

# NDC4 Call for Proposals: Raising ambition in NDCs with Green Cooling

NDC4 Webinar #1

22 November 2022 | 2-3 pm CET

**giz** Deutsche Gesellschaft  
für Internationale  
Zusammenarbeit (GIZ) GmbH

Supported by:



Federal Ministry  
for the Environment, Nature Conservation,  
Nuclear Safety and Consumer Protection

**IKI**  INTERNATIONAL  
CLIMATE  
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based on a decision of  
the German Bundestag

# Agenda

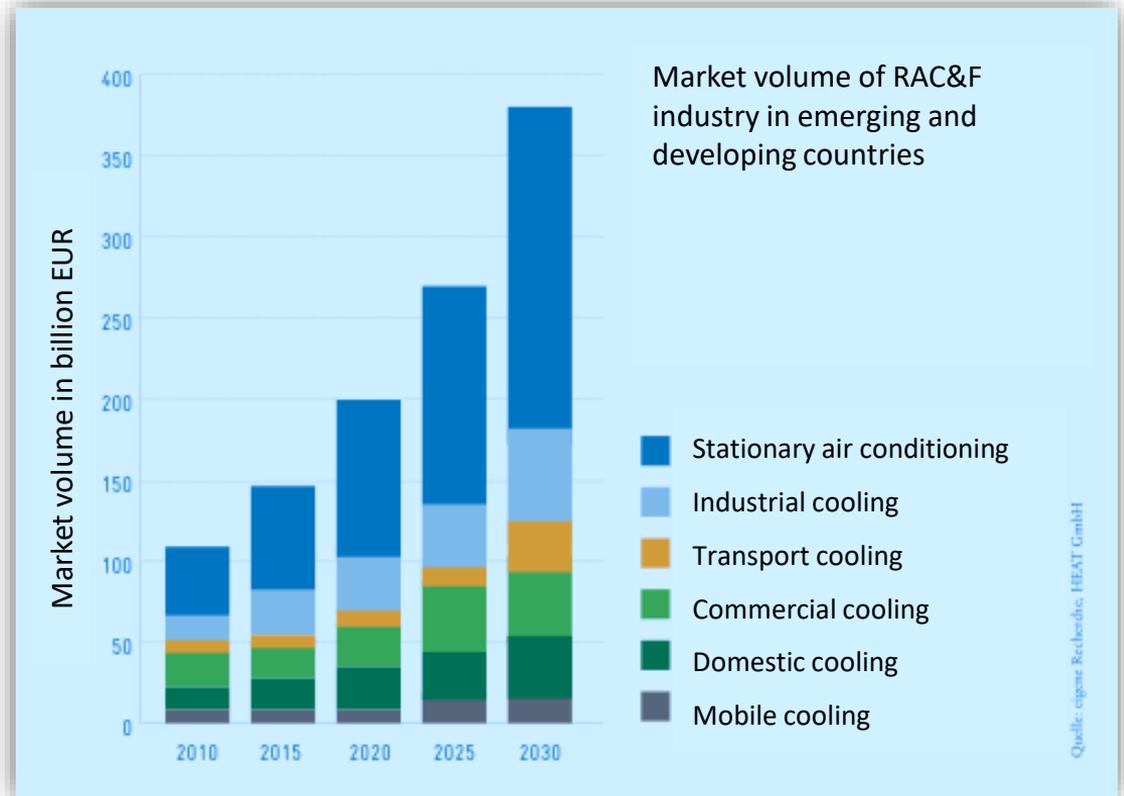
Topic	Speaker
<b>Introductory Remarks</b>	<b>Miriam Frisch</b> , GIZ Proklima
<b>Overview of current status and activities of C4 II</b>	<b>Maja Schmauser</b> , GIZ Proklima
<b>NDC4 Call for Proposals:</b> <ul style="list-style-type: none"><li>• Application procedure</li><li>• Examples of possible activities that can be supported</li></ul>	<b>Irene Papst</b> , HEAT GmbH
<b>Questions &amp; Answers</b>	All participants
<b>Closing</b>	<b>Christin Johnen</b> , GIZ Proklima

