

# COOK ISLANDS COUNTRY ASSESSMENT FOR THE IMPLEMENTATION OF THE KIGALI AMENDMENT

Prepared by The National Ozone Unit National Environment Services

With assistance of OzonAction Compliance Assistance Programme, United Nations Environment Programme

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## List of Abbreviations

A5	Article 5
ASYCUDA	Automated System for Customs Data
CCCI	Climate Change Cook Islands
CFC	Chlorofluorocarbons
CIRAC	Cook Islands Refrigeration & Air conditioning Association
EA	Enabling Activities – UNEP Project
ExCom	Executive Committee of the Multilateral Fund
GWP	Global Warming Potential
HC	Hydrocarbon
HCFC	Hydrochlorofluorocarbon
HFC	Hydrofluorocarbon
HFO	Hydrofluoro-olefin
HPMP	HCFC Phase-Out Management Plan
HS	Harmonized System
ISP	Institutional Strenghtening Project
JNAP	Joint National Action Plan
КА	Kigali Amendment to the Montreal Protocol
MAC	Mobile Air-conditioning
MLF	Multilateral Fund for the Montreal Protocol
MEPS	Minimum Energy Performance Standards
MFAI	Ministry of Foreign Affairs and Immigration
MFEM	Ministry of Finance and Economic Management
MVRE	Monitoring Verification Reporting Enforcement
NEP	National Energy Policy
NES	National Environment Service
NGO	Non-Government Organisation
NOO	National Ozone Officer
NOU	National Ozone Unit
NSDG	Cook Islands National Sustainable Development Goals 2016-2020
NSDP	National Sustainable Development Plan
ODS	Ozone Depleting Substances
ODP	Ozone Depleting Potential
OLP	Ozone Laver Protection (Act)
OPM	Office of the Prome Minister
PICs	Pacific Islands Countries
PMU	Project Management Unit
РОР	Persistent Organic Pollutant
RAC	Refrigeration and Air-Conditioning
REDD	Renewable Energy Department Division
TAU	Te Aponga Uira electricity generation authority
TVET	Technical Vocational Education and Training
UNEP	United Nations Environment Program
WATSAN	Water Waste and Sanitation Division of Infrastructure Cook Islands
WOD	World Ozone Day

Glossary

Chlorofluorocarbon (CFC)	Substances that have high Ozone Depleting Potential (ODP) and high Global Warming Potential (GWP). Commonly used as refrigerants, therefore, controlled under the Montreal Protocol.
Hydrochlorofluorocarbon (HCFC)	Substitutes for CFCs. Still have high ODP, but not as high as CFCs, and have low GWP. Commonly used as refrigerants, therefore, controlled under the Montreal Protocol.
Hydrofluorocarbon (HFC)	Substitutes for HCFCs. Low or zero ODP but have high GWP. Commonly used as refrigerants, therefore, controlled under the Montreal Protocol.
Hydrofluoro-olefin (HFO)	Substitutes for HCFCs. Zero ODP and generally very low GWP. Commonly used as refrigerants. Some exhibit low flammability with an A2L classification. Not controlled under the Montreal Protocol.
Hydrocarbon (HC)	Substitutes for HCFCs. Zero ODP and very low GWP. Commonly used as refrigerants. All exhibit high flammability with an A3 classification. Not controlled under the Montreal Protocol.
HCFC Phase-Out Management Plan (HPMP)	A project established and funded by Multilateral Fund Secretariat (MLFS) to enable parties operating under paragraph 1 of Article 5 countries of the Montreal Protocol to meet their obligation in phasing-out of HCFC as per scheduled under the Protocol.
HCFC-based equipment	Refers to equipment that uses or contains HCFC refrigerants.
HPMP Stage I	The $1^{st}$ stage of the HPMP project that implemented within 10 years from $2011 - 2020$ .
HPMP Stage II	The $2^{nd}$ stage of the HPMP project or a continuation of the HPMP stage I project. This HPMP stage II will be implemented once the $1^{st}$ stage of HPMP is complete.
Global Warming Potential (GWP)	A numerical unit to measure or emphasize the potential of a substance to contribute to global temperature.
Institutional Strengthening Project (ISP)	To strengthen national capacity and to support the day-to- day operation of the NOU. The project is renewed on a biennial basis, and it has supported the Government of the Cook Islands since its accession to the Montreal Protocol.

Ozone Depleting Substances (ODS)	Refers to substances that have the potential to deplete the ozone layer.							
Ozone Depleting Potential (ODP)	It is a numerical unit to measure or emphasize the potential of a substance to deplete the ozone layer.							
RAC Association	The Association is established and comprised of local refrigeration and air-conditioning (RAC) technicians.							
RAC equipment	Refers to refrigeration and air-conditioning (RAC) equipment.							

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# 1. Introduction

Globally, Ozone Depleting Substances (ODS) are being used in refrigeration, air conditioning, foam, solvent, fire fighting, and aerosol sectors, etc. Phasing-out consumption of the ODSs is an important strategy to address the depletion of the ozone layer and protect the environment and human health. As the global hydrochlorofluorocarbons (HCFCs) phase-out process is progressing, their alternatives that have zero ozone depleting potential (ODP) values, such as hydrofluorocarbons (HFCs), unsaturated HFCs (HFOs), hydrocarbons (HCs), ammonia (NH<sub>3</sub>), and carbon dioxide (CO<sub>2</sub>) are gradually being phased in. HFCs have become the major replacement for HCFCs over the last decade due to their features like low or non-flammability, chemical inertness, relatively low cost, and excellent performance as refrigerants, foam blowing agents, aerosol propellants, and solvents. However, the great disadvantage of HFCs is that the most commonly used HFC substances and blends are powerful greenhouse gases that have high global warming potential (GWP). Therefore, uncontrolled growth in HFC use combined with growing global heating and cooling demand is expected to contribute to climate change significantly.

Accordingly, at the 28th Meeting of the Parties in October 2016, the Parties to the Montreal Protocol agreed on the Kigali Amendment (KA), which extended the list of controlled substances to include 18 HFCs. The Amendment also established phase-down schedules for HFC production and consumption (defined as production + imports – exports of HFCs expressed in CO2 equivalent). The Parties decided that there will be different phase-down schedules for two groups of Article 5 Parties: Group 1 - to achieve 80% phase-down in HFCs by 2045 with the freeze starting in 2024, and Group 2 - to achieve 85% phase-down in HFCs by 2047 with the freeze starting in 2028. KA entered into force on 1st January 2019.

The Cook Islands are a party to the Montreal Protocol and have ratified the KA. It is thus important for the country to understand the implication of the KA to the country, as well as the institutional and policy gaps/needs for the effective implementation of the KA based on the analysis of the current situation of the market including the manufacturing and servicing sectors, as well as institutional and policy instruments.

#### 1.1. The Implementation and achievements of the Montreal Protocol in the Cook Islands

The Cook Islands ratified all agreements, conventions, and amendments relating to the Montreal Protocol. The Cook Islands have also ratified all the major international environmental treaties related to Climate Change, as outlined in the below table.

CONVENTIONS/ PROTOCOL/ AMENDMENT	ADOPTION	DATE OF RATIFICATION
Vienna Convention	1985	22 December, 2003
Montreal Protocol	1987	22 December, 2003
London Amendment	1990	09 August, 2004
Copenhagen Amendment	1992	09 August, 2004
Montreal Amendment	1997	09 August, 2004
Beijing Amendment	1999	09 August, 2004
Kigali Amendment	2016	22 August, 2019
United Nations Framework Convention on Climate Change	1992	20 April 1993
Kyoto Protocol to the UNFCCC	1997	27 August 2001
Paris Agreement under the UNFCCC	2015	01 September 2016

Table 1 Multilateral Environmental Agreements related to Ozone Depleting Substances and Climate Change to which Cook Islands is a Party

Classified as an Article 5 country under the Montreal Protocol, the Cook Islands are entitled to receive financial support from the Multilateral Fund for the implementation of the Montreal Protocol (MLF), and technical support from the international community to support the activities to phase-out the use of ODSs and phase-down the use of HFCs. The country in the Montreal Protocol context is an Article-5 country as the national average consumption of ODS chemicals is within 300 grams per capita. It is also a Low Volume Consuming (LVC) country as its consumption is below 360 MT.

With support from the MLF, the country established its National Ozone Unit (NOU), administered by the National Environment Service (NES). The NOU is responsible to coordinate with all the agencies and stakeholders to comply with the control measures/policies formulated. The country has implemented several measures such as regulations, capacity building, awareness-raising, and licensing systems, to comply with the Protocol and its Amendments.

The Cook Islands have one specific piece of legislation that deals with ozone layer issues, which is the <u>Ozone Layer</u> <u>Protection Regulations (OLP) 2008</u>. This Regulation was enacted to regulate the use of ODS and to implement the provisions of the Vienna Convention, the Montreal Protocol, and its Amendments. The Cook Islands has completely phased out CFCs and included a ban on CFC-based equipment in the OLP Regulation 2008. The licensing of import of HCFC and quota system is fully functional since January 2013. The system is capable of ensuring the country's compliance with the HCFC phase out schedule. Through the highlighted policy measures and control system the country has met its obligation to freeze (2013) and align with reduction targets as set for 2015 (10%), and is on track to meet its subsequent targets of 2020 (35%) under the HCFC Phase-out Management Plan (HPMP) Stage I. The country, as part of the Regional PIC HPMP Stage II, finalized the project document to assist the country to meet obligations in 2025 (67.5%), and in 2030 (100%). The Regional PIC HPMP Stage II has been approved by the Executive Committee at the intersessional approval session of the 86th Meeting in November 2020.

The NOU, in close coordination with the Crown Law Office, took the leading role in amending the existing regulation to control the import/export of HFCs under the Kigali Amendment and to further strengthen its implementation and enforcement of the licensing and quota system. While waiting for the amendment of the existing regulation, Cook Islands has implemented the HFC licensing system through the agreement with the Customs Department and the importers effectively from 1 January 2021.

The Montreal Protocol implementation in the Cook Island has been advanced through the below frameworks:

- Institutional Strengthening Project (ISP) To strengthen national capacity and to support the day-to-day operations of the NOU. The project is renewed on a biennial basis, and it has supported the Government of the Cook Islands since its accession to the Montreal Protocol.
- HCFC Phase-out Management Plan (HPMP) Stage I The HPMP Stage I has been implemented since 2011 with the support of UNEP as the sole implementing agency to enable the Cook Islands to achieve a sustained level of 0.56 MT of HCFC consumption prior to 1 January 2020 in compliance with the Montreal Protocol schedule. HPMP Stage I elaborates the three-pronged approaches to reduce consumption in the servicing sector as: (1) Limit the supply of HCFCs, (2) Reduce demand for HCFCs for servicing existing equipment, and (3) Limit new demand of HCFCs. The project is on-going and will be completed in 2021.
- HCFC Phase-out Management Plan (HPMP) Stage II The HPMP Stage II aims to support the Cook Islands to completely phase-out HCFCs under the Montreal Protocol. Similar to HPMP Stage I, the HPMP Stage II for the Cook Islands is part of the Regional Pacific Island Countries HPMP Stage II for 12 countries, which has been approved at the intersessional approval session of the 86<sup>th</sup> Meeting o the Executive Committee. Activities to be implemented under the HPMP Stage II will be a continuation with the achievement built under the HPMP Stage I with a focus to support Cook Islands to sustain zero HCFC consumption given that the Cook Islands has agreed to maintain zero consumption from 1 January 2021 onwards.

The ISP and HPMP activities listed below have contributed towards the reduction in HCFC consumption through:

- Establishment, implementation, and enforcement of HCFC licensing and quota system and strengthening the data monitoring and reporting mechanism,
- Engagement with national stakeholders in the implementation of the Montreal Protocol related activities,
- Enhancing the capacity of customs officers and law enforcement officials to recognize ODS and ODS alternatives,
- Enhanced capacity and skills of RAC service technicians to follow good servicing practices for refrigeration and air-conditioner using HCFCs and new and emerging technologies as alternatives to HCFC including the safety aspect,
- Information dissemination and public outreach to the general public and specific target group.

Projects, programmes,	Status	Will / has enabled the country to
initiatives		
Institutional Strengthening Project	Ongoing	Establishment and continuous operations of NOU. The project supports the Cook Islands to implement and enforce licensing and quota system to control the import and export of ozone-depleting substances.
HCFC Phase-out Management	On-going. The NOU implemented activities	Met 35% reduction from the baseline
Plan (HPMP) Stage I	to control HCFC supply, control HCFC	consumption by 1st January 2020.
(2011 – 2020)	an enabling environment	Based on the verification of HCEC
	a 6 training workshops for customs	consumption maintained zero
	<ul> <li>o training workshops for customs and enforcement officers organized with 60 trainees.</li> <li>o 7 training workshops for RAC technicians organized with 67 trainees.</li> </ul>	HCFC consumption since 2018.
HCFC Phase-out Management	Ongoing	Complete phase-out HCFC
Plan (HPMP) Stage II (2021-	Stage II tranche I has just started in July	consumption by 2030. In the case
2030)	2021 and is ongoing.	of Cook Islands, maintain zero
		HCFC consumption from 2021
		onwards.

#### Table 2 Key achievements of ODS phase-out

As shown in the table below the Cook Islands is well ahead of its HCFC phase-out schedule. Importers and local technicians have advised the NOU that they will no longer be importing HCFCs, specifically R-22, as HCFC-based equipment has been replaced with HFC technology.

Table 3 H	CFC phase-c	out schedule	2016-2020

	Country's Obligations	2016	2017	2018	2019	2020
1	Montreal Protocol reduction schedule of Annex C, Group I substances (MT)	0.77	0.77	0.77	0.77	0.56
2	Maximum allowable total consumption of Annex C, Group I substances (MT)	0.77	0.77	0.77	0.77	0.56
3	HCFC-22 import quota issued (MT)	0	0.19	0	0	0

4	Actual HCFC-22. import statistic (MT)	0	0.19	0	0	0
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Source: Verification of HCFC consumption in the Cook Islands; 2015-2019

The historical consumption of various ODSs during 2007-2019 is provided in the table below.

Chemicals	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
HCFC-22	0.31	0.3	0.57	0.92	1.004 06	0.75	0.367	0.026 7	0	0	01	0	0
HCFC-142B	0	0	0	0.23	0.018 53	0	0	0.06	0	0	0	0	0

Table 4 Historical consumption of ODSs (in MT)

Source: A7 data

In addition to the above, the NOU prepared with the assistance of UNEP the ODS Alternatives Survey Report, covering the period from 2012 to 2015, to enable the Cook Islands to understand where and how much ODS alternatives are being used in the country. The survey revealed that the Cook Islands only consumed alternatives to ODS for servicing activities, such as repairs, maintenance, leak detecting, and the cleaning of RAC equipment and mobile air conditioning (MAC) units.

