

# APPENDICES

# **APPENDIX 1: WRITTEN EVIDENCES/SUBMISSION**

**Submission by the Department of Environment**



**MINISTRY OF WATERWAYS AND ENVIRONMENT**

**PRESENTATION TO THE STANDING COMMITTEE  
ON FOREIGN AFFAIRS AND DEFENCE**

**TUESDAY [14/01/20] AT 9:30 AM**

**DEPARTMENT OF ENVIRONMENT**

## **Role and Functions of the Department of Environment**

- The Department of Environment is responsible for the protection of Fiji's natural resources (including the protection of endangered species), waste management and pollution control, control of substances (including fluorinated gases) that deplete the ozone layer through implementation of Fiji's environmental policies, programs, and enforcement of environmental laws.
- The Department is legally mandated through the following legislative instruments:
  - i) Environment Management Act (2005) and Environment Management (EIA Process) Regulations 2007, Environment Management (Waste Disposal and Recycling) Regulations 2007
  - ii) Ozone Depleting Substances Act (1998) and Ozone Depleting Substances Regulations 2010
  - iii) Endangered and Protected Species Act (2002) and Endangered and Protected Species Regulations 2003
  - iv) Litter Act 2008

### Background Info...

- ODS Unit has been established by section 8 of the ODS Act 1998 under the Department of Environment
- The Government of Fiji acceded to the Vienna Convention for the Protection of the Ozone Layer in 1988 and the Montreal Protocol to Phase-out Ozone Depleting Substances in 1989.
- Fiji was the first developing country among the Pacific Island Countries to become a party to this multilateral environmental agreement.
- Fiji phased out chlorofluorocarbon (CFC) by 2003. This was achieved by enforcement of the ODS Act 1998 and technical assistance provided by the **Ozone Secretariat**.

### Importance of the Ozone Layer

- The ozone layer is vital to life on earth because it acts as a filter for UV-B radiation, which can have severe impacts on human health and the earth's environment.
- If ozone molecules are depleted faster than they can be replaced by the new ozone molecules that nature produces, the result is an ozone deficit.
- The depletion of the ozone layer leads to a reduction in its shielding capacity and thus greater exposure of the earth's surface to UV-B radiation.

## Montreal Protocol - Past Amendments

The Government has ratified four (4) amendments to the Montreal Protocol (namely London, Copenhagen, Montreal and Beijing) in the past.

- The London Amendment (1990) changed the ODS emission schedule by requiring the complete phase-out of CFCs, halons, and carbon tetrachloride by 2000 in developed countries, and by 2010 in developing countries.
- The Copenhagen Amendment (1992) significantly accelerated the phase-out of ODSs.

## Cont'd...

- The Montreal Amendment (1997) included the phase-out of HCFCs in developing countries, as well as the phase-out of methyl bromide in developed and developing countries.
- The Beijing Amendment (1999) included tightened controls on the production and trade of HCFCs. **Bromochloromethane was also added to the list of controlled substances with phase-out.**
- Kigali Amendment is the fifth amendment that Fiji is yet to ratify.

## **Past and Current Programmes to meet Fiji's Montreal Protocol obligations/Implemented by the Department of Environment**

- Refrigerant Management Plan (RMP) – 2001
- Terminal Phase-out Management Plan (TPMP)- 2006
- Implementation of technical assistance to install alternatives to achieve compliance and phase out Methyl bromide - 2009
- Hydrochlorofluorocarbon (HCFC) Phase-out Management Plan [HPMP] – 2012 - 2020

## **Kigali Amendment**

- The Kigali Amendment to the Montreal Protocol has entered into force on 1 January 2019.
- The Kigali Amendment will help protect the climate by phasing down high global warming potential (GWP) hydrofluorocarbons (HFCs), which are commonly used as refrigerants.
- Ozone depleting substances and HFCs are used mainly in the refrigeration and air conditioning sectors, with some use in the foam blowing, fire protection, solvents and aerosol sectors.
- HFCs are not ozone depleting, but are replacements for ozone depleting substances and have high global warming potentials.
- Promoting energy efficiency of cooling technology can significantly increase those climate co-benefits.

## Kigali Amendment Con't..

- Ratifying will reinforce Fiji's commitment to the international protection of the ozone layer and climate system, provides a level playing field for countries and companies taking action to reduce reliance on HFCs, provides long term certainty for companies to invest in new and innovative alternative environmentally friendly technologies and will enable Fijian businesses to continue to trade in HFCs as the phase-down continues.
- As a net technology importer, Fiji stands to benefit from a global approach to reducing the production and use of HFCs which will encourage the development, commercialization, and distribution of newer, more environmentally friendly technologies.
- Note: Fiji only imports ODS and HFC gases (Department regulates by setting yearly quotas)

## Obligations (After Ratification)

- 2020 -2022 – baseline determination

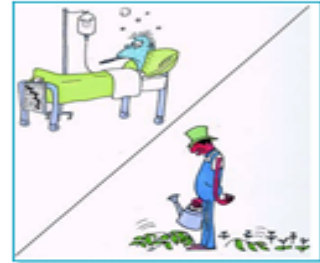
Each Party operating under paragraph 1 of this Article 5 will be obliged to calculate its consumption baseline through average of its calculated levels of consumption of Annex F controlled substances for the years 2020, 2021 and 2022, plus sixty-five per cent of its baseline consumption of Annex C, Group I, controlled substances.

- 2023 – develop a strategy and Action Plan
- 2024 – implementation
- Article 5(8) sets out the compliance with the following control measures for Fiji upon ratification:
  - (i) 2024 to 2028: 100 per cent (freeze period/set a quota)
  - (ii) 2029 to 2034: 90 per cent (reduction of 10% from the baseline)
  - (iii) 2035 to 2039: 70 per cent (30% reduction from the baseline)
  - (iv) 2040 to 2044: 50 per cent (50% reduction from the baseline)
  - (v) 2045 and thereafter: 20 per cent (80% reduction from the baseline)

## Environment and Human Health Impacts of Ozone layer depletion

### **Human health**

- Damages DNA - suppresses immune system
- Increase in infections - Skin cancer - Eye cataracts




### **Biodiversity**

- Reduces crop production and quality
- Aquatic organism
- Affects marine food chain – can result in the collapse of the food chain

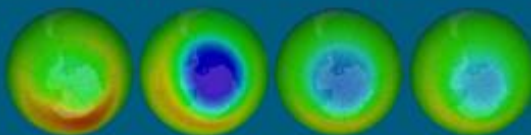
Thank you!!

## Submission by the Ministry of Industry, Trade and Tourism



MINISTRY OF  
INDUSTRY, TRADE  
AND TOURISM

**BRIEF ON ADOPTION AND RATIFICATION OF THE  
KIGALI AMENDMENT TO THE MONTREAL PROTOCOL ON  
SUBSTANCES THAT DEplete THE OZONE LAYER**



1971      2017      2041      2065

Shaheen Ali  
Permanent Secretary for Industry, Trade and Tourism

### 1.0 Purpose



i) provide background on the Montreal Protocol and the Kigali amendment to the Montreal Protocol on Substances that Deplete the Ozone Layer



ii) the impact of the adoption and ratification of the Kigali amendments to the Montreal Protocol, on imports of white goods and consumers



## 2.0 Background



key contributor to the  
global fight against climate change



ratified

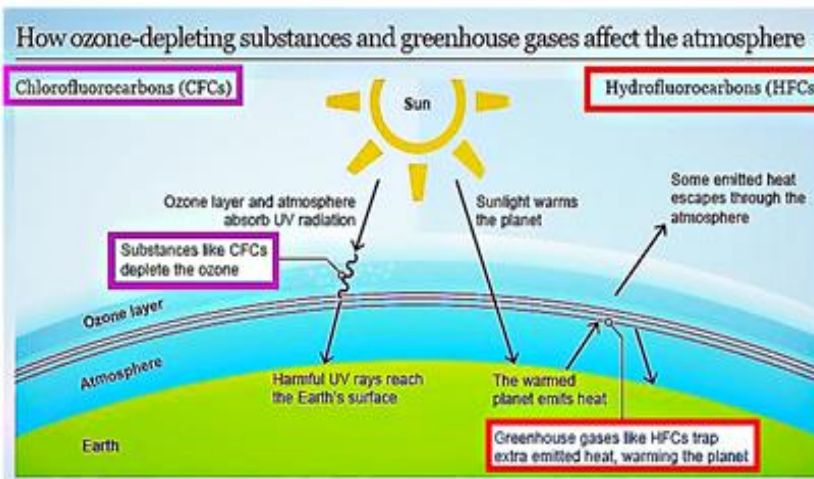
- (i) London Amendment (1990),
- (ii) Copenhagen Amendment (1992),
- (iii) Montreal Amendment (1997), and
- (iv) Beijing Amendment (1999).



Kigali Amendment  
approved by



## 3.0 Summary of the Kigali Amendment



Fiji to ratify

- 🏠 designed to phase-out or reduce the production and consumption of Hydrofluorocarbons (HFCs).
- 🏠 HFCs are frequently used in refrigeration and air-conditioning systems
- 🏠 upon ratification of the Amendment, parties will begin to deploy new technologies in line with its requirements

## 4.0 Impact of the Ratification

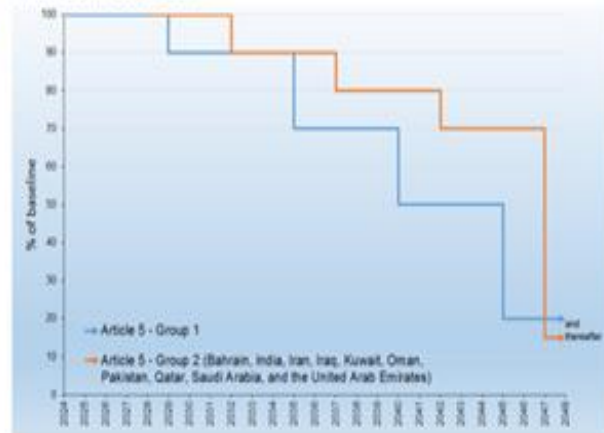
### 4.1 Fiji's commitment to phasing out HFCs



#### Summary

	Article 5 Parties: Group 1	Article 5 Parties: Group 2
<b>Baseline Years</b>	2020, 2021 & 2022	2024, 2025 & 2026
<b>Baseline Calculation</b>	Average production/consumption of HFCs in 2020, 2021, and 2022 plus 65% of HCFC baseline production/consumption	Average production/consumption of HFCs in 2024, 2025, and 2026 plus 65% of HCFC baseline production/consumption
<b>Reduction steps</b>		
Freeze	2024	2028
Step 1	2029 10%	2032 10%
Step 2	2035 30%	2037 20%
Step 3	2040 50%	2042 30%
Step 4	2045 80%	2047 85%

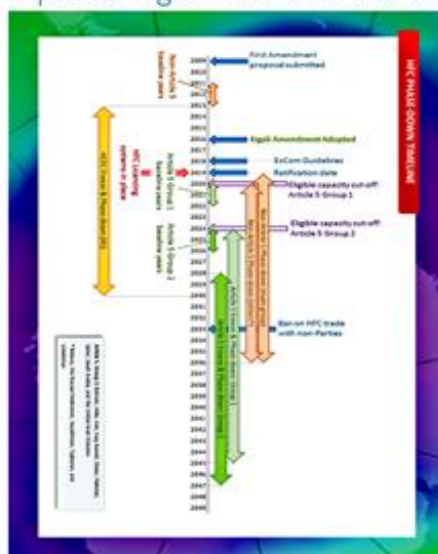
#### Phase-down schedule



phase out period will begin in 2024, and thereafter a reduction of 10% in 2029, 30% in 2035, 50% by 2040 and 80% by 2045

## 4.0 Impact of the Ratification

### 4.2 Impact of Kigali Amendment to the Montreal Protocol on Trade



The trade ban on HFCs will come into place for parties and non-parties in 2033



The ban on the trade with non-Parties after 2033 will need to be implemented through changes to the respective legislations



The Fijian Government may consider a higher tax or duty on products that contain HFCs as compared to those that are HFC-free

## 4.0 Impact of the Ratification

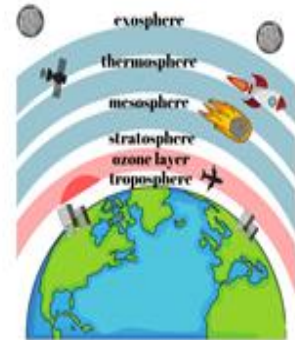
### 4.3 Impact on Consumers



There needs to be an extensive consumer awareness on the need for the phasing out of HFCs and the old refrigerators and air-conditioning units.



The cost impact will not be significant.



Consumers to be made aware of the impact of HFCs on the ozone, the environment and eventually human health.

## 5.0 Recommendations

It is recommended that Fiji adopts and ratifies the Kigali Amendment. Together with the adoption of the Amendments a number of measures should be put in place, which may include the following:



Awareness for importers on the phasing out of HFCs.



Awareness of consumers on the impact of HFCs.



Control measures at the border during the phase out period.



Incentives for importers who proactively move towards better technology products.



Opportunity to draw Multilateral Fund for the Implementation of Montreal Protocol.

## Submission by the Department of Energy



Ministry of Infrastructure and Transport  
Fiji Department of Energy



### “Adoption and Ratification of the Kigali Amendment to the Montreal Protocol”

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## Montreal Protocol

- The Montreal Protocol, finalized in 1987, is a multilateral environmental agreement to protect the stratospheric ozone layer by phasing out the production and consumption of ozone-depleting substances (ODS).
- When released to the atmosphere, those substances damage the stratospheric ozone layer - Earth's protective shield that protects humans and the environment from harmful levels of ultraviolet radiation from the sun.
- The Montreal Protocol has proven to be innovative and successful, and is the first treaty to achieve universal ratification by all countries in the world.
- The treaty evolves over time with amendments in light of new scientific, technical and economic developments, and it continues to be amended and adjusted.
- There have been a total of five amendments of which Fiji has ratified four.



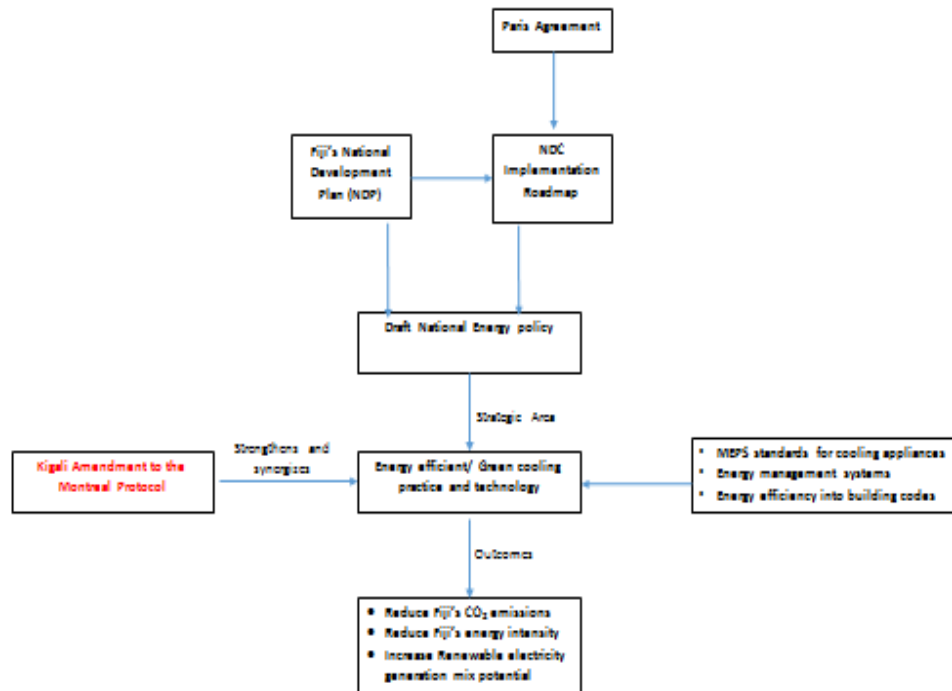
## Montreal Protocol - Amendments

Amendments to the Montreal Protocol	Description	Current Status of ratification by Fiji
The London Amendment (1990)	Changed the ODS emission schedule by requiring the complete phase-out of CFCs, halons, and carbon tetrachloride by 2000 in developed countries, and by 2010 in developing countries. Methyl chloroform was also added to the list of controlled ODSs, with phase-out in developed countries targeted in 2005, and in 2015 for developing countries.	Ratified
The Copenhagen Amendment (1992)	Significantly accelerated the phase-out of ODSs and incorporated a hydrochlorofluorocarbons (HCFC) phase-out for developed countries, beginning in 2004. Under this agreement, CFCs, halons, carbon tetrachloride, and methyl chloroform were targeted for complete phase-out in 1996 in developed countries. In addition, methyl bromide consumption of methyl bromide was capped at 1991 levels	Ratified
The Montreal Amendment (1997)	Included the phase-out of HCFCs in developing countries, as well as the phase-out of methyl bromide in developed and developing countries in 2005 and 2015, respectively.	Ratified
The Beijing Amendment (1999)	Included tightened controls on the production and trade of HCFCs. Bromochloromethane was also added to the list of controlled substances with phase-out targeted for 2004	Ratified
The Kigali Amendment (2016)	Extended controls to phase down the production and consumption of hydrofluorocarbons (HFCs) because these substances were adopted by industries in moving away from ozone-depleting substances and they are potent greenhouse gases damaging to the earth's climate.	Not yet

## Kigali Amendment to the Montreal Protocol

- The hydrofluorocarbons (HFCs), were introduced as non-ozone depleting alternatives to support the timely phase out of CFCs and HCFCs. HFCs are now widespread in air conditioners, refrigerators, aerosols, foams and other products. **While these chemicals do not deplete the stratospheric ozone layer, some of them have high Global Warming Potential (GWPs) ranging from 12 to 14,000**
- Therefore, the world has taken an important step on the road to drastically reduce the production of hydrofluorocarbons (HFCs) and limit global warming, with the Kigali Amendment to the Montreal Protocol.
- Until this amendment, the Montreal Protocol only controlled substances that damage the ozone layer. The extension of the treaty's scope now allows for the Montreal Protocol to phase down substances with high GWP.
- The Kigali Amendment to the Montreal protocol will reduce the projected production and consumption of hydrofluorocarbons (HFCs) by more than 80 per cent over the next 30 years.
- If fully supported, the amendment can avoid up to 0.4°C of global warming by the end of this century.
- 88 countries have already ratified the amendment.
- The Kigali Amendment entered into force on 1 January 2019 for those countries that have ratified the amendment

# Kigali Amendment to the Montreal Protocol



## Fiji's NDC Targets

2030 BAU  
GHG  
Emissions



INDC



Unconditional  
Conditional



### Target 1:

To reduce 30% of BAU CO<sub>2</sub> emissions from the energy sector by 2030;

### Target 2:

As a contribution to Target 1, to reach close 100% renewable energy power generation (grid-connected) by 2030, thus reducing an expected 20% of energy sector CO<sub>2</sub> emissions under a BAU scenario.

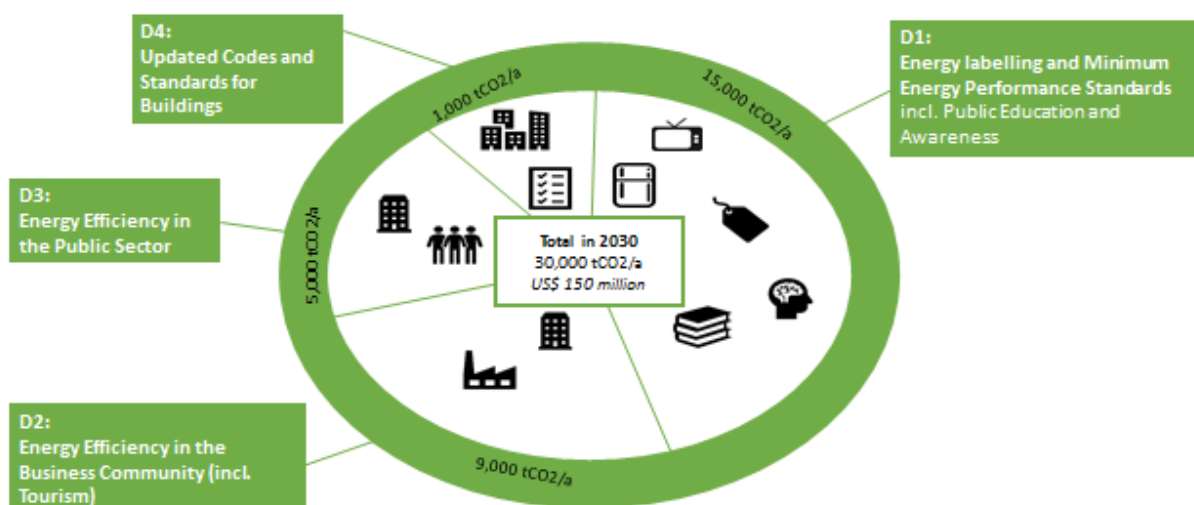
### Target 3:

As a contribution to Target 1, to reduce energy sector CO<sub>2</sub> emissions by 10% through energy efficiency improvements economy wide, implicitly in the transport, industry, and electricity-demand side sub-sectors.

## 5-Year & 20-Year National Development Plan – Energy Sector Targets

	2015	2021	2026	2031	2036
<b>Inclusive Socio-economic Development</b>					
Access to electricity (% of population) (SDG 7.1)	90	100	100	100	100
Percentage of population with primary reliance on wood fuels for cooking (%)	18	12	6	<1	0
Energy intensity (consumption of imported fuel per unit of GDP in MJ/FJD) (SDG 7.3)	2.89	2.86		2.73	
Energy intensity (power consumption per unit of GDP in kWh/FJD) (SDG 7.3)	0.219	0.215		0.209	
Renewable energy share in electricity generation (%) (SDG 7.2)	67	81	90	99	100
Renewable energy share in total energy consumption (%) (SDG 7.2)	13	18		25	

### Expected Mitigation Results, Target Areas & Investment Needs of Electricity Demand-Side Energy Efficiency



## The Benefits Of Becoming A Party To The Kigali Amendment

- Article 5 parties to the Kigali Amendment will have access to financial and technical support provided under the Protocol. There are also a number of other benefits from ratification:
  - The financial mechanism:** 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' compliance with the Protocol. Part of this package is the Multilateral Fund (MLF), which, amongst other things, meets the agreed incremental costs of Article 5 parties
  - Adopting new technologies will enable countries to gain competitive advantage on the market, as many of the latest developed alternative technologies lead to **energy efficiency and better products quality**.
  - Article 4 of the Montreal Protocol restricts Parties from trading controlled substances with states not party to the Protocol. The Kigali Amendment, when Article 4 enters into force, it will restrict trade in HFCs between parties and non-parties
  - Reaffirm the existing commitment and support under the Paris Agreement.
  - The pathway to implement the HFC phase down is to reduce dependency on high-GWP alternatives and increase the adoption of low-GWP, **energy-efficient technologies** as part of the HCFC phase-out process under the Kigali Amendment. Such approach can achieve the Kigali Amendment's objective of eliminating HCFCs while at the same time achieving **energy efficiency gains** and CO<sub>2</sub> emissions reduction — a "climate co-benefit"

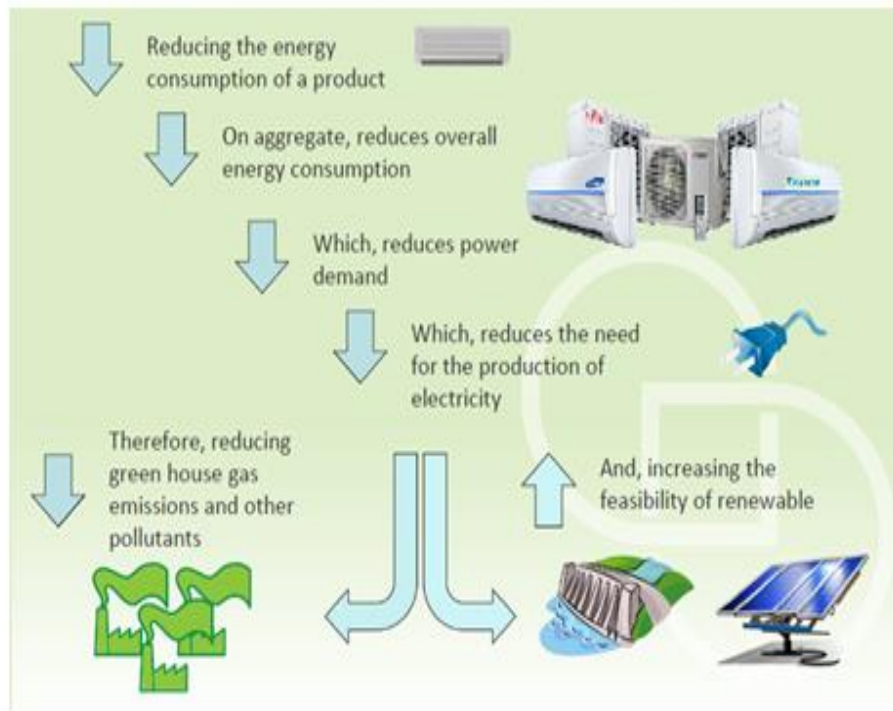
## The Benefits Of Becoming A Party To The Kigali Amendment – Energy Efficiency Perspective

- The Kigali Amendment will directly support and strengthen Fiji's existing energy efficiency programs such as the Minimum Energy Performance Standards and Labelling (MEPSL) program.
- The Minimum Energy and Performance Standards and Labelling (MEPSL) Program was implemented in 2012 with the objective to reduce electricity demand and provide a more stable energy base for economic and social development, in addition, reduce greenhouse gas emissions from diesel fuel utilized for electricity generation.
- MEPSL Regulates the importation of energy efficient electrical household refrigerators & into the country effective from the 1st January 2012
- The scope of MEPSL will be expanded to include other cooling appliances such as commercial refrigeration and single phase Air-Conditioners





## The Benefits Of Becoming A Party To The Kigali Amendment – Energy Efficiency Perspective

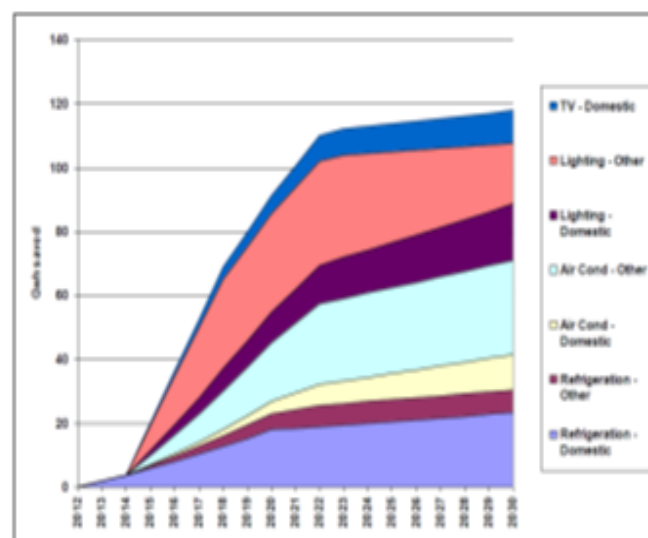


## The Benefits Of Becoming A Party To The Kigali Amendment – Energy Efficiency Perspective

- In its third year of operation (2014), all the refrigerators and freezers sold under the MEPSL program are estimated to have saved an average of:
  - 2.8 million kWh in electricity, which equates to approximately 600 tonnes of diesel fuel saved.
  - 920,000 FJD in running costs or 19.30 FJD per year per unit sold.
  - 737 tonnes of CO<sub>2</sub>-e in greenhouse gas emissions (7300 tonnes of CO<sub>2</sub>-e over the lifetime of those products sold between 2012 - 2014)
- The share of electrified household owning major appliances is projected to increase, as an expected by-product of economic growth. Household air conditioner ownership is projected to increase from 5% to 20% in 2030; furthermore, it is assumed that the underlying demand for non-residential air conditioning and refrigeration services increases at 2.5% per annum. This will essentially create more demand for electricity generation.
- It was identified that over the period 2015-2030, the projected annual electricity savings from implementing MEPSL on Air Conditioners and Commercial Refrigeration will be 47.8 GWh.

## The Benefits Of Becoming A Party To The Kigali Amendment – Energy Efficiency Perspective

Projected energy savings from MEPS for different appliances 2015 - 2030



## The Benefits Of Becoming A Party To The Kigali Amendment – Energy Efficiency Perspective

- Energy Efficiency Standards and Labels (EESL) programs setting MEPS and labelling requirements are relatively inexpensive to implement and can increase the use of new EE technologies;
- Regulation on MEPS has proved to be an effective EE policy.
- MEPS is a specification, containing the energy performance requirements that limit the maximum amount of energy that may be consumed by a piece of equipment or product.
- MEPS are key to remove inefficient equipment from the market

## Conclusion

- Ratification of the Kigali Amendment will :
  - Support Fiji's National Development Goals
  - Show Fiji's leadership on enhanced greenhouse gas abatement
  - Keep in par with technological changes and enhancements with the global market
  - Access to financial and technical support provided under the Protocol



**THANK YOU**



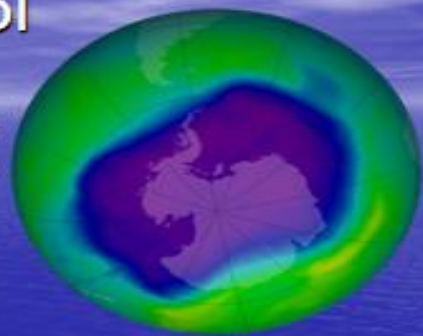
# **The Adoption and Ratification of the Kigali Amendment to the Montreal Protocol**

Parliament of the Republic of Fiji  
Standing Committee on  
Foreign Affairs and Defence.

*16 January 2020*

## **The Montreal Protocol**

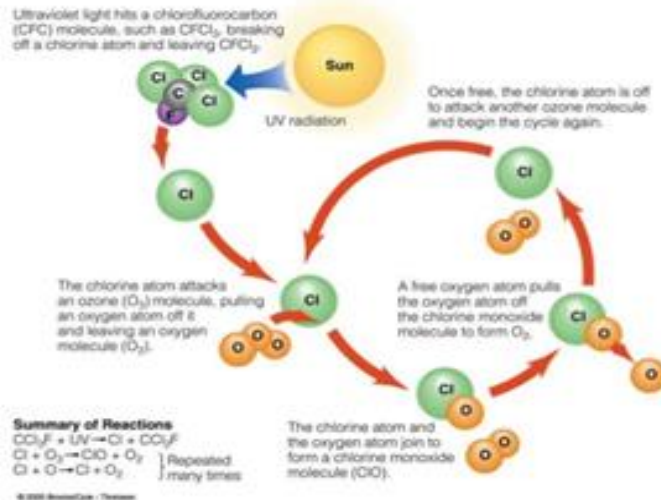
- Montreal Protocol (1987) needed to protect the Planet's Ozone Layer by eliminating chemicals that interact with Ozone and deplete it.
- Initial agreement reduced the production and consumption of several types of CFCs and halons to 80 percent of 1986 levels by 1994 and 50 percent of 1986 levels by 1999.





# Chemical Reaction leading to Ozone Depletion

## Ozone Layer Depletion by CFCs



## Success of Montreal Protocol

- The Protocol enforced the replacement of chemicals used in refrigeration and air-conditioning to Ozone friendly chemicals.
- Most scientists contend that the ozone layer will eventually recover.
- They note that the success of the treaty is exclusively responsible for the substantial decrease of Ozone Depleting Chemicals available for release into the atmosphere.



## Kigali Amendment

- HFCs, which are not ODCs, are commonly used alternatives to ODCs in refrigeration. However while not ODCs, HFCs are Green House Gases with very high warming properties.
- With the Kigali Amendment, the Montreal Protocol progressed from being an Ozone protection treaty to one that also addresses Climate Change.



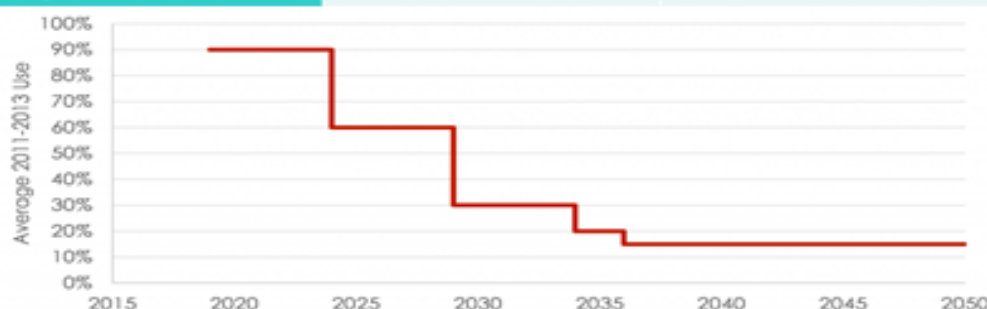
## Benefits of the Kigali Amendment

- The phase down of HFCs is expected to arrest the global average temperature rise by up to 0.5°C by 2100. As a Green House Gas, HFC is 14,800 times more potent than CO<sub>2</sub>, the gas most blamed for climate change due to its abundance.
- For a region that is advocating limiting temperature rise to 1.5°C as compared to pre-industrial levels (rather than 2°C), the implementation of the Kigali Amendment could make the required difference.



## Step-wise reduction of HFCs

Baseline Calculation	Average production/ consumption of HFCs in 2011, 2012 and 2013 (plus 15%)	
Reduction Steps	Year	Percentage reduction
Step 1	2019	10%
Step 2	2024	40%
Step 3	2029	70%
Step 4	2034	80%
Step 5	2036	85%



## Parties

- Currently there are ninety-one states that have ratified the Kigali Amendment
- Pacific Island Countries already parties to the Kigali Amendment are: Cook Islands, Federated States of Micronesia, Kiribati, Marshall Islands, Niue, Palau, Samoa, Tonga, Tuvalu and Vanuatu.

# Incentives

- Article 10 of the Montreal Protocol establishes a financial mechanism to provide financial and technical cooperation, including the transfer of technologies to support parties' compliance. Part of the package is the Multilateral Fund which, among other things, meets the agreed incremental costs of parties.
- As Fiji legislates to restrict import and/or production of HFCs, it could also take into consideration the great recent advances in energy efficiency and renewable energy technology.



# Cost to Parties

- Adapting existing laws or introducing new ones to achieve the HFC phase-down;
- Extending the ODS import and export licensing 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;
- Surveying existing HFC consumption and production;
- Developing the resources to report under the Amendment; and
- Developing a strategy for HFC phase-down, including monitoring and enforcement.



## Regional & International Support

- PIDF could coordinate regional and international support to Fiji, doing so in partnership with other regional and global partners including, but not limited to, SPREP's Climate Change Centre, the Pacific Community (SPC), the University of the South Pacific (USP), the Fiji National University, the University of Fiji, the Global Green Growth Institute (GGGI) and the United Nations Environment Programme (UNEP).

## PIDF Recommendation

- Noting there are viable and cost-effective industrial alternatives to HFCs, PIDF supports the adoption and ratification of the Kigali Amendment. This is in line with Fiji's (and other Pacific island countries') position in regards to decreasing Greenhouse Gas Emissions that are causing Climate Change.
- Fiji has taken a global leadership position on Climate Change with its chairing of the 23<sup>rd</sup> UNFCCC Conference of Parties and needs to continue showing leadership in this area, considering the adverse impact that Climate Change will have on the communities of this country, particularly those most vulnerable.



