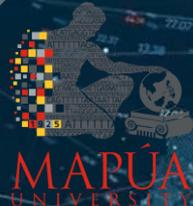


# LINKING THE KIGALI AMENDMENT AND ENERGY EFFICIENCY IN THE DEVELOPMENT OF THE NATIONAL COOLING ACTION PLAN

PROJECT: Enhancing Energy Capacities of the Philippines



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1. OVERVIEW: Why does COOLING warms our planet?
2. INTRODUCTION: Where are we in the COOLING sector?
3. SIGNIFICANCE: What links global SDG and COOLING?
4. NCAP METHODOLOGY: How does COOLING Plan works?
5. RESULTS: Will efficiency address the COOLING demand?
6. WAY FORWARD: What's next with sustainable COOLING?



# 1. WHY DOES COOLING WARMS OUR PLANET?

**1** Direct Impact:  
REFRIGERANT LEAK

**2** Indirect Impact:  
ENERGY CONSUMED

## 2. WHERE ARE WE IN THE COOLING SECTOR?

# 3.4 Billion

\*GLOBAL RESIDENTIAL COOLING UNITS

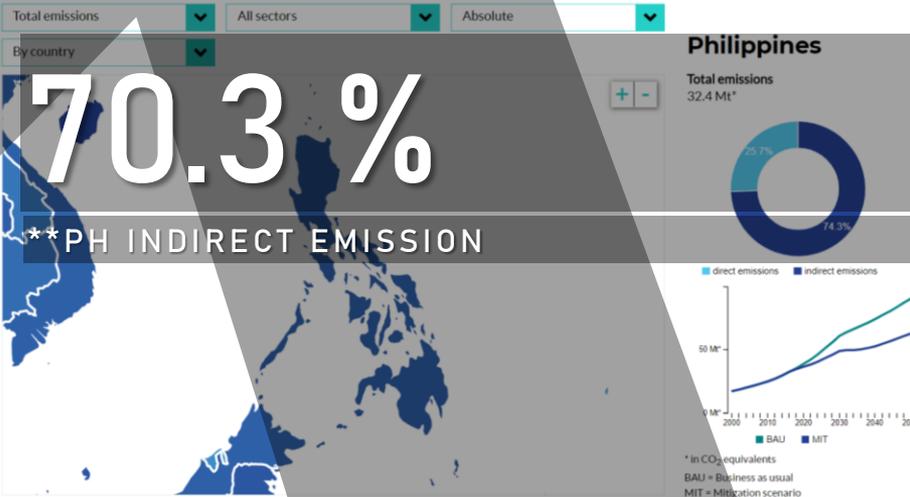
# 9,960 MT

\*\*GLOBAL TOTAL COOLING EMISSION BY 2050

# 6,200 TWh

\*GLOBAL ENERGY USE IN COOLING BY 2050

### Total emissions of cooling sector



# 70.3 %

\*\*PH INDIRECT EMISSION

\*IEA, The Future of Cooling, OECD/IEA 2018, 59-61

\*\*<https://www.green-cooling-initiative.org/country-data#ltotal-emissions/all-sectors/absolute>