# Introductory Remarks

**Miriam Frisch**  
GIZ Proklima

# Why cooling concerns us all

- The RAC sector is responsible for over **10%** of global GHG emissions. (CAIT/GCI, 2016)
- The number of air conditioners worldwide is expected to increase from **1.6 billion** in 2016 to **5.5 billion** by 2050. (IEA, 2018)
- HFC emissions could cause a global temperature increase of **0.35 to 0.5°** Celsius. (Velders et al. 2015, Xu et al. 2013)



# Emissions from the RAC sector



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# GIZ Proklima – Making cooling a hot topic since 1995



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- Programme established in 1995 in the context of implementing technical projects for **ozone protection** under the Montreal Protocol. In 2016, the Kigali Amendment broadened the focus from ozone to **climate protection**.
- Goal: promoting and introducing **Green Cooling = natural refrigerants and energy-efficient appliances** in the **RAC sector**.
- Proklima is working on behalf of **BMZ, BMUV** and other donors, e.g. EU, AFD, NAMA.



# Examples of Proklima NDC RAC advisory services

## RAC GHG inventories

as a starting point for emission reduction activities

Examples: Colombia, Costa Rica, Ghana, Indonesia, Iran, Kenya, Mauritius, Mexico, Namibia, Philippines, Thailand, Vietnam, Grenada, Seychelles, etc.

## Cooling strategies (NCAPs)

as roadmaps for countries to show GHG mitigation potential of the RAC sector and how to achieve it

Examples NCAP: Ghana, Kenya, Grenada  
Examples strategy in RAC inventory: Namibia, Seychelles



## NDC Advisory

policy assessment, stakeholder mapping, identification of priority sub-sectors and mitigation potential, technical background papers, support the inclusion of the RAC sector in NDCs

Examples: Ghana, Kenya, Namibia, Seychelles, Uganda, Vietnam

## Conceptualization and implementation of NDC mitigation actions

Examples: Colombian Domestic Refrigeration NAMA, Thailand NAMA on Refrigeration and Air-Conditioning

# Overview of current status and activities of C4 II

**Maja Schmauser**  
GIZ Proklima

# Why should countries include the cooling sector into their NDCs?

- ✓ Cost-effective mitigation potential
- ✓ Huge cost savings potential through technology conversion
- ✓ Possibility to set up a transparent MRV system and measure mitigation
- ✓ Easier to access climate finance



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# Cool Contributions fighting Climate Change II (C4 II)

**Commissioned by:** German Federal Ministry for the Environment, Nature Conservation, Nuclear Safety and Consumer Protection (BMUV) within the International Climate Initiative (IKI)

**Partner Countries:** Costa Rica, Grenada, Philippines

**Project Budget:** 2,900,000 EUR

**Project Duration:** approx. 2,5 years (2022 – 2024)

- Support to the three partner countries in improving national structures for the implementation of NDC strategies in the RAC sector
- Supporting further countries in the application of best practices and methods in the development of NDC measures for the RAC sector
- Development of concepts, strategic approaches and publications in cooperation with relevant institutions



## NDC4 Webinar Series

- **Objective:** Illustrate tools, methods and best practice examples for designing and implementing more ambitious NDCs in the cooling sector

1

### **Webinar: NDC4 Call for Proposals**

22 November, 2022, 2-3 pm (CET)

2

### **Webinar: Benchmarking the level of ambition of cooling sector-related measures included in NDCs**

13 December, 2022, 2-3 pm (CET)

- More webinars will be announced soon.



