Government of the Republic of Moldova
Ministry of Environment

Hydrochlorofluorocarbon Phase-out Management Plan (HPMP)

Lead Implementing Agency: UNDP
National Executing Agency: Ministry of Environment, National Ozone Unit

Chişinău, December 2010
Revised March 2011

MULTILATERAL FUND FOR THE IMPLEMENTATION OF THE MONTREAL PROTOCOL ON SUBSTANCES THAT DEPLETE THE OZONE LAYER

HPMP SUBMISSION CHECKLIST

BASIC INFORMATION	
Country:	**Moldova**
Project Title:	**HCFC Management Plan for Moldova (Stage 1)**
Lead Agency:	**UNDP**
Cooperating Agencies:	**-**

MONTREAL PROTOCOL AMENDMENT RATIFICATION STATUS		
Amendment	**Ratified (Y/N)**	**Date**
Copenhagen Amendment	**Yes**	**25 June 2001**
Beijing Amendment	**Yes**	**5 December 2006**

HCFC DATA	
Article-7 data reported	☒ **Yes** ☐ **No** **Year: 2009**
CP progress data reported	☒ **Yes** ☐ **No** **Year: 2009**
Calculated HCFC baseline (ODP tonnes)	**2.28**
Starting point (ODP tonnes)	**2.28**

DOCUMENTATION		
Document	**Submitted (Y/N)**	**Remarks**
Letter of transmittal	**Yes**	
HPMP document and components	**Yes**	
Draft agreement	**Yes**	
MYA online tables	**Yes**	
Technical review (where applicable)		**Not applicable**

HPMP SCOPE	
Sectors covered	☐ Manufacturing only ☒ Servicing only ☐ Manufacturing and Servicing
Phase-out targets	☒ Freeze and 10% reductions (2015) ☐ 35% reductions (2020) ☐ Complete phase-out (Year:) ☐ Other
Priority given to reductions/phase-out in manufacturing (over servicing)	☐ Yes ☐ No ☒ Not required/applicable
Justification for not prioritizing HCFC-141b	☐ Yes ☐ No ☒ Not required/applicable

HPMP COMPONENTS		
Components	**Included (Y/N)**	**Remarks**
Executive Summary	**Yes**	
Overarching Strategy	**Yes**	
Strategy and action plan for Stage-I	**Yes**	
Sector plans/individual projects	**No**	**Servicing sector only**
Annual implementation plan	**Yes**	
Implementation arrangements	**Yes**	
Environmental Impact	**Yes**	

HPMP FUNDING		
Components	**Included (Y/N)**	**Remarks**
Consistency with guidelines (for servicing sector, cut-off date, second conversions, HCFCs in preblended polyols, technology upgrade, non-A5 ownership, non-A5 exports)	**Yes**	
Funding for first tranche requested	**Yes**	
Funding for last tranche in last year	**No**	

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EXECUTIVE SUMMARY

This Hydrochlorofluorocarbon Phase out Management Plan or HPMP has been prepared to define the Governments commitment and plan to meet the obligations that it has assumed as a Party to the Montreal Protocol (MP) under Decision XIX/6[1] of the Nineteenth Meeting of the Parties, accelerating the phase out of hydrochlorofluorocarbons (HCFCs) in both Article 5 and non-Article 5 countries.

This HPMP is intended to fulfill the requirements of the Executive Committee (ExCom) of the Multilateral Fund for the Implementation of the MP (MLF) with respect to adoption and submission of an HPMP applied to Article 5 countries seeking MLF financial support.

The National Ozone Unit (NOU) of the Ministry of Environment has prepared this HPMP, with the financial support of the MLF and the technical support of UNDP. It has been developed in accordance with the guidance issued by the ExCom, as per document UNEP/OzL.Pro/ExCom/54/53[2] and ExCom Decision 54/39[3]. For the purposes of the HPMP, UNDP will be acting as Lead Implementing Agency.

Moldova is categorized as a Low Volume Country (LVC). Historically, ODS and specifically HCFC consumption has occurred in the refrigeration servicing sector (HCFC-22 and blends containing this). The HPMP will address all this area.

Consistent with the recommendations of ExCom guidance on HPMPs referenced above, a staged approach to the HPMP is taken based on a consumption baseline to be determined by the average consumption officially reported in 2009 and 2010. It involves presentation of a high level long term strategy directed to meeting the 2020 (35% baseline reduction) and 2025 (67.5% baseline reduction) phase out targets and ultimately complete elimination of HCFC consumption in 2030.

However, within this overall strategy, the primary focus of the HPMP is on the actions required to achieve the immediate phase targets of a 2013 freeze at the baseline and, 2015 and the subsequent 10% reduction of the baseline. The combination of these two steps is presented as "Stage 1" which in particular will see development of reduction priorities structured around the following general "strategic lines":

1. Regulatory measures;
2. Technical capacity development; and
3. Monitoring of activities

[1] *http://ozone.unep.org/Meeting_Documents/mop/19mop/MOP-19-7E.pdf, Page 33*
[2] *http://www.multilateralfund.org/files/54/5453.pdf,*
[3] *http://www.multilateralfund.org/files/54/5459.pdf, Page 43, Annex XIX*

The overall incremental cost as capped by decision 60/44 for this HPMP is US$ 88,000 and is summarized as follows:

Project	IA	Total	Tranche 1	Tranche 2
1. Regulatory measures	UNDP	$2,000	$2,000	
2. Technical Capacity Development	UNDP	$83,000	$75,200	$7,800
3. Monitoring of HPMP	UNDP	$3,000	$2,000	$1,000
	Total for UNDP	$88,000	$79,200	$8,800
	Support cost UNDP (9%)	$7,920		
	Grand total for UNDP	$95,920		

It should be noted that the country chooses to receive institutional strengthening assistance outside of this HPMP, as was the case in the past.

1 INTRODUCTION [4]

3.1 Background Information

Strategically located at the crossroads between Central, Southeast and Eastern Europe the Republic of Moldova occupies a territory of 33,843 sq. km, 350 km from North to South and 150 km from East to West. It borders Romania in the West and Ukraine in the East and South. It has rich agricultural land and a temperate climate, and agriculture and agro-processing represent about 60 percent of GDP. Over half of its ethnically diverse population lives in the rural areas. Moldova is almost wholly dependent on the import of energy and raw materials for its manufacturing industries.

Since 1999, Moldova's economic performance has been commendable, in contrast to its deteriorating performance during the earlier years of the 1990s. The country has successfully stabilized the economy, launched structural reforms to stimulate growth, and begun the process of establishing an effective social protection system.

The country is a parliamentary democracy with a president as head of state and a prime minister as head of government. Moldova is a member state of United Nations, World Trade Organization (WTO), Council of Europe, Commonwealth of Independent States (CIS), European Bank for Reconstruction and Development (EBRD), International Monetary Fund (IMF), Interpol, Organization for Security and Cooperation in Europe (OSCE), NATO's Partnership for Peace, Stability Pact for South East Europe and other international organizations. Moldova currently aspires to join the European Union,[4] and has implemented the first three-year Action Plan within the framework of the European Neighborhood Policy (ENP).[5].

Chisinau is the capital and largest municipality of Moldova. It is also its main industrial and commercial centre and is located in the middle of the country, on the river Bîc. The population of the city is 592,900 (2007) or 911,400 including the entire metropolitan area. Chisinau is the most economically prosperous locality in Moldova, and its largest transportation hub. As the most economically and socially important municipality in Moldova, the city has a broad range of educational facilities. The proportion of green spaces in Chisinau is one of the highest among major European cities.

The total length of the national boundaries is 1,389 km, including 939 km with Ukraine and 450 km with Romania. The most northerly point is the village of Naslavcea (48º21´ N 27º35´ E), while the most southerly point, Giurgiulesti (45º 28´ N 28º 12´ E), which is the only settlement on the bank of the Danube. The most westerly point is the village of Criva (48º16´ N 26º30´ E) and the most easterly point is the village of Palanca (46º 25´ N 30º 05´ E).

4 Sources used throughout this section include www.cia.gov and www.en.wikipedia.org as well as original material from National and International Consultants

The Republic of Moldova belongs to the group of countries located in the Black Sea Basin. It maintains close mutually advantageous commercial ties with these countries as well as the countries located in the Danube Basin. The southern border of the country extends almost as far as the Black Sea, which can be accessed through the Dniester Lyman and the Danube River.

The physical and geographical position of the Republic of Moldova has determined the specific features of its natural conditions. Source: (http://www.moldova.md/en/geografie/)

The mineral resources of the Republic of Moldova are mainly represented by sedimentary rocks, such as limestone, chalk, gypsum, sand, sandstone, bentonite, tripoli, and diatomite, which can be used in construction, cement and glass production, food processing, chemical and metallurgical industries etc. Among other nonmetallic minerals that have been identified on the territory of the Republic of Moldova are graphite, phosphorite, zeolite, fluorite, barite, iodine and bromine as well as several industrial metals such as iron, lead, zinc and copper. Moldova has small deposits of lignite, crude oil and natural gas.

The soil cover of Moldova is fertile and varied, consisting of more than 745 varieties. Chernozems (Russian: black earth) occupy around three-fourths of the land area of the country. Brown and gray forest soils cover around 11% of the country's land area. Floodplain, or alluvial, meadow soils occupy around 12% of the land area of Moldova.

The winter in Moldova is moderate, with a mean temperature in January of –5 to -3^0 C. Some days it can fall to –15 to -20^0 C, and during an intrusion of arctic air masses even to –35^0 C. The spring is not stable, as the number of sunny days and the mean air temperature is rising. In May the temperature is around +15^0 C, decreasing the risk of late frosts.

The summer is hot and long, with long periods of drought. The mean temperature in July is +19.5 to +22^0 C, but sometimes can reach +35 to +40^0 C. The summer rains are in most cases heavy and of short duration, sometimes causing local flooding.

The autumn is warm and long too, a so-called "Indian summer". In November the mean temperature falls to +5 to +3^0 C and may bring the first snowfalls and frosts.

The average annual rainfall varies between 380-550 mm. Thus, Moldova's territory is in an insufficient rainfall zone. The rainfall differs from year to year and from season to season. The period from April to October accounts for approximately 70% of the annual rainfall.

The strengths of Moldova's climate include high temperatures, abundance of sunshine and a lengthy vegetation period. Its weaknesses include: deficit of moisture (low rainfall) sometimes resulting in droughts and rain showers during the warm season, which can cause soil erosion.

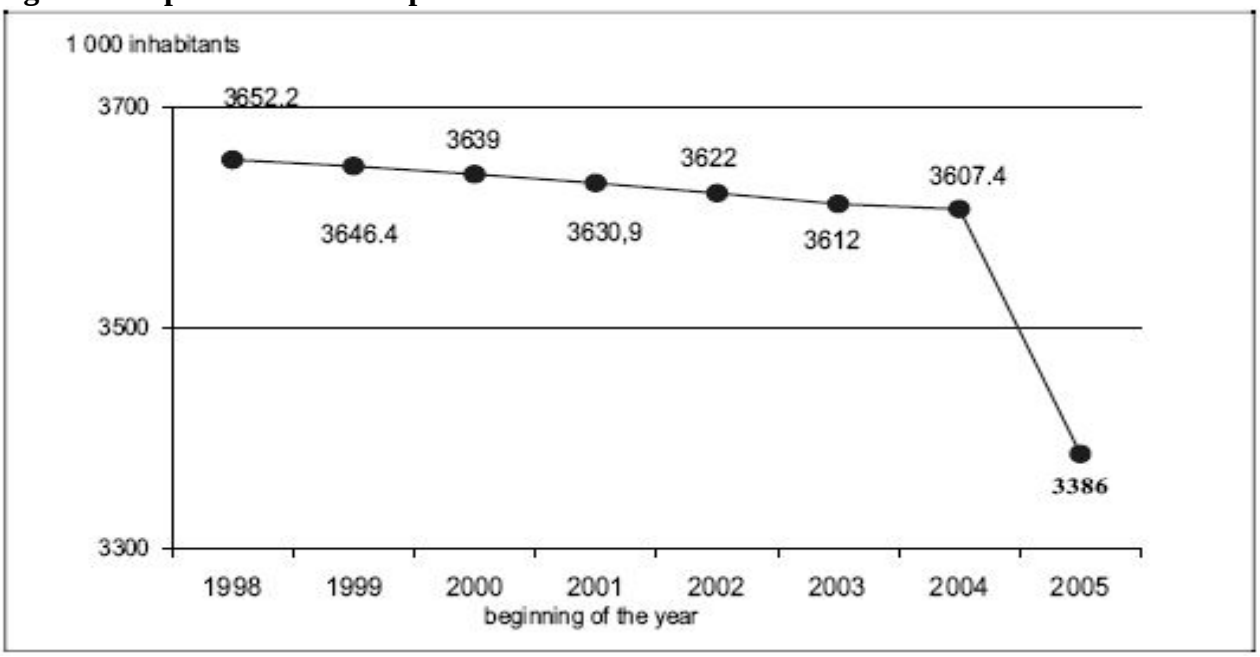
Moldova is a small country in terms of both territory and population size. With an estimated population of 3.4 million, Moldova ranks as the second smallest of the CIS member states. About 51.2% of the total population is female and 48.2% is male. As shown in Table 1, in recent years, population has declined due to a falling birth rate, increased migration and rising mortality. Fertility rates have fallen dramatically from 2.1 for the period 1990-95 to 1.2 for the period 2000-2005.

Table 1: Key indicators of natural population change (number of persons)

	2001	2002	2003	2004	2005	2005 as % of 2004	2004 as % of 2003
Live births	36 448	35 705	36 559	38 272	37 706	98.5	104.7
Deaths	40 075	41 852	43 047	41 668	44 752	107.4	96.8
of which children up to one year old	597	528	510	464	460	99.1	91.0
Natural decrease	-3 627	-6 147	-6 488	-3 396	-7 046	207.5	52.0
Marriages	21 065	21 685	24 945	25164	27 205	108.1	100.9
Divorces	10 808	12 698	14 668	14 668	14 517	97.3	104.7

Source: National Bureau of Statistics of the Republic of Moldova

Figure 1: Population of the Republic of Moldova



The decrease in population has been accompanied by ageing. Although life expectancy in Moldova is quite low, over the past 50 years it has increased from 58 to 67 and it is expected to increase to 77 by the year 2050. As the table below shows, the proportion of children and young people are declining while the proportion of older people is increasing. Women represent a large proportion of the older population. About 63% of those aged 65 and over are women. Like in all other countries of the region, ageing is posing important challenges to the financing of the already strained social security system. Poverty in old age is also an issue of increasing concern. According to Helpage, 21 over 80% of older people live below the poverty line and many (mostly older women) work informally to supplement their incomes.

As can be seen from the next table, about 60% of the Moldovan population lives in rural areas and women represent a large proportion of these rural residents, especially at older ages. Although the risk of poverty is higher in small towns than in rural areas, because the majority of the population live in rural areas rural poverty predominates, and 68% of all Moldova's poor live in rural areas.

Table 2: Resident population by area, sex and age, 1 January 2004, in thousands

	Total		Urban		Rural	
	Both sexes	Of which female	Both sexes	Of which female	Both sexes	Of which female
Total	3 607.4	1 879.0	1 477.9	764.4	2 129.5	1 114.6
Of which						
Men and women 0-15	785.7	383.4	279.6	135.8	506.1	247.6
Men 16-59 years; women 16-54 years	2 311.6	1 156.8	1 017.5	508.8	1 294.1	648.0
Men 60 years and over; women 55 years and over	510.1	338.8	180.8	119.8	329.3	219.0

Source: www.statistica.md

Employment rates remained practically unchanged between 1999 and 2002, ranging from 53.3 to 54.8%. Employment has sharply declined over the last two years, falling to 45.4% in 2005. An analysis of employment rates by sex also shows a downward trend for both sexes. However, the decline in the male employment rate is steeper (11 percentage points) than for females (7 percentage points). In 2004 the difference between male and female employment rates was less than 1.2%.

	2001	2002	2003	2004	2005	2006	2007
Employment (% change over previous year)	-1.0	0.4	-9.9	-3.0	0.2	-4.7	-0.8
Unemployment rate (%)	7.3	6.8	7.9	8.1	7.3	7.4	5.1
Youth unemployment rate (%)	16.3	15.2	18.1	19.7	18.7	17.1	14.4

Government and International relations

Moldova is a unitary parliamentary representative democratic republic. The 1994 Constitution of Moldova sets the framework for the government of the country. A parliamentary majority of at least two thirds is required to amend the Constitution of Moldova, which cannot be revised in time of war or national emergency. Amendments to the Constitution affecting the state's sovereignty, independence, or unity can only be made after a majority of voters support the proposal in a referendum. Furthermore, no revision can be made to limit the fundamental rights of people enumerated in the Constitution.

The country's central legislative body is the unicameral Moldovan Parliament, which has 101 seats, and whose members are elected by popular vote on party lists every four years.
The head of state is the President of Moldova, who is elected by Moldovan Parliament, requiring the support of three fifths of the deputies (at least 61 votes). The president of Moldova has been elected by the parliament since 2001, a change designed to decrease executive authority in favor of the legislature. The president appoints a prime minister who functions as the head of government, and who in turn assembles a cabinet, both subject to parliamentary approval.

The Constitution also establishes an independent Constitutional Court, composed of six judges (two appointed by the President, two by Parliament, and two by the Supreme Council of Magistrature), serving six-year terms, during which they are irremovable and not subordinate to

any power. The Court is invested with the power of judicial review over all acts of the parliament, over presidential decrees, and over international treaties, signed by the country.

Moldova's four opposition parties formed a new coalition, the Alliance for European Integration (AEI), which will act as Moldova's governing coalition until new parliamentary elections can be held, possibly in summer 2010. Moldova experienced significant political uncertainty in 2009, holding two general elections (in April and July) and four presidential ballots in parliament, all of which failed to secure a president.

Moldova and Ukraine operate joint customs posts to monitor the transit of people and commodities through Moldova's break-away Transnistria region, which remains under OSCE supervision.

After achieving independence from the Soviet Union, Moldova established relations with other European countries. A course for European Union integration and neutrality define the country's foreign policy guidelines. In 1995 the country became the first post-Soviet state admitted to the Council of Europe. In addition to its participation in NATO's Partnership for Peace programme, Moldova is also a member state of the United Nations, the OSCE, the North Atlantic Cooperation Council, the World Trade Organization, the International Monetary Fund, the World Bank, the Francophonie and the European Bank for Reconstruction and Development.

In 2005, Moldova and the EU established an action plan that sought to improve the collaboration between the two neighboring structures.

After the War of Transnistria, Moldova sought a peaceful resolution to the conflict in the Transnistria region by working with Romania, Ukraine, and Russia, calling for international mediation, and cooperating with the OSCE and UN fact-finding and observer missions."

Economy

After the collapse of the USSR and the declaration of its independence on 27 August 1991, the Republic of Moldova passed through a complex stage of transition to the market economy and experienced a significant economic recession.

The economic crisis in Moldova lasted for 10 years (from 1990 to 1999). During this period the GDP decreased almost by three times. Since 2000 the economy has been on the rise. This period is characterized by a steady recovery of the production output, which had a partly impact on poverty reduction. During the period 2000-2005 the GDP in real terms increased with 43 percent. Consequently the poverty rate decreased with 41.3 percent.

The country continues to maintain macroeconomic stability. Inflation reduced from 44% in 1999 to 10% in 2005. Besides, the national currency exchange rate remained rather stable while the currency reserves increased substantially.

The economic growth and circumspect external loans allowed for a decrease in the share of the public debt and the publicly guaranteed debt from 79 percent of GDP in 2000 to 27 percent in 2005. These achievements were due to the promotion of an appropriate monetary and credit

policy coupled with a rigid fiscal and budgetary policy, as well as the implementation of tax reforms aimed at improving the tax collection system.

Over 2006-2008, Moldova saw strong growth accompanied by rising macroeconomic vulnerabilities, and hesitant progress in its transition to a market economy. Buoyant domestic demand, financed by booming remittances, credit, and FDI, resulted in an average growth of over 5 percent but also widened the current account deficit and generated inflation pressures. The real effective exchange rate (REER) appreciated substantially and, together with exogenous shocks, dampened export growth. Despite some progress in structural reforms, the economy remained overregulated and hampered by relative price distortions. High barriers to entry and low competition in telecommunications, trade, and food processing kept domestic prices significantly above international prices of many consumer products. In contrast, utility tariffs generally remained well below cost-recovery levels, leading to substantial arrears and underinvestment.

The global crisis brought a deep recession in 2009**.** Reflecting a sharp decline in exports, remittances, and FDI, domestic demand and imports collapsed, and real GDP fell by 6½ percent. Although the leu depreciated significantly, deflation pressures persisted. The current account deficit almost halved to 9½ percent of GDP; nonetheless, the country struggled to cover its external financing need. It was met by running down the reserves of the National Bank of Moldova (NBM) and financing from international financial institutions. Credit to the economy declined, and share nonperforming loans (NPLs) in the banking sector tripled since end-2008; one medium-size bank failed.

The economy has been recovering since late 2009, reflecting improved external market conditions and recent trade liberalization. Real GDP rebounded strongly in Q4 2009, led by industry, transport, and trade. Helped by the removal of many trade restrictions, exports and imports rose year on year for the first time in five quarters. Recent data suggest that the recovery gained further speed in early 2010. However, energy tariff hikes, the depreciation of the leu, and increases in excises have pushed inflation to 8 percent in April 2010, with core inflation at 5½ percent.

Moldova's growth prospects depend on its ability to maintain macroeconomic stability and boost its presence on external markets. Increasing public saving to restore fiscal sustainability and intensifying structural reforms to attract foreign investment and boost total factor productivity growth are thus essential for raising incomes and reducing poverty on a sustainable basis.

Chisinau is the most economically developed and industrialized city in Moldova. It is a major industrial and services center; its main industries include consumer and electrical goods, building materials, machinery, plastics, rubber, and textiles. The main service fields are banking and shopping/commerce. The economy of Chisinau is mainly centered on industry and services, with the latter particularly growing in importance in the last ten years.

Environmental Overview

Moldova has actively taken part in international efforts to protect the environment. It signed the UN Rio Declaration on Environment and Development in 1992 and later, in 2002, participated in

the Johannesburg World Summit on Sustainable Development and signed the document adopted in the meeting.

