

## Department of Environment, Climate Change, and Emergency Management

### National Ozone Unit

#### Introduction

Situated in the Department of Environment, Climate Change, and Emergency Management, the National Ozone Unit implements all activities pertaining to the country's obligations under the Montreal Protocol. As of March 2019, FSM is 1 of 69 countries to have ratified all amendments to the Montreal Protocol including the most recent Kigali Amendment that aims to phase-down the global use of Hydrofluorocarbons (HFCs) that are known to be potent super greenhouse gases.

The National Ozone Unit currently has 5 ongoing projects as listed below. The NOU's longest ongoing project is FSM's HCFC Phase-out Management Plan (HPMP) that seeks to phase-out the consumption of Hydrochlorofluorocarbons (HCFCs) within the country. Unlike HFCs, HCFCs are known to be Ozone Depleting Substances (ODS) that destroy our earth's ozone layer. Because the ozone layer is extremely thin to begin with, it is highly susceptible to damage throughout the century as Ozone Depleting Gases are known to have a lifetime of 10 – 100 years in the atmosphere. In spite of this, the Montreal Protocol has witnessed global success in phasing out potent ODS such as Chlorofluorocarbons (CFCs) since 2010; and Carbon Tetrachloride and Methyl Bromide since 2015.

#### Project Reviews

Project Name	Project Timeline
HCFC Phase-out Management Plan Stage I Second Tranche	2015 -- 2020
Institutional Strengthening Project Phase VI	2017 -- 2019
HCFC Phase-out Management Plan Stage II Preparation	2019 -- 2020
Enabling Activities under the Kigali Amendment	2019 -- 2020
Promotion of Gold-Standard Energy Efficiency Practices and Policies for Air Conditioning Use in the FSM	2019 -- 2020

Under Stage I of the current HCFC Phase-out Management Plan (HPMP), FSM has managed to successfully phase-out 97% of HCFC consumption from its baseline 2009 – 2010 baseline of 5100 lbs. (2.55 MT). In 2017, FSM only imported 130 lbs. (0.065MT) or 2.5% of its allowable baseline.

Stage	Status	Will / has enabled country to *	Baseline consumption is	Consumption in 2017 is equivalent to <b>2.5% of the baseline</b>
HPMP Stage I (2011 – 2020)	Tranche 1 – Completed  Tranche 2 – On-going approved at 74 <sup>th</sup> ExCom Meeting	Meet 35% reduction from the baseline by 2020	<b>0.14</b> ODP Tonnes = <b>2.55</b> MT	
HPMP Stage II	Funding for project preparation was approved at 81 <sup>st</sup> ExCom meeting.  On-going - SSFA has been signed.	Plan to complete phase-out HCFC by 2030, but can be different depending on country situation	Consumption in 2017 as reported under Article 7 is <b>0.0036</b> ODP Tonnes = <b>0.065</b> MT	

Since 2015, FSM’s HPMP has arranged training workshops for our State Customs Offices, Environmental Protection Agencies, Refrigeration and Air-Conditioning Associations, Quarantine and Port Authority officers. Updated training and refresher workshops are done to ensure stronger communication, collaboration, and awareness among our key stakeholders.

		Cumulative achievements until 2018	Achievements since March 2019	Planned in 2019 & 2020
<b>Customs and Enforcement Officers Training</b>	<b>No. of Customs Training Workshops Organized</b>	6	1	5
	<b>Number of Participants</b>	98	7	50
	<b>Who trains them (institution)?</b>	Dept of Env, Climate Change, Emergency Management (DECEM)		
	<b>Main components covered under Customs &amp; Enforcement Training</b>	<i>Licensing and Permit System, Customs Regulations and Enforcement, 2017 HC Codes, Illegal Importation, Safe handling of refrigerants</i>		
<b>RAC Technicians Training</b>	<b>No. of Training Workshops Organized</b>	2	1	3
	<b>Number of Participants</b>	43	18	60
	<b>Who trains them (institution)?</b>	College of Micronesia & DECEM		
	<b>Scope of the RAC Training Workshops</b>	<i>Safe servicing practices of flammable refrigerants, ODS Recovery and Storage, Permit systems, national regulations</i>		

