Report

on

Training Workshops for Enforcement Officers from the National Environment and Planning Agency (NEPA), Jamaica Customs Agency (JCA), the Ministry of Health and Wellness (MH&W) and Customs Brokers on Ozone Depleting Substances (ODS) and Refrigerants

The Trainings were conducted on February 24, 2023

by

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Presented to:
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National Environment and Planning Agency (NEPA)

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Contents

Nomenclature

A/C	Air Conditioning
Article 5	Countries operating under Article 5 of the Montreal Protocol (i.e. developing countries)
CFC	Chlorofluorocarbon
GHG	Greenhouse gas
GWP	Global Warming Potential
HBFC	Bromodifluoromethane
HC	Hydrocarbons
HCFC	Hydrochlorofluorocarbon
HFC	Hydrofluorocarbon
HFO	Hydrofluoroolefin
HPMP	Hydrochlorofluorocarbon Phase-out Management Plan
JARVA	Jamaica Air Conditioning Refrigeration and Ventilation Association
JCA	Jamaica Customs Agency
MLF	Multilateral Fund: A fund established by the Parties to the Montreal Protocol that provides developing countries with the technical and financial assistance needed to comply with the Protocol.
MoH&W	Ministry of Health and Wellness
NEPA	National Environment and Planning Agency
NOU	National Ozone Unit
ODP	Ozone Depleting Potential
ODS	Ozone Depleting Substances
ODSS	Ozone Depleting Substance Substitute
R & R	Recovery and Recycling
R-12	Refrigerant (Freon) 12
R-22	Refrigerant (Freon) 22

R-290	Propane
R-600	Butane
R-600a	Iso-Butane
R-1270	Propylene
R-717	Ammonia
R-744	Carbon Dioxide
RAC	Refrigeration and Air Conditioning
RMP	Refrigerant Management Plan
TPMP	Terminal Phase-out Management Plan
UNEP	United Nations Environment Programme
UNDP	United Nations Development Programme

Background

The Montreal Protocol (MP) is an international treaty designed to protect the ozone layer by phasing out the production and consumption of a number of substances that are believed to be responsible for the depletion of the ozone layer. The treaty is structured around several groups of halogenated hydrocarbons that have been shown to play a significant role in ozone depletion. The protocol also protects global climate since these ozone depleting substances are also potential greenhouse gases. These substances include Chlorofluorocarbons (CFCs), Halons, Methyl Bromide, Carbon Tetrachloride, Methyl Chloroform, and Hydro-Chlorofluorocarbons (HCFCs).

Under obligation to the Montreal Protocol on Substances that Deplete the Ozone Layer, Jamaica, phased out of the use and consumption of CFCs since January 1, 2006, under the Terminal Phase-out Management Plan, (TPMP). Since the phasing out of CFCs, the industry has undergone rapid changes in the type and quantity of refrigerants and other chemical substances imported into the country as alternatives to CFCs or their replacement. One such alternative to CFCs is HCFCs. HCFCs have lower ozone depleting and global warming potentials. In compliance with the decision of the Executive Committee, ExCom 53/37 and ExCom 54/39, parties of the Protocol agreed to set the year 2013 as the freeze date for the consumption and production of HCFCs at the average 2009/2010 level. They also agreed to start a planned systematic reduction in consumption and production by 2015, with a complete phase-out by January 1, 2040. To achieve this target, Jamaica has developed a Hydro-Chlorofluorocarbon Phase-out Management Plan (HPMP). Under the HPMP a Quota and Licensing System was established to guide the phase-out process and to guarantee that Jamaica meets all the phase-out targets set out. The quota system identifies fifteen (15) refrigerant importers and establishes the maximum quantity of refrigerants they are allowed to import annually to achieve the phase-out targets.

Another set of chemicals used as alternatives to CFCs and HCFCs are Hydrofluorocarbons (HFCs), because they have zero (0) impact on the ozone layer. However, HFCs are

powerful greenhouse gases that contribute to global warming which influence climate change. Therefore, the Kigali Amendment added HFCs to the list of chemicals that parties promise to phase-down.

The Kigali Amendment is an amendment to the Montreal Protocol that was adopted by the 28th Meeting of Parties to the Montreal Protocol (MOP28) on 15 October 2016 in Kigali, Rwanda. The Amendment entered into force on 1st January 2019 after being ratified by 20 parties. Currently, the amendment is signed by 120 countries. Jamaica is not yet a party to the Kigali Amendment.

Introduction

In fulfilment of Jamaica's obligations under the Vienna Convention for the Protection of the Ozone Layer and the Montreal Protocol on Substances that Deplete the Ozone Layer, a number of strategies were implemented. One strategy includes training of enforcement officers and other relevant personnel to ensure compliance with the HPMP in light of the fact that they are responsible for the proper functioning of the quota and licensing system and the enforcement of restrictions and prohibitions under Ministerial Orders. In keeping with the rapid changes taking place in the industry, it has become necessary to train and retrain these officers and personnel on a regular basis to identify and monitor the type and quantity of refrigerants imported into the country on a continuous basis. The last sets of training conducted for enforcement officers and other relevant personnels were in June 2022, using the online modality.