Since 1991 Moldova has developed an extensive environmental framework of laws, concepts, strategies, programmes and plans to cover all major environmental areas. The most urgent current environmental problems are: protection of soil resources, improvement of the quality of drinking water, safe management of obsolete pesticides and toxic waste, biodiversity conservation, minimization of transboundary effects and diminution of the anthropogenic impact, environmental education and awareness.

Currently, the Republic of Moldova is part of the majority of the conventions on environment protection and it promotes a consequent policy in the framework of multilateral international cooperation. Thus, Moldova ratified, among others, the following conventions: the **United Nations Framework Convention** on **Climate Change**, the **Convention on Biological Diversity**, the Vienna Convention on the Protection of the Ozone Layer and the **Montreal Protocol on Substances** That Deplete the Ozone Layer, the **Convention to Combat Desertification,** the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal, the Convention on Long-range Transboundary Air Pollution, the UNECE Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters.

1.1 ODS Policy/Legislative/Regulatory and Institutional Framework

Since 1991 Moldova has developed an extensive environmental framework of laws, concepts, strategies, programmes and, plans, to cover all major environmental areas. The Partnership and Cooperation Agreement (PCA) signed on 28 November 1994 between Moldova and the EU and its Members includes environment as a co-operation area. Environment issues also have a prominent place in the Action Plan under the European Neighborhood Policy (ENP) and are regularly followed-up in the PCA sub-committee for energy, environment, transport, science and education. At present Moldova is working to fulfill its obligations under the ENP Action Plan and to converge further its legislation towards the acquis communautaire in the field of environment. Moldova developed a number of concepts and programmes, inter alia Environmental Policy Concept, Sector Strategy on Environmental Protection and Sustainable Use of Natural Resources, National Program for Ensuring Ecological Safety, Local Environmental Action Plans National Programme on Environmental Security and Strategy on Water Supply and Sewerage Systems.

Current environmental policies include the following:

- Approximation of national legal and regulatory frameworks on environment and natural resources management with EU directives;
- Prevention and reduction of degradation of natural resources;
- More efficient use of natural resources.
- Maintenance of environmental quality as a factor of health and quality of life;
- Protection of water resources;
- Improvement of the waste management scheme, with a lower impact and load of toxic substances and waste;
- Protection of forests and expansion of the forest fund;

- Conservation of biodiversity;
- Development of an efficient monitoring system;
- Prevention of, and damage compensation, for anthropogenic accidents and calamities;
- Raising environmental awareness of the population; facilitating public access to environmental information and public participation in decision-making.

1.1.1 Status of Ratification of Amendments to the Montreal Protocol

The Republic of Moldova has ratified the London, Copenhagen, Montreal and Beijing Amendments to Montreal Protocol (Laws nr.111-XV dated 27.04.2001, nr. 34-XVI dated April 14, 2005 and nr. 119-XVI dated 18.05.2006).

1.1.2 ODS Legislation/Regulations

The Government of Moldova, through the efforts of the NOU, has already made headway by putting in place legislative measures to control the import of ODS and equipment that contain them.

The Regulation on trade regime and regulating the use of halogenated hydrocarbons that are depleting the ozone layer (Law nr. 852-XV dated 14.02.2002) is in place and is the fundamental legislative document concerning implementation of the Montreal Protocol in Moldova.

Following this:

- Any import of ODS and ODS containing equipment requires a license. Additionally each and every import requires an authorization that is issued by the Ministry of Environment which is issued within the limits of approved contingent (annual quota);
- Customs is responsible for monitoring and control at the borders and carry out identification and inspection of ODS and products which contain ODS and reports this information to NOU and Ministry of Environment on a quarterly basis;
- Customs codes have been adjusted to facilitate monitoring of ODS;
- Information from importing companies on their annual imports of ODS is required.
- State Ecological Inspection provides information retrieved during ecological inspections.

According to Law Nr. 852-XV, the import, export, re-export, introduction into market circulation and transit of equipment, components and technologies that contain substances mentioned in Annex A, group I, II, Annex B, group I, Annex C, group II is banned. Due to this the import of non-CFC alternatives (HFCs) and equipment with such substances annually are increasing. Regular monitoring of implementation of the Country Programme for phase-out of ODS shows about 100% reduction in ODS import (R-12) since 1998.

The licensing system for importers and users of ODS, equipments and products with ODS was created, as well as certification of technicians in refrigeration maintenance (governmental Decision on applying provisions of Vienna Convention and Montreal Protocol for the protection of the ozone layer in Moldova nr. 300 (18.03.980; Law on providing licenses for certain types of activities nr. 332-XIV (March 26, 1999); Law on amending and completing the Law nr. 451-XV

(July 30th, 2001) on licensing certain types of activity nr. 214-XV dated June 24, 2004); Customs duties and quotas for ODS were established and the regime of taxation within the system of customs control was implemented (Law on amending and completing the Law nr. 1540-XIII dated February 25, 1998 on environment pollution nr.1566-XV dated 20.12.2002).

Overview of Existing Policy Instruments

RESTRICTIONS CONCERNING COMMERCIAL REGIME AND UTILIZATION OF HALOGENATED HYDROCARBONS DEPLETING THE OZONE LAYER

The ban is applied for the following:

1) Import, export, re-export, introduction into market circulation and transit of:

    a) chemical substances mentioned in Annex 1 (includes Annex A, Annex B, Annex C, Annex D and Annex E of the Montreal Protocol) of the present regulation from, into, through or to the states that are not party of the Montreal Protocol on Substances that Deplete the Ozone Layer (later on – Protocol)
    b) equipment that contain substances mentioned in Annex A, groups I, II, and technologies that can't operate permanently without a support of chemical substances foreseen in Annex A, groups I, II, Annex B, groups I, II, III, Annex C, group II, as well as products obtained with the help of these substances, indifferently of the case if they contain or not such substances from, into, through or to the states that are not party to the Protocol;
    c) auto vehicles of any type, including airplanes equipped with units of air-conditioning, new or used, that operate with chemical substances mentioned in Annex A, group I, II, Annex B, group I and Annex C, group II;
    d) equipment and its component parts (including refrigerators, freezers, ice machines, chillers, air conditioning and heat pump units, etc.) and technologies, destined for production of refrigerant equipment for house, commercial and industrial use, new and use others than those of personal use, that contain substances mentioned in Annex A, group I, II, Annex B, group I, Annex C, group II, or which function on these substances or products that contain or that are obtained with the help of these substances indifferently of the case if they contain or not those substances, with exception of import of spare parts destined for the activity of equipment maintenance, being in medium term of exploitation;
    e) equipment and its components (refrigerators, freezers, ice machines, chillers, air conditioning and heat pumps units, etc.) and technologies designed for production of house, commercial and industrial chillers, new or used, that don't contain chemical substances mentioned in Annex A, group I, II, Annex B, group I, Annex C, group II, but which because of their construction, can't operate permanently without these substances;
    h) chemical substances mentioned in Annex B, group I, Annex C, group II indifferently of the provenience, excepting cases envisaged by Montreal Protocol;

i) chemical substances mentioned in Annex A, Annex B, and Annex C (according to actual legislation only import of virgin ODSs (including HCFCs) is permitted in the Republic), proceeding from recovery, recycling or regeneration operations;

2) Mounting of any new installations or equipment for cooling, of house, commercial and industrial use, that contain or operate permanently with chemical substances mentioned in Annex A, group I, II, Annex B, group I and Annex C, group II;

3) Utilization of:

chemical substances foreseen in Annex A, groups I, II, Annex B, groups II, III, Annex C group II for producing aerosols, new industrial cooling systems, mobile units of air-conditioning, sterilization products and any new products where substances foreseen in Annex A, groups I, II, Annex B, groups II, III, Annex C, group II weren't used before;

5) Elimination of emissions into atmosphere of:

chemical substances mentioned in Annex A, groups I, II, Annex B, groups I, II, III, Annex C, groups I, II, contained in equipment and installations or in transport containers, in time of maintenance operations, disaffection of installations or of decant.

Recovery, recycling, regeneration, neutralization and destruction of chemical substances foreseen in annexes A group I, II, B groups I, II, II, C groups I, II is undertaken with special equipment for this type of operation, in the framework of some units within the state or foreign states, authorized under law conditions. Mixture of substances is prohibited during the period of recovery activities or further, during the recycling and regeneration operations.

Transport and disposal of chemical substances foreseen in Annex A group I, II, Annex B groups I, II, II, Annex C groups I, II is made in accordance with art. 10 and art.11 of the Law on conditions of harmful products and substances Nr. 1236-XIII dated July 3, 1997 in reusable recipients, properly labeled and in accordance with legislation for liquefied gases under pressure.

Installation of spare parts and also maintenance of equipment and installations of house, commercial and industrial use, that contain chemical substances foreseen in Annex A group I, II, Annex B groups I, II, II, Annex C groups I, II are undertaken only by qualified personnel, certified by law conditions. Instruction and certifying of technical specialized personnel that perform above mentioned activities is organized through courses by state education institutions, qualified in this field, basing on the program proposed by these once three year.

MANAGEMENT, STOCKTAKING

Production, import, export and re-export of chemical substances foreseen in the Annex 1 (see attached document Annex 1 to Law under *Annexes 5.5*) of the present regulation, excepting chemical substances foreseen in Annex B, group I and Annex C, group II, of equipment and products foreseen in Annex 2 that do not contain chemical substances foreseen in Annex A,

groups I, II, Annex B, groups I, Annex C, group II is undertaken in base of license issued in accordance with legislation currently in force.

Import, export and re-export of each lot of chemical substances foreseen in the Annex 1 of the present regulation, excepting chemical substances foreseen in Annex B, group I and Annex C, group II, of equipment and products foreseen in Annex 2 that do not contain chemical substances foreseen in Annex A, groups I, II, Annex B, groups I, Annex C, group II made with corresponding Authorization.

Authorization for import, export and re-export of mentioned above chemical substances, equipment and products are issued by Ministry of Environment but the Authorization doesn't replace license for this kind of activity.

Authorization is issued to economic agents (natural and juridical persons), holders of license for production, import, export, re-export of ozone depleting substances and of equipment and products that contain such substances during 10 working days from request receipt. Authorization is issued free of charge and is valid 90 days.

RESPONSIBILITIES OF NATURAL AND JURIDICAL PERSONS, WHICH PRODUCE, IMPORT, EXPORT, COMMERCIALIZE, AND USE, OZONE DEPLETING SUBSTANCES

Producers, importers and exporters of chemical substances included in Annex 1, are obliged to label the containers where these substances are transported or stocked with clearly visible and durable labels, carrying the following inscription: **"Contain substances depleting the ozone layer".**

Producers of products and equipment that contain chemical substances included in Annex B group 1, Annex C group I and II or that include isolating materials or component parts containing such substances are obliged to apply for each unit, clearly visible and durable labels carrying the following inscription: **"Contains substances depleting the ozone layer".**

Importers of chemical substances included in Annex 1 are obliged at the time when they introduce those into the internal market circulation, to write in the accompanying documents of the goods, the number of the license and number of authorization, issued by Ministry of Environment, on the basis of which they were permitted to enter the state.

At the request of the authority enabled by Government or local public administration personnel with control competence in the field, importers, exporters and persons that introduce into market circulation substances included in Annex 1 of the present Regulation and equipment or products that contain substances included in, Annex B, groups II and III and Annex C, group II are obliged to present for inspection license, authorization in the base of which the operation was undertaken and invoice, customs declaration and copy of the contract with exporting state (for importers).

Economic agents (natural and juridical persons) that produce, import, export or commercialize substances depleting ozone layer foreseen in Annex 1 of the present Regulation, equipment and products foreseen in Annex 2 will present statistic report for previous year (1-ozon and 2-ozon

forms) (see attached document Statistical report) to statistic territorial authorities, coordinated with ecological territorial agencies until March 31 of current year.

Economic agents (natural and juridical persons) will keep the register concerning production, import, export, commercialize or consume of ODS foreseen in Annex 1 of the present Regulation and of products and equipment foreseen in Annex 2. The Register will be kept for a period of 5 years. The data according to the register will be presented to the Ministry of Environment on or before 31 of January of the current year for the previous calendar year.

Refrigeration personnel keep the register for registering the used quantities of substances foreseen in Annex 1 (pure, recovered and recycled substances). The register will be kept for a period of 5 years. The data according to the register will be presented to the Ministry of Environment on or before 31 of January of the current year for the previous calendar year (Annex 5).

1.2 Stakeholders

Ministry of Environment will be responsible for the implementation of HPMP assisted by the National Ozone Unit. Experience gained so far shows that direct involvement of end-users, service companies and importers dealing with refrigeration and air-conditioning give the best results. In this context, the assistance of the Public Association of the Refrigeration Technicians from the Republic of Moldova will be rendered by its members taking into account their experience and collaboration with foreign partners. The Public Association of the Refrigeration Technicians will be responsible for development of new certification system and collaboration with Ministry of Construction and Regional Development and training institutions.

Harmonisation of some legal acts related to ODS with EU legislation will be carried out involving National Institute of Standardization and Metrology and other relevant governmental agencies. Ministry of Environment and National Ozone unit will continue close collaboration with Customs Service to ensure effective implementation of licensing system and import/export monitoring of HCFC and HCFC-based equipment/products. State Ecological Inspectorate will give its support in monitoring of environmental legislation implementation. Ministry of Agriculture and Food Industry may also add valuable contribution through their programmes, including assistance delivered by international organisations and different funds. Mass-media and NGOs will be engaged in public awareness activities.

1.3 ODS Phase-Out Programme

The Executive Committee of the Multilateral Fund approved the Country Programme of the Republic of Moldova in July 1998 together with the approval of the Refrigerant Management Plan resulting from a survey to establish basic data and information. The RMP update was approved at the 44th Meeting of the Executive Committee at a total cost to the Multilateral Fund of 193,380.00 US$ (technical assistance-US$ 173,495 and monitoring activities - US$ 19,885). The implementation of the Refrigerant Management Plan (RMP) is completed. Both phases of the training programmes (customs trainings and trainings of the trainers for good practices in the refrigerant management) and the recovery and recycling project have been completed. The end-user awareness and technical assistance project and monitoring of the RMP activities component were closed towards the middle of 2007. The effect of the RMP will continue to contribute to the

CFC phase-out and the TPMP has proved essential to allow Moldova to meet with its 2010 objectives.

The request for funding of the TPMP was submitted to the 52nd meeting of the Executive Committee in July 2007 and was approved. The project was prepared by UNEP as leading implementing Agency and UNDP in cooperation with the Government of Moldova.

Nr.	**Name of project**	**Project Number**	**ODSs phased out (MT)**	**Remarks**
1.	Institutional strengthening – Phase I	IM/2120-99-08	n/a	Completed
2.	Institutional strengthening – Phase II	IM/2120-99-08	n/a	Completed
3.	Institutional strengthening – Phase III	IM/2120-99-08	n/a	Completed
4.	Institutional strengthening – Phase IV	MOL/SEV/48/INS/14	n/a	Completed
5.	Institutional strengthening – Phase V	SSFA/2008-IML-5070-2602-2645-221200	n/a	Completed
6.	Institutional strengthening – Phase VI	SSFA/2010-IML-5070-2602-2645-221800	n/a	Ongoing
7.	Implementation of the RMP: National programme for recovery and recycling of refrigerants	MOL/REF/25/TAS/02	21,87	Completed
8.	Implementation of the RMP: Training on monitoring and control of CFC and CFC using equipment – UNEP	IM/0902-95-10-2272	n/a	Completed
9.	Implementation of the RMP: Train the Trainers Programme for good practices in the refrigeration sector	IM/0902-95-10/2273	7,75	Completed
10	Implementation of RMP: Technical Assistance Program	MOL/REF/44/TAS/12	14,4	Completed
11	Terminal Phase-out Management Plan - TPMP	MOL/PHA/56/TAS/22	7,4	Operationally completed
12	Terminal Phase-out Management Plan - TPMP	MOL/PHA/52/INV/18	n/a	Operationally completed
13	MDI Transition Strategy	MOL/ARS/54/TAS/20	n/a	Operationally completed
14	Development of HCFC Phase-out Management Plan – HPMP	MOL/PHA/55/PRP/21	n/a	Ongoing

1.3.1 Enterprises Converted to an HCFC Technology

Not Applicable to Moldova

1.3.2 Refrigeration Servicing Sector

The total number of technicians engaged in the refrigeration and air-conditioning servicing sector is estimated to be of about 280-300 people: 40 % of them have completed their formal training, 40 % have incomplete formal training and 20 % have some degree of vocational training.

Education and training of technical personnel in refrigeration is carried out by the Technical University of Moldova and by the Technological College. Vocational schools do not train servicing mechanics and refrigeration operators any longer and the National Refrigeration Association is considering this issue and planning to organize training courses and certification of refrigeration technicians.

The refrigeration-servicing sector includes private companies, individual enterprises and natural persons (technicians) having permits for this activity. Most of the private companies (about 80 %) are located in Chisinau, the others are located in three regions of the country:

- 5 companies in Balti City (northern part);
- 6 companies in the central part of the country – 1 in Bender City, 5 in Straseni City; and,
- 4 companies in the south – 1 in Leova City, 3 in Cahul City.

Most commercial enterprises, as well as enterprises in the food processing industry and cold storage of food, fruits and vegetables, in different districts of the country are serviced by companies located in Chisinau (both under the guarantee and post-guarantee periods). The domestic sector, as well as some of the enterprises, is serviced by technicians.

The refrigeration and air-conditioning servicing sector is in general represented by small firms employing no more than 10 people. In larger companies such as DINA COCIUG SRL, DI&TRADE SRL, ECOLUX SRL, FRIGOMAŞ SA, MAŞFRIGCOM SRL, and MGM SRL employees can number more than 20, but some of these enterprises carry out other activities than refrigeration.

Refrigerants in the Republic of Moldova are imported by the following licensed companies:

"CORAL" SRL
"ECOLUX" SRL
"FRIGOMAŞ" SA
"FRIO-DINS" SRL
"FRIGOIND" SRL, and
"TC-IUSTINIAN" SRL

The following is a non-exhaustive list of importers of refrigeration equipment, installations and components (small and large):

"DINA COCIUG" SRL
"ECOLUX" SRL
"FRIGOIND" SRL
"FRIO-DINS" SRL

"MGM" SRL
"PENOMET GRUP" SRL
"TC-IUSTINIAN" SRL
"WEATHER WISE" SRL

Air-conditioning equipment is imported by different firms, many of them acting as distributors of production companies (Non-exhaustive list):

"AEROTEHNIC" SRL,
"AIRCOND" SRL,
"AMBIENT-VEST" SRL,
"AZIMUT-GRUP" SRL,
"CLIMATINSTAL" SRL,
"CLIMATSISTEM" SRL,
"CARTAL" SRL,
"DI&TRADE" SRL,
"DIFERENS" SRL,
"ECOVENTSISTEM" SRL,
"INTER TRAIDING & SERVICE" SRL,
"INSISVENT" SRL,
"LERAI GRUP" SRL,
"ORMOTEX" S.A.,
"SNS GRUP" SRL,
"TRASCO-GRUP" SRL,
"TANIC GRUP" SRL,
"VENTSISTEM-COMPANIE CLIMATICA" SRL,
"VENT SISTEM" SRL,
"VENTCOND-M" SRL,
"VLANATEX SERVICE COMPANY" SRL.

Industrial refrigeration equipment is assembled and installed by the following large companies that have small and medium assembling companies facilities and qualified personnel. Commercial refrigeration equipment is also assembled and installed by these large companies as well as by a number of smaller firms.

"DINA COCIUG" SRL,
"ECOLUX" SRL,
"FRIGOMAŞ" SA,
"MAŞFRIGCOM" SRL,
"MGM" SRL.

The following firms specialize in air-conditioning equipment and heat pumps:

"ACCENTELECTRONIC" SRL,
"AEROTEHNIC" SRL,
"AZIMUT-GRUP" SRL,
"DI&TRADE" SRL,

"LUXGAZ" SRL,
"TERMOCLIMA" SRL,
"VENTSISTEM-COMPANIE CLIMATICA" SRL,
"VENTCOND-M" SRL and others.

The training programme and RMP provided customs officers and relevant stakeholders with the skills necessary to monitor and control the imports and exports of ODS and products (including equipment) containing them as well as detecting and preventing illegal trade. The programme consisted of two phases, the Train-the-Customs Trainers (Phase I) and the Train-the-Customs-Officers (Phase II).

Achieved results:

- The first phase workshop to train the trainers was organized in June 2001 for 24 persons;
- The second phase was completed during 2003 and 2004 and consisted of 7 seminars, resulting in the certification of 109 customs officers, ecology inspectors, importers of ODS using equipment, and professors from educational institutes;
- 18 refrigerant identifiers to determine the type of refrigerant in order to prevent and eliminate illegal imports of ODS, products and equipment with ODS were distributed to the State Ecological Inspectorate – thus having ecological control at each customs-house;
- The training programme was an opportunity to meet importers, customs officers and environmental inspectors and to discuss issues regarding implementation of licensing system.

Training sessions for customs officers were carried out through lectures and hands-on sessions with CFC-detection equipment. No new equipment was procured under this component. The ODS identifiers procured under the customs training component of the RMP, were used for demonstration purposes. Training was organized for customs officers and included themes concerning ozone depletion issues, customs codes, UN and ASHRAE numbers, detection of CFC and on procedures and guidelines for follow-up of illegal activities.

In order to prevent illegal trade and maintain the phase-out target for CFCs intensified efforts to control CFC trade were necessary. Thus in the framework of the TPMP the Customs training component was included and "Control and Monitoring of ODSs and products containing ODSs" Training workshops were organized. Upon completion of the workshop, certificates of training were given to participants. Participants received Guidance "Ghid privind reglementarea importului/exportului SDO, precum si al echipamentelor si produselor ce contin asemenea substante" (Guide-Regulation of the Import/Export of ODSs, equipment and products with ODSs).

The main topics were: national import/export licensing system; identification of ODS and ODS-based products; safe handling, transport and storage of ODS.

Achieved results:

- 142 customs inspectors have been trained;
- Enhanced capacity of the customs officers to target and capture ODS smugglers;

- Strengthening of an existing monitoring/control system and harmonisation with EU regulations;
- Accurate registration of authorized import of CFC/HCFCs and CFC using equipment, upon entrance to the country;
- Reporting to the Ozone Secretariat in line with the MOP Decision XIV/7 Para 7.

