



NEXUS

The Newsletter of the Sustainable Development & Environment Section of the Ministry of Physical Development and the Environment, St. Lucia

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OZONE LAYER PROTECTION COULD PROTECT OUR CLIMATE, SAVE ENERGY AND KEEP MORE MONEY IN OUR POCKETS

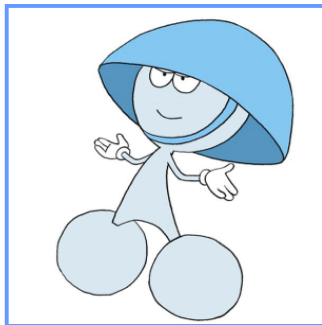
It is over ten years since we have been hearing about the ozone layer and what we must do to preserve it. Some of us have even gotten bored with the usual messages of; "wear sun screen", " No matter what we feel about these messages ozone depletion is a reality and the need for its healing is imperative.

The Montreal Protocol on Substances that Deplete the Ozone Layer is a multilateral environmental agreement, which seeks to phase out the use of ozone depleting substances (ODS) in an effort to protect the stratospheric ozone layer. Saint Lucia has been a party to the convention since 1994 and has been doing its part to phase out the use of ODSs.

Recently it has been discovered that a number of refrigerants, including those being phased out by the Montreal Protocol and those identified as ozone friendly, have a high global warming potential (GWP). Chlorofluorocarbons (CFCs,) which have a phase out date of 2010, have a GWP ranging from 4,680 to 10,720. Hydrochlorofluorocarbons (HCFCs) which originally had a phase out date of 2045, have a GWP ranging from 76 to 2,270. When we consider carbon dioxide (CO₂) has a GWP of 1 we can have a greater appreciation for the impact that these refrigerants have on our climate. The common alternative for these ODS is hydrofluorocarbons (HFC). However HFC has a GWP ranging from 122 to

14,310 and therefore their use continues to be a challenge for the refrigeration and air conditioning (RAC) sector.

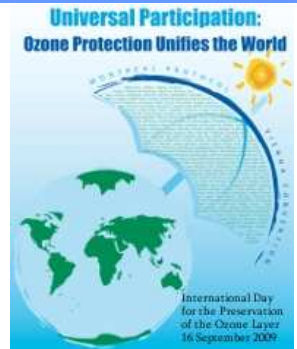
In 2007 Parties took a decision to accelerate the phase out of HCFCs, to 2030 rather than 2045. In their efforts to protect the ozone layer, Parties also



took a decision to consider other benefits such as climate protection and energy efficiency. Hydrocarbons (HC) are an alternative refrigerant that protect the ozone layer with other environmental benefits. HCs are not global warming and therefore do

not contribute to climate change. Equipment which use HCs require less energy to operate thus leading to energy efficiency and cost savings.

In 2006, the Ministry of Physical Development and the Environment, undertook an experiment to determine the energy efficiency between HCs and alternative refrigerants. A pick-up truck and an air conditioner were retrofitted from HFC to HC .Over a period of 3 months, the electricity bill for the office using the air conditioner dropped by 15% There was improvement in the fuel consumption for the pick-up truck and the owners experienced greater power when climbing hills with a full load. Over time, the cost savings can be tremendous with the added confidence that the owners were not contributing negatively to climate change and ozone layer depletion.



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FROM THE EDITOR

Saint Lucia continues to play its part in the global effort to phase out the use of ozone-depleting substances (ODSs). To this end, the country has attempted to implement the Montreal Protocol to the Vienna Convention on Substances that Deplete the Ozone layer to the fullest possible extent.

As has been the case for several years, Saint Lucia remains ahead of schedule in its ODS phase-out drive and has been used as an example, and model, both within and beyond the Caribbean.

On 16th September, Saint Lucia joined the rest of the world in observing World Ozone Day. The day's events were a great success, not least because of the fact that there was broad-based participation from schools, the private sector and the government service.

