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UNIDO – Turkey Experience in addressing F-gases Control

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UNITED NATIONS
INDUSTRIAL DEVELOPMENT ORGANIZATION



The mission of the United Nations Industrial Development Organization (UNIDO), as described in the Lima Declaration adopted by the UNIDO General Conference in 2013, is to promote and accelerate inclusive and sustainable industrial development (ISID) in its Member States, for poverty reduction, inclusive globalization and environmental sustainability

The relevance of ISID, as an integrated approach to all three pillars of sustainable development is recognized by the 2030 Agenda for Sustainable Development and the related Sustainable Development Goals (SDGs), which will frame United Nations and country efforts towards sustainable development in the next ten years.

UNIDO's mandate, fully recognized in SDG9, calls to "Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation". The relevance of ISID, however, applies in greater or lesser extent to all SDGs

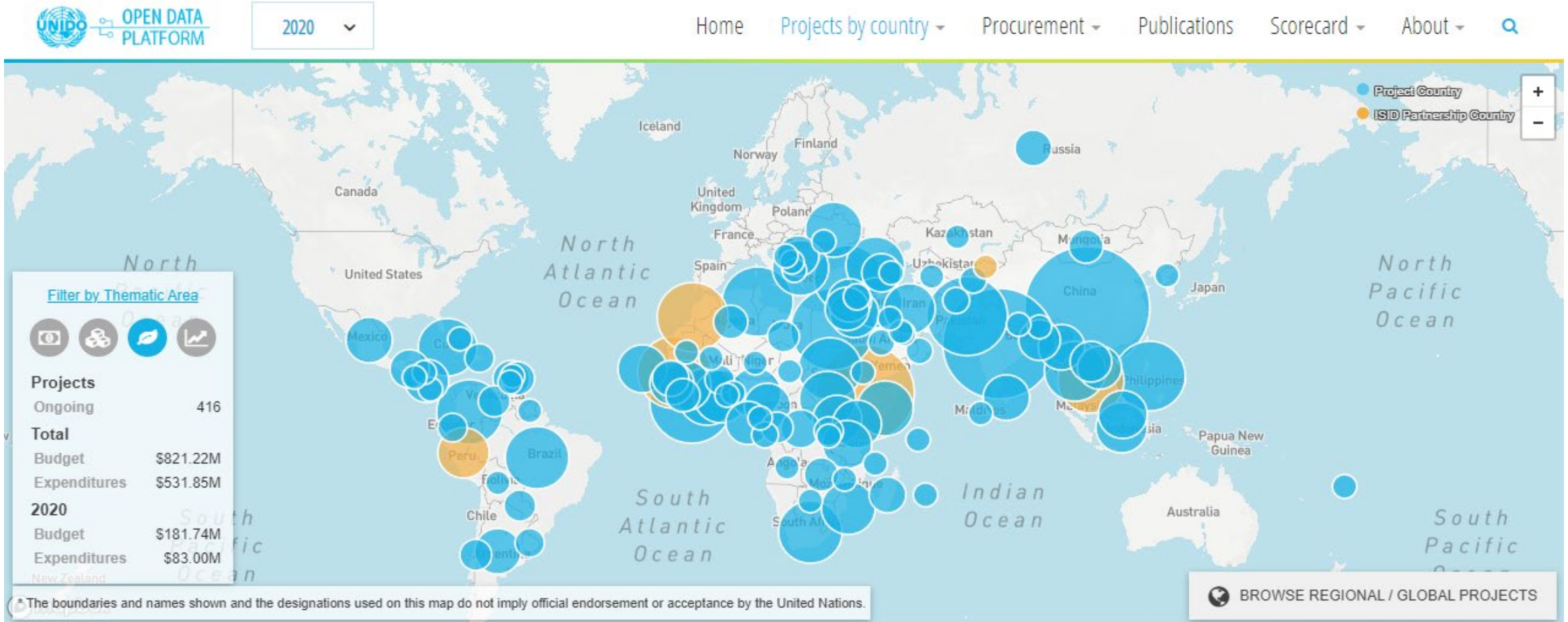
The UNIDO Organization's programmatic focus is structured in four strategic priorities:

- **Creating shared prosperity**
- **Advancing economic competitiveness**
- **Safeguarding the environment**
- **Strengthening knowledge and institutions**

Each of these programmatic fields of activity contains a number of individual programmes, which are implemented in a holistic manner to achieve effective outcomes and impacts through UNIDO's four enabling functions: (i) technical cooperation; (ii) analytical and research functions and policy advisory services; (iii) normative functions and standards and quality-related activities; and (iv) convening and partnerships for knowledge transfer, networking and industrial cooperation.