#### 1.2 The Enabling Activities Project

The Executive Committee of the Multilateral Fund for the Montreal Protocol (ExCom), at its 79th meeting, adopted the Decision 79/46 related to the Enabling Activities for Article 5 countries. According to such decision, countries are provided with some initial funding and allowed to use flexibility to undertake a range of enabling activities to help their National Ozone Units to facilitate the early ratification of the KA and to undertake specific initial activities that will help the countries to fulfil their initial obligations to phase down HFC.

At the 81st Executive meeting, ExCom approved the enabling activities projects for the Cook Islands. Technical assistance and support have been provided by UNEP to carry out enabling activities for the HFC phase-down in the Cook Islands including the following main components:

The Government partnered with the UN Environment Programme Compliance Assistance Programme, and received funding to implement the following project components:

- Component 1 Country Assessment and stakeholder workshops for implementing the Kigali Amendment: The objective of this component is to support the preparation of the necessary background documents and stakeholder consultation that would be required by the country to prepare for HFCs phase-down.
- Component 2 Article 4B Licensing & Reporting: The objective of this project component is to support the country to establish an HFC licensing, trade control, monitoring, and reporting systems.
- Component 3 Capacity building for safe use of ODS alternatives: This component supports the country in building the capacity of key actors particularly in the servicing sector to enable them to address the emerging responsibilities linked to the Kigali Amendment and to ensure the necessary foundation for the introduction of alternative technologies.
- Component 4 Communication and Awareness: Informing key stakeholders such as importers, retailers, the building sector, relevant authorities, and the general public of upcoming changes and implications for them.

<sup>&</sup>lt;sup>1</sup> The reported 2017 Article 7 was zero, which is different from the verification of HCFC consumption (0.19 MT). Based on verification of HCFC consumption, Cook Islands is recommended to revise 2017 Article 7 data to be consistent with verification of HCFC consumption.

#### 1.3. Scope, methodology, and objective of the Country Assessment Report

This Country Assessment Report is prepared as part of the Cook Islands Enabling Activities for HFC Phase-down. It covers the requirements for the Kigali Amendment implementation such as national institutional arrangements and partnerships, policy review, technology penetration trends, the existing infrastructure of the servicing sector, capacity building, and awareness-raising. The objective of this Country Assessment Report is to assess:

- The current national infrastructure of the Cook Islands in terms of the institutional and legal framework, as well as the capacity of various stakeholders for the implementation of the Kigali Amendment in the Cook Islands;
- Identify any capacity and capability gaps in the existing national infrastructure in the Cook Islands, and develop effective actions and initiatives required to overcome any challenges identified.;
- Recommendations and action plans for the government of the Cook Islands to ensure that initial obligations under the Kigali Amendment are met.

The Report covers and contributes to the Enabling Activities Project's components as follows:

EA Project Components	Interaction with the Country Assessment Report and its development process
	Consultations with stakeholders and policymakers on the successful implementation
Country Assessment and	of the KA were part of the Country Assessment Report development process. The
National Strategies for	stakeholder and market assessment conducted as part of the Report facilitated the
Kigali Amendment	sensitizing of the stakeholders and the discussion on the implementation of the KA
	and the country's follow-up actions.
	The Report reviewed the existing licensing and reporting system for ODS, HFC, and
Article 4B Licensing &	RAC equipment and proposed ways to strengthen and better implement these
Reporting	systems. The Project component to establish the revised HS Codes for HFCs will
	facilitate the implementation of the system as suggested in the Report.
Canacity building for safe	The Report maps out the current servicing sector situation and training needs,
use of ODS alternatives	providing suggestions on how to move forward, therefore contributing to this
	project component.
	Contacting stakeholders to obtain the latest data and information and sharing the
	findings of the Report with them as part of the Country Assessment Report
	development process helped raise the awareness of the stakeholders of the existing
Awareness and outreach	and upcoming issues and implications related to the MP and the KA. The Country
	Assessment Report will also serve as a useful communication tool to use for
	reference, advocacy, and awareness-raising during the implementation of the
	Project and the HFC phase-down.

 Table 5 The Country Assessment Report's contribution to the Enabling Activities Project components

To prepare this report, the NOU recruited a team of local consultants and they undertook the following activities:

- Liaised with stakeholders to collect and analyze all data and information;
- Conducted consultation workshops and meetings with stakeholders.
- Incorporated the comments received from national stakeholders and UNEP to finalize this report.

The table below shows stakeholders consulted for information and inputs.

Table 6 List of stakeholders consulted for the Country Assessment Report information gathering

Government Stakeholders
Customs Department
Statistics Office
Renewable Energy Development Division (REDD)
Climate Change Cook Islands (CCCI)
Ministry of Foreign Affairs (MFAI)
• Te Aponga Uira (TAU) <sup>2</sup>
Private Sector Experts and Representatives
<ul> <li>Cook Islands Refrigeration and Air-Conditioning (CIRAC) Association</li> </ul>
RAC Technicians – Importers and users
Equipment Importers
RAC/MAC Servicing Workshops
Experts and Support Agencies from other Countries
United Nations Environment Programme (UNEP)

<sup>&</sup>lt;sup>2</sup> Te Aponga Uira is <u>Cook Islands</u> electricity generator, <u>distributor</u> and <u>retailer</u> which provides electricity to the island of <u>Rarotong</u>a.

# 2. The Kigali Amendment and its implication to the Cook Islands

#### 2.1. The Kigali Amendment and its Obligations applicable to the Cook Islands

In October 2016, the Kigali Amendment was adopted by all Parties to the Montreal Protocol in Kigali, Rwanda. The Kigali Amendment brings the future production and consumption of hydrofluorocarbons (HFCs) under the control of the Protocol and will contribute towards the fight against climate change. The Amendment includes a group of 18 HFCs as specified in Annex F of the Montreal Protocol, listed in the below table, and establishes specific control measures to be applied by the parties to phase down the use of these substances.

Group	Substance	100-Year Global Warming Potential (GWP)
Group I		1 100
CHF <sub>2</sub> CHF <sub>2</sub>	HFC-134	1 430
CH <sub>2</sub> FCF <sub>3</sub>	HFC-134a	353
CH <sub>2</sub> FCHF <sub>2</sub>	HFC-143	1 030
CHF <sub>2</sub> CH <sub>2</sub> CF <sub>3</sub>	HFC-245fa	794
CF <sub>3</sub> CHFCF <sub>3</sub>	HFC-365mfc	3 220
CF <sub>3</sub> CHFCF <sub>3</sub>	HFC-227ea	1 340
CH <sub>2</sub> FCF <sub>2</sub> CF <sub>3</sub>	HFC-236cb	1 370
CF <sub>3</sub> CH <sub>2</sub> CF <sub>3</sub>	HFC-236ea	9 810
CH <sub>2</sub> FCF <sub>2</sub> CHF <sub>2</sub>	HFC-245ca	693
CF <sub>3</sub> CHFCHFCF <sub>2</sub> CF <sub>3</sub>	HFC-43-10mee	1 640
CH <sub>2</sub> F <sub>2</sub>	HFC-32	675
CHF <sub>2</sub> CF <sub>3</sub>	HFC-125	3 500
CH <sub>3</sub> CF <sub>3</sub>	HFC-143a	4 470
CH₃F	HFC-41	92
CH <sub>2</sub> FCH <sub>2</sub> F	HFC-152	53
$CH_3CHF_2$	HFC-152a	124
Group II		
CHF₃	HFC-23	14 800

Table 7 Controlled HFCs (Montreal Protocol Annex F)

The Kigali Amendment is a binding international treaty that is intended to create rights and obligations in international law. Once the Amendment enters into force for a Party, that Party assumes legal obligations under the Amendment. Pursuant to the above, it is essential for the Cook Islands to be prepared to fulfil the initial obligations after the ratification of the Kigali Amendment, which include:

Accurate reporting of HFC consumption as part of Article 7 data, which will be used to calculate country's baseline consumption<sup>3</sup>: Based on 2019 and 2020 Article 7 reported to the Ozone Secretariat, Cook Islands imported HFCs and HFC blends such as HFC-134a (refrigeration and mobile air-conditioner), R-404A (transport refrigeration and icemakers), R-410A (domestic a/c and small commercial chillers) and HFC-32 (domestic a/c). Therefore, an effective system for monitoring and reporting HFC import and export is critical to accurately establish the country's baseline consumption. The Cook Islands is classified as Article 5 Group-

<sup>&</sup>lt;sup>3</sup> Montreal Protocol parties establish baseline consumption levels with the aim of providing a benchmark or reference level for any control measures relating to production and consumption, such as a freeze or reduction steps.

I party, the baseline year for HFCs is 2020-2022.

- Establishment of a licensing system to control the import and export of HFCs: This is one of the key regulatory obligations under the Montreal Protocol and the Kigali Amendment; the licensing system must be established within 3 months after the entry into force of the Amendment for the country. According to Article 4B (2 bis), countries that have already ratified, such as the Cook Islands, could have delayed the establishment of the licensing system until 1<sup>st</sup> January 2021. The licensing system empowers the licensing authority to effectively control the import and export as well as to monitor and report HFC consumption.
- Freeze in consumption of HFCs (and HFC blends) from 1 January 2024: Freezing the consumption of HFCs from January 2024 at the baseline level, and phase down HFC as per the agreed schedule for A5 Group 1 countries.

Having ratified the Kigali Amendment, the Cook Islands needs to comply with the obligations to phase-down it's HFC production and consumption according to the schedule set out in the Amendment. The Cook Islands will have to follow the reduction plan shown in the below table. It is important that the Cook Islands takes active steps to implement the Kigali Amendment and to start planning the reduction of the country's consumption of HFCs.

Article 5 Parties	Group 1 (including the Cook Islands)		
Baseline Years	2020, 2021 & 2022		
Baseline Calculation	Average production/consumption of HFCs in 2020, 2021 and 2022 plus 65% of HCFC baseline production/consumption		
Reduction Steps			
Freeze	2024		
Step 1	2029	10% reduction	
Step 2	2035	30% reduction	
Step 3	2040	50% reduction	
Step 4	2045	80% reduction	

Table 8 Timetable for HFC phase down schedule for Article 5 Group 1 countries

Figure 1 Phase down timeline for Article 5 countries (Group 1 includes Cook Islands)



The Cook Islands does not produce any refrigerants and the country relies on imports from other countries. As per Article 5 Group 1 country obligations, Cook Islands will freeze its consumption of HFCs from its baseline level from 1 January 2024. Since the Cook Islands imports 100% of the refrigerants used in the country, the country needs to control its HFC imports and reduce the use of HFCs in the refrigeration and air-conditioning (RAC) servicing sectors in order to reduce its HFC consumption. The Kigali Amendment controls the consumption of HFCs whether as a single substance or as a composition in any mixtures. In this regard, Cook Islands has to phase-down consumption of both single HFCs and mixture containing HFCs stipulated in Annex F to the Montreal Protocol.

#### 2.2. The Benefits of ratifying and implementing the Kigali Amendment

The Pacific Island Countries are at the forefront of the most adverse effects of Climate Change, the Cook Islands Government, while acknowledging that its greenhouse gas emissions are small on a world scale, is committed to joining the global community, acting locally and voluntarily to meet its climate change obligations.

The ratification and implementation of the Kigali Amendment will provide considerable benefits to the Cook Islands in various ways:

- Contribute to mitigating the impacts of climate change and achieving UN sustainable development goals: Effective implementation of the Kigali Amendment at the global level could avoid up to 0.4°C of warming by the end of the century, thereby helping to mitigate the catastrophic impacts of climate change, especially on small island countries, that are more susceptible to the impacts of sea-level rise, flooding, landslides, drought, and other extreme events. Furthermore, with the ratification of the Kigali Amendment, Cook Islands contributes not only to global climate change efforts but also to other UN Sustainable Development Goals related to health, food security, poverty alleviation, innovation, and sustainable cities.
- Demonstrate country commitment towards the Montreal Protocol and the global environment protection: All prior agreements and amendments related to the Montreal Protocol have received universal support. Therefore, apart from the direct climate and ecological benefits to result from the ratification of the Amendment, Cook Islands also gains political recognition as a contributor and participant to the international efforts to protect the global environment through the phasing-down of HFCs.
- Gain access to financial and technical support from the MLF: Cook Islands, as an import-dependant country, will sooner or later face challenges inherent to the technological switch towards HFCs alternatives at the global level. Article 10 of the Montreal Protocol establishes a financial mechanism to provide financial and technical cooperation, including the transfer of technologies, to support Article 5 parties' compliances with the Protocol. Having ratified the Kigali Amendment, as an Article 5 party, Cook Islands will be able to access financial and technical support from the MLF to address challenges and strengthen the capacity of different sectors in the country, building on to support provided by the MLF through the previous ODS phase-out projects and the Enabling Activities for HFC Phase-down Project.
- Improve energy efficiency, leading to further climate benefits and energy cost savings: When transitioning away from HFCs, parties have been strongly encouraged to adopt alternatives that are also energy efficient. This, as a result, doubles the benefit of the Kigali Amendment to the climate, as small energy savings could lead to a significant reduction of GHG emissions to the atmosphere. Enhanced energy efficiency in RAC equipment can also benefit the end-users directly by reducing their energy cost.
- Leaving behind obsolete technologies: As the Kigali Amendment was adopted with universal support and is being ratified by most countries, new business opportunities for HFCs phase-down are emerging; environmentally superior alternatives have been and will continue to be commercialized, resulting in HFCs becoming obsolete. Therefore, getting up-to-date with markets in the RAC sector will put the Cook Islands on

a significant economic advantage, as the country is heavily dependent on the import of HFCs and RAC equipment.

- Avoid implication from trade restrictions: Article 4 of the Montreal Protocol restricts Parties from trading the controlled substances with non-Parties. The trade ban will prohibit Parties that have ratified the Kigali Amendment from trading HFCs with the Parties that have not. Therefore, if the Cook Islands does not ratify the Kigali Amendment, it will not be able to trade HFCs with countries that have ratified the Kigali Amendment from 2033.
- Having the flexibility to adopt a country-driven approach: Article 5 Parties will have the flexibility to prioritize types of HFCs and sectors to control, select technologies and alternatives to promote and elaborate on and implement national strategies to meet the agreed HFC obligations, based on their specific needs and national circumstances, following a country-driven approach. This principle will be incorporated into MLF guidelines.

The implementation of the Kigali Amendment also contributes towards the Cook Islands own National Sustainable Development Plan (NDSDP) 2016-2020 as stated below,

- NSDP Goal 3: by promoting sustainable practices and effectively manage solid and hazardous waste.
- NSDP Goal 6: by improving access to affordable, reliable, sustainable, modern energy and transport. Minimum Energy Performance Standards (MEPS): National or regional level MEPS for air-conditioning or refrigerator appliances sits with Renewable Energy Department Division (REDD). MEPS forms the core of an effective national strategy on cooling efficiency and is also an important tool for countries to avoid unwanted environmental dumping.
- NSDP Goal 13: in relation to strengthening resilience to combat the impacts of climate change and natural disasters. In saying that, the phasedown of HFCs is expected to avoid up to 0.5 degrees Celsius of global warming by 2100, which is a significant contribution to the goals of the Paris Agreement under the United Nations Framework Convention on Climate Change.