## 2. WHERE ARE WE IN THE COOLING SECTOR?

**3,473** MODELS

\*Certified RAC Products by DOE in 2020

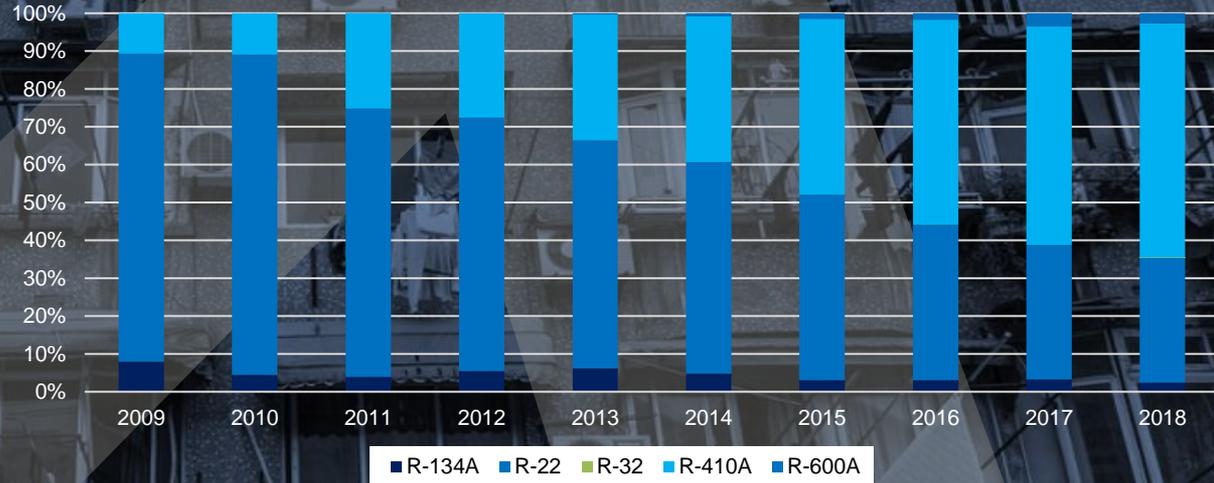
**71.9 %** OUT OF 2,463 AC

\*Certified Room Air Conditioners | Imported

**12.3 MT**

\*\*PH Total RAC Emission by 2030

\*\*\*RAC Product Refrigerant Market Profile

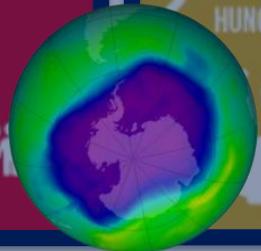


\*DOE, [https://www.doe.gov.ph/sites/default/files/pdf/energy\\_efficiency/certified\\_rac\\_split\\_2020\\_1st\\_quarter.pdf](https://www.doe.gov.ph/sites/default/files/pdf/energy_efficiency/certified_rac_split_2020_1st_quarter.pdf)

\*\*<https://www.green-cooling-initiative.org/country-data#!total-emissions/all-sectors/absolute>

