



CTCN

CLIMATE TECHNOLOGY CENTRE & NETWORK
UNFCCC Technology Mechanism

Regional Technical Expert Meeting **Efficiency in industry: CTCN experiences**

Federico VILLATICO CAMPBELL
CTCN Climate Technology Manager
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- ❑ CTCN: Introduction and services
- ❑ CTCN technical assistance mitigation priority themes
- ❑ Regional overview of mitigation technical assistance
- ❑ Industrial energy efficiency experiences in the region
- ❑ Conclusions

CTCN: Introduction and Services

CTCN: Anchored in the UNFCCC...

UNFCCC Technology Mechanism

- Operational body; partnership with TEC (policy)
- Active collaboration with Financial Mechanism (GCF/GEF)

Governed by Advisory Board

- Equal representation developed/developing, + NGO constituencies
- Reports to COP

Co-hosted by UN Environment + UNIDO

- Founded alongside 12 partners; swift scaling up of operations

CTCN: services and sectors



↓ MITIGATION

- Agriculture
- Energy Supply
- Forestry
- Industry
- Transport
- Waste Management

↻ ADAPTATION

- Agriculture & Forestry
- Coastal Zones
- Early Warning & Environmental Assessment
- Human Health
- Infrastructure, Transport & Urban Design
- Marine & Fisheries
- Water

CTCN: Services

1. Technical Assistance

- 200 requests with 109 responses being designed or implemented
- Almost half are generated by African countries (~43%)
- 158 NDEs

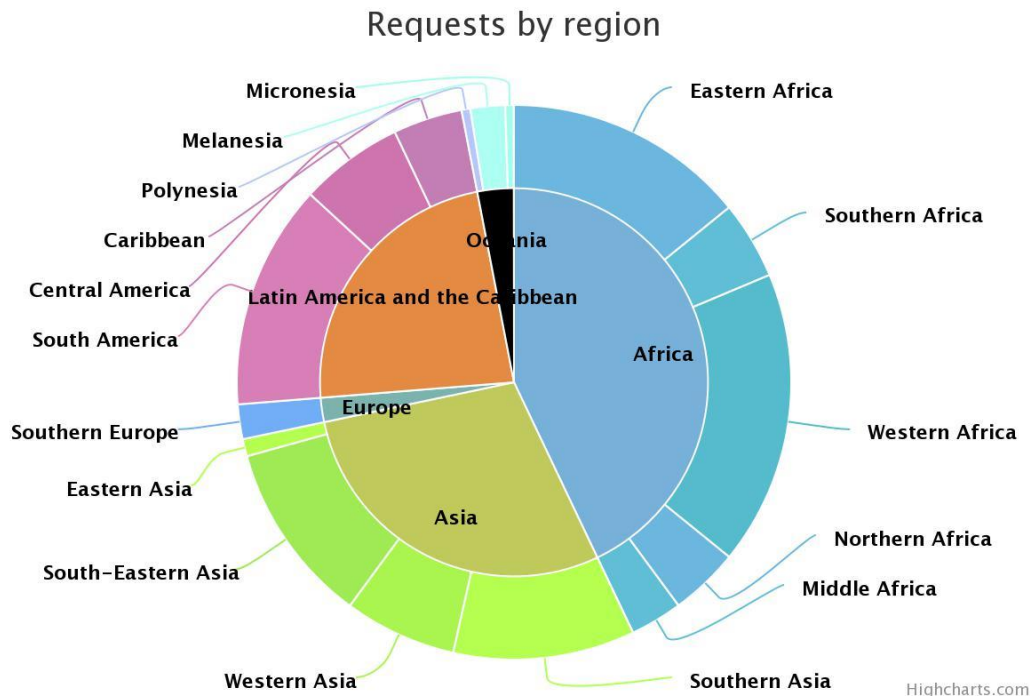
2. Knowledge sharing and capacity building

- Regional fora including national focal points, experts from private sector;
- incubator programme for LDCs, Webinars, information portail, good practices sharing;
- Specialized tech library for technologies