### **FCCC Submission on the Ratification of the Kigali Amendment**

The Fijian Competition and Consumer Commission takes a close interest in the ratification, or otherwise, of the Kigali Amendment to the Montreal Protocol, and this reflects a number of considerations. Firstly, pursuant to the FCCC's key role as the principal consumer protection body in Fiji, and the enforcer of the country's major piece of consumer protection legislation, the FCCC Act 2010, the FCCC naturally takes a close interest in matters which may affect consumer welfare. Secondly, as a body with considerable experience in inspectoral work, as is necessitated by the price control and compliance facets of the work of the FCCC, the FCCC possesses expertise which could be useful for the body tasked with enforcing the provisions of the Kigali Amendment, should it be ratified by the Parliament of Fiji. In answering the questions addressed to the FCCC by the Standing Committee on Foreign Affairs and Defence, we will address each of these key points in turn, before addressing some of the questions addressed to us by the committee.

The focus of the FCCC's work is on the promotion of the interests and welfare of consumers in Fiji. This is reflected in the mission of the FCCC to "foster a competitive, efficient, fair and informed marketplace to enhance the welfare of all Fijians". In essence, the aim of the FCCC is to ensure that consumers in Fiji can enjoy goods and services which are of a good quality, are safe, and are available for purchase at a low cost in a transparent, well-informed market. As a result of this, the proposed ratification of the Kigali Amendment is likely to impact the objectives of the FCCC in a range of ways, including both some likely impacts which are complementary to the objectives of the FCCC, and some which may not be.

The first of these potential impacts of the ratification of the Kigali Amendment reflects the objective of the Amendment – the mitigation of global warming and climate change. The effects of global warming on Fiji's per capita GDP are estimated to be fairly small at low levels of temperature increases – around a 1% loss of GDP per capita with a temperature increase of 1°C – but rise dramatically with larger temperature rises, increasing to more than 5% with a 3°C temperature increase.<sup>1</sup> Given the magnitude of these impacts, it is hardly conceivable that consumer welfare would not be impacted by such a large effect. Such a large impact is about twice as large as the OECD guideline estimate of the adverse price effects of an anticompetitive

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<sup>1</sup> Kompas, T., Pham, V. and Che, T. (2018). *The Effects of Climate Change on GDP by Country and the Global Economic Gains From Complying With the Paris Climate Accord*.

merger. Such an estimate may, moreover, be an underestimate of the loss of consumer welfare, because of the likely costs of actions which could have to be taken to mitigate the effects of climate change. It is, therefore, clear that the consumer welfare implications of climate change are sufficiently serious to be of major interest to the FCCC. Action to reduce the likely extent of global warming is, therefore, directly complementary to the underlying objectives of the FCCC.

The Kigali Amendment entails the phasing out of Hydrofluorocarbons (HFCs). In the 1990s, and partly in response to the Montreal Protocol, HFCs were developed as substitutes for ozone-depleting substances, particularly “CFCs” (Chlorofluorocarbons) and “HCFCs” (Hydrochlorofluorocarbons). While HFCs do not deplete the ozone layer, they are powerful greenhouse gases. The impact of different gases on climate change is measured by their “Global Warming Potential”, or GWP. It compares the amount of heat trapped by 1kg of the gas to the amount trapped by 1kg of CO<sub>2</sub>. A gas which traps twice as much heat as CO<sub>2</sub> would have a GWP of 2, for example. The HFCs which are to be phased out under the Kigali Amendment sometimes have a GWP several thousand times more powerful than CO<sub>2</sub> and can persist in the atmosphere for many years after they have been released. They can be up to 14,800 times more potent than CO<sub>2</sub>, although they have a comparatively short lifetime in the atmosphere.

Total emissions of HFCs globally are still relatively low, but are rising by 7-15% a year. Globally, cooling devices could cause HFC emissions equivalent to 8.8 gigatonnes of carbon dioxide by 2050—almost as high as the peak level of CFCs in the late 1980s. While Fiji’s contribution to current total HFC consumption is likely to be relatively small, it is nonetheless the case that the reduction of HFC use is of reasonably pressing importance in tackling climate change.

Naturally, it is necessary to set against the benefits of mitigating climate change against the costs to consumers of measures which are likely to be required to meet the requirements of the Kigali Amendment. HFCs are used in coolants and refrigerants, and as such refrigeration units and air conditioning are major contributors to their production. Globally, demand for air conditioning units, which often use HFCs, which may reflect the fact that global temperatures already exceed those of the pre-industrial period. In several large economies, (such as Brazil, India and Indonesia) the number of air conditioning units sold is rising by 10-15% annually, according to research by the Economist magazine. It is conceivable that demand for such units is rising similarly quickly in Fiji, although even if the true figure is lower it is nonetheless likely to be a growth market. Additionally, the need for fridges and freezers for foodstuffs in supermarkets mean that HFCs can account for almost half a supermarket’s greenhouse-gas emissions, on some measures. Similarly, a number of sectors which service Fiji’s tourist sector are likely to be affected by any moves to reduce the use of HFCs.

The impact of these costs is twofold. Firstly, they are important in their own right, although we do not anticipate that they are likely to outweigh the benefits arising from the mitigation of climate change and, as such, we still recommend that the amendment is ratified. The second, and more important, impact of these costs is that, because they are likely to fall on individual consumers and business, these costs could raise the spectre of non-compliance with any regulations that are put in place to implement the Kigali Amendment.

The scale of any non-compliance is likely, in our view, to depend on two factors in particular: firstly, the effectiveness of the regulatory and compliance framework set up to implement the amendment; and, secondly, the costs of compliance which are borne by businesses and consumers.

These two factors are closely interrelated, because the higher the costs of compliance to individuals and business are, the more effective the compliance framework is required to be, and the more burdensome the monitoring costs are likely to be to regulators. If the costs of compliance to businesses and consumers are low, then consumers and businesses face weaker incentives not to comply, and the intensity of monitoring needed to ensure compliance will be reduced. Nonetheless, Fiji is well-supplied with regulatory and monitoring expertise and experience – not just from the FCCC, but also from a range of other bodies, like FRCS, the Biosecurity Authority of Fiji, and so on – and is likely to be well-positioned to ensure compliance with the requirements of the Kigali Amendment.

Fortunately, the costs to businesses and individuals are not expected to be large for most of the sectors which are most likely to be affected by the ratification of the Kigali Amendment. Using a conservative methodology, most estimates expect the discounted cost of the Kigali Amendment to consumers to be about 1% of the price of the goods which currently use HFCs and, as these estimates have typically been constructed using the more rapid implementation schedule designed for developed countries, this can be taken as an upper bound for the costs to consumers in Fiji which, as an “Article 5: Group 1” country, is required to adjust less rapidly than the “non-article 5” developed economies.

There are three major categories of products which are likely to be most affected by the provisions of the Kigali Amendment: residential air conditioning, commercial air conditioning, and refrigeration.

As the cost of purchasing installing HFC- and non-HFC-using air conditioning units is projected to be reasonably small, and the overall contribution of refrigerant costs to the total costs of the air conditioning units is also relatively small, the expected cost difference between HFC-and non-HFC air conditioning units is expected to be relatively small over the course of the air conditioning unit’s lifetime. In cash terms, the life-cycle cost to consumers of using “Kigali

compliant” non-HFC-using air conditioning units is expected to be slightly below that of using current air conditioning units. This is because the air conditioning units which use HFC substitutes are typically slightly more energy efficient than their HFC-using counterparts, and the refrigerant costs are expected to fall as more countries implement the Kigali Amendment and the refrigerants can be produced more efficiently at a larger scale. In general, the same is true for refrigeration units such as fridges and freezers – broadly speaking, manufacturers of such units are moving away from the current family of HFC refrigerants to isobutane refrigerants, which are both considerably cheaper and do not use HFCs. This largely reflects cost considerations on the part of manufacturers, rather than regulatory enforcement of the Kigali Amendment.

Given this, it is clear that the burden of regulatory oversight is likely to rest on initial efforts to encourage switching to products which use HFC substitutes, rather than an ongoing, permanent need for regulatory oversight to ensure that HFCs are kept out of the market. The likely cost structure of the move to products which use HFC substitutes means that, once consumers and businesses have switched to products using these HFC-substitutes, there are cost incentives built into the market for these products which will discourage illicit backsliding to non-compliant products. Once consumers and businesses have switched to products which use substitutes to HFCs, switching back to the older non-compliant products is likely to be *more* costly than sticking with the compliant product, and as such consumers and businesses will have an incentive to comply with the legislation, even in the absence of regulatory oversight or enforcement.

As such, it is clear that the regulatory oversight and enforcement costs associated with the ratification of the Kigali Amendment are likely to be concentrated in the first few years of the implementation process, and should decline thereafter once the use of HFC-substitutes becomes more entrenched. This reflects our belief that the market structure of this market means that, in the longer term, compliance with the aims of the amendment will be in the best interests of consumers to make use of compliant products, without the threat of regulatory enforcement being needed to ensure that they do so. As such, whatever the costs of regulatory enforcement and oversight during the immediate implementation period of the amendment, the costs of oversight are likely to fall away rapidly once consumers and business have made the necessary switch.

Nonetheless, it is still important to be aware that there will still be a need for ongoing monitoring of the market, especially during the implementation period set out under the Kigali Amendment, as there is still some scope for non-compliant products to creep into the market. For example, the Kigali Amendment separates signatory countries into Article 5 and non-Article 5 countries, and imposes a shorter timescale on non-Article 5 countries, effectively the developed economies, to eliminate the use of HFCs in products used in their countries. In so far as this leads to a spillover of second-hand equipment into the Article 5 countries, it is likely that this will require some monitoring of imports into Fiji of second-hand products from abroad.

Moreover, compliance with the requirements of the Kigali Amendment will be likely to require proactive monitoring of importers and suppliers of the relevant products, particularly air conditioning and refrigeration units, and the impact of informal monitoring of the market by consumers may be more limited in this market than elsewhere. The use of HFCs in coolants and refrigerants does not degrade the functionality of the products in which they are used to the extent that it would be likely to generate large numbers of complaints to consumer protection bodies, either in the government sector (like the FCCC), or elsewhere (like the Consumer Council of Fiji). While we recognise that conscientious consumers, who are willing to go out of their way to draw attention to bad business practices, are an indispensable part of any regulatory regime, it is nonetheless the case that many consumers will naturally focus on the price and functionality of the equipment when choosing which units to purchase, and this creates the risk that, without proactive monitoring, opportunities will exist for unscrupulous traders to continue selling non-compliant products to unsuspecting consumers. We therefore wish to emphasise the importance of proactive monitoring, by regulatory bodies, at the point of sale, and the need to complement the activities of civil society bodies which address consumer complaints with active inspections by regulators.

### **Specific Questions**

**Will there be a need to have an oversight body that would allow agencies to get together to oversee the obligations are implemented accordingly? Is there availability of technical capacity whilst dealing with complex issues?**

Fiji is already a signatory of the Montreal Protocol, and has already ratified and implemented it. As such, the administrative and technical capabilities should already exist. The technical and inspectoral demands of the Kigali Amendment to the Montreal Protocol are no more technical than the original protocol. Indeed, we are of the view that the administrative requirements of the Kigali Amendment are likely to be less onerous than those needed to implement the original Montreal Protocol, simply because the list of substances to be ultimately banned is shorter, these substances are to be found in a smaller range of sectors than the original Montreal Protocol substances, and cost considerations for consumers militate against “backsliding” on the part of those consumers. We note that, overall, Fiji was successful in complying with the original Montreal Protocol, being found to be non-compliant only once, in 2003, and then only because of one substance, Ethyl Bromide. Given the success of Fiji’s implementation of the Montreal Protocol, it is not clear that there is any case for changing the oversight mechanism used for the original Montreal Protocol, or that any capacity shortfall is likely to exist.

**The contents of the Kigali Amendment – what additional value/difference from the original Montreal treaty?**



HFCs are an alternative to ozone-depleting substances for cooling purposes, and as such their use has been encouraged by the Montreal Protocol, and other initiatives aimed at tackling ozone depletion. However, HFCs contribute to global warming, so by encouraging their use as a replacement for CFCs and HCFCs, the Montreal Protocols as they stood before this year had encouraged a change which addressed ozone depletion while having no effect on, or even worsening, climate change.

The Kigali Amendment entails the phasing out of HFCs, which sometimes have a GWP several thousand times more powerful than CO<sub>2</sub> and can persist in the atmosphere for many years after they have been released. They can be between 12 times and 15,000 times more potent than CO<sub>2</sub>, despite their comparatively short lifetime in the atmosphere. The Kigali Amendment bans these substances in addition to the CFCs and HCFCs banned by the original Montreal Protocol.

As noted above, total emissions of HFCs globally are still relatively low, but are rising by 7-15% a year. Globally, cooling devices could cause HFC emissions equivalent to 8.8 gigatonnes of carbon dioxide by 2050. While Fiji's contribution to current total HFC consumption is likely to be relatively small, it is nonetheless the case that the reduction of HFC use is of reasonably pressing importance in tackling climate change.

The goal of the Kigali Amendment is to achieve over 80% reduction in HFC consumption by 2045. The impact of the amendment is forecast to avoid up to 0.5 °C increase in global temperature by the end of the century.

**As per Analysis 4.3 on the Key benefits of ratification, upon ratifying the treaty, will there be provision of full financial and technical assistance?**

Article 10 of the Montreal Protocol establishes a financial mechanism to provide financial and technical cooperation to support countries in the same category as Fiji (i.e. Article 5 countries) to comply with the Montreal Protocol. This includes both technological and technical assistance, and applications for this can be made through the relevant UN Secretariat. Part of this package is the "Multilateral Fund" which provides financial support.

**Positive impacts on the economy in terms less reliance on fossil fuels and more green growth initiatives**

While the Kigali Amendment does not target fossil fuels in particular, it should be seen as part of the same broader policy drive as attempts to reduce reliance on fossil fuels. The HFCs targeted by the Kigali Amendment are significantly more potent greenhouse gases than the carbon emissions associated with fossil fuels. As noted above, HFCs, which are to be phased out by the Kigali Amendment, are between 12 times and 15,000 times more potent than CO<sub>2</sub>, although they have a comparatively short lifetime in the atmosphere.

As noted above, the HFCs to be phased out under the Kigali Amendment are more potent, in the short term, than fossil fuels in heating the planet. The goal of the Kigali Amendment is to achieve over 80% reduction in HFC consumption by 2045, and this is forecast to avoid about 0.5°C – equivalent to a very significant reduction in fossil fuel use.

The effects of global warming on Fiji's per capita GDP are estimated to be fairly small at low levels of temperature increases but rise dramatically with larger temperature rises, increasing to more than 5% of GDP with a 3°C temperature increase.<sup>2</sup> Given the magnitude of these impacts, a large share of the economic benefit from ratifying the Kigali amendment is likely to come from the mitigation of the effects of HFCs on climate change.

More concretely, perhaps the key economic benefit arising from the ratification of the Kigali amendment is that, while offsetting greenhouse gases equivalent to a very large volume of CO<sub>2</sub>, it is forecast to cause only negligible increases in consumer costs. Indeed, on some estimates the substitutes for HFCs which will have to be introduced as HFCs are phased out will be cheaper in the longer-term than HFCs, and consumers will actually save from such a move, albeit only after an initial investment. To achieve the same effect from reducing carbon emissions from fossil fuels would, most likely, be considerably more expensive to consumers in Fiji. As such, while the Kigali Amendment is not likely to have much *direct* impact on the consumption of fossil fuels in Fiji, it should nonetheless be seen as a cost-effective complement to the green growth initiatives carried out by the Fijian Government as part of its National Climate Change Policy.

**How will this affect Fiji's and Pacific SIDS Countries negotiations with other nations in COP 26, Glasgow, Scotland, United Kingdom in 2020 on climate change in reductions of CFC gases from industries in rich and developed countries of the Europe and the West including USA?**

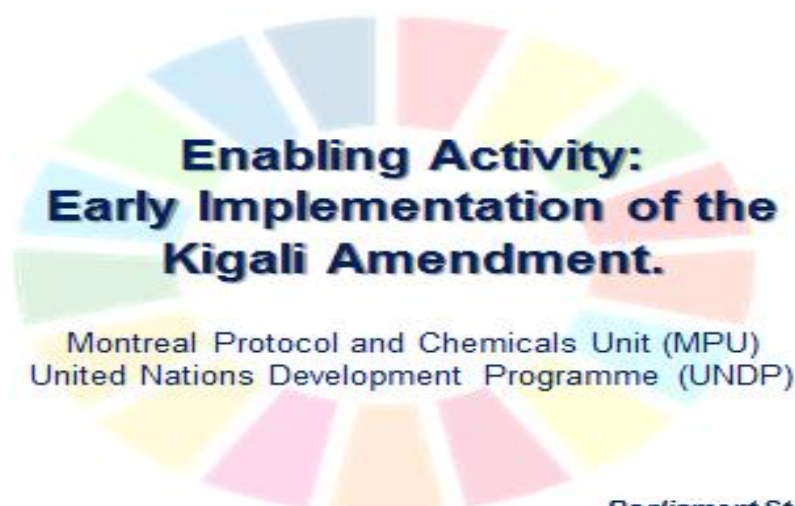
The Government of Fiji's National Climate Change Policy notes that the government aims to continue Fiji's global leadership in driving decisive action to address climate change. Ratifying the Kigali Amendment appears to be a good opportunity to take exactly the kind of decisive action which this leadership role would recommend. The Kigali Amendment offers to have significant effects, on the global scale, on the pace of climate change. As noted above, the impact of the amendment is forecast to avoid up to 0.5 °C increase in global temperature by the end of the century. The Kigali amendment came into force on the 1<sup>st</sup> January last year, having been ratified at that time by 65 countries. Given the global leadership role which Fiji wishes to take on this issue, it seems appropriate for Fiji to ratify the amendment as part of a "leading by example" approach on this matter. Most major economies (other than the USA) have ratified this amendment, and most of the major partners available to Fiji will already have ratified the amendment by the time of COP 26

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<sup>2</sup> Kompas, T., Pham, V. and Che, T. (2018). *The Effects of Climate Change on GDP by Country and the Global Economic Gains From Complying With the Paris Climate Accord*.



in Glasgow in November. We therefore believe that the ratification of the Kigali Amendment is consistent with the leading role Fiji is taking in the fight against climate change.



*Parliament Standing Committee  
Suva, Fiji  
20 January 2020*

## **The Montreal Protocol on Substances that Deplete the Ozone Layer**



- 
- Its objective is to phase-out the ozone depleting substances (ODSs);
  - Focus on the elimination of the sources of the ODS: their production and consumption;
  - Was agreed upon on 16 September 1987 - entered into force on 1 January 1989;
  - Most of the ODS covered are very potent greenhouse gases (GHG);
  - The ODS phase-out activities have provided considerable co-benefits to the climate change mitigation;
  - The total avoided net annual ODS emissions by 2010 is estimated to be equivalent to about 10 Gt CO<sub>2</sub>/year. (Velders et. al, 2007)



## The Kigali Amendment

- Hydrofluorocarbons (HFCs) are not ODSs, however, these had been, historically, the most common alternatives used to replace the ODSs phased-out by the Montreal Protocol until now;
- In its 28th Meeting held in Rwanda on October 2016, parties of the Montreal Protocol agreed to amend the Protocol through what was called the "Kigali Amendment";
- The Kigali Amendment establishes specific targets and timetables to phase-down the production and consumption of HFCs;
- It is estimated that will avoid **more than 80 billion metric tons of carbon dioxide** equivalent emissions by 2050<sub>+</sub>;
- It is expected that this will **avoid up to 0.5o Celsius of warming by the end of the century**, while continuing to protect the ozone layer<sub>+</sub>;

## Climate Impact of HFCs under the Kigali Amendment



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

## Current Short-term Scenario (2019-2024)

### Kigali Amendment:

- Has entered into force on 1<sup>st</sup> January 2019;
  - Internationally, **it has full legal effect**;
  - However, States are not bound by the Amendment until it enters into force for them (ratification, adhesion, accession by the Country).
- As of 15/Jan/2020, [91 countries](#) have already ratified the amendment, and ratification level is growing;

### Trade with non-Parties:

- The changes to Article 4 of the Protocol, Control of trade with non-Parties, set out in Article I of this Amendment shall enter into force **on 1 January 2033**, provided that at least seventy instruments of ratification. **Meaning, if a country do not ratify the Amendment, in the future it won't be allowed to engage into trading with Parties that ratified.**

## Phase-down Commitments: HFCs Phase Down Schedule



HFCs Phase-Down Schedule (against baseline level)	Article 5 Parties				Non-Article 5 Parties			
	Group 1*		Group 2**		5 Countries***		All Others	
	Year	Reduction	Year	Reduction	Year	Reduction	Year	Reduction
Freeze Consumption	2024	Freeze	2028	Freeze	-	-	-	-
Step 1	2029	(-) 10%	2032	(-) 10%	2020	(-) 5%	2019	(-) 10%
Step 2	2035	(-) 30%	2037	(-) 20%	2025	(-) 35%	2024	(-) 40%
Step 3	2040	(-) 50%	2042	(-) 30%	2029	(-) 70%	2029	(-) 70%
Step 4	-	-	-	-	2034	(-) 80%	2034	(-) 80%
Final Step (Plateau)	2045	(-) 80%	2047	(-) 85%	2036	(-) 85%	2036	(-) 85%

\*Group1 Article 5 Countries: all developing country not part of Group 2.

\*\*Group2 Article 5 Countries: Bahrain, India, Iran, Iraq, Kuwait, Oman, Pakistan, Qatar, Saudi Arabia, and the United Arab Emirates.

\*\*\* Belarus, Kazakhstan, Russian Federation, Tajikistan, and Uzbekist

## Phase-down Commitments: HFCs Phase Down Schedule



**Fiji would be Party to the Group 1**

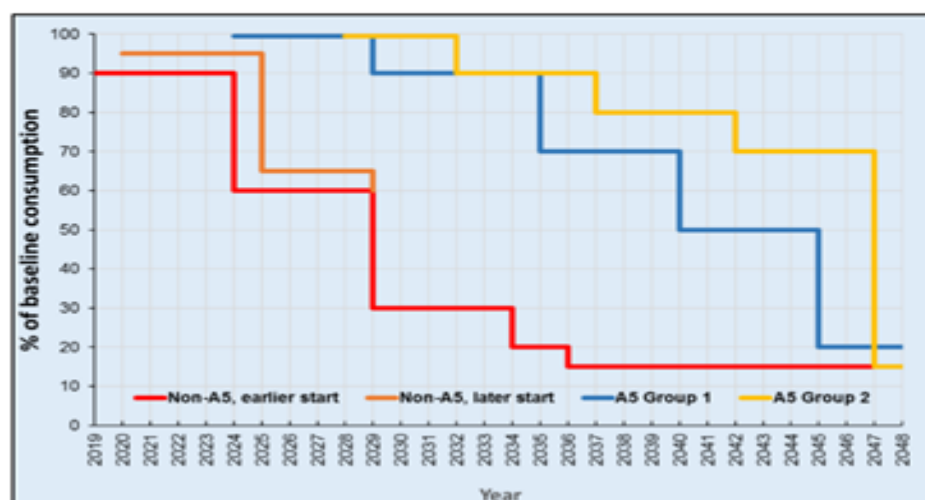
HFCs Phase-Down Schedule (against baseline level)	Article 5 Parties				Non-Article 5 Parties			
	Group 1*		Group 2**		5 Countries***		All Others	
	Year	Reduction	Year	Reduction	Year	Reduction	Year	Reduction
Freeze Consumption	2024	Freeze	2028	Freeze	-	-	-	-
Step 1	2029	(-) 10%	2032	(-) 10%	2020	(-) 5%	2019	(-) 10%
Step 2	2035	(-) 30%	2037	(-) 20%	2025	(-) 35%	2024	(-) 40%
Step 3	2040	(-) 50%	2042	(-) 30%	2029	(-) 70%	2029	(-) 70%
Step 4	-	-	-	-	2034	(-) 80%	2034	(-) 80%
Final Step (Plateau)	2045	(-) 80%	2047	(-) 85%	2036	(-) 85%	2036	(-) 85%

\*Group 1 Article 5 Countries: all developing country not part of Group 2.

\*\*Group 2 Article 5 Countries: Bahrain, India, Iran, Iraq, Kuwait, Oman, Pakistan, Qatar, Saudi Arabia, and the United Arab Emirates.

\*\*\* Belarus, Kazakhstan, Russian Federation, Tajikistan, and Uzbekistan

## Phase-down Commitments: HFCs Phase Down Schedule



## Current Short-term Scenario (2019-2024)

### Kigali Amendment:

- **For Group 1:** formation of baseline between 2020-2022 requires critical efforts from Government, as:
  - Establish control and reporting systems;
  - Mainstream information with all stakeholders, train key stakeholders on CO2-eq conversion and adapt national systems for the new metrics;
  - Re-engage “forgotten” sectors (MDIs, MAC, etc.) that use HFCs;
  - Evaluate national needs already seeking for future strategies (RAC Sector will be critical!)
- All parties (that had ratified) need to be in a position to comply with the HFC phase-down schedules from the date the Amendment enters into force for them. For this reason, [MLF has approved Enabling Activities for FIJI](#).

## Phase-down Commitments: Calculating the HFCs Baseline



Formula for the calculation of HFCs Baseline (in CO2-eq)		Article 5 Parties (developing)		Non-Article 5 Parties (developed and some of CEIT)	
		Group 1*	Group 2**	5 Countries***	All Others
HFCs Baseline =	Average HFCs in base years	Average 2020-2022	Average 2024-2026	Average 2011-2013	Average 2011-2013
	+	+	+	+	+
	% of HCFCs Baseline	65% of the Baseline	65% of the Baseline	25% of the Baseline	15% of the Baseline

## Short X Medium and Long Term Priorities



- ☐ Ratification
- ☐ Institutional arrangement
- ☐ **Data collection methodology and policy**
- ☐ Data reporting (A7, CP)
- ☐ Licensing system
- ☐ Conversion projects with mature technologies
- ☐ Adopting safety standard
- ☐ Training for custom officials and technician
- ☐ Establishing MEPs, labeling and monitoring system
- ☐ HFC-23 by-products emission control
- ☐ Slow down the growth of HFCs

- ☐ Overarching policy framework
- ☐ Sector priority
- ☐ HFCs quota
- ☐ Technology roadmap
- ☐ Scale-up conversions and market uptake
- ☐ Enhancing MEPs
- ☐ Enhanced training to technicians
- ☐ Best practice in the servicing sector
- ☐ Ban import of products in sub-sector such as refrigerator?
- ☐ Replacement program
- ☐ Destruction

### Initial Obligations under the Kigali Amendment

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- Import and export licensing systems for HFCs must be in place by 1 January 2019 (Article 4B);
  - **Any Party operating under paragraph 1 of Article 5** that decides it is not in a position to establish and implement such a system by 1 January 2019 **may delay taking those actions until 1 January 2021.**
  - Monitoring and reporting of HFC production and consumption, and HFC-23 emissions, where relevant, is required.
- **If a Country becomes Party to the Montreal Protocol, it becomes eligible to Access funding under the Multilateral Fund to support the phase-down activities.**



## Initial Obligations under the Kigali Amendment

- **How to establish Licensing and Quota System by 2021?**
  - Are there any barriers/challenges to expand current CFC/HCFCs Systems and incorporated HFCs?
  - Need to use of temporary stand-alone HFCs System?
  - How countries are addressing HS Codes for mixtures? How is the uptake of new HS Codes?
  - Role of importers, dealers, associations and customs: incorporating these stakeholders in the HFCs Control, Licensing and Reporting System.
  - Electronic tools for Control/Licensing.
- **Using Policy instruments to allow early data collection and reporting is key!**

### Challenges for the Control and Reporting

#### Range of Applications of pure HFCs

	MAC	Domestic R.	Commer. R.	Room AC	Comme. AC	Chillers	PU Foam	Solvents	MDIs	Aerosols	Fire Fight.
HFC-23			Yes			Yes					Yes
HFC-32			Yes	Yes	Yes	Yes					
HFC-134a	Yes	Yes	Yes			Yes	Yes		Yes		
HFC-143a			Yes								
HFC-125			Yes	Yes							
HFC-152			Yes								
HFC-152a			Yes				Yes				
HFC-227ea							Yes			Yes	Yes
HFC-245fa			Yes			Yes	Yes				
HFC-365mfc							Yes	Yes			
HFC-43-10me								Yes			Yes

- Some substances under the Kigali Amendment can be used in different applications, how to get the quantities in different sectors?
- Many substances are used across different mixtures.
- How importers and dealers can report the applications by chemicals?



## Challenges for the Control and Reporting HFC-based Mixtures

Large quantity of blends that contain HFCs	R-401A	23/112a/124 (55/13/34)	HFC Blend	8	Alkylbenzene or MOAB Mix	Low/medium temperature refrigeration. Can retrofit R-12 and R-500 equipment.
	R-401B	23/112a/124 (81/11/28)	HFC Blend	8	Alkylbenzene or MOAB Mix	Low/medium temperature refrigeration. Can retrofit R-12 and R-500 equipment.
	R-402A	125/290/32 (80/2/78)	HFC Blend	2.5	Alkylbenzene or MOAB Mix	Low/medium temperature refrigeration. Can retrofit R-502 equipment.
	R-402B	125/290/32 (36/2/66)	HFC Blend	2.5	Alkylbenzene or MOAB Mix	Ice machines. Can retrofit R-502 equipment.
	R-403B	290/32/118 (57/5/37)	HFC Blend	2	Mineral Oil or Alkylbenzene	Has been used successfully to retrofit R-13B1-type equipment, but has slightly different operating conditions.
Overlapping HPMPs and Kigali Amendment: blends that contain HCFCs and HFCs	R-404A	125/143a/134a (44/52/4)	HFC Blend	5.5	Polyolester	Low/medium temperature refrigeration.
	R-407A	32/125/134a (20/40/40)	HFC Blend	10	Polyolester or POE/MO Mix	Low/medium temperature refrigeration. Can retrofit R-22 equipment.
	R-407C	32/125/134a (23/25/52)	HFC Blend	10	Polyolester or POE/MO Mix	Low/medium temperature refrigeration, air conditioning. Can retrofit R-22 equipment.
	R-408A	125/143a/32 (71/6/27)	HFC Blend	1	Mineral Oil or Alkylbenzene	Low/medium temperature refrigeration. Can retrofit R-502 equipment.
	R-409A	23/124/142B (89/25/75)	HFC Blend	13	Mineral Oil or Alkylbenzene	Low/medium temperature refrigeration, some A/C. Can retrofit R-12 or R-500 equipment.
	R-410A	32/125 (50/50)	HFC Blend	0.2	Polyolester	New residential A/C systems. Not for retrofitting.
	R-454B	125/124/600a/142B (50/39/7.5/2.3)	HFC Blend	13	Mineral Oil or Alkylbenzene	Low/medium temperature refrigeration, some A/C, automotive A/C. Can retrofit R-12 equipment.
	R-457C	125/134a/1400 (79.5/79.8/1.7)	HFC Blend	6	Mineral Oil, Alkylbenzene, or Polyolester	Low/medium temperature refrigeration, retrofit blend for R-12 applications. Can also replace HCFC-based blends.
	R-422B	125/134a/500a (55/42/3)	HFC Blend	5	Mineral Oil, Alkylbenzene or Polyolester	Medium temperature refrigeration, air conditioning. Can retrofit R-22 equipment.
	R-422C	125/134a/500a (83/13/3)	HFC Blend	5	Mineral Oil, Alkylbenzene or Polyolester	Low/medium temperature refrigeration. Can retrofit R-502 and R-22 equipment, with modifications.
	R-422D	125/134a/500a (65.1/13.5/2.4)	HFC Blend	5	Mineral Oil, Alkylbenzene or Polyolester	Low/medium temperature refrigeration. Can retrofit R-22 equipment.
	R-507	125/143a (50/50)	HFC Blend	0	Polyolester	Low/medium temperature refrigeration.
	R-508B	23/118 (46/54)	HFC Blend	0	Polyolester	Very low temperature refrigeration. Can retrofit R-13 or R-503 equipment.

Source: <http://www.epa.gov/owp/odp/phase2/phase2.pdf>

**Future: trend to mixtures of HFOs containing HFCs and with (A2L) lower flammability:**

- R-448A
- R-450A
- R-452A
- R-455A
- R-513A
- R-449A

## Challenges for the Implementation of the Kigali Amendment



### HFCs Consumption Sector:

- Servicing Sector:
  - Policy, Standards and Institutional Framework;
  - Certification and Training of Technicians;
  - Maintenance, leakage reduction and handling of flammable and toxic alternatives;
  - Growth of installed equipment will put pressure on tail for servicing.



## Challenges for the Implementation of the Kigali Amendment



### Servicing Sector:

- Key to the implementation of the Kigali Amendment.
- The Multilateral Fund Secretariat reported, in the 79<sup>th</sup> ExCom Meeting, that based on the ODS Alternatives Surveys, the estimated growth of HFCs consumption could be up to 23% per year.
- This high growth rate is likely to put enormous pressure on the servicing sector, due to the high quantity of new HFC-based equipment in the market every year.
- Countries will face great challenges related to control of substance and improvement of servicing to avoid leakage. Also, the HFCs consumption tail (20% for group 1 from 2045 onwards) will demand countries to prioritize allowable uses of HFCs;
- Countries will also face challenges related to the adoption of alternatives that are either toxic or flammable, maintaining safety and cost-effectiveness.

## Opportunities in the Implementation of the Kigali Amendment



### Development of National Strategies:

- Would be equivalent to the (current) "Phase-out Management Plans"
- As per ExCom Decision 79/46, the preparation of National Strategies can be funded five years prior to the first year of commitment = **expected to commence by 2020**.
- "Expected" Key aspects of the National Strategies (guidelines still to be issued):
  - HFCs Consumption profile and growth trends;
  - "over-arching" strategy to manage and phase-down HFCs,
  - Definition of priority sectors, sub-sectors and applications for phase-down;
  - Definition of priority sectors to the "tail" consumption;
  - Preparation of Investment and non-investment projects.
  - Linkage with the HPMP.

## Current Short-term Scenario (2019-2024)

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### Critical issues “on the table”:

- ExCom Decision 79/45: allows Parties to the Kigali Amendment to request funding to prepare national strategies 5 years before first commitment (starting in 2019).
- ExCom Decision 82/83: allows flexibility in EA’s to include interventions related to energy efficiency.
- **Decisions on cost guidelines to phase-down HFCs are still to be agreed!**

### HFCs Cost Guidelines:

- Several HFC investment projects approved between ExComs 80-83 to allow data collection for the manufacturing sector.
- Servicing sector: ExCom 84 to look into a new assessment from the MLF Secretariat on cost issues.
  - **Many countries will have only servicing sector under Kigali – this is a critical issue!**



## Thank you!

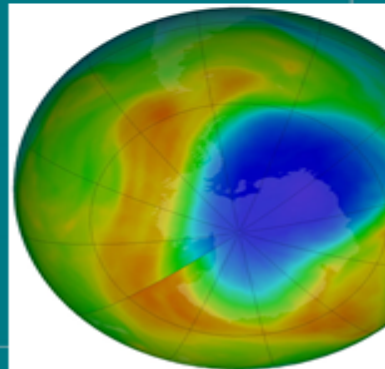
*Montreal Protocol and Chemicals Unit (MPU)  
Bureau of Programme and Policy Support (BPPS)  
Global Policy Network (GPN)  
United Nations Development Programme (UNDP)*

[mpu\\_registry@undp.org](mailto:mpu_registry@undp.org)

## **ADOPTION & RATIFICATION OF THE KIGALI AMENDMENT TO THE MONTREAL PROTOCOL ON SUBSTANCES THAT DEplete THE OZONE LAYER**

Submission to the Standing Committee on  
Foreign Affairs and Defence

The University of the South Pacific  
23<sup>rd</sup> January, 2020



## **BACKGROUND**

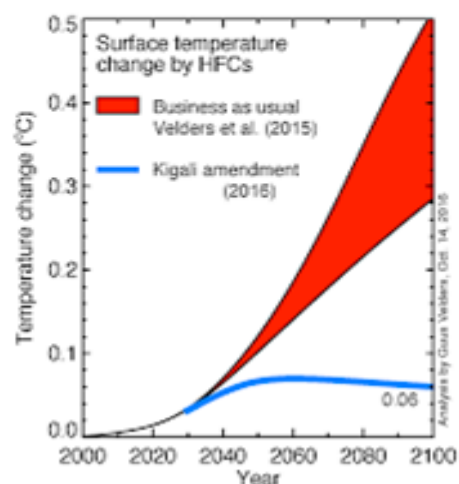
- Fiji ratified the Montreal Protocol in 1989 and has successfully phased out chlorofluorocarbons (CFCs).
- The National Ozone Unit (NOU) through the Department of Environment supports the work of the Montreal Protocol and has implemented the Ozone Depleting Substances (ODS) Act 1998 and its subsequent Ozone Depleting Substances Regulation 2010.
- The Montreal Protocol has evolved over time, aligned to the latest scientific findings and development and availability of ODS alternative technologies.
- Fiji has ratified all 4 amendments to the Montreal Protocol namely the London Amendment (1990), the Copenhagen Amendment (1992), the Montreal Amendment (1997) and the Beijing Amendment (1999).

