

# Key pieces for climate-friendly and energy-efficient cooling

Addressing the rising demand for refrigeration, air conditioning and foam (RAC&F) applications in a sustainable manner requires climate-friendly and energy-efficient solutions. Only through an integrated technology approach, coordinated and coherent policy-making and comprehensive financial planning will key stakeholders be able to push for a sustainable transformation of the RAC&F sector. This does not only reduce greenhouse gas (GHG) emissions significantly, it also contributes to achieving many of the Sustainable Development Goals (SDGs) – a perfect match for countries' Nationally Determined Contributions (NDCs).



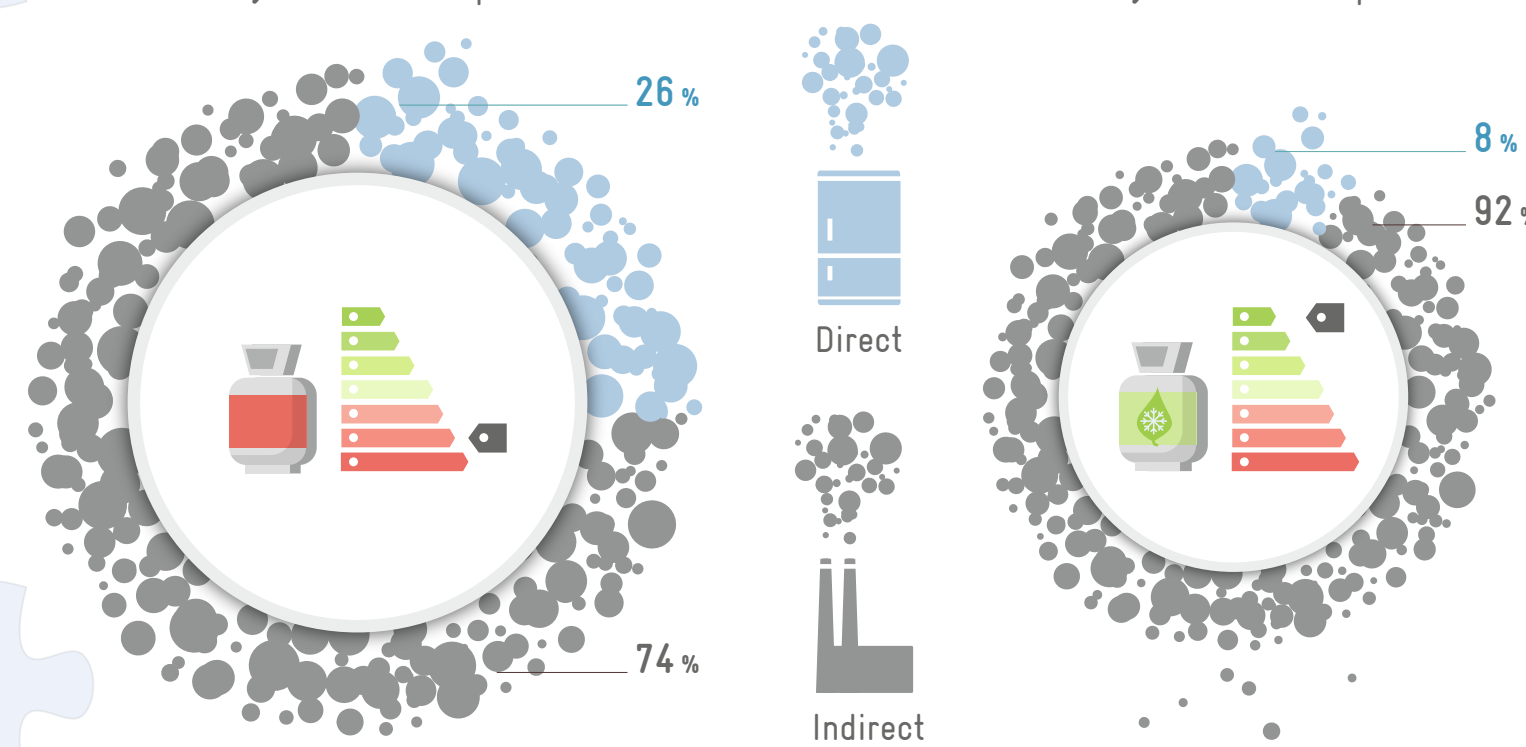
## Financing implementation

A comprehensive understanding of the national RAC&F sector, its GHG emissions, and potential barriers for introducing mitigation actions is fundamental for planning financial support. Analysing the needs in the context of available domestic sources, capabilities and sustainability helps to attract the interest of financial supporters.

