

MOP 31 | MONTREAL PROTOCOL
ROMA 2019



**THE ITALIAN HVACR
EXPERIENCE**

A CONTRIBUTION TO ACHIEVING UN'S 17
SUSTAINABLE DEVELOPMENT GOALS

Wednesday, 6 November 2019 | 18:00 - 20:00 | Austria room

MOP 31 | MONTREAL PROTOCOL
ROMA 2019

The RAC Sectors Contribution
to UN SDGs

Fabio Polonara

Università Politecnica delle Marche, Ancona, Italy
TEAP member and RTOC co-chair

The views presented here are the views of the author and do not necessarily represent the views of the TEAP and/or RTOC

Wednesday, 6 November 2019 | 18:00 - 20:00 | Austria room

MOP 31 | MONTREAL PROTOCOL ROMA 2019



MOP 31 | MONTREAL PROTOCOL ROMA 2019

MOP 31 | MONTREAL PROTOCOL ROMA 2019

2 ZERO
HUNGER



In developed countries, food losses from the absence of refrigeration account for nearly 9% of the total food production, and 23% on average in developing countries.

The FAO estimates that food production will have to increase dramatically to feed an additional 2.3 billion people by 2050 and states that refrigeration has a vital role to play in this context. Setting up of cold chains for perishable foodstuffs, which are as extensive and reliable as those in industrialized countries, would enable developing countries to raise food supply by about 15%.

MOP 31 | MONTREAL PROTOCOL
ROMA 2019

3 GOOD HEALTH AND WELL-BEING



Refrigeration has a direct impact on human health through preservation of foods and pharmaceuticals, such as vaccines; insulin; chemotherapy drugs, as well as through new low-temperature therapeutic techniques. Refrigeration inhibits the development of bacteria and toxic pathogens therefore preventing foodborne diseases.

Refrigeration dramatically reduces the need for chemical preservatives in food. Since 1930, thanks to cold-chain enabled food preservation, a 90% decrease in the number of stomach cancer cases was noticed, according to a study by the WHO.

7 AFFORDABLE AND CLEAN ENERGY



Electricity consumption for RAC has been increasing over the last decades in both developed and in developing countries. The refrigeration sector (including air conditioning) consumes about 17% of the overall electricity used worldwide in 2015.

It highlights the importance of the refrigeration sector which is expected to grow further in the coming years because of (i) increasing refrigeration and air conditioning demand in numerous sectors, and (ii) global warming. Efforts to increase energy efficiency of equipment will have to contain the expected increase in energy consumption.

8 DECENT WORK AND ECONOMIC GROWTH



Hot areas and zones with high air humidity underwent remarkable economic development due to the introduction and expansion of air-conditioning technologies over the past 60 to 70 years.

Several independent studies reported that the quality of indoor air has a significant influence on the productivity of office workers. Inappropriate ambient temperatures impair work efficiency and may cause economic losses. In the UK, 15.7 billion euros are lost every year because of inadequate temperatures .

MOP 31 | MONTREAL PROTOCOL ROMA 2019

11 SUSTAINABLE CITIES AND COMMUNITIES



The search for more sustainable ways to air conditioning of the built environment will create the conditions for progressing towards sustainable cities.

