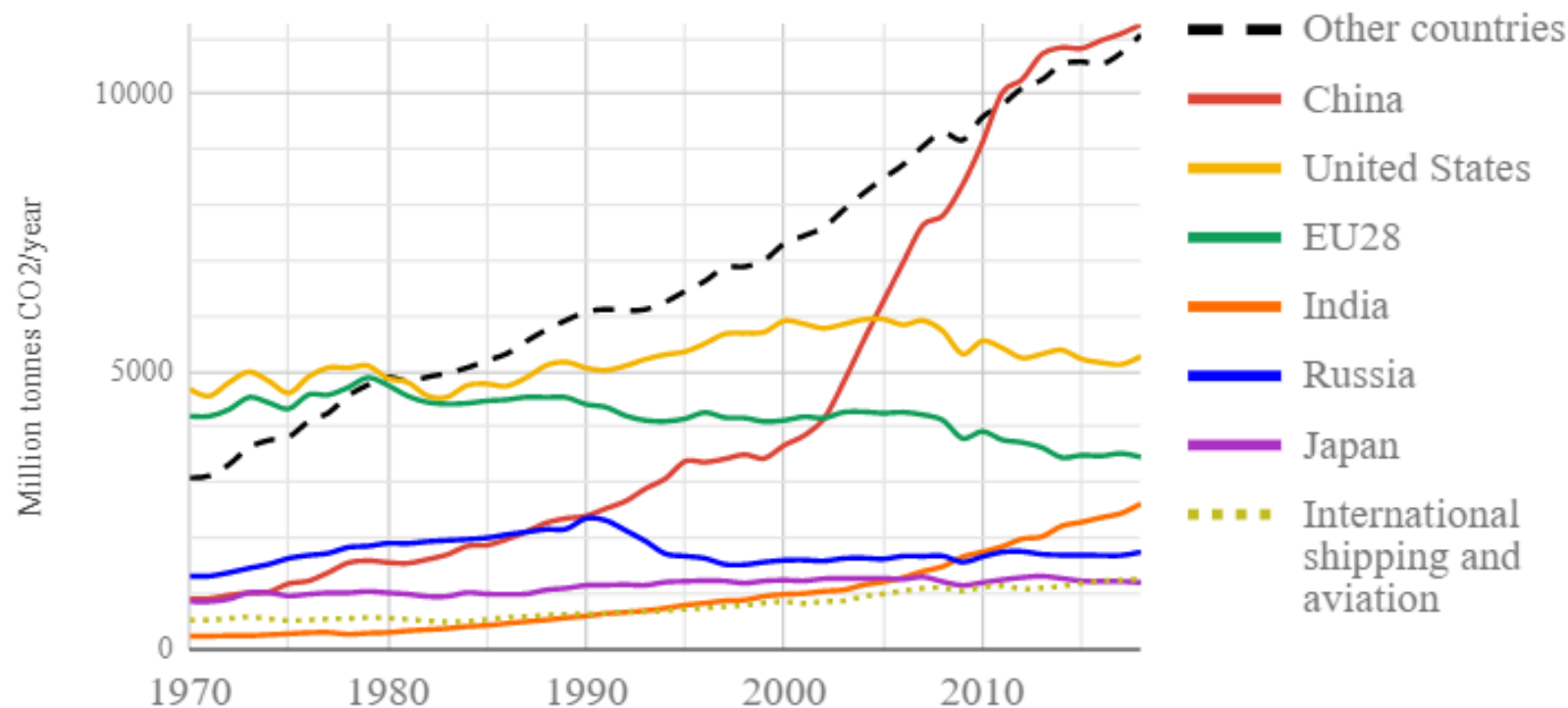


Source: Global Carbon Project; Carbon Dioxide Information Analysis Centre (CDIAC)

Top 6 Candidate Nations/Regions for DAC + TCOM System

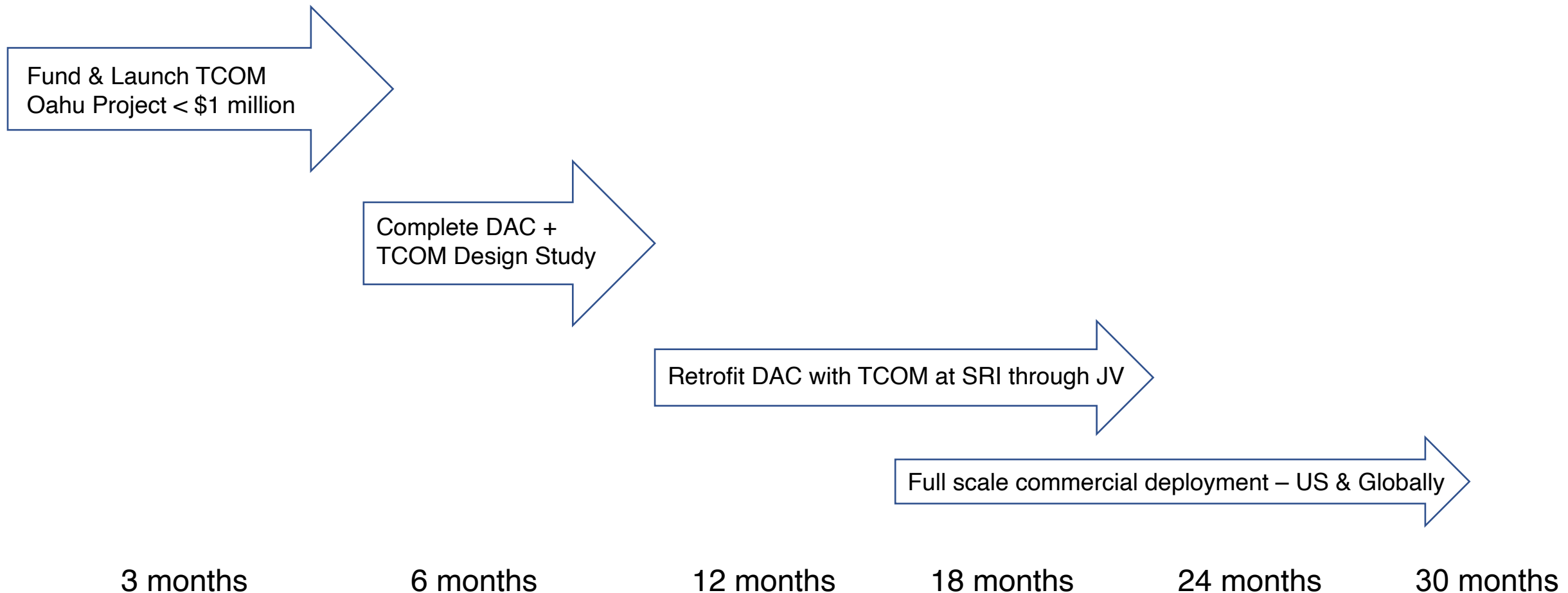
- Highest priority to curb CO₂ emissions

World fossil carbon dioxide emission 1970-2018



DAC + TCOM Proposed Development Plan

- 30 – month timeline



The REME – Smart Community Nexus

- Expand DAC + TCOM to include:
 - Clean energy capacity (solar, wind, SMR)
 - Hydrogen production
 - Desalination
 - Carbon based materials manufacturing
- Realize Global Thermostat “REME” vision
- Build NuCarbon integrated utility
- Enable carbon negative smart communities



Thank You

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