Implementation of the Incentive payment for end-users programme in Moldova was considered to be an extremely successful activity that proved to be very effective in phasing out CFCs. Though it should be mentioned that the growth of enterprises was very much influenced by external economic factors and all enterprises managed to find necessary funds to participate. In the year 2006, firms that participated were predominantly specialized in fruit and vegetable storage and decided to convert the old equipment to alternative refrigerants preponderantly R-22. 18 enterprises participated and received incentive payments in the framework of the RMP. Four of them opted for permanent retrofit, 14 for replacement of R-12 to R-22, R-404a or other alternative substances. The overall result of the Implementation of the Incentive payment for end-users programme in Moldova (RMP, RMPU and TPMP) confirms that this was the most successful activity proving to be very effective in phasing out CFCs (R-12, R-502). In total, during implementation of these projects 37 firms (predominantly specialized in fruit and vegetable storage) replaced or retrofitted their old refrigeration equipment to new refrigeration equipment working with alternative refrigerants.

Objectives:

- Provide incentive funding to assist industrial and commercial ODS end-users (enterprises) using CFC (R-12 & R-502) based refrigeration in their production processes or cold storage facilities to convert or retrofit these to employ non-ODP or low-ODP refrigerants, such as HFC-134a or HCFC-22;
- Provide 4 MAC R&R machines and 6 sets (two of these for two MAC R&R machines procured during RMP: MOL/REF/25/TAS/02) of MAC service equipment and tools to MAC service enterprises;
- Training in the retrofit of MAC units to HFC -134a;
- Organize a workshop to introduce and explain the end-user Incentive Programme to refrigeration end-users, service enterprises and other concerned parties;
- Train MAC service technicians on RMP, retrofit procedures and the recovery and recycling of refrigerants.

Training workshops for 240 refrigerant technicians were organized by the NOU Moldova, Training Centre "TEHNOFRIG", and the Technical University of Moldova. Additional equipment for the "TEHNOFRIG" Training centre was procured. Code of Good practices in refrigeration & AC was elaborated by NOU in cooperation with the Public Association of the Refrigeration Technicians from the Republic of Moldova, Training Centre "TEHNOFRIG" and the Technical University of Moldova.

As a result of above described efforts, consumption of CFCs in Moldova was phased out as foreseen by the Montreal Protocol, and as can be seen below.

Table 2.1: ODS Consumption (1998 - 2008)

Year	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
ODS												
CFCs	40.5	11.1	31.7	23.5	29.6	18.9	21,0	14.4	12	9.2	0.0	0.0
CTC	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Halon	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MeBr	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TCA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Lessons learned

1. Development and enforcement of legislation on ODS and environmental protection providing for licensing of ODS import, ODS quota establishment, mandatory recovery and recycling of ODS, data management and reporting are essential to ensure compliance with Montreal Protocol provisions;
2. Cooperation with importers, distributors and vendors of ODS and ODS containing equipment and products during seminars, exhibitions and their day-to day activity provide a good link to keep refrigeration technicians and consumers around the country informed about activities and events carried out by the NOU;
3. Customs training seminars provided the opportunity to gather customs officers, ODS importers and environmental inspectors to discuss, implement and improve licensing system and monitoring of import/export of ODS and ODS containing equipment and products;
4. Information exchange on illegal trade and methods of illegal import/export, practical exercise on identification of ODS with examination of different ways of ODS packaging and labelling by various producers from Europe and China, and discussion of problems regarding ODS import/export in ECA network countries motivated customs officers to perceive their contribution in implementation of the Montreal Protocol as key players in monitoring and prevention of illegal trade with ODS;
5. Providing equipment and tools for the ”Tehnofrig” Training centre of the Technical University of Moldova and Technological College form Chisinau and the ability to apply the hands-on approach were important factors contributing to the success of the training programme of the refrigeration technicians;
6. Recovery and recycling project contributed to reduce CFC consumption by end-users by a significant amount of R-12. Re-use scheme of refrigerants helped to reduce the demand of imported CFCs and in the long term, also of HCFCs;
7. Incentive programme for end-users to convert/retrofit CFC-equipment stimulated fast reduction of R-12, improvement of maintenance practices and introduction of new climate-control systems and remote control products and understanding of energy efficiency;
8. ODS phase-out requires involvement of all stakeholders including government, industry, importers, producers, consumers and general public through information dissemination in order to keep population aware.

2 HCFC Consumption Data

2.1 Methodology and Validation

The surveys carried out in Moldova were as comprehensive as possible, and made best attempts to follow the chain of ODS supply from the time when the substances were ordered and imported into Moldova and passed to distributors, consumers (when applicable) and manufacturers. Data sources and references include, but are not limited to, customs services, industry associations, and use-data from industries, enterprise surveys, data from manufacturers, etc.

The objective behind the data collection survey was that of establishing a national aggregate level of HCFC consumption against which future projects and activities could be funded and from which growth expectations and other relevant data could be derived for implementing measures to achieve the targets set under the accelerated HCFCs phase out schedule.

The approach followed included top-down survey that covered HCFCs supply/use by collecting relevant import/export data and performing detailed verification of the records for HCFCs pure/blend/feedstock; and bottom-up survey covering, as best as possible, the actual consumption in the different sub sectors for existing refrigeration and air-conditioning equipment.

Information was gathered through primary data gathering in the field and use of secondary data sources involving desktop review of information and materials. The sources of data for determination of consumption for HCFCs in Moldova were the NOU, Customs Service, HCFCs importers, distributors and end-users. All documents deemed necessary were obtained and verified for correctness, reviewed and analyzed, and results are included in the present chapter.

2.2 HCFC Consumption Data

In addition to HCFC and HCFC blends, hydrofluorocarbon blends such as R404A, R407A, R407B, R407C, R410A and R507, are all used in the refrigeration and air-conditioning sector. It must also be noted that Moldova is at present consuming increasing quantities of R-134A and R-600. Finally, the most commonly encountered HCFCs in Moldova are HCFC-22 and R-22 containing blends such as R406A and R408A.

Moldova is neither a producer nor an exporter of HCFCs hence its annual consumption is determined by the level of its annual imports of HCFCs[5].

Article 7 data on HCFCs (Annex C, Group 1) are summarized below for 2005 to 2009 as well as the respective year-on-year growth factor.

Table 2.2: Annual HCFC Consumption 2005-2009 in ODP tonnes (based on A7 & CP data)

ODP tonnes	**2005**	**2006**	**2007**	**2008**	**2009**
HCFC-22	0.9	0.7	2.1	2.6	1.2
Growth factor	-	0.8	3.0	1.2	0.5

[5] Consumption = Production plus import minus export

After a period of growth for 2007 and 2008 – most likely related to ongoing replacement of CFCs in service applications – a period of negative growth resulting from the effects of the financial crisis was observed as shown in the table above. However, as was explained earlier in the document, the economy has been recovering since late 2009, and Real GDP rebounded strongly in Q4 2009, led by industry, transport, and trade.

It is thus expected that in line with this rebound, growth in consumption will settle at around twice the GDP growth, which is customary for the comfort goods industries in developing nations. Given that in Moldova, the annual GDP growth rate has been about 6% in the pre-crisis years[6], and as per the previous reasoning, one can therefore reasonably assume that the increase of HCFC consumption would taper off to around 10%-12% for coming years.

GDP Growth %	Timeframe	2005	2006	2007	2008	2009
Republic of Moldova		7.5	4.8	3.0	7.8	-6.5
Average Growth	**2005 to 2008**				**5.78**	

2.2.1 Refrigeration Servicing Sector

As can be seen from the table below, consumption almost doubled from 2006 to 2007, and increased again by 1/2 in 2008. Even though, of the 8 licensed importers, 6 imported HCFC-22 in 2007 and only 4 in 2008 and 2009.

Year	Amount (Kg)
2005	20,088
2006	20,578
2007	38,573
2008	52,343
2009	21,100
Total	**152,682**

It is important to note that although this consumption decreased in 2009 as consequence of the global financial recession, preliminary estimates indicate that this tendency has been reversed in 2010 – the economy growth is increasing.

As a direct result of the field surveys that were carried out, it appeared that the following assumptions could be made with a high degree of certainty for Moldova which relate to the average annual rate of refrigerant leakages in different sectors:

- 20% for unitary air conditioners and split-systems;
- 30% for MACs;
- 25% for industrial and large commercial refrigeration systems;
- 40% for small commercial facilities and trade-technology equipment;
- 40% for large air conditioning systems.

[6] http://data.worldbank.org/indicator/NY.GDP.MKTP.KD.ZG

The average HCFC refrigerant charge and annual servicing requirements listed above are reported service frequencies and leakage rates and were derived from survey information. Leakage rates used are consistent with published global estimates of equipment emission rates[7].

2.3 Sectoral Distribution of HCFC use

2.3.1 Assembly of HCFC based equipment

There is no manufacture of refrigeration and air-conditioning equipment in the country. However, different categories of refrigeration equipment and installations (industrial and commercial), specifically cold rooms for vegetable and meat storage, are assembled by local companies using imported components mainly coming from Europe, including compressors made by "Danfoss", "Bitzer", "Copeland", "ACC", "Embraco", "Frascold", "Tecumseh", "Bock", "Dorin", etc.

Large experienced companies cover industrial and cold store equipment – central refrigeration systems, chillers, and compressor rooms. The installation of such equipment is typically related to the setup of outdoor air-condensing units attached to cold rooms as the water supply to cool off refrigeration systems is not sufficiently available in new stand alone sites – cold stores are located in places which are out of the reach of the old municipal civil engineering infrastructure. In summer time, higher temperatures tend to disrupt the operation of the heat exchange cycles and specifically air-condensing units tend to fail which require more frequent servicing and system top-up during functional fine-tuning and re-start.

Below is the summary data on the assembly and commissioning of assembled equipment.

Table 2.3 – Assembly of refrigeration equipment (2001-2010)

Year of commissioning	Number of installations, units.	Total cooling capacity, kW	Quantity of R22, kg
2001	44	1,993	1,367
2002	95	2,315	2,536
2003	36	1,355	1,810
2004	99	1,646	3,178
2005	43	1,332	1,781
2006	45	1,744	1,571
2007	82	1,979	3,399
2008	134	3,884	4,840
2009	125	3,534	4,012

[7] IPPC/TEAP Report "Safeguarding the Ozone Layer and the Global Climate System", 2005 - http://www.ipcc.ch/publications_and_data/publications_and_data_reports_safeguarding_the_ozone_layer.htm

2010*	36	986	1,266
Total	**739**	**20,768**	**25,760**

* Data as of October 2010

2.3.2 Air-Conditioning (A/C)

Moldova imports air-conditioning equipment from other countries and does not manufacture any. In total, there are an estimated 46,305 units of domestic and office A/C unitary and split-systems which represent a total cooling capacity of 185,220 kW, and an HCFC-22 bank of 64,827 kg.

In the table below, data on imports of such equipment are provided illustrating the positive import trend starting in 2002. The upward growth in the import of HCFC based A/C system is marked and creates the gradual accumulation of such appliances in the country over the years.

Table 2.4 – Import of unitary & split air-conditioners (Customs data)

Years	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Units	2,104	478	1,101	1,023	651	1,677	826	2,079	5,778	6,276	9,221	11,366	12,995	14,334	9,025
% of non-HCFCs units											10%	20%	25%	28%	31%
HCFC containing units	2,104	478	1,101	1,023	651	1,677	826	2,079	5,778	6,276	8,299	9,093	9,706	10,330	6,227

The analysis of year-to-year changes in import numbers of HCFC based units in the retrospective period illustrates an observed annual growth in A/C equipment. This trend is particularly alarming as in future it will create a larger HCFC consumption bubble once such equipment reaches 3-6 years of its operating life. The equipment that is imported is affordable, but of low quality and is not durable in the medium to longer run. Based on expert estimates, presently, it is possible to confirm that the equipment that was imported before 2007 experiences more frequent need for service checks and maintenance.

As for large A/C equipment, the survey data which was collected (Table A.8-A.12 Appendix) show that in the large air conditioning systems subsector, in 46 facilities there are 67 installations and more than 1,150 self-contained A/C systems running on HCFC-22, the total cooling capacity 23,699 kW representing 31,356 kg of HCFC-22.

In summary, the total fleet of A/C equipment currently used in the country represents 47,538 units, with a cooling capacity of 208,919 kW and containing 96,183 kg of HCFC-22. If in future the import of such equipment continues to grow without HCFC equipment being replaced by alternative equipment, this would result in the dramatic increase of HCFC consumption in Moldova as it will require more frequent maintenance and servicing.

Table 2.5 – Fleet of HCFC based Air Conditioning equipment (in use)

Indicators	Year of commissioning			Total
	Pre 1991	1991-2000	Post 2000	
Number of units	43	15,450	32,045	**47,538**
Total cooling capacity (kW)	18,340	61,906	128,673	**208,919**
HCFC-22 (kg)	28,770	21,708	45,705	**96,183**

2.3.3 Mobile Air Conditioning

As the direct result of the survey conducted, it was found that in the road and rail mobile air conditioning (MAC) sector the total number of MAC units is 2,652 with a cooling capacity of 38,836 kW. The total installed HCFC bank is 47,998 kg.

The breakdown by application is provided in the table below.

Table 2.6 - Mobile Air Conditioning

Equipment/application	Indicators		
	Number of units	Total cooling capacity, kW	R-22 (kg)
Large refrigerated vehicles (20 tons)	1,825	18,250	18,250
Small auto-refrigerators	200	1,000	1200
Buses	554	4,986	6,648
Railway transport	73	14,600	21,900
Total	**2,652**	**38,836**	**47,998**

Such data are considered to be relatively high as it was a common practice in many markets to replace R-12 and R-502 in low temperature applications with R-134a and R-404A. However, the survey confirmed the existence of a number of users in the country with old installations running on HCFC-22 as well as of their suppliers. Furthermore, these applications are considered as relatively leaky due to commonly detected haul vibrations during operations and their demand more frequent servicing also due to impacts of high operating temperatures.

2.3.4 Commercial Refrigeration

Survey data for the commercial refrigeration sector (Table A.4-A.7 Appendix) show that in the large refrigeration and cold storage facilities subsector, 74 sites operate 375 units using HCFC-22 with a total cooling capacity of 8,360 kW, containing 9,599 kg of HCFC-22. In addition, there are 6,474 units in operation in commercial and technological equipment, manufactured during 1999 and 2009, with a total cooling capacity of 3,220 kW and containing 3,290 kg of HCFC-22.

Presently, the structure of the commercial refrigeration sector is the following:

- More than 99% of the equipment fleet is the refrigeration equipment with cooling capacity below 20 kW;
- Approximately 80% of the fleet is the small refrigeration equipment (shop window, cooling box and others) with average charge of R-22 estimated at 0.5 kg.

Table 2.7 - Commercial refrigeration sector

Indicators	Year of commissioning			Total
	Pre 1991	1991-2000	Post 2000	
The number of units	12	10,576	27,761	**38,349**
The total cooling capacity, kW	215	6,431	20,684	**27,330**
HCFC-22, kg	300	7,021	21,318	**28,639**

2.3.5 Industrial Refrigeration Sector

The survey results for the industrial sector (Table A.1-A.3 Appendix) shows that 143 companies currently operate 640 units of equipment which is based on HCFC-22, with total cooling capacity of 23,977 kW, and containing 30,430 kg of HCFC-22.

Table 2.8 – Statistics on Industrial Refrigeration Sector

Indicators	Year of commissioning			Total
	Pre 1991	1991-2000	Post 2000	
Number of units	61	110	469	**640**
Total cooling capacity, kW	2,340	5,348	16,289	**23,977**
HCFC-22 (kg)	5,318	6,797	18,315	**30,430**

The following provides a summary of information on the servicing demand in HCFC-22 in refrigeration servicing sub-sectors as derived from the field surveys.

Table 2.9: Summary of Results from Surveys (2010)

Refrigeration Servicing (End User and Service Provider Surveys)			
Equipment Application Category	**Units**	**HCFC Bank (tons)**	**Annual Service Req.**
Assembly sector	739	25.76	6.44
Household/large A/C	47,538	98.18	22.78
MAC	2,652	48.00	14.40
Commercial	38,349	28.64	10.0
Industrial	640	30.43	7.61
Total	**89,918**	**231.01**	**61.23**

The highest annual demand for HCFC-22 was observed in the air conditioning sector – 22.7 Mt (31% of the total), followed by the MAC sector - 14.4 Mt (20.8 %), the commercial refrigeration sector - 10 Mt (17.4 %), the industrial refrigeration sector - 7.6 Mt (15.1 %), and assembly sector – 6.4 Mt (12.7%).

Figure 2.1: Sectoral distribution of HCFC consumption in Moldova (metric tons)

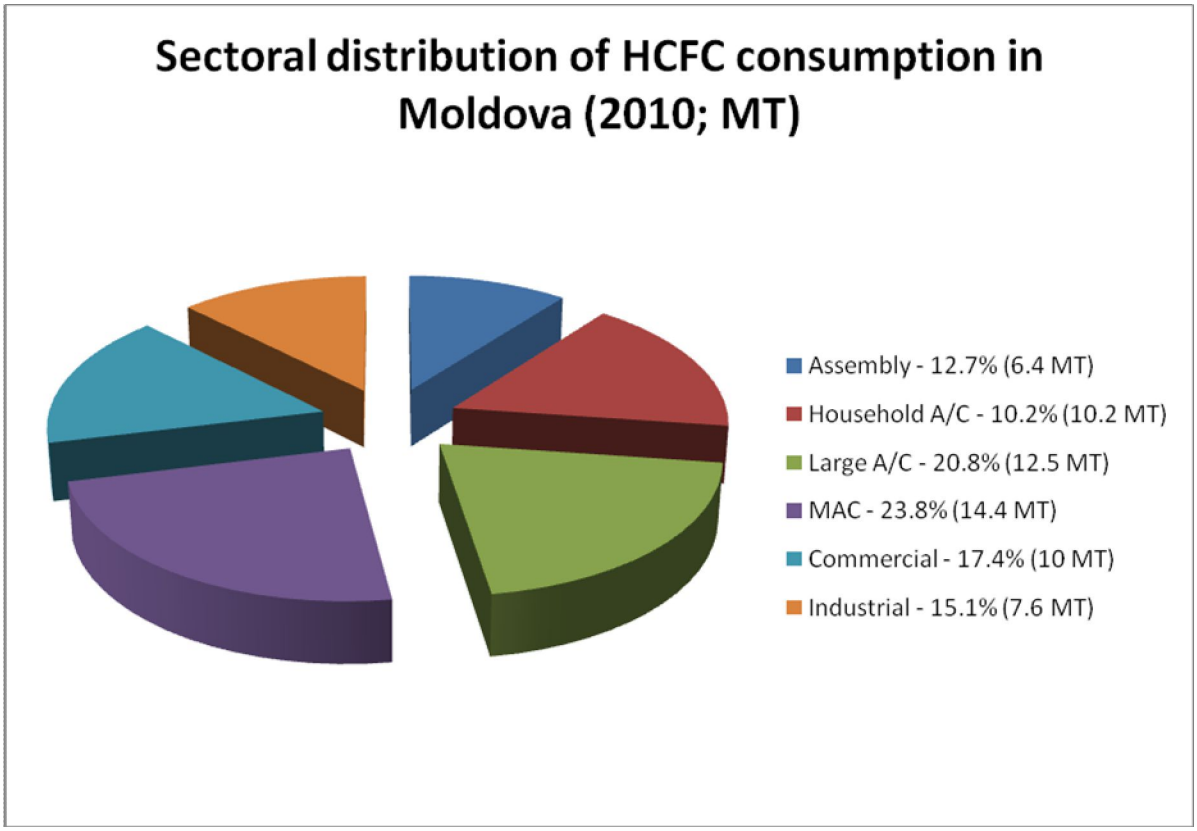
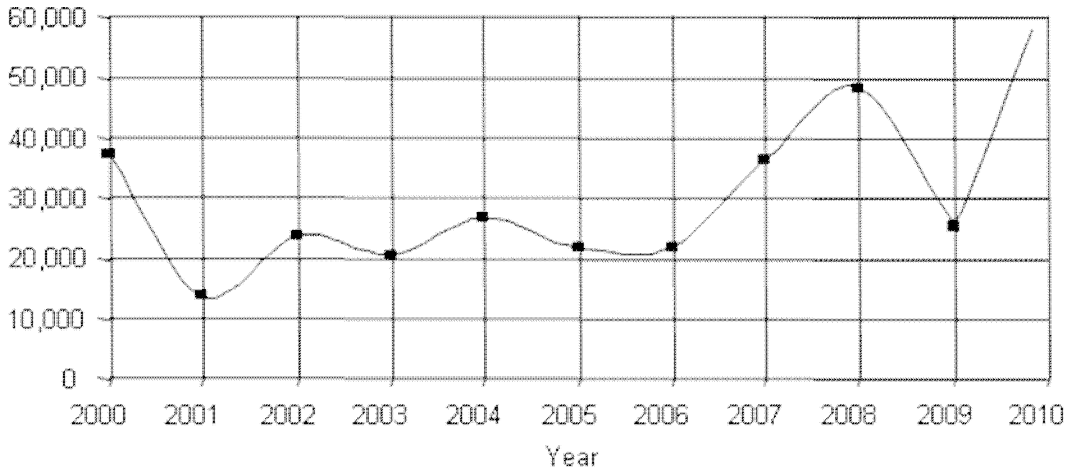


Figure 2.2. HCFC-22 Consumption for 2001 – 2010 (estimated) in kilograms



Based on the information presented above, the annual HCFC-22 consumption for Moldova showing the consumption for the period preceding the compliance regime 2010-2012 has been calculated as shown in Table 2.2 below, using 2010 survey data as the basis for the growth calculations, to demonstrate the freeze level and the initial phase-out schedules and the impact of the lead-in years on HCFC compliance.

Table 2.10: 2005 - 2012 Consumption and Allowable Post-2013 Consumption (ODP Tonnes)

	2005	2006	2007	2008	2009	2010*	2011	2012	2013	2014	2015
HCFC 22 Consumption	0.9	0.7	2.1	2.8	1.2	3.36	3.76	4.13	2.28	2.28	2.05
Phase-out Milestones					Baseline: 2.28				Freeze at the baseline		10%-reduction

** Estimated*

The estimate year-to-year growth factor is based on the experience in CFC consumption growth in the past. The historical data indicate that 12% is the average co-efficient which can be applied to the first two-three years of HCFC growth. While the global economic slow-down had negatively influenced the consumption of HCFC in Moldova in 2008 and 2009, the sector's recovery was detected in 2009 and confirmed in 2010. Furthermore, under the circumstances of the complete phase-out of CFCs in 2010, such growth received some boost, though it is believed it will level off in 2012 and will represent approximately a 10% annual growth.