FSM’s Institutional Strengthening (IS) Projects allows for funding to be allocated towards general capacity building and awareness initiatives undertaken by the NOU. The following initiatives were funded under the IS project:

- November 22, 2018 – Customs and Enforcement Officers Training Workshop on Ozone Depleting Substances (ODS) for Pohnpei and Kosrae State

- November 23, 2018 – Stakeholder Awareness workshop on new commitments under the Kigali Amendment
- February 1, 2019 – Refresher workshop for Pohnpei RAC association
- March 5 – 6: Chuuk Customs and Enforcement Officers Training Workshop on Ozone Depleting Substances and Updates on the Kigali Amendment
- March 7 – 9: Chuuk RAC Association training on Flammable Refrigerants and ODS refresher workshop
- Safety equipment – gloves and safety goggles –for FSM’s Customs Offices for unloading cargo containing flammable refrigerants
- State RAC Association T-shirts for better organizational identity and participation
- Shipment fee for an upgraded Refrigerant Identifier for Chuuk Customs

In order to streamline implementation of activities, both the HPMP Stage II Preparation and Enabling Activities under the Kigali Amendment will be done simultaneously; the need to prepare, disseminate, and analyze data covering imported refrigerants and equipment will be collected through the following questionnaires:

- i. HCFC-based equipment Inventory for Business Owners
- ii. Refrigeration and Air-Conditioning (RAC) and Mobile Air-Conditioning (MAC) Servicing Workshop/Company Questionnaire
- iii. Importer of HCFCs, HFCs, and other alternative and RAC equipment
- iv. Customs Import Statistics for Refrigerants in 2016 - 2018
- v. Fishing Vessels Refrigeration Equipment for 2016 – 2018

The HPMP Stage II Preparation project will focus on analyzing and forecasting HCFC consumption, whereas the Enabling Activities will focus on analyzing and forecasting consumption for HFCs and non-ODS alternatives. Currently, both projects are waiting on finalized recruitment of a local consultant to do the data collection and analysis. The local consultant will also be responsible for the Country Program report for the HPMP Stage II Preparation project and the Country Assessment Report for the Enabling Activities project. The NOU and local consultant anticipate collecting data in the summer in line with the consultant’s availability to travel.

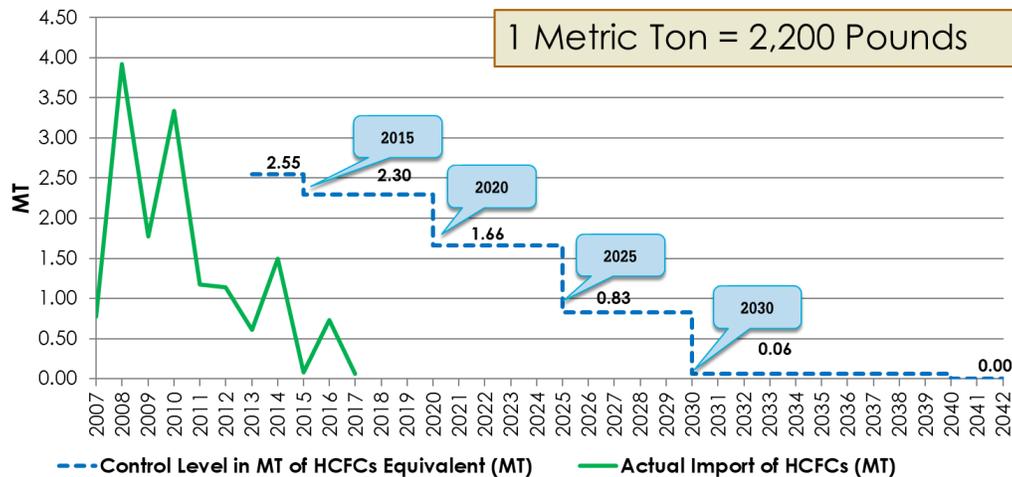
Developments under the Promotion of Gold - Standard Energy Efficiency Practice and Policies project are still underway. A major challenge impeding project development is the lack of exporters who are willing to export the new air-conditioning technology to the FSM. Upon speaking with a RAC expert in Paris, it was found that only China and India were producers of the new AC technology that used the R-290 (Propane) refrigerant. Their RAC industry’s main concern is the lack of RAC technicians in FSM who are trained to safely handle and service flammable refrigerants. Also, the FSM does not have any regulations directly addressing safety standards for its’ RAC industry. One major output from the project is to train technicians in each state in how to safely handle and service RAC appliances that use flammable refrigerants. In order to ensure that technicians meet certain competency – based and skill – based standards, they could take a certification test developed by RAC Master Trainer for FSM. Upon passing, DECEM will issue a certificate to recognize the technician’s ability to work in the RAC sector on a national level.