#### 2.3. The Cost of becoming a party to the Kigali Amendment

HFCs are only being used in RAC servicing sectors in the Cook Islands yet phasing down may still prove challenging. Some potential challenges associated with HFCs phase-down to consider and prepare for are:

- Some low-GWP refrigerants have flammable or toxic properties potentially leading to implications for safety and human health. Therefore care is required in handling them during the equipment installation and servicing. Additional investment needs to be made into buildings and ensuring the competence of personnel including their capacity building, sector regulations development, adoption of safety related standards, and consideration of building codes to ensure the safe introduction of such refrigerants;
- 2. Since low-GWP technologies are newer technologies and have not reached the critical level of market penetration, they are generally more expensive than mature technologies. Therefore, as long as the importation of high-GWP based equipment is allowed, importers can sell them at a lower price compared to equipment based on low-GWP alternatives. Users at the purchasing end will tend to pay a higher price for low-GWP alternatives and related equipment. However, low-GWP technologies are also more energy-efficient in their design and use of electricity, so the higher initial investment costs can be compensated by savings in electricity bills over the product's lifecycle;
- 3. HFC phase-down is expected to cover larger sectors and sub-sectors than when compared to HCFCs, this would require greater coordination efforts at the national level.

Normally, a country, who ratifies an environmental treaty with regular international meetings, would incur extra costs for preparing and participating in related meetings. States will, however, not incur significant international meeting costs due to the Kigali Amendment as it is part of the Montreal Protocol. Furthermore, Article 5 Parties will

participate in meetings with the support of the Trust Fund of the Montreal Protocol. In ratifying and implementing the Kigali Amendment, Cook Islands will incur financial costs related to:

- Surveying existing HFC consumption;
- Adapting existing laws or introducing new ones to achieve the HFC phase-down;
- Extending the ODS import and export licensing and quota system to cover HFCs;
- Putting in place, where appropriate, any practical arrangements that may be required for customs officers to assume extra responsibilities concerning HFCs;
- Monitoring HFC import and consumption, and reporting data under the Amendment; and
- Developing a strategy for HFC phase-down, including monitoring and enforcement.

The Montreal Protocol financial mechanism will provide financial assistance to developing countries, including the Cook Islands, for the phase down of HFCs. This includes support for capacity building and more training in the safe handling of HFC alternatives, institutional strengthening, import and export licensing systems, support to ensure compliance with the reporting requirements under the Protocol, and the development of national strategies for phasing down HFCsThe initial support provided by the Fund with the funding for the "Enabling Activities for HFC Phase-down" project, is expected to be followed by further technical and financial assistance for the country by the MLF to build its capacity for the phase-down of HFC. The Executive Committee is discussing the cost-guideline for HFC Phase-down.

#### 2.4. Key alternative technologies

The Kigali Amendment brings to the forefront the importance of the climate impacts of refrigerants and cooling technologies. Article 5 countries under Montreal Protocol on Substances that Deplete the Ozone Layer are implementing Hydrochlorofluorocarbons (HCFC) Phase-out Management Plans (HPMP) and are moving towards alternative technologies. The most used HCFC alternatives are those with high Global Warming Potential hydrofluorocarbons (HFCs) such as HFC-134a, R-410A, R-404A, R-407C, and are used in Refrigeration and Air-Conditioning (RAC) sector.

In view of the imminent entry of force of Kigali Amendment, which will drive the HFC phase-down in many countries and ongoing concurrent phase-out of HCFCs, it is expected that between 2020-2040 most of A5 countries' markets will have non-HCFC based units running with HFC-134a, R-410A, HFC-32, R-290, HFOs and a variety of blends. As the Cook Islands is a technology import-dependent country, these technologies are either operating or will be soon introduced into the country. Therefore, the country needs to be prepared for the safe adoption of these technologies. The refrigeration and air-conditioning sector will become more complex as multiple refrigerants proliferate the market in varied applications and with many alternatives presenting operational challenges due to their flammability, toxicity, or high operating pressure.

In this context, the competence of servicing sector in installation, maintenance, repair, and disposal becomes critical. The ongoing HCFC phase-out and future HFC phase down related projects will put much focus on building a sustainable system to support the refrigeration servicing sector, which will, in turn, be able to support the safe and swift adoption of alternatives.

# 3. Existing National Institutional Arrangements and Partnerships

The National institutional and partnership arrangements under the Institutional Strengthening Project (ISP) and HPMP Project will remain the same when including provisions for the Kigali Amendment. In addition, there is a need to include other relevant stakeholders that will be important for future Kigali Amendment compliance.

#### 3.1 National Environment Services and the National Ozone Unit

The Cook Islands National Environment Service (NES) is the central government agency in charge of protecting, managing, and conserving the environment of the Cook Islands, on behalf of and for the benefit of present and future Cook Islanders. NES vision is Ipukarea Tumanava – "A clean, green and sustainable Cook Islands". NES continues to play the role of bridging and ensuring the collaboration and close communication between ministries, public entities, private sectors, and NGOs who are mandated under the Montreal Protocol to phase out all ozone depleting substances in the country.

The Senior Persistent Organic Pollutants and Ozone Depleting Substances Officer is under the Project Management Unit (PMU) of the government structure. The PMU is responsible for the development, coordination and delievery of environment Donor projects to enhance Environment Management in the Cook Islands. The ODS Officer monitors, regulate, and enforces regulations under the Environment Act (Ozone Layer Protection) Regulations 2008. The NOU at present is being supervised by the Manager of PMU. The ODS Officer has been working in close collaboration with its key stakeholders as well as the lead implementing agencies, government bodies, and the CIRAC Association.



#### Figure 2 National Environment Service Organization Structure as of February 2020

The Cook Islands does not have an established national steering committee, not a technical working group as this up to now has not been considered necessary for the MP implementation in the country; the complexity of the implementation of the MP with the KA may affect this consideration.

#### 3.2 Ministry of Finance and Economic Management – Customs Department

The Ministry of Finance and Economic Management (MFEM) was created with the enactment of the Ministry of Finance and Economic Management Act 1995-1996 at the outset of the Economic Reform Program in the 1990s. MFEM serves four (4) separate functions being Treasury Operations concerning Fiscal and financial management of public expenditure; Revenue collection (tax and customs), facilitating trade and protecting the border; collection and dissemination of statistics; and is responsible for the planning and overall management of donor programmes and project activities.

There is a good working relationship between the NOU and the Customs Department. The NOU is currently working on an MOU to provide a solid foundation for both authorities to strengthen the implementation and enforcement of ODS and ODS-based product import and export controls.

The NOU is also working with Customs to have a contact/focal person with whom the NOO may communicate and who will be responsible for ODS-related issues. This person will also need to be trained on the issues related to the HFC phase-down and will act as a trainer within Customs to train the other officers.

As the control of HFCs is more complex than the control of just R-22, more intensive and long-term capacity building is required for customs officers to understand how to control HFCs effectively. The customs and enforcement officers should be informed of the mandatory licensing system of HFCs, the potential for illegal trade of refrigerants, and need to be trained to identify HFCs and detect illegal activity.

There is no database platform for sharing information on import quotas and actual imports of ODS between the ozone office and Customs. Data sharing is conducted upon request from the NOU, which is on an annual basis for reporting purposes to the Ozone Secretariat and Multilateral Fund. Furthermore, currently there are no Standard Operating Procedures in place on the management of confiscated refrigerants.

#### 3.3 Ministry of Finance and Economic Management – Statistic Office

The Ministry of Finance and Economic Management (MFEM) houses several divisions and serves a number of functions. These include the treasury operations, financial management of public expenditure, revenue collection (tax), facilitating trade and protecting the border, collection, and dissemination of statistics, and is responsible for the overall management of donor and project programs. The Statistics Office assisted the NOU in providing information for ODS and non-ODS refrigerants imported to the Cook Islands.

#### 3.4 Office of the Prime Minister– Climate Change Cook Islands

The Cook Islands government recognized the importance of responding to climate change when it signed the United Nations Framework Convention on Climate Change (UNFCCC) on 12 June 1992 and the Kyoto Protocol on 16 September 1998.

The National Environment Services (NES) was initially responsible for facilitating various projects that focused on addressing climate change. In 1997 the Climate Change country team was formed and was housed within NES. In 2011 Climate Change Cook Islands (CCCI) was established as a division of the Office of the Prime Minister (OPM). The CCCI is responsible for meeting the Cook Islands obligations under UNFCCC including mitigating emissions and periodically reporting on the country's activities and progresses.

#### 3.5 Ministry of Foreign Affairs and Immigration (MFAI)

Te Kauono Tutara e te Mana Tiaki – Ministry of Foreign Affairs and Immigration is the government's primary agency responsible for representing and advancing the Cook Islands' interests internationally and for providing an effective national immigration service that enhances the security of the country's borders. It carries out its functions across economic, political, social, environmental, security, and other national priorities as contained in the National Sustainable Development Plan (NSDP) and other national and international policy documents and commitments.

#### 3.6 Te Aponga Uira (TAU)

Te Aponga Uira (TAU) is the Government-owned power Authority responsible for the generation, distribution, and retailing of electricity on the island of Rarotonga. The power utility provides 90% of the Cook Islands electricity demand. TAU participates in the Renewable Energy Project Steering committee and provides technical support and capacity-building support. TAU is required to ensure an efficient and reliable supply of electricity to communities.

#### 3.7 RAC Association

The Cook Islands Refrigeration and Air-Conditioning (CIRAC) was formed in 2012 to bridge the relationship between the NOU and local technicians within the RAC industry. The association was initially formed to keep those involved within the RAC industry up to date with changes and amendments to the Montreal Protocol, as ozone depleting substances are only handled by RAC technicians in the Cook Islands. Technicians from various private businesses on the main island of Rarotonga formed the association to protect and improve the situation of RAC technicians. This was to allow access to equipment, funds, and assistance from Government, as it is the Government that is responsible for enforcing and implementing the obligations under the Montreal Protocol. Due to staff turn-over (NOO) and lack of interest shown by local technicians the association became inactive for some time. In 2019, the CIRAC association was re-established with a new executive committee, new members, and funds to hold monthly meetings. Since March 2019 the NOO has held monthly meetings to keep the CIRAC members up to date with procurement of equipment, import and export updates, and the Kigali Amendment.

#### 3.8 Summary list of all key stakeholders and their roles for Montreal Protocol related activities

It is important to engage and deliberate on MP related activities while consulting with relevant stakeholders to ensure that ratification and implementation of the MP takes place in the most effective way.

Stakeholder	Related activities
United Nations Environment Program (UNEP)	Provides technical assistance for projects and reports
MFEM – Customs Department	Border control, monitoring, and enforcement on imports of ODS, ODS alternatives, and equipment relying on them. Customs also collaborates with NOU on Customs and Enforcement Officers training modules related to trade control of MP implementation, ODS, and ODS alternatives.
MFEM - Statistics	Provide statistics for the NOU
Office of the Prime Minister (OPM), Climate Change Cook	CCCI - Responsible for implementing the UNFCCC Paris Agreement on Climate Change

#### Table 9 Summary List of all key stakeholders and their roles for Montreal Protocol related activities

Islands (CCCI) and Renewable Energy Development Division (REDD)	REDD - Energy efficiency experts for support related to the interaction between the policy to reduce HFCS and the impact it might have on energy efficiency policies.
Ministry Of Foreign Affairs and Immigration (MFAI), UN and Treaties division	MFAI supports the ratification process and continues to liaise with the NOU in regards to matters concerning the Montreal Protocol and its obligations.
Te Aponga Uira (TAU) (Electricity company)	Provides cooperation and information related to electricity and energy efficiency.
RAC Association - Cook Islands Refrigeration and Air- conditioning Association (CIRAC)	Provide a platform for local refrigeration and air conditioning technicians in the Cook Islands to discuss and coordinate on RAC related matters. Promote good practices, and encourage the utilization of environmentally better refrigerants to protect the natural environment, the ozone layer and the atmosphere.
Importers of refrigerants and RAC equipment	Provide data on the import of ODS, ODS alternatives, and equipment relying on those, including 1) type of equipment 2)amount of equipment sold/imported.
Local RAC and MAC technicians	Install, maintain, and repair RAC equipment and MAC systems. Provide both import and servicing data on ODS based equipment, refrigerants imported.

# 4. Policy Review and Assessment

The Environment Act 2003 provides for the protection, conservation, and management of the environment in a sustainable manner. The Act mandates and gives powers to the National Environment Service (NES) or "Tu'anga Taporoporo", "to implement, coordinate and negotiate any projects provided under any regional or international conventions, treaties, Environment protocols or agendas relating to the environment, which the Cook Islands has ratified or to which the Cook Islands has acceded or become a signatory".

#### 4.1. The Ozone Layer Protection (OLP) Regulations 2008 (No. 23 of 2008)

The Ozone Layer Protection Regulations Act was passed by Parliament in October 2008 in recognition that worldwide emissions of certain ODSs can significantly deplete the ozone layer in a manner that is likely to result in adverse effects on human health and the environment.

The OLP Regulation 2008 regulates the imports and export of HCFC through a Permit System and empowers the Director of the National Environment Services to grant, revoke, and renew a permit application under Part III of the regulations.

Therefore, the importation of HCFCs into the country is administered by the NOU under the supervision of the NES. The Custom Department also plays a vital role to assist the NOO to monitor and record the quantity of HCFCs at the border. They have the right to confiscate the goods if there is no license/permit presented to the customs during the customs clearance process or the container of the controlled substance is mislabelled. The existing mechanisms for trade control of HCFCs and HFCs under the OLP Regulation 2008 are described below.

## 4.1.1 HCFC quota allocation process

The quota system limits the amounts of HCFCs that can be imported into the Cook Islands. When the government implemented the quota system, the baseline quota was determined based on the average of the 2009 and 2010 consumption.

- Quota is valid for 12 months from the date it is issued (this means that the quota validity can cross the calendar year)
- HCFC quota for each importer is determined based on the percentage each company contributed to the baseline quota (grandfathering principle) taking into consideration import statistics of the previous quota cycle.
- Despite the above quota allocation criteria, a special request may be made by an importer for an increase of quota. This special request will be further reviewed by the NOO and approval will be given by the Director of NES.
- As the Cook Islands agreed with the Executive Committee as part of the HCFC Phase-out Management Plan Stage I, it is noted that the quota allocated to all importers must not exceed the maximum allowable consumption indicated in the Agreement between the Cook Islands and the Executive Committee.