## BACKGROUND

- The Copenhagen Amendment added the phase out of hydrochlorofluorocarbons (HCFCs) and Fiji is in the process of implementing HCFC phase out.
- When HCFCs are being phased out then the most widely accepted replacements were Hydrofluorocarbons (HFCs), which does not have any Ozone Depletion Potential (ODP) but it has very high Global Warming Potential (GWP) and contributes significantly to Climate Change.
- The recent amendment, the Kigali Amendment, reached agreement at the 28th Meeting of Parties to the Montreal Protocol, 14th Oct. 2016, in Kigali, Rwanda and entered into force on 1st January, 2019.

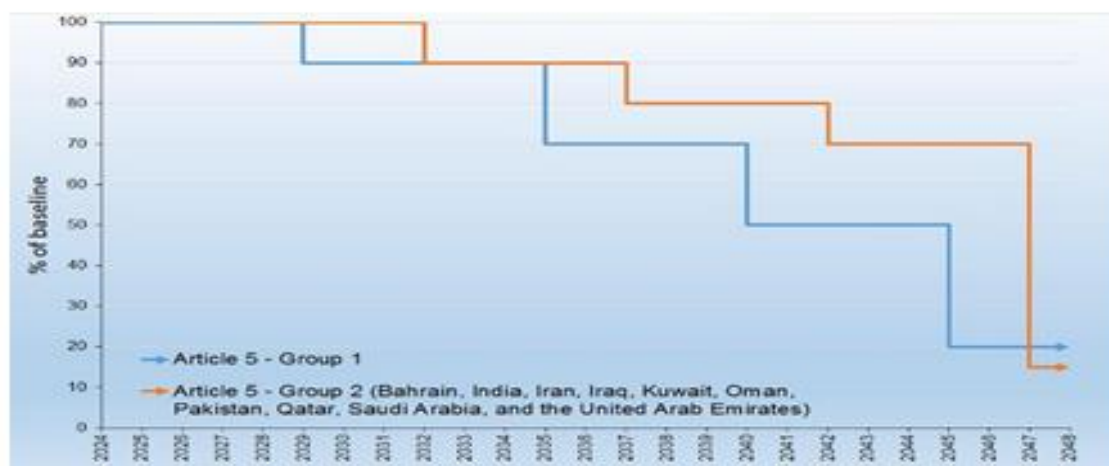
## A NEW ANNEX F HAS BEEN ADDED TO THE PROTOCOL

Group	Substance	100- Year Global Warming Potential
Group I		
CHF <sub>2</sub> CHF <sub>3</sub>	HFC-134	1, 100
CH <sub>3</sub> FCF <sub>3</sub>	HFC-134a	1,430
CH <sub>2</sub> FCHF <sub>3</sub>	HFC-143	353
CHF <sub>2</sub> CH <sub>2</sub> CF <sub>3</sub>	HFC-245fa	1, 030
CF <sub>3</sub> CH <sub>2</sub> CF <sub>2</sub> CH <sub>3</sub>	HFC-365mfc	794
CF <sub>3</sub> CHFCF <sub>3</sub>	HFC-227ea	3, 220
CH <sub>2</sub> FCF <sub>2</sub> CF <sub>3</sub>	HFC-236cb	1, 340
CHF <sub>2</sub> CHFCF <sub>3</sub>	HFC-236ea	1, 370
CF <sub>3</sub> CH <sub>2</sub> CF <sub>3</sub>	HFC-236fa	9, 810
CH <sub>2</sub> FCF <sub>2</sub> CHF <sub>3</sub>	HFC-245ca	893
CF <sub>3</sub> CHFCHFCF <sub>2</sub> CF <sub>3</sub>	HFC-43-10mee	1, 640
CH <sub>3</sub> F <sub>3</sub>	HFC-32	675
CH <sub>2</sub> CF <sub>3</sub>	HFC-125	3, 500
CH <sub>2</sub> CF <sub>2</sub>	HFC-143a	4, 470
CH <sub>3</sub> F	HFC-41	92
CH <sub>2</sub> FCH <sub>2</sub> F	HFC-152	53
CH <sub>2</sub> CHF <sub>2</sub>	HFC-152a	124
CH <sub>2</sub> CH <sub>2</sub> F	HFC-161	12
Group II		
[CHF <sub>3</sub>	HFC-23	14, 800]





## PHASE DOWN SCHEDULE FOR A5 COUNTRIES



## BASELINE FOR FREEZE

**Freeze** on 1<sup>st</sup> January **2024**

**Baseline** for freeze:

**Average import of HFC in 2020, 2021 and 2022** + **65% of baseline HCFC (import in 2009-2010)**

**Reduction schedule**

Year	Reduction
2029	10%
2035	30%
2040	50%
2045	80%



## EFFECTIVE IMPLEMENTATION OF THE KIGALI AMENDMENT



- Devise national **HFC phase down strategy** in greater consultation with stakeholders
- **Carry out ODS alternatives surveys** for data collection, monitoring and reporting requirements for HFCs
- **Assess current regulatory framework**
- **Extend ODS licensing and control system** to cover HFCs
- **Prioritize sectors and technologies** for the HFC phase down
- **Financial Support** – MLF
  - Kigali Cooling Efficiency Program
  - Global Environment Facility (GEF)
  - Green Climate Fund
- **Strengthening the RAC sectors and custom officers**
- **Increasing synergies with Department of Energy and Climate Change Division**

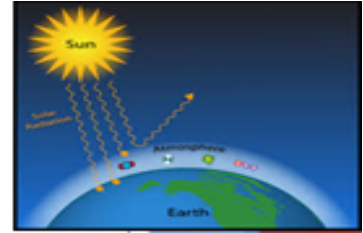
## RECOMMENDATION



Fiji's ratification of the Amendment will reaffirm:

- Fiji's existing commitments under the Montreal Protocol
- Commitments under the Paris Agreements to reduce emissions and to keep global temperature rise below 2 degrees Celsius

It is recommended that Fiji ratifies the Kigali Amendment.



**Submission:**

**The Kigali Amendment to the Montreal Protocol and its Impacts on Fiji's Consumers**



**PRESENTATION OUTLINE**

- ▶ Consumer Rights
- ▶ Kigali Amendment
- ▶ Impact of HFCs
- ▶ Consumer Trends
- ▶ Impact on Consumers
- ▶ Impact on Tourism
- ▶ Impact on Legislations
- ▶ Challenges
- ▶ Recommendations
- ▶ Impact on National Development Plan

# CONSUMER RIGHTS

## Right to Healthy Environment



## Right to Safety



# KIGALI AMENDMENT

- ▶ Gradual, market-driven phasedown of current-generation hydrofluorocarbons.
- ▶ 80% reduction in HFC consumption by 2047.
- ▶ First HFC reductions to take place in 2024.
- ▶ Trade control provision enters into force on 1 January 2033, provided at least 70 Protocol parties have ratified the Amendment.

## IMPACT OF HFCS

### ▶ **Human Health Impact**

- ❖ Medical Conditions
  - Effects on Immune System

### ▶ **Environment Impact**

- ❖ Loss of plant species → reduction in global food supply.
- ❖ There is also an increased risk of displacement brought on by rise in sea levels.

### ▶ **Tourism Impact**

- ❖ Loss of biodiversity and subsequently tourists.
- ❖ Severe weather patterns and sea level rise

## CONSUMER TRENDS

- ▶ Global- Green consumerism on the rise.
- ▶ Fijian's are adapting at a much slower pace with the global trend of green consumerism.
- ▶ Environmentally sustainable alternatives needs to be made available.
- ▶ Purchasing white goods still a common phenomenon for many Fijian families.

## IMPACT ON CONSUMERS

- ▶ HFC Baseline and Consumer Cost.
- ▶ Consumer Education and Encouraging Sustainable Consumerism.
- ▶ Energy efficient and cost efficient alternatives to HFCs.

## IMPACT ON TOURISM

- ▶ **Positive**
  - ❖ Attract Eco- friendly tourists.
  - ❖ Clean, safe and healthy environment.
- ▶ **Negatives**
  - ❖ Cost to the tourism sector.
  - ❖ Other developments may be compromised.

## IMPACT ON LEGISLATIONS

### ► **Amendments:**

- ❖ Household Electric Refrigerating Appliances Order 2007.
- ❖ Import permits – FRCS requirements may need additional section to declare HFC content for imported products.

### ► **Development of Standards**

## CHALLENGES

- **Cloned and Counterfeit Products.**
- **Lack of after- sale expertise- appropriate skills to fix new consumer products that use HFC alternatives.**
- **Marketing/sales personnel- ill advising consumers for business gains only.**
- **Consumer Education.**



# RECOMMENDATIONS



# RECOMMENDATIONS

1. Ratify the Kigali Amendment.
2. Roll out of Consumer Education programs to prepare consumers for the ratification of the Kigali Amendment.

## IMPACT ON NATIONAL DEVELOPMENT PLAN

- ▶ The NDP is aligned with global commitments including the 2030 Agenda for Sustainable Development and the Paris Agreement on Climate Change.
- ▶ The NDP has a goal to achieve net-zero global GHG emissions by 2050.
- ▶ Furthermore, the NDP states that “Fiji will strive to formulate and communicate long-term greenhouse gas emission development strategies, in accordance with Article 4, paragraph 19, of the Paris Agreement”.
- ▶ Ratification of the Kigali amendment will help Fiji achieve these targets set out in the National Development Plan.

**THANK YOU FOR LISTENING!!**



# PRESENTATION TO THE STANDING COMMITTEE ON FOREIGN AFFAIRS AND DEFENCE

27 January 2020  
Committee Room 2, Parliament Complex,  
Govt. Buildings, SUVA

1

## Overview

1. ***Kigali Amendment to the Montreal Protocol on Substances that Deplete the Ozone Layer***
  - Context Setting
  - Key Benefits
  - Financial & Technical Assistance
  - Implementing Agencies
2. ***2011 Asia Pacific Convention on the Recognition of Higher Education Qualifications***
  - Sustainable Development Goals and Fiji's National Development Plans
  - Key Benefits
  - Implementing Agencies
3. ***Council of Europe Convention on the Manipulation of Sports***
  - Ratification/Accession Process for Non Member States of the European Union
  - Implications of ratifying the Convention as a Non Member States
  - Implementing Agencies

2

# Kigali Amendment to the Montreal Protocol on Substances that Deplete the Ozone Layer

- The Montreal Protocol has been amended several times, most recently by the Kigali Amendment, which is the fifth in a series of amendments to the Protocol
- Adopted to phase down HFCs, which are frequently used as substitutes for ozone-depleting substances
- The Amendment allows parties a degree of flexibility in implementing their obligations: it is designed to give parties sufficient time and opportunities to phase down HFCs in a way that suits their needs and interests, setting their own priorities for particular HFCs, sectors, technologies and alternatives
- Fiji has ratified the Montreal Protocol and has since developed regulations (e.g. Ozone Depleting Substances Act 1998) to assist in achieving its commitment under this convention
- In 2013, Fiji successfully reached its target of eliminating the production and consumption of ozone-depleting chemicals through improved cross border control.

3

## Key Benefits

- Advances the national, regional vision and common interests on reducing climate vulnerability and amplifying our voices and leverage within the United Nations
- Contributes to the sustainability goals, consistent with the 2030 Agenda for Sustainable Development
- Avoids up to 0.5 °C of warming until the end of the century
- Implementation of Kigali made possible through Financial and Technical Assistance provided by Multilateral Fund

4

## Financial & Technical Assistance

- *Multilateral Fund for the Implementation of the Montreal Protocol*
  - Est. under Art. 10 of treaty
  - Assistance to developing country parties to the Montreal Protocol whose annual per capita consumption and production of ODS is less than 0.3 kg to comply with the control measures of the Protocol.
  - Developing countries have demonstrated that, with the right kind of assistance, they are willing, ready and able to be full partners in global efforts to protect the environment.

3

## Implementing Agencies

- Lead – Department of Environment
- Other – FRCS, Ministry of Economy (CCD) and Biosecurity Authority of Fiji

6



## **Submission by Mr. Seru Ramakita**

To: Standing Committee On Foreign affairs and Defence

Att: Mr Jacob Abraham

### **BRIEF ON KIQALI AMENDMENTS TO THE MONTREAL PROTOCOL**

RECOMMENDATIONS FROM SERU RAMAKITA ODS INSPECTOR/ GPR INSTRUCTOR- DOE – 2001 - 2018

#### **RECOMMENDATIONS**

1. For the facilitation of the HFC'S which are non ODS to be regulated, the Ozone Depleting Substances (ODS) Act #26 of 1998 to be amended to be – “Ozone Depleting And Controlled Substances” Act #\_ of 2020.
2. The MP Phaseout schedule for HCFC'S is 2030 and should not be rushed like Fiji did in phasing out CFC'S (7 years too early in 2003 instead of 2010) because R22 is still one of the best REF around and is the life blood of the Refrigeration systems in the fishing vessels.
3. Veteran RAC Engineers prefer to “Deal with the devil they know than the devils they don't know”.
4. Workability of HCFC'S 22 and cost is good apart from the duty raised by FRCS from 5% to 22% lately.
5. There is no point for Fiji to “Press Panic Button” as our contribution to Ozone Depletion and Global Warming is “Insignificant “on global scale.
6. But holistic approach practised by MP protocol Stakeholders in the RAC sector ( from past decade and a half ) will need duty concessions on Environmentally Friendly Products ( Including refrigerants, equipment's, Recovery / Recycling and Service tools ) as cost of operating the RAC companies are getting very expensive, especially for SEM'S.
7. Risk Management - Technological Adaptations will come at a cost and Fiji needs to be in the Precautionary / Preventative modes than to be “ Hyped Up “ too much that can ( if no careful Monitoring will take Fiji in “ Damage control Mode “ later that will be too expensive and badly regretted .
8. The need to form the National Steering Committee to oversee this transition (at minimal cost) is a very crucial and a must for Fiji that will worth it's Investing .
9. I am willing to Co-Chair this Committee to also Scrutinise “Fly by night investors” in this area (speaking from experience).
10. The Spirit of the MP is captured on the decision 5(8) of the MP and is embedded on Section 13 (2) of the ODS Act whereby all formulated policies are to reflect the, Ecological, Economical, social and cultural realities.
11. Please refer to ODS Act Section 13(2), (e), (f), (g), (h) as the legal guideline why I am recommending the Steering Committee as my former Colleagues in the DOE have “too much already on their plate” but for the National Ozone .
12. We'll need to carryout Efficacy trials on most RAC New brands/ Refrigerants as most of these newly manufactured products were, I trialled and tested in “Temperate Zones” and not Tropical Zones like Fiji. (Thermodynamics)

Vinaka

## **APPENDIX 2: VERBATIM REPORTS**



**STANDING COMMITTEE ON**  
**FOREIGN AFFAIRS AND DEFENCE**

**[Verbatim Report of Meeting]**

**HELD IN THE**

**COMMITTEE ROOM (EAST WING)**

**ON**

**TUESDAY, 14TH JANUARY, 2020**

**VERBATIM NOTES OF THE MEETING OF THE STANDING COMMITTEE ON FOREIGN AFFAIRS AND DEFENCE HELD IN THE BIG COMMITTEE ROOM (EAST WING), PARLIAMENT PRECINCTS, GOVERNMENT BUILDINGS, ON TUESDAY, 14TH JANUARY, 2020 AT 9.29 A.M.**

**Interviewee/Submittee:      Department of Environment**

In Attendance:

- |    |                        |                               |
|----|------------------------|-------------------------------|
| 1. | Ms. Sandeep K. Singh - | Director                      |
| 2. | Ms. Alisi Kamaiwaqa -  | Senior Environment Officer    |
| 3. | Mr. Yogesh Gounder -   | Principal Environment Officer |
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MR. CHAIRMAN.- Thank you, Honourable Members. Before us is the team from the Department of Environment.

I wish to take this opportunity, on behalf of your Standing Committee on Foreign Affairs and Defence, to welcome you all this morning, and I greet you with a Happy New Year.

On my left is Honourable Lenora Qereqeretabua, and it is unfortunate that Honourable Selai Adimaitoga is not with us this morning, she has just lost the sister who resides in the States and has given her apology. On my right is Honourable Dr. Salik, and Honourable Anare Jale. The Secretariat is Mr. Jacob Abraham and assisted by Ms. Susana Korovou.

With those few words, I ask Mr. Yogesh or whoever is your lead role just to have a brief introduction of your good selves and then you can go straight into your presentation. Thank you.

MS. S. SINGH.- Thank you, Mr. Chairman and good morning. Good morning to all the Honourable Members who are present here. My name is Sandeep and I am the Director of Environment. I will be making the presentation this morning and will be assisted by Mr. Yogesh Gounder, who is the Principal Environment Officer at the Department of Environment and Ms Alisi, who is the Senior Officer in the ODS Unit at the Department of Environment.

Thank you again and on behalf of the Department of Environment, we are glad to be invited to do a presentation and talk about the proposed ratification to the Kigali Amendment. Our Permanent Secretary is away on leave, so he could not join us and our Acting Permanent Secretary had a commitment this morning. So, with that, we will go on to the presentation. If I may, Mr. Chairman, with your permission, I think you can see the presentation behind me and I will just refer to the presentation on my laptop.

I will just quickly talk about the role and the function of the Department of Environment and provide you with some background information in terms of the work we have been doing with regards to the ozone depleting substances (ODS) and we do have with us copies of the Ozone Depleting Substances Act 1998, and also some background information which can be circulated.

The Department of Environment's responsibility is to protect Fiji's natural resources (including the protection of endangered species). We have the waste management and pollution control under us as well as. Under the ODS legislation, we control substances (including fluorinated gases) that deplete the ozone layer through implementation of various programmes, policies and other laws that we have.



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As you are already aware, we have four legislations under the Department of Environment and they include the:

1. Environment Management Act 2005 and the subsequent regulations, Environment Management EIA Process Regulations 2007, Environment Management (Waste Disposal and Recycling) Regulations 2007;
2. Ozone Depleting Substances Act 1998 and Ozone Substances Depleting Regulations 2010 (we will be talking a lot more about this morning);
3. Endangered and Protected Species Act 2002; and
4. Litter Act 2008.

In terms of the background information on the Ozone Depleting Substances Unit, it was established under Section 8 of the Ozone Depleting Substances Act 1998 and the Ozone Depleting Substances Act is administered by the Department of Environment. The Government of Fiji acceded to the Vienna Convention for the Protection of the Ozone Layer in 1998 and the Montreal Protocol to Phase-out Ozone Depleting Substances in 1989.

Fiji was the first developing country among the Pacific Island Countries to become a party to this Multilateral Environmental Agreement. Fiji phased out chlorofluorocarbon (CFC) completely by 2003 and this was achieved by the enforcement of the Ozone Depleting Substances Act 1998 and through the technical assistance provided by the Ozone Secretariat.

The importance of the ozone layer, Mr. Chairman and Honourable Members, is vital to life on earth because it acts as a filter for UV-B radiation, which can have severe impacts on human health and the earth's environment.

If ozone molecules are depleted faster, then they can be replaced by the new ozone molecules that the nature produces, the result is an ozone deficient. The depletion of the ozone layer leads to a reduction in its shielding capacity and thus, a greater exposure to outer earth's surface to the Ultraviolet (UV) radiation.

Again, just on the impacts on human health and the environment, on the human health, if more UV lights are coming our way, then it can damage the DNA, suppresses immune system, it increases infections, there is chances of skin cancer and eye cataracts.

In terms of the biodiversity, the impact it has on plants and animals, it can reduce crop production and quality, it has an impact on the aquatic organisms and affects marine food chain, especially phytoplankton, that can result in the collapse of the whole food chain.

The reason why I wanted to talk about the impacts is just to have a better understanding in terms of the importance of protecting the ozone layer.

In terms of the Montreal Protocol, the Government has verified four Amendments previously, and they are the:

1. London Amendment;

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2. Copenhagen Amendment;
3. Montreal Amendment; and
4. Beijing Amendment.

The Kigali Amendment is the Fifth Amendment.

In terms of the Amendments, the Government has ratified and the Department of Environment has implemented in the past, to meet our obligations under the Montreal Protocol, included the London Amendment which changed the Ozone Depleting Substances (ODS) emissions scheduled by requiring the complete phase-out of Chlorofluorocarbons (CFCs), which I had mentioned earlier that Fiji completely phased out in 2003, and halons and carbon tetrachloride by 2000 in developed countries and by 2010 in developing countries.

Copenhagen Amendment significantly was to accelerate the phase out of other ODSs.

Then we have the Montreal Amendment 1997 which included the phase out of the HCFCs in developing countries, as well as the phase out of new carbromide in developed and developing countries. So we have got a strategy right now and we are implementing the phasing out of HCFCs, and we are on track to phase out HCFCs by the year 2030.

The Beijing Amendment 1999 included tightened controls on the production and trade of HCFCs. As mentioned earlier, Fiji is on track to achieving their targets set out under the Montreal Protocol and the Beijing Amendment.

The Kigali Amendment is the Fifth Amendment that Fiji is yet to ratify. That is why we are here to basically inform Honourable Members as to why it is important for Fiji to ratify the Kigali Amendment.

Just very quickly, in terms of the Department of Environment and what we have done in the past since signing onto the Montreal Protocol, we have implemented many programmes to ensure that Fiji meets its obligations under the Montreal Protocol and the Amendments.

In 2001, we implemented a Refrigerant Management Plan, in 2006 the Terminal Phase out Management Plan and in 2009, we also have implemented the technical assistance to install alternatives to achieve compliance and phase out methyl bromide. Right now, like I said, we are implementing the HCFCs Phase out Management Plan and we are on track.

I have left those blank basically. We will talk about Kigali Amendment, which is the Fifth Amendment to the Montreal Protocol and has entered into force on 1st January, 2019. There are about 80 countries who had ratified to the Amendment, so it has come into force and Fiji is yet to ratify. The Kigali Amendment will help protect the climate by phasing down high global warming potential, HCFCs which are commonly used as refrigerants.

Under the Montreal Protocol with all these Amendments, that happens because the Parties find that they introduce gases as alternatives but when they find that those gasses are probably a better alternative than the one that they introduced previously, but there could be better gasses that could then have less global warming potential and unless harmful to the ozone layer, then they go for that alternative. So, the CFCs were bad to the ozone layer, if I can use very simple terms here, than HCFCs

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were introduced. Now, HCFCs were better than CFCs but still had an impact on the ozone layer and had global warming potential.

Then HFCs were introduced. HFC is not an ozone depleting substance but what it is, it has got a high global warming potential and to an extent of some of the gasses has the equivalent of 14,800 equivalent to CO<sub>2</sub>, so that is huge, and because it was introduced by the Montreal Protocol, it is the responsibility of the Parties to the Montreal Protocol to phasedown the usage of HFCs which is the Kigali Amendment. That is why we are talking about Kigali Amendment and how do we phasedown HFCs by the year 2045.

As I have said, 80 Parties have already ratified the Amendment and we hope that Fiji would be able to ratify. Then we will come up with strategies. We still have to collect baseline for the HFCs for Fiji and I had mentioned in my presentation somewhere about the steps that we will need to undertake, should we ratify – the steps we need to undertake to ensure the phasedown of HFCs.

So coming back to the presentation and the Kigali Amendment, Honourable Members, if we do ratify, it will reinforce Fiji's commitment to the international protection of the ozone layer and the climate system. It will provide a level playing field for countries and companies taking action to reduce reliance on HFCs, provide long term certainty for companies to invest in newer and innovative alternative environmentally-friendly technologies that will enable Fiji businesses to continue to trade in HFCs as phasedown continues.

I would like to also inform the Honourable Members that Fiji does not produce HFCs, we import and then re-export the HFC gasses. The Department of Environment has set a quota on the amount that we import and we regulate it. And we issue permits to all these companies who want to import it for air-conditioning purposes or refrigerants, so that we can then keep within the quota that is a level. The quotas are set based on the baseline and we work very closely with the Ozone Secretariat to establish quotas for Fiji and they work with other countries as well.

As net technology importer, again, like I mentioned Fiji stands to benefit from the global approach to reducing the production. Well, globally, there are countries who produce HFC and not Fiji, the user which will encourage the development commercialisation and distribution of newer and more environmentally friendly technologies which I have talked about.

There were some very specific questions that were sent to the Department which we would like to answer before we get into our obligations should we ratify. Honourable Members, if I may refer to the first question and to highlight whether Fiji have some expertise to put together the baseline information whilst assessing/evaluating and monitor, like I said, the Department of Environment has, in the past, been able to successfully implement and meet our obligations under the four Amendments. So the Department of Environment has an Ozone Depleting Substances Unit (ODS), we have a legislation under us and we have been able to successfully implement the previous four Amendments. We are confident, we do get a lot of support from multilateral organisations and also because we are Article 5 Country, there is a little bit of extra support that we get from the Ozone Secretariat to be able to implement and meet our obligations under the Montreal Protocol.

Let me just talk a little bit about the baseline information. So should we ratify, the Department of Environment has already prepared a timeline for us to be able to phase-out the HFCs (Hydro Fluorocarbons) come 2045. In terms of the baseline, we should be able to collect baseline information by 2022. The timeline for baseline data collection will be 2020 to 2022. Once we have that baseline, of

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course, we will need to get a consultant on board and we are in touch with the secretariat, who are going to assist the Department with funding and getting a consultant to collect our baseline data. We have actually started collecting some baseline data from 2018 but we need a more complete data set.

Once we have that, in 2023, the Department will then, in consultation with all the other relevant government agencies and the private sector as well, because really when it comes to any transition, we will need them to move towards more environmentally-friendly technologies that will allow to phase down the HFCs in 2023. Then from 2024 to 2028, we will have a quota for HFCs. It is called a freeze period but we will have a quota for importation of HFCs (we are exporting), and you can see it on the screen that from 2029 to 2030 to 2034, we have a 10 percent reduction from the baseline.

Between 2035 and 2039, we would like to see a 30 percent reduction from the baseline and from 2040 to 2044, a 50 percent reduction and 2045, almost 80 percent reduction, it is a phase down, not a phase out. Therefore, I think that is there but with the HCFCs (Hydro Chlorofluorocarbons), it is a phase out by 2030. So, I think that is how we have planned if Fiji does ratify to the Kigali Amendment, this is how we will plan to achieve that.

In terms of the technical capacity, like I mentioned, the Department has been working hard on this for a very long time with phasing out other gases so this will be just a number of gases that make HFCs. I always get confused, I am sorry, Honourable Members, and then we are also working closely with the Office of the Solicitor-General in terms of amending our Ozone Depleting Substances (ODS) Act because the ODS Act does not include some of these gases that is part of the Kigali Amendment. So, that is the other activity that the Department will undertake.

In terms of Q3, an oversight body - agencies are getting together to oversee that obligations are implemented. We do reporting, I think, on a quarterly basis to the United Nations and then we do get reports from them in terms of Fiji's compliance so right now we are on track with all our obligations under the Montreal Protocol. We do have the National Environment Council that is set up under the Environment Management Act that we do report to, in terms of the work of the Department in meeting our obligation under the various conventions and protocols that we are a party to.

We do work very closely with the Fiji Revenue & Customs Service (FRCS) and also the Biosecurity Authority of Fiji (BAF). That answers my question in terms of the coordination with relevant agencies. We also do work extremely closely with the industry. There is the Fiji Refrigeration and Air Conditioning (RAC) Association and we meet very regularly with them. We tell them about the changes that are coming, that are being proposed and actually the Protocol does allow enough time and it all depends on the parties as to how much you want to give? There is a lot of flexibility in making the transition.

In terms of the contents of the Kigali Amendment, what is the additional value difference from the original Montreal Protocol? Like I said, the original Montreal Protocol did not include the HCFCs. I think it is already in the analysis that is submitted but just for the purpose of answering that question, I will just talk about the key reasons to become a party to the Kigali Amendment for the Honourable Members' information.

The Montreal Protocol has put the ozone layer on the road to recovery by phasing out ODSs and in the process has also mitigated climate change. Under the Amendment, parties will phase down production and consumptions of HFCs creating the potential to avoid up to 0.4 degrees of warming by the end of the century. I did mention earlier HFCs which is an amendment under the Kigali Amendment

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is about phasing down HFCs. It is not an ODS but it has a high global warming potential, therefore if all parties ratify Kigali and are on track to implementation, the world globally will be able to potentially avoid up to 0.4 degrees warming by the end of the century.

All prior amendments and adjustments to the Montreal Protocol have universal support and have ratified the amendment early. If we ratify it early, we can tell the whole world that we are very serious about climate change and making sure that we do everything that we can to ensure that the warming stops really. When parties deploy new technologies while implementing the Kigali Amendment, they will be able to gain a competitive advantage in the world market. Alternative technologies are often cost-effective and lead to an improvement in the quality of the end products, including energy efficiency.

So, through the Kigali Amendment, the Montreal Protocol like I said takes full responsibility of the HFCs and plays a leading role in working towards an environmentally sustainable world where no one is left behind and it is consistent with the 2030 agenda for sustainable development.

So, because there are 80 countries that have already ratified, there would definitely be a move towards newer technologies, so if Fiji does not ratify or if we are still using technologies that are obsolete then we will not be able to actually trade with those countries or any countries because we will now become non-compliant.

In terms of the financial and technical assistance that is relating to Question No. 6, Fiji is an Article 5 country under the Montreal Protocol. So, once we ratify we will be able to access funding through the Multilateral Fund which would provide for transfer of technology and provide for enabling activities. Right now, the MLF is working on guidelines for financing but we will be able to access financing. Right now we have been able to access US\$150,000 as enabling activity from the MLF to be able to carry out some of the initial baseline work with regards to the HFCs.

Mr. Chairman, the last question that was asked was: who are the implementing agencies? The Department of Environment is the lead agency - we are the focal point for the Montreal Protocol and also we have the ODS legislation, even that does not include HFCs but we are working with the Office of the Solicitor-General to include some of those gases. We have been setting quotas, we have been able to successfully implement the other four Amendments. So, we are confident that we will be able to implement and ensure that Fiji meets its obligation under the Montreal Protocol should the Parliament endorse its ratification.

Honourable Members, thank you so much and we would be happy to answer any questions that you might have.

MR. CHAIRMAN.- Thank you, Ms. Sandeep, for that very strong message on ODSs particularly with regards to the Montreal Protocol on Substances that Deplete the Ozone Layers. I think for the benefit of the Honourable Members in the room, I come from an engineering background so I know the subject matter. But I think it is opportune to tell the Honourable Members in the room that if you look at your white goods, it has a star rating on the front door and tells you how many stars and that is what the Department of Energy ensures that every importation of white goods, particularly white goods that do have gases or refrigerants, that is the actual guideline.

Sandeep, the Department or Ministry have come a long way since the ODS Act, 1998, and having said that, how far are you away from amending that Act?



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MS. S. SINGH.- Thank you, Sir, for that question, Honourable Chairman. Once we ratify the Kigali Amendment, then we will be working towards adding additional gases as part of our schedules under the Act to be able to regulate them basically.

MR. CHAIRMAN.- Thank you for that. So, until Fiji ratifies, only then will the Act be able to be amended to cater for the current status.

MS. S. SINGH.- Right now, we are looking at engaging a consultant, again we are waiting for the ratification and we are having discussions with the SG's Office in preparation and in anticipation that if it does get endorsed by the Parliament, then as a Department, we need to move pretty quickly because then we have to start collecting baseline between 2020 this year and 2022 to be able to set quotas for Fiji. So we are progressing ahead, if I may say, but again we will wait for the decision by the Parliament.

MR. CHAIRMAN.- Thank you, Sandeep. Honourable Members, do you have any questions in particular?

HON. L.S. QEREQERETABUA.- Thank you, Sandeep, Alisi and Yogesh. I just want to ask about used vehicles. I know New Zealand ratified in 2017 and they are talking about 15,000 used vehicles per year, so they anticipated in 2017 that there was going to be a lot of refrigerants still coming in, that really should not be on the list allowed by New Zealand. What is the Department's plan with used vehicles coming from Japan that are a few years old that may be coming in? What are the plans for your communications with used car dealers and Government?

MR. CHAIRMAN.- Thank you, Honourable Member, for that question. I will go back to the last slide where we talked about the timelines and in terms of collating a baseline then having a freeze period, if gases like the HCFCs will be phased out by 2030, again we will do it in transitions, we will give enough time for the industry and for the people who import all these used vehicles. Right now, for example, they cannot import certain gases. Even if you get refrigerants, the Department of Energy is responsible for getting those equipment that has to cater, but the gases in those equipment comes under the Department of Environment's jurisdiction, because we then make sure that those gases that are banned cannot come even in those equipment.

With the used cars there will be a transition, there will be timelines given for them. The freeze period for HCFCs are between 2024 and 2028. We will be setting the quota then we will be working with everyone to make sure that they comply with our timelines.

Alisi, you might want to say something about used cars.

MS. A. KAMAIWAQA.- Thank you, Mr. Chairman and Honourable Lenora, just to support Madam Sandeep's answers on used vehicles, yes, that is also an issue that we will have to look into when it comes to controlling HFCs once we ratify the Kigali Amendment. You could see in the presentation that Madam presented on the previous projects that we had worked on and one of the projects was on Refrigerant Management Project (RMP) way back in 2001, I think. This was basically on CFCs and these were gasses that were used in vehicles.

We also achieved a complete phase-out on CFCs which also meant that we in time stopped bringing in these vehicles. So under the Kigali Amendment if we look into HFCs which basically at the

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moment some cars that are coming into the country also have these gasses charged with them to produce air-con in cars.

Basically, yes, like Madam said we will have a timeline, we will have to do awareness as well to this industry and also to those importers who are bringing in these vehicles or any equipment that is charged with these refrigerants that in time, we will have a timeline to stop the usage or to minimise because basically what Madam was saying that it will be a phasedown, not exactly a phase out. When it says phase out, it will be a zero consumption, zero import and zero export. So when it phasedown, we will just try and minimise the use of these refrigerants. Thank you.

MR. Y. GOUNDAR.- Mr. Chairman and Honourable Members, just to add on to what Alisi has mentioned, basically at the moment Fiji is currently using HFC 134a in the automotive air-conditioning. This will be replaced by HFO 1234yf, which is an alternative as per the technology and economic assessment panel under the Executive Committee of the Montreal Protocol.

These are the technologies that has been decided. HFOs, while having a global warming potential, is quite less compared to the HFC 134a. So this is the next alternative in the automotive air-conditioning. Thank you.

MR. CHAIRMAN.- Thank you, Yogesh. Just still on motor vehicles and its air-conditioning, what constraints or what remedial action has the Department or the Ministry taken to what is out there in the junkyards? As there are so many junkyards out there and a lot of air-conditioning units still in those vehicles, what sort of control, if any, has the Department or Ministry taken to curb the linkage into the atmosphere? I can assure you there is thousands of cars in junkyards and those air-conditioning still have those free-on gasses, et cetera, there.

