Combining emissions reporting with enforcement of standards and labelling for cooling products

Maraida Licerio – Senior Advisor

14 June 2023

Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH

Supported by:

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

based on a decision of the German Bundestag

INTERNATIONAL CLIMATE INITIATIVE

Agenda

Introduction to GIZ Proklima

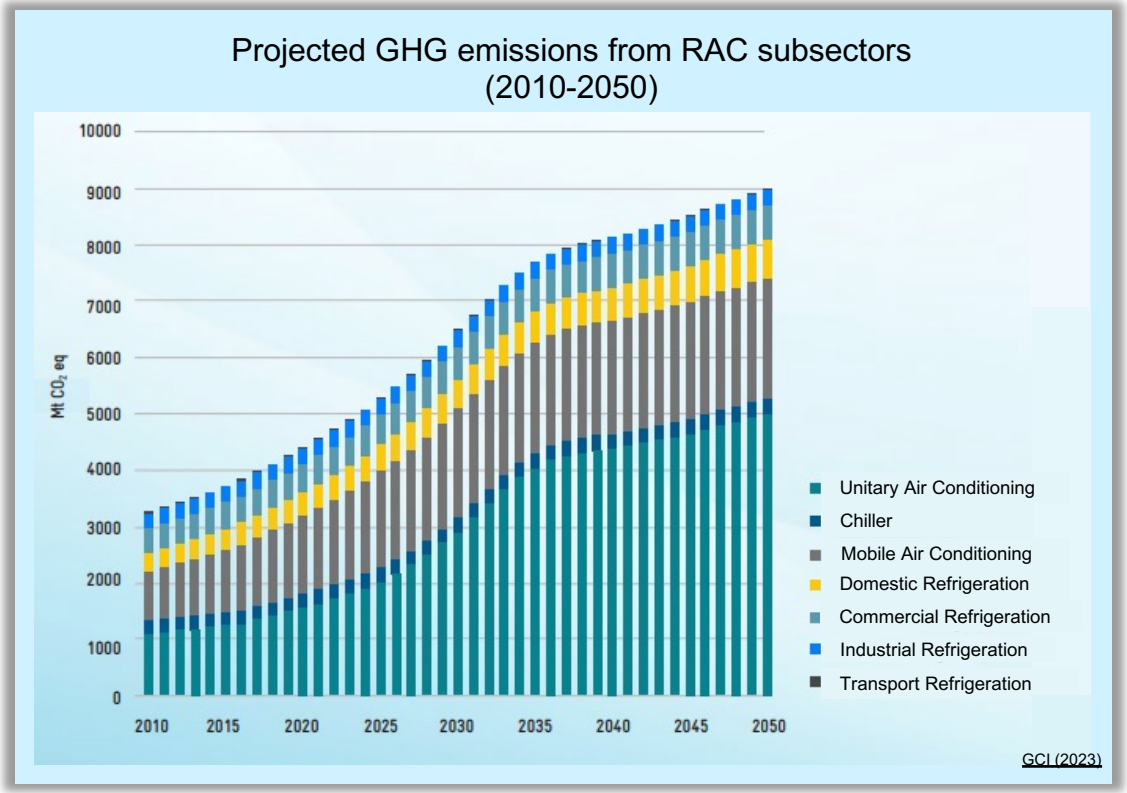
MRV in the Cooling Sector

The Philippine experience in MRV systems

Using the PELP for MRV systems

Emissions from the RAC sector

- Cooling accounts for **more than 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).