A comprehensive finance strategy should include an implementation plan which combines various potential sources (e.g. domestic, climate finance, Multilateral Fund) and describes mechanisms to channel the support. The financial strategy and its RAC&F specific sectoral targets should be aligned with the defined schedules of the Montreal Protocol and the Paris Agreement of the United Nations Framework Convention on Climate Change (UNFCCC).

Business-as-usual in 2030  
8,010 Mt CO<sub>2</sub> eq \*

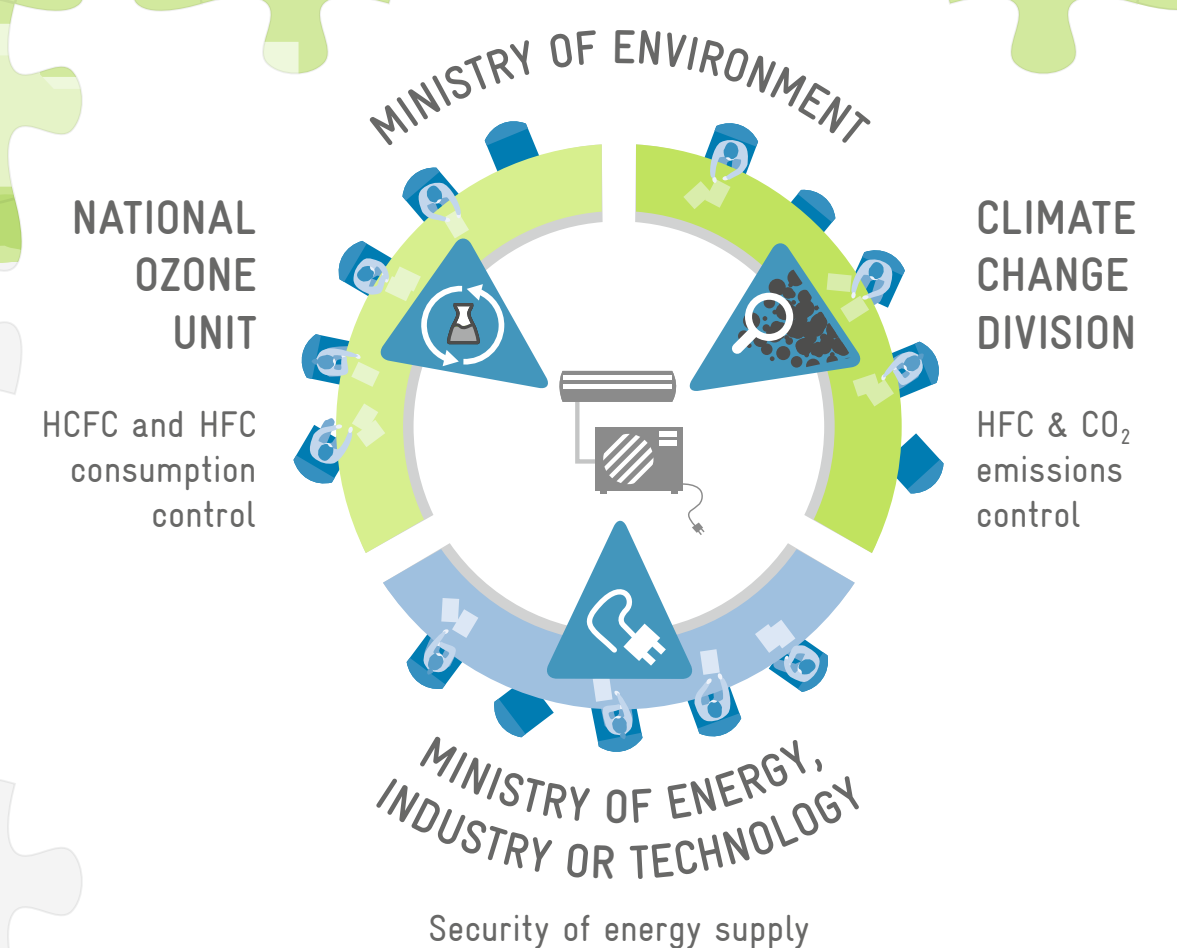
Green cooling in 2030  
4,610 Mt CO<sub>2</sub> eq \*



## Integrated green cooling approach

Large amounts of GHG emissions from cooling appliances can be avoided: Enhanced energy efficiency (through improved system design and optimized cooling load management) and the use of natural refrigerants instead of fluorinated refrigerants can lower the emissions from the sector significantly.

