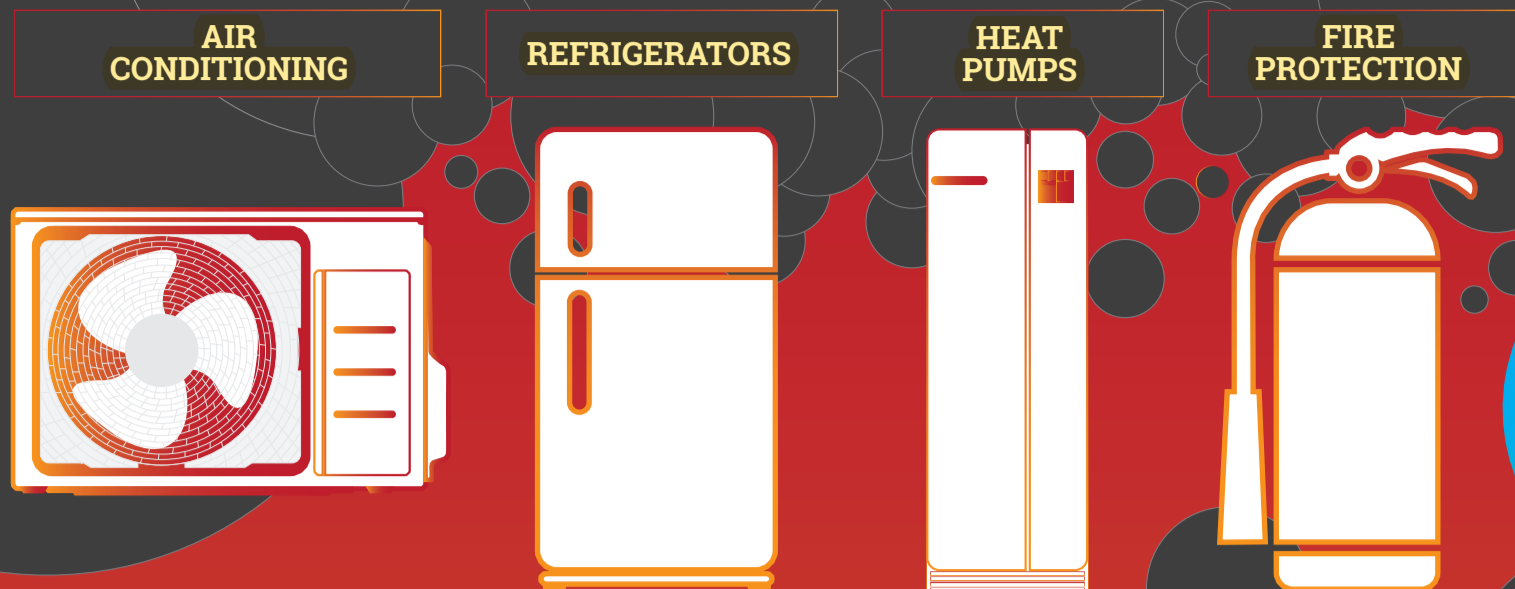


WHAT ARE HFCs?

Hydrofluorocarbons (HFCs) are **man-made chemicals and potent greenhouse gases** used in cooling and heating equipment, as well as in foams and fire protection, among others.



Cooling is an essential part of our daily lives

For example:

FOOD IN THE UK

70% USES THE COLD CHAIN

VACCINES

90% REQUIRE REFRIGERATION

WHAT ARE THE ALTERNATIVES?

Alternatives already exist using natural refrigerants



For more information on technology using these climate neutral alternatives, check out www.cooltechnologies.org

COOLTECHNOLOGIES
Sustainable Cooling Database

HFCs are being phased down by the **Montreal Protocol** under **THE KIGALI AMENDMENT**

WILL PHASE DOWN HFCs BY 80% by 2047

WILL AVOID 70 BILLION metric tonnes of CO₂e by 2050

Efficient, HFC-free equipment will reduce emissions from cooling

WILL AVOID 0.2-0.4°C of warming by 2100

more than double the entire global CO₂e emissions from fossil fuels in 2019

HFCs - BIG CLIMATE IMPACT IN A SHORT TIME

Short Lived Climate Pollutants like HFCs have big climate impacts over a short time. Reducing them now will have near and long-term effects helping flatten the climate curve.

GWP is often measured on a 100-year timeline but given the short lifetimes of HFCs, a 20-year GWP is more accurate and shows their true climate impact.