Three (3) two-day workshops were conducted in June 2022 and funding provided through the United Nations Environment Programme (UNEP). The first workshop was developed for officers from the MoH&W and was delivered on June 9 and 10, 2022. The second workshop was developed for the Custom Officers from the JCA and was delivered on June 16 and 17, 2022. The final workshop was developed for members of the Jamaica Society of Customs Brokers, and the Custom Brokers and Freight Forwarders Association of Jamaica and was delivered on June 23 and 24, 2022. All workshops were delivered online using the Zoom Platform.

Based on the feedback from the June 2022 workshops, requests were made for a follow up face to face workshop for individuals who were unable to attend the online workshops. As a result,

this workshop was planned and executed on February 24, 2023. NEPA was responsible for organizing the workshop and issuing invitations to the organizations and individuals to attend the workshops. Sixteen (16) participants including the Manager of the National Ozone Unit (NOU) and the Project Assistant, NOU attended the workshop.

Preparing the workshops material was the responsibility of the consultant engaged for the delivery of the training. Copies of the presentations, presentation guide of the workshop were prepared and emailed to the participants prior to the start of training. After the workshop, all participants were asked to complete a workshop evaluation form. Copies of the presentation guide and workshop evaluation form are presented in the Appendixes B and C.

Methodology

After a review of the Scope of Work it was determined that the workshop should be comprised of six (6) lectures covering different areas. The areas covered were as follows:

1. Introduction to Ozone Depletion and the Montreal Protocol
2. Institutional Framework and the Role of Stakeholders
3. Introduction to the Quota System and the Trade Order
4. Preventing the Illegal Trade in ODS
5. The 2022 Harmonized System (HS) of tariffs
6. The Kigali Amendment

The presentations were prepared and submitted to the NOU for approval prior to the start of the training.

The NOU contacted the Ministry of Health and Wellness, the Jamaica Customs Agency (JCA), Jamaica Society of Customs Brokers, and the Custom Brokers and Freight Forwarders Association of Jamaica and requested for them to select participants to attend the workshop. The organizations then selected staff and members to attend the workshops. The National Environment and Planning Agency was also invited to select enforcement/environmental officers to attend the workshop.

Electronic copies of the training material were prepared and sent to the participants prior to the start of the workshop. The training material included the presentation guide, lectures and the Trade Order 2014.

The participants were also asked to evaluate the workshop and the presenter. Feedback on the workshop was necessary to assess the level of satisfaction of the participants with the presenter and the material presented. The information from the feedback would help to gauge if the objectives were achieved and give recommendations for the planning of future workshops.

Lecture 1: Introduction to the Montreal Protocol and Ozone Depletion

In the opening session, the following topics were covered:

A. Ozone layer and Ozone depleting substance (ODS)

   This area defined the Ozone layer, its composition and how halogenated hydrocarbons destroy the ozone molecule and the ozone layer.

B. The history of the Ozone hole

   It was stated that scientists discovered that the release of ozone depleting substances damaged the ozone layer. Between the 1970s and the 1980s the ozone concentration over the Antarctica diminished by up to 70 per cent of the normal concentration.

C. Ozone Depletion substances

   Ozone-depleting substances (ODS) are chemical substances, basically chlorinated, fluorinated or brominated hydrocarbons that have the potential to react with ozone molecules in the stratosphere. A few examples of these substances are:

   - Chlorofluorocarbons (CFCs)
   - Hydrochlorofluorocarbons
   - Hydrobromofluorocarbons (HBFCs)
   - Bromochloromethane
   - 1,1,1-trichloroethane (methyl chloroform)
   - Carbon tetrachloride

- Methyl bromide.

D. Uses of ODS:

- Refrigerants
- Blowing Agents
- Cleaning Solvents
- Propellants
- Sterilants
- Fumigants
- Fire Extinguishers
- Feed stock and process agents
- For laboratory and analytical purposes

ODS are released by:

- Traditional use of cleaning solvents, paints, fire extinguishing equipment and spray cans that emit ODS.
- Venting and purging during servicing of refrigeration and air-conditioning systems
- Use of methyl bromide in soil fumigation, in post-harvest pest control and for quarantine and pre-shipment applications
- Disposal of ODS-containing products and equipment such as foams and refrigerators without prior recovery of the ODS

Montreal Protocol

"The Montreal Protocol is an international treaty designed to protect the ozone layer by phasing out the production and consumption of a number of substances that are believed to be responsible for the depletion on the ozone layer".

The definition was preceded with an overview of the Montreal Protocol which outlined that the treaty was opened for signature in September 1987 and entered into force on January 1, 1989. It was established that the protocol was initially signed by 27 countries when it opened in

September 1987 and was subsequently ratified by 100 countries. It was noted that Jamaica ratified the treaty at the 1993 Vienna Convention.

It was pointed out that the treaty is structured around several groups of halogenated hydrocarbons that have been shown to play a significant role in ozone depletion:

- Chlorofluorocarbons (CFCs)
- Halons, (Halon 1211 and Halon 1301)
- Methyl Bromide
- Carbon Tetrachloride
- Methyl Chloroform
- Hydro –chlorofluorocarbons (HCFCs)

Under the topic Ozone Depletion, it was stated that the ozone layer acts as a filter to harmful UV-B radiation. The ozone layer is a fragile layer 6 to 30 miles above the surface of the earth. In the event of too much UVB radiation, the following may occur:

- Eye cataracts
- Skin cancer
- Reduction in crop yields
- Killing of basic life forms

It was noted that Australia has already recorded a 3-fold increase in non-melanoma cancers.