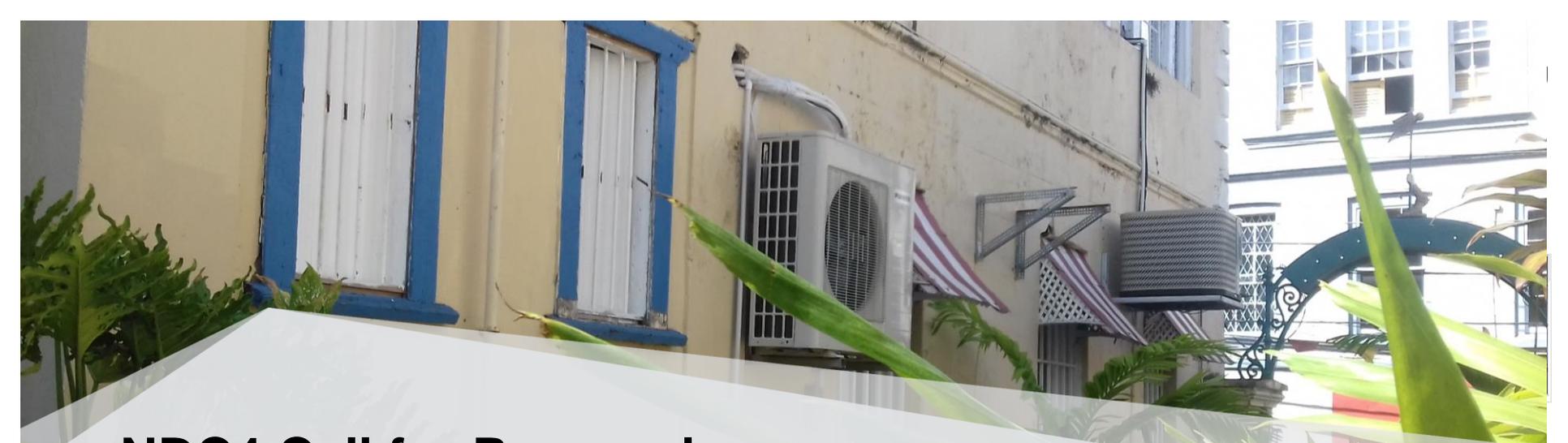
- More information & registration: [NDC4 Webinars - Green Cooling Initiative \(green-cooling-initiative.org\)](https://www.green-cooling-initiative.org)
- Contact: [ndc4@giz.de](mailto:ndc4@giz.de)

# NDC4 Call for Proposals

- **Objective:** Identify and support up to three ambitious countries interested in developing more differentiated and ambitious NDC cooling targets and action
- **Target Group:** National Ozone Units, climate change and energy departments, training institutes
- **Modalities of support:** technical assistance in the preparation and application of best practices related to RAC-specific NDC strategies, National Cooling Action Plans, RAC GHG inventories, national GHG inventories, templates for RAC policies and measures aiming at climate mitigation in the RAC sector.



- More information & registration: [NDC4 Call for Proposals](#)
- Contact: [ndc4@giz.de](mailto:ndc4@giz.de)



# NDC4 Call for Proposals

## Application procedure and examples of possible activities

Irene Papst | Consultant, HEAT GmbH

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# Agenda

## 1. Application Procedure

- Target group and required commitment
- Required documentation
- Evaluation period
- Time frame

## 2. Eligible activities and examples

# Target group

Formal criterion: Only entities in countries on the Development Assistant Committee ('DAC list') can apply

## 1. Ambitious countries

- whose HFC phase-down ambitions clearly exceed the provisions of the Kigali Amendment and/or
- whose energy efficiency target values meet at least low efficiency as specified in United4Efficiency Model Regulations for split air conditioners and/or domestic and commercial refrigeration.

