

# Montreal protocol and F-gases Regulation in Macedonia

Emilija Kjupeva  
Ministry of Environment and  
Physical Planning  
Republic of Macedonia

## Implementation of the ODS Regulation National legislation

- **Law on Vienna Convention Ratification**
- **Law on Montreal Protocol Ratification**
- **Laws on the Montreal Protocol Amendments Ratification**
- **Law on Environment (Article 22-a and 22-b)**

## **Implementation of the ODS Regulation National legislation**

- **Order Prohibiting Production and Trade of ODSs as well as Production and Trade of the Products Containing ODSs (OG of the RM no. 92/10)**
- **Order Limiting Import of Air-conditioners Containing HCFCs (OG of the RM no. 92/10)**
- **Order Prohibiting Export and Import of the Products Containing HCFCs (OG of the RM no. 92/10)**
- **Order Limiting the Import of the Ozone Depleting Substances (OG of the RM no. 92/10, 150/12)**

## **Implementation of the ODS Regulation National legislation**

- **Rulebook on the manner of ODSs recovery and recycling (OG of the RM no. 85/13)**
- **Rulebook on the form, content and manner of submission of the report on imported/exported ODSs (OG of the RM no. 85/13)**
- **Order Prohibiting Trade of Refrigerants in Non-refillable Containers (OG of the RM no. 140/13)**

## Implementation of the ODS Regulation (EC) NO. 1005/2009

Compliance with all provisions of the MP applicable to non-Article-5 countries

*Despite the fact that the country is an Article-5 country, it is in compliance with most of the provisions of the Montreal Protocol. More than 98% of the ODSs consumption in the country is already phased-out. The latest challenge the country is facing is the phasing-out of HCFCs. In this direction, a special HCFC Phase-Out Management Plan was developed and adopted by the Government of the Republic of Macedonia in November 2011. The MoEPP works on its intensive implementation.*

### Implementation of the ODS Regulation Projects for ODSs management/phase-out

<b>Investment projects</b>	<b>1997 – 1999: Phasing-out CFC-11/12 in the refrigerator production, Frinko, Bitola ODSs phased-out: 104 T</b>
	<b>1997-2000: Phasing-out CFC-11 in the flexible and rigid foam production ODSs phased-out: 356 T</b>
	<b>2014 – 2015: Conversion from HCFC-141b to HFCs in the Manufacture of polyurethane foam for the commercial refrigeration units, sandwich panels and insulated doors ODSs phased-out: 15.7 T</b>

## Implementation of the ODS Regulation

### Projects for ODSs management/phase-out

<b>Enabling + investment projects</b>	<b>2000-2005: Elimination of MeBr consumption in tobacco and vegetable production</b> ODSs phased-out: 45.4 T
	<b>2003: Halon Management Plan</b> ODSs phased-out: n/a
	<b>2005-2009: Terminal Phase-out Management Plan</b>
	<b>2010-2020: HPMP</b> ODS to be phased-out: 1.17 ODP T

## Implementation of the ODS Regulation

### Projects for ODSs management/phase-out

<b>Demonstration projects</b>	<b>2000: Demonstration project on the alternatives to the use of MeBr</b> ODSs phased-out: 25 T
	<b>2006-2008: Demonstration Project on the Replacement of CFC Centrifugal Chillers</b> ODSs phased-out: 28 ODP T

## Implementation of the ODS Regulation (EC) NO. 1005/2009

Is the countries consumption for all controlled substances zero or below zero?

Consumption of most of the ODSs (CFCs, halons, CCl<sub>4</sub>, methyl chloroform, MeBr, HBFCs) is zero until 2006.

There is still HCFC consumption in the country. The HCFC consumption for 2013 is 13.056 MT (HCFC-22).

## Implementation of the ODS Regulation (EC) NO. 1005/2009

### ODSs consumption

*According to the Order Limiting the Import of the Ozone Depleting Substances (Official Gazette of RM no. 92/10, 150/12), 5% HCFCs annual reduction is foreseen for the period 2013 – 2020 on the average consumption in the period 2009 – 2010 (32.784 MT).*

Baseline (MT)	2014	2015	2016	2017	2018	2019	2020
32.784	31.145	29.506	27.866	26.226	24.586	22.946	21.31

## Implementation of the ODS and F-gases Regulations (EC) NO. 1005/2009 and 842/2006

### Refrigerants recovery, recycling scheme

The scheme for refrigerant recovery and recycling is functioning well in Macedonia. The recycled refrigerants quantity in 2013 was 14.042 kg.

Refrigerant	CFC 12	HCFC 22	HFC 134a	R 404A	R 407C	R 410A	R 403B	R 502	Total	Waste
Total	575	2,807	2,746	3,481	2,493	1,795	62	83	14,042	482

## Implementation of the ODS and F-gases Regulations (EC) NO. 1005/2009 and 842/2006

### Refrigerants recovery, recycling scheme

Recovered and recycled amounts of refrigerants (in kg) from  
2001-2013

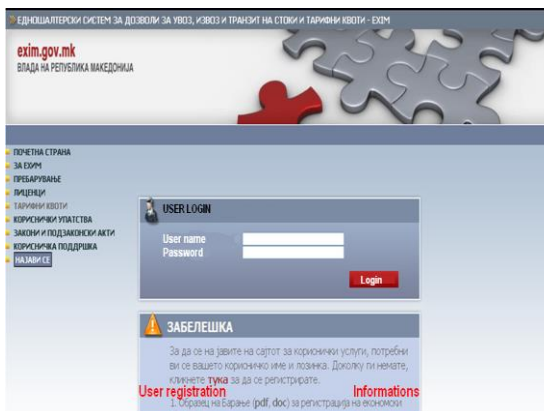
Year	May 2001- Dec 2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Recycled refrigerants	2.820	2.466	7.101	7.191	5.452	8.089	10.407	6.765	8.406	10.921	11.813	14.042
Total	88.285,4											

## Implementation of the ODS and F-gases Regulations

### A licensing system for imports and exports of controlled substances

The system of permits for imports and exports of controlled substances exists in the country since 1997. Article 22-a of the Law on Environment prescribes that ODSs and ODS equipment could be imported/exported with prior issued permit by the Ministry of Environment and Physical Planning.