Lecture 2: Institutional Framework and the Role of Stakeholders

Ministry and Agencies that provide support to the Montreal Protocol:

- The Ministry of Economic Growth and Job Creation (MEGJC)
- NEPA
  - NOU
  - Environmental Management and Conservation Division
    - Pollution Prevention Branch
- Ministry of Finance and the Public Service
  - Jamaica Customs Agency
  - The Statistical Institute of Jamaica
- Ministry of Health and Wellness
  - Standards and Regulation Division
- Ministry of Industry Investment and Commerce (MIIC)
  - Trade Board Limited
  - Bureau of Standards Jamaica

    - National Compliance and Regulatory Agency (NCRA)
- Ministry of Justice
    - Attorney General
- Ministry of Education and Youth
    - Training Institutions
- Ministry of National Security
    - Police and Coast Guard
- Government Laboratory
- Jamaica Air-conditioning Refrigeration and Ventilation Association (JARVA)
- Refrigerant/Equipment Importers
- Service Agencies/ Technicians

The NOU's main responsibilities include:

- Implementation of the Institutional Strengthening Programme

- Implementation of the HCFC Phase-out Management Plan (HPMP), which often includes recovery, recycling and reclamation (3R) programmes and training programmes for refrigeration technicians and Customs Officers. HPMPs were designed as the next step after completion of the Refrigerant Management Plans (RMPs), which dealt mostly with CFC phase-out.

- Preparation of proposals for policies, strategies, laws, regulations, incentives and agreements with the private sector and other measures for national ODS phase-out

Customs Officers

- Systematic monitoring of all ports of entry into a country helps to control legal imports and to prevent illegal imports of ODSs through mislabelling or false documentation.

- Inspection of imports by dealers known to import ODSs for sale or their own use should be mandatory in order to verify compliance with regulations or Quota System

Standards and Regulation Division (SRD), MoH&W

- Responsible for issuing import permits for the importation of cosmetics and chemicals which would include ODSs based on quotas established annually by the National Ozone Unit (NEPA).

Licensing Agencies

The Trade Board Limited had responsibility for:

- WTO Agreement on Import Licensing.

- Issuing import and export licences for specific items that may have a negative impact on the environmental, social or economic conditions of the country.
- Issuing certificates of origin for Jamaican exports under various Preferential Trade Agreements.
- Ensuring that Jamaica meets its international obligations under the WTO Agreement on Rules of Origin

Bureau of Standards Jamaica

- The Bureau of Standards Jamaica may check imports to guarantee that all import standards are followed:
  - Labelling of products and equipment containing or manufactured using ozone depleting substances and/or their substitutes
  - Transportation, handling and storage of refrigerants

Jamaica Air-conditioning Refrigeration and Ventilation Association (JARVA)

- Supports the execution of programmes and projects aimed at improving servicing practices in the industry.
- They act as a lobby group on behalf of their members.
- JARVA also assists with the training of technicians.
- JARVA may be helpful in ensuring that the licensing and quota systems operate effectively.
- Their members also could play a role in public awareness raising and providing importers, exporters, service technicians and other end users with information on changes in the industry and market trends.
- May signal to the licensing authority that a black market exists for ODS

General Public

The general public is a useful ally in the effective operation of the ODS import/export licensing system.

- If members of the public are sensitized about ozone issues, they may be less likely to bring ODS-based refrigerators and air-conditioners into the country unknowingly.
- As aware consumers, the public can choose to retrofit to non-ODS alternatives and not to buy old ODS equipment.

Lecture 3: Introduction to the Quota System and the Trade Order

This lecture focused on the HPMP Quota System. The methodology of the survey conducted in 2011 to determine the 2009 – 2010 HCFC consumption pattern was discussed. At the Nineteenth Meeting of the Parties to the Montreal Protocol, it was agreed that the baseline should be developed based on the average imports for 2009/2010. Due to expected inconstancies in the data, the data was collected from three sources to guarantee accuracy.

The sources are:

- Jamaica Customs Agency
- Standards and Regulation Division (SRD)
- Importers' Records

From the results of the survey the average consumption of HCFC refrigerants and blends between 2009 and 2010, along with Jamaica's phase out target were highlighted.

The HPMP Quota System and how the Quotas were determined were outlined. Importers were instructed to provide written approval/feedback to NEPA on the proposed quotas. It was pointed out that consultations were held with importers before the Quotas were finalized.

The Trade (Montreal Protocol) (Trade in Ozone Depleting Controlled Substances) Order, 2014 was presented and the list of individuals and companies who received quota was discussed.

Table 1 ***List of companies and percent of total quota allocated***

	Name of Company	**Percentage (%) Allocation**
1	ACON Supplies Limited	0.392
2	Appliance Traders Limited	7.30
3	Arel Limited	7.35
4	B. J Hanna and Sons Limited	0.78
5	CAC 2000 Limited	5.57
6	Troy Traders Limited	18.69
7	Carlisa Enterprise Limited	1.76
8	Comfort Systems Limited	6.67
9	Donald Witter Limited	16.48
10	Geddes Refrigeration Limited	2.55
11	IGL Limited	8.38
12	Jamaica Public Service Limited	0.78
13	Modern Refrigeration Limited	10.41
14	Quality Distributors & Manufacturing Co. Ltd	6.94
15	Tropical A/C & Refrigeration Co. Limited	5.88

Jamaica has revised the phase-out target from January 1, 2040, to January 1, 2030. The quotas were revised to completely phase-out HCFCs by January 1, 2030. Therefore, the new consumption targets and the current arrangement of responsibilities were discussed.