## 2. Any entity that promotes their country's ambition to include emissions and mitigation measures of the RAC sector in the NDC

- Government departments (National Ozone Unit, Climate Unit, Energy Efficiency Unit)
- Research institutes
- Industry associations
- Training institutes

# Required contributions of applying entity

To facilitate productive exchange on the agreed scope for technical assistance, the applying entity is required to make available or ensure:



**Sufficient staff time to respond to questions, facilitate access to other relevant departments, seek stakeholder discussion, etc. depending on the scope of assistance**



**Commitment to collect (sectoral) data, if necessary**



**Commitment to make use of provided assistance to promote an ambitious RAC sector target as part of the NDC**



**Provision of relevant existing documents, studies, etc.**



**Other contributions depending on specific scope of assistance**

# Required documentation

## 1. Completed application form

- To be downloaded from the [Green Cooling Initiative Website](#)
- Content:
  - Contact details of applying entity and consortium partners (if any)
  - Current national targets concerning the RAC sector
  - Activities of all consortium partners relevant to this application
  - Type and description of activity requested
  - Description of required support: scope of technical assistance
  - Description of own contribution and staff experience
  - Commitment and plan on how to use results of supported activity
  - Involvement of affected stakeholders
- The application form can be requested as MS Word file per email ([ndc4@giz.de](mailto:ndc4@giz.de))
- The signed application form needs to be submitted as PDF to [ndc4@giz.de](mailto:ndc4@giz.de)



### Application Form for NDC4 Call for Proposals

The global project "Cool Contributions fighting Climate Change II" (C4 II) assists countries in implementing Nationally Determined Contribution (NDC) mitigation measures in the Refrigeration and Air Conditioning (RAC) sector. Simultaneously, C4 II aims to support countries in developing more differentiated and ambitious NDC cooling targets and actions.

The project launches a Call for Proposals which provides technical advisory to ambitious countries in the application of best practices for NDC strategy development in the RAC sector. Up to three additional countries can be supported.

### Application procedure and required documents

Interested entities are invited to submit proposals containing as a minimum the following two documents in PDF format:

- Completed application form as PDF format  
Please note that applicants may request the application form in word version by sending an email to [ndc4@giz.de](mailto:ndc4@giz.de)
- Letter of intent from applying entity and from additional consortium members (if relevant) signed and as PDF format

Optional documentation (proposals submitting these annexes will be assigned extra points):

- Letter of intent to include the HFC emission into the national greenhouse gas (GHG) inventory
- Letter of intent of department responsible for the NDC, stating that it strongly supports the activities proposed and aims to include an ambitious sectoral target for the RAC sector in the next NDC update as well as measures to achieve this target.

Please submit the required documents (PDF format) to: [ndc4@giz.de](mailto:ndc4@giz.de)

Application deadline: **16 January 2023**

In case of any questions, please contact [ndc4@giz.de](mailto:ndc4@giz.de). Please note that a [webinar](#) on the application process will take place on **22 November 2022, 2-3 pm CET**.



# Required documentation (continued)

## 2. Letter of intent from applying entity

- All consortium partners (if any) need to state their intent to support and contribute to the proposed activity as described in the application form.

