

Cool Contributions fighting Climate Change

Advancing nationally determined contributions through climate-friendly cooling

Background

Refrigeration, air-conditioning and foam blowing (RAC&F) sector is increasingly contributing to global greenhouse gas (GHG) emissions due to indirect and direct emissions. Making up the major share of GHGs in the sector, indirect emissions result from the energy consumption of RAC appliances. Direct emissions are caused by the release of fluorinated gases (F-Gases) used as refrigerants in cooling appliances. With the ever growing demand for cooling, both types of GHG emissions will significantly rise within the next three decades if left unregulated. This makes the RAC&F sector a significant area for immediate mitigation actions and a key source for nationally determined contributions (NDCs). Following the Paris Agreement 2015, parties are to pursue domestic mitigation measures to achieve their NDCs and thereby support a strengthened global response to climate change. These should “reflect a party’s highest possible ambitions, reflecting its common but differentiated responsibilities and respective capabilities, in the light of different national circumstances”.¹ In this regard, parties are expected to further develop and improve their NDCs.

F-gases are among the most highly climate damaging GHGs with global warming potential (GWP) values up to 4000 times more than that of CO₂. Hydrofluorocarbons (HFCs), the most commonly used F-gas are now the fastest growing GHG.² The global phase-down of HFCs is regulated under the Kigali Amendment to the Montreal Protocol entering into force by 2019. Several

international initiatives as well as bilateral agreements and several developing countries are pushing for a phase down of F-gases on a global level in a more timely and stringent manner.

The mandated international control for F-gases will also aid countries in taking F-gases into account as they formulate and implement their NDCs. The reduction of F-gases provides a huge and achievable potential considering they are mainly used in one sector, which is rigorously regulated under the Montreal Protocol. Moreover, alternative, climate-friendly systems with high energy efficiency and natural refrigerants as well as blowing agents are already established in a number of applications. However, their widespread dissemination is hindered by political, economic, and capacity-related barriers.

Objective

The project aims to further pursue an international control for F-gases. It shall strengthen cooperation between various initiatives by promoting a coordinated agreement, reducing overlaps, and harmonizing donor contributions. Furthermore, the project will support partner countries in formulating mitigation strategies in the RAC sector and thereby advancing their NDCs. The improved framework conditions will encourage the use of energy-efficient RAC&F equipment and environmentally-friendly natural refrigerants and blowing agents. These measures will, in turn, lead to realizing a more climate-friendly RAC&F development pathway.

On behalf of:



Federal Ministry
for the Environment, Nature Conservation
and Nuclear Safety

Activities

The project works at international and national levels towards climate-friendly solutions in the RAC&F sector. Decision makers in these interacting fields are approached through the following activities:

- » Promote collaborative structures and processes between international initiatives and organizations by delivering policy advice, methods, and tools as well as providing reliable channels for communication such as expert review groups and regular dialogues
- » Support partner countries in framing their F-gas policy and initiating transformative processes and translating these efforts into active participation in international panels and fora. Particularly, this includes:
 - Inventory of the RAC&F sector
 - Analysis of existing RAC&F policies and regulations
 - Definition of mitigation scenarios
 - Strengthening national capacities in selecting national strategies to implement international targets
 - Presenting national policy scenarios and strategies at international conferences
- » Barrier analysis and design of an appropriate mitigation strategy to advance NDCs and their exemplary implementation and dissemination, for example, through:
 - Reduction of market barriers to enable the introduction of more energy-efficient technologies with F-gas alternatives
 - Enhancement of coherence between national ozone and climate change institutional structures
 - Assessment of suitable finance mechanisms
 - Development of communication strategies for national political actors

Published by:
Deutsche Gesellschaft für
Internationale Zusammenarbeit (GIZ) GmbH

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Design:
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Photo credits/sources:
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Title Cool Contributions fighting Climate Change
Country Costa Rica, Cuba, Grenada, Iran, Philippines, Vietnam
Sector Refrigeration, air-conditioning and foam (RAC&F)
Objective Promote and advance an international control for F-gases and encourage inclusion of F-gases in NDCs of partner countries
Target Group National departments of climate and ozone protection, relevant international initiatives and alliances in the F-gas discussions, multilateral implementing agencies, industrial associations, and technology suppliers
Project Executing Organization BMU (German Federal Ministry for the Environment, Nature Conservation and Nuclear Safety)
Implementing Partner Organization environmental ministries and national ozone units in selected partner countries
Project Approval January 2016
Project Duration Until June 2021
Project Budget EUR 4,700,000
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- 1 Adoption of the Paris agreement, Paris, 12 December 2015, available from <https://unfccc.int/resource/docs/2015/cop21/eng/l09r01.pdf>
- 2 Velders G. J. M, et al. (2012) Preserving Montreal Protocol Climate Benefits by Limiting HFCs, *SCI*. 335(6071): 922-923.

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On behalf of
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Eschborn 2018