3. Network

- 400+ network members

Technical Assistance – Distribution by region



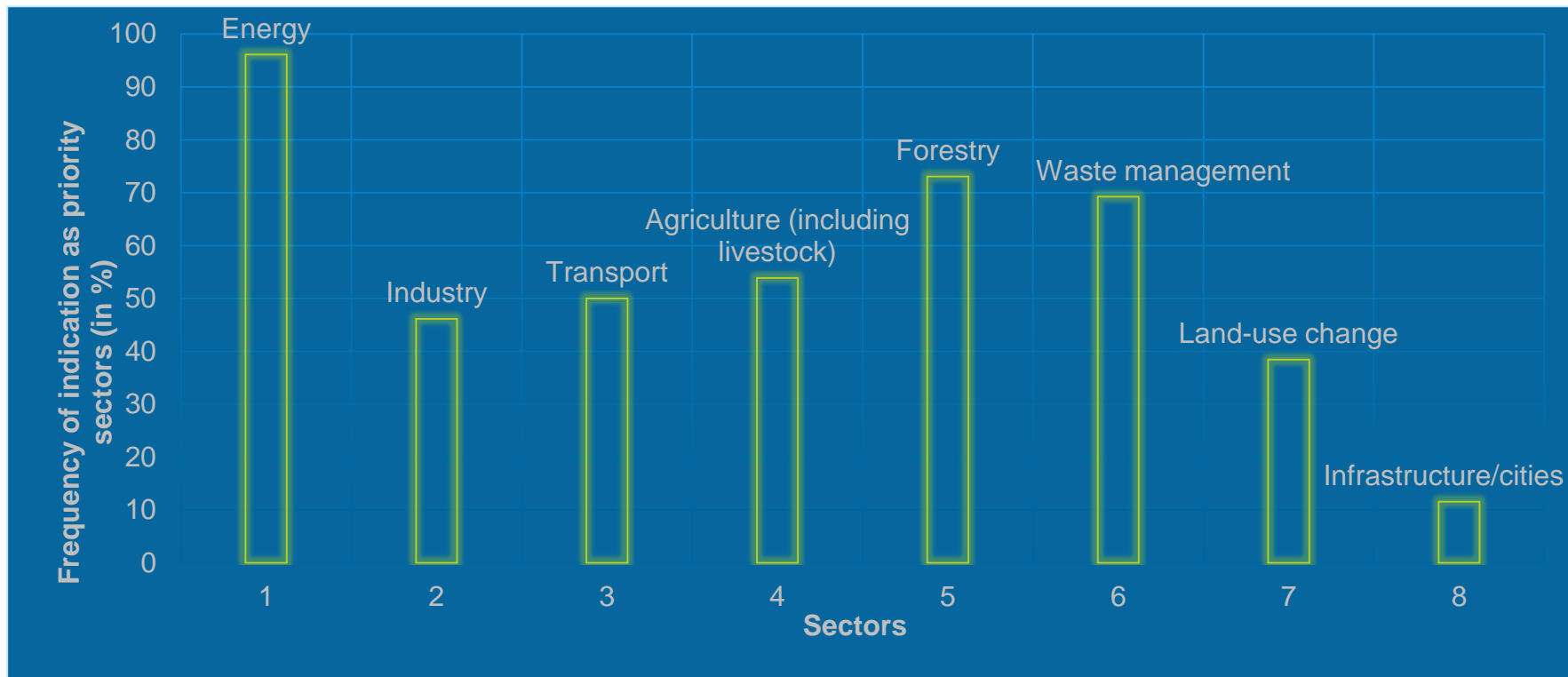
Technology priorities in Mitigation TA portfolio

- 1. Minimum energy performance standards (**MEPS**) & energy labelling (in light of market creation)
- 2. **Industrial energy efficiency** (EE)
- 3. Electric grid stability and renewable energy (RE) penetration
- 4. Policies, masterplans and market assessments for RE and **EE**
- 5. Building codes
- 6. Planning for sustainable cities
- 7. Waste-to-energy solutions in both agriculture and municipalities
- 8. Low-carbon mobility
- 9. Gender mainstreaming in energy access
- 10. Circular economy: waste and industrial symbiosis (this topic may combine number 7 and 2))

