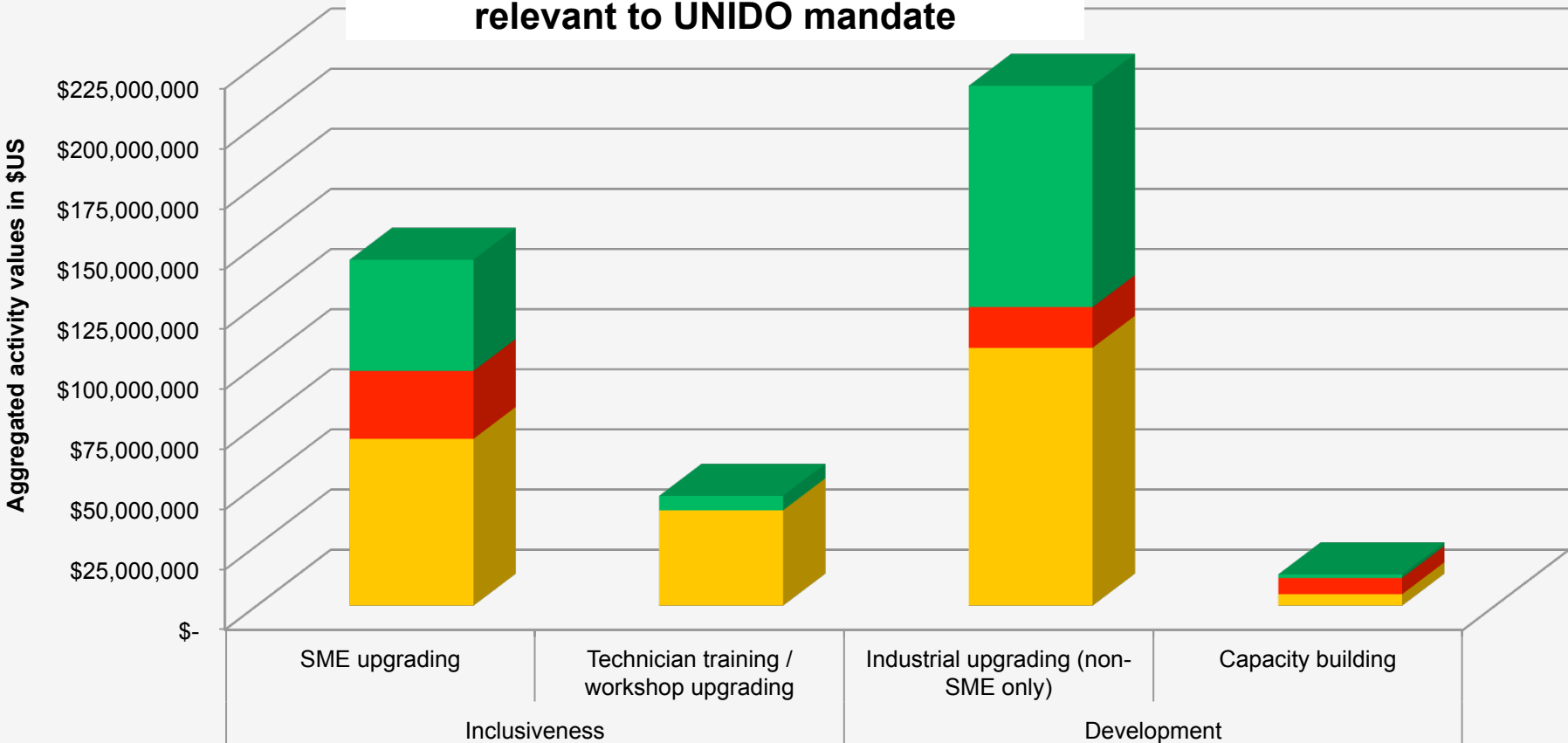




22 April 2015 in Bangkok, Thailand

*UNIDO Phasing-in Naturals*  
*Stephan Sicars, Director*  
*Environment Branch*

**UNIDO Montreal Protocol / MLF activities  
 relevant to UNIDO mandate**



Notes: Analysis based on a sample of 190 Multilateral Fund (MLF) supported projects representing the larger projects from a total project portfolio of 1,008 MLF projects; the sample represents 66 per cent of the MLF funds received

## **Traditional MLF projects:**

- Factory conversions;
- Service sector interventions; and
- Capacity building.

<b>MLF "Traffic light"</b>	
High-GWP HFC's (R-404A, R-407C, R-410)	
Medium/high-GWP drop-in blends	
HFC-32	
Low-GWP HFC/HFO blends	
R-744, R-717, R-718	
HC's	

## **Funds mobilization initiative:**

- Pilot countries: Viet Nam and The Gambia
- The servicing sector has been identified as one of the most critical in terms of sustainability, diffusion and dimension
- UNIDO focused on finding a mechanism for promoting the conversion of existing installations with low-GWP and energy efficient technologies

## **Funds mobilization initiative:**

- Main funding source: GEF
- Co-financing from partners was identified (governments, beneficiaries, UNIDO but also technology providers, local development banks)
- The projects consist of three main components
  - Policy and regulatory support;
  - Technology transfer/Technical assistance; and
  - Awareness raising

## **Vietnam:**

- Goal: To introduce alternative refrigerant systems to the Vietnamese market and to demonstrate their effectiveness to policy-makers and to facility owners and operators
- Expected Outcome: Technology with low GWP (hydrocarbon system) is demonstrated, replicated and deployed

## **Vietnam:**

- The mechanisms include:
  - Pilot facility conversions
  - Financial scheme for facility owners to convert their facilities to the new technology
  - Creation of a local knowledge based on alternative refrigerants, including training and capacity building



## **The Gambia:**

- Goal: To pilot a technology transfer mechanism through the establishment and operation of the technical support mechanism, while introducing innovative technologies
- Expected Outcome: Technical and financial support on replacement refrigerants, and reducing greenhouse gas emissions and operational costs, is ensured

## **The Gambia:**

- The technology focus is on energy efficiency improvements (reduction of ODS leakage and reduction of contaminated refrigerants) and the introduction of two types of demonstration systems – one using hydrocarbon refrigerant for retrofits and a second full-scale CO<sub>2</sub> subcritical – to be piloted in training environment.

## **CCAC tech demo:**

- Retail sector in warm ambient climate (Jordan);
- Replace HCFC-22 based supermarket system (app. 75/25 kW) with subcritical CO<sub>2</sub>;
- Verify energy savings/climate benefit (expected app. 70 tCO<sub>2eq</sub> annually); and
- National/regional awareness.

## **MLF tech demo window:**

- Several tech demo's with natural refrigerants in both manufacturing and end-user sectors;
- Capacity building / barrier identification for natural refrigerants;

## **HPMP stage II's:**

- Innovative approaches to introduce low-GWP and natural refrigerants in end-user sectors.



n e t w o r k

**natural refrigerants**

22 April 2015 in Bangkok, Thailand

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Thank you very much!