MS. S. SINGH.- Thank you, Mr. Chairman, for that question. The Department is currently working with the Ministry of Environment and the Japanese Government, and I think there is another agency within the Government of Japan which we are working with in terms of having a waste management and a gas recovery plan, so we are equally concerned.

Some of the vehicles before they come to their end of life, their gasses are all taken out before it is taken out of the market or out of the road, but there are some cars that still has gasses. So, we are working with the Government of Japan, who have indicated their interest in working with the Department of Environment to address that issue.

MR. CHAIRMAN.- Thank you. Honourable Dr. Salik.

HON. DR. S.R. GOVIND.- Thank you, Mr. Chairman, and thank you Sandeep for a very informative presentation. The subject is so technical. My interest is that, in Fiji, about the conditions you mentioned, like skin cancer and eye cataract, are very highly prevalent. So, is there any thoughts about doing some kind of studies or setting up some monitoring mechanisms as we control these ODS, meeting our targets, it really impacts on these conditions. Are you having some association with the Ministry of Health and Medical Services or is there an oversight body?

MS. S. SINGH.- Thank you so much for that question, Sir. Like I mentioned in my presentation, we do report to the National Environment Council in terms of our obligations, meeting our obligations and some of the environmental and health concerns when it comes to all these gases in the environment and also the Ultraviolet (UV) lights that reach us. The Ministry of Health and Medical

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Services is a part of the National Environment Council, so we do talk about some of the human health implications and environmental health issues.

But the ozone layer is on the road to recovery which is a good news for everyone in the world. There was a big ozone hole that was there and that is being repaired, so we would advise people to take preventative measures, such as wearing sunglasses to protect their eyes from UV rays and all those things.

The Ministry of Health and Medical Services is aware, we are aware, but the good news is that the ozone layer is on the road to recovery which means that there will be less of these harmful rays that will be reaching us and that will result in less people getting skin cancers or eye cataracts that were directly related to those rays reaching us previously.

HON. A. JALE.- Thank you very much for your presentation. I have two issues to clarify. I think your statement on the ozone layer will be a welcome news to President Donald Trump, who has not been very supportive of this international initiative.

Firstly, your obligation timeline that you have already specified over there, I just want to know, who were the ones that you had consulted with in terms of those timelines? Is that something done by your own Ministry or have you consulted with the National Environment Council or others? I think the implementation part is going to be very important and you need the support, you need the collaboration of others. Can you answer that, please?

MS. S. SINGH.- Thank you for that question, Honourable Member. We do, like I said, nationally. We do report back to the National Environment Council in terms of our work that we do under the different Protocols and Conventions.

With regards to the timeline that you see on the slide, this was set out by the parties to the Montreal Protocol during the meeting of the Parties so it is an agreed timeline globally. So, each country, once you ratify, we need to meet those timelines. We cannot leave it open because otherwise all countries might come up with all sorts of excuses for not phasing down HFCs. So, basically this is a timeline that is set and once we fully ratify the Kigali Amendment, the Department of Environment will need to meet those timelines.

Then we will also be consulting internally. We have started informing the stakeholders, the industry, that these are the timelines we will be working with if Parliament ratifies the Kigali Amendment, so they are aware. It is not like they will be shocked come 2024, on what has happened because this will require a lot of investment. It will be very costly.

I can inform the Honourable Members that we do have a lot of support, great support from the RAC Association and the industry because they recognise the importance of protecting the ozone layer, phasing out these gases that has got high global warming potential and they are aware about the impacts of climate change and how it is impacting on us as Fijians and as a small island nation.

HON. L.S. QEREQERETABUA.- Thank you, Sandeep, just one question, you were talking about the high costs. As you phase down, the alternatives maybe more expensive than what we are using now but when it comes to costs and business, making ends meet, how prepared are you to check on counterfeit refrigerants?

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MS. S. SINGH.- That is a technical question, I will let the technocrats answer that.

MR. Y. GOUNDER.- Thank you, Director.

Honourable Member, we have the refrigerant identifiers. Under the HCFC Phase Out Management Plan what we have done is that, we have encountered issues of counterfeit refrigerants, as well as smuggling of HCFCs. Now, we have engaged with the six enforcement agencies and they are the National Fire Authority of Fiji, Fiji Ports Corporation Limited, Fiji Navy, Fiji Revenue and Customs Service and the Maritime Safety Authority of Fiji along with Fiji Navy.

Now, Fiji Revenue and Custom Services looks at the physical border and then we have the Fiji Navy looking at the EEZ, if we have any smuggling of these gases. In terms of counterfeits coming in, with these goods, normally we have a machine or equipment that when we actually fit it to the gas cylinders (something similar to a quality test), it uses some grammes of the gases just to see what actually is in the cylinder itself. So, basically, it tells us, is it 100 percent of that particular gas or is it a combination of something. So, we are able to detect through that means.

Normally, any imports coming into the country, the importer is obliged to report to the Department of Environment as to when the shipment actually comes in, and the inspector goes, then the container is opened and then we do a random quality test for these refrigerants. An identifier has also been distributed to Fiji Revenue and Custom Services for the identification at the borders. In future, we also plan to go ahead and procuring some more of these equipment and distribute it more widely into other border agencies as well. Thank you.

HON. L.S. QEREQERETABUA.- Just on that, I just remembered watching this news item on the quality of air in airplane cabins and just made me think (this is just out of the blue kind-of-thing), when you have the air conditioning vents. I was just wondering, have you heard of any, like a litmus test almost, of air coming out of vents to test the quality of the air coming out of air conditioning vents in cars? Have you heard of anything like that?

You turn on an air conditioning in a hot car and you get this blast of air. What do we know about what we are breathing in at that point in time before the actual coolant starts to work? It is a random question.

MS. S. SINGH.- My understanding, Honourable Member, is, with the airlines, they do comply with international standards, the civil aviation standards. So, all the air that you breathe in their plane are safe and are of good quality. So, I am sure the Civil Aviation Authority of Fiji ensures and globally the aviation industry are compliant with international standards.

HON. L.S. QEREQERETABUA.- I was just thinking about cars, how do we test? I know you said random testing, but you could test 10 and missed the one that is the culprit. This is just a random thought about it.

MS. S. SINGH.- We test the gases, Honourable Member, that are used in those air conditions, we do not test the air that comes out. It is warm, it depends on the day, but it is the gases that we are concerned about.

HON. L.S. QEREQERETABUA.- Yes.

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HON. A. JALE.- I think it is important that when we do our report to Parliament to specify whether there are some difficulties that the Government of Fiji needs to take note of in terms of our obligations under the Kigali Amendment Convention. From your expert opinion, those baselines, are there things that you need to tell us now if there are going to be some difficulties that we need to take note of?

MS. S. SINGH.- Thank you so much, Honourable Member, for that question. One thing, I think, that will be helpful for the Department of Environment as the enforcement and lead agency is to implement the Kigali Amendment. The sooner we ratify, the more time we will have for implementation and to meet those timelines because if we do not ratify until 2024, then we will have less time to meet those timelines, because those timelines have been agreed globally by the parties to the Montreal Protocol.

So for the Department of Environment, I think again it will be a Parliament's decision whether to ratify or not, but in terms of the timelines I am talking about, we need to have sufficient time to be able to implement this because there is a whole industry that is involved in this whole transition. They are the key players and the ones who will be assisting Fiji to meet our obligations to phase down the HFCs and to ensure that we are able to be part of this global agreement to reduce the temperature of up to 0.4 degrees, if everyone implements. So, I think that is what we want at this point in time, but again in terms of setting quotas, how much HFCs is coming out, we will be able to determine that once we have the baseline, Sir.

MS. A. KAMAIWAQA.- Regarding what Madam Sandeep has mentioned, Honourable Members, what she is meaning is that, we have been trying to put this to Cabinet, I think since 2017 as well, so it would really help in our implementation if this is ratified because of the industry and to consider them, it would be important for them to have time for the transition to the new technologies, if we are to ratify the Kigali Amendment and we regulate HFCs and we tell them during awareness that they need to remove these gases or these equipment, because under the law it will have to be minimised. For now we are still regulating under the Ozone Depletion Substance Act, specifically ODS which are HCFCs.

Once we ratify the Kigali Amendment, we will include the HFCs. Once it is included in the law, it would really make our implementations more easier when we come and say, "Under the law it states this and that and you cannot bring this in", because right now while we are doing voluntary collection of HFC data from the industry, sometimes we face difficulty in them providing us data because they say we are not obligated to give you those data. Basically, that is one of the challenges that we are currently facing, thank you.

MR. Y. GOUNDAR.- As alluded by the Director and Alisi, in terms of timelines, we really need to give the industry more time to actually prepare or transit into these new technologies. Just for your information, refrigeration and air conditioning is an essential industry in Fiji's sector. It works in tourism, we need refrigerants over there.

To have convenient, cool temperatures for tourists to come and visit Fiji, we need refrigerants in the fisheries sector to keep the catch fresh, we need the refrigerants in the medical sector to keep the medicines at a certain temperature and also to preserve the bodies in the mortuary, and there are other set of applications in the minings, et cetera.



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We really need to emphasise that this transition timeline for the industry is really important. The more time we give them, the more time they can be obliging to Fiji's commitment to the Montreal Protocol. Thank you.

HON. DR. S.R. GOVIND.- Thank you. I see that there is a lot of technical support plus other resources will be required once this ratification is done. What we are really asking is that, currently, my understanding is that the Ministry of Environment is a very small Ministry in terms of budget, plus your staffing.

If this is ratified and you have your plans, et cetera, what kind of resources and expansion of your Ministry do you see; is there sufficient technical staff with the know-how to do the implementation? I think that is what the Honourable Member is asking.

MR. S. SINGH.- Thank you so much Honourable Member for that question again. If we do ratify the Kigali Amendment in terms of the cost implications to the Department of Environment, mostly it will be administrative costs in terms of like an enforcement.

We are currently enforcing the ODS Act, like we said, it is an amendment. We will be including these other HFC gasses as part of the schedules of the current Act. There will obviously be some administrative cost associated. We have to get a consultant but like I said, Fiji is an Article 5 country, we do get a lot of support from the Ozone Secretariat, we should be able to access some of those funding.

In terms of going out to the field, this will be just an additional work to what we are already doing, so it will not be a separate work to what we are already doing but it will be just part of the list of gasses that we are already regulating but obviously, we will need to carry out a lot more awareness so that the industry is fully prepared.

There is all these transitions that are happening which we have already started doing. Should Parliament ratify the Kigali Amendment, we will be asking for some additional funding from the Ministry of Economy in this year's budget. But really it will be all administrative cost because the consultants that we are going to get to pay for the baseline will be supported by the Ozone Secretariat because we are able to access some of this funding from the Multilateral Fund as an Article 5 country.

With regards to enforcement, we are already doing enforcement for other ODS gasses and the HFCs for now and then HCFCs, and the HFCs will be just another gas that will be added as part of our schedule. It will not be something new that the Department will be doing, we are already doing the enforcement. It is an amendment we have already been able to successfully implement. There are the other four amendments, this will be the Fifth Amendment to the Montreal Protocol. But there will be some additional administrative cost which we will hopefully get support from them. We have already got about US\$150,000 from the ML to do some work.

MR. CHAIRMAN.- Put it this way, you want this Committee to push for the ratification so you can include it in this year's budgetary allocation.

MR. S. SINGH.- Yes, thank you, Sir.

MR. CHAIRMAN.- Honourable Members, any other questions? If none, may I take this opportunity to thank you, Ms. Sandeep, Ms. Alisi and Mr. Yogesh for that very, very informative and enlightening experience, particularly for us all.

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It was a pretty difficult subject to pounce on but I take this opportunity to say “thank you once again”. If you have any departing remarks, Ms. Sandeep, please, feel free to do so or any of your members. Thank you.

MR. S. SINGH.- Thank you, Mr. Chairman and thank you, Honourable Members. It is just being great to be here and to speak in very simple terms like the importance of ozone layer, why Fiji needs to ratify the Kigali Amendment and the timelines and the work that the Department of Environment has been doing all this while in relation to enforcement, and how we would like to progress should we ratify the Kigali Amendment.

Yesterday, when we were preparing the presentation, we tried to keep it as simple because it can get very technical and you have to use all these chemical names, the gasses, et cetera. Hopefully we have been able to give very clear information to be able to make the decision whether to ratify it or not. Thank you so much, Sir.

MR. CHAIRMAN.- Thank you again. We might, if required, through writing up our final report come back to your goodselves with other pressing questions and I hope you will be able to adhere to that. Thank you.

MS. S. SINGH.- We will, Sir. Thank you.

MR. CHAIRMAN.- Thank you.

The Committee adjourned at 10.26 a.m.

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The Committee resumed at 10.50 a.m.

**Interviewee/Submittee: Ministry of Industry, Trade and Tourism (MITT)**

In Attendance:

1. Mr. Shaheen Ali - Permanent Secretary
  2. Ms. Seema Sharma - Director, Trade
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MR. CHAIRMAN.- Honourable Members, thank you. We have before us the Permanent Secretary for the Ministry of Industry, Trade and Tourism (MITT) - Mr. Shaheen Ali; and Director, Trade - Ms. Seema Sharma. I welcome you both to the meeting of the Standing Committee on Foreign Affairs and Defence.

A brief introduction, Mr. Ali; you probably know the Honourable Members, as well as Honourable Lenora Qereqeretabua. Unfortunately, Honourable Selai Adimaitoga had a demise in the family and has given her apology for this morning. On my right are Honourable Dr. Salik Govind and Honourable Anare Jale; also, Mr. Jacob Abraham and Ms. Susana Korovou from the Secretariat. With that introduction, Sir, I know you both very well. I am pretty sure you do not need an introduction so we look forward to your submission this morning. Thank you.

MR. S. ALI.- Thank you very much, Mr. Chairman and Honourable Committee Members. Good morning to you all. Thank you for your kind invitation to present to this Committee on this subject matter. I must admit that when the invitation first came to me, I was very intrigued as to why MITT would be invited, but then I could understand the rationale. I trust that the line Ministries have been also lined up or have also presented on this topic, so we will keep our presentation mainly on what the Committee is trying to seek from the Ministry which is the impact on the private sector, business community and consumers and other stakeholders. What would be the possible impacts at this early stage if Fiji is to ratify?

The question that was asked was, whether Fiji should fully ratify the Treaty? I hope we do not have to dwell too much on that topic and we can unequivocally say that Fiji should ratify the Kigali Amendment and keep within the spirits of the Montreal Protocol.

Mr. Chairman, I have a presentation which is on the screen. I hope I am not blocking it. So, I will keep within the presentation and the time allotted to me. I hope to present much sooner and have some interactions with the very knowledgeable Committee Members.

The presentation will basically concentrate on two parts; firstly, on background. The Ministry of Environment, I believe, has presented already so they would have shared a lot of technical details with regards to Kigali Amendment and the Montreal Protocol on Substances that Deplete Ozone Layer, but the impact in terms of adoption and ratification of Kigali Amendments to the Montreal Protocol on some of our imports on white goods, propellants that use it, firefighting equipment and our major stakeholders of the Ministry which is the consumers, what will be the impact at this early stage? We are trying to forecast some of those.

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If we cannot answer any questions, my Director Trade, who is much more knowledgeable than I am in trade matters can answer some of the technical questions and, of course, if we cannot answer any questions here at the present, we will provide written answers.

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In terms of background, I think we know that we are a party to the Vienna Convention on the Protection of the Ozone Layer and the Montreal Protocol on Substances that Deplete Ozone Layer and we became parties in 1989. We have successfully reduced the use of ozone depleting substances over the years and we have contributed to the reduction of greenhouse gas emissions also through this Protocol and various other initiatives. We have become a key contributor to the global fight against climate change.

The Protocol has evolved over time, as new substances are invented to replace the old CFCs and Ozone Depleting Substances. These substances are better, but they have harmful effects as well. So, over time, the Protocol has had amendments to also regulate and phase out these substances which are harmful to the environment.

So, we are party to all the four Amendments and I am sure that was shared with you, so the question before us is the latest one, Kigali Amendment and that was, sort of, agreed to in 2016 in Rwanda. It came into force after the requisite number of countries had ratified it on 1st January, 2019.

There is the question whether we should ratify it? Our position is that we should because it has not only benefits Fiji and the Pacific but also to the global fight against climate change. The negative or down side to it is very minimal, given the long transitional period that the Amendment offers us.

This particular Amendment targets HFCs. HFCs are greenhouse gases which have very high global warming potentials. They may not deplete the ozone layer but they trap greenhouse gases and, thereby, has this counter-negative effect of warming the global planet, so we need to do something about it.

The Parties to the Montreal Protocol came together and said, "Let's have an amendment that requires parties to gradually reduce HFC and find a more environmentally friendly alternative and let us reduce it in phases." The target was approximately 80 to 85 percent reduction by late 2040, Mr. Chairman.

Fiji as a developing country has been given a longer phasing period than other developed countries. We are called the Article 5 Country of the Montreal Protocol and we are required to phasedown the production and consumption of HFC. We will go through the slides that look at our phase out schedules.

What the Parties to the Montreal Protocol estimate, Mr. Chairman, is upon ratification of this Amendment, Parties will begin to deploy new technologies in line with these new requirements, and Parties will be able to gain a competitive advantage in the world market with these new technologies. So, the price differential will be less because newer technologies would become prevalent and with the forces of supply and demand, the newer technology white goods would be more cost effective. This will lead to improvement also for consumers in terms of energy efficiency as well, as we have seen in other types of controls, such as energy efficiency. I believe the Department of Energy is also presenting to the Committee.

The flexibility is the main thing. The Amendment allows Parties a degree of flexibility in implementing this obligation. It is designed to give Parties sufficient time and opportunities to phasedown HFC in a way that suits the country's needs and interest, and setting your own timetable and priority for particular HFCs products, technologies and finding alternatives to them.

Through this Amendment, the Montreal Protocol takes responsibility for phasing out HFCs and plays a leading role in working towards an environmentally sustainable world where no one is left behind. As we know, Mr. Chairman, all countries of the world have signed up to the Montreal Protocol. Approximately, 88 countries have ratified this Amendment and the momentum is there.

Most of our trading partners have also ratified the Amendment and accepted the Amendment. Most of the Pacific Island Countries have also ratified or accepted the Amendment. The only country that we feel is significant enough that has not done so is China.

In relation to the procedural aspects of implementation, if Fiji ratifies, the lead Department would be the Department of Environment and if it is done in the next Sitting of Parliament, for example, the Amendment enters into force after 90 days following the ratification.

Now, I will go on to the impact of the ratification which is the main part of the presentation. Here, it is little bit of a grey area because of the early stages of the implementation and then what will happen. What we think will happen closer to the end date of the phase out period.

Firstly, ratification of the Amendment will reaffirm our existing commitments under the Montreal Protocol. It is very much within the spirits of the Montreal Protocol and at the same time, it will support our commitments under the Paris Agreement, and the global goal to stabilise greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous interference with the climate system.

Being an Article 5 Party to the Montreal Protocol, Fiji, as I had said, classified in Group 1, and we have baseline years that our limits were calculated on, and these baseline years were 2020 and these are technical information, Mr. Chairman. Anyway, the phase out period for Fiji will begin in 2024 and thereafter, reduction will take place and that is:

- 10 percent in 2029;
- 30 percent in 2035;
- 50 percent of reduction in HFC usage by 2040; and
- 80 percent by 2045.

These are usage of HFCs gasses in products.

There will also be a ban in the trade of HFCs by 2033. Therefore, whether a country is party to the amendment or not, they will not be able to trade in HFCs from 2033, at least, with the countries that have ratified the Amendment.

Impact on trade, given that all trading of HFC-related products will stop in 2033, there will be a phase out of the consumption of the HFCs for Fiji and this will begin from 2024, which means that there will be gradual reduction of consumption of HFCs in Fiji. So, as I said, the trade ban will come into force by 2033, which means imports will not be permitted but the consumption will be at a much reduced level.

So, there is no immediate impact because we are given a lot of time. There is a phase out period for Fiji until 2045. There is a long phase out period and there will need to be also policies put in place, to ensure that the phase out happens smoothly and without impediments. In addition, with regards to ban on trade, we will have to introduce policies at the border, to ensure that such products are not imported into Fiji after 2033.



There are lots of policy options available, Mr. Chairman. The Department of Environment may study the protocol in close detail and come up with the best one, but there are also standards available apart from import licencing, et cetera. We can look at national standards and inculcate these new requirements in our national standards with regards to goods that use HFC products. Now, standards have an advantage because they are voluntary and they can be made mandatory at a later date.

It is noted that we have tried to consult through FSAF and other private sector bodies or firms that import goods that use HFC. So, at this early stage, the implications or the awareness of what HFC does to the environment and whether their products contain HFCs is minimal, so there needs to be a number of awareness sessions and I will dwell on that also. However, at this early stage, there is a lack of awareness with the private sector on possible implications to trading these products.

As far as the consumers are concerned, as we begin to phase out the consumption from 2024, there needs to be extensive consumer awareness as well on why HFCs are bad, why we are phasing out HFCs and also in terms of if there is any price differentials, we need to account for that. And there are some policy measures that can be taken, to ensure that Fiji is well prepared and to ensure that we are able to comply with the obligations of this new Kigali Amendment.

As I have noted, Mr. Chairman, most of our trading partners have ratified the amendments and are taking significant steps to implement the phase out of the use of HFCs in goods such as refrigerators, air-conditioning units, fire-fighting equipment and propellants used in cans. I think naturally the newer technology products or alternative to HFCs will become cost-effective for Fiji.

The major concern is that the largest producer of these goods being China has not ratified the Amendment. However, if China is smart and plays to the forces of supply and demand then major countries - the major consumers of these products such as the European countries, Australia, New Zealand and the rest of the world help ratify it, they will demand these newer products so China will also move towards producing an alternative to HFCs.

There has been significant research done especially in Europe on finding good alternatives to HFCs that are also cost-effective. Why I can say this with confidence, Mr. Chairman, is because we have a parallel example. When we move towards better fuel standards with low sulphur content, there was a lot of concern by stakeholders that these new standard fuel which has lower emission, lower sulphur content which is better for environment, will be more expensive for Fiji, also that it may not work on the older vehicles. So, there was a lot of toing and froing between the Ministry and our stakeholders, there were long years of discussions with fuel importers, fuel retailers, consumer groups and private sector groups.

Finally when the policy came into force last year, there was minimal or no impact at all, in fact, it was so smooth. There was no increase in prices. The older cars worked better with the newer technology fuel, the consumers gained.

In terms of price impact, the refineries in Singapore and elsewhere have already based themselves to produce low sulphur fuel. So, in terms of economies of scale, it is probably more cost-effective to have those lower sulphur fuel come to Fiji because the containers have already stocked with them. So, we forecast that a similar thing will happen, but that is not to sort of offer an alternative. We still feel that a lot of advocacy needs to be done with the business community and the consumers on the benefits and the possible sort of impediments that could happen. There is a need to switch to non-HFCs technologies.

For these consultations, our Ministry stands ready as the line Ministry to the private sector and consumers, to help the Department of Environment, the Climate Change Unit and the Department of

Energy to consult with the stakeholders and also help in the policy implementation. Like I said, the Standards Department also is with the Ministry and the current Officer in Charge is Ms. Seema. So, we can also help with regards to policy implementation.

In terms of recommendations, Mr. Chairman, if I can very quickly sort of recap on what I have said that there needs to be awareness for importers that we are now parties if we become parties to the Kigali Amendment, the phasing-out that needs to happen in the future of HFCs, their role as a key stakeholder to help Fiji comply with our obligations and implementation of the changes.

As I talked about, there should be awareness of consumers on the impact of HFCs and why Fiji is taking such a move, adopting and ratifying the Kigali Amendments. This needs to be properly explained in a manner that they can relate to and what HFC does with regards to global warming and its harmful effects on environment and human health.

As I have said, Mr. Chairman, a lot of policy measures that we can take in terms of ensuring smooth implementation of this and border agencies such as Fiji Revenue and Customs Services, Fiji Ports Corporation Limited, Fiji Ports Terminal Limited, Ministry of Health, Biosecurity can all play a role in terms of ensuring that any policy decisions we take is effectively implemented and monitored.

We can also offer, Mr. Chairman, incentives to fast-track some of the implementation. So, for importers that proactively move towards better technology products that do not include HFCs, we can give them tariff incentives or duty concessions to ensure this change happens proactively. So, that is something that the Ministry of Economy and Fiji Revenue and Customs Services can consider in terms of how effectively and pragmatically that can be implemented.

So, there can be a lot of incentives given for people, consumers, producers, importers that use newer technology, HFC alternative products. We would very strongly recommend, Mr. Chairman, as a final recommendation that in order to effectively implement the Kigali Amendment, there are a lot of multilateral funds that are available on such endeavours and specifically for this Amendment, there is a Multilateral Fund for the implementation of the Montreal Protocol which has donor commitment of over US\$25 million to enable early action.

So, the Ministry of Environment and the Climate Change Division can tap into these funds to stopgap any areas that require our assistance, whether it is consumer understanding or policy recommendations, et cetera. This Fund can help in terms of implementation needs and capacity building, so, that is my final point, Mr. Chairman, with regards to our presentation and I will be happy to take any questions.

MR. CHAIRMAN.- Thank you, PS, for that very informative and precise submission. I saw one of your slides and it took me right back to my school days when you had all the different spheres. There is something that we had raised in an earlier session with the Department of Environment and that was the fact on these HFCs, in particular, the vehicles air condition systems. They are working, they said they do have people that are monitoring and they are doing analysis on vehicles. There is over a thousand of these vehicles that are sitting in junk yards that still have the gases in their so-called compartments. From your Ministry, Trade that is, what sort of assistance, if any, would you be already giving the Department of Environment?

MR. S. ALI.- Mr. Chairman, this is in regards to the proper disposal of those redundant air conditioning units that are in junk yards. This would require a level of scientific solution that is environmentally-friendly. Like I said, there is a number of technical agencies that are competent in this area and the Ministry of Foreign Affairs can provide link to those agencies.

As I have said, there is a number of organisations that have funds that help in the implementation and a number of organisations and funds available with regards to fighting climate change. So, those could be tapped into from our side. There are private sector organisations that we can tap on in terms of seeing the latest technology in the disposal of such types of concerns and offer that type of assistance and advice to the Department of Environment. I am sure there is a lot of research and this is not a Fiji problem, I am sure this is being faced by all the Pacific Island countries and also the developed countries. We can liaise through our trade commissions and see what the latest research is. We are constantly approached by private sector organisations that are always trying to introduce new technologies with regards to waste management and generation of energy through waste management.

There are a number of technologies that are out there. It is just ensuring that such technologies are commercially viable for Fiji and are implemented easily by countries like Fiji. So, that is the hurdle that we have to get over. So, in that regard, Mr. Chairman, we can do a lot with the Ministry of Environment.

MR. CHAIRMAN.- Thank you, PS. Honourable Members, do you have any questions for the Ministry of Industry, Trade and Tourism? No further questions, PS.

May I take this opportunity to say - thank you again, and if you have any departing remarks, PS, I give you the floor.

MR. S. ALI.- Thank you, Mr. Chairman. Again, I would like to thank you warmly and Honourable Members for the invitation. It is not often that we face this esteemed Committee but I dare say that if we spearhead any other Treaty ratification, we will have to come to this Committee and we look forward to further introduction and working very closely with your Committee.

Again, Mr. Chairman, if Honourable Members do have any questions, please, feel free to send them to us and we will endeavour to reply as best we can. *Vinaka*.

MR. CHAIRMAN.- Thank you again, PS.

The Committee adjourned at 11.22 a.m.

The Committee resumed at 11.45 a.m.

**Interviewee/Submittee: Department of Energy**

In Attendance

1. Mr. Mikaele Belena - Director, Energy
  2. Mr. Vishal Prasad - Senior Officer, Minimum Energy Performance Standards  
and Labelling (MEPSL) Programme
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MR. CHAIRMAN.- Welcome, gentlemen, and Happy New Year to both of you.

(Introduction of Honourable Members and Secretariat by Mr. Chairman)

Without further ado, gentlemen, just a brief introduction of your goodselves. The floor is yours, thank you.

(Introduction of Team from Department of Energy)

MR. M. BELANA.- Thank you so much, Mr. Chairman and Honourable Members of the Standing Committee. Firstly, I would like to take this time to thank you for giving us the opportunity to come here and present on this Kigali Amendment.

On behalf of the Honourable Minister, the Permanent Secretary and the Senior Management, I would like to convey our gratitude to the Committee and we also wish you a Happy New Year at the start of this Year, 2020.

We are here to present on behalf of the Ministry and the Department of Energy on the adoption and ratification of the Kigali Amendment to the Montreal Protocol.

I think we have already sent a copy of the presentation to the Committee and it is also before you. I will be presenting on behalf of the Department and my colleague, Mr. Vishal, is also here to assist us if there is any question relating to the programme that he is looking after.

Just a very brief overview, I think, as you are aware that the Montreal Protocol was finalised in 1987 with the intention to look at those Ozone Depleting Substances (ODSs) which are mostly released to the atmosphere.

As you are aware that when these gases are released to the atmosphere, they have harmful effects to the environment. The Montreal Protocol itself is proved to be innovative and successful as a universal ratification which were done by all countries. As you are aware that there has been a number of amendments done to the Protocol over the years to bring about the changes happening in terms of the scientific, technical and also the economic aspect that have been happening over the years.

Altogether, there have been five Amendments done and Fiji had already ratified four. Just a very brief overview on the amendments that were done:

London Amendments 1990: Changes in the ODS schedule by requiring the complete phase out of CFCs, halons and carbon tetrachloride by 2000. This is applied to both the developed and developing countries and Fiji has also ratified this Amendment.

Copenhagen Amendment 1992: This was also ratified by Fiji.

Montreal Amendment 1997: This includes the phasing out of HCFCs in developed countries, as well as the phasing out of the methyl bromide in developing countries in 2005 and 2015 respectively, so this was also ratified by Fiji.

The Beijing Amendment which was also ratified in 1999 was also ratified by Fiji.

Currently, the Kigali Amendment basically extended the controls to phase down the production and consumption of hydrofluorocarbons because these substances were adopted by industries in moving away from ozone depleting substances and they are potent greenhouse gas damaging to the earth's climate.

Looking at the Kigali Amendment in a bit more detail, the hydrofluorocarbons were introduced as non-ozone depleting alternatives to support the timely phase out of CFCs and HCFCs. HFCs are now widespread in air conditioners, refrigerators, aerosols, foams and other products. While these chemicals do not deplete the stratospheric ozone layer, some of them have high global warming potentials, ranging from 12 to 14,000. Therefore, the world has taken an important step on the road to drastically reduce the production of hydrofluorocarbons and limit global warming with the Kigali Amendment to the Montreal Protocol.

While the Montreal Protocol only control substances that damage the ozone layer, the extension of the Treaty's scope now allows for the Montreal Protocol to phasedown substances with high global warming potential. The Kigali Amendment to the Montreal Protocol will reduce the projected production and consumption of hydrofluorocarbons by more than 80 percent over the next 30 years.

If fully supported, the amendments can avoid up to 0.4 percent of global warming by the end of this century. So, 88 countries have already ratified the Amendment. It came into force on 1st January, 2019 for those countries that have ratified the Amendment.

We have just shown how this Amendment will have an impact on the energy sector. As you are aware that we have made our commitments to the Paris Agreement in terms of our carbon emission reduction. We have a 30 percent carbon emission reduction, as we have already committed under the Paris Agreement so from that 30 percent, we have 20 percent which has to be achieved through renewable energy targets and 10 percent through energy efficiency measures.

These targets will also be incorporated into the National Energy Policy. Currently, we are in the process of reviewing the National Energy Policy. The Draft Policy we have from 2014 has not been endorsed by Cabinet but Cabinet has also endorsed for us to review that Policy.

One of the key strategic areas that we will be incorporating is looking at energy-efficient measures or looking at green cooling energy-efficient technologies. So with the ratification of the Kigali Amendment, it will add more impetus into these strategic areas and also with the existing programmes that we have in the Department, we have the minimum energy performance labelling where we currently regulate the importation of energy-efficient appliances.

For the information of Honourable Members, we are currently regulating the importation of household refrigerators. If you have been noticing that most of the appliances that are now sold now by the retailers have this brand, 'energy efficient' brand labels. So that is what we are currently regulating

and that programme will also be expanded to look at other electrical white goods, air conditioning system, we are going to look at televisions and lighting system.

So, with the existing programme that we have and if you are going to ratify this Kigali Amendment, it will somehow complement the work that the Department of Energy is also doing, basically looking at how we can minimise or reduce our carbon emissions to the atmosphere.

With that, I think some of the outcomes we are looking at, apart from reduction of carbon emissions, we are also trying to increase our renewable energy mix, looking at our national electricity mix. As we currently speak, we have about 55 percent of our total generation mix from renewable, so with the Kigali Amendment and also looking at our national programme, this will further increase the percentage of renewable in terms of our overall renewable energy mix.

The next slide, it just basically shows what I have explained earlier in terms of our carbon emission reduction. We have a target of 30 percent, so 20 percent from renewable energy and 10 percent from energy efficiency.

Well, also looking at our targets in terms of our five-year and 20-year National Development Plan targets, looking at the energy sector, I think for the information of Honourable Members, we have a target to provide 100 percent access to electricity by 2021. Of course, looking at renewable energy, as I mentioned earlier that we are currently generating about 55 percent of our electricity from renewable but we are planning to further increase that to 100 percent by 2036.

Also, in terms of energy efficiency, looking at our energy intensity, currently this was from the baseline data of 2015 but we are expecting to reduce that further to 2.73 percent by 2031.

Just very briefly, looking at the programmes that we have, we are now focusing more into energy efficiency programmes. I think that is where it is more related to the Kigali Amendment. Looking at some of the programmes that we have, as I mentioned earlier, we already have the minimum energy performance labelling programme and we are also working together in terms of our building code. There is a committee that has been formed to review the building code and also to incorporate energy efficiency measures, together with the standards on how we can improve the energy consumption of buildings.

Of course, our ongoing programmes where we run awareness campaigns in the different sectors that we have, looking at public, private and even schools where we run energy competitions, just to create that awareness on energy saving measures.

The benefits of becoming a party to the Kigali Amendment, I think it has been clearly mentioned in the Amendment itself that we can have access to some form of financial and technical support which are provided under the Montreal Protocol. Apart from that, in terms of financial assistance, Article 10 of the Montreal Protocol establishes a financial mechanism to provide financial and technical co-operation, including the transfer of technologies to support Article 5 Parties' compliance with the Montreal Protocol. Part of this package is the multilateral fund which, amongst other things, meet the agreed incremental cost of Article 5 Parties.

Adopting new technologies will enable countries to gain competitive advantage in the market, as many of the latest developed alternative technologies lead to energy efficiency and better product quality. I think for us in the Pacific and even in Fiji, we are located at the end of the supply chain. So, as you are aware that technology evolves over time, there has been a lot of scientific studies done in terms of new technologies.



I think Fiji when ratifying this Kigali Amendment will position us in a better place in terms of receiving new technologies which are entering the market and for us, we do not have much control in terms of the new technologies. But I think it will place us in a better position in order for us to be able to have access and be able to undergo this kind of capacity building training with the new technologies that are coming into the market.

Article 4 of the Montreal Protocol restricts parties from trading control substances with States not party to the Protocol. The Kigali Amendment, when Article 4 enters into force, it will restrict trade in HFCs between parties and non-parties. I think this is very important as well, in terms of parties trading amongst those that have ratified the Protocol or the Kigali Amendment. So, we are able to shield ourselves properly and also restrict those non-parties or those that have not amended the Kigali Amendment from trading with member countries or those that have already ratified the Amendment.