UNIDO Environmet Portfolio

<https://open.unido.org/>



Ongoing Projects	Total Budget	Total Expenditures	2020 Budget	2020 Expenditures
678	\$1323.47M	\$799.90M	\$302.23M	\$138.47M

Among other MEAs, UNIDO plans, develops and implements **national and sector-wide ozone-depleting substances (ODS) phase-out plans in developing countries** to ensure their compliance with the Montreal Protocol. Since 1992, UNIDO has helped in the phasing out of more than one-third of ozone-depleting substances in the developing world.

UNIDO works to encourage the adoption of sustainable industrial solutions by converting and upgrading production lines of companies of all sizes. **Interventions target particularly the foam, refrigeration, air conditioning, aerosol, solvent and healthcare sectors, as well as fire protection and agro-industry.** In all areas, the introduction of new ozone-friendly technology and equipment is coupled with training on technology use and safety.

In line with its holistic approach to tackling ODS phase-out, UNIDO **further supports governmental institutions with the strengthening of regulatory frameworks and the monitoring of ODS consumption and recently, HFCs controlled by the Kigali Amendment.**

UNIDO has completed over 1,340 Montreal Protocol projects through the Multilateral Fund, the Global Environment Facility (GEF) and through bilateral contributions. Currently, it is implementing hydrochlorofluorocarbons (HCFC) phase-out management plans in 70 countries.

Chemicals controlled substances under the Montreal Protocol (like CFCs, halons, HCFCs, CTC, methyl bromide) collectively referred as ODS, most of them are very potent greenhouse gases.

In addition, HFCs were listed under the Kigali Amendment of the Montreal Protocol
UNIDO is supporting a large number of countries to achieve this goal.

One example of UNIDO's interventions leading to climate impact, **are projects focusing on the refrigeration servicing sector**. These projects **include introduction to and training in good service practices, as well as the provision of necessary equipment to reduce refrigerant leakages**. Such projects directly reduce emissions of gasses that both deplete the ozone layer and contribute to climate change.

Additionally, improved service methods have a positive impact on energy consumption in sectors that usually account for substantial energy consumption.

As a result of such activities, UNIDO is creating a significant climate impact, in terms of use reduction, through activities under the Montreal Protocol. The greenhouse-gas emissions reduction achieved is approximately 340 million tonnes of CO₂-eq, using 1990 as a baseline. This is equivalent to the EU-15's target for the period 2008-2012, and also equivalent to the combined target of Germany, France and the United Kingdom for 2020.

MLF funded projects in Turkey with impact on the HFCs future phase-down commitments (1)

1. HCFCs Phase-Out Management Plan of Turkey (UNIDO – UNEP - 2012)

- Approved in 2012 by the 68th Meeting of the Executive Committee
- The Government of Turkey committed to reduce the consumption of HCFCs consumption by 86.4 % per cent of the calculated baseline by the year 2017 and 100 % by 2025
- (current achieved consumption phase-out in 2019 reached 98% of the baseline, with a servicing tail in refrigeration servicing sector)

2. ODS Alternatives Survey in Turkey (UNIDO – 2014 - 2016)

Approved by the 80 ExCom of the Multilateral Fund

3 . Enabling Activities for Kigali Amendment Project (UNIDO)

- Approved by the 80 ExCom in November 2017

With the objective to support ratification of the Kigali Amendment to the Montreal Protocol and initiate early implementation actions towards HFCs control

MLF funded projects with impact on the HFCs future phase-down commitments (2)

