

System transformation areas: Business and Industry

ACW/NDE FORUM

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Relevance of Business and Industry

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- The operations of businesses and industries are intricately linked with climate change. **According to the IPCC, industry accounted for 24% of global GHG emissions in 2019.** Manufacturing processes, e.g., in the cement and steel industries, are extremely energy and emissions intensive. On the other hand, operations of businesses and industries are also threatened by climate change with increasingly frequent extreme weather events damaging critical infrastructures for manufacturing and logistics.
- **Climate action in the industrial sector** is required to reduce its carbon footprint and increase climate resilience of businesses and industries.
- **Climate action does not threaten long-term economic growth;** on the contrary, climate action can stimulate economic growth by boosting human capital (healthier lifestyles and better education), natural capital (valuation through ecosystem services), technological change and increasing productivity, as well as efficiency and getting more with less.





CTCN: Business and Industry

CTCN Africa Portfolio: Business and Industry



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Countries	Examples of the CTCN Technical Assistance	Status
South Africa	Developing an STI-led cross-sectoral Circular Economy Roadmap for abating GHG emissions in South Africa	Completed
Nigeria	Developing an Institutional Framework for the Energy Efficiency Act and Regulations targeting energy intensive sectors (household and industries) in Nigeria	Implementation
Algeria	Feasibility study and technical support for the implementation of a pilot project waste-to-energy pilot project at a cement plant belonging to the Groupe Industriel des Industriel des Ciments d'Algérie	Bidding
Zimbabwe, Senegal	Development of a Deep Decarbonization Roadmap in the Cement Sector through Advanced Technology Upgradation and Enhanced Standards.	Response plan development

Further requests for technical assistances were submitted and are still under evaluation, under discussion or awaiting funding.

CTCN Success Story: Business and Industry



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Costa Rica: Accelerating transition to a circular economy

- For Costa Rica, the transition to a circular economy has the potential to reincorporate 85 per cent of the waste generated back into the economy.
- CTCN technical assistance helped to develop the National Circular Economy Strategy, starting with the establishment of the Intersectoral Technical Committee on Circular Economy
- In 2023, the Strategy was published, aiming to optimize the use of resources and create better employment opportunities, while generating environmental sustainability innovation
- The Circular Economy Fiscal Policy and Law proposals are under public consultation
- With this strategy, the country aims to become a leader in circular economy, innovation and sustainability for Latin America by 2050



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Examples of Future Technical Assistances



Develop low-carbon strategies for businesses and industries Businesses and industries receive support on identifying low-carbon pathways and developing targeted strategies.

Focus on Hard to abate Sectors (cement, steel, ammonia etc.) – Cement Sector roadmap implementation, steel sector process efficiency, waste heat recovery.

Develop low-carbon strategies: Industrial automation and 4IR (Fourth Industrial Revolution)

Small and Medium Scale Industries : To enhance endogenous capacities of innovation and adopting as well as adapting climate technologies to local needs, paying special attention to women and youth and their role in shaping and leading the green business and industry. Focus could be on agro based SMEs specifically in LDCs and SIDs.

Greening of Supply Chain to large producers
Development of strategies and visions for new source of energy, like green hydrogen etc. for fossil fuel replacement, and specific climate gases such SF6, HFCs, methane etc



TEC: Business and Industry

Background

The TEC has been working extensively on climate technology topics related to business and industry.

> See previous work of the TEC on Industrial Energy Efficiency and Material Substitution in Carbon-Intensive Sectors and Energizing entrepreneurs to tackle climate change

2023-2027: TEC works on transformative industry, in particular in hard to abate sectors (steel, cement, chemicals).

Work started (2023-2024):

- Mapping of initiatives in hard to abate sectors of industry (2023)

> [More info on next slides](#)

Forthcoming (2024-2025):

- Policy brief on integrating **hard-to-abate industry sectors in NDCs**
- Technology Day on transformative industry @COP29

TEC mapping of transformative industry initiatives



United Nations Climate Change
Technology Executive Committee

Transformative industry:

Mapping of initiatives that promote low and near zero emission production and products in hard-to-abate sectors

Background Paper
28 December 2023



The mapping exercise, focuses on initiatives that promote low and near zero emission production and products in cement, steel, and chemical and petrochemical industries and:

- Provides sector-specific emissions and indicators for cement, steel, and chemical and petrochemical industries;
- Analyzes global initiatives such as Mission Possible Roadmap, Net Zero by 2050 and State of Climate Action;
- Identifies innovative low-emission and net-zero technologies, categorized by intervention type aligned with IPCC AR6 mitigation measures;
- Includes technology maturity, barriers, implementation cost, timeframe, enabling policies, and cross-sectoral considerations;
- Analyzes the status of hard-to-abate industries in ten countries through national documents; production, emission and mitigation goals;
- technology gaps and alignment with technology roadmaps;
- Suggests potential roles of various entities in driving industrial transformation, including through national-level R&D, policy interventions and international cooperation;
- Presents suggestions where the TEC can add value.