Reaffirm the existing commitment and support under the Paris Agreement; yes, I think for Fiji, we have already taken a lead role in terms of climate change negotiations. We have been voicing the need for developed countries and our bigger brothers to reduce their carbon emission. So, with us ratifying this Kigali Amendment will also reinforce our position in terms of the support towards the Paris Agreement.

The pathway to implement the HFC phase down is to reduce dependency on high-GWP alternatives and increase the adoption of low-GWP energy-efficient technologies, as part of the HCFC phase-out process under the Kigali Amendment. Such approach can achieve the Kigali Amendment's objective to eliminate HCFCs, while at the same time achieving energy efficiency gains and CO<sub>2</sub> emission reduction.

What we all are trying to do here is to minimise the greenhouse gas emissions. So, from Fiji, irrespective of our contribution to the global environmental impact in terms of CO<sub>2</sub> emissions, whatever amount that we can contribute, that, in itself, will contribute to the global target in terms of reducing greenhouse gas emissions into the atmosphere.

Looking at how the Kigali Amendment is going to benefit or affect the programmes that we are currently running in the Department, as I have mentioned earlier, the Kigali Amendment will complement and also will strengthen the Minimum Energy Performance Labelling Programme that we are currently undertaking in the Department.

For your information, even though we do not directly regulate the refrigerants, the gasses that are used in these appliances, but we regulate the electrical standards that these electrical appliances need to comply with, but at the end of the day when we have energy-efficient appliances, that will also consume less electricity and directly that will also link to the generation, if we are going to use renewable fossil fuel, then we have less consumption. If you are burning diesel then, of course, you will also burn less diesel to meet the demand.

That is something that I have already mentioned in terms of how this will link to the electricity or to the generation part in terms of the fossil fuels. As we are going to expand the Programme to include other cooling appliances, looking at refrigeration and air conditioning systems, the Kigali Amendment will also reinforce on that in terms of the refrigerant that will be eliminated and also from outside in regulating the electrical standards that these appliances need to comply with.

Going on further, we have just shown you some of the diagrams on the linkages and how this Kigali Amendment is going to link to the Programme and our ultimate objective here is in trying to reduce carbon emission into the atmosphere. When we brought in all these energy efficient appliances, on one hand, we are looking at the demand side where these appliances will be used but on the

generation, we can either be using renewable or we are looking at, I think, some use of fossil fuel that when you bring in energy efficient appliances, as I had mentioned earlier, that will consume less energy. From the generation side, we are going to use less fossil fuel if you are burning fossil fuel and renewable energy. I think that is where the Government has also made commitments in terms of increasing the share of renewable energy when looking at our total electricity generation mix.

We are just giving you some figures in terms of the studies that were done, we have undertaken an evaluation of the programme, the Minimum Energy Performance Enabling Programme. This was enforced from 2012. The study that we had undertaken in 2014 had shown some savings in terms of fuel, carbon emissions and also in some form of monetary savings to the economy as a whole. We are expecting this as we are going to expand this Programme to cover the electrical appliances. We are also expecting that the benefits will also increase in terms of carbon emission that we will be releasing into the atmosphere.

The next graph that we have shown before you, just show you some of the projected savings in terms of the electrical appliances that we are going to incorporate into the Programme. Basically the graph shows that, yes, it has some impacts in the country in terms of the amount of electricity that we use, as well as the carbon emission that we are going to reduce into the atmosphere.

Honourable Chairman, I have been reinforcing on this in terms of Fiji becoming a party to the Kigali Amendment, the energy efficiency standards and labelling, and how this will strengthen and complement each other.

In terms of generation, I think we have to invest more if we want to generate more electricity but looking at the demand side in terms of consumption, we can easily save electricity and also in terms of reducing our carbon emission. With this programme that we have that is why we keep on emphasising new energy efficient technologies to come into the market because that is one area that we can easily save electricity in terms of the generation as well as in terms of carbon emission into the atmosphere.

Mr. Chairman, I think just to conclude, Fiji's ratification to the Kigali Amendment, it will also support our NDG targets as I have already explained to you, and also reinforce our position in terms of climate change. I think we have been leading that position in terms of negotiation and so with this Kigali Amendment it will also reinforce Fiji's position in that regard.

Also we will be able to have access to some of these new technologies which will be entering the market and with that I think we will also be having access to some sort of financial and technical support to allow us to better understand and also build that capacity within our people for them to understand better and apply this new technologies into our local situation.

With that, Mr. Chairman and Honourable Members, that brings to a conclusion our presentation for this afternoon. Thank you very much.

MR. CHAIRMAN.- Thank you, Mr. Mika and Mr. Vishal, for a very informative presentation on behalf of your Department of Energy. I think it has put icing on the cake for the two earlier sessions we have had this morning. Honourable Members, do you have any questions for the two gentlemen.

HON. A. JALE.- Thank you for your presentation. I think it reinforces the view of the earlier presenters on how we should approach the Kigali Amendment. I was looking at the Ozone Act and I note that the Department of Environment is under the Ministry responsible for that.

There is an issue about the appointment of inspectors on environment and auditors to verify compliance with the regulation of this law. I am asking about how close is your Department working with the Department of the Environment on the enforcement of this law because I think your Department's responsibility and theirs, or the responsibility of the Kigali Amendment are very close. If they do not work together properly, there is certainly going to be some gap in terms of the enforcement side. So I am asking: how have you been working with the Department of Environment on this subject we are talking about now?

MR. M. BELENA.- Thank you, Honourable Member. I will be answering that question and I will also be asking my colleague to also provide his response to that question. Yes, I think as we work closely with them in terms of the electrical appliance, especially the white goods that normally comes into the country.

From the department side, we normally regulate the electrical component or the standards for these appliances, but, on the other hand we have the Department of the Environment under the ODS Act where they regulate the refrigerant or the gas that normally comes with those appliances. So looking at it, all the appliances that come into the country has to meet both standards. It has to comply with the ODS and from our end, it has to also comply with the Minimum Energy Performance Standards that we have.

MR. V. PRASAD.- Thank you, Sir. Just to further add on that, the focus of the Department of Environment is mostly on ODS and the focus of the Department of Energy is on the energy performance of electrical appliances. With the Kigali Amendment, now one of the requirement is to essentially decrease the greenhouse gas emissions. This will actually synergise with our Programme as well in terms of bringing in more energy efficient appliances which will consume less energy thus decreasing the demand for electricity and less reliance on fossil fuel therefore releasing less greenhouse gases into the atmosphere. Thank you, Sir.

HON. A. JALE.- Mr. Chairman, talking about fossil fuel, what are some of the steps that you are taking in order to complement what is required under the Kigali Amendment?

MR. M. BELENA.- Yes, I think with the Kigali Amendment, what we are trying to do is to minimise the emission of those greenhouse gas emissions. Yes, I think for Fiji, we have also put a target in terms of increasing our renewable energy this year. We are trying to cut down the use of fossil fuel. As I mentioned earlier, around 55 percent of our electricity is generated through renewable so we are trying to target the other 45 percent of fossil fuel where we put in place programmes.

I think for Fiji, yes, we have got a number of resources in terms of renewable energy, apart from hydro which has been our main source of supply. We are looking at other renewable energy resources like biomass. We are also looking at solar grid connect systems so there has been some programmes that Energy Fiji Limited (EFL) is currently working on. We have had a 5-Mega Watt solar grid installation currently in progress in Qeleloa, Nadi - those are some of the programmes. I think we also have within our NDC set an implementation plan in terms of the resources that we have and how we can tap into those resources to increase our renewable energy this year.

MR. CHAIRMAN.- Thank you. Mr. Belena, let me just side-track a little bit here: Are you familiar with kinetic energy? Kinetic energy is motion. Have you people come across that in the Department?

MR. M. BELENA.- Yes, I think in high school. Yes, we have learnt some sort of those kinetic energy. I think, I can say that there has been some studies done in other parts of the world, looking at all those kinds of kinetic energy. Yes, some or most of them are still under research, some are still in

demonstration stages but we have not actually rolled out all those type of technologies. I think here in Fiji, we have had some discussions with the University of the South Pacific. The students there are also doing some research on that but we have not actually looked into the application and also the roll out of these kinds of technologies for Fiji.

MR. CHAIRMAN.- Thank you, Mr. Belena. I will certainly be making an appointment to see your goodself in a couple of days' time because I think it is a fantastic idea. But anyway, Honourable Members, do you have any other questions.

HON. L.S. QEREQERETABUA.- Thank you, Mr. Chair, thank you, Director, thank you, gentlemen. We are in no doubt that Fiji needs to agree with the Kigali Amendment. My question is; what do you see as your needs, as the Department of Energy, should we go ahead and ratify in the next Sitting this year, what are some of the hurdles you need to overcome yourselves?

MR. M. BELENA.- Yes, I think from the Department side, as I had mentioned earlier, the market keeps on evolving. There are a lot of new technologies coming into the market. So, with that, we need some sort of capacity building training for our officers and also in terms of financing, we need finance in order to properly adopt and use these kinds of technologies.

As I had mentioned, we are right at the end of the supply chain, so we need to keep ourselves updated and also be in par with what is happening in the outside world or in the market, so we cannot be left alone. We have to have this kind of capacity building training for our officers.

HON. L.S. QEREQERETABUA.- I hope that will be part of your own budget submission for 2020-2021. Thank you.

MR. CHAIRMAN.- There are no further questions, Honourable Members, so I take this opportunity to thank you, Mr. Mikaele and Mr. Vishal, for your attendance this afternoon, and thank you once again. If you have any departing remarks, the floor is yours. Thank you.

MR. M. BELENA.- Thank you. Once again, we thank you, Mr. Chairman and Honourable Members, for inviting us to come and present on behalf of the Ministry and the Department on this Kigali Amendment. We look forward to the decision made by the Committee and I think it will have a great impact in terms of our position as Fiji being the leader in the climate change negotiations.

With the Kigali Amendment, as we have presented today, it will have more positive impacts in terms of Fiji and together, with our Small Island Developing States, we will be able to have a greater voice and have a strong stand in terms of our fight against climate change effects. Thank you.

MR. CHAIRMAN.- Thank you, Mr. Belena, and if we do have any other further pressing questions, we will certainly put them to you by email through the Secretariat.

With those few words, again, thank you very much for your attendance.

The Committee adjourned at 12.23 p.m.

**STANDING COMMITTEE ON**  
**FOREIGN AFFAIRS AND DEFENCE**

**[Verbatim Report of Meeting]**

**HELD IN THE**

**COMMITTEE ROOM (EAST WING)**

**ON**

**THURSDAY, 16TH JANUARY, 2020**

**VERBATIM NOTES OF THE MEETING OF THE STANDING COMMITTEE ON FOREIGN AFFAIRS AND DEFENCE HELD IN THE COMMITTEE ROOM (EAST WING), PARLIAMENT PRECINCTS, GOVERNMENT BUILDINGS ON THURSDAY, 16TH JANUARY, 2020 AT 10.50 A.M.**

**Interviewee/Submittee: Pacific Islands Development Forum (PIDF)**

In Attendance:

- |    |               |   |                                   |
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| 1. | Mr. Solo Mara | - | Secretary-General                 |
| 2. | Mr. Mark Borg | - | Team leader, Programme Management |
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MR. CHAIRMAN.- Thank you, Honourable Members. We have before us His Excellency, the Secretary-General of the Pacific Islands Development Forum and his Associate, Mr. Mark Borg. Welcome, Sir, and thank you for acceding to the request of the Committee.

*(Introduction of Committee Members and Secretariat by Mr. Chairman)*

Sir, without further ado, a brief introduction of your goodselves and the floor is yours, thank you.

MR. S. MARA.- Thank you very much, Mr. Chairman, and through you, Sir, I would like to extend our sincere appreciation to the Committee for thinking it useful for the PIDF to make a presentation on the adoption of the ratification of the Kigali Amendment to the Montreal Protocol.

As a way of introduction, Mr. Chairman, my name is Solo Mara, Secretary-General of the PIDF, recently and Fiji's Ambassador to the United States of America. I come from the beautiful island of Kadavu and for the last 20 years, I have been in service of the Government and we see ourselves in our work in the areas of conservation and the health of the environment as a critical component of the work of the PIDF.

I will invite my colleague, Mark, to introduce himself as he will make the presentation on behalf of the PIDF. I just wish to mention that I am sure you are well aware that the Kigali Amendment to the Montreal Protocol is bringing together, both the ozone depletion mechanism with that of the climate change, and this is something that will be underlined by my colleague, Mark, in his presentation.

We will explain the differences between the two and why it is important to bring about this Amendment to cover those chemicals that were outside of the Montreal Protocol, which was specifically for ozone layer depletion chemicals. And in doing so, we will also explain how it is useful for Fiji and the implied cost that we will need to make in terms of our ratification process. That will be covered in some details, but also the general benefit for Fiji and the region in our leadership role in terms of the climate change debate we are engaging in.

So without further ado, Sir, I will now invite Mark to make a PowerPoint presentation. Thank you, Sir.

MR. M. BORG.- *Bula vinaka*, Mr. Chairman, Honourable Members, it is a pleasure to be here and presenting today. I myself also come from a beautiful island, that is not in Fiji though, it is in the Mediterranean. I come from Malta but I have been in Fiji for 25 years now, so I am both Maltese and Fijian. I have been working with PIDF as the Team Leader, Programme Management, and as such, we will be presenting our submission to this Committee.



Tuesday, 21st January, 2020

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As a background, I think this is not new, so I will not dwell for a long time on this because you have been hearing presentations and reading about this for a while but basically, the Montreal Protocol was created because we have a problem with the ozone layer, the ozone layer that protects us from Ultraviolet (UV) light that obviously causes cancer if we let it to pass through, as such the Montreal Protocol was a huge success. It managed to control the chemicals that deplete the ozone layer and at the same time allow that to recover and fix itself, as the scientists actually had predicted.

The problem arose and that is why the Kigali Amendment came along that the chemicals were replaced by the HFCs so the HFC is not ozone depleting as a chemical but it does have a huge impact on Climate Change. In fact, it is 48,000 times more powerful than carbon dioxide (CO<sub>2</sub>), we always talk about CO<sub>2</sub>, but the HFCs are 48,000 times more potent than CO<sub>2</sub> in terms of greenhouse warming. Thankfully, there is not much HFCs but whatever is there, we need to rapidly cut down, which is why the Kigali Amendment came into effect.

Very quickly, I know there are some scientists in the room too. The chemicals - ozone is (O<sub>3</sub>) as a formula and there is not much ozone in the world. There is a lot of oxygen (O<sub>2</sub>) but very little ozone and the ozone that is in the stratosphere is a very, very thin layer.

When we start depleting that ozone, that ozone is very much degraded very quickly because it is a very thin layer. We have seen holes in the ozone, we have seen that it has thinned even further as a layer so that is when the Montreal Protocol was brought in and as I said, it was successful because it did control these chemicals and it did give time for the ozone layer to recover which it is doing very well.

Now, the HFCs are not Ozone Depleting Chemicals (ODCs). They are not ODCs and they were commonly used as alternatives to the ODCs, however, as I said, it is a powerful greenhouse gas which needs to be eliminated. The phasedown of HFCs through the Kigali Amendment can happen in steps and I will talk about these steps later on but it is expected to arrest Climate Change by 0.5 degree Celsius. When we consider that we were fighting in the Pacific to limit temperature rise to 1.5 degree Celsius rather than two degree Celsius. That .5 degree Celsius makes that difference really and therefore, it is very important for the Pacific that the Kigali Amendment actually comes into effect all over the world.

For Fiji, particularly where we have been the Chair of COP 23 and we have been on the forefront of Climate Change negotiations, it is very important that we set also a good example in this regard. As I said that this is a stepwise reduction so the idea is that in 2019 (which has passed now) we had reduced HFCs by 10 percent, 2024 by 40 percent, 2029 by 70 percent, 2034 by 80 percent and 2036 by 85 percent. This gives time for countries and industries to basically adapt to the changes.

Now, currently there are 91 States that have ratified the Kigali Amendment and many of the Pacific Island countries also have already ratified. We have got Cook Islands, Federated States of Micronesia (FSM), Kiribati, Marshall Islands, Niue, Palau, Samoa, Tonga, Tuvalu and Vanuatu that have already ratified. Fiji, having not ratified, maybe it is sending there wrong signals at the moment.

The Montreal Protocol provides some incentives: financial incentives; and also in terms of technological transfer. I think there is a structure in place that can assist countries that actually sign the Montreal Protocol and now, also the Kigali Amendment. Fiji can take advantage of these incentives and pass them on to the industry and consumers but also I think Fiji needs to hasten the transition, needs to provide its own incentives and as you legislate because you would have to legislate eventually once

you signed this, you might want to consider what kind of incentives need to be in place so that the transition happens as fast as possible.

Now, what are the costs to the parties? This was one of the questions that you posed to us. There are some costs but not that much, especially for Fiji as we are importers of this technology, we do not produce it here. So, as far as the refrigeration, air conditioners, we do not produce that in the country but we import it.

Now, some cost difference exists between the HFC and the chemicals that would replace it. There are three chemicals named that could replace HFC; CO<sub>2</sub>, Ammonia and the other one which I cannot currently remember but CO<sub>2</sub> and Ammonia are very cheap, cheaper than the HFCs. The other one is more expensive but the cost of the gas used in the refrigeration is a small factor in the whole fridge, for example, on the whole AC so the price will not affect much, while you are buying an object that can range from \$500 to tens of thousands of dollars, if they are industrial refrigerators. So, the difference in the price of the gas will not affect the price of the item that much at the end of the day.

So, the costs involved would be:

- For Fiji to adapt its domestic law and probably, you have to just add another chemical to the schedule of banned substances in this case.
- Extending the ozone depleting substances import and export licencing system to cover Hydrofluorocarbons (HFCs) as well.
- Putting in place where appropriate any practical arrangements that maybe required for Custom Officers to assume extra responsibilities concerning HFCs. This might require some training or instructions.
- Surveying existing HFC consumption and production and I think in Fiji, the case would be the consumption part rather than the production part.
- Developing the resources to report under the Amendment.
- Developing a strategy for HFC phase-down according to those steps that have been alluded to including, monitoring and enforcement. Again, the monitoring and the enforcement should already be dealt for the other ozone depleting chemicals. So, this would be just an addition to that monitoring and enforcement structure that is already there.

Now, PIDF has actually a history with the Kigali Amendment, as I had described in the brief that was distributed, because the Suva Declaration on Climate Change was agreed to in 2015, there was a mention of the Montreal Protocol and the need to control the HFCs.

And following that, there was a meeting in Dubai and they agreed on the roadmap that led to the Kigali Amendment in Dubai. So, we have a history connected to this through the Suva Declaration and we obviously have a huge interest to see as many countries adhere to the Kigali Amendment as possible. And we feel that if (again) Fiji needs it, we could also help in coordinating all the different partners to support Fiji in any way it needs to implement the Kigali Amendment.

So, our recommendation and I will read it, noting there are viable and cost-effective industrial alternatives to HFCs, PIDF supports the adoption and ratification of the Kigali Amendment. This is in

line with Fiji's and other Pacific Island Countries' position in regards to decreasing Greenhouse Gas Emissions that are causing climate change.

Fiji has taken a global leadership position on climate change with its chairing of the 23rd UNFCCC Conference of Parties and needs to continue showing leadership in this area, considering the adverse impact that climate change will have on the communities of this country, particularly those most vulnerable.

Mr. Chairman, thank you very much, *vinaka* and we can have any questions that Honourable Members would like to ask us.

HON. A.D. O'CONNOR.- Thank you, Your Excellency and also to you, Mr. Borg, for that very informative submission and explanation. We now open up the floor for questions. Honourable Members of the Committee, if you so wish to ask questions, I give you the opportunity now to do so. Thank you.

HON. A. JALE.- I will ask the first question and thank you Ambassador for the presentation, Mr. Borg, thank you very much for that.

We are grateful that you are here because you have the responsibility, not only for Fiji but for other regional countries. It is important that they tend to see this amendment as very important to us because your submission talks about HFC as an Ozone Depleting Substance or Greenhouse Gas which contributes to global warming, so that is exactly what have been the concern of our leaders.

My question is, is there a plan put in place by the PIDF in terms of monitoring the progress of implementation of the roadmap, yet there are plan of actions that need to be taken. Have you considered that or is there something that you are going to put in place to see, monitor and try to assist these countries that come under the umbrella of PIDF in terms of this important amendment?

MR. S. MARA.- I thank you, Mr. Chairman, if I may, the question on monitoring is one that is the responsibility of States Parties. State Parties would be responsible and they will designate the relevant Government agencies to attend to the monitoring of the Protocol as we sign on to the Amendment.

But what PIDF does is to assist Member States in building their capacity and also to make them aware of the various assistance programme that are available within the Protocol itself and those that are being introduced within the Amendment that can assist Member States, not only in their monitoring but also in the transition away from HFCs.

Mr. Borg has explained about the cost that will be incurred by Member States. We should not also lose sight that HFCs, you know in refrigeration and air conditioning and in tropical countries, it is an integral part of our economy, so how can we help in this transition, particularly amongst the private sector, who will have to bear the cost of a lot of this transition to climate-free and friendly gasses in air conditioning and refrigeration units.

That is the discussion that we at PIDF will undertake with the private sector, if this Amendment is agreed to by Parliament. But it is our role in addition to advocacy, to also reach out to private sector to hear their concern and also probably be adopted and heard by Parliament itself because they will need as Mr. Borg has said, some innovative legislative support in terms of tax concessions, I suppose. Those are the kind of assistance that we would bring to the table. I hope I have answered your question, Sir.

HON. DR. S. GOVIND.- Thank you, Honourable Chairman. Thank you for the presentation, it was very useful.

From the presentation, you have shown that currently the Small Island Developing Countries which have ratified these Treaties, so what I would like to know more is, what kind of challenges those small countries are facing in implementing this Amendment? How has the PIDF helped some of these countries to resolve all those challenges, if you have some examples? If we look at the countries, they are very small countries and I am sure they must have faced challenges because signing in one thing, implementing is another.

MR. S. MARA.- Honourable Chairman, I thank you for the question, Sir. Mr. Borg, can answer it too in his own remarks.

As I have mentioned, we have not received any direct request on this particular Protocol and its Amendment, but the issue for us and for our Member States is one of capacity in all the Treaties that is signed, whether it is in conservation, the ocean or on the environment. This common threat runs through all Pacific Island Countries, most of which is related to the lack of scientific capacity to monitor and how we can address this issue in terms of capacity building.

One of the advocacy we undertake in terms of the Secretariat of these Treaties and Conventions is to implore upon them the need to assist Small Island Developing States in building national capacity, in order for us to actively and constructively participate and deliver our obligations under the Treaties we have signed to. So, first and foremost, in my view, it is the capacity that is often lacking in Pacific Island Countries. Now, I will ask Mr. Borg to elaborate further.

MR. M. BORG.- Since this is a phase down approach, I think the most important thing today is to ban these products from coming again. And then you start working on that because this is a 16 year period that we are talking about. Some of these products do not have a lifetime of 16 years, many of them have a maximum lifetime of 10 years. So the important thing is to stop the imports now, and when the other products need to be replaced, then automatically they have to bring in products that would be adhering to this Treaty.

I think the spaced out arrangement that they have allowed helps countries rather than everyone needs to change their fridges under ACs but when those fridges and ACs need to be changed which they will in 16 years, then you bring products that actually align with this Protocol.

HON. DR. S. GOVIND.- My next question, when this change occurs, there has to be some mechanism facilities to monitor the disposal of those old equipment, fridges, et cetera. So, has PIDF have any experiences of how it is handled in countries?

MR. M. BORG.- We can advise but these are all responsibilities that the Government perform.

HON. DR. S. GOVIND.- Thank you very much.

HON. L.S. QEREQERETABUA.- I was just going to add on to Honourable Dr. Salik Govind's comment. Fiji being part of the Group 5, we are part of the Group 5 which means we will be open, as you said in your presentation, to financial aid and technical assistance when we do Article 5 Group.

Yes, I had questions but you have answered them. Thank you, Mr. Borg.

MR. CHAIRMAN.- Honourable Members, your Excellency and Mark, with PIDF and its regional capacity, is there any overarching protocol with Pacific Islands Forum (PIF) in so far as treaties are concerned and in this one in particular?

MR. S. MARA.- Thank you, Mr. Chair. The question is not limited to that. We want to see ourselves at PIDF as being different from the Pacific Islands Forum because we have, as our members, the private sector and civil societies. PIF have them as partners. Our leaders sit around the table as this with representatives of the private sector and the civil society. So, one of the main distinctive feature about PIDF is that our leaders have asked us to find business solutions to conservation and climate change adaptation because one of the issues that are often raised with Pacific Island leaders is the cost of conservations to resource owners. They are often required to give up a lot in terms of ocean conservation or whether it is the forest but there is very little return that goes back to them in terms of economic empowerment.

Our work at the PIDF is to mobilise the private sector, the resources of the private sector and the skills and the engagement capacity of civil societies on the ground, to bring about this economic empowerment in the areas of conservation, building resilience amongst our local communities and in the area of climate adaptation. That I feel is the distinctive difference of the PIF and the PIDF. We see PIDF as most in the areas of policy formulation in a lot of areas whereas Pacific Island Forum (PIF) is just focussing on sustainable development issues and the Green Growth Economy, so to speak.

MR. CHAIRMAN.- Thank you for that, Sir. Any other question, Members? If we do not have any questions, we certainly ask, Sir, if we should have any pressing questions whilst compiling our Report, if you do not mind, we will email through to your goodselves and we thank you once again, but if you do have any departing comments, the floor is yours, Sir.

MR. S. MARA.- Thank you, Honourable Chair, through you, we thank the Members of your Committee for this constructive engagement today. Absolutely, the PIDF stands ready to provide additional information as you may require to guide you in your deliberation and also in the formulation of your decision on this very important conservation measure. *Vinaka saka vakalevu.*

MR. CHAIRMAN.- Thank you again, Sir, *vinaka vakalevu.*

The Committee adjourned at 11.19 a.m.





**STANDING COMMITTEE ON**  
**FOREIGN AFFAIRS AND DEFENCE**

**[Verbatim Report of Meeting]**

**HELD IN THE**  
**COMMITTEE ROOM (EAST WING)**

**ON**

**TUESDAY, 21ST JANUARY, 2020**

**VERBATIM NOTES OF THE MEETING OF THE STANDING COMMITTEE ON FOREIGN AFFAIRS AND DEFENCE HELD AT THE COMMITTEE ROOM (EAST WING), PARLIAMENT PRECINCTS, GOVERNMENT BUILDINGS ON TUESDAY, 21ST, JANUARY, 2020 AT 10.55 A.M.**

The Committee resumed at 11.52 a.m.

**Interviewee/Submittee:**      **Montreal Protocol and Chemicals Unit (MPU) - United Nations Development Programme (UNDP)**

In Attendance:

Mr. Rusiate Ratuniata – Programme Analyst

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MR. CHAIRMAN.- Honourable Members, we have before us Mr. Rusiate Ratuniata, the Programme Analyst with the UNDP. We welcome you, Sir.

(Introduction of Committee Members and Secretariat by Mr. Chairman).

You can have a brief introduction of your good self and then the floor is yours. Thank you.

MR. R. RATUNIATA.- Good afternoon to you, Honourable Members of Parliament, Members of the Standing Committee on Foreign Affairs and Defence of which I am here to inform you on this Kigali Amendment of the Montreal Protocol.

I must thank you, Sir, for the warm welcome. I came here and I was greeted by the Policeman and he told me just to write my name, I was just kind of scribbling because I had a little bit fear and jittery coming, walking the hallways, of the impacts of decision makers in the country. And I must tell you that I am really privileged and I am honoured to be here, especially from being a humble village boy and to be here today, I am humbled and thank you for that very kind and warm welcome.

Perhaps, just to introduce myself as you have read there, I am the Programme Analyst with the United Nations Development Programme (UNDP) and I am based at the Kadavu House. We actually support the Ministry of Environment and Waterways for particular projects that relate to the ozone, specifically the National Ozone Unit.

We have a current project with them, implemented with the support of the UNDP. It is the HPMP1, that is the acronym for Hydro Chlorofluorocarbon Management Plan Phaser 1 and it is quite lengthy. I have been with UNDP for two years now and I am still coming to terms with acronyms, so please excuse me. If any of the acronyms I might say without you knowing, please just ask me. I will try as much as I can to give you the full term for that acronym.

This is Fiji HPMP2 and it starts with the funding from Montreal Protocol Multilateral Fund which is called the Kigali Early Ratification Amendment Funding which we are now working together with the Ministry of Waterways and Environment and their National Ozone Unit to ratify, probably the Government is doing things under their responsibility to have it fully ratify the Kigali Amendment.

The Montreal Protocol, probably from the outset, I would just like to say before I go into the presentation proper, a healthy ozone layer and climate are essential to meeting all the

Sustainable Development Goals (SDGs). So, without a healthy ozone or healthy environment, all our pursuit in achieving the SDGs might come to naught. We need a good ozone, we need a good climate to achieve SDGs 1 to 17.

The Montreal Protocol continues to protect, this is the initial protocol which was put for the objective of phasing out ozone depleting substances. Here is where I will just get a little bit technical. The people at the office told me, do not get too technical. I am not sure because the presentation was prepared by our Bangkok Regional Hub (BRH) colleagues, and here we are in Fiji. The Country Office told me to simplify it and I am not sure, I am caught in the middle, so I will try as best.

So the Montreal Protocol, first of all, of which this Kigali is an amendment to, has an objective of phasing out Ozone Depleting Substances (ODSs). It focuses on the elimination of the sources of ODSs, their production and consumption. It was agreed on 16th October, 1987, probably you are looking at it now, at the PowerPoint presentation behind me, it was entered into force on 1st January, 1989, so most of the ODSs covered are very potent greenhouse gases.

The ODSs phase-out activities have provided considerable co-benefits to the climate change mitigation. The total avoided net, this was a study done by Valders and others in 2007, they had calculated with the implementation of the Montreal Protocol that by 2010 (which we have passed), would probably have done away with an equivalent of about 10 gigatonne of carbon dioxide per year, so an equivalent of global warming potential of 10 gigatonne of carbon dioxide. I just did what would one gigatonne of carbon dioxide be equivalent to, and that will be 10 billion metric tonnes of carbon dioxide per year. So the study that Valders and others came up with in 2007, if the Montreal Protocol is adhered to, we would have, by 2010, done away or would have avoided an estimated equivalent of this much of carbon dioxide.

This is where just that little bit of technicality. I just want you to know from the outset, the difference between ODSs. These are the (CFCs) Carbon Fluorocarbons or the Hydro Carbon Fluorocarbons (HCFCs). Now, that we are going to move to the Kigali Amendment, it is for the phasedown of HFCs, that is the difference. HCFCs and CFCs and the Kigali Amendment is the phase down of HFCs, in case you might be wondering what that is.

At the implementation of the Montreal Protocol, the eradication or the stop in consumption of the HCFCs and the CFCs, companies that deal with refrigerants and air conditioning have moved from HCFCs and CFCs to HFCs. Initially, that is a good move to, at least, get rid of ODSs. So ODSs are those substances that react with the O<sub>3</sub> molecule in the atmosphere, the layer that protects planet Earth from the sun's harmful rays.

This ozone layer when the sun with all its full constituents of that rays hits the ozone, whatever the harmful UVs or the harmful rays are reflected or are filtered by this ozone, when these ODSs react with the ozone layer it thins the ozone layer. When most of the UVs that are supposed to have been reflected back, comes through. So the initial objective of the Montreal Protocol was to help keep and sustain the ozone layer, so it removes all the ODSs.

The Kigali Amendment deals with the HFCs which most of the companies that deal with refrigerants have taken in to replace the CFCs and the HCFCs. The thing about this HFCs, although they are not ODSs, but historically, they are the substances that have global warming potential. So when they are hanging in the atmosphere, they tend to gather heat. When the sunlight hits the planet Earth and then it is reflected up, it is supposed to somehow make its way through the stratosphere and out again into outer space but most of it is trapped because of these HFCs. That is why they have this global warming potential, because they are able to trap the heat from these rays that is reflected from planet Earth. I hope I am not confusing you.

That is why there is a need for the phasing down of these HFCs. That is why in 2016 in Rwanda, Kigali, when they the Conference of Parties to the Montreal Protocol sat, they came up to also have an amendment to phase down HFCs. I am going to talk a little bit on the HFCs.

These are the climate impact of HFCs (referring to the Table in the slide). If you see that there is a Table, on your right and my left, there is a group and there is a column heading of “Substance” and “A 100 year Global Warming Potential (GWP)”. In the column that is type of group, Group 1, those are the HCFCs and CFCs that had been dealt with by the Montreal Protocol. Those are the ODSs.

In the implementation of the Montreal Protocol in removing these ODSs, they have replaced it with what we have there in the column titled “Substance.” So those are the HFCs. Those are the different HFCs that are now in circulation and in use and it is safe. The Kigali Amendment is also trying to phase these down, those in the substance column.

In the 100-year Global Warming Potential (GWP) are the unit or the amount of global warming potential that each of these substances have. If you go down the list, as you go down through the substance list, you can go across to the 100-year GWP ability of those substances. That is why we also need that. Even though we know it is a good thing that they are not reacting with the ozone but they have that capacity to retain heat.

Carbon dioxide, in itself, is good enough but with this, in addition, hanging in the atmosphere, it adds to the GWP. I just looked through and saw that GWP is a measure of how much heat a greenhouse gas traps in the atmosphere up to a specific time relative to carbon dioxide because carbon dioxide is a natural global warming.

We need heat on earth but not as much as we are having now. I think, if you turn on the television, that attests to itself in our neighbour country of Australia, the heat (bushfires) and also here in Fiji, we are having excessive heat. Heat waves are hitting us and I do not have to explain that to you. That is attest to itself. I have a link here, if you need to have a little bit more of an understanding of what GWP is, I can share this with you. You do not have it in that original PowerPoint presentation.

This is what the Kigali Amendment is looking to phasedown, and it has a plan to do that, the current short term scenario from 2019 to 2024, which the Government of Fiji is also looking into. That is we have brought in this early Kigali Amendment funding to help the National Ozone Unit to ratify the Kigali Amendment.

It has entered into force from 1st January, 2019. Internationally, it has full legal effect, however, States are not bound by the Amendment until it enters into force for that. That is, when it says ‘enters into force for them’ it means ratification, adhesion and accession by the country.

As of 15th January, 2020, a total of 91 countries have already ratified the Amendment and the ratification level is growing. One thing about this is that, we are able to trade with Parties that have agreed to ratify the Kigali Amendment. That is the paragraph down there, the next bulletpoint, trade with non-parties.

The changes to Article 4 of the Protocol, control of trade with non-parties set out in Article 1 of this Amendment shall enter into force in January 2033, provided that at least 70 Instruments of ratification. I believe this is what the Fiji Government is currently working on, to have things that they need under their responsibility, the 70 Instruments to ratify the Kigali Amendment. It means,

if a country does not ratify the Amendment in the future, it will not be allowed to engage into trading with parties that have ratified.

Furthermore, from the phasedown commitment to HFCs, now we are going full into the Kigali Amendment. We have left the Montreal Protocol, ozone depleting substances, these are the global warming substances. So, the HFC phasedown schedule, Fiji is a part to Group 1 Article 5 countries. So, those are the second big column on the table after the HFCs phasedown schedule.

Article 5 countries are split into two groups. Group 1 is where Fiji is, so the schedule for Group 1 countries is for the year 2024, we will try to have a total freeze in the importation of HFCs.