## 4.1.2 HCFC licensing system

The importation of HCFCs whether alone or in a mixture into the Cook Islands are prohibited but exempted under two types of permits as per Part III Sections 12 - 13 of the OLP Regulation 2008. Importers may apply for i) Health and safety permits or ii) HCFCs permit to import in bulk whether alone or in a mixture.

• A person who wishes to import HCFCs shall apply to the Director using the approved form.

- Depending on the Director's review of the application, a permit is approved or denied. Either result is communicated to the applicant in writing. For approved permits, a letter of conditions is prepared by NOU and issued after the director's approval.
- The Director is also empowered under Section 14 (g) of the OLP Regulation 2008 to revoke any permit if the permit holder i) has been convicted of any offense against the regulations and/or ii) provided any false or misleading information in relation to the application for the permit.
- Currently, once issued, the permit is valid for 12 months from the date of issuance. Similar to the HCFC quota system, this means that the permit validity can cross the calendar year. The 2021 Amendment to the ODS regulation which is currently being drafted will change this provision making it a per-shipment license with a validity of 45 days after its issuance or the end of the calendar year (whichever comes first).

## 4.1.3 HFC Quota and licensing system

There is currently no import quota being enforced for HFCs as the HFC baseline consumption still has to be established (baseline period 2020-2022). The quota for HFCs will be enforced from 1<sup>st</sup> of January 2024 at the latest. Although there is currently no quantitative limitation to the import of HFCs prior to 2024, the HFC importers are nevertheless mandated to request a permit to import HFCs since 1<sup>st</sup> of January 2021 through an agreement with the Customs Department. The 2021 Amendment to the ODS regulation which is currently being drafted will formalize this provision.

#### 4.1.4 Data monitoring and reporting

#### After Permit Issuance

NOU works closely with Customs by providing an updated list of importers to ensure effective monitoring of prohibited imports.

#### **During customs clearance**

Part IV of the OLP Regulation 2008 empowers any officer enforcing the Environment Act 2003 and Customs Revenue and Border Protection (CRBP) Act to seize any controlled substance and related goods in breach of prohibition regulations. Similar powers are given to Customs officers under Part 14 of the CRBP Act to monitor and enforce legal provisions towards prohibited imports through examination of goods, verifying entries, seizure, and detaining of goods suspected in violation of prohibition provisions.

The CRBP Act Part 6 Section 62 mandates goods that are imported or that are to be imported to be entered by the importer in such form and manner as may be prescribed. Entries can also be made by electronic means such as a computer or other devices and within such time as may be prescribed or such further time as the Comptroller may allow. The Cook Islands Customs Authority established a computerized entry processing system under Part 13 of the CRBP Act. The system requires users to be registered through applying in writing to the Comptroller in the prescribed form and must provide such information in relation to the application as is required. Lodging paper clearances according to CICS are currently required to be scanned and emailed to their office including supporting documentation.

Importers of exempted prohibited goods by permits such as HCFC importers can only use an approved Customs broker to facilitate and handle the clearance process. The Customs Broker is required to provide the below listed documents to CICS in order for goods to be released.

- Complete Import Entry CICS Form 056;
- Complete Import Delivery Order CICS Form 051;

- Invoices, receipts, or proof of payment attached;
- Credit note (supplier);
- Original clearance (if applicable);
- Airway bill, bill of lading, or arrival notice;
- Packing list;
- HCFC Import Permits
- Any supporting documents.

#### Annual Reporting

Part III Section 14 (e) of the OLP Regulation 2008 mandates a permit holder to submit a report to the Director by the 30<sup>th</sup> January of each year. The report is required to specify the amount of any controlled substance imported or consumed in the previous year. Permit holders are also required to report on the uses to which the controlled substance was put, and any other matter that the Director may from time to time require.

#### 4.1.5 Controls on import of HCFC-based equipment

There are currently no controls on the import of CFC and HCFC-based equipment under the OLP Regulation 2008. This will be included in the amended OLP Regulation 2008.

#### 4.2 2021 Amendment to the OLP Regulation 2008

The Cook Islands is currently finalizing an Amendment to the current OLP Regulation 2008 for HFCs and other alternative refrigerants to ensure obligations under the Kigali Amendment are met. On review of the current OLP Regulations 2008, the following amendments were proposed in the amendment, which is being finalized:

- a) Incorporated control substances listed in Annex F of the Montreal Protocol namely hydrofluorocarbon (HFC) into the schedule of the Ozone Layer Protection Regulations 2008.
- b) Provision to regulate HFCs whether or not as a single substance or as a mixture through the licensing system to control the import and export as per Cook Islands' obligation to the Kigali Amendment.
- c) Provision to regulate refrigeration and air conditioning system/equipment containing HFCs or its mixtures through the licensing system to control the import and export.
- d) Changed modality of permit system from multiple-shipment permit with validity of 12 months after issuance of the permit to be per-shipment permit with validity of 45 days after issuance of the permit
- e) Strengthened the data monitoring mechanism by
  - Requiring holder of a bulk HFC permit must, within 15 days after using the permit (or its expiry without use), submit to the Director (i) the permit and (ii) the customs declaration form in respect of the substances imported together with invoices and bills of lading necessary to show the exact quantity of substances imported, the date of import, exporting country, and port of entry.
  - All permits granted under the Regulation every permit holder must submit a report to the Director by the close of 30 January each year specifying required information.
- f) Imposed ban on the import of the following goods to enter the Cook Islands under the Ozone Layer Protection Regulations 2008
  - Any types of HCFCs from the commencement of the amending regulations

- Any types of refrigeration and air conditioning system/equipment containing or designed for use with CFCs or HCFCs whether for commercial purposes or as personal property of residents returning to the Cook Islands.
- g) The current regulations do not make provision for the qualification of personnel handling controlled substances. The Amendment determined who may be certified to undertake installation, maintenance, and servicing/disposal of refrigeration and air conditioning equipment/system that use refrigerants;

#### 4.3 HS Code for HFCs

The Cook Islands is a member of the Oceania Customs Organization (OCO) and adopts the OCO's Pacific Harmonized Commodity Description and Coding System (PACHS) as the national HS code to facilitate the trade of commodities. PACHS 2017 is the current version of the regional code for Pacific Island Countries, which was developed based on the World Customs Organization (WCO)'s Harmonized System (HS) Nomenclature 2017. The Cook Islands successfully adopted the PACHS17 on 1 June 2018.

While the Cook Islands Customs Services has had a mechanism to monitor and report data of HCFC imports under the PACHS17, which classifies specific HS code for most commonly used HCFCs used in the Pacific island Countries including the Cook Islands, there will be additional challenges in the monitoring and reporting of HFCs. As the original PACHS17 has no specific code for different types of HFCs and blends, it is necessary that each imported HFCs and blends is individually identifiable through separate HS codes to facilitate data reconciliation.

The WCO's "Recommendation of the Customs Co-operation Council on the Insertion in National Statistical Nomenclatures of Subheadings to Facilitate the Collection and Comparison of Data on the International Movement of Substances Controlled by Virtue of the Kigali Amendments to the Montreal Protocol on Substances that Deplete the Ozone Layer", dated 27 June 2019 was established as an interim solution prior to 2022. The WCO's recommendation provided guidance to include sub-heading for single HFCs under the HS sub-heading 2903.39, mixtures containing HCFCs/HFCs under the HS sub-heading 3824.74, and mixtures containing HFCs under the HS sub-heading 3824.78. As a result, Cook Islands NOU was part of 14 Pacific Island Countries NOUs contributing to the development of the joint proposal to the OCO for the amendment of the HS code under PACHS17 to assign specific HS code for HFCs and blends in accordance with WCO recommendation. The proposal for amendment was approved by the Review Committee in September 2019. The NOU negotiated with Cook Islands Customs Authority on the adoption at the national level, but there was a challenge in the adoption of revised PACHS17 given the need for the legal process to adopt the new revision.

Moreover, the WCO through the Harmonized System (HS) Committee has approved the 2022 HS code to create HS codes for commonly traded HFCs and mixtures containing HFCs. The updated WCO's Nomenclature 2022 will be effective and adopted by members from 1 January 2022. However, the 2022 HS code still does not entirely distinguish individual HFCs and blends especially the blends. In this regard, the Cook Islands NOU was involved in the preparation of the regional PACHS2022 to includes specific HS codes assigned for HFCs and its blends in accordance with the classification under the WCO's 2022 HS version. The PACHS22 with specific HS code for HFCs and blends has been adopted by OCO and circulated to member countries for adoption by 1 January 2022.

#### Table 10 Existing Legislative frameworks on ODS, ODS Alternatives in the Cook Islands

		НС	CFCs	HFCs		Other Re	efrigerants
	TYPE OF ACTION	Yes/No	Since when (Date)	Yes/No	Since when (Date)	Yes/No	Since when (Date)
1	Montreal Protocol Obligations		•		·		
	Does the existing policies include phase-out/phase- down schedule as per the Montreal Protocol obligations?	Yes	Oct-2008	To be implemented	Upon approval of the revised Regulation	No	N/A
2	Quota System for Import and Ex	kport	•		•		
	Quota system in place	Yes	Dec-2011	To be implemented	Upon approval of the Regulation	No	N/A
	Quota system in operation	Yes	Dec-2011	To be implemented	Jan-2024	No	N/A
	Procedures for quota allocation	Yes	Dec-2011	To be implemented	Upon approval of the revised regulation	No	N/A
3	License system for Import and E	Export					
	Mandatory import license system in place	Yes	Dec-2011	Yes	1 January 2021 <sup>4</sup>	No	N/A
	Mandatory import licensing system in operation	Yes	Dec-2011	Yes	1 January 2021	No	N/A
	Is registration of refrigerant importers required?	Yes	Oct-2008	Yes	1 January 2021	No	N/A
4	Data Monitoring and Reporting						
	Regulatory procedures for data reporting in place	Yes	Oct-2008	To be implemented	Upon approval of the revised regulation	No	N/A
	Post-clearance reporting requirement in place	No	-	To be implemented	Upon approval of the revised Regulation	No	N/A
	The country has a specific harmonized code (HS code) to distinguish different types of commonly used refrigerants	Yes	2013	To be implemented	Upon approval of new HS codes at the national level	No	N/A

<sup>&</sup>lt;sup>4</sup> Through agreement with Cook Islands Customs Authority as indicated in the letter to the Ozone Secretariat dated 12 Janaury 2021. The NOU is finagling the amendment to the existing OLP Regulation 2008 to empower the NOU to implement the licensing and quota system for HFCs under the Kigali Amendment.

		НС	CFCs	HFCs		Other R	Other Refrigerants	
	TYPE OF ACTION	Yes/No	Since when (Date)	Yes/No	Since when (Date)	Yes/No	Since when (Date)	
-	Are estimated quantities and origin of refrigerants imports tracked by country?	Yes	Dec-2011	To be implemented	Upon approval of the revised Regulation	No	N/A	
5	Other Provisions	le l	le l					
	Requiring permits for sale/purchase of controlled substances	No	-	No	-	No	N/A	
	Requiring permits for import of brand-new and used RAC equipment containing	No	-	To be implemented	Upon approval of the revised Regulation	No	N/A	
	Ban the import of brand-new and used RAC equipment containing	To be implemented	Upon approval of the revised Regulation	No	-	No	N/A	
-	Ban on upgrading or establishing new production capacity using	To be implemented	Upon approval of the revised Regulation	To be implemented	Upon approval of the revised Regulation	No	N/A	
	Requiring RAC technician to obtain a permit to handle controlled substance	To be implemented	Upon approval of the revised Regulation	To be implemented	Upon approval of the revised Regulation	No	N/A	

#### 4.3 Interactions with other policy measures

The Kigali Amendment will be beneficial for reducing emissions and their impacts on climate change. It is the role of the NOU to ensure that there is engagement with government and private sectors, especially in the implementation of policies that interact with the Kigali Amendment.

#### 4.4 Energy Efficiency Policy

The Kigali amendment provides an opportunity for the Cook Islands to synergize HFC Phase-down with energy efficiency. This will motivate the Cook Islands Government to support energy efficiency technologies being imported into the country.

In 2011, the government established the Renewable Energy Development Division (REDD) under the Office of the Prime Minister. REDD is responsible for Renewable Energy (RE) and Energy Efficiency (EE). The Cook Islands has several Acts that deal directly with energy or related issues:

#### Cook Islands Energy Act 1998 (amended 2012)

The Energy Act specifies and assigns the energy responsibilities within the government for planning, renewable energy, standards, legislative review, energy efficiency, energy research, monitoring of electricity tariffs, and monitoring and approving the quality of petroleum products and their compliance with fuel standards.

#### Te Aponga Uira Act 1991 (amended 1999)

The Te Aponga Uira (TAU) Act established a government-owned utility to generate and distribute electricity for Rarotonga. The TAU Act of 1991 (amended 1999) established it as a commercially-operated government-owned utility. It is charged with generating and distributing electricity for Rarotonga. TAU's operation is governed by this act and the Cook Islands Investment Corporation (CIIC) Act of 1998, which allows TAU to operate with private sector participation from diesel and renewable (solar PV and wind) power generators.

According to TAU and the Energy Division of the Ministry of Infrastructure and planning, in 2020 total electricity generation in the Cook Islands amounted to 34mwh with 25.0 MWh delivered from diesel generators and 8.9 MWh provided by renewable sources, chiefly solar. TAU provides electricity to Raratonga with a split of 24.1 MWh to 4.3 MWh diesel and solar respectively. Other islands rely more on solar produced electricity.

The Statistics Office of the Ministry of Finance and Economic Management notes that in 2016 there were 4,435 dwellings in the Cook Islands of which were 4,269 were connected to grid-supplied power. Most of the remaining dwellings produced their own power with either generators, solar panels, or wind turbines, while just 29 dwellings had no electricity.

Stepped pricing is applied to electricity consumption in the Cook Islands. Usage up to 60 kWh per month is charged at \$NZD 0.53 per kWh while consumption between 60 kWh up to 300 kWh is charged at \$NZD 0.77 per kWh. The price of electricity is in the order of 20% above the average for PICs.

#### National Energy Policy 2003

In 2003, the Cook Islands' Cabinet endorsed a National Energy Policy, which aims to "to facilitate reliable, safe, environmentally acceptable, and cost-effective sustainable energy services..." The NEP includes a strategic plan with activities, lead agencies, indicators of success, assumptions and risks, and timeframes.

The policies and activities are well thought-out, clear, and consistent, although until recently there was neither a budget allocation for implementing activities nor indications of priority. The new Renewable Energy Development Division (REDD) that reports directly to the office of the Prime Minister has now, under the new Energy Act, gained all responsibility for implementing the energy policy and strategic plan and has absorbed all functions of the old Energy Division, including responsibility for the inspectors. This action clearly shows the Government's commitment to reducing the use of fossil fuels and improving efficiency in the use of available energy.