The electronic licensing system EXIM (under the Customs Administration of the Republic of Macedonia) is an excellent tool that accelerate and facilitate the procedure for HCFCs and HFCs import/export.



## Implementation of the ODS and F-gases Regulations (EC) NO. 1005/2009 and 842/2006

Minimum qualification requirements for the personnel involved in refrigerant recovery and recycling of controlled substances

In accordance with Article 22-b of the LE, legal and/or natural person that manage refrigerants should possess a licence for refrigerants and equipment containing refrigerants management.

The licences will be issued in categories depending on the refrigerant types, procedure applied for the equipment servicing and installation and the manner of recovery, recycling and reclamation of the refrigerants (Rulebook on Categories).

The persons that would be given with licence should meet the minimum conditions:

- Adequate space and equipment for refrigerants and equipment containing refrigerants management,
- At least one service technician passed training and specialized exam on refrigerants and equipment containing refrigerants management and be given with the personnel certificate.

The provision enters into force starting on 1 January 2017.

## Implementation of the ODS and F-gases Regulations (EC) NO. 1005/2009 and 842/2006

### Leakages and emissions of controlled substances

According to the Rulebook on manner of refrigerant recovery and recycling

- Undertakings should check for leakage the equipment containing fluid charge of 3 kg or more at least once every 12 months.
- The equipment with a fluid charge of 30 kg or more is checked for leakage at least once every 6 months.
- The equipment with a fluid charge of 300 kg or more is checked for leakage at least once every 3 months.
- Any detected leakage should be repaired as soon as possible and in any event within 14 days.

## Implementation of the ODS and F-gases Regulations

### Leakages and emissions of controlled substances

The performed checks are to be evident in special log-books to be possessed by each owner of the equipment containing more than 3 kg fluid charge.

The MoEPP organized a thematic workshop with undertakings and service shops in order to introduce the obligation for evidence of the equipment check and log-books.

In order to facilitate and accelerate the evidence procedure the MoEPP published number of log-books to be disseminated among considered undertakings.

Министерство за животна средина и просторно планирање  
Канцеларија за заштита на околната обвина

**Евидентна книшка**  
за спроведени проверки на истекувања

Бр. \_\_\_\_\_  
(се наведува редниот број на книшката)

Назив на опремата \_\_\_\_\_  
(се наведува називот на опремата)

Број на опремата \_\_\_\_\_  
(се наведува произволниот број или број под кој се води опремата)

Податоци за правното или физичкото лице (поседувач на опремата)

Табела 1 (ја пополнува лицето што ја поседува опремата)

Име/име на правното/ физичкото лице:	
Седиште / адреса:	
Лице за контакт:	
Телефон / факс / мобилен:	
E-mail:	



## Implementation of the ODS and F-gases Regulations (EC) NO. 1005/2009 and 842/2006 (EC) NO. 1005/2009

### Leakages and emissions of controlled substances

#### Log-book format

Податоци за опремата	
Намена	Евидентен број: Ладење <input type="checkbox"/> Климатизација <input type="checkbox"/>
Производител на опремата	
Година на производство	
Вид на сустанција што се користи за ладење	
Ладилен капацитет (kW)	
Тип на компресор	Херметички <input type="checkbox"/> Нехерметички <input type="checkbox"/>
Инсталирана електрична моќност на компресорот (kW)	
Количина на полнење со сустанција што се користи за ладење (kg)	

**Внимание!**  
Само обучено лице може да интервенира во ладилниот круг

**Табела 2** (ја пополнува лицето што ја поседува опремата)

Податоци за контрола на опремата				
Табела 3 (ја пополнува овластеното лице од правното лице кое собира, обновува и рециклира сустанции)				
Датум	Опис на извршената проверка / собирање, рециклирање	Дополнување со сустанција што се користи за ладење (kg)	Овластен сервисер Број на Уверение Фирма / потпис	Проверил Име / потпис

## Implementation of the ODS and F-gases Regulations (EC) NO. 1005/2009 and 842/2006 (EC) NO. 1005/2009

### Leakages and emissions of controlled substances

#### Label format

0 0 0 1			
Министерство за животна средина и просторно планирање Канцеларија за заштита на озонска обвивка			
e-mail: ozonunit@unet.com.mk		Тел. 02 3119 622	

Податоци за опремата		Евидентен број:	
Намена	Ладење <input type="checkbox"/> Климатизација <input type="checkbox"/>		
Производител на опремата			
Година на производство			
Вид на ладишно средство			
Ладилен капацитет (kW)			
Тип на компресор	Херметички <input type="checkbox"/> Нехерметички <input type="checkbox"/>		
Инсталирана електрична моќност на компресорот (kW)			
Полнење со ладишно средство (kg)			
<b>Внимание!</b> Само овластено лице може да интервенира во ладилниот круг			

## **Implementation of the ODS Regulation (EC) NO. 1005/2009**

**Training programme in "Phase-out of HCFC refrigerants"  
for service technicians**

**199 service technicians trained on good practices for  
refrigerants management and granted with interim  
certificates**