The noticeable trends associated with the quota system include a reduction in supply and an increase in demand. This can cause:

- Stockpiling
- Prices increase
- Illegal importation
    - incorrectly labelled of cylinders
    - Incorrect colour cylinders
    - incorrectly labelled HCFC equipment (dumping)

Changes in prices were also discussed.

A copy of the 2014 Trade Order was given to all participants.

Lecture 4: Preventing the Illegal Trade in ODs

Lecture 4 looked at ways of preventing the illegal trade in ODSs.
Topics discussed included:

- Inspection
- Health and Safety
- Legal Issues
- Risk Assessment
- Corporation between agencies
- Other Chemicals being smuggled

The following questions were answered:

- "The reason for the illegal trade" and
- "What Chemicals are being smuggled?"

Answers to those questions paved the way to review the various Smuggling Schemes that are used to smuggle ODSs.

The various Screening Methods used by officers in other jurisdictions were discussed.
A proposed checklist to be used by Officers and a Customs Quick Tool for Screening ODS was discussed. A copy of the Customs Quick Tool for Screening ODS was sent to all participants.

A list of ODS producing countries was also presented.

Lecture 5: The 2022 HS Codes

The complete phase-out of chlorofluorocarbons (CFCs) as at 1st January 2006, the phasing-out of hydrochlorofluorocarbons (HCFCs) and the impending phase-down of hydrofluorocarbons (HFCs) has increased the trade in HFCs and other alternatives as replacement chemicals.

To better facilitate monitoring of trade in ODS, the Parties to the Montreal Protocol requested the World Customs Organization (WCO) to revise the Harmonized Commodity Description and Coding System, also known as the Harmonized System (HS codes) for HCFCs.

This resulted in amending Heading 29.03 of Chapter 29 with the objective of assigning specific 6-digit HS codes to the five (5) most commonly used HCFCs, and at the same time deleting individual HS codes previously assigned to CFCs.

With the Kigali Amendment adding hydrofluorocarbons (HFCs) to the substances controlled by the Protocol, it is important for customs and enforcement officers to be able to identify, monitor and control imports and exports of these substances. A disaggregation of the HS tariff code 2903.39 for HFCs and 3824.78 for mixtures containing HFCs was completed in 2018.

The HS Codes for halogen free refrigerants were also discussed.

Lecture 6: Kigali Amendment

The Kigali Amendment is an amendment to the Montreal Protocol that was adopted by the 28th Meeting of Parties to the Montreal Protocol (MOP28) on 15 October 2016 in Kigali, Rwanda. The Amendment seeks to phase down the consumption of HFCs gases to 80-85% of a baseline amount that is to be established by the late 2040s. Jamaica has ratified all the earlier amendments of the Montreal Protocol except the Kigali Amendment. In the process to ratify the Kigali Amendment, Jamaica implemented enabling activities towards the ratification.

Importation of Hydrofluorocarbons is not regulated since legislation is not yet in place to do so because Jamaica has not ratified the Kigali Amendment. Companies and individuals desirous of

importing these gases require an import license issued by the Trade Board and a permit to import for cosmetic and chemicals issued by the Standards and Regulation Branch, Pharmaceutical and Regulatory Affairs Unit with the Ministry of Health and Wellness. The phase-down schedule was discussed.

Table 2 ***HFC Phase-down Schedule***

	A5 parties (developing countries)- Group 1	**A5 parties (developing countries)- Group 2**	**Non-A5 parties (developed countries)- Group 1**
Baseline formula	Average HFC consumption for 2020 - 2022 + 65% HCFC baseline	Average HFC consumption for 2024 - 2026 + 65% HCFC baseline	Average HFC consumption for 2011 - 2013 + 15% HCFC baseline
Freeze	2024	2028	-
1st step	2029 – 10%	2032 – 10%	2019 – 10%
2nd step	2035 – 30%	2037 – 20%	2024 – 40%
3rd step	2040 – 50%	2042 – 30%	2029 – 70%
4th step	-	-	2034 – 80%
Plateau	2045 – 80%	2047 – 85%	2036 – 85%

The following topics were discussed:

- Methodology of the 2016 – 2020 Survey of HFC consumption
- Survey Result
- HFC Alternatives and their GWP by Sector
- Issues associated with HFC Alternatives
- Analysis of the survey result by sector
- Baseline Study
    - Consumption by sector
    - Projection of consumption by sector for 2021 to 2030
    - Proposed Baseline amount.
    - Importers and proposed quota allocation
- Licensing and Quota Framework to support the HFC phase-down.

- Institutional Strengthening
- Structure, function and responsibilities to support the HFC quota and licensing system

Questions asked by survey participants:

1. How can we identify what gas is used in the refrigerator or vehicle Air Conditioning system?
   Due to the current labeling standards, "JS 1: Part 29: 2015, "The Labelling of Commodities Part 29: Labelling of products and equipment containing or manufactured using ozone depleting substances and/or their substitutes", all equipment must bear a label that will indicate the type and quantity of gas they contain. The same is true for motor vehicles. In case the label is not attached or visible a refrigerant identifier can be used to determine the contents of the system.

