

Bassam Elassaad, P.Eng.

International Expert

Executive Summary

International Expert with proven track record in the Refrigeration, Air-conditioning, and Heat Pump (RACHP) sector related to refrigeration, alternative refrigerants, energy efficiency, and the Montreal Protocol. Owner and manager of Elassaad & Associates consultancy.

Accomplishments

With over 45 years' experience in the field of Refrigeration, Air Conditioning, and Heat Pump (RACHP) industry, I have concentrated for the past 14 years on programs and initiatives related to the environment and the Montreal Protocol.

With the Kigali amendment coming into effect in 2019, I have been a consultant to UNIDO for several countries on the design and the implementation of enabling activities. I have prepared for UNIDO in 2022 the first progressive plan for the reduction of HFCs, known as the Kigali Implementation Plan (KIP), and in 2023 the first plan to be approved by the Executive Committee.

For both the UNEP and UNIDO, I have consulted on the preparation of HPMPs, the preparation of investment projects, and on designing and implementing capacity building programs for training of technicians and Customs officers. I have conducted verification of ODS consumption over a number of years and worked on the preparation of Stage-II and tranche requests of the HPMPs of several countries. I coordinated research projects to test and optimize air conditioning prototypes working with low-GWP refrigerants when operating in high ambient temperature countries.

For the World Bank, lead consultant on a study on sustainable refrigeration in the fisheries sector in Madagascar and Comoros Islands using low-GWP refrigerants and renewable energy. I was also lead consultant on a study on fisheries value chain energy efficiency analysis for climate friendly cooling and refrigeration systems in Pakistan.

For the UNDP, I have consulted on minimum energy performance standards and labelling of efficient air conditioning appliances in Bahrain.

For GIZ, lead consultant on providing solutions for the collection and end-of-life (EOL) disposal of ODS substances in equipment in Grenada.

I have spent the first years of my career managing the technical aspects of systems and products. I speak three languages (English, French, and Arabic) fluently, have multiple skills and have lived and worked with stakeholders on four continents managing cultural and professional diversity. I have excellent communications skills, both written and verbal, which allows me to present different technical and environmental concepts at meetings and conferences as well as defending those concepts in discussions and reports. I have cooperated on the writing of articles and technical papers which were presented at conferences and symposia.

I am a member of Refrigeration Technical Options Committee (RTOC) of the Technical and Economic Assessment Panel (TEAP) and Lead Author on the Servicing and High Ambient Temperature chapter of the committee's assessment report. I was a member of Task Forces and Working Groups for Decisions XXVI/9 and XXVII/4 on alternatives to ozone depleting substances; Decisions XXXI/1 and XXXIV/2 on Replenishment; Decisions XXIX/10, XXX/5, XXXI/7, and XXXIII/5, and XXXIV/3 on energy efficiency; and Decision XXXV/11 on Life Cycle Refrigerant management. I contributed to TEAP progress reports in 2021 addendum on vaccines, in 2022 on the update of on alternatives, and in 2024 on paragraph 5 of Decision XXVIII/2. I have also contributed to reports by the UN Scientific Assessment Panel on the Kigali Amendment, and to IPCC on emissions.

I have co-organized and participated in several seminars, workshops symposia, and study-tours on refrigeration, low-GWP alternative refrigerants, and the challenges facing high ambient temperature countries. I have reviewed several publications and am serving as a volunteer with the team building model energy efficiency regulations for United for Energy (U4E).

I am an engineer by training with a master's degree in mechanical engineering and a member of the Professional Engineers Society of Ontario, Canada. I am a member of the Royal Engineers Society of Belgium, and a Life Member of ASHRAE (American Society of Heating, Refrigerating and Air Conditioning Engineers). I have been involved in discussions and committees related to refrigerants for the past several years. I participated, as president of an ASHRAE local Middle East chapter, in the signing in 2005 of a coordination agreement with UNEP West Asia which led to a global agreement that was recently signed between the two organizations.