\*\*\*PH NCAP, 2021 Draft National Cooling Plan

# 3. WHAT LINKS GLOBAL SDG AND COOLING?



1

**MONTREAL PROTOCOL**  
One of the most successful treaty



2

**UNDP**  
United Nations Development Programme

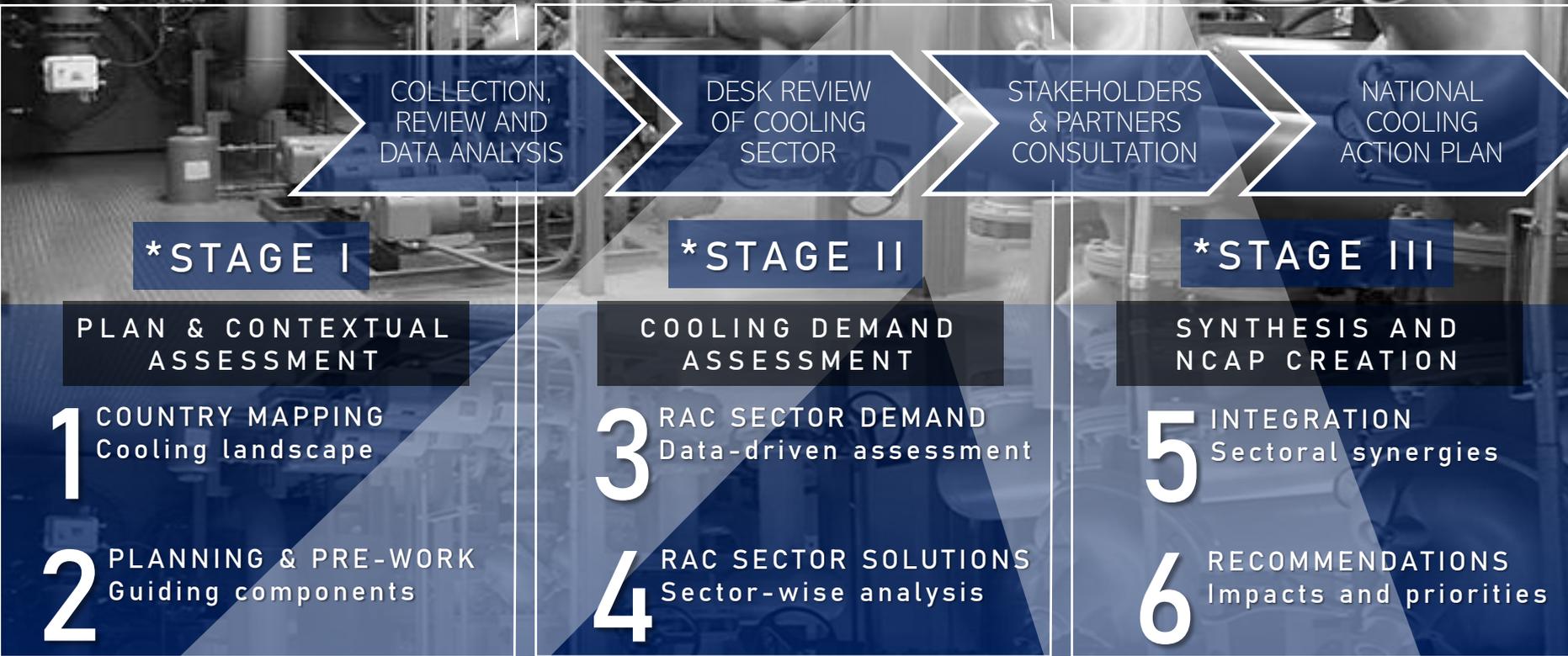


3

**CLEAN COOLING COLLABORATIVE**  
Previously branded as Kigali Cooling Efficiency Program (K-CEP)



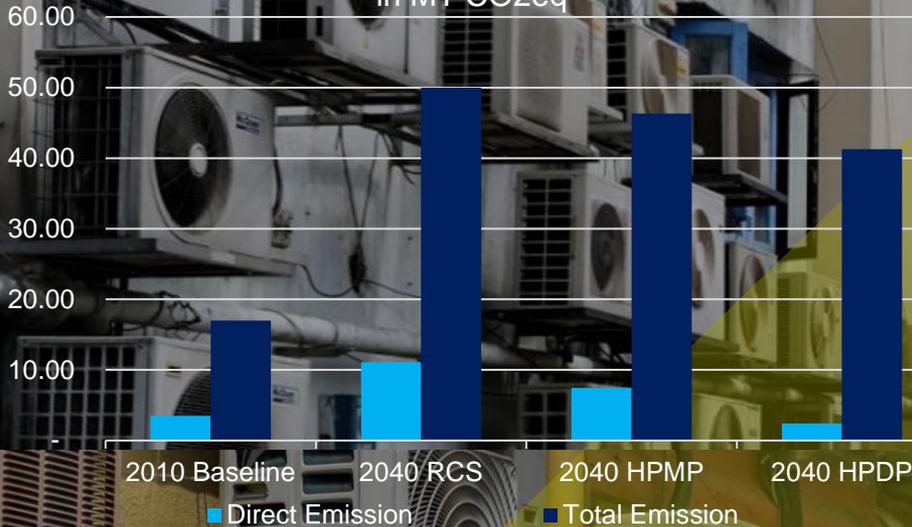
# 4. HOW DOES COOLING PLAN WORKS?



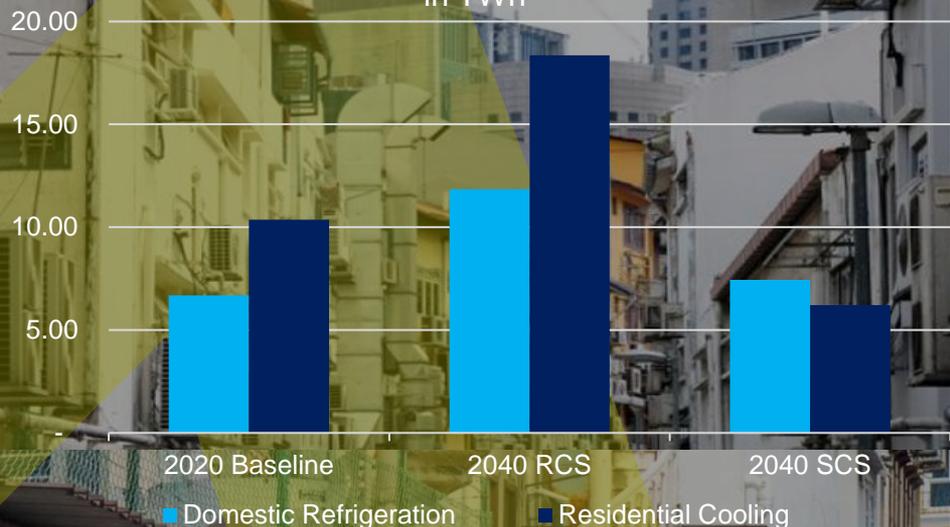
\*Cool Coalition, 2021 National Cooling Action Plan Methodology

# 5. WILL EFFICIENCY ADDRESS COOLING DEMAND?

RCS and SCS Direct Emission Comparison  
in MT CO<sub>2</sub>eq



RCS and SCS Energy Consumption Comparison  
in TWh



The reduction in direct emission and energy savings projections in TWh comparing RCS and SCS are presented above. RCS already considers the 4 percent energy savings based on the DOE energy outlook while SCS further adopts the full implementation of MEPP. With these assumptions on RCS and SCS, the domestic refrigeration sector will save 4.41 TWh while residential cooling sector will save as much as 12.15 TWh.

## 6. WHAT'S NEXT WITH SUSTAINABLE COOLING?



Based in the Philippines NDC targets, the country's projected business-as-usual cumulative economy-wide emission is 3,340.3 MT CO<sub>2</sub> equivalent for '20-'30. This is 75 percent target GHG emission reduction and avoidance by 2030 as committed to the Paris Agreement. Out of this target, 72.29 percent is "conditional" or contingent upon the support provided by developed countries while the remaining 2.71 percent is "unconditional" or shall be implemented mainly through domestic resources. The SCS net effect is close to 12 % of the unconditional NDC target of the country.

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