#### Renewable Energy Roadmap 2012

The Cook Islands Renewable Chart is the country's renewable energy "roadmap". Published in 2012, the charter aims to achieve the Government's target of 50% of Cook Island's electricity to be provided by renewable energy in 2015, and 100% in 2020 (i.e. the 50/15 – 100/20 renewable electricity policy goals). The charter is accompanied by an implementation plan that aims to use proven technologies for achieving renewable energy goals. REDD, based within the Prime Minister's Office, is charged with promoting awareness of the country's renewable energy policy drive and targets, planning of the Renewable Electricity Charter and its implementation plan, and coordinating the Renewable Energy Committee.

The National Renewable Energy Committee, chaired by the Prime Minister, has the role of leading and directing project initiatives arising from the Renewable Energy Charter as well as vetting the deployment of various renewable energy technologies in the country.

It noted that the Environment Act which applies to Rarotonga, Aitutaki, and Atiu, restricts the use of biomass for energy production

Policies	Brief Description	Relevance to the Montreal Protocol and the Kigali Amendment
The Energy Act 1998 (amended 2012)	The Act addresses, amongst other issues, safety standards and licensing.	Not directly relevant
Energy Regulations 2006	The Regulations govern the licensing, technical, and safety requirements for power generation, distribution, and consumer premise wiring, including the qualifications and technical skill requirements for the registration and licensing of various grades of electrical workers	Not directly relevant
Pacific Appliance Labelling and Standard (PALS) Customs Regulation	Designed to assist 9 Pacific countries including the Cook Islands to implement labeling and standards for energy-using equipment such as refrigerators, freezers, air conditioners, and lighting. The draft is under review for submission to Cabinet.	Energy Rating Labels to ensure that people have the information required to make energy-efficient choices when looking to purchase RAC equipment, including those that contain HFCs, i.e. R-410A and R-32 based AC. There is a high opportunity to synergy the

Table 11 Policies under the REDDenewable Energy Department Division and its relevance to the Montreal Protocol and Kigali Amendment

Policies	Brief Description	Relevance to the Montreal Protocol and the Kigali Amendment
		HFC phase-down under the Kigali Amendment with PALS.
Draft Minimum	A regulation was developed based on the above	Refrigerators, freezers, air
Energy	PALS Customs Regulation to standardize	conditioners especially air-
Performance	appliance imports to the Cook Islands. The draft	conditioners have been
Standards and	is under review for submission to Cabinet.	identified as the highest
Labeling (MEPSL)		energy-consuming appliances
Regulation		and therefore have been
		targeted under this project.
Cook Islands	To provide 50 percent of our inhabited island's	Reduction of GHG emissions
Renewable	electricity with renewable energy in 2015 and	and increasing the investment
Electricity "Chart"	100 percent in 2020	in low-carbon technologies.

# 4.5 Climate Change Regulation

The Cook Islands climate change policies focus on contributing to sustainable development, strengthening resilience to the impacts of climate change inclusively, and working collaboratively in climate change activities domestically and internationally.

Policies	Brief Description	Relevance to the Montreal Protocol and Kigali Amendment
Cook Islands Climate Change Policy (2018- 2028)	Aims to strengthen climate resilience to protect lives, livelihoods, economic, infrastructural, cultural, and environmental assets in the Cook Islands, while ensuring sustainable development. Emphasizes on building resilience to the impacts of climate change and reducing GHG emissions for the Cook Islands.	The Kigali Amendment has no impact on resilience however focuses on the reduction of emissions. The Cook Islands climate change policy confirms a zero emissions target for the Cook Islands by 2040.
Cook Island Third National Communications Report (2019)	The Cook Islands Third National Communications report is expected to enhance the general awareness and knowledge on climate change- related issues in the Cook Islands. In addition, it will contribute to the social and economic development of the country by reducing vulnerability associated with climate change, or	HFCs are classified under other gases in the TNC and contribute 3% of emissions in the Cook Islands

#### Table 12 Climate Change Policies

	proposing options to do so in the key sectors	An in-depth analysis and future
	while reducing emissions and enhancing sinks of	GHG reporting for HFCS data
	greenhouse gases.	collection is required.
Initial National	The Cook Islands INDC aims to achieve its national	HFCs phase-out under the Kigali
Determined	vision, which is 'to enjoy the highest quality of life	Amendment supports Cook
Contributions	consistent with the aspirations of our people, and	Islands efforts to achieve
(2011)	in harmony with our culture and environment'.	emission reduction goals in the
	The Cook Islands is committed to a future	INDC.
	powered by renewable energy with targets of	
	50% production transformed from diesel-based	
	to renewable sourced electricity by 2015, to	
	100% coverage by 2020.	
	The Cook Islands is developing its second NDC for	
	completion by the end of 2020.	
Joint National	Takes an integrated approach for natural	The Kigali Amendment has no
Action Plan II	disasters and climate change. The goal of the	impact on strengthening
(2016-2020)	JNAP II is to strengthen climate and disaster	resilience however focuses on
	resilience to protect lives, livelihoods, economic,	the reduction of emissions.
	infrastructural, cultural, and environmental	
	assets in the Cook Islands in a collaborative	
	sectoral approach.	

## 4.6 Regulations on Solid & Hazardous Wastes

Policies/Organisations	Brief Description	Relevance to the Montreal Protocol and the Kigali Amendment
Solid & Hazardous Waste 2016-2026	The focus of this policy is to improve the Cook Islands management of solid waste and Promote shared responsibility for waste management by all stakeholders. The policy provides the higher-level framework within which more detailed solid waste strategy or strategies will operate. Strategies will set out the actions required to give effect to the policy.	Not directly related to the MP, nevertheless, the NOU may consider coordinating with other agencies in the future on the end of life of RAC appliances. The Cook Islands faces some particular challenges in managing solid waste due to the lack of legislation, limited institutional capacity, high transport costs, lack of investment in related infrastructure, and poor management of hazardous waste.
Environment Act 2003	Under the Environment Act 2003, NES is the implementing agency; its functions include preventing, correcting, and controlling pollution; and ensuring the	NOU may consider coordinating with other agencies on leakage prevention and management of unwanted refrigerants.

Policies/Organisations	Brief Description	Relevance to the Montreal Protocol and the Kigali Amendment
	environmentally safe disposal of toxic chemicals and wastes.	
Public Health Act 2004, Ministry of Health Act 2013	The functions of the Public Health Act, Ministry Act 2013 include implementing laws, requirements, programs, and initiatives relating to public health issues affecting the health of the community and the environment. This includes waste management, and hazardous and harmful substances and practices. Part 6 of the Public Health Act seeks to ensure that waste is safely stored, collected, treated, removed, transported, disposed of, and otherwise dealt with.	Mandates initiatives on management of hazardous substances including storage and transportation.
Infrastructure Cook Islands	Responsible for the administration of the landfill and recycling center and the collection of rubbish and recyclables on Rarotonga. Provides waste management advice to the Island Governments. The Water, Waste, and Sanitation (WATSAN) Division sits under the auspices of ICI, with responsibility for policy aspects of waste management.	ICI needs to be kept informed of technology changes that may potentially impact the safety of their operations (for instance presence of potentially harmful substances in appliances entering the waste stream).
Island Governments	Responsible for waste management in Te Pa Enua on their respective islands.	Same as above.
Cook Islands General Transport Ltd	A land and sea transport business that practices recycling, particularly of scrap metal including steel and aluminum. Also exports plastic PET bottles and whiteware for recycling.	Dispose of RAC equipment/recovered cylinders
Cook Islands Trading Corporation	The retail and wholesale business which practices recycling and other waste reduction initiatives including reducing product packaging, accepting the return of traditional light bulbs, and selling reusable shopping bags.	Not directly relevant
T&M Heather Ltd	Current contractors for the Rarotonga roadside collection of municipal solid waste and recyclables.	Not directly relevant

## 4.7 Regulations and standards on safety in the adoption of flammable refrigerants

There are no existing standards in the Cook Islands that prohibit the use of flammable/toxic refrigerants. While this lack of standards to control the use of potentially hazardous refrigerants can fast track the adoption of low-GWP alternative technologies, the uncontrolled adoption of products beyond the capacity

and capability of current technicians and organisations has the potential for adverse health and safety outcomes.

The Dangerous Goods Act addresses safe storage and handling of petroleum fuels but there are no specific standards or inspection procedures.

# 5. Technology Penetration trends for HFC phase down in the Cook Islands

This chapter provides an overview of the market for refrigerants and technologies (RAC/MAC) in the Cook Islands. The data was obtained from importers of HCFCs and HFCs, the Statistics Department (MFEM), the Bank of the Cook Islands (BCI) and verification report of 2015-2019 HCFC consumption.

#### 5.1 Importers

The Cook Islands is 100% reliant on imports for refrigerants and RAC technology. The Cook Islands neither exports nor produces ODS and ODS-alternatives, nor RAC equipment. Depending on the type of controlled substances, the import information is summarized as follows:

- **HCFC in bulk**: The verification of 2015-2019 HCFC consumption and the 2020 Article 7 data revealed that, since 2015, the Cook Islands only imported 190 kg of HCFC-22 in 2017.
- **HFC in bulk**: HFCs imported to the Cook Islands have been originated from New Zealand. Since 2016, Cook Islands imported HFC-134a, HFC-32, R-404A, and R-410A. These were imported by importers listed in the below table.
- **RAC/MAC equipment technologies** imported to the Cook Islands are commonly originated in either New Zealand, Australia, or China.

	Name of Importer	Refrigerant Type	Business Type
1	Manea Foods	R134a, R404A,	Supermarket
2	CITC Building Centre	R134a, R404A, R410A R427A	Building Supplies
3	Cook Islands Motor Centre Ltd	R134A	MAC Services
4	Edgewater Resort	R410A, R407C,R32, R314A	Accommodation
5	CITC	R134a, R32, R404A, R600a	Business
6	Tamanu Resort	R410A	Accommodation
7	Prime Solutions	R134a, R404A, R410A, R600a	RAC Services
8	Andersons Limited	R134a, R404A, R407C, R410A	Energy Company

#### Table 14 Imports of HFCs and alternatives refrigerants

#### 5.2 Refrigerants import amount and trend

The data shows steady increases in consumption of HFCs and low-GWP alternatives contained in and used to service air-conditioners, chillers, and commercial and domestic refrigerators. This trend is expected to continue into the foreseeable future.

- The trends for R-410A and HFC-134A show a rise in demand for ODS alternatives that exhibit high GWP.
- The import of R-407C has been steady and mainly used in air-conditioners with the capacity of over 3 tons as a replacement for R-22. Most of the end-users of R-407C have indicated that they are phasing out the use of R-407C as it is more expensive compared to R-410A, and existing systems will be retired and replaced with equipment containing R-32.
- Considering that the Cook Islands is a remote Pacific island, there is stockpiling of ODS alternative refrigerants for urgent requirements, R-404A in particular is being stockpiled by end-users of cold storages and walk-in chillers to prepare for catastrophic failures and any shortage of supplies.

The table below shows the annual imports of all refrigerants including HFCs from 2016-2020.

Pofrigorant	Imports (Kg)					
Keingerant	2016	2017	2018	2019	2020	Total (kg)
HCFC-22	0.0	190	0.0	0.0	0.0	190
R-410A	79.1	180.8	316.4	655.4	339.0	1570.7
HFC-134a	136.0	244.8	163.2	421.6	122.4	1088.0
HFC-32	0.0	9.0	12.0	21.0	15.0	57.0
R-404A	185.3	262.5	632.2	446.9	65.4	1592.3
R-407C	113.0	135.6	67.8	0.0	0.0	316.4
R-427A	0.0	0.0	226.0	0.0	0.0	226
Total (kg)	513.4	1022.7	1417.6	1544.9	541.8	5040.4

 Table 15 Annual imports of refrigerants including HFCs from 2016-2018

Source: data from importers' records, 2020 market survey

#### Figure 3 Refrigerant Imports 2016-2020



#### 5.3 Overview of HCFC & HFC and other refrigerant-based RAC/MAC equipment in the Cook Islands

The Cook Islands does not manufacture or export any RAC/MAC equipment such as domestic refrigerators, commercial refrigerators, and freezers, residential and commercial-sized air conditioners, large refrigeration systems, chillers, mobile air-conditioners. Depending on the type of equipment, they are imported as new or second-hand from other countries including New Zealand, Australia, and China.

While data regarding imported RAC equipment is collected through the Revenue Management Division – Customs Department and held by the Statistics Office it cannot be accessed as it is assessed as commercial-

in-confidence. The import statistics also do not provide the breakdown by type of refrigerant since the HS code of RAC equipment is the same regardless of its refrigerant type. Recent advice from major importers and resellers of equipment is as follows:

- All refrigerators and chest freezers imported and sold contained R600a as the refrigerant;
- The air conditioning market is split with one major importer selling only HFC-32 based units, while another sells only R-410A units;
- Unit sales data was not disclosed for commercial reasons.
- The country of origin for the majority of the equipment imported during 2016-2018 was from New Zealand, Australia and China.

Regarding MAC systems, NOU obtained the annual new registration of vehicles from the BCI. Although the annual registration of new and used vehicles does not include the refrigerant type in the MAC system, the survey confirmed that HFC-134a is the sole refrigerant in the MAC sector.

Mobile Air	Model	2016	2017	2018	Total
Conditioning	Cars/SUV/Station Wagon/Jeep/Van	221	299	276	796
	Truck/Mini Truck/	94	117	110	321
	Fire Truck	-	1	2	3
	Bus	-	4	1	5
	Total	315	421	391	1125

#### Table 16 MAC equipment imported into to the Cook Islands during 2016-2018

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Sector	Sub-Sector	ODS Alternative used
Domestic Refrigerator	Appliances/Freezers	HFC-134a and R-600a
Commercial Refrigerator	Stand Alone (glass door bottle coolers, and chest freezer/top sliding freezer) and Condensing units	R-404A, R-134a, R-290
Mobile Air Conditioning	Automobiles	R-134a
Air-Conditioning	Self-Contained, Mini Splits and Multi-splits/ducted	R-410A, R-407C
Walk-in Cold Storage	Refrigeration applications mostly in commercial economic sectors	R-404A

#### 5.4 Users – servicing sector

The assessment under the Enabling Activities project included reviewing the information from the Cook Islands ODS Alternatives Survey Report 2017. In addition, the NOU gathered updated information by identifying importers of refrigerant based equipment, conducitng surveys and interviews with owners of refrigerant-based equipment and servicing technicians, and by communicating with Bank of the Cook Islands.

The survey confirmed that HFCs are being used in the servicing sector only. The servicing sector includes domestic refrigerators, commercial refrigerators and freezers, residential and commercial-sized air conditioners, large refrigeration systems, chillers, and mobile air-conditioners.