In addition to action on protecting the Ozone Layer, steps are being taken in other areas that will ultimately benefit the global climate system, and Saint Lucia's environment. In this issue, you will read about efforts to: promote the use of energy-efficient devices; project the investment flows required to address climate change; address issues related to recreational water quality and increase

THE MONTREAL PROTOCOL MOVES TO THE NEXT PHASE

By the end of this year Parties to the Montreal Protocol would have successfully phased out the use of approximately 2 million tonnes of Chlorofluorocarbons (CFCs), the first set of ozone depleting substances targeted for elimination. The successes of the Protocol is measured not only by the fact that it is the only international treaty to which all countries are Parties, but also by the level of solidarity and cooperation displayed by all Parties to meet the goals of the agreement. The phase out of CFCs is projected to result in the healing of the ozone hole in the coming years.

The phasing out the use of CFCs also has climate benefits. Two million tonnes of CFCs have a global warming potential equivalent to 20 billion tonnes of Carbon Dioxide. When this is considered against the Kyoto Protocol and the Clean Development Mechanism, which taken together are expected to reduce CO₂ emissions by 6.5 billion tonnes by 2012, it becomes clear that the Montreal Protocol has had considerable impacts on both the ozone and climate global agendas.

SAINT LUCIA'S OZONE SONG

Verse one

I'll tell you something You need to know
It is most vital for life tomorrow
If we all know What life is worth
We must unite to protect planet earth
Up in the sky though we cant see it
Ozone layer protects the earth beneath
Sheltering us from ultraviolet rays
Makes it possible for life today

Bridge

But there is a hole in the ozone layer.
If we don't stop it, its going to get larger.
These UV rays going to come down like fire.
Harming life on earth and in the water.

Chorus

Come on let us save it, the ozone layer
Lets all protect it, the ozone layer
Stop the CFCs, save the ozone layer
Stop the HFCs, save the ozone layer.

awareness of the threats posed by alien invasive species. Enjoy!

Encouraged by their successes, Parties to the Protocol have agreed to accelerate the phase out of the next group of ozone depleting substances – hydrochlorofluorocarbons, or HCFCs. These chemicals are due to be phased out by 2040 and in addition to marking the near complete phase out of the main ODSs known at this time, as additional 16 billion tonnes of CO₂ equivalent would have been phased out as well, thereby contributing further to climate change mitigation.

The first set of control measures for HCFC phase out involves a freeze in consumption levels from 2013 and a 10% reduction by 2015. To achieve this, countries have received funding to prepare national phase out strategies. Saint Lucia will commence the development of its phase out strategy later this year and hopes to begin receiving assistance from the Multilateral Fund by the end of 2010 to meet its commitments. The National Ozone Unit will be leading this process and invites all stakeholders to participate in the national level consultations which it will be organizing.

IN FOCUS

DUGARD COMBINED SCHOOL CELEBRATES WORLD OZONE DAY!

Ozone Layer Day, (16th September, 2009), was of tremendous significance to the staff and students of the Dugard Combined School.

The school participated in various activities in commemoration of that day. The activities included the wearing of blue clothing and corsages; a special lecture presentation which was accompanied by dramatization; and a "Save the Ozone Layer" march on the school's ground. The march was brought alive by the students wearing sunglasses and carrying umbrellas; waving placards; and singing a theme song and jingle composed for the day.

The activity would not have been so successful without the cooperation of the staff especially Miss Ava St. Ange who coordinated the different



activities. The day's jingle was as follows:

"Go Green Go; The sun has too much glow;

Protect the Ozone Layer; To live a little longer."

INVASIVE ALIEN SPECIES AS THREATS TO BIODIVERSITY

International Day for Biological Diversity was celebrated on the 22nd May 2009 and the theme was "Invasive alien Species-threats to biodiversity". School lectures were given by the Forestry Department and the Agricultural Extension Division to various schools around the island. The Hon. Ezechiel Joseph, Minister for Agriculture, Lands, Fisheries and Forestry gave an address that was broadcast over the airwaves in observance of the day. An interview was done on "Agriculture Today" on the theme. A banner was flown outside the ministry for a month highlighting the day. Newspaper articles were written and a panel discussion is soon to be broadcast over national television on the theme.