Education & Training

- Master of Engineering (ME) - Major Mechanical
- Six Sigma® Green Belt certified
- *Implementing Re-engineering Strategy* - Dr Michael Hammer. Boston, MA
- *Lateral Thinking* - Dr. Edward DeBono. Milan, Italy
- *Financial Management for Non-Financial Managers* - Management Center. Nice, France
- *Managing People in Projects* – Ingersoll Rand. Galway, Ireland
- *Graduate Course in air conditioning Systems and Design* – Trane. Lacrosse, WI

Associations

- Professional Engineer (P. Eng) by the Professional Engineers of Ontario (PEO) – Canada;
- Member of the Royal Engineers Association of Belgium (ATIC);
- Refrigeration Technical Options Committee (RTOC): Member, Lead Author;
- Technical and Economic Assessment Panel (TEAP), Task Force member;
- International Panel for Climate Change (IPCC): Contributing Author;
- American Society of Heating, Refrigerating, and Air Conditioning Engineers (ASHRAE): Past Regional Chair for Europe, Founding President - Emirates Falcon Chapter in 2003;
- Member of ASHRAE and UN Environment Joint Coordination Team – 2005;
- Emirates Green Building Council (EGBC): Founding member – 2006;
- European Partnership for Energy & the Environment (EPEE): Communications workgroup vice chairman 2006 – 2010, and Market Surveillance workgroup.

Current Focus – International Expert

- Preparation of the first overarching strategy for the HFC phase down plan, KIP, including a detailed plan for stage I that was presented and the first KIP that was approved. I am continuing to work on other KIPs.
- Consulting on the Kigali Enabling Activities for several countries to facilitate and support the ratification of the Kigali Amendment.
- Research, preparation and evaluation of strategies, projects and programs for the HCFC Phase-out Management Plans (HPMP):
 - Preparation of complete HPMP plans;
 - Preparation of Stage and Tranche requests;
 - Preparation of project documents;
 - Training Customs officers on refrigerant identification and illegal trade;
 - Conducted verification audits of HCFC consumption in several countries.
- Analysis on ODS inventory of banks in EOL equipment and proposal of technical solutions for the collection and disposal of these banks.
- Study on Regional Center of Excellence including recommendations for tools, equipment, courses offered, and financial structure of the center. Center is up and running.
- Lead Consultant on a World Bank comprehensive study on the fish value chain including fish product cold chain logistics profile development and analysis of promoting sustainable fish products, market and business opportunities analysis including technology gap analysis, and development of guidelines and action plans for sustainable fish products.
- A comprehensive study for UNIDO on the challenges of the fisheries sector proposing solutions using new and sustainable technologies for the preservation of fish and marine resources covering several locations in two countries.
- Authored a manual in English and French on refrigerant alternatives for the fisheries sector covering both marine and land-based refrigerated storage. Manual used to conduct training in several countries.
- Project Administrator: Promoting Low-GWP Refrigerants for the Air Conditioning Sectors in High Ambient Countries (PRAHA-I and PRAHA-II) and Promotion of Low-GWP Refrigerants for the Air conditioning Industry in Egypt (EGYPRA): Projects for testing specially built prototypes using low-GWP refrigerant alternatives at several temperatures; Associated research studies on energy efficiency of residential air conditioning units, district cooling prospects in the high ambient temperature region; Optimization of prototypes, and risk assessment at HAT conditions.
- Coordinating for UNEP an EU-funded project in six West African countries to maximize climate benefits through technology transfer projects in refrigeration, providing technical training, and building country roadmaps to adopt low GWP and non-ozone depleting alternatives.
- Evaluating and checking Non-ODS substance surveys and writing of complete reports in preparation for the Kigali agreement.
- Study and preparation of an investment project for the conversion of an air conditioning plant from HCFC-22 to a lower GWP refrigerant.
- Project study on the conversion of industrial refrigeration cold stores to natural refrigerants. Presentation of project to mobilize funds.
- Market study: evolution of natural refrigerants in the refrigeration industry in Europe.