2.4 Discussion on Growth and Starting-Point for Moldova

As can be seen from the above tables, the estimated growth through 2012 would reach a peak consumption level of 4.13 ODP tonnes. To return to the freeze level in 2013 the country will therefore have to arrest such growth. These efforts will have to take place during Phase 1 of the

HPMP and the 10%-reduction step by 2015 will correspond to 0.23 ODP tones in terms of the phase-out.

Taking account of the growth characteristics of its HCFC consumption, Moldova chooses the forecast baseline consumption as its starting point for aggregate reductions due to phase-out. Based on the above-described calculations, the starting point consumption level will be **2.28 ODP tonnes**. Consistent with the Executive Committee Decision 60/64 the starting point will be adjusted when the actual HCFC baseline is assessed.

2.5 HCFC Phase-out Schedule for Moldova

On the basis of the calculated forecast HCFC baseline consumption the HCFC phase-out schedule applicable to Moldova in accordance with Decision XIX/6 of the Parties to the Montreal Protocol has been calculated and is reproduced in Table 2.2 below.

Table 2.11: HCFC Phase-out Schedule 2013 - 2040 for the Republic of Moldova (ODP tonnes)

Reduction Step	MP Requirement	Allowable Consumption (ODP tonnes)	Schedule Period	Needed Reduction
Baseline	Average 2009-2010	2.28	2009-10	
Growth	Peak consumption	4.13	2012	
Freeze	Equal to baseline	2.28	2013	
Step 1	10% reduction	2.05	2015	0.23
Step 2	35% reduction	1.48	2020	0.80
Step 3	67.5% reduction	1.54	2025	0.74
Step 4	97.5% reduction	0.05	2030	2.23
Step 5	Complete phase-out	0.00	2040	2.28

2.6 Data validation

The process of data validation was built into the survey work applicable to estimates of servicing consumption. The assumptions made for purposes of statistical analysis based on banks of equipment being checked for consistency by actual enterprise specific survey information that confirmed things like typical leakage rates (overall annual service demand). The comparison of overall consumption determined by the "bottom up" survey/statistical approach (61.23 tons) correlates well with the "top down" consumption indicated by the preliminary import license/customs data information which was in the upper range of 50 tons.

2.7 Availability of Alternatives to HCFCs and Prices

One of the most effective measures to prevent the growth of consumption and subsequent reduction in R22 is to promote the use of the alternative refrigerants in the same manner as was done in phase out of CFCs.

An analysis of worldwide trends shows that the refrigeration sector of the Republic of Moldova is likely to adopt similar scenarios in use of alternatives to R22, leading to its complete phase-out.

In the first stage - up to 2015 we will see growth of R-22 in small and medium sized commercial equipment, R600a - in home refrigerators, R407C and R410A - in the split and unitary AC systems, a reduction of R-134a in road transport, with a relative preservation of R-22 in the large refrigeration facilities, manufacturing sector and air conditioning in commercial equipment may increase the share of R404A and R507, the number of systems on ammonia (R717) may remain unchanged.

The second stage - from 2016 to 2025 will end the use of R22 and R134a, which will be replaced by new generation HFC-refrigerants and natural refrigerants (blends of hydrocarbons, ammonia blends - with hydrocarbons, oils, etc., and carbon dioxide).

In multitemperature cycles in the production sector, blends of natural refrigerants will be used (ammonia, carbon dioxide, propane, isobutane, propylene, ethane, etc.).

In general, the strategy of substitution of R-22 to other refrigerants after 2010 may follow, in Moldova, the following trend (see below).

Table 2.12 - Forecast for refrigerant use in refrigeration sectors post 2010

	Refrigeration & AC sub sectors	**Steps**	
		Step 1 (2011 – 2015)	**Steps 2 & 3 (2016 – 2025)**
1	Industrial	R717, R404A	R717, R744, a mixture of natural agents
2	Commercial	R404A, R407A, R407B, R507	R407C, R410A, R744
3	Air-conditioning	R407C, R410A	R410A
4	Household	R600a, R600a/ R290	R600a, R600a/ R290
5	Transport	R404A	R744

The shift of most European countries towards ozone-friendly refrigerants has directly influenced the increased consumption of alternative refrigerants in the Republic of Moldova, which is growing continuously, as evidenced by the data presented on the import of these agents in Moldova in 2008.

Table 2.13 Imports of alternative refrigerants in 2008 (on the basis of permits issued)

Refrigerant	**HFC-134a**	**R-404A**	**R-407C**	**R-410A**	**R-507**
In Kg	5,849.6	6,236.9	226	684	3,628

Prices of refrigerants on the market in the Republic of Moldova according to data from importers are listed in Table below.

Table 2.14 *Fluctuation of imported refrigerant prices in the Republic of Moldova (production: Europe & China)*

Refrigerant	Market price USD/kg., excluding taxes					
	2004	**2006**	**2007**	**2008**	**2009**	**2010**
CFC-12	5.0	14.0	16.1	Europe * – 16.7 China ** - 11.0	Europe – 18.1 China – 14.0	China – 14.0
HCFC-22	4.1	7.1	7.3	Europe – 8.8 China - 6.3	Europe – 7.2 China - 5.0	Europe – 7.7 China - 4.6
HFC-134a	8.0	14.0	17.0	Europe – 15.4 China - 12.1	Europe – 16.9 China - 12.0	China - 15.5
R-404 A	-	18.5	19.6	Europe – 17.6 China - 13.2	China - 12.7	China - 9.0
R-406 A	-	-	-	China - 9.0	China - 7.0	China - 5.0
R-407 C	-	-	-	-	China - 9.0	China - 11.5
R-410 A	-	-	-	-	China - 9.0	China - 11.5
R-507	-	-	-	-	China - 9.5	China - 10.0
R-600	-	-	-	-	China – 10.8	China - 11.0

* Europe
** China

3 Phase Out Strategy

3.1 Overarching Strategy

Since the refrigeration and air-conditioning sector in Moldova represents the major HCFC consumption (approximately 60 Mt in 2010), the measures to phase-out HCFCs should be an upgrade of activities implemented under the CFC phase-out process. The infrastructure, logistics and distribution-channels with enterprises, service companies and technicians involved in the CFC technology are nearly the same.

Over the years and out of necessity, refrigeration technicians and companies in the field have extended the range of their activities to HCFC and HFC refrigerants. Basically, in relation to CFCs, the ways to reduce emissions of HCFCs and HFCs are the same, including sound system design, improved commissioning and maintenance practices, leak detection, monitoring and recovery, and functional recovery recycling and reclaiming (RRR) process.

All of these segments need to be carefully evaluated and upgraded. The global industry faces new regulations with requirements on equipment owners, technicians and companies in the RAC sector (i.e. in Europe the ODS and F-Gas Regulation; EN 378-2 Refrigerating systems and heat pumps; Safety and environmental requirements; Design, construction, testing, marking and documentation). It is important to gradually harmonize the national regulations, standards and codes with those being applied at the international level.

Another important measure to be considered is that of moving the process of training and certification for technicians and companies to a higher level, again in line with international level requirements. Although the efforts to improve the basic skills of technicians in the servicing sector have been made under earlier projects (RMP, RMP update, TPMP), it has been shown that the servicing sector is still in need of adapting and improving knowledge for the new practices typical for HFCs blends and even more so for natural refrigerants.

The EU ODS and F-regulation dictated detailed and challenging requirements for the certification of technicians and enterprises establish a clear target for the industry. These structures can also easily be upgraded with competencies to work with hydrocarbons, ammonia and carbon dioxide, the line of natural refrigerants. With a strategy of harmonization with EU, it is of significant importance to establish a certification scheme following EU standards.

As alternatives to HCFCs in the RAC sector, four groups of refrigerants exist today, HFCs, hydrocarbons, ammonia and carbon dioxide, the three latter often called “natural refrigerants“ as they are naturally occurring and have low Global Warming Potential (GWP). With increasing focus on climate change low GWP refrigerants should be the preferred choice whenever possible; however, this will require extensive education of the industry and adaptation of legislation. The low GWP alternatives are all associated with safety, toxicity and/or technical challenges that must be overcome for a wide introduction on the market.

The use of HFCs as an alternative is the route taken by most of the global RAC industry as well as in Moldova. However, it is well known that HFCs are under pressure due to the significant Global Warming Potential and their use is now regulated in industrialized countries to reduce

their consumption. By making it clear that regulations for ODSs are coordinated, with the intention to apply them for HFCs in the near future as well, the introduced measures for HCFC will not be understood as short-term and unnecessary.

3.2 First Stage Implementation Programme (2011-2014)

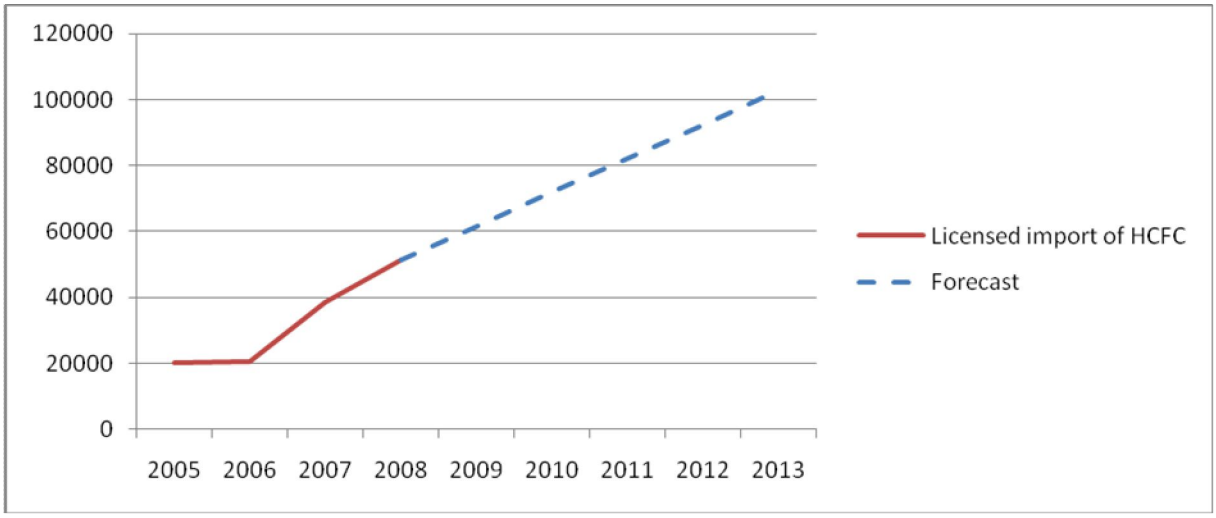
The action plan for 10%-reduction of the HCFC consumption by 2015 will include:

- Regulatory measures consisting of:
    - Harmonization of legislation with EU legislation;
    - HCFC chemical import quotas, permits and environmental taxation;
    - Bans on specific HCFC equipment;
    - Reporting system for the servicing sector;
- Technical Capacity Development:
    - Training and certification of existing technicians with supply of basic service equipment;
    - Support to improve knowledge base at vocational schools;
    - Support to Refrigeration Association;
    - Training of Customs officers.
- Monitoring of activities:

3.2.1 Regulatory measures

The existing regulations on ODS are focused on the CFC phase-out, but it also partly cover HCFCs. These need to be upgraded to take into account the new phase-out schedule of HCFC.

Based on the HCFC survey, a "business-as-usual" type of scenario on installed quantities of HCFCs equipment and, foreseen consumption in Moldova, the needs for the period from 2010 is estimated at approximately 60 Mt per annum. An increase of the consumption is expected due to the growth of the economy and increased used of refrigerated and frozen goods as well as air-conditioning. In the period 2006-2008, the growth has been averaging at around 50%.



Unless limitations on the import of new equipment containing HCFC and installation of systems charged with HCFC are introduced it is expected that the consumption of HCFCs will continue to increase in the period 2010-2013 and that Moldova will face significant challenges to meet the freeze level of 2013.

The Ministry of Environment intends to establish HCFC import quota for the allowed annual import of HCFC-22 to meet (1) the needs in the service sector and (2) the obligations under the Montreal Protocol for the reduction of HCFC consumption in line with the established phase-out schedules.

According to the standard practice, the importers/exporters of HCFCs have to apply for import/export licenses to the MoE for each shipment during the current year until the quota is reached. The same method will be applied in the future. For the time being, the application for an import/export permit is to be submitted in hard copy. Every importer/exporter of ODSs has to report by 31 January each year to the MoE on the total annual quantities of imported/exported goods under issued permits for the previous year.

The following policy instruments will be implemented through modifications of the existing Regulation on ODSs and alternative refrigerants as follows:

- Harmonization with EU legislation (F-Gas Regulation);
- Annual HCFCs import quotas for 2012-2013 will be adopted by the end of 2011 based on the actual baseline figures (Average HCFC consumption for 2009-2010) will be introduced. At the same time, the quotas for the years 2013 and onwards will be announced;
- An introduction of a ban on import of certain HCFC containing equipment (new and second hand, especially small air conditioners) for 2013 (it is in the current discussions);
- An evaluation of the benefits and disadvantages related to the introduction of an environmental tax for the import of HCFCs chemicals will be performed;
- Mandatory two-level training and certification of technicians will be gradually introduced;

- Mandatory logbooks for users of the equipment containing more than 3 kg of charge (6 kg hermetically sealed) will introduced in 2012. The main purpose of equipment logbooks is to collect data on refrigerant emissions and create a system where the log books of service technicians can be compared with the log books on the serviced installations to make the recovery requirement and no-venting enforceable as well as to reduce the possibilities to introduce illegally imported refrigerants on the market;
- A web-based electronic reporting and licensing system will be developed. The handling of ODSs and in the future also of HFCs has to be recorded by the service enterprises and the records submitted to the authorities on an annual basis. At the moment, only HCFC records are submitted in hard copy, but it is expected that this will also cover HFC in the near future. In order to make the reporting process easier and cheaper and to increase the quality of reports, it is recommended to introduce an electronic, web-oriented reporting system. The system can keep records for each customer and their installation(s). This information can then be transferred to the central database. Each company could use this tool to report their consumption of ODSs and alternative refrigerants via the web page to the certification body. The reporting would be required in order to update the company certificate.

Description	Amount [USD]
Legislation (HCFC quotas, bans on import of specific HCFC containing equipment, harmonization with EU legislation)	2,000.00
TOTAL	**2,000.00**

3.2.2 Technical Capacity Development

3.2.2.1 Training and certification of technicians with supply of basic service equipment

There is a strong need to introduce a new certification system which will clearly define the level of competence and will distinguish the expertise domain of each participant in the course. This measure will lead to reduced emissions as it will limit the access to refrigerants of less competent technicians.

As indicated in the EU F-Gas Regulation, a four level certification is proposed. With highest certification category I, the technician is entitled to perform leakage check, recovery, installation, service and maintenance of all systems; with category II, leakage check, recovery, installation, service and maintenance of systems containing less than 3 kg of refrigerant (6 kg in hermetically sealed systems); with category III, the recovery of refrigerant; and with category IV, the leakage tests.

In the Republic of Moldova it is reasonable to introduce 2 (two) levels of certification:

1. Certification category I - the technician is entitled to perform leakage check, recovery, installation, service and maintenance of refrigeration and AC systems containing more than 6 kg of refrigerant;
2. Certification category II - the technician is entitled to perform leakage check, recovery, installation, service and maintenance of refrigeration and AC systems containing less than 6 kg of refrigerant;

According to the existing regulations adopted in Moldova, technicians dealing with ODSs and/or HFCs are obliged to complete the training in one National Training Centre "Tehnofrig" near the Technical University of Moldova. However, under the current Regulations (Law 852-XV dated 14.02 2002), there is no distinction between technicians working with large-scale refrigeration units and having long experience in the field, and technicians that are at the beginning of their careers and are dealing with automotive small-scale air-conditioning units.

Nevertheless, if they successfully pass the examination, they are awarded with a certification of training and are entitled to work with any kind of equipment containing ODSs and/or HFC refrigerants. However, all national trainers report large discrepancies in the level of knowledge that exists between individuals that attend the training courses. The continuous updating and expansion of the training materials and the effort invested in the training courses over the years have improved the situation but there is still a strong need to improve and extend training and certification to follow rapid technical development as well as upgrading of certification schemes.

All technicians who have attended the existing qualification schemes under Refrigerant Management Program activities in national training centre "TEHNOFRIG" and have been awarded with a Certification of Training can be awarded with category III and IV in line with the European F-Gas Regulation. The total number of technicians that have attended the courses (previous projects (RMP, RMP Update and TPMP) in Moldova is approximately 450. A certification body for categories I and II will be backed-up by a national law or regulation.

Technicians, who now wish to acquire category I and/or II, have to take additional training courses. Minimum requirements as to the skills and knowledge to be covered are:

- Theoretical part of the course as indicated in the category columns by skill category T (acc. to EU Regulation No. 303/2008);
- Practical part of the course as indicated in the category columns by skill category P (acc. to EU Regulation No. 303/2008);
- Examination should cover each of the skills and knowledge groups related to classes of 1, 2, 3, 4, 5 and 10 as indicated below;
- Examination should cover at least one of the skills and knowledge groups related to classes of 6, 7, 8 and 9 as indicated below.

Skills and knowledge groups are:

1. Basic Thermodynamics.
2. Environmental impact of refrigerants and corresponding environmental regulations.

3. Checks before putting in operation, after a long period of non-use, after maintenance or repair intervention, or during operation.
4. Checks of leakage.
5. Environment-friendly handling of the system and refrigerant during installation, maintenance, servicing or recovery.
6. Component: installation, putting into operation and maintenance of reciprocating, screw and scroll compressors, single and two-stage.
7. Component: installation, putting into operation and maintenance of air-cooled and water-cooled condensers.
8. Component: installation, putting into operation and maintenance of air -cooled and water-cooled evaporators.
9. Component: installation, putting into operation and servicing of TEV and other components.
10. Piping: building a leak-tight piping system into a refrigeration installation.

It is estimated that approximately 50 technicians will need to be trained in Moldova. In addition, this project component will ensure the supply and provision of additional sets of basic recovery equipment and tools to equip the technicians who were certified in line with the new system. This will attempt to strongly reinforce the trainings and the establishment of certification system described above.

A set of service equipment and tools will be supplied within this stage of HPMP. The total is estimated to be 20 sets as provided below:

- Portable recovery machines capable of dealing with HCFCs and HFCs;
- Double stage vacuum pumps;
- Required multiuse cylinders;
- Leak detectors; and
- Basic service tools.

In future stages of HPMP, additional equipment sets should be required to enlarge the coverage of technicians with modern tools capable of working with HCFCs and HFCs.

Description	**Amount [USD]**
Preparation/update of training materials	2,000.00
Update of Code of Practice of Good Practices in Refrigeration and Air-Conditioning/Certification of technicians (category I and II according to legal requirements of EC Regulation 842/2006)	4,000.00
Training of 50 technicians/students according to the legal requirements of the EC Regulation 842/2006 (commonly known as the F-Gas Regulation).	15,000.00
Recovery equipment/service tools (20 sets): - Recovery machines	34,000.00

- Vacuum pumps - Cylinders - Leak detectors - Service tools	
TOTAL	**55,000.00**

3.2.2.2 Vocational school strengthening

Under the TPMP, professional vocational schools have been equipped with demonstration refrigeration units (stands with disassembled domestic refrigeration equipment for educational purposes), together with accessory equipment (basic service tools). Educational materials were produced and the training Centre "Tehnofrig" was established. However, such assistance is considered as limited as:

(-) published materials were translated by NOU on the basis of training materials formulated for the general training of technicians;
(-) previous assistance did not envisage any substantial and regular training to teachers to upgrade knowledge; and
(-) it also did not involve any change in teaching curriculum to make the impacts more sustainable.

According to the information from school principals, the educational results are at a low level. The equipment is not used in a proper way. The present challenge is the insufficient technical knowledge of the teaching staff.

Taking into consideration that refrigeration and air-conditioning study topics are introduced in the curriculum, and that refrigeration and air-conditioning equipment is subject to frequent changes which requires new knowledge of new equipment designs, it is necessary to produce new lecturing materials, which would be periodically upgraded. The materials would consist of relevant topics such as basic refrigeration principles, influence of refrigerants on the environment, new low GWP and non-HFC technologies based on the material developed internationally to comply with the upgraded certification scheme. Thus, in the result, it is expected that the system of training professional level technicians will be gradually improved.

Description	Amount [USD]
Elaboration/Update of training materials	2,000
TOTAL	**2,000**

3.2.2.3 Strengthening of the Public Association of the Refrigeration Technicians

The Public Association of the Refrigeration Technicians is an important partner and acts as an advisory board to the government, public bodies and other organizations in Moldova, with the intention to promote the best interests of the refrigeration and air-conditioning sector in Moldova. The Association has technically supported formulation of HPMP, and serves as the benchmark for technical expertise in the servicing sector. Thus, in order to promote wider adoption of best practices of relevant stakeholders in the refrigeration sector, the strengthening of the Association is proposed in this component.

The Public Association of the Refrigeration Technicians can, in addition to providing guidance to its members, represent and promote the interests of manufacturers, importers, wholesalers, distributors, contractors, designers and end-users of refrigeration plants, equipment and components, and help facilitate the compliance of the country with MP provisions.

The Association specifically proposes to:

- promote good business ethics and environmental responsibility in the industry;
- promote publicity for the refrigeration sector through exhibitions, media contacts and general public relations;
- be a counterpart to relevant authorities that affect or might affect the technical or commercial interest of the RAC sector;
- through education and training, encourage uniform high standards of competence and of training and education to achieve this at all levels throughout the industry;
- coordinate the market and technical research in the areas of common interest identified by members;
- assume responsibility to develop and continuously upgrade the national Code of Practice in the servicing sector and publish technical newsletters;

It is proposed to support the Association with the creation of its own web-site, the opportunity to have a limited number of workshops on HCFC alternatives and equipment maintenance practices for its members, and a modest upgrade of its service tools for the training.

Description	Amount [USD]
Strengthening of the Public Association of the Refrigeration Technicians	
- Web-site	250
- Workshops	1,000
- Service tools	2,750
TOTAL	**4,000**

3.2.2.4 Customs officer training

Trainings for Customs officers were arranged in previous projects (RMP, RMP Update and TPMP) but with the introduction of new ODS and HFC chemicals and due to rotation of staff/

recruitment of new officers there is an urgent need to train such new officers, and upgrade competencies of the existing custom officers. Lectures will consist of two parts: theory and practice. A Handbook for Customs Officers has been prepared but needs to be updated. The total number of Customs officers that attended the courses in Moldova was 251 people.