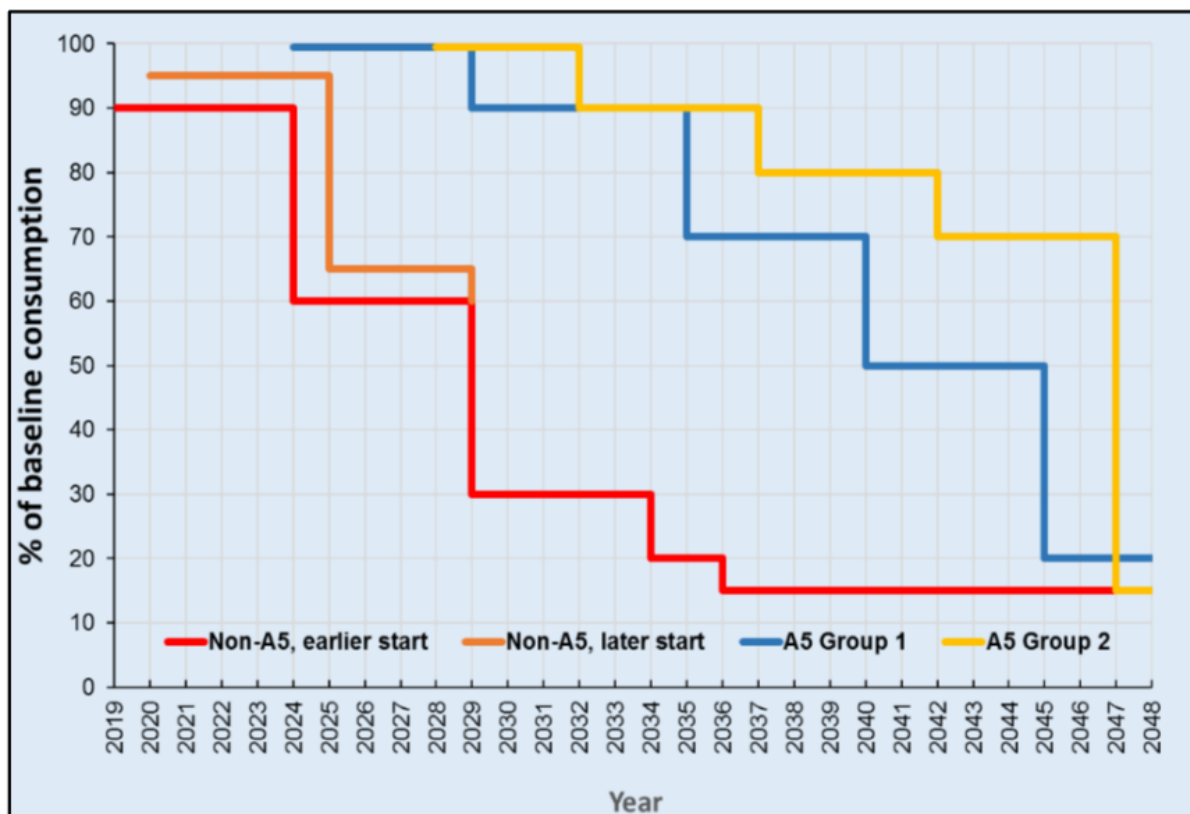
In Step No. 2 in 2029, they have the reduction by 10 percent to the baseline. I have a graph after this, that explains that a little bit better, but it is 10 percent of the baseline and we move it up and in the Kigali Amendment, we will try to move it up to the 30 percent baseline in 2035.

Step No. 3 is to have a 50 percent reduction of the baseline in 2042 and the final step up is an 80 percent reduction of the baseline in 2045. So, that is roughly the schedule of the HFC phasedown.

As I told you before that Fiji would be party to Group 1. It is all developing countries and not part of Group 2. So Fiji is party to Group 1 and it has that schedule, if it is going to ratify the Kigali Amendment fully.

This is the graph that I was talking about and if you could just focus on the blue line on the graph, that is, for countries in A5 Group 1 countries.

### Phase-down Commitments: HFCs Phasedown Schedule





The y-axis is your percentage of baseline consumption and on your x-axis is the year. This is supposed to be starting in 2024, on Fiji whatever country that has fully ratified this and they will do the necessary preparations from now till 2024 when it will start the implementation of the Kigali Amendment.

It will start at 100 percent and by the year 2028, then we should have that - the reduction by, at least, 10 percent. Then by the year 2034, a reduction by 70 percent, and as you follow down that blue line on the graph, that represents A5 Group 1 countries which Fiji is a part of. So that is the schedule, should Fiji fully ratify the Kigali Amendment, and it is the schedule that it has to stick to in reducing or phasing down the HFCs.

The current short-term scenario of 2019 to 2024 for Group 1: Formation of baseline is between 2020 and 2022. So if we are going to fully ratify this, there will be preparations to ascertain the baseline from year 2020 to 2022. And the implementation or whatever that will be needed for the countries will start proper in the year 2024.

It requires critical efforts from Governments to:

1. Establish control and reporting systems; and
2. Mainstream information with all stakeholders.

This is where the challenge is because of the companies, especially the fishing vessels and the fishing companies in Fiji have just moved through during the Montreal Protocol, from ODSs to HFCs. Now, in just a short period of time, they are moving from HFCs to phasing down HFCs and the alternative to HFCs are expensive and are flammable. It is ammonia and it is safe to the atmosphere, but that is the alternative.

There are ways that the international body or multilateral funds GEF and GCF, they have funding to help countries subsidise the retrofitting or the fitting of these systems into their big companies, especially for Fiji it is the fishing companies, fishing vessels, and the air conditioning producers or manufacturers, or companies that have the deal in the sales of air conditioning units.

We have to evaluate our national needs or already seeking for future strategies in the refrigeration and air conditioning sector. This would be critical. All parties that have ratified need to be in a position to comply with HFC phasedown schedule from the dates the amendment enters into force for them. For this reason, the Multilateral Fund has approved, enabling activities for Fiji.

Fiji has given its commitment and the Multilateral Fund of GEF has supported or funded the Ministry of Environment and Waterways' Ozone Unit, to ensure that they are fully compliant to what needs to be done in order for Fiji to fully ratify the Kigali Amendment and to start with the implementation of the Kigali Amendment.

This are the phasedown commitments, just a table, to show you the calculation of the HFCs baseline. I hope you are not going to ask me questions on this because I myself am coming to terms with this table, so that has basically simplified how they will come with that baseline for the HFC and that is the 100 percent. This is the work that needs to be done from now until 2022 or 2024.

These are some of the short, medium and long term priorities. The short and medium priorities for the Kigali Amendment is in the orange box and the long term priorities are there in the green box. First and foremost is the ratification, secondly is the institutional arrangements which is part of one of the projects that is an enabling activity with the Fiji National Ozone Unit where we have a particular person who is the consultant and is now with them, looking into the institutional

arrangements to make this happen with Government, especially with companies that deal with refrigerants and the air conditioning units.

Another one is the data collection - the methodology and policy, data reporting, licensing system, conversion projects (to convert the use of HFCs to the environmentally safe alternative), adopting safety standards. As I have just said that the alternative to the HFCs are really flammable. It requires a lot of knowledge and technical know-how to operate it safely. So that is why we need to adopt safety standards. Training for Customs Officials and technicians which is very important), establishing MEPs, labelling and monitoring systems, HFC-23 by-product emission control, slowdown of the growth of HFCs. Those are the short and medium term priorities.

The long term priorities, as you would be involved with eventually is the overarching policy framework, the sector priority, HFC quota which will also need to be a priority of the Government should it ratify the Kigali Amendment, technology roadmap because this thing will not change overnight, it will take some time so we need to have the technology roadmap as a long term priority, scale-up conversion and market uptake, enhanced training techniques, best practices in servicing sectors, ban on the import of products in sub-sector, such as refrigeration and air conditioning units, replacement programme and eventually, destructions of these HFCs.

The initial obligations under the Kigali Amendment:

1. Import and export licensing systems for HFCs must be in place by 1st January, 2019. That is according to Article 4B:

“Any Party operating under Paragraph 1 of Article 5 that decides it is not in a position to establish and implement such a system by 1st January, 2019, may delay taking those actions until 1st January, 2021.”

So, that is the option there. In case the deadline is not met for any country ratifying the Kigali Amendment by 1st January, 2019, they can do so by 1st January, 2021.

2. Monitoring and reporting of HFC production and consumption, and HFC-23 emissions, where relevant and where it is required.

If a country becomes Party to the Montreal Protocol, it becomes eligible to access funding under the Multilateral Fund to support the phasedown activities. So, that is where we are now with the Ministry of Environment and Waterways because Fiji is party to the Montreal Protocol and they have access to funds to ratify the Kigali Amendment. It is not a lot of funds but it is enough for Fiji to fully ratify the Kigali Amendment.

3. How to establish a licensing and quota system by 2021? So, those are the questions on the system that will need to be asked if there are any barriers/challenges to expand the current CFC/HCFCs Systems and incorporate into HFCs. May be some of the structures or the systems that are already current, we can adopt, change or tweak to also include the HFCs.
4. A need to use of temporary stand-alone HFCs System.
5. How countries are addressing HS codes for mixtures? Because most of these refrigerants will new mixing with HFCs, so the country that has ratified the Kigali

Amendment will have a harmonised system code for these mixtures. How to regulate the uptake of new Harmonised System Codes.

6. Role of importers, we need to come up with those dealers, associations and customs incorporating these stakeholders in the HFCs Control, Licensing and Reporting System.
7. The purchase and installation of electronic tools for Control and Licensing.
8. Using policy instruments to allow early data collection and reporting is very key and that is what we are having a consultant with the Ministry of Environment and Waterways, to have a look right now at the existing policies that we might have to tweak or use or add a few more criteria to make sure that it is good enough to implement the Kigali Amendment of phasing down HFCs.

These are the challenges for the control and reporting and the range of applications for pure HFCs. So, if you see on the table, those are some of the places where HFCs are currently used at the moment. It is with the MAC (Mobile Air-conditioning Unit), used domestically for air-conditioning units, room air-conditions, chillers, PU Foam probably this is for the fire extinguishers, some of the solvents and the Fire Department.

These are the challenges and some of these are very essential to our needs and phasing them down would be a challenge. Even though most of them are not pure HFCs, they use a mix of the HFCs in whatever they use, for the Fire Department using foam and the domestic air-condition. So, these would be a challenge. Many substances are used across different mixtures. The question is; how importers and dealers can report the applications by chemicals and then eventually try to phase them down? So these are bit more, not only on the HFCs but the mix of HFCs and HCFCs and CFCs. I will skip through that now.

The challenges for the implementation of the Kigali Amendment, the main one is the servicing sector. Because we will be having changes from CFCs to HFCs and from HFCs to the environmentally-friendly alternatives, we need to have the servicing sectors in Fiji for refrigerants and air-conditioning units to have the understanding, have a policy that will include standards and institutional frameworks. They will need to be certified and the technicians trained to the new technology. They need to have maintenance, leakage reduction and handling of flammable and toxic alternatives. These are the challenges here for the implementation of the Kigali Amendment.

The growth of installed equipment will put pressure on the tail for servicing. We will need to have the Kigali Amendment implemented or reduced by the year to the percentages until we try as much as we can to have 80 percent of it reduced, the more pressure will be on the servicing unit. So, this servicing unit should be the target for a government that has ratified the Kigali Amendment because it is where all these units will end up with because of the changes that need to be retrofitted into the system.

The servicing sector, the key to the implementation of the Kigali Amendment: The Multilateral Fund Secretariat reported in the 79th Executive Committee Meeting that based on the ODS alternative surveys, the estimated growth of HFCs consumption could be up to 23 percent per year. So the switch from ODSs to HFCs is an increase of 23 percent per year, so that is the challenge. Now, that people are still changing from ODS to HFC, now they are asked again, please phase down on the HFC and that is where the conflict will be.

The high growth rate is likely to put enormous pressure on the servicing sector due to the high quantity of new HFC-based equipment in the market every year. Countries will face great

challenges related to control of substance and improvement of servicing to avoid leakage. Also the HFC consumption tail 20 percent of group 1 formed from 2045 onwards, will demand countries to prioritise allowable uses of HFCs. So it is not a total elimination of HFCs but to, at least, 80 percent reduction of the baseline from where it is right now. Countries also faces challenges related to the adoption of alternatives that are either toxic or flammable, maintaining safety and cost effectiveness.

Here are some of the opportunities in the implementation of the Kigali Amendment. Just to let you know, it is slide 18, I am only one slide left.

The development of national strategies. It will be equivalent to the current phase-out management plans, so Fiji is already doing this. As I have said, we can just tweak or twist some of what we are currently doing, just to include the HFCs, and as per the Executive Committee Decision 79/46, the preparation of national strategies can be funded five year prior to the first year of commitment. So this is expected to commence in 2020.

That is some of the opportunities that we have. It can be funded from the external funders - the GCF, GEF.

Expected key aspects of the national strategies and guidelines that are still to be issued.  
HFC Consumption, Profile and Growth Trends:

- overarching strategy to manage and phase down HFCs;
- definition of priority sectors, sub-sectors and applications for phase down;
- definition for priority sectors to the tail consumption;
- preparation of investment and non-investment projects; and
- linkage with the HPMP, which is currently being implemented by the Fiji Government.

This is the current to short-term scenario 2019 to 2024.

The critical issues on the table as it is in the Executive Committee (ExCom) Decision, 79/45, allows all Parties to the Kigali Amendment to request funding to prepare national strategies five years, first commitment starting in 2019. Fiji, to a certain extent, has accessed this through the Ministry of Waterways and Environment. We have right now a funding that I have already alluded to earlier on, that is, to have this early ratification for the Kigali Amendment.

The ExCom Decision 82/83, allows flexibility and enabling activities to include intervention-related energy efficiency. So should the government that ratifies the Kigali Amendment see it fit to also enabling the activity to include some of the interventions on related energy efficiency which is outside of HCFCs and ODSs, it can also be accommodated.

The decision on cost guidelines to phase down of the HFCs are still to be agreed upon. So hopefully when we say that they are still to be agreed, then there will be a substantial amount of funding towards this effort of the Kigali Amendment.

**HFC Cost Guidelines:** Several HFC investment projects approved under the ExCom Committee Decision of 80/83, to allow data collection for the manufacturing sector.

Servicing sector as per the ExCom Decision 84, to look into new assessments from the Multilateral Fund of GEF Secretariat on quote and on the cost issue. This is important to note, I think this will also be applying to Fiji because we do not manufacture this, but it is on the servicing

end of the industry here in Fiji. So, many countries will have only servicing sector under Kigali Amendment, so this is a critical issue.

I would just like to end with this note, the Montreal Protocol has been such a success because of its unanimous global support and that we are encouraged to know, and I have already alluded to in my presentation, that 91 countries, including 60 developing nations, have ratified the Kigali Amendment as of 1st January, 2020, and many more nations are expected to join in 2020. At the UNDP, from the office, we will continue to focus and foster our support to the nations on tackling climate change. The activities to phase down HFCs could be an important piece of work in line with UNDP and which is a climate promise.

With that, I would like to say, thank you very much to the Standing Committee on Foreign Affairs and Defence for allowing me to inform you on Kigali Amendment.

MR. CHAIRMAN.- Thank you very much, Mr. Ratuniata, for that very informative presentation. I must say, coming from a technical mechanical background, I fully understood everything that you have said.

I would just like to mention here, you mentioned about ammonium, that a lot of the fishing boats were using this 15 years to 20 years ago. But as you rightfully said, it is very flammable and if you may recall, we had a disaster here at the local fishing docks in Walu Bay some years ago where three people died instantly when one of those ammonia cylinders exploded. But yes, it is a medium, but very, very volatile and also heavier than air.

The way forward is possibly using that but there is still a lot of work to be done on finalising it. I mean, it is not a product where you can ship in and out. Unlike the Freon gases, the refrigerants, they come in very small cylinders and you can toss it around. The flammability level is very, very low. But, thank you, again. Honourable Members, do you have any questions.

HON. DR. S.R. GOVIND.- Thank you for your very comprehensive presentation. It really enlightened us and we are very knowledgeable about the Amendment.

It seems that Fiji is already ready to develop a strategic plan, so it means that you do not have to ratify to get that funding. The funding that you have got is not dependent on ratification, it is prior to ratification you can access that funding, is it true?

MR. R. RATUNIATA.- That is correct. When the Government shows commitment to ratifying the Kigali Amendment, there is a level of funding that comes, just to help the Government to fulfil its responsibility in ratifying the Kigali Amendment. We believe that the Government of Fiji has shown that commitment to ratify. It is called the Early Kigali Amendment Fund that has been put through to the Ministry of Waterways.

When it shows the commitment, then this is disbursed. But then, once it is ratified, there are other opportunities that will be available, to have a strategy at the very first year. So once Fiji fulfils its responsibility to the ratification of the Kigali Amendment, then there will be funding to put forward a strategic plan.

HON. DR. S.R. GOVIND.- I hope the Opposition does not object to ratification. I said in that case, we hope the Opposition do not object to ratification in the next sitting of Parliament.

There are so many stakeholders as you have already identified. When the strategic plan is developed, I hope that everyone has an input into that strategic plan. That is my hope.

MR. R. RATUNIATA.- Thank you for that. Yes, we hope to do that and it will depend on the Government, the Ministry of Waterways and Environment in its process of consultation to have everyone, the buy-in of everyone to phasedown HFCs and take on the eco-friendly alternative. Thank you.

HON. A. JALE.- Mr. Chairman, I just want to add that I tend to understand the Kigali Amendment much better now with his presentation and I thank you for this. It really cleared a lot of areas that we are not very clear about, particularly the roadmap, the timelines to things that should happen sometime, and then you took us through those very clearly and you have made us to really understand this Amendment much better now, which will make our work easier in terms of what we are going to write to Parliament.

MR. R. RATUNIATA.- *Vinaka Vakalevu.*

MR. CHAIRMAN.- *Vinaka.* No other questions, Honourable Members.

To you, Rusiate, *vinaka sara valevu.* Thank you once again for your adherence to our invite and request to be with us this morning. If we do have any other further pressing questions, if you do not mind, we will email you through the Secretariat and that you will respond to them.

With those few words, Rusiate, if you have any other departing comments, the floor is yours. Thank you.

MR. R. RATUNIATA.- Sir, thank you. I just want to say again, I consider myself really privileged and honoured. I am humbled to be here. I just came back from leave and today is my first day at work. So when they told me that I was coming to Parliament, I almost skipped the beat in my heart but I am so thankful to you. Here I am walking the hallways. Usually I am just over this side. Thank you so much and *vinaka vakalevu.*

MR. CHAIRMAN.- Thank you again, Rusiate. *Vinaka.*

The Committee adjourned at 12.40 p.m.

**VERBATIM NOTES OF THE MEETING OF THE STANDING COMMITTEE ON FOREIGN AFFAIRS AND DEFENCE HELD AT THE BIG COMMITTEE ROOM (EAST WING), PARLIAMENT PRECINCTS, GOVERNMENT BUILDINGS, ON THURSDAY, 23RD JANUARY, 2020 AT 9.26 A.M.**

**Interviewee/Submittee:      The University of the South Pacific**

**In Attendance:**

- |    |                         |   |   |
|----|-------------------------|---|---|
| 1. | Professor Pal Ahluwalia | - | Vice-Chancellor                                 |
| 2. | Dr. Francis Mani        | - | Associated Dean                                 |
| 3. | Dr. Heena Lal           | - | Planning and Quality Assurance Department       |
| 4. | Ms. Elizabeth R Fong    | - | Librarian                                       |
| 5. | Mr. Aneet Kumar         | - | Research Officer                                |
| 6. | Mr. Faranise Raicebe    | - | Welfare and Deputy Chairperson (Students Union) |

MR. CHAIRMAN.- Honourable Members, we have before us this morning the Vice Chancellor and team of Officials within the University of the South Pacific (USP). A very warm welcome to you, Sir, and the rest of your team.

(Introduction of Committee Members and Secretariat by Mr. Chairman)

Welcome again. With the brief introduction of your team, Sir, the floor is yours. Thank you.

PROFESSOR P. AHLUWALIA.- Thank you, Mr. Chairman and Honourable Members. I will start from here, on my extreme right is from our Student's Union, Mr. Aneet Kumar; Dr. Heena Lal is from our Planning and Quality Assurance Department; Dr. Francis Mani is our Associated Dean in the Faculty of Technology, Science and Environment; Ms. Elizabeth R. Fong, I think many of you know is our Librarian; and on my left is Mr. Faranise Raicebe from the Student's Union.

Mr. Chairman, with your permission, if we can go straight into the presentation and I think it is going to be Dr. Francis who is going to lead us off this morning.

DR. F. MANI.- The Honourable Chairman and Honourable Members, I will be presenting USP's submission on the Adoption and Ratification of the Kigali Amendment to the Montreal Protocol on Substances that Deplete the Ozone Layer. There is a diagram there which shows the blue region which is the ozone hole that was observed in 2019 over Antarctica. The good news is due to the implementation of the Montreal Protocol, we are actually on the road of recovery. So the ozone hole is actually filling up.

Fiji ratified the Montreal Protocol in 1989 and has successfully phased out chlorofluorocarbons which were used as the main refrigerants in Fiji. The implementing agency in Fiji is the National Ozone Unit which is housed in the Department of Environment, and they actually implement all the Montreal activities. To that effect, they have also implemented the Ozone Depleting Substances Act 1998 and its subsequent Ozone Depleting Substances Regulation 2010.

The Montreal Protocol, since its inception, has evolved over time and aligned to the latest scientific findings and development and availability of the ODS alternative technologies.



Tuesday, 21st January, 2020

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Fiji has ratified all the four Amendments to the Montreal Protocol namely the London Amendment (1990), the Copenhagen Amendment (1992), the Montreal Amendment (1997) and the Beijing Amendment (1999).

The Copenhagen Amendment added the phase out of hydrochlorofluorocarbons (HCFCs). So, basically when CFCs were phased out, the replacement for CFCs were HCFCs, and Fiji is in the process of actually implementing HCFC phase out because the HCFCs have a small ozone depleting potential, not as high as the CFSs. So, they have ratified the Copenhagen Amendment and we are in the process of phasing out HCFCs and by 2030, we hope to phase out HCFCs completely.

When the Copenhagen Amendment was implemented, when the HCFCs were being phased out, the most widely accepted replacements were HFCs because they do not have any ozone depleting potentials, zero. But, they have a very high global warming potential which means that it contributes to global warming.

The recent Amendment, the Kigali Amendment, which reached agreed at the 28th Meeting of the Parties to the Montreal Protocol in Kigali, was entered into force on 1st January, 2019 and the main aim is to phase out HFCs because it is a super greenhouse gas. As of November 2018, 85 countries have ratified the Montreal Protocol and some of the Pacific Island Countries have ratified as well.

The next slide shows the Annex F which has been added to the Montreal Protocol, and that actually lists all the HFCs. They are actually controlled under the Kigali Amendment.

In the last few days, I had been going around looking at air-conditioning units and refrigeration that is in Fiji and those that are marked in red are the common HFCs that we are using. So, I will take an example, HFC 134a the global warming potential is 1,430. What that means is, on a molecule to molecule basis, HFC 134a is 1,430 times stronger than CO<sub>2</sub> in terms of creating warming.

On the right is a figure which shows that if we continue as business as usual by 2100, the temperature is supposed to rise by 0.5 Degrees Celsius, if you use HFC. But if Kigali kicks in or is ratified by all the countries, then by 2040 we will reduce HFC consumption by 80 percent and then you can see that it will reduce temperature by almost 0.5 Degrees Celsius.

The phase down schedule for A5 countries, which are the developing countries/parties within the Montreal Protocol, and we can see that from 2024 to 2028, we will have a phase down, so the impact, we will need calculate our baseline consumption and we are going to restrict to that baseline consumption only. So, there will be no more access importation of HFCs into the country, so we will freeze.

By 2029, then we will have to reduce by 10 percent; in 2035, we will reduce by 30 percent; and 2040, by 50 percent; and 2045, by 80 percent of our baseline consumption.

Do we have the expertise to calculate the baseline? Yes, we have expertise to do that and the way to calculate the baseline is average import of HFC in 2020, 2021 and 2022. These data, we can take a top-down approach and look at all the companies import HFCs into the country and get what is actually being consumed. And then that can also be verified with tariff codes that are

registered with the Fiji Revenue and Custom Services (FRCS). We also had to add 65 percent of baseline HCFC import in 2009 and 2010. We should have that data when we actually implemented the HCFC phase out.

One of the main drivers for an effective implementation of Kigali Amendment is:

1. We need to devise the National HFC phasedown strategy in wider consultation with all the stakeholders.
2. Carry out ODS alternative surveys for data collection, monitoring and reporting requirements of HFCs.
3. Assess current regulatory framework. So we have the ODS Act and the ODS Regulations, however it needs to be amended to include the control on HFC.
4. Extend ODS licensing and control system to cover HFCs. So, the companies would actually import HFCs, they would need to give in some quota, which is what they are allowed to import into the country.
5. Prioritise sectors and technologies for the HFC phasedown.
6. Financial support to make Kigali successful. Under Article 10 of the Montreal Protocol, there is funding possibility. All Parties to the Montreal Protocol have access what we call multi-lateral funding and the implementing agencies for that is actually UNDP and United Nations Industrial Development Organisation (UNIDO).

There are also some possibilities of accessing the Kigali Cooling Efficiency Programme (K-CEP) funds and since Kigali helps in mitigating greenhouse gas emissions and mitigate climate change, we could also access funding from the Global Environment Facility (GEF) and the Green Climate Fund (GCF).

Another thing to make Kigali more effective is, we need to strengthen the Refrigeration and Air Conditioning sectors in Fiji. There need to be some capacity building development for technicians to provide them some training as to how to handle these low-GWP ODs replacements, and to also train our Custom Officers in terms of identifying correct tariffs for what is imported into the country.

Most importantly, there needs to be increasing synergies with the Department of Energy and the Climate Change Division. Why Department of Energy? When we are actually looking at low-GWP ODs replacements, the idea is also to choose a replacement that would also have low energy efficiency. So that will actually help in counteract indirect emissions of carbon dioxide related to energy generation. So that would actually help to improve the carbon footprint of the country.

Since HFC is a greenhouse gas and we are on the path to reduce our greenhouse gas emissions, last year we launched the Low Emission Development Strategies, so these actually ties in with that. So, the Department of Environment would then need to work very closely with the Climate Change Division as well.

So our recommendation is, Fiji's ratification of the Amendment will reaffirm our existing commitments under the Montreal Protocol and our commitments under the Paris Agreement to reduce emissions and to keep global temperature rise below 2 Degree Celsius. So, it is recommended that Fiji ratifies the Kigali Amendment. Thank you.

MR. CHAIRMAN.- Thank you Francis. Perhaps, you would have receive questions on your submission because you have another three. Perhaps, we take a break now and we ask supplementary questions from the floor. Honourable Members, do you have any other pressing questions?

If I may start, you mentioned, Francis, one is to device the national HFC phased down strategy and also the strengthening of the Refrigeration and Air Conditioning Sector (RAC), where does the USP come in to play with the Ministry responsible?

DR. F. MANI.- USP like, we could actually come in and help the Department of Environment in establishing the baseline calculations. I am an expert in this area, I have actually done the National Greenhouse Gas Inventory for the country and I have some expertise in actually building the baseline.

That is an important aspect for us to actually ratify. When we have to develop the strategy, we need to identify what is our baseline consumption and then from there, we are going to set our targets so I think that is where USP can play a great role.

MR. CHAIRMAN.- Having answered that, has the Ministry or the Department consulted your good selves to prepare for that?

DR. F. MANI.- Not at this stage but we did help them with the HPNP and HCFC, so probably once they ratify, once they get funding from UNEP and then probably, they will approach us.

MR. CHAIRMAN.- Thank you, Francis. Honourable Members, any other question on this first submission?

HON. A. JALE.- Thank you, Mr. Chairman, and thank you very much for that presentation. What are some of the constraints that you see in terms of Fiji meeting the baseline?

DR. F. MANI.- Honourable Member, thank you for your question. One of the constraints in actually developing a baseline for our country is getting data, like our consumption. As I had mentioned, anything that comes into the country or the refrigerants, they are actually recorded with Customs.

But sometimes, the Custom Officers are not trained, so they actually put it in different categories. For example, they put HFC under HCFC and HCFC under HFC, so this is what I said in my submission, that they need to be trained so that they can actually differentiate between different ODSs and they put it in the right codes. So, that is the constraint I see in actually constructing baseline.

HON. L.S. QEREQERETABUA.- Thank you for the presentation. I just wanted to find out what you reckon USP's strengths are when it comes to the risks of counterfeit gases being brought in after the phase down, people are going to say it is too expensive to switch over, are we prepared to police counterfeits?

DR. F. MANI.- Thank you, Honourable Member, for your question. Article 4 of the Montreal Protocol says that if we actually do not ratify the Kigali Amendment, then we would not be able to actually trade with Parties which had ratified. So, if we want to bring the counterfeit, for example, HFC gases into the country, we do not actually produce them, so we will have to import it

from abroad. So if we do not ratify the Kigali Amendment, then we will not be able to trade with the developed countries who are actually producing those gases.

PROFESSOR P. AHLUWALIA.- Having said that, we do have some expertise. We have both, expertise in our School of Engineering and also in the Institute of Applied Sciences where we could possibly test some of these counterfeit gases. We probably will have to create some additional laboratory equipment in that particular area, but certainly we would have the potential to assist if that were to be the case where we have to test counterfeit gases. Although, I think it is pretty hard to counterfeit these gases.

HON. L.S. QEREQERETABUA.- Thank you, Sir. I was just reading a case in Australia where there was R410A, I think it is called, that was caught in Western Australia. So, how easy would that be for our border control to police? Thank you.

The Committee resumed at 11.54 a.m.

**Interviewee/Submittee:      Consumer Council of Fiji (CCF)**

In Attendance

- |                      |   |   |
|----------------------|---|---|
| 1. Ms. Seema Shandil | - | Chief Executive Officer                   |
| 2. Ms. Evelyn Sami   | - | Manager, Research and Policy Analyst      |
| 3. Mr. Tevita Vuibau | - | Manager, Campaigns, Information and Media |

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MS. S. SHANDIL.- Thank you, Mr. Chairman. We will just directly move to the Kigali Amendment and once again looking at the presentation slides, because we are coming from the Consumer Council of Fiji, so we would like to harp on consumer rights and see how it relates to whatever we are trying to achieve, moving forward.

Then we will talk about Kigali Amendments and some insights into the impact of HFCs, what are some of the consumer trends in terms of moving towards sustainability, the impact of consumers on our tourism and what will be some impacts on legislations, what challenges we will face if we decide to ratify, and our recommendations as usual.

Once again, all around the world, we know that the consumers have eight fundamental rights, which will be impacted by the decision, if we decide to ratify this Amendment.

To elaborate, the consumers have the right to safety, which very simply means, to be protected against products which are hazardous to their health and life. We all are consumers sitting in this room and we know that to some extent, we are exposed to products that are hazardous, not only to our health but also to our environment which we live and depend on.

We can see that not only the right to safety is at risk, but the right to healthy environment is also at risk. Hence, an immediate action is required to change the production and consumption patterns and behaviours, not only from the production side, but also we need to change the behaviours of consumption patterns.

It is very important to note that this Amendment has been brought in place to the world or gives us a real chance to take a big bite out of climate change, promising ourselves to change our daily habits towards a cleaner planet and to be a better person.

How can this be achieved? By making global commitment to reduce the use of HFCs by 80 percent by 2047 and the first HFC reduction for Article 5 Countries will incur in 2024. As Fijians, I think, simply being promising to change our habits is the first step and ratifying this, is the step towards showing that we are part of the global family and we are definitely part of the global family.

It is a well-known fact that climate change in the Pacific is threatening the health of the Pacific Islanders, as well as the economic and social development.

We are the most vulnerable in the world to the impacts of climate change. We face triple burden of disease, whether it is communicable or non-communicable diseases and health impacts.

We know that increased exposure to the UV rays also weakens our immune system, so if there are introduction of new viruses, sometimes our immune systems also weakens.

Additionally, it has an impact on our environment. The concern that ozone layer will lead to loss of plant species, and it is nothing new. We know that a lot of research and it is already there, it is out there and we see it.

Then it leads into the reduction of global food supply. Any changes to the balance of our food species, means that it will have a serious impact, not only on the generation today but also on the future generations because life is interconnected. We know it is a cycle. We depend on food species, et cetera.

Finally, it also impacts our tourism industry. Our tourism industry is very closely linked to biodiversity and because the attractions are created by rich and our varied environment, however, due to climate change, we have seen a loss in our biodiversity.

Also, the adverse weather patterns has greatly affected the tourism sector, not only in Fiji, we can say it has been happening worldwide, for example, tsunami affecting the coastal areas in the Asian countries which are also well-known for tourism industries.

What is the current consumer trend? Globally, more consumers are becoming wary about the consequences of our actions, so they are trying to move towards making more sustainable choices, which impacts our production because we know, nowadays the production depends on demands and a lot of manufacturers and traders are working with consumers so that they can know what they actually want, and then they supply accordingly. Those who are more environment conscious make good choices, they demand for products that do not affect the environment around them.

As in cases everywhere, people are a bit resistant to change. In the case of Fiji, sustainable choices are still in very early stages. We are there, people have started realising, however, it is a bit slow and so we are a bit behind in the global trend of green consumerism. We are not saying that we will not achieve it, we know we are on the right track, we want a green Fiji and we are moving towards it. And the Council has already started work on that. Our main project for this financial year and the subsequent years will be green consumerism.

What we can say is, firstly, the people will resist change, slowly they will adjust to the change, however, we need to provide them with alternatives.

They know that products containing HFCs are bad, however, they need alternatives. An alternative should be energy efficient and cost efficient because when they are transiting through the phasedown, we know this is a phasedown and not a phase out transition. So they will need our full support as well because we do not want them to be burdened with costs during the phasedown period.

In order to assist, the first thing is we need to ascertain is, what is the HFC baseline in Fiji? We need to do a survey on consumption of HFCs, to find out what are some of the products and what our rate of consumption is in terms of products which have HFC content.

Then the study should also be expanded to include the post-impact study, to ascertain the added cost that will be passed on to the consumers and to all the other key players, who will need to partake in this transition period.

Also, we can use data from this survey to devise appropriate strategies for advocacy to encourage consumers to move towards alternatives, together with how they can carefully transit without having a cost burden on them.

The State may also provide incentives to businesses who may be forthcoming with using alternatives because we understand there may be a lot of costs associated to the businesses.

Also, consumers lack technical expertise in this area and they will depend on the suppliers to provide them with all the information. They do not understand the advantages and disadvantages, so everything needs to be communicated to them in a manner that they understand. Why is this happening? If Fiji decides to ratify, why are they ratifying this Convention?

Impact on Tourism; well, no doubt, it will have some impacts while transiting through the phasedown period which will come to a cost, but the benefits will definitely outweigh the cost because we want to promote biodiversity. So in this way, what will happen is, they will attract eco-friendly tourists and most of the time, the tourists come to Fiji because they want to run away from the hustle and bustle of towns and cities, and have a peaceful time in countries like Fiji. So they will have a more clean, safe and healthy environment.

Because we know those countries who are part and parcel of this Convention, they are also now discussions going on how to get the technologies or the latest innovation geared towards energy-efficient products and cost-saving products. So, definitely, once we are out there phasing out, there will be a lot of better products in the market.

Impact on legislations; we need to prepare the phase out policies and strategies that are clearly known to consumers and businesses. So, there will be a need to amend the Trade Standards (Household Electric Refrigerating Appliances) Order 2007. It will have to be amended to incorporate standards for HFC content and a system of record keeping of HFC products that would enter our country.

Also, the FRCS might require to amend the import permits whereby businesses would have to declare the contents of the imported items.

I think very important is the development of standards in the importation of goods with the HFC contents so that our market does not get dumped with all those items that we do not need. We do not want to become a dumping ground.

Also to make sure that consumers do not end up paying for those items that they are not looking for and then it ends up as a liability to them, as well as to our environment.