The Kigali Amendment to the Montreal Protocol calls on parties to phase down hydrofluorocarbons (HFCs). By choosing natural refrigerants to replace the ozone-depleting hydrochlorofluorocarbons (HCFCs) now, countries will avoid having to phase out HFCs again later. Increasing prices for HFCs will make natural refrigerants even more economically attractive.



## Join forces: Key actors need to coordinate

Pooling competences and coordinating closely among climate, energy efficiency and ozone policymakers ensures a coherent approach in designing and implementing national mitigation strategies. The reduction of direct (HFC) and indirect (CO<sub>2</sub>) emissions should go hand in hand to optimize the use of resources and to maximize climate benefits.

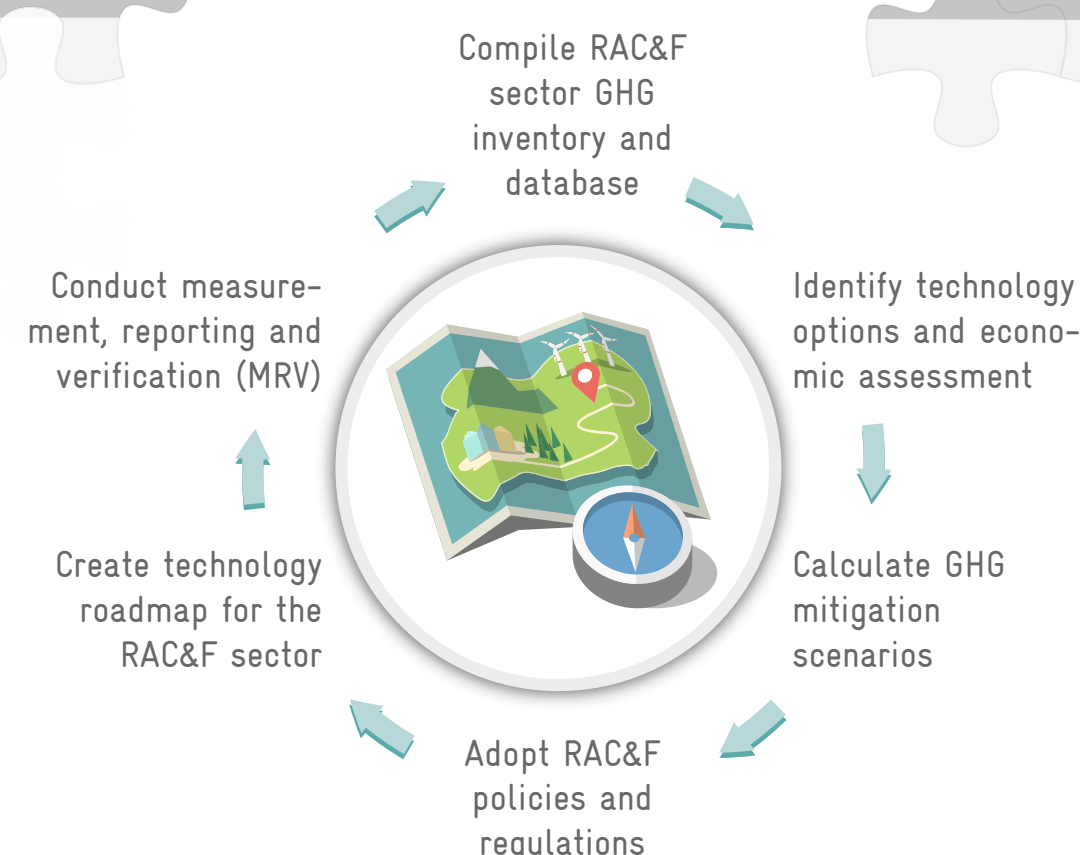
The key government institutions need to closely interact with non-state actors such as:

- Private sector
- Standards committees
- Training institutions and facilities
- Operators of equipment
- Research and academic institutions
- Non-governmental organizations

## RAC&F mitigation strategy for NDCs

A coherent and comprehensive strategy making process requires a number of methodological steps to ensure that intended changes are achievable. Both the strategy and the set goals need to be compatible with national development plans and international requirements.

GIZ has published a document guiding policymakers in their efforts to address their country's RAC&F sector. Download the document by scanning the QR-code on this poster.



\* Source: Green Cooling Initiative, 2016 – <http://www.green-cooling-initiative.org/country-data/>  
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