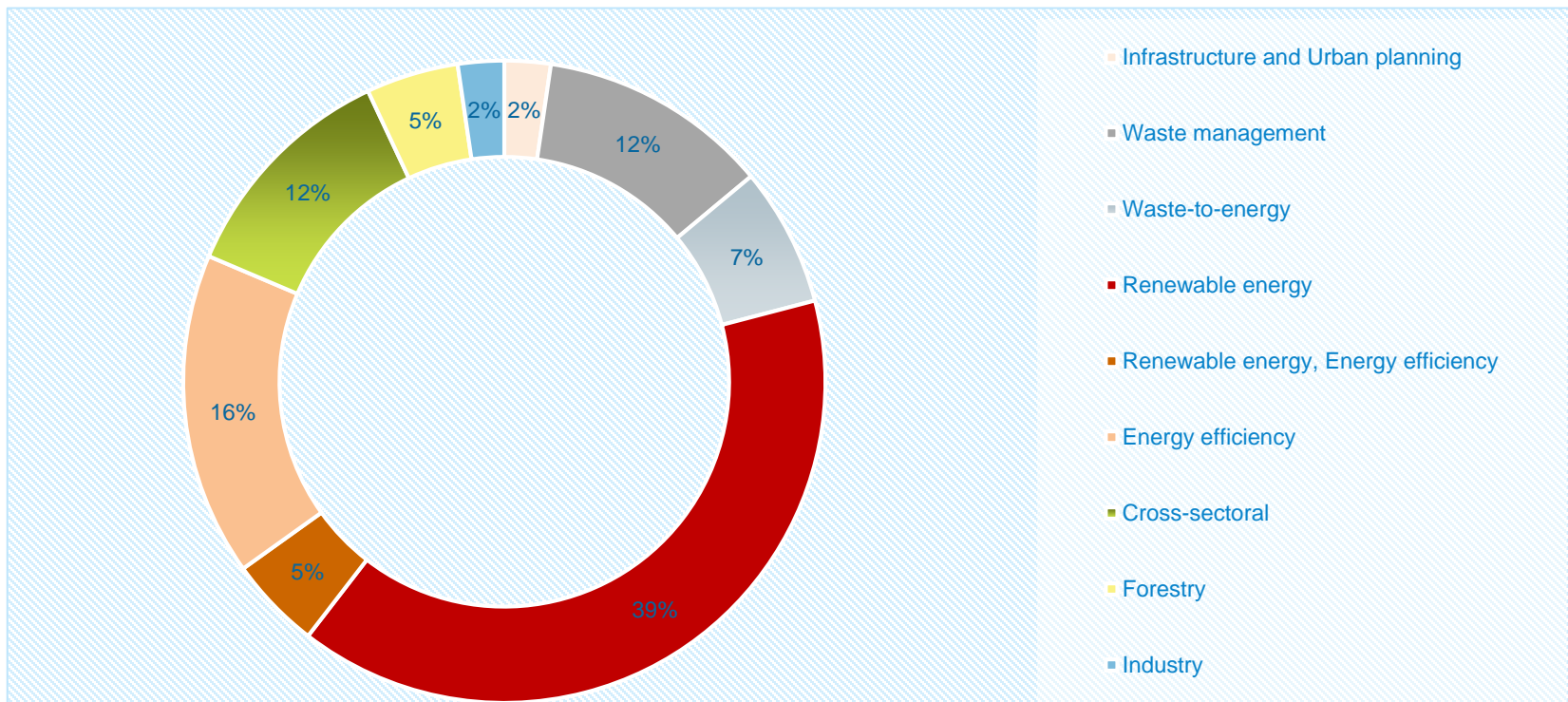
Mitigation Technology Support Demanded by Countries in iNDCs/NDCs in Africa

- Energy demand optimization and management strategies;
- Waste-to-energy solutions in both agriculture and municipalities;
- Integrated Energy master plan (including **Industrial EE** and RE) and strategies;
- Low-carbon mobility;
- Electric grid stability and RE penetration;
- Strategies and Technologies for planning sustainable cities, Smart grid, etc;
- Capacity building on Carbon finance and project development skills;
- Building codes, Minimum energy performance standards (**MEPS**) & **energy labelling** on appliances and equipment.