MOP 31 | MONTREAL PROTOCOL ROMA 2019

MOP 31 | MONTREAL PROTOCOL ROMA 2019

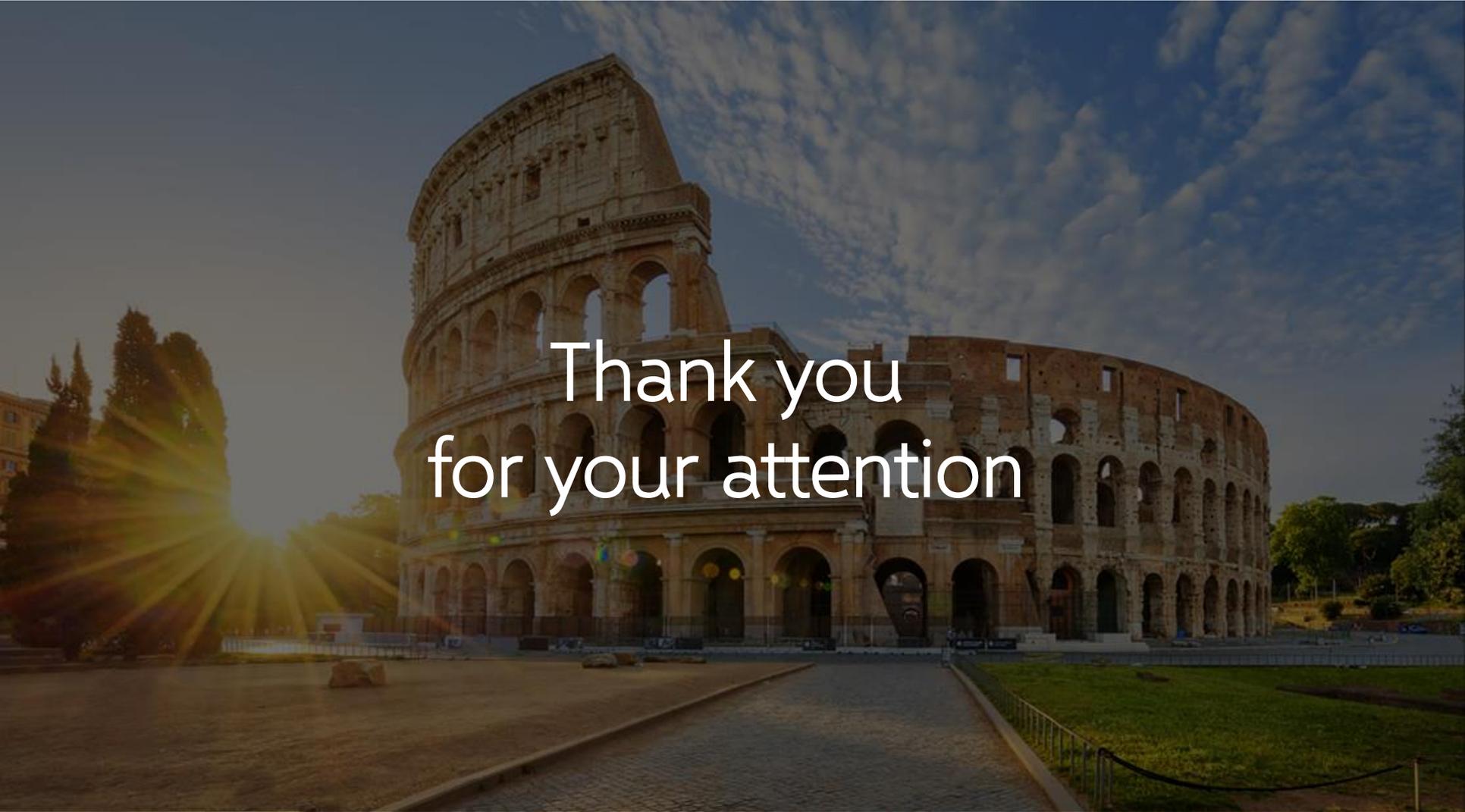
13 CLIMATE
ACTION



The RACHP sectors account for 7.8% of total global greenhouse gas emissions. Of this total, 20% to 37% [2] (value for the year 2014) are direct emissions of CFCs, HCFCs and HFCs, and 63-80% are indirect emissions related to the production of the energy consumed by refrigeration systems. The Kigali Amendment intends to progressively reduce the production and consumption of HFCs, and should allow to avoid an increase in the average global temperature and limit it to between 0.1°C and 0.3°C by 2100.

MOP 31 | MONTREAL PROTOCOL
ROMA 2019

MOP 31 | MONTREAL PROTOCOL ROMA 2019



Thank you
for your attention

MOP 31 | MONTREAL PROTOCOL ROMA 2019