Emissions from the RAC sector

GIZ Proklima – Making cooling a hot topic since 1995

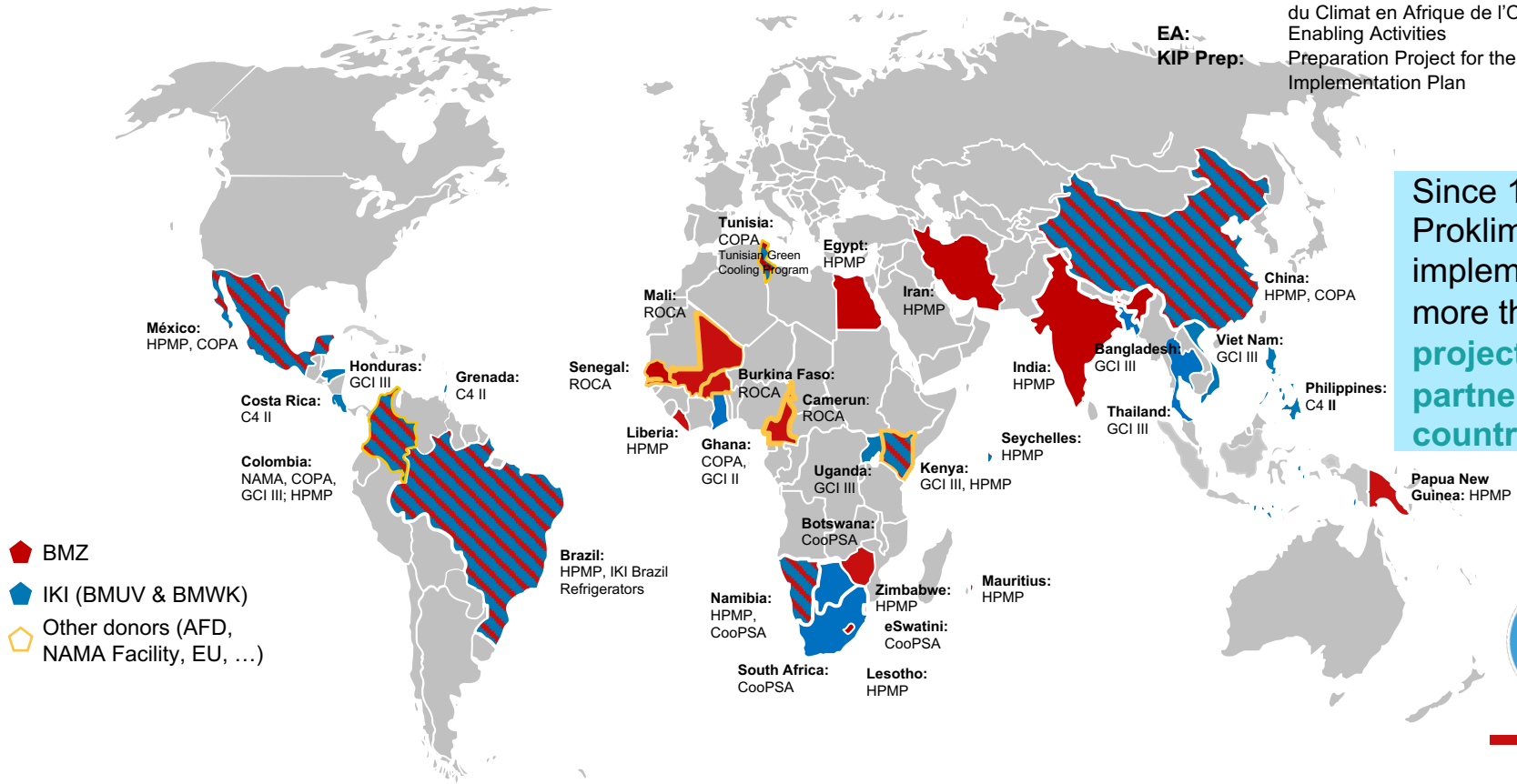
© GIZ Proklima / Green Cooling Initiative

- 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. Climate Works

Since 1995, Proklima has implemented more than **300 projects** in **+40 partner countries**

GIZ Proklima Portfolio (05/2023)

COPA: Climate and Ozone Protection Aliance
GCI III: Green Cooling Initiative III
CooPSA: Cooling Programme Southern Africa
HPMP: HCFC Phase-Out Management Plan
ROCA: Refroidissement respectueux de l'Ozone et du Climat en Afrique de l'Ouest et Centrale
EA: Enabling Activities
KIP Prep: Preparation Project for the Kigali Implementation Plan