Invasive Alien Species are very damaging to biological diversity. To become invasive, these species must usually arrive in a country, survive and then thrive. The Ministry of Agriculture has many quarantine procedures that should be adhered to by all, in order to bring animals and plants into the country, to minimize the entry and establishment of invasive alien species in the country. We need to protect our existing species of crops, our ornamentals, our wild life and our domesticated species of animals. Let us resist the temptation to smuggle in organisms into the country. To you, it may be an interesting species of flower or fruit that you can hide in your suitcase but it may contain invisible pests and diseases and through that thoughtless act, may result in

the elimination of a vital industry or species of animal or plant. Just ask the honey production farmers about the problems that they encountered from the Varoa mite. Please let us all cooperate with the authorities as beloved citizens, taking pride in our beautiful country!

For further information on any of the above topics, feel free to contact Ms. Anita James at 468-4122/27; Ministry of Agriculture, Lands, Fisheries and Forestry, 4th Floor, Sir Stanislas James Building, The Waterfront.

POWER ENGINEERING

Power Engineering Services is an energy mitigation organization geared and committed towards the use of renewable energy sources and energy limiting devices. Our range of services helps customers reduce their carbon footprint and the associated cost of energy while playing their part in fighting global emissions. Typically customers start with a Preliminary Audit after which, their options for tackling their energy needs are clearer.

One of the services that we offer as a mitigation measure is the retrofitting of AC units with Duracool refrigerants. Duracool products are clean, safe and environmentally friendly and the products are made exclusively from natural, organic materials and represent no environmental threat whatsoever. These are essentially a line of

“UNIVERSAL PARTICIPATION: OZONE UNIFIES THE WORLD”; SAINT LUCIA CELEBRATES OZONE DAY 2009

Saint Lucia joined the rest of the world in celebrating Ozone Day on 16 September, under the theme “Universal Participation: Ozone Unifies the World”. Ozone Day celebrations got its endorsement from, the United Nations General Assembly who proclaimed by General Assembly Resolution 49/114, September 16, the International Day for the Preservation of the Ozone Layer. The date selected is important because it commemorates the date, in 1987, on which the Montreal Protocol on Substances that Deplete the Ozone Layer was signed.

Generally the main aim of Ozone day is to raise awareness on the need to continue to take steps to protect the stratospheric ozone layer and to highlight progress made. This year marked Saint Lucia’s 16th year in this global effort. This year is of particular significance because the *Montreal Protocol on Substances that Deplete the Ozone Layer* has become the first agreement ever to achieve Universal participation. This achievement has been made possible because Timor Leste, a country situated near Indonesia has finally joined the global effort.

Though over 97% of controlled ozone-depleting substances (ODS) have already been phased-out globally, the work by the parties to the Protocol is far from over. The end of 2009 will mark another

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hydrocarbon refrigerants that cover the entire spectrum of refrigerant applications. Duracool refrigerants have a dual advantage being ozone friendly and as well possessing the property of being up to 35% more efficient than traditional refrigerants in use today. In addition to Duracool being ozone friendly it is also non-global warming.

As an incentive to encouraging the shift towards this greener refrigerant, customers are being offered the opportunity to pay-back the cost of conversion from their savings on electricity bills. This method is non intrusive and makes use of the existing energy budget allocations for the year under consideration. Power Engineering Services has used this non-intrusive method on Solar PV projects and even energy audits but laments the fact that banks are generally static and not open to such instruments.

significant milestone in the history of ozone layer protection as all developing countries will completely stop the use of the major group of ODS, chlorofluorocarbons (CFCs). Saint Lucia achieved its phase out of CFCs in 2008.

CFCs are being replaced hydrofluorocarbons (HFCs) but they too can negatively impact the environment. HFCs have a high global warming potential and therefore contribute to climate change. Efforts are continuing into finding a better alternative for CFCs.

This year’s national celebrations included a “schools’wear blue day”, training for Refrigeration and Air- Condition Technicians in Ozone and climate friendly refrigerants. The highlight of the celebrations was an Ozone Pledge by which companies publicly declare their support for ozone layer and climate protection. Saint Lucians are reminded that every action counts!