Mapping of Priorities in Africa – Mitigation-NDCs



Mitigation requests for TA by sector



Experiences in the region on industrial EE: Technical Assistance

Regional TA (10 Countries)

Development of a Regional Efficient Appliance and Equipment Strategy in Southern Africa - SADC



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Challenges

- Rising energy demand due to economic development and increase use of appliances
- Limited access to electricity
- Low availability of energy efficient household appliances in the market

CTCN support and impact

- Phase I: Countries' market assessments
- Phase II: Targeted appliances and equipment prioritization: technology roadmap
- Funder engagement: resource mobilisation

Facts

- Budget: USD 200k
- Implementer/Duration: DNV-GL, 12 months

Challenges

- Refrigeration and air conditioning appliances (RAC) are rapidly spreading
- Increased demand for energy efficiency to mitigate increasing GHG emissions
- Alternative technologies are internationally available but not common in Africa

CTCN support and impact

- Robust **GHG Inventory** for the Cooling sector established
- Analysis of the **technological gap** between BAU and Internationally available **best options**
- **Policy** and **regulatory** framework recommendations
- Regional and country specific **technology roadmap** recommendations

Facts

- Budget: USD 600k
- Implementer/Duration: GIZ, 12 months



Challenges

- 56% of Mauritius' electricity generation comes from 5 power plants making use of bagasse and/or coal
- Over the past decade, sugar cane cultivation has significantly decreased
- The amount of coal used for electricity production increased by 5% between 2012 and 2013

CTCN support and impact

- Identify, evaluate and assess current boiler technologies, processes and practices at the five power plants operating on coal in the country
- Advise on best environmental practices and best available techniques
- Provide capacity building on the monitoring and evaluation system for GHG mitigating measures
- Develop a strategy for proper monitoring of existing coal fired power plants in order to ensure optimum operation and limit GHG emitting potential

Facts

- Budget: USD 50k
- Implementer/Duration: CSIR/6 months

Challenges

- Water scarcity with effects on the industrial production processes and energy sectors
- Limited monitoring and measurement of water and energy intensity and comparison with international benchmarks

CTCN support and impact

- Carrying out preliminary industrial energy and water audits for 10 demonstration companies to determine resource productivity
- Development and implementation of ISO 50001 Energy Management Systems at company level
- Awareness on the importance of water and mainstreaming water management and resource efficiency in business strategy
- Establishing the Green Industry Networking Facility (GINF) to enable networking of GI pilots, information exchange and knowledge management in industrial energy efficiency and efficient water utilisation

Facts

- Budget: USD 150-200K
- Implementer/Duration: PWC / 9 months

Challenges

- Improve economic opportunities for a growing population
- Respond to environmental/climate pressures: Lighting accounts for 17% of total nation energy consumption

CTCN support and impact

- National Energy Management Agency (ANME) has requested capacity-building assistance from the CTCN for national experts (engineers, architects, etc.), covering innovative, low-GHG-emissions lighting system technologies and design techniques.
- create a local pool of high-level experts in Tunisia and to create a favourable environment for other energy-efficient lighting projects
- focus on the development of energy-efficient lighting training materials and the delivery of training to around 100 Tunisian professionals.

Facts

- Budget: USD 50-100K
- Implementer/duration: UNEP/ 6 months

■ NEEDS

- Industrial EE in developing countries is a strong mitigation need, especially in middle income countries, in order to reduce energy and water consumption and cut GHG emissions;
- Enabling environment: sectorial regulatory framework and standards for industrial EE (e.g. ISO 50001);
- Methodology: energy audit

- Barriers
 - Data availability on industrial sectors consumption
 - Regulatory framework, standardization (including audit methodology)
 - Financing: GCF as a good route to scale-up actions
 - Capacity of local private sector players at industrial and EE assessment service provision level
- Actions
 - Enabling environment
 - Methodology for energy/water audit at country level

CTCN through its Network can provide high quality TA for industrial EE analyses, regulatory framework. These interventions can leverage private sector investment.

Thank you!



Governments
of Germany
and Korea

www.ctc-n.org
ctcn@unep.org



Supporting slides

Tonga – Development of an Energy Efficiency Master Plan

Challenge

- Tonga depends entirely on imported fossil fuel for its energy;
- Energy efficiency strategies will help achieve continued and sustainable development while further curbing the island's oil dependency.

CTCN support and impact

- Development of an EE Plan for targeted sectors: transport, power, infrastructure, tourism, education, fisheries and agriculture;
- Ensure the transition to an EE future for Tonga;
- Propose GHG targets and cost-effective objectives;
- Conduct capacity development and training for key stakeholders

Facts

- Budget: USD 200,000 (GCF Readiness)
- Implementing Partner: NREL
- Duration: 6 months