2. How will a customer know the type of chemical/gas in equipment/appliance when purchasing for import?
   The BSJ has standards for equipment imported into the island. For refrigerators, freezers, air conditioning units, domestic, commercial or industrial the refrigerant and the quantity are written on the specification label. Copies of the specification labels were shown and where they can be located on the equipment was discussed.

3. What should the customer look for on an equipment label?
   The label would indicate the type and quantity of refrigerant used. The label would also give additional technical specifications of the unit such as the power and voltage requirements. The label would sometimes indicate the efficiency of the equipment and the annual cost to operate.

4. What is going to happen to the current stockpiles of refrigerators or vehicles operating on the phase-out gas?
   Vehicles entering Jamaica can only be six years old or later, all these vehicles would have HFC-134a, HFO-1234yf, Hydrocarbon or one of the newer alternatives. Vehicles containing HCFC refrigerants can be retrofitted to one of the available alternatives.

5. What is NWC using to chlorinate water?
   Chlorine.

6. Will it damage the Ozone layer?
   The molecular structure of Chlorine makes it denser than air, which means the chlorine released on earth will stay close to the earth surface and might never reach the stratosphere to destroy the ozone layer. Chlorine and Fluorine in some of the complex halogenated hydrocarbon molecules are lighter than air and once released close to the

surface of the earth will rise to the stratosphere where they destroy the stratospheric ozone.

7. What refrigerants are used in the electric cars?
   Most electric vehicles still use HFC-134a, a few of the later models are using HFO-1234yf.

8. Why was the Ozone Hole located over Antarctica and not anywhere else?
   The meteorological conditions in Antarctica present a more favorable condition for the gases to destroy of the Ozone Layer.

9. Is there any training provided for service technicians?
   Yes! There is a number of sponsored trainings and certification opportunities for service technicians across Jamaica. The content of the training will include safety considerations for new and emerging technologies.

10. Does Jamaica have other agencies like yours that we can reach out to for information on refrigerants etc.?
    Whenever you have questions and concerns you should contact the National Ozone Unit (NOU). They work with a group of consultants who they can recommend to answer your questions. In addition, if you see an incident of malpractice in the sector, you should report the incident to the NOU.

11. Is there room to speed up the phase-out schedule?
    Originally when the Hydrochlorofluorocarbon Phase-out Management Plan (HPMP) was developed, the phase-out date for HCFCs was January 1, 2040. Because of the progress Jamaica has made under the HPMP, the phase-out schedule was accelerated to January 1, 2030 which will give us enough time to do what is necessary to comply with all the phase-out requirements. Notwithstanding the accelerated phase-out schedule, stakeholders are concerned about two issues:
    - Starting a phase-down in the middle of a phase-out
    - The availability of viable alternatives as it relates to price and availability.

12. Don't you think that use car dealers are vital to getting the information out?
    Yes! Used Car Dealers are vital to getting the information to their client. However, there has never been a training that targets the used car dealers specifically. I will recommend that they be a part of future training.

13. How do we know when a cylinder is empty?
    The empty cylinder will be lighter that the full cylinder. If a pressure gauge is attached, the gauge will indicate zero or a low pressure.

14. Why is there no information on quarantine of personnel or goods? Which fall under Ministry of Health and Ministry of Security.
    The information exists but is not published.

15. So, would you say the HCs and HFOs are the best substitutes since they have the lowest GWP?
    HCs and HFOs are good alternatives to HFCs because they have zero ODP and low GWP. However, they are not the only alternatives; there are other natural refrigerants and chemicals that have low or no ODP and GWP. Some of these chemicals include Water, Carbon Dioxide, Ammonia and Methyl Formate.

16. How does one measure the ozone and how does one see it?
    Ozone is measured as Dobson units. A Dobson unit of gas is equal to a layer of gas, with a thickness of one-hundredth of a millimeter at the surface of the Earth. The ozone in the atmosphere should measure about 300 Dobson units. Ozone has a light blue colour.

17. What does Ozone smell like?
    Ozone is a light blue gas with a distinctively pungent smell. Ozone's odour is similar to chlorine gas, and detectable after an electrical fire or a thunderstorm. Many people can detect Ozone at concentrations of as little as 0.1 part per million (ppm) in air.

18. Does NEPA have the power to seize, arrest and prosecute an importer for violations of the Trade Order governing the import/export of ODS of the Montreal Protocol?
    There is an enforcement branch at NEPA that would have the power to enforce the applicable laws. In addition, these officers would conduct inspections in conjunction with the JCF.

19. Does JCA Officers have the power to seize and arrest?
    Yes.

20. Will there be any special provision made for a returning resident for their personal goods in their possession for years?
    The equipment should be seized at the port of entry and the NOU contacted. The NOU will recommend a technician who can retrofit the equipment to use a non-ODS at the importer's expense. The equipment must be properly labeled indicating the date of the retrofit, the personnel that did the retrofit, the quantity and type of gas that was removed and the type and quantity of the retrofit gas. The BSJ has approved a special label for this retrofit. While this was the case in 2006, recently no returning resident has requested this service.

21. Questions were asked about a disposal site in Jamaica for chemical and the responsible entity.
    Currently, there is no disposable/destruction centre in Jamaica. Until a decision is made about the destruction of these ODSs, it is advised that the refrigerants recovered be stored

in recovery cylinders. The Cement Company is the only company in Jamaica with a kiln that reaches temperatures high enough to destroy ODS, however, some retrofit will be necessary. Also, the quantity of ODSs to be destroyed must be of a certain quantity to make the retrofit cost effective. Discussions between the NOU and the Cement Company are ongoing.