## 5.4.1 Domestic Refrigerators

During the ODS Alternative Survey 2017, it was noted that more than 50% of the domestic refrigerator imports in recent years have been R-600a technology. Most domestic refrigerators are imported as new and pre-charged equipment and no refrigerants are needed for the installation.

#### Table 18 Servicing of domestic refrigerators

	Installation of new and second-hand equipment	Servicing of existing equipment
Domestic refrigerators	New equipment - Do not require the use of refrigerants for installation as it is pre- charged from the manufacturers in exporting countries. Second-hand equipment – Not applicable as they are not imported.	The average charge size is 0.10 kg for HFC- 134a and 0.05 kg for HC-600a.

#### 5.4.2 Commercial Refrigeration

Commercial refrigeration applications imported to the Cook Islands during 2016-2018 were mostly condensing units, glass door bottle coolers, and chest freezer/top sliding freezer.

#### Table 19 Servicing of commercial refrigerators

	Installation of new and second-hand equipment	Servicing of existing equipment
Commercial refrigerators	New equipment - Do not require the use of refrigerants for installation as it is pre-	Almost all commercial refrigerators equipment requires servicing annually.
	charged from the manufacturers in exporting countries.	For equipment relying on HFC-134a and R-404A, the average charge size is 0.7 to 0.8
	Second-hand equipment – Not applicable as they are not imported	kg for small standalone units.
Condensing Unit	New equipment - requires the use of refrigerants for installation as it is not pre- charged from the manufacturers in exporting countries.	The charge size varies but can be more than 30 kgs for large supermarket systems.
	Second-hand equipment – Not applicable as they are not imported	

#### Table 20 Servicing of refrigeration systems and cold storage

	Installation of new and second-hand equipment	Servicing of existing equipment
Large refrigeration	New equipment – requires full refrigerant charges when newly installed.	Large systems and cold storage require regular maintenance and servicing.
systems and cold storage	Second-hand equipment – Not applicable.	The main refrigerant is R-404A with charge sizes 5-30 kilograms although very large systems have larger charges.

#### 5.4.3 Room Air-conditioners

The cooling capacity of residential and commercial size air conditioners installed in the Cook Islands ranges between 12,000 - 22,000 BTU per hour. According to the data collected the majority of residential systems imported were mini-split type followed by potable then window units.

For commercial size AC there was a total of 45 multi-split and 59 large split type systems imported. The survey revealed an increase in the import of R410A based systems over 2016-2018. While not shown in the survey results it is expected that some R-32 based systems have been imported and installed as some small quantities of that refrigerant have been imported.

#### Table 21 Servicing of room air-conditioners and VRF

	Installation of new and second-hand equipment	Servicing of existing equipment
Room air- conditioners and VRF systems	New equipment - Do not require the use of refrigerants for installation as it is pre- charged from the manufacturers in exporting countries	Almost all room air-conditioning equipment requires cleaning every 3 to 6 months and servicing for about every two years.
	Second-hand equipment – Not applicable as they are not imported	The average charge size for air- conditioning equipment are as following: of 0.6 kg for R-410A and 0.4 kg for R-32.

#### 5.4.5 Mobile Air-Conditioning (MAC)

This sector includes MAC systems in small cars, mini-vans, and large vehicles. The only ODS alternative used in the Cook Islands MAC sector is R-134a. It is expected that R-134a will remain dominant in the MAC sector for many years. There is no need to charge refrigerants for new vehicles. Some second-hand vehicles arrive with ACs not working, and they need to be fully charged with refrigerants after repairing the refrigerant leak. Some second-hand vehicles are imported with refrigerant gas removed, and they need to be fully charged with refrigerant second and they need to be fully charged with refrigerant gas removed.

#### Table 22 Servicing of mobile air-conditioners

	Installation of new and second-hand equipment	Servicing of existing equipment
Mobile air conditioning	New Vehicles – No need to charge refrigerant as it is pre-charged from the exporting countries Second-hand vehicles – If there has been a refrigerant leak in the system or the refrigerant has been removed from the system, it will be repaired, leak tested, vacuumed, and recharged.	About 50% of the total existing MAC requires servicing annually with different charge-sizes for different types of vehicles. Small vehicles and minivans - the average charge size is 0.8 kg

# 6. RAC/MAC servicing business in the Cook Islands

#### 6.1 RAC/MAC servicing technicians in the Cook Islands

The National Ozone Unit has had issues recording data in relation to the registration of RAC technicians and servicing companies. The turnover of staff in the NOU has impacted the quality and periodicity of data recorded. In 2018 there was a need to review and revive the Cook Islands refrigeration and air conditioning association in order for the project coordinator to collect the register of technicians and servicing companies in the Cook Islands. This alone has been a challenge as this information is not required under the OLP Regulation 2008 and Ministry of Justice record-keeping for registered RAC companies is not up to date.

The recent survey indicated 45 technicians are presently working in the RAC/MAC servicing sector in the Cook Islands. These include technicians that are

- 1) employed by RAC servicing businesses,
- 2) employed as an in-house servicing technician, and
- 3) those who work as freelance technicians.

The survey revealed that 26 technicians work in servicing workshops while 15 technicians are freelance technicians. The remaining 4 work as in-house technicians. Freelance technicians do not have their own servicing workshops but provide services when customers call them by phone.

In-house technicians are those employed by organisations that are not registered as RAC businesses with the Business Registry Office but are allowed to work with refrigerants. During the survey, a number of organisations advised having in-house technicians, for example working as hotel maintenance technicians, engineers, and electricians. However, there would seem to be some confusion regarding titles and actual responsibilities. Further investigation revealed that most of the organisations stating they have in-house service technicians actually need to outsource RAC work if the repair work involves refrigerant.

It is also noted that 62% of the technicians in the servicing sector are working in the RAC sector, while 7% are working in the MAC sector, and 31% in both RAC/MAC sectors.

Type of Employment of Technicians	No of Servicing Workshops		No of Technicians	
		Technicians in Servicing Workshops	Freelance Technicians	In House Technicians
RAC Servicing only	12	16	14	4
MAC Servicing only	6	8	0	0
MAC & RAC Servicing	0	0	0	0

Table 23 Number of registered RAC/MAC technicians by type of employment and sector

#### 6.1.1 Education level

In the Cook Islands, the majority of service technicians do not have formal vocational education before they started working in the sector and receive on-the-job training. A few technicians obtained formal vocational education. Local technicians without formal education have a medium skill level, while the technicians with formal education hold higher skill levels and undertake supervisory roles or run the business. A number of technicians received their on-the-job training from other RAC organisations and after a number of years of working for those organisations, started their own RAC servicing business.

#### 6.1.2 Technical and Vocation Education and Training (TVET)

#### **Training Syllabus**

In the Cook Islands, there is currently only one official vocational training institute, Cook Islands Tertiary Training Institute (CITTI). CITTI is located on the main island of Rarotonga. CITTI provides training and New Zealand Certificate in Refrigeration and Air Conditioning level III and level IV as listed in the below table. The course provided is over a 12 week period.

CITTI initiated a 12 weeks evening training for qualified technicians in 2019 and 2020 to provide capacity building and upskill the RAC workforce as follows:

o March to May 2019, Rarotonga, 10 participants;

o April to June 2020, Rarotonga, 10 participants.

Training included the following:

- Demonstrate knowledge of refrigeration and air conditioning principles and applications;
- Assemble commercial refrigeration and/or air conditioning system components under supervision;
- Prepare and purge braze piping for refrigeration and air conditioning.

The existing training programme identified as an avenue to sustain RAC training at the national level. The course was delivered by Greg Amos, CITC Refrigeration Engineer in collaboration with one of New Zealand Technical Universities – Manukau Institution of Technology (MIT)

CITTI is generally not properly equipped to conduct trainings in refrigeration, and the trainer often had to employ personal tools in order to deliver training modules at CITTI.CITTI is currently in the process of recruiting a tutor for this position once they see who is available for the replacement and also have providers that we are connected to from NZ who come and do block workshops in Rarotonga.

The table below shows the training syllabus of the course offered by CITTI however this does not include a specific subject on the good servicing practices for refrigeration and air-conditioner as the training syllabus is general for electrical appliance, in which the refrigeration and air-conditioner is part of the syllabus. It is also noted that the training syllabus of CITTI does not have the one for the MAC system.

#### Table 24 CITTI RAC Course Curriculum

CITTI RAC	Course Uni	ts for Delivery – 3 months	
Level III	1192	Fault-find, repair, and test portable electrical tools and appliances	2 Credits
	16411	Fault-find, repair, and re-commission fixed-wired electrical appliances	4 Credits
	18086	Draw and interpret diagrams of electrical appliances	4 Credits
	18087	Exhibit customer service skills in electrical appliance servicing	3 Credits
	18088	Demonstrate systematic fault finding techniques in electrical appliance servicing	3 Credits
	20591	Braze refrigerator pipe work in electrical appliance servicing	3 Credits
	29421	Inspect, test, fault-find, and repair fixed-wired electrical appliances and portable appliances	3 Credits
	30645	Demonstrate practical application of theory and legislation for electrical appliance servicepersons (endorsed)	3 Credits
	30646	Demonstrate knowledge of electrical theory and legislation for electrical appliance servicepersons EAS (endorsed)	7 Credits
	6705	Test electrical appliances for safety	3 Credits
Level IV	1173	Install and commission electrical appliances	5 Credits
	1189	Service microwave ovens	3 Credits
	18082	Replace faulty motors in electrical appliances	4 Credits
	18083	Service electrical appliances	30 credits
	18084	Demonstrate knowledge of refrigeration principles applicable to domestic appliances	6 Credits
	18085	Demonstrate knowledge of the operating principles and installation requirements of domestic electrical appliances	7 Credits
	18089	Demonstrate knowledge of domestic gas appliances for electrical appliance servicing	4 Credits
	22763	Service electrical or electronic goods	15 Credits
	22764	Service electrical appliances	25 Credits
	22765	Demonstrate knowledge of microwave ovens for electrical appliance servicing	4 Credits
	22766	Demonstrate knowledge of the operating principles of portable electrical	7 Credits
	22767	Demonstrate knowledge of operating principles and installation requirements of commercial electrical appliances	7 Credits
	29427	Install, test, and commission electrical appliances	2 Credits
	31729	Demonstrate knowledge of domestic systems and appliances	15 Credits
	31730	Install standard and non-standard domestic systems, appliances, and equipment	25 Credits
	31731	Restore operation and performance of domestic systems, equipment, and services	15 Credits
	31732	Demonstrate knowledge of commercial systems and appliances	15 Credits
	31733	Install standard and non-standard commercial systems, appliances, and	25 Credits
	31734	Demonstrate knowledge of consumer electronic systems and products	15 Credits
	31735	Install and configure standard and non-standard consumer electronic systems,	25 Credits
	31726	Service and repair domestic electrical appliances	22 Cradita
	31738	Bestore operation and performance of consumer electronic systems, equipment	15 Credits
	51/20	and services	
	31739	Service and repair commercial electrical appliances	22 Credits
	31740	Service and repair consumer electronic products for service technicians	25 Credits

#### Competency-based Certification of Technicians

Although CITTI provides training and New Zealand Certificate in Refrigeration and Air Conditioning level III and level IV, there is no specific competency-based certification of a technician on good servicing practices in the Cook Islands given that there is no specific subject on good servicing practices under the existing national qualification frameworks.

It is noted that, under the amended OLP Regulation 2008, Cook Islands requires that any persons handling controlled substances under the Montreal Protocol and alternatives need to apply

- A handling license
  - holds certificate III in refrigeration and air conditioning (or higher qualification) from a registered provider approved to deliver the accredited course to which the certificate relates; and
  - has at least 5 years experience in the industry and has completed the Good Practices in Refrigeration (GPR) course or an equivalent qualification recognised by the Director:
- A trainee handling license under the supervision of a person holding a handling license
  - is enrolled in a course that, on completion, entitles the applicant to be awarded certificate III in refrigeration and air conditioning (or a higher qualification) from a registered provider approved to deliver the accredited course to which the certificate relates; or
  - has at least 1 year's experience in the industry and has completed the Good Practices in Refrigeration (GPR) course or an equivalent qualification recognised by the Director.

Under the HPMP Stage II, a competency-based certification system will be set-up and implemented to enable Cook Islands to regulate the RAC servicing sector. However, the intervention under the HPMP Stage II does not include the MAC sector, which must be further addressed under the HFC Phase-down, if needed.

#### 6.1.3 Training under the HCFC Phase-out Management Plan Stage I

Under the HCFC Phase-out Management Plan (HPMP) Stage I, the NOU has been responsible for organizing a national 2-days training workshop for RAC technicians with the support of the Cook Islands Refrigeration and Air-conditioning Association (CIRAC) to address additional requirements for Good Practices in Refrigerants (GPR). The training workshop targets RAC technicians and aims to provide trade knowledge and skills on ODS, alternative refrigerants, and the proper use of tools. The training on safe handling of flammable refrigerant has been included in the recent training under the HPMP Stage I to address the penetration of flammable refrigerant technology as alternatives to HCFCs.

	Cumulative achievement s until 2017	Achievement s in 2018	Achievement s in 2019	Achievement s in 2020	Achievement s in 2021
No. Of Training Workshops organised	4	1	1	2	1
Number of Participants	60	21	8	19	8

#### Table 25 RAC technicians training

RAC	Number of	<b>Males</b> – 60	<b>Males</b> – 20	Males – 8	Males-18	Males-8
Technician	females	Females –	Females - 1	Females – nil	Females-1	Females-nil
s Training	and males	nil				
	Who trains	NOU, RAC Exp	erts			
	them					
	(institution)					
	?					
	Scope of	Refresher cou	rse for technicia	ns – ODS Laws,	Montreal Proto	col mechanism
	the RAC	and Ozone Lay	/er Protection, 1	he basis of RAC	, good service p	oractices, Kigali
	Training	Amendment.				
	Workshops					

# 7. Awareness Raising

#### 7.1 Existing initiatives

The Cook Islands NOU has implemented several awareness-raising initiatives under the Institutional Strengthening, HPMP and EA projects with the goal of improving awareness around the Montreal Protocol and its obligations as well as the Vienna Convention. The NOU coordinates public awareness activities, outreach, and the dissemination of information to stakeholders.

Activities periodically implemented under ISP include the World Ozone Day (WOD) celebration. World Ozone Day is celebrated annually on September 16<sup>th</sup> to commemorate the Preservation of the Ozone Layer. As part of the celebration, the NOU delivers key messages through information materials including banners, national TV, radio programs as well as school visits.

Table 24 explains outreach activities that the Cook Islands NOU has carried out during implementation under the ISP, HPMP, and EA Projects.