Yes, there are some challenges. We know we had some challenges previously that our cloned and counterfeit products are made to our markets. However, that can be controlled by strict border controls and so border agencies need to ensure that Fiji is compliant with the Kigali Amendment. We will have to have Acts, Regulations and Policies and stricter border control in place so that this can be taken care of.

Furthermore, lack of after sales expertise. So, when new products come in, the traders must ensure that they have expertise in place so that should something go wrong with the alternative products, the after sales service is available to the consumers.

Market and sales personnel should also ensure disclose of information and honestly advise consumers regarding appliances that do not contain HFCs because what will happen, there may be some traders who may not be able to sell out all the items during the phasedown period. So what happens to those products?

Decisions need to be made because we do not want our consumers to be fooled into buying those products that still have HFC because in here, we will be encouraging them to look for alternatives that do not have HFCs.

Consumers, as I said, is very important. They will need to be educated on why the transition, what are the alternatives and they need to be told on what the world is trying to do in order to get energy efficient and cost efficient products and how this transition will benefit them. These three are very important and it needs to be communicated to them.

So our recommendations, once again, we say, “Yes, let us ratify this Amendment.”, because we need to be flexible, we need to be accommodative, we need to be ambitious. The world is our family and as a responsible member of this global family, we need to play our roles right to support the amendments to keep the world safer from the worst effects of climate change. We are yet to see a lot, if we do not change our behaviour or our habits, and we need to start working to change these behaviours in ways, as I said, benefits everyone, not only today but also the future generations’ needs also need to be fulfilled.

Once we ratify that, there will be certain impacts. We have a National Development Plan and this is aligned with the global commitment, including the 2030 Agenda for Sustainable Development and the Paris Agreement on Climate Change. So this will help us to achieve the net zero global GHG emissions..... 2050 and furthermore, as the NDP states that Fiji will strive to formulate and communicate long-term greenhouse gas emission development strategies in accordance with Article 4, Paragraph 19 of the Paris Agreement. So this ratification will definitely help Fiji to achieve the targets that are outlined or set out in the NDP. Thank you very much.

MR. CHAIRMAN.- Thank you again, Ms. Shandil, and team for that comprehensive report. We heard earlier this morning from the University of the South Pacific, in particular the School of Engineering. Yes, I see it very much aligned from a consumer point of view, I can see the variance there. Having said that, are there any questions from the floor, Honourable Members?

Since there are none, thank you once again, Ms. Shandil, for acceding to our request to come before the Committee. If we do have any pressing questions once we are compiling the report to be presented to Parliament, we hope you will oblige willingly through our Secretariat and we wish to say thank you once again for joining us this afternoon. Thank you.

MS. S. SHANDIL.- Definitely, Sir, thank you so much.

The Committee adjourned at 12.28 p.m.



**VERBATIM NOTES OF THE MEETING OF THE STANDING COMMITTEE ON  
FOREIGN AFFAIRS AND DEFENCE HELD AT THE SMALL COMMITTEE ROOM  
(WEST WING), PARLIAMENT PRECINCTS, GOVERNMENT BUILDINGS, ON  
THURSDAY, 30TH JANUARY, 2020 AT 9.22 A.M.**

**Interviewee/Submittee:**

**University of Fiji**

In Attendance:

- |                                |                                      |
|--------------------------------|--------------------------------------|
| 1. Professor Shaista Shameem - | Dean of Law                          |
| 2. Mr. Davendra Kumar          | - Executive Director, Just Atonement |
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Thank you, Professor, for the sharing. There are no further questions on that subject matter. We will ask, if you do not mind, your colleague, Mr. Davendra Kumar, if you would like to share with us on climate change and also with regards to the commitment of Parties. We are going to COP 26 this year in Scotland, just some thought behind that. Thank you.

MR. D. KUMAR.- Thank you very much, Mr. Chairman and Honourable Members of Parliament. It is an honour to sit here with you and to talk a little bit about my views on what I call the climate crisis and what people are calling now, as opposed to climate change.

I think this actually dovetails very nicely on Madam Shameem's comments about education because part of my own learnings from this and my efforts in this area are a result of my own education in the last five years on this subject and not understanding the urgency of the crisis, particularly for island nations, such as Fiji, Vanuatu, Tuvalu, Kiribati, in the Caribbean and effectively for people living on coastlines everywhere around the world.

This is an imminent crisis that will affect all of our lives in ways that we are only starting to really conceive of and imagine. All of this is happening in a framework of international politics of hundreds of years of history where rich countries, we can say western countries but now we can speak of rich countries, like China and Japan as well, who have been the historic emitters of greenhouse gasses for now hundreds of years. The countries who have not emitted, like Fiji, Ghana, and South Africa, will be the first victims of the climate crisis, so this is all happening in a framework of history with the past remains the prologue to this century.

I guess in terms of your question, Mr. Chairman, specifically on COP and I can speak briefly on COP 25 while I was not there in Spain but from what I observed and read in the papers, in my view, the rich countries have dominated the diplomat talks and they have been able to use their resources to employ armies of diplomats to come to this Conventions and lawyers and, in my view, they have two agendas. One is the financing agenda which is very much something, as you may know of the UNFCCC Framework, there is supposedly an obligation on the rich countries to support less developed States, to provide them with resources, technology and finance, and to help them adjust and adapt to the centuries ahead. In my view the rich countries are using that framework as a means of continued financial dominance, in the same way that this last 20th century was the century of IMF loans and World Bank planning, in a lot of ways, that was not with the input of local communities, not respectful enough of self-determination of countries in which these loans and financing instruments were being sold. And that left and perpetuated an unfair global system throughout the 20th century. So I think that framework is zipping back in now into the COP Framework and when you go and talk to an Economist who shows up from the rich countries and they want to talk about carbon markets, they give you the brief and you can read through the briefs and if you have an Economics Degree or you have some influence in Economics, it does not take too long to recognise that what is being proposed here is a type of new form of economic

domination with the climate and with geography being used as the bargaining chips now between the rich and the poor. That is one aspect of what I think is happening now at COP.

The second aspect is just simply to stall on change and unfortunately, I would not make that type of allegation without reading the news, especially from the last year at the COP. There was not, in my view, a much more open and naked effort now by the rich countries just to stall any type of change when it comes to the way the global world works because just to be blunt in the tradition of Madam Shameem of this blunt without getting kicked out of the room, the 20th century was the century of oil and international politics was dictated by oil. I mean, what we are witnessing in the 21st century is a continuation of that history and as long as oil continues to be the foundation of economic and international development or international politics, we will never be able to change our economies to adjust.

Again, just speaking nakedly here and frankly, I think that this is a crisis of self-determination fundamentally. It is not a question of 'if' but when the seas rise and overtake so much of our coastlines in this world and overtake low-lying countries, the self-determination of an island people itself is at risk in a way that it is unprecedented in history in terms of what happens. Will the country of Kiribati maintained its seat at the United Nations when it no longer has coral reef to come home to?

These are questions that the rich countries do not have to ask, they will never have to deal with in terms of the injury to self-determination. I think this is also fundamentally a project of deep, deep national independence and sovereignty for people like Fiji to take charge of their own destiny in a world that is still dominated by a lot of great power, but to do in a way where there is that remains an absence of leadership.

So the third thing I would say about COP is that, there is a failure to control the narrative, to control the future of what it could be, and that is a role that island countries such as Fiji could play in creating a narrative in the framework in a manner that all comes back in the 1960s and 1970s there was a non-aligned movement. There was a first world and a second world, but there was a group of States who said, "We are not going to fall into that narrative and we are going to control our own narrative as mostly decolonised peoples but also firstly independent and proud of our traditions, who want to be independent of great power politics and who want to forge a genuinely free destiny for our peoples. That was, in my view, a very big of thing.

The Non-Aligned Movement has mostly ceased to exist, there are some echoes of it from countries like Malaysia, some countries in Africa, but the force of it is lost. I think it is time for a renewal of that concept based on this idea of positive healing concept coming from countries who want to forge destinies together in a shared way with other countries who will be mutually respectful of their independence and sovereignty, but also free of the financing arrangements that are being proposed and free of the 21st century that echoes the 20th century in terms of its international relations. The COPs can be valuable for messaging and for providing that narrative.

And in the same way that my colleague on the left has advised the Committee to focus on the messaging of education. I think similar work could be done with this topic. What is Fiji's message about the climate crisis and to take that message to the full spectrum of its Government apparatus, starting with leadership through the Diplomatic Corp, through the Attorney-General, down to domestic policies, to the things that get taught in school. What is the fundamental message? And that is for Parliament to decide and talk to but that type of hard work, I think, could make Fiji which has an opportunity here, to be a real leader on this issue. Thank you very much.

MR. CHAIRMAN.- Thank you, Mr. Kumar. The Standing Committee on Foreign Affairs and Defence has been tasked through Parliament to make a report on the Adoption and Ratification

of the Kigali Amendment on Substances that Deplete the Ozone Layer. Are there any thoughts you may have on that please, Mr. Kumar?

MR. D. KUMAR.- That is a great question. I think with respect to Ratification of the Kigali Amendment on Substances that Deplete the Ozone Layer, I think in my view, the framework that exists internationally, the international framework that has been proposed generally speaking by the United Nations is a decent mechanism, it is not perfect.

But I think to show leadership, it boils down to the question of knowing that to become an effective leader in the space, you also have to walk. I know one of the concerns on the ozone depleting amendment is that, Fiji will have to look at its own domestic industries and determine; are we in compliance already? What is the cost to shift?

I mean, it is a fundamentally an economic question, I think, at the end of the day and I know that for rich countries, it might be easier for them to subsidise an economic transformation of certain industry, versus a not so resourceful country. That being said, the way that Fiji could handle and explore ratification is an opportunity to explore how countries like Fiji deal with their (I do not want to say responsibility because it is not their responsibility) role in effectively cleaning up so much of what has been polluted by other countries and other generations.

So one thing to consider would be doing that analysis, so what is the cost? What is really the cost to our country to comply with this? What do we have to do and what would it cost? Come up with that number, and then that becomes an issue with the COP. And then I think you can absolutely say ' "This is what is going to cost us. Here is why it is going to cost us this much. We are willing to do it. Who is going to help us? Why are you not going to help us?" Especially if it is legacy industries, legacy pollution, but those are the topics that come up.

I think before we can get to say, "yes" or "no", I think it is more about examining the cost and coming up with the procedure for how we can start compliance with that in a way that also reflects the amount is really at fault for emissions and for those steps of ozone depleting chemicals.

MR. CHAIRMAN.- Thank you again, Mr. Kumar, for sharing on the subject.

Thank you again Professor Shameem and Mr. Kumar for availing yourself this morning. If you do have any departing comments, the floor is yours and we thank you once again.

# **[VERBATIM REPORT]**

## **STANDING COMMITTEE ON FOREIGN AFFAIRS AND DEFENCE**

### **TREATIES**

- 1. Kigali Amendment to the Montreal Protocol on Substances that Deplete the Ozone Layer**
- 2. 2011 Asia-Pacific Convention on the Recognition of Higher Education Qualifications**
- 3. Council of Europe Convention on the Manipulation of Sports Competition**

**INSTITUTION:** Ministry of Foreign Affairs  
Office of the Solicitor-General

**VENUE:** Big Committee Room (East Wing)

**DATE:** Monday, 27th January, 2020.

Tuesday, 21st January, 2020

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**VERBATIM NOTES OF THE MEETING OF THE STANDING COMMITTEE ON FOREIGN AFFAIRS AND DEFENCE HELD AT THE COMMITTEE ROOM (EAST WING), PARLIAMENT PRECINCTS, GOVERNMENT BUILDINGS, ON MONDAY, 27TH JANUARY, 2020 AT 9.50 A.M.**

**Interviewee/Submittee: Ministry of Foreign Affairs**

In Attendance:

1. Ms. Keleni Seruvatu - Manager, Multilateral Division
  2. Ms. Melania Bada - Senior Foreign Service Officer
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MR. CHAIRMAN.- Honourable Members, we have before us the Officials from the Ministry of Foreign Affairs.

A very good morning and welcome, Keleni, the Manager; and Melania, the Senior Foreign Affairs Officer.

(Introduction of Honourable Members and Secretariat)

We do not have, unfortunately, the service of Honourable Dr. Salik Govind, who is away overseas on a very personal issue. Ladies, with that, a brief introduction of your good selves and the floor is yours for your submission. Thank you.

MS. K. SERUVATU.- *Vinaka vakalevu*, Mr. Chairman. First of all let me just convey the greetings of the Honourable Minister for Foreign Affairs to this Standing Committee and also the greetings of the Acting Permanent Secretary for Foreign Affairs. It is our pleasure this morning to come and address you very briefly on the three Conventions or Treaties that we will be speaking on this morning.

First of all, as you have rightly said, my name is Keleni Seruvatu, I hail from the Province of Kadavu and on my left is Melania. We both work for the Multilateral Affairs Division of the Ministry of Foreign Affairs. With those greetings, Mr. Chairman, I would like to request if we could just proceed straight to our submission this morning.

As you can see behind me is a PowerPoint, we prepared the PowerPoint for the purposes of our submission this morning. It is not too technical and it will not be too extensive for the purposes of just conveying our position on the issues that we have this morning.

If I may begin on our submission this morning, we note that we will be looking at the three proposed international laws or Conventions that are being proposed for Fiji to ratify or to become a member of. And we would like to begin with the Kigali Amendment to the Montreal Protocol on Substances that Deplete the Ozone Layer.

Mr. Chairman, as you will note, our Ministry plays a facilitative role in the issue of Treaties and Conventions. Rightfully, the implementing agency for the Kigali Amendment to the Montreal Protocol is the Department of Environment. But for the purposes of our submission this morning, we would like to just highlight a number of issues in terms of our position on this proposed Amendment.

The Kigali Amendment to the Montreal Protocol is basically an amendment that looks at clarifying or assisting Member States to the Montreal Protocol on their efforts to implement activities that will phase out the use of Ozone Depleting Substances (ODSs) in Fiji.

As you will note, Mr. Chairman, the Montreal Protocol is an old protocol. It is an old international law that was introduced in 1987 and Fiji has been a member for 32 years so 2019 was our 32nd year of being a State Member acceding to the Montreal Protocol.

The Kigali Amendment is just one of the amendments that have been made to this Protocol. Speaking on the legal basis of the Montreal Protocol, it deals with substances that deplete the ozone layer. You will note, Mr. Chairman, that Fiji's current leadership efforts on the global stage to combat climate change is complemented by protocols and amendments, such as the Kigali Amendment and the Montreal Protocol.

We would also like to say that the Department of Environment has also undertaken measures to implement or domesticate the Montreal Protocol through the Ozone Depleting Substances Act 1998. There are other mechanisms in place that have been implemented domestically to help Fiji commit or to phase out ODSs.

You will have seen, Mr. Chairman, that the Kigali Amendment is just one such amendment to the main Protocol that will assist us to coordinate better and to help us in completely phasing out ODSs as part of our agenda under the Agenda 2030 or the Sustainable Development Agenda.

The key benefits of this Protocol or this Amendment; it advances the national, regional and common interests on reducing climate vulnerability and amplifying our voices and leverage within the United Nations.

It contributes to sustainability goals consistent with the 2030 Agenda for Sustainable Development. It avoids up to 0.5 percent degrees of warming until the end of the century.

The implementation of the Kigali Amendment is made possible through financial and technical assistance provided by the Multilateral Fund. The Multilateral Fund, if I may speak on it very briefly, it is established under Article 10 of the Protocol and contribution is made to the Multilateral Fund Assistance to developing countries or Parties to the Montreal Protocol, whose annual per capita consumption and production of ODSs is less than 0.3 kilogrammes, to comply with the control measures of the Protocol.

Developing countries have demonstrated that with the right kind of assistance, they are willing, ready and able to be full partners in global efforts to protect the environment.

Mr. Chairman, respectfully, that is our submission on the first Protocol or first international law that we are dealing with or will be speaking to this morning. I request if there are any

questions, that they be taken at the end of our presentation, if that is alright with the Honourable Members.

MR. CHAIRMAN.- Honourable Members, do you care to ask any questions?

HON. A. JALE.- Can I just clarify a point on the assistance to developing countries, how are we in terms of meeting that target of 0.3 kilogrammes to comply with the control measures of the Protocol, has Fiji met that requirement? You are talking about the Multilateral Fund and the assistance that we might be able to get, have we met that target?

MS. K. SERUVATU.- Mr. Chairman, if I may be allowed to consult with the Department of Environment on that issue and I will be happy to report back to the Secretariat.

HON. A. JALE.- Thank you, Mr. Chairman, because our report has mentioned the benefits of Fiji, if we ratify the amendment to the Montreal Protocol and one of it was the financial aspect of it.

Now, this is the targets 0.3 kilogrammes of ODS reduction, have we met it? And I am glad that you are going to give us that answer later.

MR. CHAIRMAN.- Yes, that is fine Ms. Keleni. If you could consult the Department or Ministry concerned and get back to us, we would appreciate that. Thank you. You may carry on now.

MS. K. SERUVATU.- *Vinaka*, Mr. Chairman.

To the next Convention, in 2011, the Asia Pacific Convention on the Recognition of Higher Education Qualifications. Mr. Chairman we note that this Convention deals with the recognition of Higher Education Qualifications and at the outset, we would like to state our support for this Convention. If I may retract a little bit, Mr. Chairman, I beg your indulgence, we had not mentioned this point in terms of the first Convention which is Kigali Amendment, we had not specifically reiterated our support for it, but, as you will note from the previous presentation that we have done so.

For this Convention as well, Mr. Chairman, we would like to convey our support, noting that this Convention deals directly with and has very relevant linkages with the Sustainable Development Goals, as well as Fiji's National Development Plans.

We note that education mobility is fundamental to regional prosperity, while equal access to quality higher education is essential for peace and stability. This is the recognition also given from UNESCO in terms of higher education and education overall.

This vision is also at the core of Sustainable Development Goal 4 on education. Fiji aligns with this vision through its National Development Plan that seeks to enhance and strengthen the support for Higher Education Institutions through the implementations of a National Accreditation Framework.



The benefits that we foresee with this Convention is that, it allows Fiji's Higher Education graduates and international graduates access to greater studies and work opportunities across the Asia-Pacific Region. It has the potential to increase the supply of well-trained, world-class professionals, who are equipped for job opportunities in the global market. As we speak, labour migration and Fiji's outreach into the world in terms of its graduates and its people, the world is now interconnected. Speaking of this Convention, it really adds to our aspirations to market Fiji and its people to the world, the specific skills and abilities that our graduates may be able to offer the global market which is before us, Mr. Chairman.

Mr. Chairman that is a very brief submission on the second Convention that we are seeing this morning, that is, on the Recognition of Higher Education Qualifications.

MR. CHAIRMAN.- Thank you, Ms. Seruvatu. Honourable Members, do you have questions on this?

If I may start, I have a question, it is to do with labour migration. From time to time, we have had some foreigners arrive into the country and, sort of, overstayed. I think as we speak, we have two brothers who are facing the court but that is duly immigration. If it is, what has the Ministry have in place in so far as, if they are to check on their employment status? What are their career past? If they are academics so to speak, can the country not make use of those? Just a thought, thank you.

MS. K. SERUVATU.- *Vinaka*, Mr. Chairman. In terms of the issue that you have rightfully highlighted would be with the ambit or the jurisdiction of the Department of Immigration, as well as the Ministry of Employment. But overall for the Ministry of Foreign Affairs, our role basically is to utilise the presence of our Missions in foreign countries, to do the ground work for us in terms of liaising with our partner governments and seeking opportunities that we may be able to capitalise on.

Labour and migration is one such issue that is very, very significant in this day and age, given the interconnectivity of the world nowadays. Of course, the situations as you have already highlighted are bound to occur but our Ministry is playing an oversight facilitative role in terms of working with other line agencies that will govern these specific issues. Thank you, Mr. Chairman.

MR. CHAIRMAN.- Thank you, Ms. Seruvatu, for the explanation. Honourable Members, are there any other questions on the subject matter?

Ms. Seruvatu, you may proceed to your third item, thank you.

MS. K. SERUVATU.- *Vinaka*, Mr. Chairman, on the last item on our agenda this morning, the Council of Europe Convention on the Manipulation of Sports. For this item, Mr. Chairman, we would like to address specifically the process of ratification or accession to this Convention, noting that this is a Council of Europe Convention which would basically apply to European Union Member Countries.

At the outset, we will say that this Treaty is open for signature by Member States. Other State Parties to the European Cultural Convention, the European Union, the Non-Member States

which have participated in its elaboration or are enjoying observer status with the Council of Europe and by other Non-Member States.

Participation in most Council of Europe Treaties is not exclusively limited to the Member States of the Council of Europe. The Treaties concerned are open to accession by Non-Member States, even Non-Member States, provided that they have been informally invited to accede by the Committee of Ministers of the Council of Europe.

It is customary for Non-Member States to request accession in a letter addressed to the Secretary-General of the Council of Europe, signed by a Minister for Foreign Affairs, or a diplomatic representative, acting upon instructions of his/her government.

Formal requests for accession are examined by a rapporteur group of the Committee of Ministers and, then, by the Committee of Ministers. The decision inviting the Non-Member State is usually taken at the level of the Ministers' deputies.

An invitation to accede to one of the Council of Europe Conventions is notified to the State concerned, which, prior to acceding, has to take the necessary measures to ensure that its domestic law allows the Convention to be implemented

It is customary for the Instrument of Accession to be deposited at the seat of the Council of Europe in Strasbourg, in the presence of a representative of the acceding State and of the Secretary General of the Council of Europe or his/her deputy. The representative of the acceding State brings with him/her the Instrument of Accession, and a procès-verbal of deposit is signed by both Parties. States having acceded to a Convention are entitled to accede to the Protocols thereto.

The implication of ratifying the Convention as a Non-member State; we wish to highlight that certain Council of Europe Conventions contain a provision on the financing of their follow-up mechanism by Non-Member States as in Article 32 of the Treaty which states, and I quote:

“A contracting party which is not a member of the Council of Europe shall contribute to the financing of the Convention Follow-Up Committee in a manner to be decided by the Committee of Ministers after consultation with that Party.”

Mr. Chairman, as we have highlighted before, there are no barriers or possibly if I may reword my earlier sentiment, this particular Convention is an open convention in which Non-Member States (Non-EU Member States) may be able to join or to accede to such Conventions. The implications, however, as we have stated here is the financial aspect of the membership of the Convention which would be decided after consultation between their Party, our member State and the Committee of Ministers under the Convention.

Mr. Chairman, with those few remarks, I would like to end our submission on the third issue of this agenda item and also overall our presentation this morning. *Vinaka*, Mr. Chairman.

MR. CHAIRMAN.- Thank you. Honourable Members, do you have any questions for the presenters?

HON. L.S. QEREQERETABUA.- Thank you, Mr. Chairman. *Vinaka vakalevu sara*, Keleni. I just wanted to check on point 4 of the last Treaty. For the domestic laws, have you checked on that? Do we have any domestic laws that could be an obstacle?

MS. K. SERUVATU.- Thank you, I have to revisit this, Madam. We will be happy to supply our research back to the Secretariat.

HON. L.S. QEREQERETABUA.- Thank you. *Vinaka vakalevu sara*.

HON. A. JALE.- Mr. Chairman, I take it that the European Union, the Council of Europe are different bodies. I am just inquiring, what are the sort of membership of this Council of Europe, if it is not the same as the European Union?

MS. K. SERUVATU.- If I may, Mr. Chairman, I could answer this question now but to be sure, I would like to do more research and get back to the Committee.

MR. CHAIRMAN.- We appreciate Keleni and Melania because I think it is probably put forward to you two to represent the Ministry this morning at the eleventh hour, but we do appreciate that Madam. We fully understand that and yes, if you do not mind taking note of those three questions, two on this particular one and the earlier question on the Kigali Amendment.

Yes, thank you very much for that. Thank you again for your presentation.

If we do have any other questions, if you would oblige by having reply to us through our Secretariat and we also, once again, thank you for availing yourselves and acceding to our invitation.

With those few words, Keleni, if you have any departing words, the floor is yours. Thank you.

MS. K. SERUVATU.- *Vinaka vakalevu*, Mr. Chairman. We are grateful for the experience to come and address this esteemed Committee this morning. *Vinaka*.

MR. CHAIRMAN.- Thank you again.

The Committee adjourned at 10.15 a.m.

The Committee resumed at 11.05 a.m.

**Interviewee/Submittee: Office of the Solicitor-General**

In Attendance:

1.	Ms. Seema Chand	-	Acting Principle Legal Officer
2.	Ms. Manisha Ali	-	Legal Officer
3.	Ms. Nazia Ali	-	Legal Officer
4.	Mr. David Solvalu	-	Senior Legal Officer
5.	Ms. Raumanu Pranjivan	-	Acting Principle Legal Officer
6.	Mr. Epi Rawalai	-	Communications Officer, Fiji Higher Education Commission (FHEC)

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MR. CHAIRMAN.- Honourable Members, we have before us now the team from the Office of Solicitor General. A very good morning and welcome to you all. Welcome to you, Seema, and the rest of the team.

(Introduction of Honourable Members and Secretariat)

With those few words, the floor is yours Seema. Thank you.

MS. S. CHAND.- Good morning, Honourable Members, and Happy New Year to everyone. Thank you for giving us an opportunity to present on the various Conventions. I will just briefly introduce you to the team.

We have Nazia Ali and a colleague from FHEC, who will be presenting on the Convention to the Recognition of Higher Education Qualifications. I will be speaking on the Council of Europe Convention on the Manipulation of Sports. Mr. Solvalu, Ms. Ali and Mr. Pranjivan will be speaking on the first Convention, which is the Kigali Amendment. So I pass it to Mr. Solvalu and team to take us through that presentation.

MR. D. SOLVALU.- Thank you, Seema. As Seema has stated, we will be addressing the Standing Committee on the Kigali Amendment, the Montreal Protocol.

On 16th January, from the Standing Committee, we received the specific questions in relation to this Convention, so it is really up to the Committee on how you wish us to do this. Would you like us to specifically go through each question and answer them, or would you like to have, sort of, a conversation?

The issue for us on our end is that, a few of the questions are not very legal in nature, so there are questions that would be best answered by the enforcement agency. We have received answers from them as well, we have got everything on that, so we are aware of their capacity.

However, we are also aware that you have also spoken with the Department of Environment, and so we know that we have three Conventions today. How would you like us to do this, would you like us to only go to the questions with legal effect?

MR. CHAIRMAN.- I think that would be the way to go David. Just give us what you have and if you have consulted the agencies, the legality part of that, yes, we will go through that. All that sort of information will help us compile our final report.

MR. D. SOLVALU.- We will just zero in on Question 5 and Question 6 because from our perspective, these are the questions that have the most potential for legal implications. However, we have prepared copies of answers for the other questions and we are willing to distribute those to assist you with the report.

MS. R. PRANJIVAN.- Good morning, Honourable Committee Members. I will just take you through Question 5, the contents of the Kigali Amendment. What additional value difference from the original Montreal Treaty?

The Amendment is a binding legal agreement or Treaty which is intended to create rights and obligations in international law. It is designed to particularly, phasedown or reduce the production and consumption of HFCs frequently used in refrigeration and air conditioning systems. It is currently used as a replacement to ODSs.

HFCs are greenhouse gases which can have a high or a very high global warming potential, ranging from 12 to 14800 GWP, and I am pretty sure that the Committee has already heard from the technical perspective of what this means.

This Amendment creates the opportunity and the potential to avoid up to 0.5 Degree Celsius of warming by the end of the century.

The Amendment, in fact, adds new Annex F, which lists HFCs separated into two groups. Group 2 substances, only has HFC 23 for the time being, will be treated differently from Group 1 substances for the purposes of reporting on emissions and application of approved technology to emissions and destruction of substances. Generally this Amendment requires the phasedown of HFCs which are frequently used as substitutes of ODS and are powerful GWP gases. The two groups as annexed below, you can see that subheading one is Annex F – Group 1 and Annex F - Group 2.

This Amendment requires Parties to gradually reduce the use of HFCs by 80 percent to 85 percent by the late 2040s. Fiji is currently listed as a developing country in Article 5 of the Montreal Protocol, and is required as an Article 5 country to phasedown the production and consumption of HFCs listed in Annex F.

Upon ratification of this Amendment, Parties will begin to deploy new technologies in line with its requirements. Parties will also be able to gain competitive advantage in the world market, technologies will be more cost-effective and lead to an improvement in the quality of end products, including improvement in overall energy efficiency.

This Amendment will allow Parties a degree of flexibility in implementing their obligation. It is designed to give Parties sufficient time and opportunities to phasedown HFCs in a way that suits their country need and interest, setting its own priority for particular HFCs, technologies and alternatives.

Through the Amendment, the Montreal Protocol takes responsibility for HFCs and plays a leading role in working towards an environmentally sustainable world where no one is left behind, consistent with the 2030 Agenda for Sustainable Development. Thank you.

MS. M. ALI.- I will take Question 6 which are the key benefits of ratification. Fiji has already ratified the Montreal Protocol and the Four Amendments to it so as you know, this is the Fifth Amendment, the Kigali Amendment.

Once Fiji ratifies this and if successfully implemented, the Amendment is anticipated to avoid up to 0.5 Degrees Celsius of global warming by 2100, a significant contribution towards the Paris Agreement's objectives.

There are trading control restrictions under the Montreal Protocol. Article 4 of the Montreal Protocol restricts Parties from trading controlled substances with States not a party to the Protocol. That Amendment enters into force on 1st January, 2033 and if we are not a party to that, States not Parties to the Montreal Protocol will not be able to trade with us.

In terms of financial and technical support, there are provisions in the Montreal Protocol for that as well. Article 10 of the Montreal Protocol establishes a financial mechanism to provide financial and technical co-operation, including the transfer of technologies to support Article 5 countries, like Fiji, which are developing countries, for their compliance. There will be financial support for enabling activities, institutional strengthening, import and export licensing and quota, reporting, demonstration projects and the development of national strategies for phasing down of HFCs.

Becoming party to the Amendment will also ensure that Fiji does not operate with technologies that are obsolete, and it will avoid situations whereby processors and facilities that are not updated begin to operate at an economic disadvantage. It will result in loss of market for non-party industries and the use of latest innovative technology in related field. So the ratification will reaffirm our existing commitment under the Montreal Protocol and also the Climate Change Conventions, the Paris Agreement.

In terms of cost there will not be much cost involved, there will be minimum costs involved because for attending Parties when normally they will become parties to Treaties, they have to attend meetings, but for this one, we are already attending meetings for the Montreal Protocol and since this is an amendment to the Montreal Protocol, we will not have addition cost to attend these meetings.

As for technical officers, the Ministry already has these technical officers. If any, they would have just employ maybe one more officer, but it is not that if they do not employ this one officer, they will not be able to meet their obligations in this. They already have technical support, they already have existing, coordinating relationship with agencies like Fiji Revenue and Customs Services (FRCS), MITT, SG's Office and Department of Energy. So there are minimal costs involved and then we will get financial and technical assistance from Montreal Protocol. Thank you.

MR. CHAIRMAN.- Thank you. No other speaker on the subject matter?

MR. D. SOLVALU.- Also, Fiji has a long relationship with this Protocol and like Ms. Nazia said, we ratified the Protocol and all of its Amendments so far, and this is another one in the line of us sticking to our international commitments.

But also of particular note is that if we are to ratify this Amendment, we have an Ozone Depleting Substances Act 1998, the then Parliament saw fit to pass/enact domestic legislation to give greater reflect to our international commitments, and this Amendment will also lead to a review of that Act, to ensure that it is brought up to standard.

MR. CHAIRMAN.- Thank you, Mr. Solvalu.

Honourable Members, do you have any questions on the Kigali Amendment?

Since there are none, Ms. Seema would you like to proceed to the next item which is the recognition of higher education qualifications. Thank you.

MS. S. CHAND.- Thank you, Mr. Chairman. I will pass it to my colleague, Ms. Nazia Ali, to present on that.

MS. N. ALI.- Thank you, Mr. Chairman, and good morning Honourable Members. I will be presenting on the 2011 Asia Pacific Convention on the Recognition of Higher Education Qualifications, which is more commonly known as the Tokyo Convention.

I believe that the Fiji Higher Education Commission (FHEC) has already presented to the Committee and taken the Committee through the Convention in each Article of the Convention. We do not intend to do that again, however, on 20th January, we received one question in particular from the Committee which was: Why Fiji did not ratify the Lisbon Convention and why do we intend to ratify the Tokyo Convention?

So for the purposes of our presentation this morning, we are going to expound on that question, and also Fiji's obligations under the Convention and its readiness from a legal perspective.

The first question: Why did not Fiji ratify the Lisbon Convention and why do we intend to ratify the Tokyo Convention?

As a way of history and background UNESCO has from a very long time tried to develop a Global Convention on the recognition of higher qualification. However, due to the lack of consensus among State Parties, this actually resulted in regional Conventions. So in total, we have six Regional Conventions on the Recognition of Higher Qualifications and these are for different regions, for example:

1. Latin America and the Caribbean;
2. Mediterranean Region;
3. Arab States;
4. African States;
5. Asia-Pacific; and
6. Lisbon Convention which is the European Region Convention.

The Lisbon Convention is predominantly for the European Region and its purpose is to facilitate the mobility of students and workers among the European countries. The countries that have ratified the Lisbon Convention are mainly the European countries, however, there are some

non-European countries that has ratified the Lisbon Convention, and this includes, Australia and New Zealand.

Why they ratified the Lisbon Convention at that time, the Lisbon Convention actually came into effect in 1979. At that time, there was no Asia-Pacific Regional Convention to govern the mobility of students and workers in Asia and the Pacific. And at that time Australia and New Zealand was ready to ratify this Convention and undertake the obligations in a context of the European region.

Fiji, at that time, was not ready to comply with the obligations under that Convention. Now when Fiji is ready to undertake its obligations, we have a more relevant and appropriate Convention, that is, the Asia-Pacific Convention. So why we intend to ratify the Tokyo Convention is because it is more appropriate and relevant to the Asia-Pacific Region.

Honourable Chairman and Honourable Members, we have prepared documents that we will be referring to in our submissions, and we would like to distribute it to the Honourable Members.

(Documents were distributed to Honourable Members)

Fiji by ratifying the Tokyo Convention will not be losing out on not ratifying to any other regional Conventions because if you look at the preamble of the Tokyo Convention, it actually calls out for the State Parties to engage in active international collaboration at the global level with parties to other UNESCO regional Conventions.

As such, by ratifying the Tokyo Convention, Fiji will automatically affiliate itself with other regional Conventions. So there is no restriction by ratifying the Tokyo Convention to affiliate ourselves with other regional countries. By doing so we automatically will be liaising with other countries and it actually encourages State Parties to the Tokyo Convention to affiliate itself with other regional countries.

We move on to the obligations under the Convention from a legal perspective. Under the Convention, there are particularly three obligations that Fiji has to undertake.

The first one is the Recognition of Higher Qualifications itself. Article 3 for the Convention imposes an obligation on State Parties to recognise qualifications issued by other Parties that need the general requirements for access to respective higher education programmes, unless a substantial difference can be shown. So that is a bottom line obligation. The State Parties have to recognise the higher education qualifications received from other countries, unless a substantial difference can be shown in the standard that we have in Fiji when compared to the standards that is in other countries.

In assessing the substantial difference, that is where Fiji will need to undertake its assessment in accordance with principles and standards that we have domestically. To assess the qualification and application received by Fiji, the State Parties need to have a competent recognition authority. This is already in Fiji, that is, the Fiji Higher Education Commission. They are mandated under the Higher Education (Qualifications) Regulations 2010 to determine the criteria and processes for the assessment of foreign qualifications. So this obligation Fiji has in its



place, we do not need to take undertake any further activities or to develop a separate Unit or an office to undertake this obligation.