22. What are the repercussions for an importer who contravenes the Trade Order 2014, governing the importation of ODS?
    The person would have committed an offence and is liable on summary conviction before a Resident Magistrate to a fine not exceeding two million dollars. The person will also stand the cost to reexport the goods for destruction.

23. What should be done when an importer abandons refrigerants and equipment at the port of entry?
    The refrigerant and or equipment can be stored for some time (to be determined by customs) to see if the individual will collect at a later date. If the equipment is not collected after this period has expired the goods should be exported for disposal at the expense of the importer.

24. How can one identify the refrigerant gas that is contained in cylinders?
    The refrigerant cylinders are colour coded. This would make it easy to identify the refrigerant gas. However, recently it was noticed that colour codes are no longer fool proof and cylinders might contain gases that are not compliant with the colour of the cylinder. Therefore, it is recommended that a refrigerant identifier be used to identify the gas. Also, a refrigerant analyzer can be used to analysis of the composition of the gas in the cylinder.

25. Are HCFC refrigerants considered hazardous chemicals and are they dangerous to handle?
    All refrigerants are considered hazardous chemicals and the proper personal protective equipment (PPE) should be used when handling these chemicals. The BSJ has approved a standard for the handling of refrigerants: JS 339: 2017, Transportation, Handling and Storage of Refrigerants which should be consulted if in doubt.

26. What are the HS Codes now being used for HFCs?
    The 382762 Codes were abolished and replaced by 2903.4…

Workshop Participants

The workshops were attended by a total of sixteen (16) participants. The workshop was delivered on Friday, February 24, 2023 at the Courtyard Marriott, 1 Park Close, Kingston 5. The full list of participants is presented in Appendix A.

Post Workshop Survey

To evaluate the effectiveness of the training workshop a post-workshop survey was administered. The participants were asked to evaluate the workshop and the presenter.

Feedback on the workshop was necessary to assess the level of satisfaction of the participants with the presenter and the material presented. The information from the feedback would help to gauge if the objectives of the workshop were achieved and give recommendations for the planning of future workshops.

Responses were collected from thirteen (13) of the sixteen (16) participants. The survey results are as follows:

Sixty nine percent (69%) of the participants indicated that the information presented was very relevant to their profession, while 31% indicated that the information was relevant.

Sixty one percent (61%) of the participants indicated that they were very satisfied with the quality of the presentation, while thirty nine percent (39%) indicated that they were satisfied with the quality of the presentation.

The quality of the presenter was assessed through the following four questions:

- Was it easy to understand the presenter?
- Was the presenter engaging and able to hold your interest?
- Did you feel free to ask any question at any time?
- Were the answers to your questions helpful?

When asked if it was easy to understand the presenter, forty six percent (46%) of the participants indicated that it was easy to understand the presenter and fifty four percent (54%) indicated that it was very easy to understand the presenter. Twenty three percent (23%) of the participants indicate that the presenter was engaging while seventy seven percent (77%) of the participants indicated that the presenter was very engaging. All the participants (100%) felt free to ask questions at anytime and fifty four percent (54%) felt that the answers to their questions were helpful and forty six percent (46%) felt the answers to their questions were very helpful.

Figures 1 and 2 give an indication of the most and least relevant areas of the workshop.