The main objective of the training programme is to provide Customs officers with the skills required for the monitoring and control of imports and exports of ODSs and the equipment containing or relying on them. In addition, the skills for detecting and preventing illegal trade will be provided as well. Customs officers will be trained on how to detect and prevent the illegal trade of ODSs. They will also be trained for using the refrigerant identifier systems properly. At this stage, it is estimated that approximately 40 customs officers will need to be trained every year.

This project component will provide training for 25 officers and ensure update of training materials and the supply of modern multigas identifiers.

Description	Amount [USD]
Multigas refrigerant identifier with autonomous electricity supply (battery) – 3 pcs.	11,000.00
Update of Training materials	1,000.00
Training of Customs officers (25 people)	6,000.00
TOTAL	**18,000.00**

3.2.2.5 Awareness raising activities

Public awareness activities are an integral part of the HPMP project as they are required as building blocks on the way to achieving a complete phase–out of HCFC and the promotion of the use of low GWP alternatives. These activities will be tailored towards the planned policy interventions in the area of implementing the phase-out of HCFC group of chemicals and in general with a view over the environmental and health issues posed by the destruction of the ozone layer.

The main awareness raising activities will target:

- Public (schools, especially vocational schools; households, etc.);
- Service technicians and industry;
- End users that own and/or operate equipment.

Description	Amount [USD]
Broadcasting /Video clips (production)/ Pamphlets	3,000.00
Commercials (newspapers, TV)	1,000.00
TOTAL	**4,000.00**

3.2.3 Monitoring of activities

The implementation of HPMP activities involves constant interaction with the concerned stakeholders, periodic dialogue on issues and concerns and evolving schemes for implementation of the HCFC phase-out strategy. Therefore, monitoring of progress is an essential element of the programme of actions which would provide a feedback to the decision-making process to achieve better results. This component will achieve these targets through monitoring of the timely implementation of the HPMP components, interacting with major stakeholders and interested parties, and providing feedback on the effectiveness of the proposed measures.

Description	Amount [USD]
National consultant(s)	3,000.00
TOTAL	**3,000.00**

Cost Estimate Implementation of Stage 1 of the HPMP

Activities / project	Time frame	Estimated costs [USD]
1. Legislative framework	2011 - 2014	2,000
2. Technical Capacity Development:	2011 - 2014	
• Training and certification of existing technicians with supply of service equipment;		55,000
• Vocational school strengthening;		2,000
• Strengthening of the Public Association of the Refrigeration Technicians		4,000
• Training of Customs officers;		18,000
• Awareness raising activities.		4,000
3. Monitoring of activities	2011 - 2014	3,000
TOTAL		**88,000**

3.2.4 Other Impacts on the Environment Including on the Climate

As noted above in the presentation of the HPMP strategy framework, integration of consideration of broader global environmental issues, namely climate change, is a part of this framework. Consistent with the direction provided in Decision XIX/6 and subsequent ExCom guidance this particularly relates to climate change, the description of the action plan above notes where these linkages exist.

In order to reduce the failure rates and energy consumption as well as to gradually harmonize regulations with European Union, it is of interest to bring the RAC industry to the EU level standards. There is a need to ensure that the phase-out of HCFCs is taken as an opportunity to introduce environmentally friendly, energy-efficient solutions.

However, as previously indicated, the presence of natural refrigerants such as hydrocarbons, CO2 and ammonia in the R&AC sector is at a low level, while possibilities for their implementation are significant. Despite often somewhat higher initial and maintenance costs, the main obstacles are a limited number of qualified and competent service staff and companies and, the lack of awareness among end-users. This issue should be treated under education/training scheme and measures for raising awareness.

The following summarizes a number of specific aspects that potentially could be incorporated into the implementation of this HPMP and which link to climate change:

- Involvement of authorities responsible for climate change policy as key institutional stakeholders
- Adoption of EU standards for the certification of technicians
- Introduction of refrigerant management regulations that would in future extend to HFCs

4 Project Coordination, Management and Monitoring

The National Ozone Unit (NOU) is the central national body within the Ministry of Environment, which is fully responsible for the coordination of governmental activities with respect to the ozone layer protection and facilitation of ODS phase-out. This Office is in charge of implementing the Country-Programmes under the Montreal Protocol.

The National Ozone Unit will be given the role of coordinator of the national activities towards the HPMP Phase-out Plan implementation. The management of the implementation of the planned project activities will be allocated to the NOU in cooperation with UNDP as Implementing Agency.

Accordingly, the planned activities and the stakeholders in implementation will be:

- UNDP - Implementing Agency (preparation of projects, coordination of the implementation);
- Government;
- National consultants;
- Beneficiaries (industry, importers/exporters, companies).

Reports

The NOU will submit annual progress reports on the status of implementation of HPMP to UNDP or if otherwise requested. Participants in the implementation of the projects will submit their individual reports defined in the ToR of the Projects.

5 Annexes

5.1 DRAFT AGREEMENT (submitted separately)

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5.2 Annex II - Survey Results

5.2 Data on R-22 Refrigeration Equipment in the Assembly/Industrial Sectors

1.1.1. Table A. 1 - Enterprises with a Total Cooling Capacity of Over 100 kW

Nr.	Organization name	Address	Contact person	Tel, fax, e-mail	Equipment specifications				
					Model, type	Year installed	# of units	Qo, .kW	R22 for maintenance of equipment (kg)
1	„Cristi" SRL	mun. Chisinau, s. Bucovet.	Chilianu Ion		LH 114/4T-12.2	2002	8	27	240
	Total						8	216	240
2	„Niv-Impex" SRL	s. Șișcani, r-nul. Nisporeni	Neagu Ion Vasile	(+264) 42230, 42400 fax : 42218	LH 114/4T-12.2 FH -25-2-0	2003 2004	4 1	27 27	120 30
	Total						5	135	150
3	„Telemar" SRL	mun. Chisinau, Str. Uzinelor 21//1	Teleuca Marian	/+373-22/ tel: 479098 fax: 476679 telemar @mtc.md	LH 84/4FC 5.2 LH 64/2EC 3.2 114/4T-12.2 LH 124/4J-20.2 LH 84/4 CC-6.2 LH 84/2U 5.2	2003 2003 2004 2006 2007 2008	1 1 1 1 1 1	10 8 27 22 17 16	16 13 30 36 18 17
	Total						6	100	130
4	„Basfruct" S.A.	mun. Chisinau, str.Studentilor 1//7	Vaipan Gheorghe Aurel	/+373-22/ tel: 491378	FH 25-2-0-Y	2004	16	27	480
	Total						16	432	480

Table A.1 continued

Nr.	Organization name	Address	Contact person	Tel, fax, e-mail	Equipment specifications				
					Model, type	Year installed	# of units	Qo., kW	R22 for maintenance of equipment (kg)
5	"Valul Traian" SRL	mun. Chisinau, Str.V.Alexandri 68	Harti Vasile Ilici	/+373-22/ tel: 221908 valul-traian @logitera.md	LH124/4N-12.2	2005	1	20	35
					LH 84/2CC-6.2	2005	1	19	18
					LH 135/6J-22.2	2006	1	30	45
					LH 153\6J-J22.2	2007	1	33	4
					LH 114/ 4TCS -12.2	2007	1	27	30
					LH 114/4TCS-12.2	2008	3	27	90
	Total						8	210	222
6	„Carmez" S.A.	mun. Chisinau, Sos.Muncesti 121	Cislaru Anatol Emanuel	/+373-22/ tel:551093 fax: 559169 carmez@ carmez.com	LH 135/4H-15.2	2005	2	25	40
					LH 135/6J-22.2	2005	1	30	45
					LH 135 /6J -22.2	2007	1	33	45
					CEKN-3000 3,5	2008	1	5	3
					LH 124/4N 12.2	2008	2	15	50
					LH 104/4EC – 6.2	2008	1	17	17
					LH 124/4TCS 12.2	2008	1	27	30
					LH 135/4NC – 20.2	2008	1	30	36
					LH 104/4EC – 6.2	2008	1	17	11
					LH 124/4DC – 7.2	2008	1	19	18
					LH 84/4EC 6.2	2009	1	16	14
					LH 64/4FC 3.2	2009	1	10	10
					Bitzer F 20/4 DC 7.2	2009	1	17	16
	Total						6	301	105
7	"Orhei-VIT" S.A.	or.Orhei str. Stejarilor 20.	Creidman Ghenadii Eduard	(+235) 23810 tel: 21567 info@orhei-vit.com	Masina de răcire a apei YCRM-280	2006	1	250	110

	Total		1	250	110

Table A.1 continued

Nr.	Organization name	Address	Contact person	Tel, fax, e-mail	Equipment specifications				
					Model, type	Year installed	# of units	Qo, .kW	R22 for maintenance of equipment (kg)
8	„Ipteh" S.A.	mun. Chisinau, bd. Stefan cel Mare, 65	Stratan Iurie Ion	/+373-22/ tel: 272089 fax: 272414 ipteh@mdl.net	Masina de racire a apei YCAL-0377	2006	1	350	140
	Total						1	350	140
9	"Sanrado" SRL	mun. Chisinau, Calea Iesilor 1. 61/2-E	Laturinschii Vladimir Tudor	/+373-22/ tel: 716684 69775701 teopiy_dom@ mail.md	Masina de racire 2140 a apei cu modul YCWL Ozaline	2006	1	120	40
	Total						1	120	40
10	IM "Vegfrutis" SRL	U. T. A. Gagauzia mun. Comrat str.Tankistov, 1		/+373-298/ tel: 23532 fax:23796	Masina de racire a apei YORK-ZCAL 0255	2006	1	250	140
	Total						1	250	140
11	"Vera Trofim" SRL	or.Ialoveni str.Alexandru cel Bun	Trofim Vera	/+373-268/ fax: 24970 tel: 68405	LH 104/4TCS-8.2 LH 135/4NCS 20.2 LH 104/4TCS-12.2	2007 2008 2008	1 2 2	15 42 22	25 72 50
	Total						5	121	147
12	SC „Satevis – MG"	r-n Hînceşti s. Draguşeni Noi			LH 124/4TCS 12.2 LH 124/4TCS 12.2 Y	2008 2009	1 4	27 27	30 120

	SRL				LH 135/4NCS-20-2 12.2 Y	2009	1	27	42
	Total						6	162	192

Table A.1 continued

Nr.	Organization name	Address	Contact person	Tel, fax, e-mail	Equipment specifications				
					Model, type	Year installed	# of units	Qo, .kW	R22 for maintenance of equipment (kg)
13	Plaiul- Birladean SRL	r-n Ocnita s. Birladeni	Pavliuc Tatiana	/+373-271/ tel: 75062 67100093	LH 135/4NCS 20.2	2009	3	42	108
	Total						3	126	108
14	„Asamblor” SRL	s. Gratiesti	Telescu Andrei	/+373/ 69102649	LH 124/4TCS 12.2 Y LH 114/4TCS-12.2	2009 2006	1 4	27 27	30 120
	Total						5	135	150
15	Orhei-Vit S.A.	or.Orhei str. Stejarior 20	Mudrea Simion	23521567 23523810	Bitzer 4 FC-5,2 Ciller York 208	2008 2008	1 1	11 180	15 270
	Total						2	191	285
16	Colicauţanu S.R.L	s.Colicauti r-nul Briceni	Lupu Mihai	24742585	Centrala frigorifica MANEUROP SY 300	2008	1	185	290
	Total						1	185	290
17	"Carne DK" SRL	s. Hruşeva r-nul Criuleni		/+373/ tel: 456029 fax: 456416	Bitzer	2002	7	50	560
	Total						7	350	560
18	"Grusagroindcom" SRL	s. Hruşeva r-nul Criuleni			Bitzer S3900	2007 2007	3 1	10 180	45 325
	Total						4	210	370
19	"Şalaru	mun. Chisinau,	Salaru	/+373-22/	KSl-80	1992	3	80	150

	Andrei" Î.I.	Aeroport	Andrei	tel: 524811					
	Total						3	240	150

Table A.1 continued

Nr.	Organization name	Address	Contact person	Tel, fax, e-mail	Equipment specifications				
					Model, type	Year installed	# of units	Qo, .kW	R22 for maintenance of equipment (kg)
20	Anifrig SRL	s.Costesti Ialoveni			FH 18x2	2000	3	40	240
	Total						3	120	240
21	Avicola-Rosso SRL	s.Floreni Anenii Noi	Alexeev V.	524157	FH 9x2	2002	3	60	180
	Total						3	180	180
22	Makler Kelers SRL	s.Budesti		69109377	Bristol	2000	6	60	200
	Total						6	360	200
23	"Turcanu M" Î.I.	s.Codru	Turcanu M	69119766	Bitzer	2008	4	30	220
	Total						4	120	220
24	Agrosargal SRL	s.Sarata Galbena r-nul Hincesti	Papuc Ion Andrei	26 950 246	FH 40	2001	4	40	400
	Total						4	160	400
25	"Roris Viniarum" Î.I.	s.Cighirleni	Dmitrii Ivanovici	27 762 223	FH 18x2	2000	2	80	200
	Total						2	160	200
26	“Prodcomert” SRL	or.Straseni	Ciriac	69132799	FH 18x2	2004	2	80	200
	Total						2	160	200
27	"Nadejda-92" SRL	or.Straseni	Filin P.V	69141412	FH 18x2	2003	2	80	200
	Total						2	160	200

28	„Ademol Grup” SRL	mun. Chisinau, s. Bucovet.	Gheorghe Soilita		FH-100	1994	2	180	200
	Total						2	180	200

Table A.1 continued

Nr.	Organization name	Address	Contact person	Tel, fax, e-mail	Equipment specifications				
					Model, type	Year installed	# of units	Qo., kW	R22 for maintenance of equipment (kg)
29	„ Drujba” Agrofirma	S.Protegailovca Str.Pervomaiscaia, 5	Macean Danil	(+552) 63480 63403	FH-40	1990	3	120	225
	Total						3	120	225
30	„Floarea Soarelui” S.A	mun. Balti, Str. 31 August, 6	Orlovshi Anatolii	/+373-231/ tel: 22280 fax: 25414	MKT-220 MKT-110 FH-20	1998 1998 1998	2 3 3	880	740
	Total						8	880	740
31	„Combinatul Alimentar” S.A.	mun. Balti, str.Kievului	Kirilov N	/+373-231/ tel: 41216	Vuno-60	1999	2	188	220
	Total						2	188	220
32	“Doina-Vin” SRL	s.Razeni r-nul Ialoveni	Bors F.T	/+373-22/ tel: 228573	MKT-40	1998	1	75	100
	Total						1	75	100
33	„Agrofirma Cimislia” S.A.	Or.Cimislia, Str.Alexandri, 77	Tapordei Timofei	/+373-241/ tel:22184 fax: 22888	Vuno-60	2003	6	600	600
	Total						6	600	600
34	„Bacii” Cap	mun. Chisinau, s.Bacioi	Donciu Dumitru	/+373-22/ tel: 383745	Vuno-80	2002	2	220	200

	Total						1	350	200
35	Combinatul de vinuri de calitate"Milestii Mici" I.S	s.Milestii Mici, r-nul Ialoveni	Maciuga Mihai	/+373-22/ tel: 382777	Vuno-80 Vezo	1996 1998	1 2	270	180
	Total						3	270	180

Table A.1 continued

Nr.	Organization name	Address	Contact person	Tel, fax, e-mail	Equipment specifications				
					Model, type	Year installed	# of units	Qo., kW	R22 for maintenance of equipment (kg)
36	"Ungheni-Vin" S.A	s.Pirlita r-nul Ungheni	Sova Nicolai	/+373-236/ tel: 22433	Vuno-80	2000	1	110	100
	Total						1	250	140
37	"Botritis" S.A	s.Cania r-nul Cantemir	Antoniu Anatol	/+373-273/ fax: 41025	Vuno-60 Velo	2008	1 1	294	300
	Total						2	294	300
38	"Trifesti" S.A	s.Bucuria r-nul Cahul	Curos Gheorghe	/+373-299/ 55343	Vuno-80	2000	2	215	200
	Total						2	215	200
39	"LionGri" SRL I.M	Mun.Chisinau Str.Muncesti, 801	Sonic Vladimir	/+373-22/ tel: 211243	Centrala Bitzer	2001	1 1	100	80
	Total						2	100	80
40	„Vinaria din Vale & Co" S.A	s. Siseni r-nul Calarasi	Rosca Ion	/+373-244/ 66401	Carier HM-14	2001 2001	1 1	200	110
	Total						2	200	110
41	"Agrostil" S.R.L	s.Dorotcaia r-nul Dubasari	Zaharia Simion	069480000	HM-28*2 HM-14*2	2001	2 2	210	100
	Total						4	210	100
42	"Besleaga E.R.V.A"	s.Varnita	Besleaga	069130797	York CUAM-400	2009	1	200	70

	S.R.L	r-nul Anenii-Noi	Vitalii						
	Total						1	200	70
43	"Floreni" S.A	s. Floreni r-nul Anenii-Noi	Barbuta Iurii	079534212	KSL-40 MDV-150TH Centrala Bitzer	2000 2007 2009	6 3 1	240 30 60	320
	Total						10	330	320

Table A.1 continued

Nr.	Organization name	Address	Contact person	Tel, fax, e-mail	Equipment specifications				
					Model, type	Year installed	# of units	Qo., kW	R22 for maintenance of equipment (kg)
44	"Bucuria" S.A	mun. Chisinau, Str.Columna 162	Umbirovscaia Galina	/+373-22/ tel: 895518 fax: 895543	Ciler "Bitzer" ESH 743 PB-20 PB-28 P-110 PB-14 TAG-4568 TAG-4546	2008 2000 1991 2004 2003 2008 12007	5 1 1 1 1 14 10	200 40 60 160 30 98 40	100 40 50 100 20 168 100
	Total						33	628	578
45	Amir SRL	Mun.Chisinau Str.C.Basarabiei,4	Dirar S.	/+373-22/ 270386	Sabroe Refrigeration	2000	3	340	560
	Total						3	340	560
46	Drancor SRL	Mun.Chisinau Str.Burebista, 78	Drangai Nichita	/+373-22/ 521639	Bitzer Sabroe	1998	2 2	295	270
	Total						4	295	270
47	Viceni SRL	s.Panasesti			VRN-20	1997	3	125	110
	Total						3	125	110
48	Centrul Republican de	Mun.Chisinau		/+373-22/ 736213	M7-12/50				

	Hemotransfuzie				HS-280/75, CC-30	1990	30	105	123
	Total						30	105	123

Table A.1 continued

Nr.	Organization name	Address	Contact person	Tel, fax, e-mail	Equipment specifications				
					Model, type	Year installed	# of units	Qo, kW	R22 for maintenance of equipment (kg)
49	Uzina “Alfa”	Mun.Chisinau Alba Iulia 75		/+373-231/ 590116	MKT-220		3	830	2200
	Total						3	830	2200
50	Uzina “Sigma”	Mun Chisinau		/+373-22/ 765782	MKT-220 HM22FUU-400	1986 1992	2 2	 1350	 3600
	Total						4	1350	3600
51	Uzina "Semnal"	Mun.Chisinau			MKT-220	1988	1	280	750
	Total						1	280	750
52	Societatea orbilor din RM	Mun.Chisinau		/+373-22/ 731823	PB-80	1993	2	235	400
	Total						2	235	400
53	“Rioncom-Grup” SRL	Mun Chisinau	Casicov Denis	/373-/ 69303673	Bitzer LH135/4 NC-12.2	2006	3	114	141
	Total						3	114	141
54	Centrul de hemotransfuzie	Or.Balti Decebal, 113 A	Cociu Nicolai	/+373-231/ 72182 Fax: 70225	KS-30 LZ-45		21	145	170

					HS-250 MKT-40			
	Total					21	145	170

Table A.1 continued

Nr.	Organization name	Address	Contact person	Tel, fax, e-mail	Equipment specifications				
					Model, type	Year installed	# of units	Qo, .kW	R22 for maintenance of equipment (kg)
55	"Vis Pas si Co" SRL	s.Girbovet	Ivan Grigoriev	/+373-/ 79600267	MVV 35-2-2-0	2005	1	70	95
					Bitzer 4H-15.2	2005	1	56	82
					MVV 20-2-2-0	2005	1	40	63
					MVV 28-2-2-0	2005	1	56	85
					Bitzer 4G-20.2-3	2008	1	65	92
	Total						5	287	417
56	"Unmezgrup" SRL	Or.Ungheni	Mircea	/+373-/ 69869107	Bitzer 6H-35.2-3	2009	1	212	209
					Copeland 3DS3A150E-2	2009	1	81	168
	Total						2	293	377
57	"Codru" SRL	s.Bicovet	Victor	/+373-/ 694027779	Bitzer LH114/4T-12.2	2004	8	184	236
			Goenanu		FX50-2-0	2007	4	200	240
	Total						12	384	476
58	"Agro-Product" SRL	S.Colicauti r-nul Briceni	Vlad Gamureac	/+373-/ 68086605	FX50-2-0	2007	8	400	428
					Bitzer 4NC-20.2	2009	2	76	80

	Total						10	476	508
59	"Carmez Int" SRL	Mun.Chisinau Str. Muncesti, 121	Grigorii Sanduleac	/+373-/ 69409934	Centrala Bitzer	2008	1	110	155
	Total						1	110	155
	Total Manufacturing/Industrial Sectors - Equipment with Cooling Capacity Over 100 kW (Year 2009)						**314**	**15920**	**20769**

Table A.1 continued

Nr.	Organization name	Address	Contact person	Tel, fax, e-mail	Equipment specifications				
					Model, type	Year installed	# of units	Qo, .kW	R22 for maintenance of equipment (kg)
60	S.R.L. „Monicol"	s. Nimoreni, rl. Ialoveni	Vicol Dumitru		Copeland	2006	5	100	150
	Total						5	100	150
61	S.R.L."Original product"	s. Popiasca rl. Şt. Vodă	Arsenii Alexandru		Copeland, Centrală frigorifică	2007	1	110	160
	Total						1	110	160
62	S.R.L."Avicola-Efect"	Or. Străşeni, Str. Cojuşna 23	Arhip Elena		Centrală frigorifică Cu compresoare " Bitzer"	2008	1	120	180
	Total						1	120	180