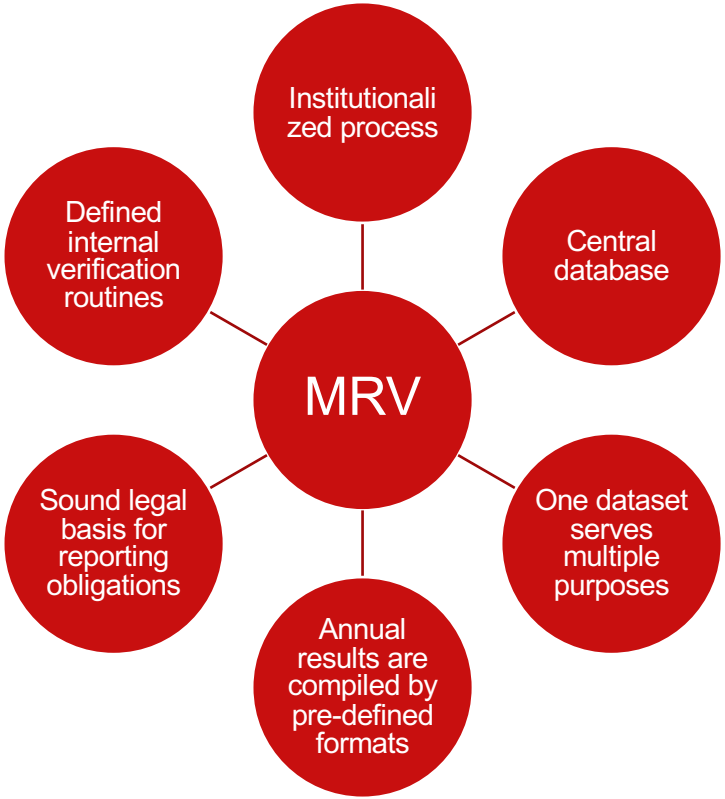


- BMZ
- IKI (BMUV & BMWK)
- Other donors (AFD, NAMA Facility, EU, …)

Since 1995, Proklima has implemented more than **300 projects** in **+40 partner countries**