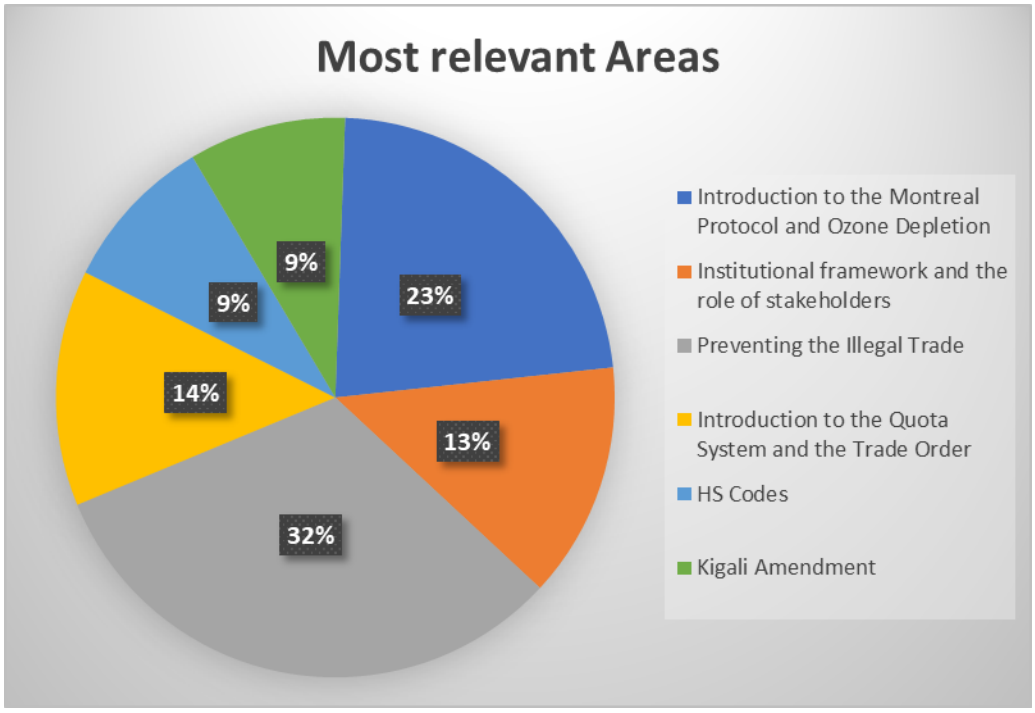

Figure 1: Most relevant areas of the Workshop

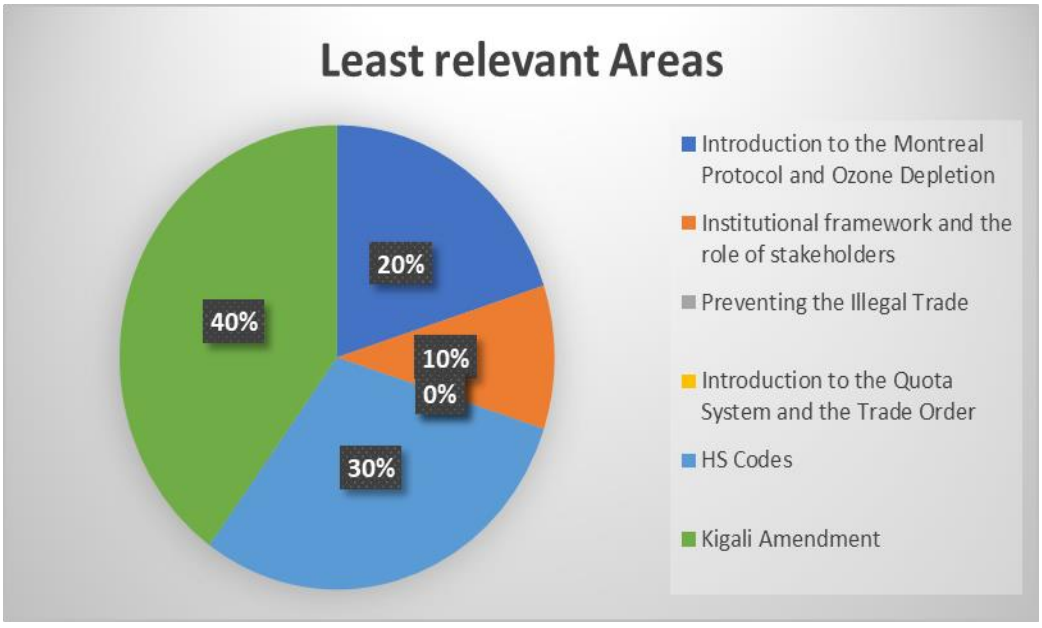

Figure 2: Least relevant areas of the Workshop

Overall Rating of the Workshop:

One hundred percent (100%) of the participants gave the workshop a rating of very good to excellent.

Conclusion

A Training Workshop for Enforcement Officers from the National Environment and Planning Agency (NEPA), Jamaica Customs Agency (JCA), the Ministry of Health and Wellness (MH&W) and Customs Brokers on Ozone Depleting Substances (ODS) and Refrigerants was conducted on February 24, 2023. The workshop was conducted face to face. A total of sixteen (16) participants attended the workshop.

The areas covered in the workshop included:

1. Introduction to Ozone Depletion and the Montreal Protocol
2. Institutional Framework and the Role of Stakeholders
3. Introduction to the Quota System and the Trade Order
4. Preventing the Illegal Trade in ODS
5. The 2022 HS Codes
6. Kigali Amendment

A Post-workshop Survey was administered where participants were asked to evaluate the workshop and the facilitator. Their responses were used to gage the satisfaction of the participants, get their feedback and recommendations. A copy of the post-workshop survey instruments is presented in Appendix C.

The feedback collect from the evaluation of the workshop would indicate that the participants were satisfied with the workshop. One hundred percent (100%) of the participants gave the workshop a rating of very good to excellent.

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Appendix

Appendix A

Registration List of Participants:

NAME	COMPANY	POSITION	DATE
Vivian Blake	National Environment and Planning Agency	Manager	February 24
Sonya Newman	National Environment and Planning Agency	Project Assistant Manager	February 24
Patricia Hamilton	National Environment and Planning Agency	Staff	February 24
Andre Edwards	National Environment and Planning Agency	Staff	February 24
Tresann Williams	Ministry of Health and Wellness	Drug Inspector	February 24
Alicia V. Smith	Ministry of Health and Wellness	Drug Inspector	February 24
Sandrene Hayden	Ministry of Health and Wellness	Chief Drug Inspector (Acting)	February 24
Ann Brown-Chang	Customs Brokers Freight Forwarders Association of Jamaica	Vice President	February 24
Marcia Bent	Customs Brokers Freight Forwarders Association of Jamaica		February 24
Suzette McNab-Wiggan	Customs Brokers Freight Forwarders Association of Jamaica		February 24
Dermott Morris	Customs Brokers Freight Forwarders Association of Jamaica		February 24
Jacqueline Mason Reid	Customs Brokers Freight Forwarders Association of		February 24

	Jamaica		
Sherica Falcone-Robertson	Jamaica Customs Agency	Customs Officer	February 24
Patrice Bethune	Jamaica Customs Agency	Customs Officer	February 24
Simone Bennett	Jamaica Customs Agency	Customs Officer	February 24
Shanalee Edwards	Jamaica Customs Agency	Customs Officer	February 24