Two areas of high priority intervention were included within the HPMP Stage I Project of Turkey in 2011:

- To complete HCFCs consumption phase-out in foam sector (SH Manufacturers and their downstream users) – *considering zero GWP alternatives (leapfrogging HFCs uses where possible)*
- To address the increasing trend of the HCFC-22 consumption in the refrigeration servicing sector; including elements of the HFCs control in synergy with HCFCs reduction programme:
 - Introduction of EU F-Gas Regulation elements within the legislative system (with applicability to both HCFCs and HFCs control)
 - Demonstration component in RAC sector to raise awareness and promote low GWP refrigerants (including several pilot conversions to 0 GWP alternatives and considering the energy efficiency benefits for each of the study cases)

Synergy concept and benefits

Synchronizing the F-Gases EU funded project with the HPMPs activities in field created premises for enhanced impact for both projects

- In developing the F-Gases regulatory framework of Turkey, the experience accumulated during the development and enforcement of the HCFCs control (HPMP project) was beneficial for understanding the challenges and the barriers of HFCs control
- Turkey EU funded F Gases project main outcome, to complete HFCs regulatory framework was enhanced by the early interventions for low GWP alternatives introduced during the HCFCs phase-out
- The synergy creates the momentum for achieving compliance with Kigali commitments

National coordination

Linking the EU funded F-Gases in Turkey project interventions with the MLF funded Enabling Activities Project

- addressing at an early stage the HFCs control (initially as priority in Turkey for accessing the EU market) was beneficial towards the ratification process for the Kigali Amendment (currently under consideration by the Parliament)
- The activities of the Kigali Enabling Activities Project (the ratification) were strengthening the legal base for the licensing and quota system allocation for HFCs

The ODS alternatives survey Project conducted with MLF funding in the period 2014 – 2016, and the replication of the HFCs data collection process under the Enabling activities project, addressing the HFCs consumption in 2017 and 2018, facilitated the market consumption forecast and potential trends.

Setting up field cooperation

- National Ozone Unit / MoEU Turkey played crucial role
- Teaming-up in field on the projects activities execution (direct cooperation between the experts and executing teams)
- organization of the linked activities back-to-back (e.g. F-Gas regulatory consultative workshop back to back with legislative consultations on Kigali Amendment)
- Sharing information for avoiding overlaps and
- Aligning / linking projects annual work-plans
- Involving local technical expertise in relevant events/workshops/ consultations of both projects

Low GWP pilot conversions component of the HPMP Project

The HPMP Stage I demonstration component addressed a series of activities in partnership with SOSIAD Turkey (completed until December 2019)

- **National awareness campaign on R-22** phase out and related bans, national dissemination activities on alternatives,
- **Demonstration Project - CO₂/NH₃ cold room cascade system** conversion.
- **R-448A/R290 conversion of a discount supermarket** from HCFC-22.
- **R-123 chiller conversion to R-1233zd**

<http://www.unido.sosiad.org.tr/en/>

Low GWP pilot conversions demonstrations in Turkey (2018 – 2019)

Demonstration Site	Reason for Selection	Type of System	End-User
Izmir	HVACR manufacturers are very active in this region. It is an appropriate target group for dissemination and awareness raising.	CO₂/NH₃ cold room cascade system conversion.	UNILEVER/Algida Ice Cream Plant, Izmir
Istanbul (3 discount supermarkets)	International/national food retail sector is very common in Istanbul. Corporate headquarters and end users are located here and easy to reach.	R-448A/R-452A/R290 conversion of a discount supermarket with HCFC-22.	Sariyer Market Ferahevler, Sariyer Market Etiler, Cagri Market, Fikirtepe (Istanbul)
Ankara	State-owned stakeholders are the target audience. Therefore, one of the important pillars of dissemination and awareness.	R-123 chiller conversion to R-1233zd	ETI Soda, Ankara Plant

Q&A

Thank you for your attention!

Name	Rodica Ella Ivan
Address	UNIDO HQ Vienna
Postal Code, Country	1400 Vienna Austria
Phone:	00 431 26026 5085
e-mail:	R.Ivan@unido.org