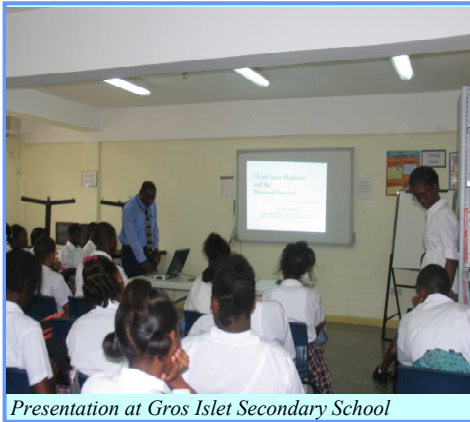
SAINT LUCIA’S RESPONSE TO OZONE LAYER PROTECTION

- Training of Technicians in Good Refrigeration Practices and alternative technologies
- Establishment of an Association of Refrigeration and Air Conditioning Technicians
- Training of Customs/Marine Officers in Monitoring and Controlling Trade in ODSs.
- Provision of refrigerant identification equipment to Customs
- Provision of refrigerant recovery and recycling equipment to technicians
- Licensing System to control the importation and exportation of ODS
- Revision of Montreal Protocol Act and Regulations to accommodate accelerated phase out of HCFCs
- Development of a Code of Good Practices for the Refrigeration and Air Conditioning Sector
- Public Awareness and Education – radio and TV spots and interviews, presentations to schools and other interest groups, distribution of posters, brochures and other public awareness materials

THE QUARTER IN REVIEW - WHAT THE SECTION HAS BEEN UP TO

OZONE DAY PRESENTATION AT GROS ISLET SECONDARY SCHOOL

Environmental education is an organized effort by interest groups, stakeholders and other environmental agencies to teach about how the natural environment functions and more specifically how we as human beings ought to treat our natural surroundings and adopt a conscientious behaviour to make use of natural resources in a sustainable manner. Environmental management programmes tend to have a specific focus, for example coastal zone issues, ozone depletion, global warming and climate change. Environmental education serves to spread the word on current environmental issues and give warnings that if habits do not change, further damage will occur.



Presentation at Gros Islet Secondary School

Public awareness campaigns take many forms (print materials, websites, media campaigns, school presentations) and are a rather effective method for sensitizing people about the environment. In St. Lucia, Ozone Day awareness

campaigns included a classroom presentation at the Gros Islet Secondary School to students of Forms 4 and 5. This proved to be a very interactive learning experience for the students as they listened attentively to what was being presented and actively participated in the question and answer segment. Tokens were distributed to students who made attempts to answer questions and also to those who got correct answers. This demonstrates the level of effectiveness that environmental education can achieve in disseminating information to various age groups in society.

With increased use of environmental education initiatives, it is anticipated that we will achieve much success at reaching out to various groups in society. This will help foster a greater consciousness of our activities, that we must do something now to stop the anthropogenic degradation of the natural environment. Together we can make the difference.

AN ENERGY EFFICIENCY PIF FOR GEF FUNDING – JULY 9, 2009

Saint Lucia receives funding from the Global Environment Facility (GEF) to assist it with projects that encourages environmental sustainability. It is to this end that a number of agencies converged at the conference room of the Ministry of Economic Affairs to put together a project concept on Energy efficiency in buildings to the amount of about half a million U.S. dollars. Saint Lucia hopes to receive approval for the project by the end of 2009.

INVESTMENT AND FINANCIAL FLOWS FOR CLIMATE CHANGE

The Ministry of Physical Development and the Environment hosted a 3 day training workshop on Investment and Financial Flows for Climate Change at the Bay Gardens Inn from 8th to 10 September 2009. This brought together various stakeholders from



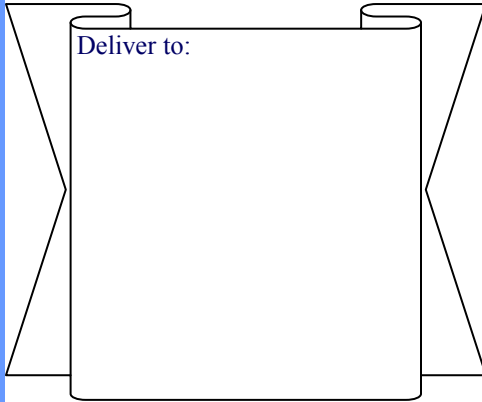
Participants at IFF Workshop

the energy, water and coastal zone sector to discuss the impact of climate change on these areas locally. This is part of a global project conducted by the United Nations Development Programme, UNDP. The Project aims to gain a better understanding of the magnitude of funds needed to tackle climate change now and in the long term. The project is expected to run for 8 months and it is hoped that the outcomes will be instrumental in planning and sourcing and allocating resource for St. Lucia's fight against Climate Change.