## Data Reporting

The NOU collects HCFC consumption data on an annual basis. State visits are done to verify data recorded on the ODS surveys and to ensure businesses are aware of new developments under the Montreal Protocol. DECEM must submit annual Country Program Data to the Multilateral Fund Secretariat before May 1. Also, under Article 7 of the Montreal Protocol, FSM has to submit A7 Data to the Ozone Secretariat before June 30. Both mandatory reports are reviewed by UNEP, as they are our Implementing Agency for all projects pertaining to the Montreal Protocol.

<b>MLF Executive Committee meeting</b>	March	8 weeks before 1 <sup>st</sup> ExCom meeting (requested date): Submit CP data report to Fund Secretariat ( ▶ Module 9)
	April	
Publication of TEAP Progress Report Bureau of the COP Ozone Research Managers meeting <sup>1</sup>	May	1 May deadline: Submit CP data report to Fund Secretariat ( ▶ Module 9)
<b>Open-Ended Working Group (OEWG) meeting</b> Implementation Committee meeting	June	30 June (guideline date): Submit Article 7 data report to Ozone Secretariat ( ▶ Module 10)
	July	
<b>MLF Executive Committee meeting</b>	August	

Below is the graph showing HCFC import graph against the reduction schedule for 2015, 2020, 2025, and 2030. The green line shows the actual HFCF consumption values from 2007 to 2017. It is important to note that there were some year in which FSM imported R-141b and R-125 used in fisheries application. Other than that, import of R-22 is the only HCFC refrigerant consumed in the FSM.



Substance	ODP	2007 MT	2008 MT	2009 MT	2010 MT	2011 MT	2012 MT	2013 MT	2014 MT	2015 MT	2016 MT	2017 MT
HCFC-22	0.055	0.777	3.92	1.635	3.338	1.17	1.14	0.59	1.44	0.082	0.73	0.065
HCFC-124**	0.022			0.138				0.02				
HCFC-141B	0.11								0.06			
<b>Total</b>		<b>0.777</b>	<b>3.92</b>	<b>1.773</b>	<b>3.338</b>	<b>1.17</b>	<b>1.14</b>	<b>0.61</b>	<b>1.5</b>	<b>0.082</b>	<b>0.73</b>	<b>0.065</b>

## Pending HCFC Import Permits

There is only one pending HCFC import permit for the calendar year of 2019. Liancheng Fishing Ventures Company has submitted all the requirement documents for a permit; however, the company is currently facing penalties for an illegal importation of ODS into Kosrae State. Until the company resolves the pending issue, DECEM will not issue the company a permit to import any ODS into the country.

Businesses with Approved Import Permits for Given Years		
2013	2014	2015
Ace Hardware Dept of Marine Resources JM Refrigeration Services Lei-side Store Pohnpei True Value R&D - Div of Fisheries and Marine Resources Yap Cooperative Association Yap Fishing Authority	Office of Fisheries and Aquaculture Ace Hardware GNOVA Corporation High Speed Auto Parts Luen Thai Venture Palm Terrace R&D - Div of Fisheries and Marine Resources	Dept of Marine Resources Dept of Resource and Economic Affairs Office of Fisheries and Aquaculture Yap Fishing Authority
2016	2017	2018
Office of Fisheries and Aquaculture Dept of Marine Resource Black Micro Corp Dept of Resource and Economic Affairs Palm Terrace Yap Fishing Authority	Liancheng Fishing Company Yap Fishing Authority	Liancheng Fishing Company