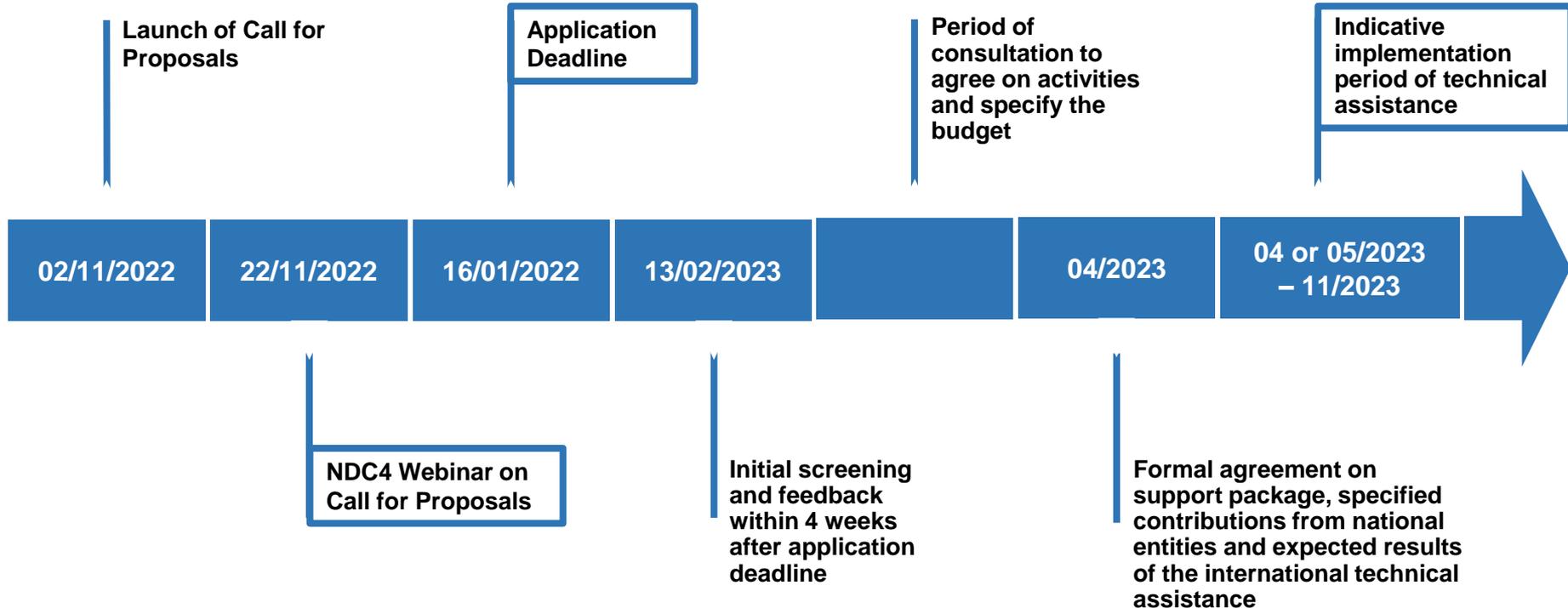
# Optional documentation

## Purpose:

To demonstrate the intention to feed the results of the supported activity into NDC and GHG reporting-related processes and thereby improve the knowledge base of RAC sector emissions to enable target-setting implementation of mitigation action

- 1. Letter of intent to include the HFC emission into the national greenhouse gas inventory**
- 2. Letter of intent of the department responsible for the NDC**, stating that it strongly supports the activities proposed and aims to include an ambitious sectoral target for the RAC sector in the next NDC update as well as measures to achieve this target.

# Timeline



# Overview on the application procedure

Contact for questions: [ndc4@giz.de](mailto:ndc4@giz.de)



Application deadline: 16 January 2023



Information and application documents are available on the Green Cooling Initiative Website: [NDC4 Call for Proposals](#)



## Eligible activities

In principle, any activity that promotes the implementation of RAC sector mitigation measures is eligible.

Technical assistance of up to 30 days per application can be provided.

A broad range of activities is supported, such as

- A status quo analysis of the RAC sector
- Establishing a National Cooling Action Plan
- Applying the RAC sector Tier 2 inventory methodology
- Establishing an MRV system for RAC sector emissions and mitigation measures
- Defining NDC measures targeting the RAC sector
- The implementation of concepts, e.g.
  - Sector-specific analysis and mitigation plan (e.g. tourism, commercial refrigeration)
  - Concept for technician training
  - Review of energy efficiency regulation based on market analysis
  - Customizing of tools for sectoral inventory, MRV, etc.