SECOND WATER RECREATIONAL WATER QUALITY CONSULTATION

Recreational water quality in St. Lucia has received much attention in recent times, especially due to increased sightings of fleshy macroalgae along coastal rocks and also reports of ear and skin infections from bathers. These are indicators that our recreational waters contain pollutants which create the said unpleasant experiences for users. In light of this, The Sustainable Development &

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**Sustainable Development & Environment Section
Ministry of Physical Development & the Environment**
The American Drywall Building,
Vide Bouteille, Castries, St. Lucia
Tel. (758) 451-8746, (758) 468-5805;
Fax (758) 451-9706;
Email: sde@sde.gov.lc
nexus@sde.gov.lc

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Environment Section of the Ministry of Physical Development and the Environment embarked on an EU funded project to develop recreational water quality standards for Saint Lucia. Currently the St. Lucia Bureau of Standards in collaboration with the Ministry is now hosting national consultations with stakeholders. The second national consultation was held at the Kimitrai Hotel in Vieux Fort on September 30, 2009. Approximately 30 persons attended, representing a cross section of both Government and private agencies. Participants displayed interest for the subject and were eager voice their concerns. The feedback, comments and recommendations offered by these stakeholders will help steer and refine the implementation of the Standard.

OZONE DAY WORD SEARCH

A	B	Y	H	W	X	R	E	C	O	V	E	R	Y	H	Q	X	W	O	L	V	O
T	O	M	O	N	T	R	E	A	L		P	R	O	T	O	C	O	L	R	B	W
M	S	G	E	C	E	Y	L	V	F	W	B	P	S	V	O	S	K	D	A	S	J
O	S	P	R	F	W	M	I	K	X	Y	D	A	K	H	L	D	Y	E	D	Z	Z
S	B	F	Y	C	Q	C	A	V	S	X	C	I	V	H	B	C	P	I	E	W	
P	M	F	W	S	U	W	U	B	M	S	F	L	U	D	C	P	W	L	A	O	T
H	R	E	T	R	O	F	I	T	T	I	N	G	I	M	F	L	B	E	T	M	P
E	U	L	T	R	A	V	I	O	L	E	T	W	Q	P	C	M	V	T	I	Q	H
R	Y	H	C	P	R	T	D	E	E	L	W	E	K	X	S	O	B	I	O	P	I
I	F	T	C	S	P	O	Z	O	N	E		L	A	Y	E	R	T	O	N	U	Z
C	P	Z	D	H	I	F	V	L	G	E	R	O	Y	C	L	O	E	N	B	O	X

OZONE LAYER
DEPLETION
MONTREAL PROTOCOL
RADIATION
RETROFITTING

CFCS
HCFCs
ULTRAVIOLET
RECOVERY
ATMOSPHERIC

USEFUL URLS

International Day for the Protection of the Ozone Layer Website:
http://ozone.unep.org/Events/ozone_day_2009/index.shtml

The Ozone Hole
<http://www.theozonehole.com/>

Ozone Secretariat
<http://ozone.unep.org/>

Ozzy Ozone Defender of Our Planet
<http://www.ozzyozone.org/>

SNEAK PEEK

1. Energy Awareness Week
2. Waste to energy Presentation
3. Energy Symposium for Secondary Schools
4. Energy Symposium for the Construction sector
5. Training for Technicians in the use of HCFCs
6. Launching of local GEF website
7. Second National Communication V and A Training

Welcome Back Neranda Maurice, good to have you back!

ENVIRONMENT QUOTE

Don't blow it - good planets are hard to find.
<http://www.quotearden.com/environment.html>