Measurement-Reporting-Verification (MRV) system

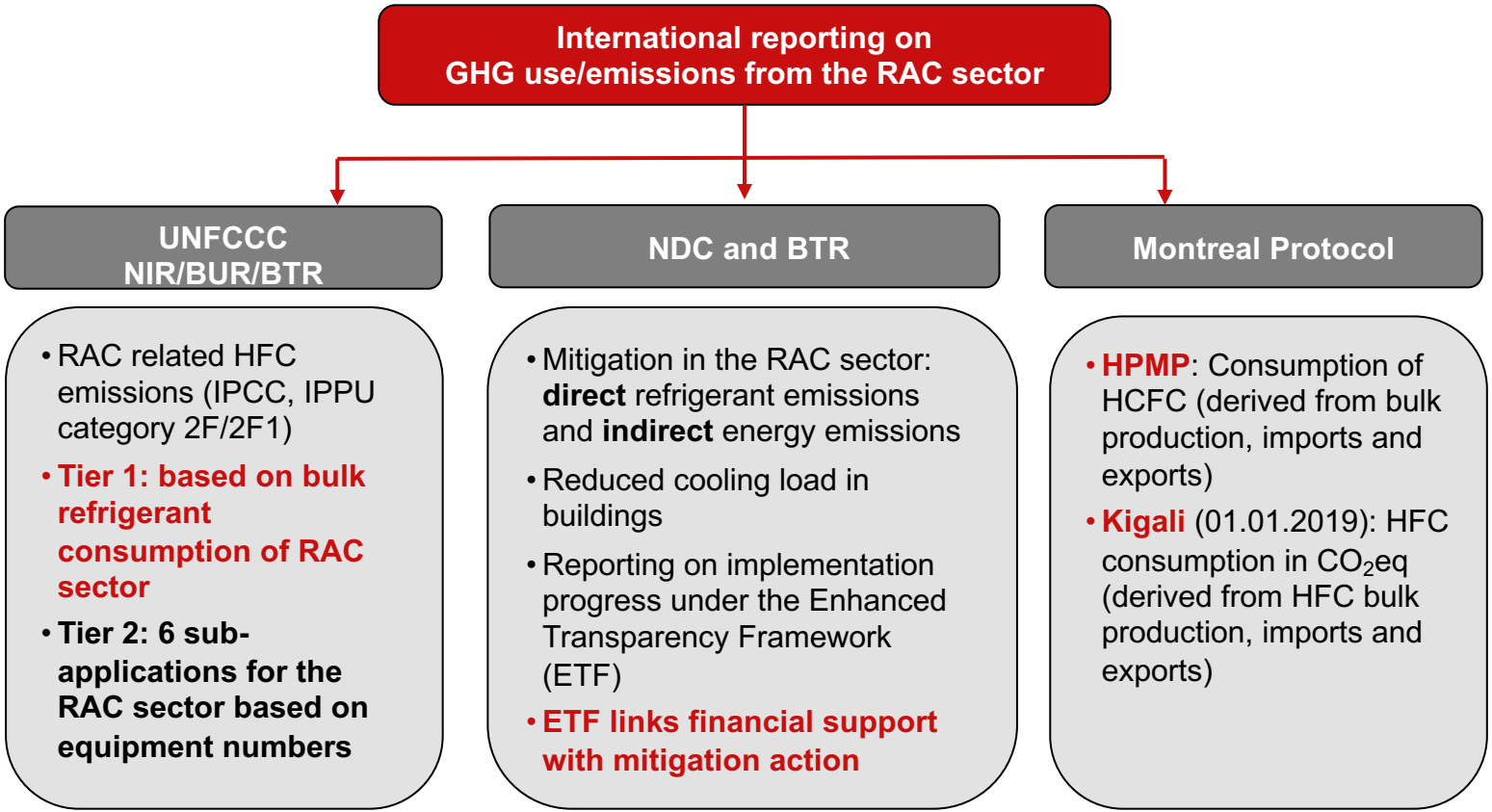
improves the information basis of countries to monitor their mitigation actions for national planning, implementation and coordination



What can an MRV system do for you?

- Mandatory collection of **relevant market data** for several purposes
- Stored at a **single location**
- Available to several government entities

Supports the need for reporting within multilateral agreements



Before…we would gather data through surveys and actual visits to the data sources

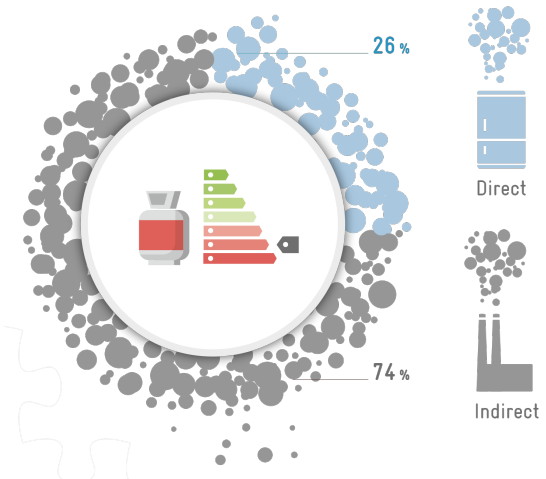
- Primary data collection from manufacturers and distributors for the Philippines with enforcement support from the **ozone unit** since the mandate is on **refrigerants** but not on the **products**

- Surveys were completed by manufacturers
- Partial data was provided since it was perceived that **non-ODS products were not covered by the inventory**
- Some **confusion** with commissioned surveys under the **Montreal Protocol**

© GIZ Proklima / Green Cooling Initiative

Integrating refrigerants in the product registry

- Workshops and consultations were done simultaneous with energy efficiency initiatives in preparation for the **Energy Efficiency and Conservation Act (RA11285)** which brought together relevant stakeholders in terms of energy, climate and ozone issues



- The type of refrigerant and its global warming potential (GWP) is included in the design of the new energy label due given the active engagement of the ozone and climate units