## Policy Overview

In 2015, the previous National Ozone Officer had managed to draft an amendment to current ODS regulations to include a ban on the importation of new HCFC – based equipment. By doing so, FSM’s future consumption from the inventory of HCFC-based equipment would decrease as new HCFC – based equipment would be barred from entering the country. This would cap future growth in HCFC consumption and keep the country in track to meeting all baseline reduction goals by 2030. However, though the amendment did receive approval from DECEM and the DOJ, the ban was not fully instituted for reasons not fully apparent. There is still a need to conduct a 30 day public notice for the ODS amendment to be fully endorsed by the Secretary of DECEM.

Because FSM is a Party to the Kigali Amendment under the Montreal Protocol, it is imperative for the country to develop new regulations to control and monitor the trade of HFC gases. A new set of regulations that institute a licensing, import, and quota system must be in place before 2021. The Kigali

Amendment has been in effect globally since January 1, 2019, however, developing countries may defer implementing control and monitoring mechanisms up until 2021. The only caveat is that if the FSM delays until 2021, it will not have HFC consumption data for 2020 under the licensing system. It is important to note that HFC data collection for 2020 – 2022 will be used to calculate the country's baseline that will be established in 2024. The average HFC consumption values for 2020 – 2022 will serve as starting point for the global HFC phase-down for A5 Group 1 countries in 2024.

The National Ozone Unit is collaborating with the Center for Technical Education at the College of Micronesia in implementing a Minimum Energy Performance Standard (MEPS) to deter businesses from importing lower quality, energy inefficient appliances into the country. This is one component of the larger Packard Project where COM and the NOU are working to institute a nationwide certification scheme for technicians in the Refrigeration and Air-Conditioning sector. The next generation of RAC appliances will tend to be more energy efficient and start to use flammable refrigerants with incredibly low Global Warming Potential as opposed to HCFCs and HFCs.

### **Monitoring and Enforcement**

Oversight on ODS is done on the national level with key stakeholders in enforcement being the State Customs Offices and Environmental Protection Agencies. Given that ODS are manufactured outside of the FSM, oversight is done primarily through our Border Protection Officers who ensure that ODS imports are not brought into the country illegally – without an approved import permit from DECEM or through misdeclaration of goods.

The most recent illegal import incident occurred in Kosrae where the Liancheng Fishing Ventures Company has illegally imported 8 cylinders of HCFC R-22. Kosrae's Customs Office had conducted an inspection of cargo onboard one of Liancheng's fishing vessel and charged the company a penalty for misdeclaration of goods. The ship's Material List had declared 2 cylinders of R-22 and 26 cylinders of R-404A. After the inspection, it was found that the ship had 8 cylinders of R-22 cylinders and 64 cylinders of R-404A. Total weight of the confiscated cylinders totaled 400 lbs. of R-22 and 1536 lbs. of R-404A. The company is facing a penalty of \$50,000 for the illegal importation of the ODS R-22 and the falsified number of R-404A cylinders.

In order to improve monitoring and enforcing FSM's ODS regulation, the NOU conducts site inspections of several businesses that either service or destroy HCFC-based equipment. The NOU was notified that several defunct AC units were picked up by the Mai Xiong Company in Nett for salvage and disposal. The major concern was how the company was going about recovering the ODS still contained in these decommissioned units; As the willful discharge of any ODS into the atmosphere is subject to penalties up to \$50,000 under FSM's ODS regulations. After speaking to Mr. Xiong, it was found that he did not have any recovery machine and recovery cylinders. Knowing this, the assumption had been confirmed that that the company had crushed up the AC units without retrieving the gas to prevent ODS from being discharged into the atmosphere. The NOU urged Mai Xiong's Company to contact the RAC Master Trainer to borrow the refrigerant recovery machine and purchase their personal cylinders in order to recover the ODS the next time they salvage or dispose of old AC units that contain ODS. In complying with the demands, the NOU will not impose penalties on the Mai Xiong Company.