Average atmospheric lifetime: 15 years

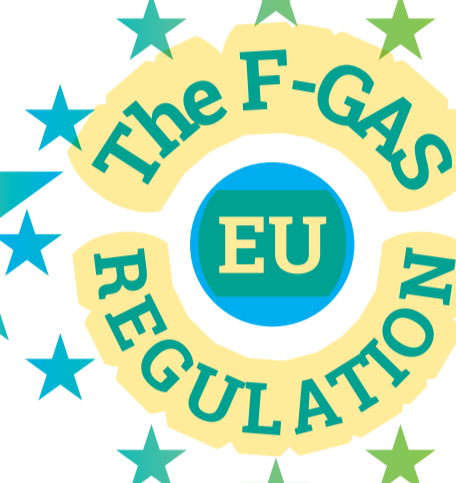
GWP: Global Warming Potential

HFC-404A
20 YEAR GWP = 6010
100 YEAR GWP = 3922

HFC-410A
20 YEAR GWP = 4340
100 YEAR GWP = 2088

HFC-134a
20 YEAR GWP = 3710
100 YEAR GWP = 1300

HFC-32
20 YEAR GWP = 2430
100 YEAR GWP = 677

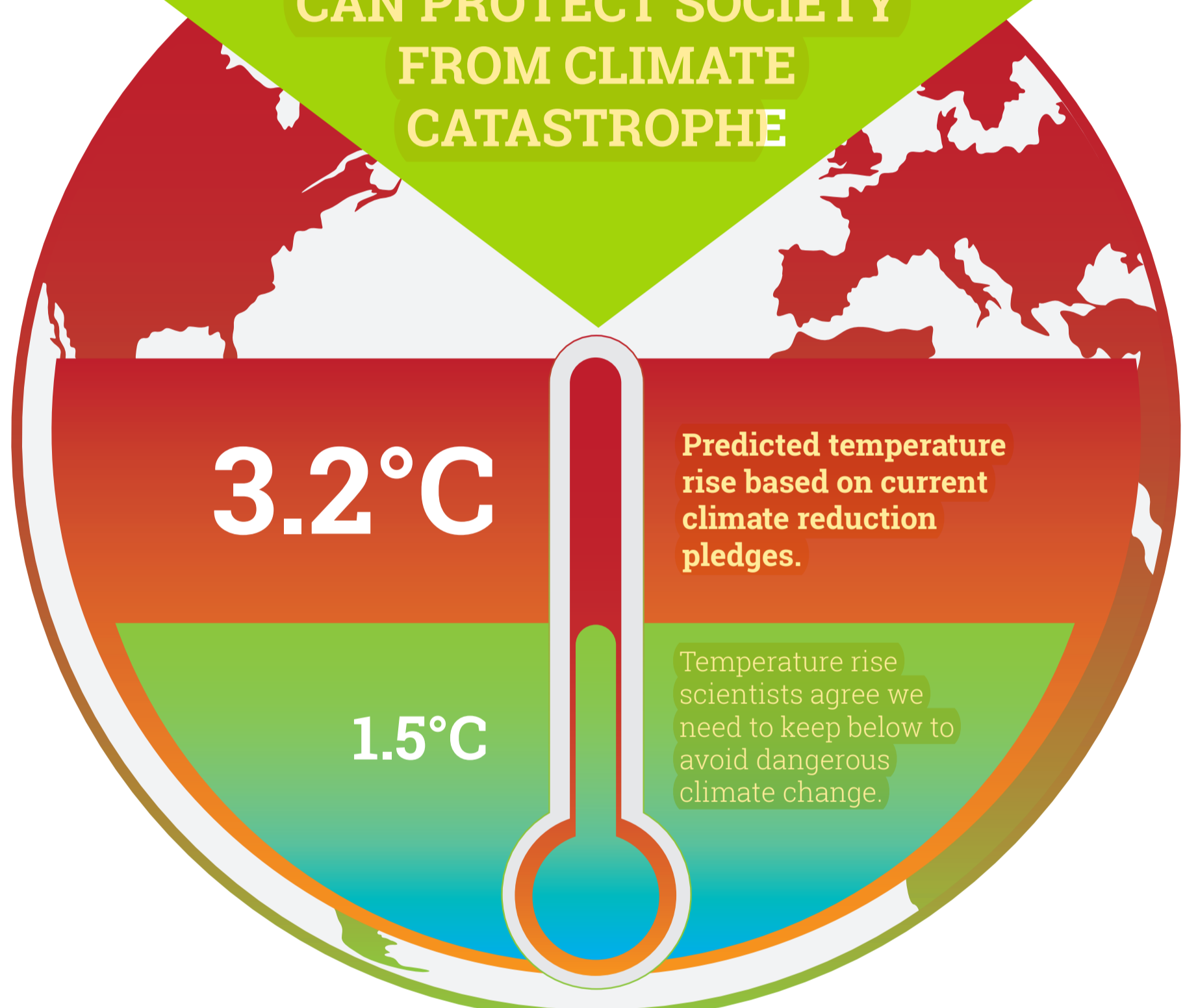


WILL PHASE DOWN HFCs BY 79% by 2030

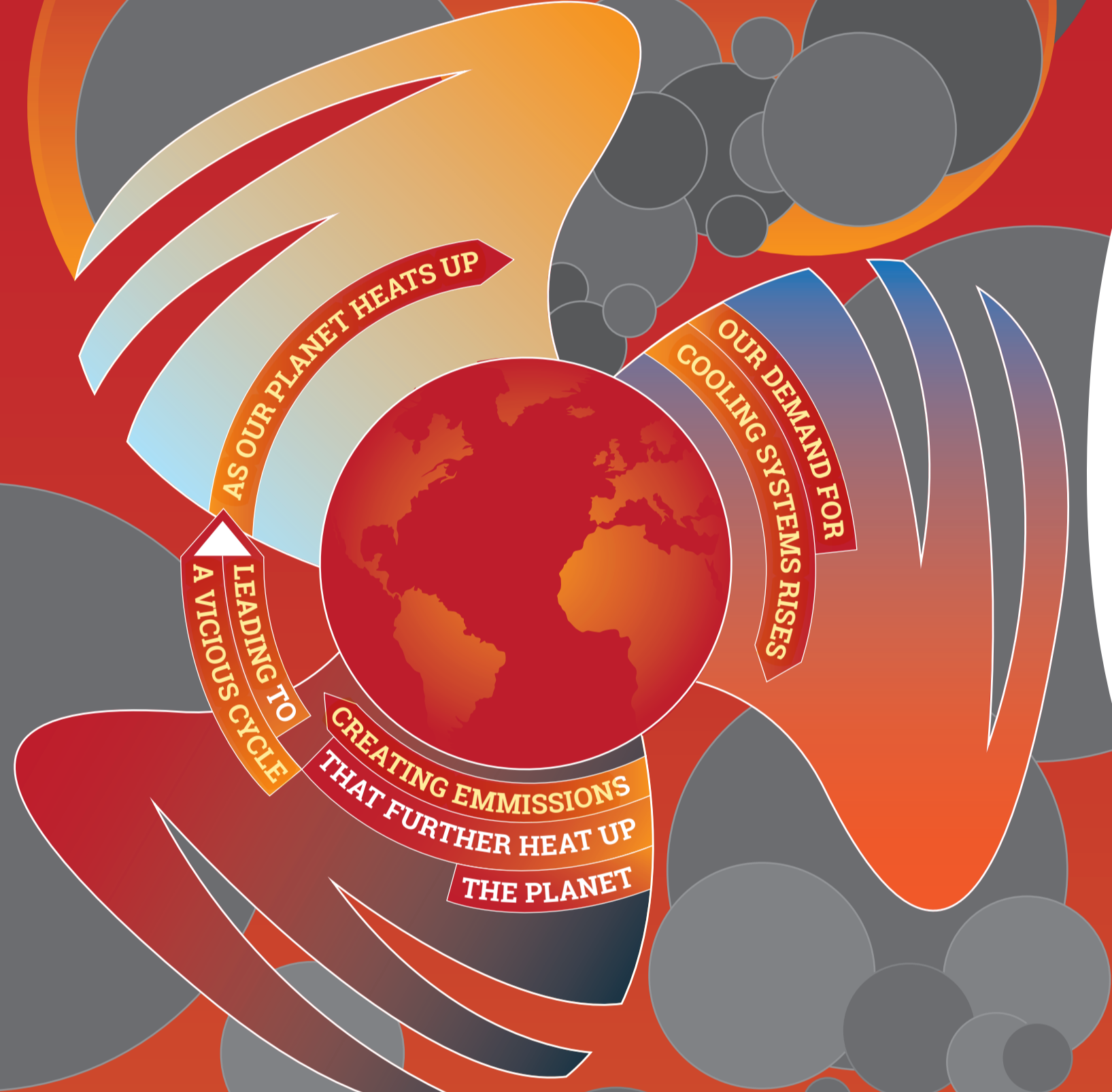
WILL CUT HFC EMISSIONS BY TWO-THIRDS by 2030

But more can be done to avoid growth in HFC usage in the next decade. **FURTHER BOLD MEASURES TO ELIMINATE HFCs CAN HELP PROTECT US FROM THE DEVASTATING IMPACTS OF CLIMATE CHANGE**

EARLY AND BOLD ACTION ON HFCs CAN PROTECT SOCIETY FROM CLIMATE CATASTROPHE



THE GROWING PROBLEM OF HFCs



IMAGINE THIS!
The global stock of air-conditioners is set to **TRIPLE** by 2050

10 NEW AIR-CONDITIONERS WILL BE SOLD EVERY SECOND FOR THE NEXT 30 YEARS

2050: 5.6 BILLION

Avoiding HFCs in just domestic air-conditioners alone would **SAVE 5.6 GTCO₂e of emissions by 2050**

Equivalent to the annual emissions of over **1,400** coal-fired power plants.

Reducing refrigerant leakage during use and disposal of existing equipment could **AVOID 57.8 GTCO₂e of emissions by 2050**

Equivalent to **1.3 times** the world's current annual emissions

CLEANING UP COOLING

AVOID

cooling where possible through better building and city design and behaviour change.

SHIFT

to cooling systems that don't use refrigerants or fossil fuel derived electricity



IMPROVE existing cooling technologies for highest energy efficiency and natural refrigerant uptake



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