

## Upscaling sustainable cooling

# Our holistic approach

### Background:

Rising temperatures lead to higher cooling demand and with it, higher indirect greenhouse gas emissions from electricity consumption as well as direct emissions from leakages of refrigerants with high global warming potential. More cooling begets more warming. The cooling challenge is to break this vicious cycle.

In the Middle East and North Africa (MENA) region, cooling represents over half of energy consumption in air conditioning-equipped homes. By 2040, energy demand is projected to increase by 50% in the region.

### Duration:

December 2020 - January 2027

### Team:

Guidehouse, Öko-Recherche, Frankfurt School, United Nations Development Programme, Integrated Development Group, Lebanese Center for Energy Conservation, Istanbul Aydın University, Institut für Luft- und Kältetechnik gGmbH, Regional Center for Renewable Energy and Energy Efficiency, Royal Scientific Society

### Client:

Supported by:



Federal Ministry  
for the Environment, Nature Conservation,  
Nuclear Safety and Consumer Protection

based on a decision of  
the German Bundestag

## Themes

### Policy and regulation

Support implementation of Paris Agreement and Kigali Amendment objectives

### Technology and markets

Showcase the benefits of cooling solutions with natural refrigerants

### Finance and business models

Develop and build upon financial models that boost sustainable cooling and improve access to finance

## Stakeholder dialogue

## Capacity building

## Knowledge dissemination

## Impact

Reduced cooling demand

Increased technical knowledge

Replacement of inefficient equipment

Accelerated phase-down of HFC

## Bridging worlds

- Natural refrigerants
- Energy efficiency
- Renewable energy



Sustainable cooling

- Ozone protection
- Climate change mitigation

## Action hubs

Egypt

Jordan

Lebanon

Turkey



Commercial air conditioning and refrigeration

Cross-segmental focus



Residential air conditioning

## Programme goals:

- Upscale the deployment of sustainable cooling technologies in markets of the MENA region and Turkey
- Promote accelerated technological change and early implementation of the Kigali Amendment to the Montreal Protocol and the Paris Agreement