63	C.A.P. „Basarabia”	s. Hîrboveţi rl. Anenii Noi	Calmîc Serghei	(265) 72-594	Copeland	2009	4	120	165
	Total						4	120	165
64	S.R.L. „Secol-Export”	s. Bulboaca rl.Anenii noi	Alexandru Snegur	(265)47-745	LH135/4NCS20.2	2005	6	150	210
	Total						6	150	210

Table A.1 continued

Nr.	Organization name	Address	Contact person	Tel, fax, e-mail	Equipment specifications				
					Model, type	Year installed	# of units	Qo., kW	R22 for maintenance of equipment (kg)
65	CAP „ Ciobalaccia” rl. Cantemir	s. Ciobalaccia, rl. Cantemir	Obreja Valeriu	(237) 70-230	Bitzer	2000	4	120	180
	Total						4	120	180
66	S.R.L. “ Pomul”	S. Ţibirica, rl.Călăraşi	Tudor Druţă	(244) 65-317	LH135/4TCS12..2y	2009	4	148	185
	Total						4	148	185
67	S.R.L.”Ghermes Agroservice”	s. Zaim, rl. Căuşeni	Vitalie Socolenco	(243)76-623	Copeland	2004	4	160	220
	Total						4	160	220

68	S.R.L.” Hadgimus Agro”	s.Hadgimus, rl.Căuşeni	Dumitru Liulica	(243)58-230	Bitzer	2009	4	150	190
	Total						4	150	190
69	Î.I.” Rînja Filip”	s. Logăneşti, rl. Criuleni	Filip Rînja	069105711	Bitzer	2005	3	105	140
	Total						3	105	140
70	S.R.L”Criulagrocom”	s.Cruglic, rl.Criulrni	Ion Sîrbu	(248) 66-248	LH114-2-0-FH	2004	4	108	145
	Total						4	108	145

Table A.1 continued

Nr.	**Organization name**	**Address**	**Contact person**	**Tel, fax, e-mail**	**Equipment specifications**				
					Model, type	**Year installed**	**# of units**	**Qo., kW**	**R22 for maintenance of equipment (kg)**
71	S.R.L.” Maşcăuţan”	s. Jevreni, rl.Criuleni	Avram Măşcăuţan	(248) 68-272	Bitzer	2000	4	280	340
	Total						4	280	340
72	S.R.L.” Nic-oil”	Or.Cupcini, rl. Edineţ	Anatol Ţurcan	069176341	SHA4/ 850 Bock	2009	4	120	160
	Total						4	120	160
73	S.R.L.”Mere Nord”	or. Cupcini, rl. Edineţ	Vasile Zaporojan	069101380	Bitzer	2010	4	160	180
	Total						4	160	180

74	CAP" Agrosargal"	s.Sarata Galben, rl. Hînceşti	Iacob Negru	(269) 50230	FH 18x2	2003	4	160	320
	Total						4	160	320
75	S.R.L."Gaztatgrup"	s. Iablona rl. Glodeni	Sîrbu Rodica	(231)72-497	FH 18x2	2002	4	160	310
	Total						4	160	310
76	S.R.L." Ambarda"	s. Cărpineni, rl. Hînceşti	Mihai Diaconov	(269) 42-230	FH 9x2	2003	4	160	320
	Total						4	160	320

Table A.1 continued

Nr.	**Organization name**	**Address**	**Contact person**	**Tel, fax, e-mail**	**Equipment specifications**				
					Model, type	**Year installed**	**# of units**	**Qo., kW**	**R22 for maintenance of equipment (kg)**
77	S.A." Orizontul"	s. Costeşti, rl.Ialoveni	Tudor Ţurcanu	(268) 51-411	Bitzer	2009	4	120	138
	Total						4	120	138
78	CAP" Zîmagrocol"	s. Zîmbreni, rl. Ialoveni	Ion Afanase	(268) 57-230	LH135/ S6H-20..2	2005	3	105	110
	Total						3	105	110
79	S.R.L." Ever Vin"	s. Suruceni, rl. Ialoveni	Chiril Turculeţ	(268) 33-645	FH 18x2	2008	4	160	308

	Total						4	160	308
80	S.A. „ Vitamina”	s. Ciorăşti, rl. Nisporeni	Cornelia Buga	(264) 23-285	Copeland	2009	3	105	115
	Total						3	105	115
81	S.T.L. „ Plaiul Bîrlădean”	s.Bîrlădeni, rl. Ocniţa	Tatiana Pavliuc	(271) 75-000	LH135/4J-22.2	2009	5	165	190
	Total						5	165	190
82	SRL”Petrol Prestij”	s. Calaraşăuca,rl. Ocniţa	Vasile Romaniuc	069137500	SHG4/650 Bock	2008	8	336	380
	Total						8	336	380

Table A.1 continued

Nr.	Organization name	Address	Contact person	Tel, fax, e-mail	Equipment specifications				
					Model, type	Year installed	# of units	Qo, .kW	R22 for maintenance of equipment (kg)
83	S.A. „Vinul Codrilor ”	s. Peresecina, rl.Orhei	Ion Popa	(235) 47-352	Bitzer	2010	4	160	164
	Total						4	160	164
84	S.A. “ Tecroma”	s.Bilicenii Noi rl. Sîngerei	Valeriu Matcovschii	(231) 29-251	Bitzer	2010	8	285	300
	Total						8	285	300
85	S.A. “ Agroserv “	s. Chişcăreni, rl. Sîngerei	Boris Cucoş	069118605	Copeland	2004	6	180	200

	Total						6	180	200
86	S.R.L.” URS-Bergher”	s. Crocmaz, rl. Ştefan Vodă	Sergiu Malcoci	(242)46-320	Bitzer	2010	4	104	134
	Total						4	104	134
87	S.R.L.” Ponitec Agro”	s. Chiştelniţa, rl. Teleneşti	Nicolae Popescu	(258) 78-245	LH114/4T-12.2	2009	4	108	120
	Total						4	108	120
	Total Manufacturing/Industrial Sectors - Equipment with Cooling Capacity Over 100 kW (Year 2010)						**434**	**20180**	**26249**

1.1.2. Table A. 2 - Enterprises with a Total Cooling Capacity from 20 to 100 kW

Nr.	Organization name	Address	Contact person	Tel, fax, e-mail	Equipment specifications				
					Model, type	Year installed	# of units	Qo, .kW	R22 for maintenance of equipment (kg)
1	„Mezalimpe” SRL	s. Rascaeţi r.Şt.Voda	Iurco Anatol	/+373-242/ 37461 69144578	LH 114/4T-12.2 LH 114/4T-12.2	2005 2006	1 1	27 27	30 30
	Total						2	54	60
2	„Plai-Fruct” S.A.	Or.Străşeni , str.Orhei, 2		/+373-22/ tel/f: 507536	LH 114/4T-12.2	2003	1	27	30
	Total						1	27	30
3	ISM Salcuta SRL	mun. Chisinau, Str. Sciusev, 53	Pîslaru Eugen	/+373-22/ tel: 245252	LH 84-2-0-FH	2004	1	18	16

				fax: 228153	LH 114-2-0-FH	2004	1	27	30
	Total						2	45	46
4	IM “Vinaria-Bardar” S.A.	r-nul Ialoveni s. Bardar str. Uzinelor, 3.	Plugaru Ivan Tudor	(+268) 37241 tel: 37260 fax: 37340	LH124/4N -12.2	2005	1	27	30
	Total						1	27	30
5	„Dogger –Trans” SRL				LH114/4T-12.2 LH 104/4DC-7.2	2005 2006	1 1	27 15	30 18
	Total						2	42	48
6	“Sandriliona” SRL	or. Ialoveni str.Alexandru cel Bun, 5/5	Ghenov Andrei Ion	(+268) 24924, 23223 fax:738379	LH 135/S6H-20.2	2006	2	35	80
	Total						2	70	80

Table A.2 continued

Nr.	Organization name	Address	Contact person	Tel, fax, e-mail	Equipment specifications				
					Model, type	Year installed	# of units	Qo, .kW	R22 for maintenance of equipment (kg)
7	“Service-Frig” SC	or. Straseni			LH 135/4J-22.2	2006	1	42	40
	Total						1	42	40
8	„Universal-Cmplect” SRL	mun. Chisinau, str. Belgrad 32.	Cazlovschi Vadim Grigore	/+373-22/ tel: 522641 fax:521646	LH 104/4T-8.2	2006	2	25	45
	Total						2	50	45
9	„Nuri” SRL	or. Ialoveni		/+373-22/ tel: 520081	LH 114/4T-12.2	2006	1	27	30
	Total						1	27	30
10	IM si Compania Consulting				LH 114 4T-12.2 LH 124 4N-12.2	2007 2007	2 1	27 20	60 32

	Group S.A.				LH 104 4T-8.2	2007	1	15	25
	Total						4	89	117
11	"Buza Nadejda " I.I.	or.Hincesti			LH 124/4N-12.2	2007	1	27	30
	Total						1	27	30
12	" Moara din Costesti " S.A.	s.Costeşti r-n Ialoveni			LH 114/ 4TCS -12.2	2007	8	27	240
	Total						8	216	240
13	„Lavmar –Agro" SRL	s.Magdaceşti			LH 124/ 4TC-12.2	2008	2	27	60
	Total						2	54	60
14	„Întreprinderea de deservire tehnica din Bardar" S.A.	s. Bardar str. Puşkin, 2	Cupai Grigore	/+373-268/ tel: 37363 fax: 37384	LH 124/4NCS-12.2 Bitzer F 15/4EC-4.2 Bitzer F 202H/4CC 6.2	2009 2009 2008	1 1 1	15 11 16	25 17 17
	Total						3	42	59

Table A.2 continued

Nr.	Organization name	Address	Contact person	Tel, fax, e-mail	Equipment specifications				
					Model, type	Year installed	# of units	Qo, .kW	R22 for maintenance of equipment (kg)
15	"Expodil" SRL	S.Birladeni, r-nul Ocnita			LH 124/4TCS-12.2	2008	2	27	60
	Total						2	54	60
16	Institutul National pentru Viticultura si Vinificatie I.S.	mun. Chisinau, or. Codru, str.Vierului, 59	Dadu Constantin	/+373-22/ tel: 285431 fax: 285025	LH 114/4T-12.2 LH 64/2.CC – 3.2 LH 114/4T-12,2 LH 135/4J22,2	2008 2008 2004 2004	1 1 1 1	27 14 27 25	30 11 30 40
	Total						4	93	111
17	„Flobrival – Fruct" SC, SRL	r-n Nisporeni s. Şişcani			LH 135/4NC – 20.2	2008	1	42	36
	Total						1	42	36

18	„Salamer – Com" SRL	s.Mereni			LH 84/2CC – 4.2	2008	2	12	22
	Total						2	24	22
19	„Largul Holdelor" SRL	Com . Bacioi			LH 124/4TCS 12.2 Y	2009	2	27	60
	Total						2	54	60
20	"Pronectar Prim" SRL	com. Bacioi			LH 124/4TCS 12.2 Y	2009	2	27	60
	Total						2	54	60
21	„Ecospirit" SC	s.Pîrîta r-n Dubasari			LH 124/4TCS 12.2 Y	2009	2	27	60
	Total						2	54	60
22	"Avicola" SRL	Saratenii vechi r-nul Telenesti	Paladii Iacob	0-258-73500	Bock-SHA4/650-4L Bock-SHA4/465-4L	2005 2005	1 1	11 11	32 24
	Total						2	22	56
23	"Agur" S.R.L	Or. Anenii Noi str. Chisinaului 24a	Catan Piotr	(+373-265) 24566	Bitzer 4 TC-12,2	2007	2	25	56
	Total						2	50	56

Table A.2 continued

Nr.	**Organization name**	**Address**	**Contact person**	**Tel, fax, e-mail**	**Equipment specifications**				
					Model, type	**Year installed**	**# of units**	**Qo., kW**	**R22 for maintenance of equipment (kg)**
24	Motozoc G.T. Serghei Simion	s.Berezovchi r-nul Ocnita	Motozoc S		Bitzer 4 TC 12,2	2009	1	25	25
	Total						1	25	25
25	Petru Balan Î.I.	or. Criuleni, str. Orheiului, 53	Balan Petru	(+373) 69141120	DLF-301 S9-2DB-750	2004 2004	1 4	6 8	8 48
	Total						5	38	56
26	"Soro Meteor" SRL	or. Soroca		/+373-230/ tel: 26190	ER-30A KK37CIE	1998	8	5	56
	Total						8	40	56

27	"Corsor" SRL	or. Soroca str. Stroescu, 64		/+373-230/ tel: 22035 fax: 22035	FH 9x2	1996	2	20	100
	Total						2	40	100
28	Elvites-Com SRL	Straseni	Rebeja		FH 18x2	1998	2	40	240
	Total						2	80	240
29	Galb-Vin SRL	Fundu Galben Hincesti			Bitzer	2006	1	20	40
	Total						1	20	40
30	Mavicom-Nord SRL	Edinet	Mansurov V	24 625 101	MANEUROPE	2005	2	30	140
	Total						2	60	140
31	Camedones SRL	Cimislia	Camerzan V	69144931	Bitzer	2008	2	20	100
	Total						2	40	100
32	"Avicola-serbinica" S.A.	s.Piatra r-nul Orhei		23 593 358	FH 9x2	2005	2	40	220
	Total						2	80	220

Table A.2 continued

Nr.	Organization name	Address	Contact person	Tel, fax, e-mail	Equipment specifications				
					Model, type	Year installed	# of units	Qo, .kW	R22 for maintenance of equipment (kg)
33	"Feodora" SRL	Or.Ungheni	Percic.V	/373-236/ 22004	PB-10-2-0 PB-14-2-0	2001	1 3	42	60
	Total						4	42	60
34	"Fedelit-com" SRL	Mun.Chisinau		(+373-22) 270397	Bitzer 6F40-2	2000	1	30	39
	Total						5	38	56
35	"Puratos-Moldova"	Mun.Chisinau	Turcan		MGZ-050-064-080	2003	1	25	32

	S.A		Anatolii						
	Total						1	25	32
36	”Sole-mio” SRL	Mun.Chisinau	Cubasov G.	/+373-230/ tel: 235645	FH -10 FH-40		1 1	52	52
	Total						2	52	52
37	“Produse Cerialiere” SA	Mun. Balti	Stenanov V	/+373-231/34183	PB-10 KHS-12.5 PB-7	2004	1 3 2	57	79
	Total						5	57	79
38	“Moroz Timofei” I.I	Or.Calarasi Str.Florilor 5	Moroz Timofei	079467483	HM-14	2001	2	40	38
	Total						2	40	38
39	“Sobor Ion” GT	s.Sadic	Ion Sobor	/+373-/ 68011414	Bitzer LH 114/ 4CC-9.2 Bitzer LT 104/ 4EC -6.2	2008 2008	1 1	20 14	24 21
	Total						2	34	45
	Total Manufacturing/Industrial Sectors - Equipment with Cooling Capacity from 20 to 100 kW (Year 2009)						94	1780	2754

Table A.2 continued

Nr.	Organization name	Address	Contact person	Tel, fax, e-mail	Equipment specifications				
					Model, type	Year installed	# of units	Qo, .kW	R22 for maintenance of equipment (kg)
40	S.A.”Zubreşti”	s. Zubreşti rl.Străşăni	Malic Tudor	(237) 72230	Bitzer	2006	1	36	35
	Total						1	36	35
41	G.Ţ.” Timofei Căldare”	s. Mîndreşti, rl. Teleneşti	Căldare Timofei		Bitzer	2008	2	40	60

	Total						2	40	60
42	SRL"Nord Vînd-Angro"	s. Colicăuţi rl. Briceni	Lavric Valeriu	(247) 42238	Bitzer	2008	1	36	35
	Total						1	36	35
43	SRL „ Mariana Gîrbu"	Or. Călăraş	Gîrbu Mariana		Bitzer	2008	3	75	80
	Total						3	75	80
44	Î.I."Elena Jîgnea"	s. Şişcani rl. Nisporeni	Jîgnea Elena		Bitzer	2008	1	26	24
	Total						1	26	24

Table A.2 continued

Nr.	Organization name	Address	Contact person	Tel, fax, e-mail	Equipment specifications				
					Model, type	Year installed	# of units	Qo., kW	R22 for maintenance of equipment (kg)
45	SRL"Struguri de Aur"	s.Mileştii Mici	Slobozean Mihai		Maneurop	2009	4	50	60
	Total						4	50	60
46	SRL „ Rusnac-MoldAqa"	s. Gura Căinarului, rl. Floreşti	Şuiu Serghei		Bitzer	2008	1	20	30

	Total						1	20	30
47	S.A. „JLC”	or.Chișinău, Str. Ssarmizegetusa,90	Proțenco Vladimir	558340 Fax 523960	Linia de producere a înghețatei „Mavklain”	1998	1	40	86
					FrizerGM-400	1998	2	21	56
					Bitzer	1999	1	12	16
					PB-10	2001	2	20	47
					PFT-1200	1996-2001	25	113	75
					Alfa-Laval-850	1998-2002	8	32	18

Table A.2 continued

Nr.	Organization name	Address	Contact person	Tel, fax, e-mail	Equipment specifications				
					Model, type	Year installed	# of units	Qo, .kW	R22 for maintenance of equipment (kg)
					Alfa-Laval-1000	1997-2002	17	78	36
					Alfa-Laval-1700	2006	1	5	4

					Padco-650	2004	2	8	10
					Muler-1200	2006-2008	8	45	32
					Virpu-1700	2002	2	10	12
	Total						69	384	392
48	GȚ" Ion Grigoriev „	s. Cobusca, rl. Anenii Noi.	Ion Grigoriev	(265) 35-572	Bitzer	2010	4	80	124
	Total						4	80	124
49	GȚ" Cerneavschi Iurie"	s. Hîrboveț, rl.Anenii Noi	Cerneavschi Iurie	(265) 72-423	Bitzer	2007	2	70	82
	Total						2	70	82
50	GȚ " Efros Ștefan"	s. Logănești, rl. Criuleni	Ștefan Efros	069370393	LH114/4T-12.2	2006	3	81	96
	Total						3	81	96

Table A.2 continued

Nr.	Organization name	Address	Contact person	Tel, fax, e-mail	Equipment specifications				
					Model, type	Year installed	# of units	Qo, .kW	R22 for maintenance of equipment (kg)
51	S.R.L." Faur "	s. Drăsliceni, rl.Criuleni	Stepan Bîtlan	069142258	Bitzer	2009	3	90	120

	Total						3	90	120
52	Î.I. "Sitari Ion "	Or. Cupcini, rl.Edineţ	Ion SItari	(246) 24-346	Copeland	2010	3	75	84
	Total						3	75	84
53	S.R.L. "Ionictrans "	s. Costeşti, rl. Ialoveni	Gheorghe Ionaş	(268) 51-477	LH114-2-0-FH	2009	3	81	90
	Total						3	81	90
54	S.R.L. " Soscom "	s. Costeşti, rl. Ialoveni	Sosana Sulă	(268) 92-561	LH 84-2-0-FH	2008	3	54	62
	Total						3	54	62
55	S.R.L. "Sivuh- Com "	s. Bardar, Rl. Ialoveni	Raşid Chitinov	069133608	Bitzer	2009	3	90	100
	Total						3	90	100
	Total Manufacturing/Industrial Sectors - Equipment with Cooling Capacity from 20 to 100 kW (Year 2010)						200	3728	4094

1.1.3. Table A. 3. Enterprises with a Total Cooling Capacity less than 20 kW Total Assembly/Industrial Sectors Equipment	**2009**	**414**	**17769**	**23610**
	2010	**640**	**23977**	**30430**

Nr.	Organization name	Address	Contact person	Tel, fax, e-mail	Equipment specifications				
					Model, type	Year installed	# of units	Qo., kW	R22 for maintenance of equipment (kg)
1	Centrul de medicina legala	mun.Chisinau Str.Korolenco, 8	Baciu Gh.	tel:727469 tel:727466	Bitzer 2 FC-2,2	2007	2	5,5	22
	Total						2	11	22
2	"Pucoven" S.R.L	s.Roscani r-nul Anenii Noi	Juvinel Luis	(+265) tel:93285	Bitzer 4 EC-6,2	2008	1	10	15
	Total						1	10	15
3	"Timcu Irina" G.T.	s.Petrunea r-nul Glodeni	Timcu Irina	(+249) tel:26972	Bitzer 2 CC-4,2	2008	1	10	14
	Total						1	10	14
4	„Dionysos –Mereni” AO	r-nul Anenii Noi s. Merenii Noi str. Şt. cel Mare 9	Foca Dmitrii Iurie	(+265) tel:62432 (+22) tel:838485 mail@dm.md	LH 84/4CC-6.2	2005	1	19	18
	Total						1	19	18
5	„Nistru-Olanesti” S.A.	r-n Stefan-Voda s. Olanesti	Tulci Iurii	/+373-242/ fax: 52018 tel: 52348	LH 84/4 CC 6.2	2007	1	19	18
	Total						1	19	18
	Total Assembly/Industrial Sectors - Equipment with Cooling Capacity Less than 20 kW						**6**	**69**	**87**

5.4. Data on R-22 Equipment in the Commercial Sector

1.1.4.Table A. 4 - Enterprises with a Total Cooling Capacity Over 100 kW

Nr.	Organization name	Address	Contact person	Tel, fax, e-mail	Equipment specifications				
					Model, type	Year installed	# of units	Qo., kW	R22 for maintenance of equipment (kg)
1	"Slavena Lux" SRL	mun. Chisinau, Str.Valea Bicului, 1/1	Smirnov V	/+373-22/ 507536 fax: 507536	LH 135/4J-13,2	1996	8	160	240
	Total						8	160	240
2	Neptun-Nord S.A. Free Fisheries	mun. Chisinau, str. Calea Basarabiei, 42	Scobioala S.	/+373-22/ tel: 551416 fax: 554048	Sabroe Danemarca Bitzer F-6G 302Y	1997 2004	4 12	500 360	600 480
	Total						16	860	1080
3	Frigoagroservice S.R.L	mun. Chisinau, str.Voluntarilor, 15	Iordatii Serghei, Cebotari Veaceslav	/+373-22/ tel: 479159 tel: 476915	KSL-40 FUBS-18 PB-50	2002 2002 2002	1 2 1	40 80 50	400
	Total						4	170	400
4	SMIRTRANS SRL / trade mark FRIGOLUX	mun. Chisinau, str.Voluntarilor, 15	Nichitin Mihail	/+373-22/ tel: 410711 fax: 472348	Bitzer LH-124	2002	22	660	440
	Total						22	660	440
5	«IMC Market»	mun. Chisinau, str. Ion Creanga, 48	Mura V.	/+373/ 79708781	Centrala frigorifica Centrala frigorifica Centrala frigorifica	2007 2007 2007	1 1 1	80 30 70	400
	Total						3	180	400