National Environment and Planning Agency

HPMP IMPLEMENTATION PROJECT (UNEP COMPONENT)
Capacity Building Workshop
Attendance Register

Venue: Courtyard Marriott Hotel, 1 Park Close, Kingston 5

Date: 24 February 2023

#	NAME	ORGANIZATION	EMAIL ADDRESS	TELEPHONE NUMBER	SIGNATURE
1.	Patrice Bethune	JCA	patricebethune@jca.gov.jm	876 386 4512	
2.	DERMOTT MORRIS	CBFFAJ	fmacustoms@gmail.com	876 352 3849	
3.	Ann Brown Chap	CBFFAJ	annbrownchap@yahoo.com annbchap@cwjamaica.com	8768480008 8768679725	
4.	Simone Bennett	JCA	simone.bennett@jca.gov.jm	876-424-4342	
5.	JACQUELINE MASON REID	CBFFAJ	jamreid69@yahoo.com	876 395 9535	
6.	Marcia Bent	CBFFAJ	marciabenty@gmail.com	395-8332	
7.	Shanalee Edward	JCA	shanalee.edwards@jca.gov.jm	876-363-8856	
8.	Tresan Williams	MOHW	tresan.williams@moh.gov.jm	(876) 633-7151	
9.	Suzette McNab	CBFFAJ	Symbrokerage@yahoo.com	876-5593954	

National Environment and Planning Agency

NATIONAL OZONE UNIT-JAMAICA

HPMP IMPLEMENTATION PROJECT (UNEP COMPONENT)
Capacity Building Workshop
Attendance Register

Venue: Courtyard Marriott Hotel, 1 Park Close, Kingston 5

Date: 24 February 2023

	Name	Organization	Email Address	Telephone Number	Signature
10.	ALICIA V. SMITH	MINISTRY OF HEALTH & WELLNESS (STANDARDS & REGULATION)	alicia.smith@moh.gov.jm	876 770 3020	
11.	Andé Edwards	NATIONAL ENVIRONMENT AND PLANNING AGENCY (NEPA)	andre.edwards@nepa.gov.jm	876-807-3216	
12.	Sonya Newman	NEPA	Sonya.newman@nepa.gov.jm newmansonya27@gmail.com	876 489-5930	
13.	Sherica Falconer-Roberts	JCA	Sherica.roberts@jca.gov.jm	876 892-4912	
14.	VIVIAN BLAKE	NEPA	V.Blake@nepa.gov.jm	(876) 351-1812	
15.	Felicia Hamilton	NEPA	Feliciahamilton@nepa.gov.jm	876-754-7540	P. Hamilton
16.	SANDRENE HAYDEN	MINISTRY OF HEALTH & WELLNESS - SRD.	Sandrene.Hayden@moh.gov.jm	876-537-4376	
17.					
18.					
19.					

Appendix B

National Environment and Planning Agency

Presentation Schedule

One-Day Training of NEPA, JCA and other Enforcement Officers

February 24, 2023

Presenter: Noel Brown

Day 1

8:30 – 9:00 am	**Registration**
9:00 – 9:10 am	**Welcome and Introduction**
9:10 – 11:00 am	Introduction to the Montreal Protocol and Ozone Depletion
11:00 – 12:00 pm	Institutional Framework and the Role of Stakeholders
12:00 – 1:00 pm	Introduction to the Quota System and the Trade Order
1:00 – 2:00 pm	**Lunch Break**
2:00 – 3:00 pm	Preventing the Illegal Trade in ODs
3:00 – 4:00 pm	2022 HS Codes
4:00 – 4:30 pm	Kigali Amendment
4:30 – 4:50 pm	Questions and Answers
4:50 – 5:00 pm	**End of Day**

Appendix C

National Environment and Planning Agency

EVALUATION

ENFORCMENT OFFICERS TRAINING WORKSHOP

We kindly ask you to answer the following questions with the purpose of helping us to improve future training programmes

Please respond by selecting one of the responses

1) **How relevant was the information presented to your profession/?**
   a) not relevant
   b) relevant
   c) very relevant
2) **Were you satisfied with the quality of the presentations?**
   a) not satisfied
   b) satisfied
   c) very satisfied
3) **Was it easy to understand the presenters?**
   a) not easy
   b) easy
   c) very easy
4) **Was the presenter engaging and able to hold your interest?**
   a) not engaging
   b) engaging
   c) very engaging
5) **Did you feel free to ask any question at any time?**
   a) not free
   b) free
   c) very free

6) Were the answers to your questions helpful?

a) not helpful
b) helpful
c) very helpful

7) What area was most relevant?

a) Introduction to the Montreal Protocol and Ozone Depletion
b) Institutional framework and the role of stakeholders
c) Preventing the Illegal Trade
d) Introduction to the Quota System and the Trade Order
e) Kigali Amendment
f) HS Codes

8) What area was least relevant?

a) Introduction to the Montreal Protocol and Ozone Depletion
b) Institutional framework and the role of stakeholders
c) Preventing the Illegal Trade
d) Introduction to the Quota System and the Trade Order
e) Kigali Amendment
f) HS Codes

9) Overall, how do you rate this workshop?

a) Bad
b) Fair
c) Good
d) very good
e) excellent

We thank you for your cooperation and contributions; we will gather the information received and will process it as part of the final report of the workshop.