## Example: Support for defining NDC measures targeting the RAC sector

Possible Steps	Technical support	National contribution
Assessment of status quo, including database and relevant policies	Analysis of available information, assessment if information is sufficient as a base for quantitative targets Recommendations on how to improve the data situation	Provide documentation of data and policies collect additional data, if needed
Define sector baseline	Provide methodological guidance	Facilitate alignment with national baseline
List potential measures with roughly estimated cost and qualitative benefits incl. projected mitigation	Provide examples for mitigation action and proxy data for cost/benefit estimate Projection of mitigation potential	Stakeholder consultations to gain support for selection of measures
Select measures to be included into NDC and prepare documentation	Assist with transparent description of measures along with ICTU guidelines	Facilitate alignment with national procedures and push for inclusion into next NDC update

More detailed implementation plan as part of the NCAP

## Example: Support for establishing a National Cooling Action Plan (1)

Possible Steps	Technical support	National contribution
Assessing data situation: what is known about emissions on subsector level	Interpretation of data, providing top-down estimate of current RAC sector emission, modelling the effect of policies to build a business as usual (BAU) scenario Policy gap analysis	Screening of available documentation (HPMP, KIP data, energy consumption), possibly additional data collection
Assessing policy framework: current and planned policy influencing RAC sector emissions		Summary of applying policies
Selecting priority intervention areas	Analysis of BAU scenario, sketching possible interventions and their effect, set-up matrix for choosing priority intervention areas	Stakeholder consultations to gain support for selection of priority areas, facilitate discussions with local sector experts

## Example: Support for establishing a National Cooling Action Plan (2)

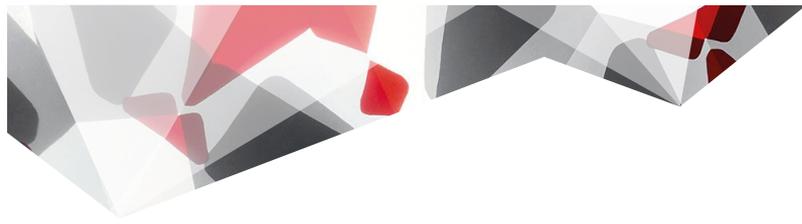
Possible Steps	Technical support	National contribution
Describe mitigation action and project mitigation scenario	Assistance for design and transparent description of potential mitigation measures and projection of the mitigation effect	Stakeholder consultations to gain support and reach agreement on mitigation action
Elaborate implementation plan	Assistance for design and transparent description of implementation plan Assistance for designing feasible M&E measures	Stakeholder consultations to gain support and reach agreement on implementation plan

## NCAP vs NDC

NCAP	Item	NDC
More detailed, Includes policy gap analysis	Status quo analysis	Overview, Assessment if data is sufficient for setting a baseline
Included	Sector baseline	Included, with focus on alignment with national framework
Detailed analysis, discussion with stakeholders	Selection of mitigation measures	Overview analysis, potential measures from international best practice
Detailed plan	Implementation plan	-
Implementation plan includes MRV provisions	MRV	Documentation in line with ICTU requirements

## Example: Sector-specific analysis and mitigation plan, e.g. tourism sector

Possible Steps	Technical support	National contribution
Assessment of status quo: data situation, stakeholders, policies, trends	Interpretation of data, providing top-down estimate of subsector specific emission, modelling the effect of policies to build a business as usual (BAU) scenario	Provide documentation of data and policies collect additional data, if needed
List potential measures with roughly estimated cost and qualitative benefits incl. projected mitigation	Provide examples for mitigation action and proxy data for cost/benefit estimate Projection of mitigation potential	Stakeholder consultations to gain support for selection of measures
Select measures to be implemented Set up an implementation plan, including financing strategy	Assist with a transparent description of measures and specific implementation plan Support the set up of an MRV framework for tracking the implementation	Facilitate stakeholder engagement for the selection of measures, the implementation plan, and the setup of an MRV system Push for implementation and inclusion of sector plan into next NDC update



# Wishing you success!

Irene Papst

Consultant – HEAT GmbH

[Irene.Papst@heat-international.de](mailto:Irene.Papst@heat-international.de)

# Questions & Answers

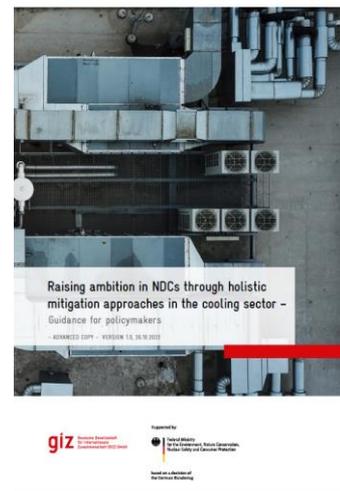
# Enhancing NDCs with Green Cooling – Read our publications