	Target group	Main topics covered		Activity
•	General public Large end- users	<ul> <li>Ozone layer protection and Climate Change</li> <li>ODS alternatives and their usage</li> <li>Consumer's responsibility and environmentally sound available options</li> <li>Alternative technologies</li> <li>Brief introduction to control measures for controlled substances and their phase-out/phase-down schedules</li> </ul>	•	Distribution of information materials (focus on visual communication such as video and printed materials) Events and brief presentations by NOU and others
•	Policy-makers and public administrators	<ul> <li>Ozone layer protection and Climate Change</li> <li>Refrigerants' role in Climate Change</li> <li>Montreal Protocol and Kigali Amendment</li> <li>ODSs and alternatives, global trends</li> <li>Controlled substances and their uses</li> <li>Control measures of the controlled substances and their phase-out/phase-down schedules</li> <li>Alternative technologies, equipment, and energy efficiency potentials</li> <li>Quota, licensing, data monitoring systems</li> <li>Implications for economic development</li> </ul>	•	Production and distribution of information materials (handbooks, factsheets, printed materials) Issue briefs Regular delivery of relevant information (by e-mail for instance) Presentations from NOU Organization of bilateral meetings
•	Servicing sector workshops and technicians	<ul> <li>Ozone layer protection and Climate Change</li> <li>Refrigerants' role in Climate Change</li> <li>ODSs and alternatives, global trends</li> <li>Business registration procedures</li> <li>Licensing and quota system procedures for controlled substances and equipment containing them</li> </ul>	•	Production and distribution of information materials (handbooks, factsheets, printed materials) Distribution of technical manuals and small guides

Table 26 Outreach activities carried out by the NOU

Target group	Main topics covered	Activity
	<ul> <li>Control measures of the controlled substances and their phase-out/phase-down schedules</li> <li>Alternative technologies, equipment, and energy efficiency potentials</li> <li>Labelling on ODS, and mislabelling</li> <li>Good practices in handling flammable and toxic refrigerants</li> <li>Relevant standards</li> <li>certification system</li> <li>Relevant regulations</li> <li>Equipment and energy efficiency potentials</li> </ul>	<ul> <li>Publication of online tools (relevant websites, courses, mobile applications)</li> <li>Regular delivery of relevant information (by e-mail for instance)</li> <li>Roundtables and presentations from NOU</li> <li>Training workshops</li> <li>Production and distribution of merchandise (wearables and gadgets)</li> </ul>
<ul> <li>Importers and retailers of controlled substances</li> <li>Importers and retailers of equipment containing controlled substances</li> </ul>	<ul> <li>Ozone layer protection and Climate Change</li> <li>Refrigerants' role in Climate Change</li> <li>ODSs and alternatives, global trends</li> <li>Licensing and quota system procedures for controlled substances and equipment containing them</li> <li>Control measures of the controlled substances and their phase-out/phase-down schedules</li> <li>Alternative technologies, equipment, and energy efficiency potentials</li> <li>Labelling on ODS, and mislabelling</li> <li>Testing kit and refrigerant identification procedure</li> <li>Relevant regulations about restrictions and bans</li> <li>HS code classification of controlled substances</li> </ul>	<ul> <li>Production and distribution of information materials (handbooks, factsheets, printed materials)</li> <li>Regular delivery of relevant information (by e-mail for instance)</li> <li>presentations from NOU</li> <li>Partnerships during events</li> <li>Production and distribution of merchandise (wearables and gadgets)</li> </ul>
<ul> <li>Officers from Customs</li> <li>Customs brokers</li> </ul>	<ul> <li>Ozone layer protection and Climate Change</li> <li>Licensing and quota system procedures for controlled substances and equipment containing them</li> <li>Control measures of the controlled substances and their phase-out/phase-down schedules</li> <li>Labelling on ODS, and mislabelling</li> <li>Testing kit and refrigerant identification procedure</li> <li>Relevant regulations about restrictions and bans</li> <li>HS code classification of controlled substances</li> </ul>	<ul> <li>Information materials (factsheets)</li> <li>presentations from NOU</li> <li>Targeted awareness meetings/focus meetings</li> <li>Regular delivery of relevant information (by e-mail for instance)</li> </ul>

# 8. Conclusions and Recommendations for HFC phase-down

The Cook Islands consumption of HFCs has been solely used in the servicing sector for the installation and servicing of RAC and MAC equipment. The choices of technologies used in the Cook Islands will depend on the RAC and MAC equipment that is imported from other countries manufacturing the equipment. As many of these countries ratify the Kigali Amendment, they will have to phase-down the use of HFCs and replace their existing manufactured equipment with low GWP alternative technologies. These alternative technologies may be either flammable, toxic, and have high pressure. This is a disadvantage for many servicing technicians in the Cook Islands as they are not at the expected level to handle the new technologies. Moreover, the infrastructure is not in place for proper storage for these products. An effective approach for safety aspects and adopting energy-efficient technologies need to be carefully considered.

On the 1<sup>st</sup> January 2019, the Kigali Amendment entered into force, and the Cook Islands, along with all other Parties to the Montreal Protocol have agreed to phase-down HFC consumption as per the obligations. However, in order to phase-down HFCs, there are additional challenges for Parties, which requires an all-inclusive approach for successful implementation due to the following reasons:

- During the HCFC phase-out, there were several challenges regarding incidents of illegal trade of ODS as well as the import of HCFC equipment that had already been prohibited - this was due to the lack of effective data monitoring and reporting. The Cook Islands will face more challenges in the implementation and enforcement of the licensing system for HFCs as there will be more substances to be controlled.
- Decision XXVII/2 of the Meeting of the Parties discussed initiatives associated with maintaining and/or enhancing the energy efficiency of replacement technologies with low or zero GWP in the refrigeration and air conditioning sector. It is necessary to identify new partners, their roles, and responsibilities for the successful implementation of the Kigali Amendment.
- The informal servicing sector will face major challenges especially the safe introduction of low GWP alternatives that may be flammable, toxic or have higher operating pressures. The mechanism to ensure that only competent technicians are allowed to handle refrigerant will facilitate the safe introduction of low GWP alternatives, which will sustain the HFC phase-down.
- There will be an overlapping period from 2024 onwards that Article 5 countries need to phase-out HCFC in conjunction with the phase-down of HFCs. The country will need to implement activities that will facilitate the HFC phase-down and that are complementary with currently approved HPMP (i.e., changes in data reporting, policy framework, training needs identification, national strategies, outreach, and awareness).

The following table summarizes the list of recommended measures that Cook Islands stakeholders shall consider to assist in the implementation of the HFC phase-down. According to the data and information collected for the purpose of the country assessment, there are substantial issues to be addressed by the National Ozone Unit as well as by other stakeholders. These issues are highlighted below.

# 8.1 Stakeholder engagement

Recommended	Description	Stakeholder
Enhance the	Additional work is forecase within the NOUL to implement the	NOU
	Additional work is foreseen within the NOO to implement the	NOU
resources of the	Rigal Amendment. The control and phase-down of HCFCs were	
NOU to	relatively simple as only one type of HCFC (HCFC-22) was	
undertake	imported. Controlling HFCs will be more complicated as it involves	
additional tasks	many types of HFCs and additional applications. Based on the	
	updated survey, it is evident that more refrigerants e.g. HFC-134a,	
	R-410A, R-404A, R-40/C, and HFC-32 are already being imported	
	and must be compulsory controlled, with potentially new entrants	
	in the coming years. Therefore, the import quota and licensing	
	system for HFC will be more complicated to manage than that of	
	the HCFC. Additionally, the Kigali Amendment not only aims to	
	phase down HFCs, but also to support the country's energy	
	efficiency action plan and to safely introduce the HFC alternatives	
	that are flammable.	
	Therefore, additional resources are required, including the NOU	
	to perform the additional day-to-day tasks to manage the Kigali	
	Amendment implementation, which includes engaging the larger	
	number of stakeholders and ensuring that the servicing sector is	
	well prepared for the safe adoption of the flammable	
	technologies.	
Improve MVRE	In light of the need to strengthen the monitoring, reporting,	Customs &
systems	verification, and enforcement (MRVE) system, it is essential for	NOU
	the NOU to establish a mechanism to share and reconcile import	
	data of controlled substances between the NOU and Customs on	
	a quarterly basis.	
Actively involve	The NOU has identified new partners for the implementation of	NOU, Climate
new key	the Kigali Amendment based on new covered aspects and policy	Change Cook
partners	interactions.	Islands Office,
relevant to the	New key partners identified were: Climate Change policy-makers,	Renewable
Kigali	energy policy-makers. These new partners need to be actively	Energy
Amendment	involved to provide for regular exchange and decision-making	Development
	among policy-makers for the implementation of the HFC phase	Division
	down.	
Raise	Future initiatives should consider delivering the key messages	All
awareness on	through diverse channels, using mass communication media such	stakeholders
HFC-related	as radio and TV, print media such as posters displayed at public	
issues	places such as markets, schools, and community centres, and	
	online social networks. Professional specialized support is needed	
	to expand awareness and communications activities, the NOU	
	shall also make use of available expertise to make sure the	
	planning of awareness rising activities includes measurable	
	results. Surveys shall be used at times to measure the change	
	between the awareness before and after a major media	
	campaign.	

Awareness-raising is intended here as the communications activities the NOU carries out through public events, mass media, and social media, and the distribution of information materials, with the intention to inform and influence attitudes and behaviours, and should be seen distinctively from the formal training activities mentioned in later recommendations. Awareness-raising should take into account messaging for different target groups:

- Customs
- Importers of refrigerants and equipment
- RAC/MAC servicing sector technicians and businesses entities
- Policy-makers
- Large end-users (e.g. hospitality industry / fisheries, etc.)
- The general public

The customs and enforcement officers should be informed of the mandatory licensing system for HFCs to prevent the potential illegal trading of refrigerants.

Furthermore, the NOU shall clearly communicate to all refrigerants importers to make them aware of upcoming policy changes, of the criteria for HFCs quota allocation (relevant from 2024), of the changes in the licensing system and mandatory reporting, and of the need to properly and accurately declare refrigerant information including the specific HS code in their application to be checked by customs officials. The NOU shall also clearly communicate to all equipment importers to make them aware of policy changes concerning the import of equipment, on what HCFC based equipment will be banned, on EE related requirements, and what to look out for when ordering refrigerantbased equipment including favorable consideration to technologies that can help Cook Islands leapfrog from ODS to low-GWP refrigerants.

Most existing technicians do not have a proper understanding of low-GWP technologies and are unaware of the necessary safe working practices for flammable refrigerants. It is essential for RAC technicians to be informed of the HFC phase-down under the Kigali Amendment, alternatives technologies, safety issues related to HFC alternatives, certification process, as well as training opportunities.

Additionally, to prepare for the implementation of the Kigali Amendment, messages delivered through the awareness-raising activities for the large end-users and the general public should be revised to emphasise the Kigali Amendment and its HFC phasedown goal, the importance of considering purchasing newer appliances relying on low-GWP refrigerants, the energy efficiency of RAC appliances and their lifetime costs, the importance of relying on trained and certified technicians.

	<ul> <li>The main target groups and relevant topics are summarized below:</li> <li>General public – End-user, university, and secondary school students, government officials</li> <li>Connection between Ozone layer protection, energy efficiency, and climate change</li> <li>ODS and low GWP alternatives (and their ozone, climate, and energy savings benefits)</li> <li>Benefits of using certified technicians for installation and servicing of equipment (energy efficiency, safety, equipment lifetime)</li> </ul>	
	<ul> <li>Servicing sector workshop and technicians / TVET</li> <li>Policy changes and regulation amendment</li> <li>Ozone layer and climate change</li> <li>ODS and low-GWP alternatives, their cost, and benefits (risks of flammable and toxic refrigerants used as alternatives to HFC)</li> <li>Labeling on ODS and GWP value</li> <li>Benefits of maintaining Good servicing practices in installation, maintenance, and repairing of equipment</li> <li>Certification system and competency assessment, and benefits of being certified technicians</li> <li>Benefits of having proper tools and equipment for good practices</li> <li>SOG</li> </ul>	
	<ul> <li>Importer &amp; exporter of refrigerants and equipment / Shipping companies / RAC Importers / Retailers / Customs officials / Environmental Protection Officers / Port Authority/ Fishing Companies</li> <li>Ozone layer protection, energy efficiency, and climate change</li> <li>HFC licensing and quota system</li> <li>New HS codes and proper declaration</li> <li>Mandatory reporting requirements</li> </ul>	
Outreach to	When implementing the HPMP neither the domestic refrigeration	All
refrigeration	sector using HFC-134a refrigerators nor the MAC sector were	Stakeholders
and MAC	involved. These sectors use significant quantities of HFC-134a and	
sectors	their involvement is essential.	

# 8.2 Policy and regulation related to trade control implementation

Recommended	Description	Stakeholder
Actions		Involved
Revise import	The Ozone Layer Protection Act 2008 does not include controls on	All
control	HFC substances. The current regulation is specific to ODS and is	Stakeholders

mechanism	mainly to control the import of HCFCs. An amendment is being	
within the	developed to include provisions for mandatory control of HFCs to	
Ozone Layer	implement the Kigali Amendment. The list of 18 HFCs (Annex F of	
Protection Act	the Kigali Amendment) and any mixture containing them, shall	
2008	therefore be added to the list of controlled substances under the	
	Act.	
	The guota validity periods (relevant from 2024 for HFCs) shall	
	correspond to a calendar year from January to December of each	
	year (in line with the annual maximum allowable consumption	
	periods) without possibility for quotas to cross over to the following	
	year. A suitable procedure (including notice periods, appropriate	
	forms or other needed provisions) for the quota allocation at the	
	beginning of each calendar year should be devised, included in the	
	regulations and transparently communicated to all concerned	
	stakeholders.	
	The regulation amendment shall clearly specify all needed	
	procedures for the registration of importers, for the annual import	
	guota allocation, and for the license application for the import of	
	controlled substances.	
Improve NOU	During the market survey, a lack of up-to-date information on	NOU
records of	companies in the RAC and MAC sectors has been identified. The	
businesses	NOU shall strongly consider enforcing a strict mandatory	
involved in the	registration process which has been included in the amended	
RAC and MAC	regulation with NES and the NOU of all the local businesses	
sectors	involved in refrigeration, including:	
	- Importers of all refrigerants (both controlled and not	
	controlled such as natural refrigerants)	
	- Importers of RAC equipment	
	- Servicing sector businesses	
	Businesses shall be instructed also to proactively update the	
	registered information with NES and NOU whenever relevant.	
Violations of	The regulation Amendment shall specify penalties for its violation.	NOU and
the Regulation	Also, procedures for the prosecution of various possible violations	Crown Law
	of the regulation shall be specified.	
Introduce	The regulation amendment will require a person who intends to	NOU, RAC
requirement of	handle controlled substances must apply to the Director of National	Technicians,
competency	Environment Service to receive a certification.	RAC servicing
based	The NES shall integrate the good servicing practices into the	sectors, CITTI
certification to	existing certificate level III and IV as the existing one is combining	
obtain a license	with other electrical appliances and build the capacity of CITTI to	
to handle	conduct competency based certification with GSP.	
refrigerants		
Establish	Under the Kigali Amendment, HFCs are controlled in tonnes CO2	NOU
criteria for HFC	equivalent (CO2e), the NOU plans to implement the quota system	
quota	for HFCs from January 2024. From 2020-2023, the NOU will	
allocation	continue to monitor the importation of HFCs without limiting the	
	import quantities with the quota system.	