Table A.4 continued

Nr.	Organization name	Address	Contact person	Tel, fax, e-mail	Equipment specifications				
					Model, type	Year installed	# of units	Qo., kW	R22 for maintenance of equipment (kg)
6	GREEN HILLS MARKET / VISTARCOM S.R.L.,I.C.S	mun. Chisinau, str.Alecu Russo, 28	Golban Ion	/+373-22/ tel: 890110 fax: 422611	Danfoss MT100	2005	1	10	18
					K750CS-T ”Dorin”	1995	3	12	54
					Danfoss MT64 NM4AVE	1995	3	8	39
					TAG4561	2008	1	8	13
					K100 CCT „Dorin”	1996	1	4	6
					Bristol H23A623	1996	5	4	60
					MT150 Danfoss	2003	1	14	26
					MT80	2004	3	8	54
					Dulap frigorific „KAPLANLAR”	1998	3	1	9
					TFN45-24	1999	1	3	12
					Centrala frigorifica 4 compresoare, ZB-92-KC	2004	1	80	150
					Centrala frigorifica 4 compresoare, ZF-48K-4E	2004	1	36	100
	Total						24	262	541
7	Bavasco-C SRL	mun. Chisinau, str.Voluntarilor, 15	Bacal Vasile	/+373-22/ tel: 470975	LH 135/4NCS 20.2	2009	1	42	36
					LH 114/4TCS 12.2	2007	3	25	90
					FH-18x2		2	40	100
	Total						6	197	226
8	MS-ILPEX	mun. Chisinau, Str.Petricani 21/3	Slobozeanu Ilie	/+373-22/ tel: 312127	Bitzer-4PC-15,2	2008	3	29	90
					Bitzer-4FC-5,2	2008	3	11	45
					Bitzer-2CC-4,2	2008	3	10	39

	Total		9	150	174

Table A.4 continued

Nr.	Organization name	Address	Contact person	Tel, fax, e-mail	Equipment specifications				
					Model, type	Year installed	# of units	Qo., kW	R22 for maintenance of equipment (kg)
9	"Extravita" SRL	mun. Chisinau, str.Industriala,40/1		/+373-22/ 740737	LH 124/4TC 12.2	2009	4	27	120
	Total						4	108	120
10	Magazin "Fourchette"	mun. Chisinau, bd. Dacia 55	Lazarencu Adrian	/+373-22/ tel: 535018	Instalatia frigorifica, Centrala	2007	1	100	380
	Total						1	100	380
11	"Broters" S.R.L	mun. Chisinau, Str.Voluntarilor, 15	Anghel Leonid	/+373-22/ 473336 069106621	Bitzer 4PC-27.2	2000	5	160	130
	Total						5	160	130
12	Institutul de microbiologie al ASM	mun. Chisinau, str.Academiei, 1,	Rudic. Valeriu	/+373-22/ 731389	FM-45 MVV-20 FDS	1982 1982 1982	1 1 10	215	300
	Total						12	215	300
13	Supermarkete Nr.1	mun. Chisinau, Str.Puskin, 32	Danilov S.	/+373-22/ 227487 225568 211045	Dorin Centrala frigorifica Copeland-3compres. Centrala frigorifica Copeland-2compres.	2002 2002 2002	30 1 1	200 60 36	240 80 40
	Total						32	296	360
14	Universitatea Agrara din MD	Mun,Chisinau str. Mircești, 44	Petru	/+373-22/ 312258	FDS	1995	4	182	200

			Turcanu	312276	FM				
	Total						4	182	200

Table A.4 continued

Nr.	Organization name	Address	Contact person	Tel, fax, e-mail	Equipment specifications				
					Model, type	Year installed	# of units	Qo, .kW	R22 for maintenance of equipment (kg)
15	"Fidesco" S.R.L	mun. Chisinau, str.Petricani, 19	Popa Ion	/+373-22/ tel: 253789 fax: 241497	Centrala frigorifica				
					MPM 123	2004	1	113	195
					MPM 123	2004	1	45	165
					MPMN 078	2008	1	26	70
					DPM	2008	1	45	55
					DPMB 035	2007	1	41	65
					DPMB 035	2007	1	10	52
					DPMB 035	2007	1	33	48
					D3D 55 – 150x -	2000	1	24	32
					ZB 75 KGE	2000	1	15	21
					ZF 48 K4E	2000	1	6	14
					Dorin H 180	2003	1	3	15
					H 200	2003	1	3.5	18
					K 470	2003	1	8.5	24
					Vitrine frigorifice	2000	25	75	75
	Total						38	448	849
16	"Agropomfruct" S.R.L	Or.Donduseni	Tcaci Igor	/+373-251/ 55767	KSL-40	1992	8	480	240
	Total						8	480	240
17	Prometeu S.R.L	mun. Chisinau, Str.Petricani, 21/1	Slanina. T	/+373-22/ 312026 Fax: 312036	Bitzer LH-124-4CC-9.2	2008	4	100	100
					LH-135-4NC-20.2	2008	1	30	30

	Total		5	130	130

Table A.4 continued

Nr.	Organization name	Address	Contact person	Tel, fax, e-mail	Equipment specifications				
					Model, type	Year installed	# of units	Qo., kW	R22 for maintenance of equipment (kg)
18	Geotrans-com S.R.L	Or.Falesti	Mamii Serghei	/+373-259/ 23001	KSL-40	2001	8	145	160
	Total						8	145	160
19	Investsprom-Nord S.R.L	r-nul Ocnita, s.Hadarauti	Ciubuc Ion	Mob. 069103540	Centrala Bock HG6/124-4S	2008	1	140	120
	Total						1	140	120
20	Agroglin-Prim SRL	s.Navirnet r-nul Falesti	Gafinciuc Petru	/+373-259/ 71225	KSL-80	2001	3	240	105
	Total						8	240	105
21	Original Product S.R.L	s.Popesti r-nul Stefan Voda	Arsenii Alexandru	/+373-242/ 43424	FUUBS-25	2008	2	104	120
	Total						2	104	120
Total Commercial Sector Equipment - Cooling Capacity Over 100 kW (year 2009)							**213**	**6148**	**6715**
22	„Rudo-Agro" SRL	s. Ţînţăreni, r-nul Anenii-Noi	Platon Ion	Mob. 069111406	Bock SHG-4/650-4SRU	2009	4	150	120
	Total						4	150	120
23	„Pom-Erem" SRL	Or. Hînceşti	Eremia Victor	(373 22) 23-53-54 Fax: 23-53-28	Bock SHG 4/455-4SRU	2009	4	126	130
	Total						4	126	130

Table A.4 continued

Nr.	Organization name	Address	Contact person	Tel, fax, e-mail	Equipment specifications				
					Model, type	Year installed	# of units	Qo., kW	R22 for maintenance of equipment (kg)
24	„Green Hills" marchet „Vistarcom" SRL	Chişinău, str. Alecu Russo,28	Golban Ion	(373 22) 890110 fax: 422611	Centrală frig. 3 compres. Frascold V35103Q	2010	1	120	140
	Total						1	120	140
25	"Fidesco" SRL	Mun. Chişinău Str. Petricani,19	Popa Ion	/+373-22/ 253789 Fax:241497	Centrală frig. Arneg 2 compresoare	2009 2009 2009	1 2 1	44 44 7,5	60 60 24
	Total						4	95,5	144
Total Commercial Sector Equipment - Cooling Capacity Over 100 kW (year 2010)							**226**	**6640**	**7239**

1.1.5. Table A. 5 - Enterprises with a Total Cooling Capacity from 20 to 100 kW

Nr.	Organization name	Address	Contact person	Tel, fax, e-mail	Equipment specifications				
					Model, type	Year installed	# of units	Qo., kW	R22 for maintenance of equipment (kg)
1	"Vigar-com" SRL	mun.Chisinau, str. Voluntarilor, 15	Bantuş Victor	/+373-22/ tel: 421990	Bock HG 34P/380-4 Copeland	2005 2004	1 5	24 8	36 60
	Total						6	64	96
2	"Cooperatorul"	mun. Chisinau, str.Uzinelor, 15	Ungureanu GHeorghe	/+373-22/ tel: 470467	FH-18x2 FH-9x2	2005 2005	1 1	40 20	100 50
	Total						2	60	150
3	"Vis-Strom" SRL	mun. Chisinau,			LH 114/4TCS-12.2	2008	2	27	60
	Total						2	54	60
4	«Linella»	mun. Chisinau, bd. Moscova, 11/1	Pavelescu Eugen	/+373-22/ tel: 890927 fax: 890928	Centrala frigorifica	2007	1	60	100
	Total						1	60	100
5	"Derdelus" SRL	mun. Chisinau, Str.Drumul Crucii, 100/36	Rusu Ion	69234846 373-22 710189	LH 114 4T-12.2	2007	2	27	60
	Total						2	54	60
6	"Fivils" IM SRL	mun. Chisinau, str.Munceşti, 801		373-22 551648 373-22 523158	LH 135/4J-22.2 LH 84/4 FC 5.2	2007 2007	1 1	40 10	36 15

	Total		2	50	51

Table A.5 continued

Nr.	Organization name	Address	Contact person	Tel, fax, e-mail	Equipment specifications				
					Model, type	Year installed	# of units	Qo, .kW	R22 for maintenance of equipment (kg)
7	„Grisan-Hamb” S.A.	mun. Chisinau, str. Mesterul Manole, 1	Coman Andrei	/+373-22/ tel: 471138 fax: 477312	PB-10-2-0	1998	1	12	13
					H2-14	1998	1	5	8
					Copeland DNRA 500	2002	1	9	13
					Danfoss MT-80	2009	5	8	60
	Total						8	66	94
8	"Petru Erhan" G.T.	S. Fundul Galbenii	Erhan Petru	/+373/ 79431862	S9-2DB-750	2006	3	45	45
	Total						3	45	45
9	"Virens" S.A.	mun. Chisinau,	Nani Iu.V		FH-18x2	2002	1	40	100
	Total						1	40	100
10	"Racicovschi Petru" Î.I.	s. Hîrtop, r-nul Cimişlia	Racicovschi Petru	/+373/ 69228562	LH 104/4DC-7.2	2008	1	15	18
					LH 84/2CC-6.2	2008	1	12	15
	Total						2	27	33
11	„Vladalina” SRL	mun. Chisinau, sos. Muncesti, 173	Balea Vitalie Mihai	/+373-22/ tel: 550011 fax: 505060	Agregat frigorific “Danfoss”	2006	1	4,5	8
					LH 84/4EC-6.2	2006	2	15	30
	Total						3	34,5	38
12	„Novacond Prim” SC	mun. Chisinau, str.Sarmizegetusa 92, of. 312	Nirauta Anatol	/+373-22/ tel: 520081	LH 124/4CC 9.2	2008	1	22	25
	Total						1	22	25

13	Navelina SRL	Mun Chisinau Stefan cel Mare	Harti V	/+373-22/ 213677	Centrala frigorifica 3 comp.	2008	1	37	48
	Total						1	37	48

Table A.5 continued

Nr.	Organization name	Address	Contact person	Tel, fax, e-mail	Equipment specifications				
					Model, type	Year installed	# of units	Qo, .kW	R22 for maintenance of equipment (kg)
14	Pecostita SRL	s.Costesti r-nul Ialoveni	Marandici Nicolai	/+373-268/ tel: 52336	SHG 34-380 4L Bock	2008	5	85	90
	Total						5	85	90
15	Elita 5 SRL	m.Chisinau Cetatea Alba 16	Belenchi Efimim	/+373-22/ tel: 554306	Bitzer LH 84/2N-5.2	2008	2	16	24
					Bitzer LH 114/4T-8.2	2008	1	10	17
					Bitzer LH 44/2GC-2.2	2003	1	5	19
					Bitzer LH 64/2Q-4.2	2003	2	12	29
	Total						6	53	89
16	Universitatea Tehnica RM	Mun Chisinau Stefan cel Mare	Bostan Ion	/+373-22/ tel: 232252	Bitzer	2006	1	20	22
					Bock	2008	2	40	48
	Total						3	60	70
17	"Ghestiana-com" SRL	mun.chisinau, str. Voluntarilor, 1	Pavlov Valerii	/+373-22/ tel: 422222 fax: 475633	LH 135/6J-20.2	2001	1	32	36
					LH 124/4N-12,2	2001	1	20	35
	Total						2	52	71
18	Mapeva-Agro SRL	r-nul Orhei s. Jora de jos	Maler Petru	Mob. 079462293	SHG 5/945-4SR4	2008	1	52	60
					SHG 34P/380-4SS	2008	1	18	22
	Total						2	35	82
	Total Commercial Sector Equipment - Cooling Capacity from 20 to 100 kW (year 2009)						**52**	**934**	**1302**

Table A.5 continued

Nr.	Organization name	Address	Contact person	Tel, fax, e-mail	Equipment specifications				
					Model, type	Year installed	# of units	Qo, .kW	R22 for maintenance of equipment (kg)
19	Market "Conti"	mun. Chisinau, str. Cuza-Voda, 37/1		/+373-22/ 664876	Centrala Bitzer 2DC-2,2	2009	1	20	26
	Total						1	20	26
20	„Stanteh" SRL	mun. Chisinau, str. Faradeiului, 4	Suhan Ion	Mob. 069120893	Copeland S9-2DB-750	2009	2	28	32
					Centrala Copeland DLL-301	2009	1	22	48
					Centrala Copeland 2DL-750	2009	1	20	36
					Copeland DLSG-401	2009	1	7	16
	Total						5	77	132
21	"Ecospirit" SRL	s. Pîrîta, r-nul Dubăsari	Dumbrava Serghei	Mob. 069778777	Bock SHG 5/555-4SRU	2009	1	30	32
					Bock SHG 5/725-4SRU	2009	1	33	36
	Total						2	63	68
22	"Linela-6" Supermarket	Mun. Chişinău, Str. Titulescu, 47	Pavelescu Eugen .	/+373-22/ 520011	Centrala Maneurop	2008	1	36	60
					Maneurop M-60	2008	1	6	12
	Total						2	42	72

23	"Robintor-Lux"	Mun. Chişinău Str. Costiujeni,8/3	Baltari Stepan	/+373-22/ 766656*567570	Copeland DLL-401 Copeland DLL-201 Vitrine frigorifice	2004 2004 2004	1 2 8	4 8 16	12 16 16
	Total						11	28	44

Table A.5 continued

Nr.	Organization name	Address	Contact person	Tel, fax, e-mail	Equipment specifications				
					Model, type	Year installed	# of units	Qo, .kW	R22 for maintenance of equipment (kg)
24	"Salamer-Com" SRL	s. Mereni, r-nul Anenii Noi		(+373 265) 55444	LH-64/4FC 3.2Y	2009	2	24	28
	Total						2	24	28
25	„Plaiul Bîrlădean" SRL	s. Bîrlădeni r-nul Ocnița	Pavliuc T.	(+373-271)75000 Mob. 069134337	LH-135/4NC-20,2	2009	2	84	72
	Total						2	84	72
26	"Satevis-MG" SC	s. Dragușeni r-nul Hîncești			F402T/4P-15,2	2009	1	30	32
	Total						1	30	32
27	"Bavasco-C" SRL	s. Caplari r-nul Ștefan-Vodă	Bacal V.	(+373-22) 470975	LH114/4TC-12,2	2010	2	54	64
	Total						2	54	64
28	MS- "Ilpex"SRL	Mun. Chişinău str. Petricani,21	Slobozeanu Ilie	/+373-22/ 312127	Bitzer 4CC-3,2 Bitzer 2CC-4,2	2010 2010	1 2	10 20	12 24
	Total						3	30	36

29	"Agur" SRL	Anenii Noi, str. Chişinaului,24A	Catan Petru	(+373) 265 24566 24661	Bitzer 4PC -12,2	2009	2	40	48
	Total						2	40	48
	Total Commercial Sector Equipment - Cooling Capacity from 20 to 100 kW (year 2010)						**85**	**1426**	**1944**

1.1.6. Table A. 6 - Enterprises with a Total Cooling Capacity less than 20 kW

Nr.	Organization name	Address	Contact person	Tel, fax, e-mail	Equipment specifications				
					Model, type	Year installed	# of units	Qo, .kW	R22 for maintenance of equipment (kg)
1	"Selani-Lux" SRL	mun. Chisinau, str. Sciusev, 53	Pîslaru Evghenii	/+373-22/ tel: 245252	LH84/2CC 6.2	2005	1	19	18
	Total						1	19	18
2	„Onix – Cris" S.A.	mun. Chisinau, str. V.Alecsandri,	Cebotari M.	/+373-22/ 727298	Bitzer F15/4CC 4.2	2009	1	17	14
	Total						1	17	14
3	"Universcoop" CC	Or.Leova Str.Unirii, 20	Cibotaru Serghei Ion	(+263) 23709 tel: 22779	FH -84-2-1	2004	1	15	16
	Total						1	15	16
4	„UNIC" S.A.	mun. Chisinau, Stefan cel Mare,8	Scripnic Maria	/+373-22/ tel: 273036	PB-10 2FC-2.2Y	1996 2007	1 1	10 5	18 10
	Total						2	15	28
5	"Dergaci Gheorghe" Î.I.	mun.Chisinau str.Grenoble 12	Dergaci Gh.		LH 84/4 EC 6.	2007	1	12	16
	Total						1	12	16

6	Peste S.A.	mun. Chisinau, M. Vaarlam, 63	Stratan Vasile	/+373-22/ 277848	LH 84/4EC 6.2	2009	1	12	15
	Total						1	12	15
7	"Serviabil" SRL	mun. Chisinau, str.Dimo, 12	Anghelută Tatiana	/+373/ 69115130	LH 44/2FC 2.2	2008	1	10	11
	Total						1	10	11

Table A.6 continued

Nr.	Organization name	Address	Contact person	Tel, fax, e-mail	Equipment specifications				
					Model, type	Year installed	# of units	Qo, kW	R22 for maintenance of equipment (kg)
8	Institutul de genetica si Fiziologie a plantelor	mun. Chisinau, Str.Padurii, 20	Jacota Anatolii	/+373-22/ 556180	TAG 45-46	2009	3	9	18
	Total						3	9	18
9	"Marinar -Grup " SRL	mun. Chisinau, str. Sadoveanu, 6/3	Viscu Vitalie	Mob. 069120650	Bitzer 152H/4FC -3.2	2008	1	10	12
	Total						1	10	12
10	FPC "MGM" SRL	mun. Chisinau, Str. Alba Iulia, 75	Şcurin Maxim	/+373-22/ tel: 581148 69501326 s.max@ mgm.arax.md	Instalatie frigorifica	2000	2	1,5	4
						2001	4		8
						2002	5		10
						2003	4		8
						2004	3		6
						2005	5		10
						2006	4		8
						2007	5		10
						2008	3		6
	Total						35	52,5	80

	Total Commercial Sector Equipment - Cooling Capacity Less than 20 kW (year 2009)						**47**	**172**	**228**
11	„Viada-Parc" SRL	mun. Chisinau,	Ianciu Victor	Mob. 069106408	SIL 2522Z SIL 2480Z SIL 2480Z	2009 2009 2009	2 1 1	12,5 1,5 1,5	16 4 4
	Total						4	15,5	24

Table A.6 continued

Nr.	**Organization name**	**Address**	**Contact person**	**Tel, fax, e-mail**	**Equipment specifications**				
					Model, type	**Year installed**	**# of units**	**Qo., kW**	**R22 for maintenance of equipment (kg)**
12	"Victor Braghiş" Î.I.	Mun. Chişinău s. Tohatin	Braghiş V.	Mob. 069117345	Bock SHG 34P/215-4L Bock SHG 12P/60-4SL	2009 2009	1 1	10 2,5	16 6
	Total						2	12,5	22
13	"Credoprim" SRL	Mun. Chişinău Str. V. Badiu,20	Costru G.	(+373-22) 468528	LH-84/1CC-3,2	2009	1	12	16
	Total						1	12	16
14	"Comolco" SRL	Mun. Chişinău Str. Faradeilor4/4		(+373 22) 275091 (+373 22) 549646	DLSG-301 PB10	2009 2005	1 1	8 10	16 16
	Total						2	18	32
15	„Dominos" SRL	Straşeni			LH-84/4EC-6,2		1	17	20
	Total						1	17	20
16	"Nour Vasile" ÎI	Anenii Noi s. Bulboaca	Nour Vasile	/+373-/ Tel.	Bitzer 2DC-3,2	2010	3	18	24
	Total						3	18	24

17	„Doloşcan G.” ÎI	r. Anenii Noi s. Floreni	Doloşcan G.	(373) 265 61381	PB-10	2008	1	10	16
	Total						1	10	16
18	“Jani-Dars” SRL	Mun. Chişinău Str. Petricani,19/5	Golban Ghenadie	(+373-22) 294713	Bitzer 2DC	2009	1	6	12
	Total						1	6	12

Table A.6 continued

Nr.	Organization name	Address	Contact person	Tel, fax, e-mail	Equipment specifications				
					Model, type	Year installed	# of units	Qo, .kW	R22 for maintenance of equipment (kg)
19	“Octopus-Plus” SRL	Mun. Chişinău Str. Varniţa,20	Agrici V.	/+373-22/ 407107	Maneurop MT-40	2008	1	8	12
	Total						1	8	12
20	“Ivesoldo” SRL	Mun. Chişinău Str. Transnistria,5/1	Suslov Igor	/+373-22/ 476166	Maneurop MT-28	2009	1	5	10
	Total						1	5	10
	Total Commercial Sector Equipment - Cooling Capacity Less than 20 kW (year 2010)						**64**	**294**	**416**

Total Commercial Sector Equipment	**2009**	**312**	**7254**	**8245**
	2010	**375**	**8360**	**9599**

i. Table A. 7 – Refrigerated Counters

Nr.	Organization name	Address	Contact person	Tel, fax, e-mail	Equipment specifications				
					Model, type	Year installed	# of units	Qo, .kW	R22 for maintenance of equipment (kg)
1	FPC "MGM" SRL	mun. Chisinau, Str. Alba Iulia, 75	Şcurin Maxim	/+373-22/ tel: 581148 69501326 s.max@ mgm.arax.md	Vitrina frigorifica	1999	650		325
						2000	660		330
						2001	696		348
						2002	612		306
						2003	350		175
						2004	591	0.5	296
						2005	671		335
						2006	771		385
						2007	661		330
						2008	634		317
						2009	143		72
	Total FPC "MGM" SRL						6439	3220	3219