Other work of the TEC on business and industry

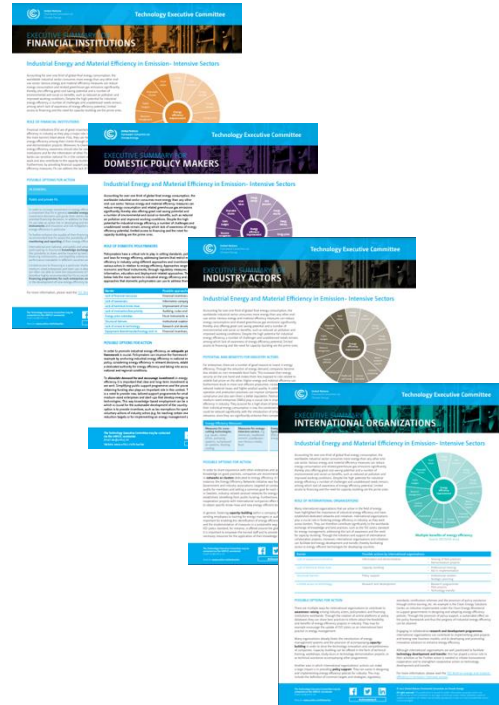
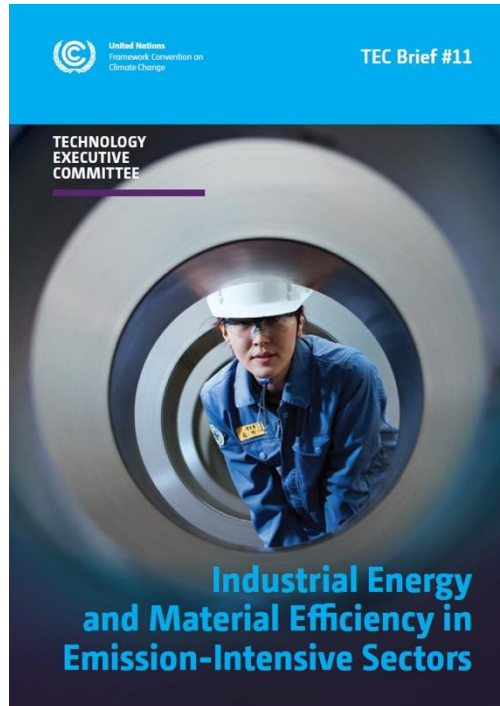


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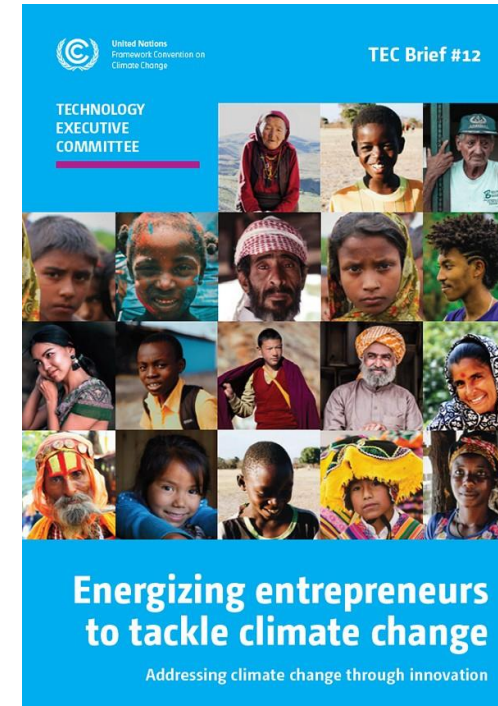


Industrial Energy and material Efficiency (2017)



A policy brief on industrial energy and material efficiency in emission-intensive sectors, and executive summaries for financial Institutions, industry Actors, international organizations and domestic policymakers.

Energizing entrepreneurs to tackle climate change (2018)



A policy brief on energizing entrepreneurs to tackle climate change, with a focus on addressing climate change through innovation. This work is also linked with policy work of the TEC on incubators and accelerators.





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