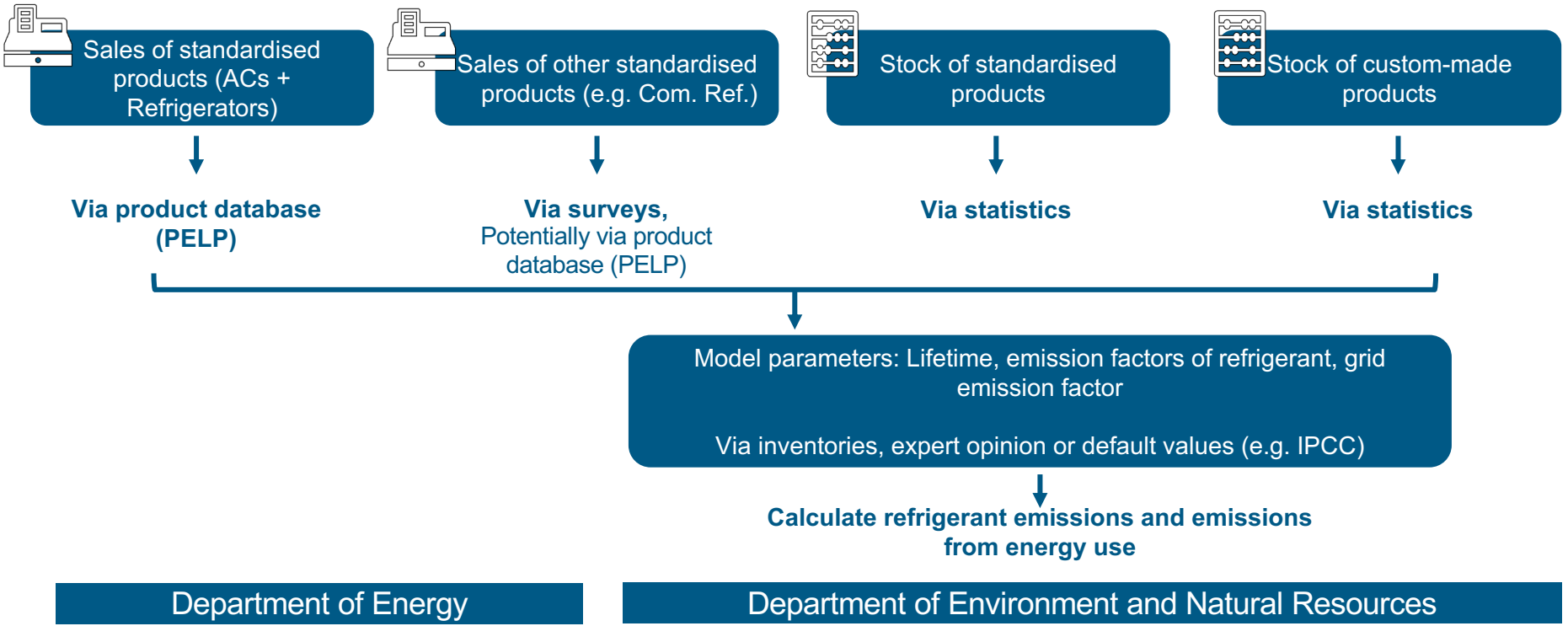
- Other information and product details were agreed to be included in a QR for consumer information

Why product registries and database?

+ Perfect solution for an institutionalized MRV system for mass-produced systems
  - Sound legal basis of reporting obligations for stakeholders
+ Implement minimum energy performance standard
+ Track pull-effect of energy labeling system
  - Data to support future MEPS and label class updates
+ Track refrigerant choice in appliances
  - Data to support possibly ban on high GWP refrigerants
+ Track sales of equipment and Follow stock development
+ Used for calculation of energy-related and refrigerant emissions
+ Provide end-users with market overview

➢ **Around 60%++ of RAC emissions might be covered with Philippines RAC product registration database**