Guidance for policymakers on Advancing NDCs through climate friendly RAC ([Download](#))



Green Cooling in updated NDCs – Are we embarking on an ambitious path or a journey into a cooling crisis? ([Download](#))



Raising ambition in NDCs through holistic mitigation approaches in the cooling sector – Guidance for policymakers ([soon available here](#))



# Excel based RAC sector NDC benchmarking tool

Type of policy instrument	Group A	Ambition level	Group B	Ambition level	Group C	Ambition level
Overall (economy-wide) declared HFC consumption reduction target	Reference to Kigali Amendment, no further differentiation or additional action	Low	Reference to Kigali Amendment, no further differentiation or additional action	Low	Reference to Kigali Amendment, no further differentiation or additional action	Low
	Freeze of current levels of HFC consumption (no growth of HFC consumption)	Medium	Freeze of current levels of HFC consumption (no growth of HFC consumption)	Medium	Freeze of current levels of HFC consumption (no growth of HFC consumption)	Medium
	Sectoral target to reduce HFC consumption by 25% every 5 years, starting in 2025 with the first step of -25% to be achieved in 2030	High	Sectoral target to reduce HFC consumption by 25% every 5 years, starting in 2025 with the first step of -25% to be achieved in 2030	High	Sectoral target to reduce HFC consumption by 25% every 5 years, starting in 2025 with the first step of -25% to be achieved in 2030	High
Financial instruments to reduce HFC consumption	No financial regulation/ incentives to reduce HFCs and promote natural refrigerants	Low	No financial regulation/ incentives to reduce HFCs and promote natural refrigerants	Low	No financial regulation/ incentives to reduce HFCs and promote natural refrigerants	Low
	Levy (e.g. tax, fee) on the use of high GWP HFCs	Medium	Levy (e.g. tax, fee) on the use of high GWP HFCs	Medium	Levy (e.g. tax, fee) on the use of high GWP HFCs	Medium
	Financial incentives (e.g., import tax reduction, subsidy), <20% of equipment cost, to use natural refrigerants	Medium	Financial incentives (e.g., import tax reduction, subsidy), <20% of equipment cost, to use natural refrigerants	Medium	Financial incentives (e.g., import tax reduction, subsidy), <20% of equipment cost, to use natural refrigerants	Medium
	GWP weighted levy or carbon tax on all HFCs and HFOs (substances as defined in EU F-gas regulation)	High	GWP weighted levy or carbon tax on all HFCs and HFOs (substances as defined in EU F-gas regulation)	High	GWP weighted levy or carbon tax on all HFCs and HFOs (substances as defined in EU F-gas regulation)	High
	Financial incentives (e.g., import tax reduction, subsidy), >20% of equipment cost, to use natural refrigerants	High	Financial incentives (e.g., import tax reduction, subsidy), >20% of equipment cost, to use natural refrigerants	High	Financial incentives (e.g., import tax reduction, subsidy), >20% of equipment cost, to use natural refrigerants	High
	Reduction of investment cost via bulk procurement programme.	High	Reduction of investment cost via bulk procurement programme.	High	Reduction of investment cost via bulk procurement programme.	High
	No regulation to reduce HFC use	Low	No regulation to reduce HFC use	Low	No regulation to reduce HFC use	Low
Green public procurement with GWP limits for refrigerants based on current EU F-gas regulation	Green public procurement with GWP limits for refrigerants based on current EU F-gas regulation	Medium	Green public procurement with GWP limits for refrigerants based on current EU F-gas regulation	Medium	Green public procurement with GWP limits for refrigerants based on current EU F-gas regulation	Medium
	Introduction of GWP limit of HFCs for certain appliances/ technologies based on thresholds as defined in current EU F-gas regulation	High	Introduction of GWP limit of HFCs for certain appliances/ technologies based on thresholds as defined in current EU F-gas regulation	Medium	Introduction of GWP limit of HFCs for certain appliances/ technologies based on thresholds as defined in current EU F-gas regulation	Medium
	Refrigerant assessment on its recyclability, with possible restrictions on blends that are difficult to recycle/reclaim	High	Ban of synthetic refrigerants for specific sectors/ appliances, e.g. refrigerators, freezers, plug-in commercial equipment	High	Commitment of local manufacturers to change to natural refrigerants	Medium