The second obligation is the assessment itself. Articles 4 to 7 of the Convention mandates for State Parties to make appropriate arrangements for the assessment and recognition of qualifications that are transparent, coherent, reliable, fair, timely and non-discriminatory. This includes the assessment of partial studies as well. For example, if in Australia or New Zealand, a student has undertaken partial studies and was unable to complete its qualification and makes an application to Fiji to recognise its higher qualification, we have an obligation under the Convention to assess that partial studies and give a recognition, if it meets our criteria.

In 2012, the UNESCO Asia-Pacific Regional Bureau for Education established a technical working group which prepared a toolkit for the recognition of Foreign Higher Education Qualifications, and you can see the toolkit at Annexure I of the document that we had just handed over.

The goal behind the development of this toolkit was to provide a common reference guide for the Asia-Pacific Region in regards to assessing higher education qualification. These are the set of guidelines which is a standard guidelines that the State Parties need to take into account when carrying out the assessment in its own countries.

Fiji has, in its place, what is called the Fiji National Qualifications Framework (FNQF) and it can be seen at Annexure II of that document. The FNQF is mandated under the regulations and the Fiji Higher Education Act, and it creates a platform for different learning pathways and promotes learner mobility by clarifying how qualifications relate to each other within the National Education and Training System. The Framework includes a credit point system, which is used to compare provider qualifications with levels on the Framework for the accreditation of qualifications at the national level. The Framework is managed by the Fiji Qualification Council which is mandated under the regulation and the Act.

The Framework, as we have been informed by the Higher Education Commission, was revised last year, to align itself with the UNESCO toolkit. So, Fiji already has, in its place, a Framework to assess qualifications received by foreign countries. The FHEC has already been doing this where we have been receiving requests from foreigners to assess the qualification and that is the Framework that Fiji utilises to assess the qualifications that we receive in our country.

The third obligation is to establish a National Information Centre (NIC), which is under Article 8 which requires each country to establish a system, a unit or a centre that acts as a single point of contact which is called the National Information Centre, for providing information on qualifications and higher education systems. In 2013 the UNESCO Asia-Pacific Regional Bureau for Education established a technical working group to prepare the guidelines for National Information Centres for the recognition of foreign qualifications in higher education, and we have provided a copy at Annexure III.

The main purpose for the guidelines is to provide clarity to State Parties, that substantial administrative commitment is not necessary to establish and maintain the NIC. It does not require a separate infrastructure or statutory authority. It simply means, having a system in place, a single point of contact to provide information on a State Party's higher education systems.

Under Section 7(1) of the Higher Education Act, the FHEC is mandated to maintain a database of higher education information. The FHEC already maintains a NIC, that collates information about the Higher Education Institutions, the qualifications and the like information.

This can be expanded for the purpose of the Convention in line with the guideline. The guideline also provides for model systems from Australia, New Zealand and other countries, that Fiji can utilise as a guide on what type of information needs to be available on its database when other countries request for information.

The whole point of having a NIC is that, we have readily information available that can be provided timely when other countries or other higher institutions from other countries requests for such information, for the purpose of assessment of higher education qualification.

Under the Convention, Fiji has also obliged to appoint a member of its NIC to the network of National Information Centres established under the proposed Convention. So, each State Party will have to develop a NIC and there will be a point of contact person, who will liaise with each other to develop a database that will be for all regional parties and all the information will be deposited in that database.

For implementation purposes, Fiji does not need to enact any new legislation to implement this Convention domestically. There is no need to amend the existing legislations, there is no possible financial cost to Fiji of compliance with the Convention obligations, as there is nothing new that Fiji will need to perform that they are not already undertaking. So Fiji is ready at this stage to ratify the Convention. There is no legal implication and there is no extra financial implication on Fiji by doing so.

That is all from our Office, unless the Honourable Members have any further questions.

MR. CHAIRMAN.- Thank you, Madam, for that very comprehensive elaboration on the subject matter.

Honourable Members, do you have any questions on the subject matter right now that is before us?

Since there is none, Seema we go straight into the third and final subject, which is the Convention on the Manipulation of Sports. Thank you.

MS. S. CHAND.- Thank you, Mr. Chairman and Honourable Members. I understand that the Ministry of Youth and Sports made a presentation last week, so I wish to support their presentation and everything that they have furnished you in terms of their PowerPoint slides and any other written notes. So what I will do is, I will focus again on the legal aspects of the Convention, so not to go into things that the Ministry had already talked about.

I think one of the things that is really important to mention from the outset is, that the Convention is the only international legally binding Instrument that helps address manipulation in sports and provides a legal basis and framework for co-operation in this field between various other

public authorities and private entities. It also provides structured mechanisms for the co-operation and for the co-ordination of actions within the framework of the Convention.

As outlined in Article 1 of the Convention, the purpose of the Convention is to combat the manipulation of sports competitions, in order to protect the integrity of sports and sports ethics. The objectives of which are to:

- prevent, detect and sanction national or transnational manipulation of national and international sports competitions;
- promote national and international co-operation against the manipulation of sports competitions between public authority is concerned; as well as
- organisations involved in sports and sports betting.

The Convention is guided by the principles of human rights legality, proportionality and the protection of private life and personal data, and these are all outlined in Article 2 of the Convention.

I will refer to some of the questions from the Standing Committee.

**What is the status or the implications of Fiji ratifying this Convention, when Fiji is not a member of the European Union (EU)?**

Honourable Members, there is no legal impediment with respect to ratification of the Convention, even though, we are not member of the European Union. The Convention essentially is a set of rules and procedures with respect to international best practice and standards in sports, and is open for countries to ratify on the invitation of the European Council.

I would just like to make a distinction between the European Council and the EU at this point. Unlike the EU, the Council does not make binding rule, but has powers to, therefore, select international agreements reached by European States in a range of topics. The best known body of the Council of Europe is the European Court of Human Rights, which enforces the European Convention on human rights.

The Council of Europe is an international organisation, whose purpose is to uphold human rights democracy and the rule of law in Europe and has 47 Member States. The Council works mainly through Conventions by drafting Conventions or international Treaties.

Common legal standards are set for each Member State, however, there are several Conventions that have also been opened up for signature to Non-Member States. Some of these are the:

- Convention on Cyber Crime;
- Lisbon Convention;
- Anti-Doping Convention; and
- Convention on the Conservation of European Wildlife and Natural Habitats.

So, these are some of the Conventions that via invitation, they have extended it to other countries that are not part of Europe. That is why with respect to Fiji, there really is no impediment for us to sign. If anything that we should sign up to it, given the practices and standards that are set out in the Convention.

**With respect to laws that would need amendment, should we ratify the Convention and what are the existing laws that regulated betting, et cetera?**

I would like to submit that, with respect to this Convention, of course, like any other Convention, we will have to do a thorough gap analysis to see where we are falling short and whether or not we need to make amendments to our current legislations, or whether we need to enact a standalone legislation, to give effect to various Articles of the Convention. This is something that we may need to look at.

However, the best thing about the Convention is, it promotes collaboration. Article 7 of the Convention, if you have a look through Article 7 on sports organisations and competition organisations, it basically is between the State and the private organisations. The State encourages these sports organisations to have their own internal procedures, internal policies in place, whether it is in respect to anti-doping or any, sort of, other manipulation in data what have you, to have those procedures in place.

When we sign up to the Convention, it is essentially the State encouraging these organisations and other groups to have rules and procedures within your organisation, that comply with the Articles of the Convention, given that Fiji is a party to the Convention, should we ratify it. So, essentially that is what the overarching legal framework looks like.

With respect to which sports are covered in the Convention, under the definition section of the Convention, sports competition is defined and it is encompassing of all sports. Unless the Committee has further questions, I will stop there.

MR. CHAIRMAN.- Thank you, Seema, for that very informative brief. Honourable Members, any other questions?

HON. A. JALE.- A point about traditional sports, like *veitau waqa ni viti*, and certain other sports and I am sure it is really competition, do you see that we need to include that in the scope of the Convention if we ratify that?

MS. S. CHAND.- The Convention is clear. I will just read out the definition of sports competition, so should it fall within that definition, then it will have to adhere to international standard. But, sports competition essentially means, as defined by the Convention, any sport organised in accordance with the rules set by a sports organisation listed by the Convention and recognised by an international sports organisation or where appropriate, another competent sports organisation. I hope that answers your question, Honourable Member.

MR. CHAIRMAN.- Thank you again, Ms. Seema.

We have heard from other stakeholders, like the FHEC but, yes, we now appreciate the fact that we know the legality of these Conventions and Amendments. We thank you for that.

If there are no further questions from Honourable Members, if I may request if we do have any other pressing questions in the time that we putting our report together to present to Parliament, if you would oblige and it will come through Jacob.

With those few words, I thank you once again, Seema, David and the team. If there is any parting comments, the floor is yours, Madam.

MS. S. CHAND.- On behalf of our team, Mr. Chairman and Honourable Members, thank you so very much for giving us the opportunity. We remain on standby, should you require any further information or clarification from our Office, and we will furnish the relevant documents and our answers to the Secretariat. *Vinaka*.

The Committee adjourned at 11.39 a.m.

Tuesday, 21st January, 2020

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# **[VERBATIM REPORT]**

## **STANDING COMMITTEE ON FOREIGN AFFAIRS AND DEFENCE**

### **TREATY**

**Kigali Amendment to the Montreal Protocol on Substances  
that Deplete the Ozone Layer**

**SUBMITTEE:**      **Mr. Kevin Ching, Director, Foreign  
Appliance  
Mr. Seru Ramakita**

**VENUE:**            **Lautoka City Council Chambers,  
Lautoka.**

**DATE:**             **Friday,      31st      January,      2020**

**VERBATIM NOTES OF THE MEETING OF THE STANDING COMMITTEE ON  
FOREIGN AFFAIRS AND DEFENCE COMMITTEE HELD IN THE LAUTOKA CITY  
COUNCIL CHAMBERS, LAUTOKA, ON FRIDAY, 31ST JANUARY, 2020 AT 10.31 A.M.**

**In Attendance:**

Hon. Alexander D. O'Connor	-	Chairman
Hon. Selai Adimaitoga	-	Member
Hon. Anare Jale	-	Member
Hon. Lenora S. Qereqeretabua	-	Member

**Submittee:**

- |    |                   |   |                             |
|----|-------------------|---|-----------------------------|
| 1. | Mr. Kevin Ching   | - | Director, Foreign Appliance |
| 2. | Mr. Seru Ramakita | - | Private sector              |

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MR. CHAIRPERSON.- Honourable Members, we have before us Mr. Kevin Ching, the Director of Foreign Appliance and Mr. Seru Ramakita, also from the private sector, who I understand are here to submit on the Kigali Amendment so far the refrigerants affecting the ozone layer.

(Introduction of Honourable Members by the Chairman)

With those few words, Mr. Ching, a very brief introduction of your good selves and Mr. Seru, and then you can start with your submission. Thank you.

MR. K. CHING.- Good morning, Mr. Chairman and Honourable Members. Thank you for the invitation and this is the first time I am doing something like this. I am the Director of Foreign Appliance which involves a lot of cooling and refrigeration. I am honoured to be here today and I have been in the field for over 25 years.

MR. S. RAMAKITA.- Thank you, Mr. Chairman, for the kind words of welcome. My name is Seru and I have spent 15 years of my trade in Fiji's biggest hotels and I joined the Government for 17 years and I just retired in 2018.

The Montreal Protocol is the best environment document signed under the sun. I have been one of the champions in the implementation of this Protocol on the ground in Fiji. After I retired, I heard that the meeting will be held here today, so I came from my farm to be here to maintain the consistency of the implementation of this Protocol in Fiji. *Vinaka*.

CHAIRMAN.- You may start with your submission, Mr. Ching.

MR. K. CHING.- What I face in the industry is the constant change in trying to adopt the best refrigerant for our daily needs at the same time, we are trying to save the ozone layer and reduce global warming potentials. But with the high cost of daily living, the refrigerants that are coming now and we are adapting to new refrigerants which are quite expensive, compared to the old refrigerants. For example, for an air-conditioning system, we can repair once or twice but it is rather we buy a new unit than to repair. If the Government could reduce concession or maybe just some supplementary to the new imports on energy and global warming ratifications. Thank you.

MR. CHAIRMAN.- Is that all you want to comment on Mr. Ching?

MR. K. CHING.- Yes.

MR. CHAIRMAN.- Mr. Seru, would you like to comment more on the refrigerants that affect the ozone layer, as we speak, and its carbon footprints?

MR. SERU.- Yes, Mr. Chairman. Today is Friday and it is the 31st day, the last day of the month, most of in the private sector are busy doing their pays, et cetera. With my background, I think I can in one or two or some ways present something collectively for the benefits industry for Fiji. Can you allow me Mr. Chairman, to just enlighten us on brief overview of the Montreal Protocol? Thank you.

In 1974, there was a scientist in university of California, his name was Dr. Frank Sherwood. He predicted that man-made chlorofluorocarbons (CFC) manufactured by man in the 1920s and 1930s in the early centuries will rise up to the upper atmosphere or stratosphere and it will deplete the ozone layer. With his friend Mario Molina, they went further to say that once the ozone layer will be depleted, it will be catastrophic to mankind because of the impact of the ultraviolet radiation. There are three ultraviolet radiation - A, B and C. While ultraviolet A and C are not harmful, it is ultraviolet B that it will cause eye cataract, skin cancer and decrease in crop yields. That was in 1974 and the scientists went to do other discoveries.

In later 1978, the US banned aerosols because it contain CFCs. CFCs is 100 percent Ozone Depleting Potential (ODP). In 1985, may be because the US had plenty allies after the First World War, they went to Vienna, Austria, and signed the agreement called Vienna Convention on the Protection of Ozone Layer, and the numbers built up.

In 1987, they went cross to Canada. Over 20 countries ratified the best environment document signed under sun, the Montreal Protocol on Substances that Deplete Ozone Layer in Canada.

Then the number of interested parties then grew on from there and the ODSs, that was in 1987 that was done in Canada. In 1989, I always mention this in my training programmes and seminars, we thank the Fiji Government at that time for ratifying the Montreal Protocol. Fiji adopted the Montreal Protocol because trade bans can happen, et cetera.

In 1989, we ratified both, the Vienna Convention and the Montreal Protocol, and the interest grew in Fiji. I was working in the Shangri-La Fijian Resort and was also part of the training for CFC accreditation by TAFE Australia and was sent by the company to attend the training because of its technological adaptation. Later, interested parties grew and grew and grew in Fiji.

In 2001 when I was recruited into the programme to do training in Good Practices in Refrigeration (GPR) for the industries in Fiji from 2001 to 2008, I trained more than 1,000 people. GPR is basically what technicians are to do and not to do, to avoid the unnecessary release of those gases to the environment. The drive at that time was more on CFCs because of its 100 percent ODP.

In Fiji, the phase out year was 2003 but under the Montreal Protocol it was 2010. Fiji was one of the countries that phased out CFCs in 2003 and we had the award for that.



The implementation programme in Fiji has been very, very effective. There was awareness also going on for the schools. Then I requested our project officer back then not to focus too much on the children because it will make them afraid but reasonable information to go through the Curriculum Development Unit which we have done. During that time, students in class 6 would not have known the ozone layer but 10 years later, everyone will know about the ozone layer.

So, that work was done from that time and we focused more on the end users of these gases because they are the people who are releasing these gases to the sky. It is the refrigeration and air-conditioning sector. In the Fijian Hotel where I was working, I am proud to say that I was the first one to do the recovery and re-use of these gases in the systems in the Hotel.

The biggest challenge we now have is the Montreal Protocol. It has its amendments like the Beijing Amendment, et cetera, but now we are coming to the Kigali Amendment. The Kigali Amendment is to include HFCs just because of its global warming potentials. It is a non-ozone depleting substances so there is a big catch here. So, my first recommendation for Fiji is not to make a new law for the Kigali Amendment but just to amend the wordings.

In the Amendment before, it was Ozone Depleting Substances Act No. 26 of 1998. There are some companies in the past five years which I have proactively advised them to put their sign board as, "Ozone Depleting and Control Substances" anticipating this technological adaptation and the changes in the refrigerants which we will need to regulate.

So, the first recommendation from my part and from my experience and my association with the industries is, for the wordings just to include Ozone Depleting and Control Substances 2020, et cetera.

Just for the record during the past decade of technological adaptations, there are guidelines under the Montreal Protocol also. The technological adaptation for efficacy trials to be done, to be proven that it is really working and the backup service for changes, it is not that easy and cannot be changed overnight. There is a theme used by the West Refrigeration Association as their motor rather, it is "slowly but surely". In Nadroga we say, "*vahewa me rewā*" so we trade surely.

To adopt these changes, I especially request from my experience and expertise and in the Association I have done plenty consultations, also it is under the ODS Act for thorough consultations and I appreciate the Committee from the august House who are here today.

Under Section 13 of the ODS Act, National Policy for the protection of the ozone layer, and I quote:

- "13(1) The Minister must formulate a National Policy for the Protection of the Ozone Layer and ensure that the formulation of the National Policy is undertaken through the broadest possible consultation and participation.
- (2) The National Policy must take into account the ecological, economic, social and cultural realities and contain -
  - (a) an analysis of future demand for any controlled substance;
  - (b) an evaluation of options concerning the phasing-out of any controlled substance;
  - (c) an estimation of incremental costs for the phase-out of any controlled substance;

- (d) the target year for phasing out of the consumption of any controlled substance;
- (e) a strategy containing mechanisms, Programmes and initiatives that are to be implemented to give effect to the National Policy which shall provide for the following -
  - (i) the promotion of economic incentives;
  - (ii) the establishment of public awareness programmes;
  - (iii) the establishment of a training programme on the recycling and reduction of any controlled substance;”

While we are there and this past decade through our own initiative requested UNAM for funding to get the training in FIT for this technological adaptation. I think all of us or most of you will understand now the refrigerators which we use to have at our homes in the 1980s and 1990s contain R12. The R12 is CFC and now they are no longer, 20 years, all were R134A. R134A is the refrigerant that is also used for the cooler in the vehicles and now through the past decade it came silent because of the push from the technical adaptation, the global market.

Hydrocarbon is flooding the market already. The fridge that we have in our homes now where we buy from these wholesalers contain R600. It is hydrocarbon itself, it is a flammable gas, because of the spirit of the Montreal Protocol is embedded in Article 5(8) of the Montreal Protocol and also Section 13 of the ODS Act, making the policy economical, social and ecological and realities to be taken into consideration.

The changes in all these years, we work hard to get the training programmes for our institutions for these past decade we have had Training the Trainers approach programme with FIT, while we conduct the Good Practices on Refrigeration (GPR). From 2004 until now and because of this flammability and special skills to change these refrigerants, we have issued different certificate to certify those people.

Only those people with certificates, are licensed to carryout changes in the domestic refrigerants as and when they are repaired. R600 is Hydrocarbon, it is Non-ODS and now, what we have been regulating is R22 or HCFCs which will be totally phased out or there will be a total stop in import in 2030.

With the baseline and tail of 2.5 percent to 2040 and while these changes are here, R22 is one of the best refrigerants around and I want to be honest in also advocating for the importers back in 2000 and 1989 for the Fiji importers to import as much as they can R22 because R22 is only 5.5 ODP, so it is nearly 20 times lower in CFCs. I advocate that for the industries to get as much R22 as they can because the baseline will be set in 2010. That was the strategy to also furnish and facilitate the demands which we were anticipating for our region in the Pacific.

During the mitigation in the past decade in Vanuatu and some other countries, Solomon Islands was a bit too ambitious in reducing the consumption baseline level. Then they learned to be realistic on the ground.

In Fiji, it was a strategic move also for us because we are going into the future. We know all the vessels in the Pacific will come to Fiji and stop at the port, pay their duties, go to nightclubs, markets, buy gases and Fiji will benefit more because of that strategic move because HFCs is only 5.5 percent ODP and the phase out schedule for Fiji is always ahead. So, we are proud to say that

Fiji has phased out CFCs, seven years too early. HCFCs will be phased down but we in the industry still feel that R22 is still the best refrigerants around.

When we go and inspect fishing vessels, and we detained 197 vessels only in one year with Customs at the wharf, when we asked the Vietnamese engineers, they do not know English and they only say, “free on number one” because R22 is the lifeblood of fishing vessels.

The fishing industry is really struggling right now because of the cost of operations, et cetera. That is why I am saying it is the best environmental document on earth and this is one of the best Acts in Fiji, to furnish the Montreal Protocol requirements. We have to give it time and be flexible on those changes, otherwise when you go too fast, too early, but it is good to be ambitious.

I always mention in my ministry that to be too ambitious, there are plenty risks there because of the accumulated cost. I think Honourable Qereqeretabua will agree or maybe this is the first time she is hearing this, there was a unit I attended to in the Shangri-La Fijian Resort and it was a three-door freezer back in the 1990s. After I could not repair it, I told our supervisor to consult with the system manufacturer. He never did that and he brought two companies and I am willing to mention their names - Sigatoka Electric and J. Kevi Refrigeration from Nadi, but they could not repair it.

Then he came back to what I said earlier, he contacted the system manufacturer and the system manufacturer advised that, that was one of those 16 or 17 units that came out of the factory. The first one to be manufacturing technical changes and we need to connect the power factor into the system to make it work. By that time plenty repairs had been done and it was condemned write-off.

So, through those experiences I am trying to advise Fiji, we are the champions on the Montreal Protocol implementation. Just because of the Kyoto Protocol and the UNFCCC piggybacking on the Montreal Protocol, we have to be cautious and it will come at a cost for Fiji in terms of this technological adaptation.

There are guidelines already there, as I had already mentioned. The costs and the availability of the spare parts, et cetera, I request the Committee to take into consideration the request from the industries and that is, for the duty concessions on refrigerants that are ozone, environmental and global warming friendly that will have to phase out is R134A.

R134A is HFC but it is currently the best refrigerant right now in Fiji. Back in 2011 on page 11 of the *Fiji Times*, I was in the paper, we were detecting one R134A that was contaminated in Fiji with the detector that we have in the office. One company director called me after returning from New Zealand to come with my identification kit, that he had a problem where he had burnt 10 compressors by shipment. He said that while he was in Australia, they were calling him that he had burnt 10 compressors. Can we just test one of these cylinders? I am suspecting the cylinder is wrong, something must be wrong with the gas. Then we went to check and found that it was contaminated.

Then without raising an alarm, the team visited all the importers and did a random test on all their refrigerants and we managed to pick out the outlet or the importer. Then he was served with a notice. We really feel for the importer because he was honest, he was not aware that it was contaminated up until that incident happened at Lincon Refrigeration back in 2011 after burning 10 compressors.

So, those are the incremental costs. The problems that can happen, you should be worrying about. Based on precautionary principle, it is always good and costless to be on the preventative mode rather than to go on the damage control. It is too much cost. It is a waste of time, energy and money for Fiji.

I think because Fiji has the political will, we are speaking out about global warming issues and the “what”, “why”, I have been explaining about the Montreal Protocol and why we need to change, but the “how” issues need to be taken seriously.

Before the ODS Act the Sustainable Development Goal Bill was passed in Parliament and was named the SDG Bill and Honourable Anare Jale will understand. The Ozone Act was part of the Sustainable Development Goal Bill but it was extracted to be formed as an Act on its own because in 1989, we were running out of time and we have to enact a law to safeguard this, while the Environment Sustainable Development Bill stalled and was passed later in Parliament in 2005 to become the Environment Impact Assessment from the Bill to be an Act.

So, those are the current challenges facing Fiji and after working in the Ministry, at the Department and from my experience and expertise, the equipment and system is a cumbersome activity.

Through my initiative also, we have formed Refrigeration and Air Conditioning Associations in Fiji. From Sigatoka to Rakiraki, it is called the West Refrigeration Association, Suva Central is another Association and Labasa, there is the North Association. Later we realised the problem, then we broke the Association down to Sigatoka Coral Coast Association, Lautoka to Rakiraki Association, to make it cheaper for the industry to travel because one meeting is half a day. Meeting in Lautoka or Sigatoka, the people from Rakiraki can attend which costs a lot of money. While we use our fund for our reach-out initiative to go out there and speak to them in Sigatoka, share the message or any amendments to the law or any consultation, we take it to Sigatoka, it is easy it and costs less for them to attend in numbers, and so as in Nadi and Lautoka. So, those are the strategies also we have implemented on the ground.

Again, on record, we have been the champion of the Montreal Protocol implementation in Fiji. This Kigali issue about global warming is UNFCCC from the Kyoto Protocol and to be honest, for these changes to be supervised and monitored properly, we will need to form something like the Consultative Committee on Ozone Depleting Substances, like in the 1980s.

A wider consultation of the industries and institutions prior to the Ozone Depleting Substances Act No. 26 of 1998. Preparatory work for the Kigali Agreement is already on the ground for Fiji and thank you very much for that. A special request and approach, it is a must and I feel that a steering committee needs to be formed in Fiji to oversee this transition on the technological adaption properly, to assist the Government in getting things in its right place, to oversee any problems, as I was sharing, and not to happen again in Fiji, like the R22 that was not detected from those burnt compressors from a commercial company. I was doing a presentation at the Customs Office and I told them, “Your chiller is R134A. If it was not detected, Fiji would have gone into damage control worth millions of dollars.” Thank you very much.

MR. CHAIRMAN.- Thank you, Mr. Ramakita, for your very, very comprehensive report and I can assure you that certainly, we have not heard much of the practical aspects and experiences that you have mentioned from the Ministry and the Department in the submissions that have come to us. Thank you once again and certainly some or perhaps all those recommendations will surely go into our final Report. To you, Mr Ching, also thank you for your submission.

Honourable Members do you have any questions for the submitters?

HON. L.S. QEREQERETABUA.- Thank you, Mr. Chairman. Thank you so much for that amazing presentation. *Vinaka saka vakalevu*, Sir. I just wanted to ask, with both your experiences, what would you recommend upon ratification? What would you recommend to the Committee, Government and Parliament about keeping an eye on the risks of counterfeit gases being used by, I do not know? Could counterfeit gases come into the country not as part of units but just part of gases that we import?

MR. S. RAMAKITA.- I think I have mentioned a bit of it already. That detection that we did in 2011 was the suspicious of the trained refrigeration and air conditioning engineer and this thing can happen with people doing vehicles, et cetera. To answer the question, Mr. Chairman, I think a steering committee needs to be formed to oversee these changes which I feel I have to be the Co-Chair. Thank you very much.

MR. CHAIRMAN.- Thank you, Mr. Ramakita, we will keep that in mind certainly. Honourable Anare Jale?

HON. A. JALE.-Thank you, Mr. Ching and Mr. Ramakita, thank you very much. I think I am very proud of you today being a person that was involved in the field of occupational health and safety and looking after the running of the public service in Fiji. I think you have a lot of information and experience with you that may be of help to the Government. I am not too sure where you worked before you retired from Government but I assume it could be Department of Environment.

I would like to clarify a few things with you which came out in your presentation. I certainly agree with you on the issue of consultative committee and I think the Government needs to look at how the Government and stakeholders out there can come together and discuss and decide on policy matters affecting ozone issue for Fiji in terms of our requirement under the Montreal Protocol and Kigali Amendment.

You talked about R22 and you said that it might be the ideal refrigerant to be the replacement to the ones that we are using now. If you can just clarify that and I also feel it is most important for you if you can try to put down in writing some of your thoughts because it should factor in the Report that we are putting into Parliament - something coming from someone who understands the issues quite well.

Do not ever think that we, Parliamentarians, know a lot, no we do not. So, your guidance and something in writing for them to read, it could be very useful. It pushes through some of your thoughts on what Fiji needs to consider and do in terms of what it plans to do in ratifying the Kigali Amendment. I think you commented on R22 just give us more on that.

MR. S. RAMAKITA.- Thank you very much, Honourable Jale. Mr. Chairman, thank you for giving me that opportunity again.

R22 is still the best refrigerant in the world, just to put in simple terms. It is the one that is in our air conditioning refrigerant right now, if there is no other refrigerant. So, it is one of the best coolant. It is cost effective, easy to work with, pressure dimensions and their technical aspects. The system is already in existence.

However, as I mentioned, R22 is ODS and it will eventually phase out. But we promote a bit delay into rushing into and to be seen to be too ambitious into phasing out, we advise the importers to import as much as they can, to safeguard Fiji because the cost of living is going up and the cost of refrigerated items in supermarkets is going up because of the operational cost and the bills to pay the refrigeration and air-conditioning companies is so much also. The fishing sector has been crying for long now because of the cost of operations and most of these operations are refrigeration units which are running on R22 and cost less.

Again, FRCS raised 5 percent duty in the past few years to 22 percent. So, the duty concession is what I am asking or requesting for these new refrigerants to come, to be applied duty concession. R22 is ODS and it has to be phased out in 2030 and the scientists are still working on manufacturing a new system to invent new refrigerants. The hydrocarbon which is a bit on the market is only in domestic refrigerators.

In 2016, there was a meeting at the GPH attended by the Pacific Island Countries. For the past 12 years of this meeting, Fiji has facilitated, I think, four times. They like coming to Fiji because they learn a lot too from Fiji.

In 2016, three other networks came to Fiji, namely; Pacific Island Countries, South East Asia Pacific and the Asia Pacific, and I was part of the panel of discussions. I was selected, one from UNEP, one guy from Australia and I represented Fiji. Plenty challenges came and they were displaying some new refrigerants and I prepared my speech, it was a three-page speech because of the technological adaptation, we have to be cautious about.

It is good to have big refrigeration and air-conditioning companies adopt or have contractual basis with the suppliers, for example, Mechanical Services, AquaHeat, Lincon Refrigeration. At that time Mechanical Services was displaying their units which will be a new R32 refrigerant. So, they have yet to implement it on the ground. I was coming up with ideas for efficacy trials.

Now, that they are contracted to the Government, they should put it in one of the big Government facility to be monitored on how effective it is. There are parameters to be assessed in the technical areas in the refrigeration field and those are the precautionary measures to be in place. That is why I feel the steering committee (before it was the Consultative Committee on ODS) should oversee these changes and the transition to be smooth, and to give recommendations and reports on the way for Fiji to be guided because right now, the scientists are still working on the manufacturing of new systems. We do not know, maybe another package of first new 16 coming into Fiji because we are a bit too ambitious in the changes. *Vinaka*.

HON. A. JALE.- Mr. Chairman, the question of ammonia, we have been told about ammonia that have been used in some refrigeration systems. Can you say whether that could be a supplement to what we have discussed?

MR. S. RAMAKITA.- Yes, ammonia is a very, very good refrigerant and only a handful of specialised skilled engineers on the ground in Fiji who handle that. It was also one of the main refrigerants for PAFCO in Levuka. It has some smelling effects and hazards but only to be maintained properly. I was pushing for FIT to get the training on ammonia for refrigeration technicians because it is a special craft on its own from the normal refrigerant because of the hazards and risks in handling ammonia.

MR. CHAIRMAN.- Its flammability.

MR. S. RAMAKITA.- Flammability, yes.

MR. CHAIRMAN.- Thank you, Mr. Ramakita. Just an idea along with that question, a lot of the fishing boats in the 1960s and 1970s did have ammonia and I had mentioned this before. If you recall, Mr. Ramakita, there was a big explosion on the Government Wharf in Suva where one of the ammonia cylinders exploded. That is how volatile ammonia is, but it is one of the best refrigerants. They use it on real bulk-ware.

MR. S. RAMAKITA.- Because of its availability, I strongly feel that, yes, instead of getting it obsolete because there are less tradespeople now, you should encourage the institution also to give or facilitate special training on ammonia, or having it inbuilt in the current refrigeration, air-condition craft apprentice trade, et cetera.

MR. CHAIRMAN.- Thank you, Mr. Ramakita. What are your thoughts with regards to the refrigerants in the thousands of cars that are sitting out there in the wilderness, unserviceable vehicles that are in the junk yards? They do have the free-ons or R12 still within them.

MR. S. RAMAKITA.- Thank you, Mr. Chairman. I think I have to enlighten the Committee also on that area.

The Department signed the MOU with FRCS in 2003 and the vehicles were detained after we have been training Customs. After training of over 80 Customs Officers in Fiji, one of the inspection teams that was checking the vehicles at the Suva Wharf saw an R12 sticker in a secondhand vehicle and because they have been trained on the awareness, they detained the vehicles. Over 80 vehicles was detained in Fiji at that time in both, Lautoka Wharf and Suva Wharf because they had CFCs or R12. It was a big issue in Fiji.

I want to be honest with myself, there were lawyers coming into the Ministry, knocking on the doors of our PS and the Director because of the held back of their vehicles at the wharf. I was called in by our Director and PS. They asked me as to what other mechanisms or technical aspects to solve the problem and I replied and said, "Sir, by law, as of 1st July, 1998, no vehicles with CFCs are to be in Fiji so that means we have to take them to court. They asked again as to any other technical way to do that, I said, "Sir, the next one is to ship it back at the importer and the exporter's cost." That has become the norm now after so many consultations with us and the Department of Energy is using that clause now.

What is the more better way to do it? They really pushed me to the corner because I am a technical person, and I said, "Sir, the best way to do it technically and practically, the bread and butter issue and the socio-economical guideline of the Montreal Protocol is to recover the gas at the wharf which is the point of entry. Recover the gas in the cylinders, retrofit, change it to R134A because the vehicles are so durable, the metals are durable and the cost is cheap. Any lite-ace that contains R12, any door broken, these companies can remove the door, put it out and put it again for \$80. That was in 2003 and that was the cost of changing the doors. That approach was then put into practice and agreed. So, only licensed technicians do it under our supervision with only licence.

The licensing system just started from 2001 so only licensed technicians do it because that becomes their economic incentive under the Montreal Protocol and it is in the ODS Act and becomes the incentive for them. So, the first few 50 who got the licence, the recovery machine and the recovery cylinders we got it from the office and assisted them to get rid of it. Mr. Chairman, I

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was a trainer too at Shangri-La Fijian Hotel during my time and I was trained on the Shangri-La care, that is service beyond customers' expectations. So, I took that approach to the Government and applied it there for Fiji. Thank you.

MR. CHAIRMAN.- Thank you, Mr. Ramakita. Those are the vehicles that coming into Fiji. What I asked was the vehicles that are sitting outside in the junk yards that is beyond used, are never going to be used. They are in the junkyards but they have got gases still in those air-conditioning systems.

MR. S. RAMAKITA.- Thank you, Sir. The idea of recovering those gases was for the vehicles to be, at least, environment friendly in terms of depleting the ozone layer while going out, but again it is solid waste issue on its own. The gas might be very minimal in practical or engineering sense, but the big issue now is the solid waste. This is one of my lines too when I conduct seminars, I want to share it also with you, that Fiji is just a dot in the ocean. If we release all these ODSs into the sky overnight, it will not heal the ozone layer overnight. So, I can share it also with you, if you release all these HFCs, it will not patch the global warming effect overnight.

Bigger countries also, like Brazil, Argentina, India, China, USA, ought to be aware. I always say in the seminars I attend, the US banned the aerosol sprays in 1978 because they were afraid of ozone depleting issues because it will eat away their skin. But on climate change issues, they are sitting at the back seat because if there is a climate heat, they can run to their offices and in the comfort of the air-conditioning in their homes. Thank you, Sir.

MR. CHAIRMAN.- Thank you, Mr. Ramakita.

Honourable Members, we have no other questions, so Mr. Ramakita and Mr. Ching, thank you very, very much for your contribution this morning. We thank you most sincerely for coming forward and submitting to us. If you have any other departing comments, gentlemen, you may do so.

MR. S. RAMAKITA.- Mr. Chairman, when we conduct consultations, we want to make the atmosphere semi-formal for people to express themselves freely. On a lighter note, I just want to share that my friend is not from China, he was born in Fiji so we should not be afraid of the virus.

(Laughter)

MR. K. CHING.- Thank you very much, Mr. Chairman and Honourable Members.

The Committee adjourned at 11.40 a.m.