	<ul> <li>From 2021-2023, the allowed import allocation to importers may be based on the requested quantity from importers without restrictions, the quota allocation system will not be enforced between 2021 and the end of 2023.</li> <li>By September 2023, the country's HFCs baseline consumption will be determined and notified to the NOU (as the baseline year of Cook Islands is 2020-2022).</li> <li>The NOU shall disseminate and make public the criteria (grandfathering model) for quota allocation to importers, preferably before 2023.</li> <li>The import quotas will be allocated in January of every year</li> <li>From 2024, which is the first HFC phase-down obligation, the NOU will allocate quotas to importers in CO2e, this way each importer will have the flexibility to decide the import amount of each HFC refrigerant as long as the total tonnes CO2e quota of that importer is respected. However, to avoid mistakes at the Customs entry point or in reporting due to conversion, the pershipment import license of HFCs will only be requested by importers and issued by NOU in MT (while respecting the importer's allocated quota in CO2e). As there will be multiple HFCs to be controlled, it is suggested that one per-shipment license shall be issued for each HFC substance to be imported to prevent confusion during the document review for shipment clearance by the customs.</li> </ul>	
Quota enforcement and monitoring of actual import	<ul> <li>It is necessary for the NOU and Customs to have an effective tracking mechanism of the quota and permits; for example,</li> <li>The NOU will need to provide the Customs with an updated list of licensed importers and their allocated quota annually;</li> <li>The Customs should inform the NOU upon arrival of each shipment of containing controlled substances and allow the NOU to double check the declaration form and the declared HS code.</li> <li>After the clearance, it is mandatory for all importers to submit the customs declaration form to the NOU for cross-checking (post-clearance reporting requirement).</li> <li>The verification of the customs declaration form would allow the NOU to ensure that an accurate HS code is used in the declaration to customs.</li> </ul>	NOU, Customs
Strengthen reporting requirements, introduce mandatory a) post clearance reporting, and b) annual reporting to	Import data monitoring and reporting currently only concerns Ozone depleting substances. The National Ozone Unit (NOU) collects data on imports mainly from companies that are licensed importers. The data collected is reported to the Ozone Secretariat as Cook Islands' consumption under Article 7 of the Montreal Protocol. This information is also included in the Country Program Report that is submitted on an annual basis to the Multilateral Fund Secretariat.	RAC Importers, NOU, RAC servicing companies

NOU for both	The Regulation Amendment shall introduce a mandatory post	
HCFC and HFC	clearance reporting of actual import quantities for all importers of	
	controlled substances (HCFCs and HFCs); the NOU shall evaluate	
	whether to extend the requirement to HFC alternatives as it would	
	greatly benefit NOU market understanding.	
	By the mandatory reporting requirement, each importer shall	
	communicate the exact imported quantities to the NOU after each	
	shipment is cleared.	
	In addition, at the beginning of each year, importers shall formally	
	report to the NOU the whole imported amounts for the previous	
	year. Importers that do not report shall be disqualified from quota	
	and license at least for one cycle or being at risk of losing their	
	refrigerant importer business registration.	
	There should be a clear register maintained by the NOU of all	
	refrigerant and equipment importers.	
	The NOU shall put in place all necessary actions to facilitate this	
	recurrent reporting, including specifying procedures and forms;	
	these procedures and forms shall be prepared and referenced in	
	the regulation amendment.	
Develop a	The effective and accurate data monitoring and reporting of ODSs	NOU,
systemic	and HFCs under the Montreal Protocol depend on the	Customs,
mechanism to	reconciliation of data from different sources, namely the NOU and	Statistics
share and	the Customs. However, as explained in the previous chapters, there	Office
reconcile data	is no formal database and data-sharing platform between the NOU	
between the	and Customs other than the iPIC mechanism and data collected	
NOU and	from the Statistics Office.	
Customs	As there is a need to strengthen the monitoring, reporting,	
	verification, and enforcement system, the NOU and Customs shall	
	establish a recurrent data reconciliation meeting at least bi-	
	annually between NOU and custom focal point to ensure accuracy	
	and consistency. Discrepancies may be examined to understand the	
	cause of difference and processes improved to provide accuracy.	
	The reconciled data will be used for reporting to the Ozone	
Duana ana ta	Secretariat under Article 7 of the Montreal Protocol.	NOU
Prepare to	While the Customs has had a mechanism to monitor and report	NOU,
update HS	data of HCFC import, customs will have challenges in monitoring	Customs
codes to	and reporting HFCs. It is necessary that HS codes be assigned for	
	HFCs and HFC blends to facilitate data reconciliation. The world	
HEC and HEC	Committee has approved the 2022 HS code to create HS codes for	
hlends after the	commonly traded HECs and mixtures containing HECs, the WCO's	
2022 version is	Nomenclature 2022 will be effective from 2022	
introduced	$W(\Omega)$ 's nomenclature 2022 also clusters certain HECs in groups	
milloudeed	under a single HS code therefore even when 2022 nomenclature	
	will be adopted, some further subdivision will be needed in order to	
	make sure that the most commonly imported HFCs in the Cook	
	Islands have a separate HS code to enable tracking. The NOU shall	
	work with Customs to ensure that the HS codes for HFCs and HFC	

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	blends are integrated into PACHS22, the next version of the regional HS code.	
Management of unwanted refrigerants - Develop SOP on confiscated refrigerants	Once the Cook Islands controls the import of HFCs through the HFC licensing system, it is likely more refrigerant will be confiscated if proper procedures aren't followed. There is a need for the NOU and the Customs to develop Standard Operating Procedures (SOPs) that will guide the NOU and Customs on how to handle confiscated refrigerant.	NOU, Customs
Consider developing an online system for import ODS and HFC permit application and quota allocation	The Cook Islands does not have an online system to apply for permits and quotas. The development of an online system to facilitate quota and permit applications and transmission of data among NOU, importers, and Customs may be considered in the medium term to support the enforcement of the quota, permit, and data monitoring.	NOU, Customs
Ban the import of equipment relying on ODS, introduce trade monitoring of equipment relying on HFCs and HFC alternatives, and check the feasibility of further mechanisms to control RAC equipment.	<ul> <li>The Ozone Layer Protection Regulation 2008 does not include controls on equipment; not on equipment relying on CFCs/HCFCs, nor on equipment relying on HFCs or HFC alternatives.</li> <li>The ban of equipment relying on CFCs and HCFCs shall be seriously considered.</li> <li>At the same time, it is important for the NOU to gather reliable annual data on the imports of equipment relying on HFCs and HFC alternatives to identify trends and support the NOU in the planning for the HFC phase-down strategy. Therefore mandatory registration of equipment importers and annual mandatory reporting for imports of equipment relying on HFCs and HFC alternatives shall be considered.</li> <li>There is a comparative advantage to ban the import of RAC equipment to prevent the future demand of refrigerant for (i) installation and (ii) periodical servicing due to the long operational lifetime of RAC equipment.</li> <li>The Cook Islands currently does not control the import of RAC equipment relying on HFCs; the Regulation amendment will propose a per-shipment permit system for all imports of equipment.</li> <li>Encouraging importers to import low-GWP RAC equipment. The market survey has identified still a substantial amount of HFC-134a based domestic refrigerators and R-410A air conditioners being imported in recent years. Therefore, the NOU may want to indirectly reduce the country's HFCs consumption and demand through such encouragement.</li> <li>Banning the import of second-hand equipment and introducing measures to prevent unnecessary consumption of HFCs.</li> </ul>	NOU, RAC servicing sector

<ul> <li>Banning the import of high-GWP HFC-based equipment where</li> </ul>	
low GWP alternatives are commercially and technically viable,	
through coordination with relevant stakeholders from RAC	
business and government sector, includes a strong disincentive	
or ban on the import of equipment relying on R-410A	
refrigerant where leapfrogging to HFC-32 is to be strongly	
preferred. Measures to signal this policy change to the industry	
shall be taken as early as possible to minimize business	
disruption and to create mutual understanding and partnership	
between NOU and the industry.	
Consideration to EE, disincentivising or banning the import of	
equipment without inverter technology in those sectors where	
this is feasible (for instance residential air-conditioning).	

# 8.3 New policy areas related to Kigali Amendment

Recommended Actions	Description	Stakeholder Involved
Climate Change - reflect KA contribution	The HFC phase-down under the Kigali Amendment will contribute to the climate change mitigation efforts. Therefore, NOU shall work closely with CCCI, and include the positive effects of greenhouse gas emissions reduction from the HFC phase-down in the next National Communication to UNFCCC.	NOU, CCCI
Energy efficiency – establish collaboration with REDD on promoting EE in RAC appliances	<ul> <li>Decision XXVII/2 of the Meeting of the Parties discussed initiatives associated with maintaining and/or enhancing the energy efficiency of replacement technologies with low or zero GWP in the refrigeration and air conditioning sector. EE is a major contribution to the GHG emission reductions achievable with the Kigali Amendment implementation.</li> <li>Cook Islands has participated in the Pacific Appliances Labelling and Standards (PALS) initiative to enhance the energy efficiency of refrigeration and air-conditioning equipment through the adoption of Minimum Energy Performance Standards (MEPS). The RAC sector is also where the HFC phase-down will be achieved. The target audiences of both PALS and the Kigali Amendment are the same. The following should be considered for synergy:</li> <li>The NOU and REDD to share the work plan related to their programme and jointly organize EE awareness-raising and promotion of energy-efficient equipment targeting users to maximize resources in the country.</li> <li>NOU to coordinate with REDD to include energy-efficiency and PALS in the training workshop organized by NOU.</li> </ul>	NOU, REDD
Safety - introduce regulations and standards on safety in the	As there are no standards that prohibit the use of flammable refrigerants in the Cook Islands.	NOU, Ministry of Transport

adoption of flammable refrigerant	<ul> <li>NOU shall collaborate with the Ministry of Transport for the development of standards and SOPs for the safe use storage and handling of flammable refrigerants.</li> <li>The technical regulations should have provisions regarding the maximum charge size of flammable refrigerants/minimum room area requirement for equipment installation, the NOU shall link the charge size/room area requirement with the UNEP mobile application.</li> <li>The NOU shall conduct awareness workshops to enable local enterprises dealing with transportation and storage of flammable refrigerant and RAC technicians to understand and</li> </ul>	
	comply with the requirements of the national standards.	

# 8.4 Capacity building

Recommended	Description	Stakeholder
Actions		Involved
Procurement of	The Cook Islands will face some challenges inspecting the	NOU, UNEP
retrigerant	Imports of HFLs during the customs clearance process. During	
Identifiers	the implementation of HPIVIP Cook Islands acquired 2 reingerant	
	properly recognise certain common HECs for example HEC-32	
	and $R-427\Delta$ Without a proper understanding of the limitation of	
	refrigerant identifiers, there is a risk that types of refrigerant will	
	be misidentified causing operational issues from false	
	conclusions. For this reason, the NOU, with the support of UNEP	
	under HPMP Stage II funding, shall consider procuring refrigerant	
	identifiers capable of recognising all the major HFCs in the	
	market.	
Strengthen risk	Importers/customs brokers of refrigerant and RAC equipment	NOU, Customs
profiling and	need to understand the proper declaration of commodity	
ASYCUDA	descriptions and HS codes, which will be monitored through the	
system to track	post-clearance reporting requirement.	
HFC	It is highly recommended that the NOU coordinates with	
	customs officers to apply a sampling method for the verification	
	of refrigerants using a risk profiling system along with the	
	retrigerant identifier, to significantly reduce inspection time. It is	
	system also applies to HECs. This will facilitate the work of	
	customs officers during the verification, and will contribute	
	towards stricter control and accurate reporting on the import of	
	HFCs Also, the NOU shall collaborate with Customs to integrate	
	risk profiling for ODS and HFCs in ASYCUDA, underline the	
	importance of cross-checking of descriptions and HS codes to	
	facilitate accurate data monitoring and reporting.	

Update training	As the control of HFCs is more complex than the control of single	Customs,
of Customs	HCFC-22, more intensive and long-term capacity building is	Custom
officers	required for customs officers to understand how to control HFCs	Experts/Trainers
	effectively.	
	The customs and enforcement officers should be informed of	
	the mandatory licensing system of HFCs and potential illegal	
	trade of refrigerants, and be trained to identify HFCs and detect	
	illegal trade. Therefore, the Custom training curriculum should	
	be updated to include the control of HFCs, proper declaration of	
	refrigerants (including dedicated HS codes), types of smuggling	
	methods used by international syndicates for ODS, HFC cylinder	
	identification, and equipment containing them, testing of	
	cylinders with identifiers, and the safe handling of refrigerant	
	cylinders. The training should also update the Customs officers	
	on recent policy changes including new provisions related to HFC	
	controls as well as the monitoring mechanism and the	
	importance of coordination between the customs and the NOU.	
Update training	Importers must be trained to have a better understanding of	NOU, RAC
of importers	different technologies, safety concerns and standards, and to	technicians,
	properly declare to Customs the import of refrigerant and	RAC experts
	refrigerant-based equipment.	
Strengthen	Further capacity building of servicing companies and technicians	NOU, CIRAC
capacity building	is essential for the implementation of the Kigali Amendment.	Association,
of RAC servicing	NOU to liaise with the CITIT and the RAC association to:	
sector and	<ul> <li>Discuss procedures for implementation and enforcement of</li> </ul>	companies, RAC
certification	the certification of servicing technicians;	citti
	• Prepare the procedure and criteria to set up the certificate	CITII
	system for the technicians to apply and test for certificate of	
	competency;	
	Further measures	
	• As part of awareness activities, the NOU shall outreach to	
	servicing workshops to encourage them to have proper	
	tools/equipment for the safe use and handling of flammable	
	refrigerants (HPMP Stage II will support the acquisition).	
Periodically	Under the HPMP Stage II. necessary tools and training	NOU. CITTI. RAC
assess and	equipment will be provided to strengthen the capacity of the	workshops, RAC
identify future	training center (as former trainers often used personal tools to	servicing sector
equipment	conduct trainings at CITTI) and of the RAC servicing workshops.	3
requirement for	The NOU shall coordinate with UNEP and periodically monitor	
training centers	the use of provided tools and eventual future requirements as	
and RAC	alternative technologies evolve.	
servicing	The NOU will further maintain an inventory of RAC servicing and	
workshops in	training tools provided, and of RAC training centers and servicing	
coordination	workshops that receive support.	
with UNEP and		

HPMP Stage II	
implementation	