



German Green Cooling Initiative

Promoting climate-friendly cooling technologies world wide

The challenge

Due to the rising temperatures, population, urbanization and economic growth, the demand of cooling and air conditioning is steadily increasing. Existing refrigeration and air conditioning (RAC) equipment, especially in developing countries, is still often based on outdated technologies, generally with high energy consumption and the use of halogenated refrigerants with high global warming potential (GWP). In addition, halogenated substances are often used for foam blowing substances for insulation purposes.

- Refrigeration and air conditioning are responsible for emissions of approx. 4,8 GT CO₂eq which will rise to above 12 GT CO₂eq by 2030 under a business as usual scenario.
- About 1/3 of these emissions are caused by the use of refrigerants and 2/3 by energy consumption.¹

The carbon footprint from cooling technologies can be reduced significantly. By 2050, direct emissions can completely be avoided by using alternative technologies. Indirect emissions and energy consumption can be reduced by over 50%.

The main barriers in developing countries for the introduction of alternative, environmentally friendly technologies are insufficient information on alternative technologies, access to technology, the supply of components, alternative refrigerants, qualified services, financing, operational and technical standards for operational safety and certification standards.

¹ Source: Proklima, RAC and Foam Blowing Roadmap 2012, http://unfccc.int/ttclear/pdf/Call%20for%20Inputs/RM/GIZ_RM.pdf

Our approach

Within the International Climate Initiative (ICI) of the Federal Ministry for Environment, Nature Conservation and Nuclear Safety (BMU) the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH aims to implement the Cancun decisions to build efficient processes and structures that serve to accelerate the technology transfer for mitigation and adaptation in developing countries.

Within the framework of international climate negotiations in Cancun (Conference of Parties, COP 16) a preliminary structure of a Technology Mechanism under the UNFCCC was agreed upon. The Technology Mechanism consists of two bodies: the Technology Executive Committee (TEC) and the Climate Technology Centre & Network (CTCN).

The TEC / CTCN Mechanism

Supports the development and transfer of technologies for mitigation and adaptation by

- providing overview of technological needs and analysis of policy and technical issues
- considering and recommending actions to promote technology development and transfer
- promoting and facilitating collaboration between policy, industry, research and non-profit
- catalysing the development and use of technology road maps or action plans at the international, regional and national levels.

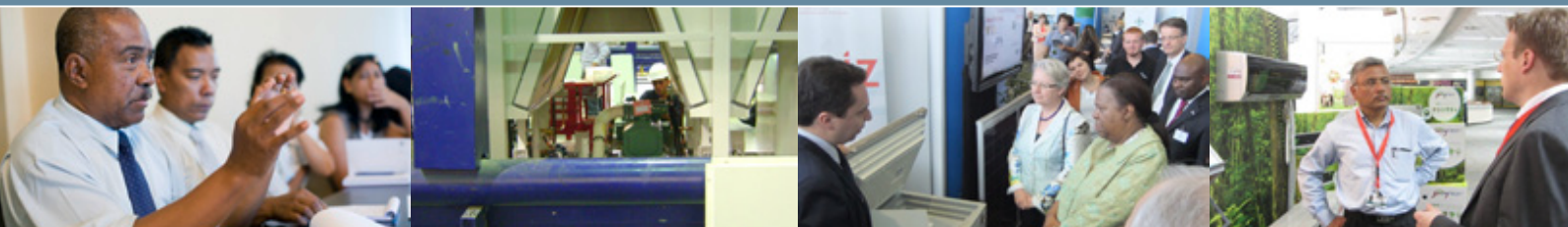
(Source: UNFCCC)

On behalf of



Federal Ministry for the
Environment, Nature Conservation
and Nuclear Safety

of the Federal Republic of Germany



Through the Technology Mechanism, the project gives recommendations how to accelerate technology development, deployment, and transfer of innovative technologies in the RAC and foam sector to, within and between partner countries, which have the potential to lower Greenhouse Gas Emissions significantly.

Activities

The project establishes the “Green Cooling Network” to promote a dialogue between stakeholders from industries, policy, research and non-governmental organizations. Thereby it actively supports the collaboration of technology providers and technology costumers in partner countries to encourage North–South, South–South and triangular partnerships. The project helps to design more efficient processes and structures in cooling and climate control and to accelerate the transfer of emission-reducing technologies in developing countries. Thereby it supports the aims of the ‘Green Cooling’ Network, which is intended to (1) mobilize technology providers and investors in Germany and the EU to participate in sector networks and joint initiatives with developing countries; and (2) create incentives for investments in climate-friendly technologies.

The benefits...

... for the environment and the climate

Within the RAC, as well as within foam production, significant emission savings can be achieved with relatively little effort in short to medium term. Through this project global greenhouse gas (GHG) emissions will be reduced directly, by promoting innovative cooling technologies, as well as indirectly through energy efficiency measures which discharge the grid.

Additional emission reductions will be achieved through capacity development. This may include trainings, support of partner institutions or by providing handbooks for the use of climate-friendly technologies. These activities are intended for replication on a country or regional level leading to more emission reductions in the medium and long term.

... for the economy and job market

Innovations play an essential role in the growing market of green economy. By initiating a long term technology, knowledge and capacity transfer sustainable alternatives in the cooling sector will be set up. Especially small and medium sized enterprises (SME) in partner countries will benefit from technology partnerships, knowledge transfer and the strengthening of the servicing and maintenance sector. This preserves and creates jobs. Through the “Green Cooling Network”, in particular SMEs will be encouraged to participate in technology networks and cooperations to make innovative, low carbon cooling technologies available. Ultimately participating companies will gain through accelerated market access.

Contact German Green Cooling Initiative

Target countries Global

Objective The project aims to implement the Cancun decisions to build efficient processes and structures that serve to accelerate the technology transfer for mitigation and adaptation in developing countries.

Target Group political decision makers, manufacturers, technology providers and research institutes

Project Executing Organization German Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU)

Implementing Partner Organization environment ministries or ministries for industry and technology and their national ozone units in selected partner countries

Project Duration February 2012 until April 2017

Project Budget EUR 3,500,000

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