

United Nations Industrial Development Organisation (UNIDO) Regional Demonstration Project

Title:	Safe handling of low-Global Warming Potential (GWP) flammable refrigerants
Beneficiaries:	Bahamas, Grenada, St. Lucia, St. Vincent and the Grenadines and Suriname
Project Duration:	18months
Budget:	US\$220,000.00
Implementing Agency:	UNIDO

OVERVIEW

The phase-out of Hydrochlorofluorocarbons (HCFCs), specifically in the refrigeration and air-conditioning sector, has brought about a broader discussion on suitable long-term alternatives. Readily available refrigerant alternatives, which are hydrofluorocarbons (HFCs) e.g. R410A and R407C have high global warming potentials (GWPs), contributing to global warming. The refrigeration and air-conditioning manufacturing sectors worldwide, are thus gearing towards the use of low-GWP alternatives, such as hydrocarbons (HCs) and novel refrigerant formulations of *Hydrofluoroolefin* (HFO) and HFC blends, which are designed to have short atmospheric lifetimes. Refrigeration service technicians in countries with large service sectors need to be well trained and equipped to cope with the installation and maintenance demands of next generation appliances. HCs, as well as HFOs, have zero Ozone depleting potential (ODP) and low-GWP properties; however, both refrigerant groups are flammable. Countries in the Latin-American and Caribbean region (LAC) are gradually beginning to take up hydrocarbons as an alternative to HCFCs in air-conditioning although few technicians are trained to handle the alternatives effectively. It is anticipated that as old installations near decommissioning, more end-users will opt for hydrocarbon-based appliances. However, specialized training for technicians on flammability needs to be done to ensure that only well-trained technicians service hydrocarbon-based equipment. Hence it is important to increase the know-how and confidence of technicians with regard to using flammable low-GWP refrigerants when installing new units or servicing old units.

OBJECTIVES

In order to facilitate the introduction of low-GWP refrigerants in the servicing sector, this demonstration project aims to:

- (i) Enhance the expertise of technicians and train specialized trainers,
- (ii) Upgrade the training curricula at vocational centers,
- (iii) Augment the equipment at the regional training center and
- (iv) Expose stakeholders to the latest HC-based equipment and components on the market.

PROJECT STRATEGY

The project will achieve its objectives through activities implemented at regional and country-levels with results replicated in the respective HPMPs of the countries.

Technicians who are already adequately trained in refrigeration and air-conditioning servicing practices will be targeted to ensure a high level of expertise in handling flammable refrigerants is attained after training. To ensure continuity of the specialized training, the curricula of the training programmes will be upgraded during the workshop to reflect best practices in handling flammable refrigerants. To benefit from their expertise in the area of hydrocarbons, UNIDO will seek input from GIZ in the preparation of the training workshop and its curriculum.