Experiences of the RAC inventory in Kenya

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What is Green Cooling?

Aiming at a reduction of emissions from the cooling sectors, the Green Cooling Initiative combines three approaches:

- promoting natural refrigerants,
- maximising energy efficiency,
- fosters a sustainable approach to private and commercial energy consumption.

The term "green cooling technologies" is used to describe equipment with maximized energy efficiency that is using natural refrigerants, thereby minimizing its environmental impact.
Kenya RAC Inventory: Experiences
Inventory Process: Experiences

• Various consultants recruited to collect data from industry
• Collection of data covered all subsectors
• Detailed information requested in questionnaires: e.g. unit numbers, imports, refrigerants, energy usage and efficiency, etc.
• A wide range of uses of refrigerants was observed
• Industry participated in the process, faced some challenges in filling out the questionnaires
• Stakeholders of the RAC industry attended and actively participated in the RAC Inventory workshops
Kenya RAC Inventory: Results
Estimated GHG emissions by subsector in 2030

- Mitigation small UAC: 55%
- Mitigation larger UAC: 9%
- Mitigation Dom ref: 28%
- Mitigation Com stand-alone: 3%
- Mitigation condensing units: 5%
Inventory-based emission scenario until 2050
Mitigation Potential in Mt CO$_2$eq (cumulative emissions) 2010 to 2050

- Cumulative GHG emission BAU: 386
- Cumulative GHG emissions saved with mitigation: 112
- Cumulative GHG emission with mitigation: 274
Energy consumption of the RAC sector (BAU)

- Contribution of RAC sector to overall energy consumption: ~60%
Kenya RAC inventory: Challenges and Benefits
Inventory process: Challenges faced

• Institutional arrangement – No specific institution to handle RAC sector
• Lack of/inadequate regulations
• Expensive and non readily availability of technologies
• Lack of incentives to convert to energy efficient and low-GWP alternatives/natural refrigerants
• Local market penetration
Benefits of RAC Inventory

• Help identify and verify barriers and find solutions
• Develop effective and informed decision by the Government
• Reduction of green house gas (GHG) emissions – climate protection
• Job creation for qualified service technicians
• Allow for a competitive, transparent market competition
• Support inter-Ministerial and public-private cooperation
• Support compliance with international regulations (e.g. MP, UNFCCC)
Usefulness and national applicability of the results of the RAC inventory

• Assist Government to take informed decision on RAC sector
• Policy transformation regarding import regulations
• Adoption of energy efficient, and ozone and climate friendly technologies

➢ Outlook: Inclusion of the RAC sector mitigation potential in the NDCs
Thank you!