# Excel based RAC sector NDC benchmarking tool

Type of policy instrument	Group A	Ambition level	Group B	Ambition level	Group C	Ambition level
Overall (economy-wide) HFC consumption reduction	Reference to Kigali Amendment, no further differentiation or additional action	Low	Reference to Kigali Amendment, no further differentiation or additional action	Low	Reference to Kigali Amendment, no further differentiation or additional action	Low
	Freeze of current levels of HFC consumption (no growth of HFC consumption)	Medium	Freeze of current levels of HFC consumption (no growth of HFC consumption)	Medium	Freeze of current levels of HFC consumption (no growth of HFC consumption)	Medium
Financial instruments to support HFC consumption reduction		High		High		High
		Low		Low		Low
		Medium		Medium		Medium
		Medium		Medium		Medium
		High		High		High
		High		High		High
Other measures	Introduction of GWP limit of HFCs for certain appliances/ technologies based on thresholds as defined in current EU F-gas regulation	High	Introduction of GWP limit of HFCs for certain appliances/ technologies based on thresholds as defined in current EU F-gas regulation	Medium	Introduction of GWP limit of HFCs for certain appliances/ technologies based on thresholds as defined in current EU F-gas regulation	Medium
	Refrigerant assessment on its recyclability, with possible restrictions on blends that are difficult to recycle/reclaim	High	Ban of synthetic refrigerants for specific sub-sectors/ appliances, e.g. refrigerators, freezers, plug-in commercial equipment	High	Commitment of local manufacturers to change to natural refrigerants	Medium
		High		High		Medium

*Next NDC4 Webinar:*  
**Benchmarking the level of ambition of cooling sector-related measures included in NDCs**  
**13 December 2022, 2-3 pm (CET)**  
[Register here](#)



## Join our Alliances

### Join the Green Cooling Network



The members of the

#### **Green Cooling Network**

are all committed to energy-efficient and climate-friendly refrigeration & air conditioning.

Join the network and become part of the Green Cooling community today!

[www.green-cooling-initiative.org/network](http://www.green-cooling-initiative.org/network)

### Become a COPA member



The **Climate and Ozone Protection Alliance (COPA)**

is open to all countries and organisations willing to support the global shift to sustainable refrigerant management and closing the loop to a circular economy in the cooling sector.

Find more Information on our Website:

<https://www.copalliance.org/network/become-a-member>



**Christin Johnen**

Communication specialist C4 II

GIZ Proklima

[Christin.johnen@giz.de](mailto:Christin.johnen@giz.de)



[www.giz.de](http://www.giz.de)

[www.green-cooling-initiative.org](http://www.green-cooling-initiative.org)



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<https://twitter.com/GCIGreenCooling>

**Deutsche Gesellschaft für  
Internationale Zusammenarbeit (GIZ) GmbH**

Registered offices  
Bonn and Eschborn

Friedrich-Ebert-Allee 36 + 40  
53113 Bonn, Germany  
T +49 228 44 60 - 0  
F +49 228 44 60 - 17 66

Dag-Hammarskjöld-Weg 1 - 5  
65760 Eschborn, Germany  
T +49 61 96 79 - 0  
F +49 61 96 79 - 11 15

E [info@giz.de](mailto:info@giz.de)  
I [www.giz.de](http://www.giz.de)