Overview of the Philippine MRV System



Unitary Air Conditioner Parameters in the PELP

Needed to calculate indirect emissions

Needed to calculate direct emissions

- Sales for each air conditioner model
  - Country of Origin
- Cooling Capacity in KW of each model;
- Cooling Seasonal Performance Factor (CSPF) and other Coefficient of Performance (COP) deemed necessary;
  - Classification as Fixed Speed or Inverter (Variable Speed Drive);
- Installation type (Window-Type, Split-Type (Wall-mounted, Floor-standing, Cassette-type, Ceiling-suspended));
- Chemical used as Refrigerant;
- Refrigerant Charge Volume;

Domestic Refrigerator Parameters in the PELP

- Sales for each refrigerator model
- Volume of Refrigerators in Liters
- Energy Efficiency Factor (EEF)
- Tested Daily Electricity Consumption in KWh/24hours
- Chemical used as Refrigerant
- Refrigerant Charge in Mass
- Country of origin

Needed to calculate indirect emissions

Needed to calculate direct emissions

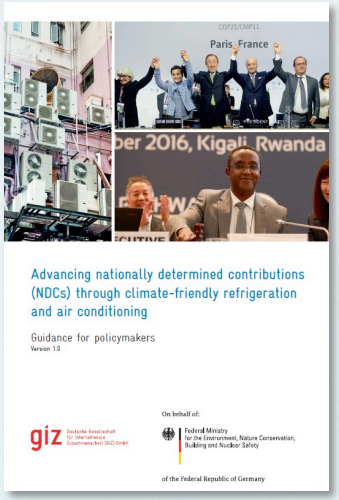
Cool MRV – Read our publications!

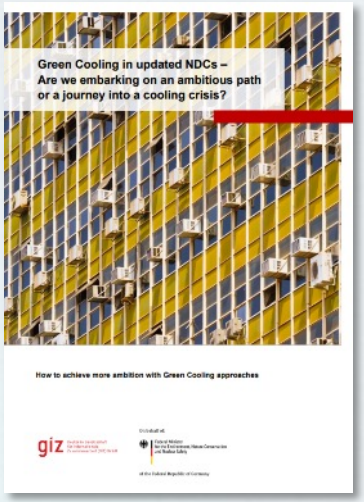
[Measurement, Reporting & Verification (MRV) Handbook]

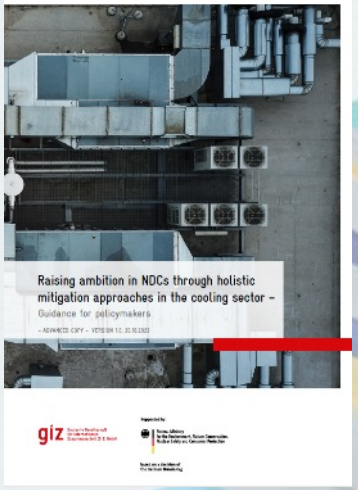
[Understanding MRV in the cooling sector]

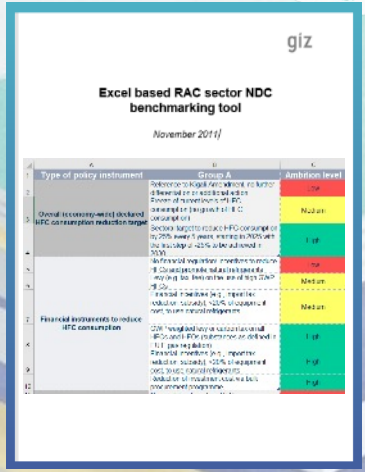
- [U4E Guidelines]
- [Prototype open-source application]

Advancing NDCs with Green Cooling – Read our publications!









Advancing nationally determined contributions (NDCs) through climate-friendly refrigeration and air conditioning

Green Cooling in updated NDCs – Are we embarking on an ambitious path or a journey into a cooling crisis?

Raising ambition in NDCs through holistic Mitigation approaches in the cooling sector

Excel based RAC sector NDC benchmarking tool
&
Quick self-analysis to evaluate cooling sector-related targets and measures included in NDCs

Contact

Please do not hesitate to contact us with any concerns, questions or requests.

GIZ Proklima
NDC4 service desk
ndc4@giz.de

www.giz.de
www.green-cooling-initiative.org

https://twitter.com/giz_gmbh
https://twitter.com/GCIGreenCooling