Total Trade and Technological Refrigeration	**31500**	**15750**	**15750**

Total Commercial Refrigeration Equipment (Including Commercial and Technological Refrigeration Equipment)	**2009**	**38251**	**26224**	**27204**
	2010	**38319**	**27290**	**28568**

5.5 Data on R-22 Equipment - Air Conditioning

1.1.8 Table A. 8 - Enterprises with a Total Cooling Capacity Over 100 kW

Nr.	Organization name	Address	Contact person	Tel, fax, e-mail	Equipment specifications				
					Model, type	Year installed	# of units	Qo, kW	R22 for maintenance of equipment (kg)
1	Teatrul de Opera şi Balet	MD-2012, Chisinau, bd. Stefan cel Mare si Sfint, 152	Grosu Ion	Tel:244172,244163 Fax: 245158 info@nationalopera.md	MTH-90	până 1991	6	200	2600
	Total						6	1200	2600
2	Spitalul Republican I.M.S.P.	MD-2025 Chisinau, N.Testemitanu,29	Ous Mihai Alexei	Tel: 403600,403552 403550, Fax: 729033	HM22FUU-400 HM22FU-200	până 1991	2 1	825 415	2400
	Total						3	2075	2400
3	Hotel “National”	MD-2001 Chisinau, bd. Stefan cel Mare si Sfint, 4		Tel: 570335, 540301, 570494	HM22FUU-400	până 1991	2	825	2400
	Total						2	1650	2400
4	“Moldova-Film” S.A.	MD-2028 Chisinau, Hancesti,61,of.216	Mateuta Alexei	Tel: 721170,721625 Fax: 721200 referent@moldova-film.md	MKT-110	până 1991	2	215	1000
	Total						2	430	1000
5	“Floare-Carpet” S.A.	MD-2032 Chisinau Gradina Botanica 15	Rabii Nicolae Ilie	Tel: 558006 Fax; 522000 mk@floare.carpet.md	HM22FUU-400	până 1991	4	825	4800
	Total						4	3300	4800

Table A.8 continued

Nr.	Organization name	Address	Contact person	Tel, fax, e-mail	Equipment specifications				
					Model, type	Year installed	# of units	Qo, kW	R22 for maintenance of equipment (kg)
6	Manejul de atletic uşoară	MD-2024 Chisinau, Andrei Doga, 26	Cebanu Pavel Ion	Tel:445335,438926 432330 -Director	HM22FUU-400	până 1991	2	825	2400
	Total						2	1650	2400
7	"Centrul de Moda" S.A.	MD-2004 Chisinau bd. Stefan cel Mare si Sfint, 182	Mitcul Ion Trofim	Tel: 295845,295744 Fax: 295840	HM22FUU-400	până 1991	2	825	2400
	Total						2	1650	2400
8	Academia de Studii Economice din Moldova	MD-2005 Chisinau, M-t G.Banulescu-Bodoni, 61	Belostecinic Grigore leonovici	Tel:224128,402842 Fax: 221968 anticamera@ ase.md	MKT-220	1991	1	430	1500
	Total						1	430	1500
9	Institutul Oncologic I.M.S.P.	MD-2025 Chisinau, N.Testemitanu, 30	Sofroni Dumitru Tudor	Tel: 725970 Fax: 723363 sofroni@yandex.ru	MKT-220	până 1991	2	430	1500
	Total						2	860	1500
10	"UNIC" S.A. Magazinul Universal Central	MD-2001 Chisinau, bd. Stefan cel Mare si Sfint, 8	Scripnic Maria Vladimir	Tel: 273036 Fax: 273814 unic@mdt.net	HM22FUU-400	până 1991	2	825	2400
	Total						2	1650	2400

Table A.8 continued

Nr.	Organization name	Address	Contact person	Tel, fax, e-mail	Equipment specifications				
					Model, type	Year	# of	Qo,	R22 for maintenance of

						installed	units	kW	equipment (kg)
11	Directia pentru exploatarea cladirilor Ministerului agriculturii si industriei alimentare	MD-2004 Chisinau bd. Stefan cel Mare si Sfint, 162		Tel: 233427 Fax: 210204 adm_maia@ maia.gov.md	MKT-220	până 1991	4	430	2400
	Total						4	1720	2400
12	Spitalul clinic munucipal "SF. ARHANGHEL" MIHAIL	MD-2005 Chisinau Arhanghel Mihail, 38	Cebanu Mihai Anton	Tel: 292652 Fax: 241488	MKT-40	până 1991	2	60	120
	Total						2	120	120
13	FRANZELUTA S.A./ Combinatul de panificatie din Chisinau	MD-2032 Chisinau Sarmizegetuza, 30	Baleca Eugen Vladimir	Tel:555270, 528084 Fax: 528165 marketing@ franzeluta.md	MKT-110	până 1991	1	215	500
	Total						1	215	500
14	PALATUL REPUBLICII	MD-2012 Chisinau Maria Cibotari, 16	Nirean Tudor	Tel: 232613 Fax: 232242	FU-80	până 1991	4	80	400
	Total						4	320	400

Table A.8 continued

Nr.	Organization name	Address	Contact person	Tel, fax, e-mail	Equipment specifications				
					Model, type	Year installed	# of units	Qo, kW	R22 for maintenance of equipment (kg)
15	SA „ MOLDTELECOM" cu filiale in Republica	MD-2001, Chisinau, Bd. Stefan cel Mare si Sfint,10	Ursachi Gheorghe	Tel: 570101 Fax: 546418, 570111 office@mtc.md	MKT-110	până 1991	2	215	1000

	Total						2	430	1000
16	NOUSTIL S.R.L.	MD-3003 Soroca Viilor, 15	Martiniuc Ecaterina Iacob	Tel: (0230) 23388 Fax: (0230) 23388 noustil@mtc-sr.md	MKT-220	până 1991	1	430	500
	Total						1	430	500
17	"BUCURIA" S.A.	MD-2004 Chişinău, Columna, 162	Imbirovscaia Galina	Tel.: 295600 Fax.: 295700 office@bucuria.md	CWHSESH743	2008	1	206	120
	Total						1	206	120
Total Air Conditioning Equipment with a Cooling Capacity Over 100 kW (year 2009)							**41**	**18336**	**28440**
18	BC "MOBIASBANCA-GROUPE SOCIETE GENERALE" SA	MD-2003, Chisinau, Bd. Stefan cel Mare si Sfint,81/A	Serghei Eisei	Tel.: 256599 Fax.: 244868 sergiu. elisei@mobiasbanca.md	YCAM 210	2002	1	240	100
	Total						1	240	100
19	SA "MEDIAS HEALTH CENTER"	MD-2002, Chisinau, str. Bulgara 33/1	Serghei Roman	Tel.: 577967 Fax.: 577900	YCAM 360	2002	1	270	120
	Total						1	270	120

Table A.8 continued

Nr.	Organization name	Address	Contact person	Tel, fax, e-mail	Equipment specifications				
					Model, type	Year installed	# of units	Qo, kW	R22 for maintenance of equipment (kg)
20	"NIGARA CLUB" SRL	Chisinau, Str. Ghidighici 5	Igor Negruti	Tel.: 210021 Fax.: 719714	RLC 300	2004	1	215	100
	Total						1	215	100
21	"KENTFORD CAPITAL CORPORATION" SRL	MD-2004, Chisinau, Bd. Stefan cel	Violeta Ciobanu	Tel.: 223161 Fax.: 222451	YCUJ	1998	1	500	200

		Mare si Sfint,202							
	Total						1	500	200
22	"ELAT PLUS" / "MELODIA" SRL	Chisinau, Str. Brincus 3	Dibrov A.B.	Tel.: 636314 Fax.: 636424	SLS 2002	2002	1	320	130
	Sumar						1	320	130
23	"ELIT TUR"SRL/ HOTEL "FLOWERS"	Chisinau, str. Anestiade 6	Alexei Muntean	Tel.: 636314 Fax.: 636424	YCAM 200	2004	1	200	80
	Total						1	200	80
24	"IPTEH" SRL	MD-2001, Chisinau, Bd. Stefan cel Mare si Sfint,65	Iurie Stratan	Tel.: 272417 Fax.: 270498	YCAL 0377	2000	1	350	140
	Total						1	350	140
25	Centrul Mamei si a Copilului (ISICOM)	Chisinau, Str. Burevista	Petru Stratulat	Tel.: /Fax.: 523641	PB 80	până 1991	3	70	150
	Total						3	210	450
Total Air Conditioning Equipment with a Cooling Capacity Over 100 kW (year 2010)							**51**	**19641**	**29760**

1.1.9 Table A.9 - Enterprises with a Total Cooling Capacity from 20 to 100 kW

Nr.	Organization name	Address	Contact person	Tel, fax, e-mail	Equipment specifications				
					Model, type	Year installed	# of units	Qo, kW	R22 for maintenance of equipment (kg)
1	GREEN HILLS MARKET / VISTARCOM S.R.L., I.C.S.	MD-2044 Chisinau Alecu Russo, 28	Penschii Igor Vitalie	Tel: 890110 Fax: 422611 info@ghm.md	Conditioner „Clima venta" 2 compresoare Copeland	1996	2	20	40
	Total						2	40	40
2	"VINĂRIA PURCARI" SRL	MD-2069 Chişinău, Calea Ieşilor, 17, et. 2	Seicaş Gheorghe Gheorghe	Tel.: 592777, 595050, 595444 Fax.: 295911 purcari@purcari.md	SHG4/650-4SRU	2008	1	55	30
	Total						1	55	30
3	"FABRICA DE BRÎNZETURI DIN	MD-3035 Soroca,	Manian Alăn	Tel.: (+230) 22287, 23026 Fax.: (+230) 23684	DHGX4/650-4S	2008	1	80	50

	SOROCA" S.A. Î.M.	Ştefan cel Mare, 133							
	Total						1	80	50
4	"NAVELINA" S.R.L.	MD-2004	Harti Valeriu	Tel.: 214022 Fax.: 213677 navelinasrl@gmail.com	HG34P/380-4S	2008	1	82	50
	Total						1	82	50
Total Air Conditioning Equipment with a Cooling Capacity from 20 to 100 kW (year 2009)							**5**	**257**	**170**
5	"TRANSLINE EXIM" SRL	Chişinău, Str. Vasile Alexandri 79	Igor Damascan	Tel: 890110 Fax: 0-69-119660	YCAM 36	2002	1	36	10
	Total						1	36	10

Table A.9 continued

Nr.	Organization name	Address	Contact person	Tel, fax, e-mail	Equipment specifications				
					Model, type	Year installed	# of units	Qo, kW	R22 for maintenance of equipment (kg)
6	"INCONEXCOM" SRL	Chişinău, Str. Cojocarilor 12	Serghei Ciapchin	Tel.: 220732 Fax.: 547993	YCAM 36	2002	1	36	10
	Total						1	36	10
7	"BREEZCOMFORT" SRL	MD-2012 Chisinau Str. Sciusev 97	Bas Vasile	Tel.: 222501 Fax.: 222502 office@breeze.md	YCAM 36	2003	1	36	10
	Total						1	36	10
8	SA "VISMOS"	Chisinau Str. Uzinelor 5	Victor Manoli	Tel.: 407440 Fax.: 445380	YCAM 36T	2003	1	36	10
	Total						1	36	10
9	SPITALUL CLINIC REPUBLICAN	Chisinau Str. Testimiteanu 29	Victoria Coretchi	Tel.: 208649 Fax.:208648	STULZ CCU	1998	2	25	15
	Total						2	50	30

10	ELITA – 5 AUTO	Chisinau Bul. Dacia 55	Valeriu Subin	Tel.: /Fax.:664058	GAC O25 AC1	2001	1	53	35
	Sumar						1	53	35
11	IM"VITEZA CEAPCHIN"SRL	Chisinau Str. Eminescu 13	Serghei Ciapchin	Tel.: 220732 Fax.: 547993	YCAM 36	2001	1	36	10
	Total						1	36	10
12	HOTEL CODRU	Chisinau Str. 31 August 1989, 127	Valeriu Fedorov	Tel.: /Fax.:208-111	PUHY-200 YMF-B	1998	3	27	15
	Total						3	81	45
	Total Air Conditioning Equipment with a Cooling Capacity from 20 to 100 kW (year 2010)						**16**	**621**	**330**

i. Table A. 10 - Enterprises with a Total Cooling Capacity less than 20 kW

Nr.	Organization name	Address	Contact person	Tel, fax, e-mail	Equipment specifications				
					Model, type	Year instal led	# of units	Qo, kW	R22 for maintenance of equipment (kg)
1	SA „ MOLDTELECOM”, Drochia	DROCHIA str.31AUGUST,1	Paslari Nicolae Mihail	Tel: (0252)23050 Fax: (025)224985	TNLS 15H THLS30H TNLS20H TNLS25H GFLS300H GFLS150H TQL363H MSG12H TADIRAN 27000BT	2005 2002 2002 2002 2000 2002 2006 2006 2008	3 1 1 2 2 1 1 1 1	1,33 2,55 1,72 2 2,7 1,7 3,75 1,03 2,7	1,15 2,18 1,28 1,83 2,29 1,15 3,10 1,05 2,12
	Total						13	19,4	16,5
2	BANCA NATIONALA A MOLDOVEI	MD-2005, Chisinau, bd. Renasterii,7	Talmaci Leonid Petru	Tel: 220549 Fax: 218006 official@bnm.org	Tadiran, TOSHIBA, YORK	2000 - 2008	100	3,5	96
	Total						100	350	96
3	SA „ MOLDTELECOM” cu filiale in Reoublica	MD-2001, Chisinau, Bd. Stefan cel Mare si Sfint,10	Ursachi Gheorghe	Tel: 570101 Fax: 546418, 570111 office@mtc.md	Tadiran, TOSHIBA и др.	2000 - 2008	400	3,5	384
	Total						400	1400	384
4	ODEON, cinematograf	MD-2012 Chisinau Eminescu, 55		Tel: 221058, 227218	Split - Ballu	2004 - 2006	10	2 - 7	14
	Total						10	45	14
5	MOLDOVA AGROINDBANK, cu filiale in Reoublica	MD-2005, Chisinau, Cosmonautilor, 9	Vrabie Natalia Gheorghe	Tel: 56565,856555 Fax: 228058 aib@maib.md	Tadiran, TOSHIBA,	1997 - 2005	141	2,2 - 16,7	257,8

	Total	141	216,2	257,8

Table A.10 continued

Nr.	Organization name	Address	Contact person	Tel, fax, e-mail	Equipment specifications				
					Model, type	Year instal led	# of units	Qo, kW	R22 for maintenance of equipment (kg)
6	MINISTERUL FINANTELOR	MD-2005 Chisinau Cosmonautilor, 7		Tel: 233575 Fax.: 240055	Tadiran, TOSHIBA, MITSUBISHI		50	2 - 6	50
	Total						50	200	50
7	Organizatii de Stat, Urbanproiect	MD-2005 Chisinau Cosmonautilor, 9		Tel:204506, 204507 Fax.:226858 Ministerul Ecologiei	Tadiran, TOSHIBA, MITSUBISHI si alte modele		300	3,5	288
	Total						300	1050	288
8	BANCA DE ECONOMII S.A. cu filiale in Republica	MD-2012, Chisinau, Columna, 115	Mocanu Stefan Dan	Tel: 220549 Fax: 223509 bem@bem.md	Tadiran, TOSHIBA, MITSUBISHI	2000 - 2009	100	2 - 6	98
	Total						100	350	98
9	Sectorul locative şi birouri				marcile firmelor	1999 2008	46305	2 – 6	64827
	Total						46305	185220	64827
Total Air Conditioning Equipment with a Cooling Capacity up to 20 kW (year 2009)							**47419**	**188850**	**66031**
10	HOTEL EUROPA (ULIM)	Chisinau, Str. V. Lupu 6	Dumitru Balaban	Tel mob.: 0-69-198079	MIDEA MSE 07, 09,12	2009	51	2,5-3,5	1,2
	Total						51	153	61,2
Total Air Conditioning Equipment with a Cooling Capacity up to 20 kW (year 2010)							**47470**	**189003**	**66093**

Total Air Conditioning Sector	**2009**	**47465**	**207443**	**94641**

	2010	**47538**	**208919**	**96183**

5.3 Data on R-22 Equipment - Mobile Air Conditioning (MAC)

1.1.1. Table A. 11 - MAC Units for Transport of Goods and Products

District	**Enterprises, name, tel.**	**Total Number of Units**	**R-22 Based Units**	**Quantity of R-22 (kg)**
Basarabca	Railroad in Moldova	73	73	21900
Soroca	1.Alfa-Nistru SA 0-69289757	10	10	120
	2. Corsor SRL 0-230-26485	3	3	48
	3.Intersortrans SRL 0-69228671	7	5	60
	4.Millagro SRL 0-69127207	0	-	-
Edineţ	5. Eurotir-Trans SRL 0-75775730	8	8	96
Bălţi	6.Balintertrans SRL 0-69171028	10	10	120
	7.Cargotir-M.D. SRL 0-69102238	0	-	-
	8.Cernis A. I.I. 0-69123560	0	-	-
	9.Migalauto SRL 0-69322203	4	2	24
	10.Est-vest SRL 0-69109363	0	-	-
	11.Fashion grup SRL 0-69115506	0	-	-

	12.Gamatransprim SRL 0-69641212	0	-	-
	13.Geopalar-grup SRL 0-69153939	0	-	-
	14.Incotir SRL 0-69109362	0	-	-
	15.Indspecial-trans SRL			
	16.Neutral-com SRL	0	-	-
	0-79173795	0	-	-
	17.Nicanor-Zaplitnii I.I. 0-79523424	15	13	156
	18.Nicolae Groza I.I. 0-69037137	2	2	24
	19.Regiunea-Exim SRL 0-23147560	6	4	48
	20.Roma SRL 0-69112523	3	3	36
	21.Stromacon-Trans SRL 0-69002101	0	-	-
	22.Unitranzit SRL 0-69568000		-	-
Donduşeni	23.Feliann SRL 0-69150767	0	-	-
Făleşti	24.Marthatex SRL 0-25922949	0	-	-
Briceni	25.Nord Trans SRL 0-69201789	10	10	120
Drochia	26.Vortolomei I.I. 0-25262241	0	-	-
Camenca	27.Godiac S. I.I.	3	2	24
Orhei	28.Coloana auto №2830 0-96130083	4	4	48
	29.Orhei-Vit SA 0-23521337	5	5	60
Floreşti	30.Avicola Roso 0-69064016	4	3	36
Glodeni	31.Agrogrintrans SRL 0-79480466	2	2	24
Criuleni	32. Pallada SRL	0	-	-

	0-24827847			
Ocniţa	33.Savenis-Trans SRL 0-27153227	3	3	32
T o t a l	**33**	**172**	**162**	**22,968**

1.1.2. Table A. 12 - MAC Units for Transport of Cargo (Chisinau)

Company Name	**Total Number of Units**	**R-22 Based Units**	**Quantity of R-22 (kg)**
1. Aggestus SRL	15	8	96
2. Aleno-met SRL	12	9	108
3. Aptranstir SRL	15	11	132
4. Cagortatrans SRL	12	12	144
5. Calivad-Trans SRL	70	53	636
6. Cvanc-Trans SRL	5	4	48
7. Eurotir-Trans SRL	2	2	24
8. Fina SRL	5	5	60
9. Luntracom SRL	3	3	36
10. Magirul Indcom SRL	4	4	48
11. Olsitrans SRL	2	1	12
12. Rocon-Trans SRL	31	16	192
13. Selida-Lux SRL	2	2	24
14. TVN-Trans SRL	1	1	12
15. Van-Valina-Trans SRL	10	8	64
16. Vintrans Grup SRL	10	8	64
17. Zimroeli-Trans SRL	3	3	36
T o t a l	**202**	**150**	**1,736**

5.4 R-22 Equipment – Vendors, Type and Inventory of Available Stock

1.1.3. Table A. 13 - Characteristics of air conditioners sold to companies in Moldova

Nr.	Organization name	Address	Contact person	Tel, fax, e-mail	Equipment specifications				
					Model, type	Year installed	# of units	Qo.kW	R22 for maintenance of equipment (kg)
1.	"DIFERENS" S.R.L.	MD-2012 Chişinău, Columna, 72/3	Neciaev Vasile Leonid	Tel.: 227337 Fax.: 225190 info@diferens.md	BSC-07H BSC-09H BSC-12H BSC-18H BSC-24H BSC-30H	2007 – 2008	25 30 25 20 25 20	2,0 2,6 3,5 5,0 7,0 8,8	19 27 24 33 58 58
	Total						135		219
2.	"VENTSISTEM-COMPANIE CLIMATICĂ" S.R.L.	MD-2044 Chişinău, Meşterul Manole,12	Panciuc Alexandru	Tel.: 838798 Fax.: ventsistem@company.md	BSC-07H BSC-09H BSC-12H BSC-18H BSC-24H BSC-30H	2007 – 2009	80 100 100 60 30 30	2,0 2,6 3,5 5,0 7,0 8,8	61 90 96 99 70 87
	Total						400		503
3.	"CLIMATSISTEM" S.R.L.	MD-2064 Chişinău, Ion Creangă ,39/2	Tarlapan Valeriu	Tel.: 592982 Fax.: 593032, 582964 climatsistem@yahoo.com	KFR-120	2008	20	12	56
	Total						20		56

Table A.13 continued

Nr.	Organization name	Address	Contact person	Tel, fax, e-mail	Equipment specifications				
					Model, type	Year installed	# of units	Qo.kW	R22 for maintenance of equipment (kg)
4.	"ALINA ELECTRONIC"	MD-2012 Chişinău, M-t Bănulescu-Bodoni, 45		Tel.: 224035, 238606 Fax.: 224035, 238606 info@alina.md	LG DAEWOO Electrolux VORTEX PANASONIC VITEK	2007 – 2009	268 43 19 10 13 14	2,0 – 10,55 1,5 – 3,6 2,1 – 6,7 2,6 – 3,6 2,5 – 4,6 2,0 – 3,6	346,42 37 30,4 12 18,85 17,5
	Total						367		462
5.	"TINA" S.R.L.	MD-2038 Chişinău, bd. Dacia, 15/1	Bannicov Ivan Marcovici	Tel.:553881, 660000, 582070 office@tina.md	Samsung Panasonic LG	2006 – 2008	100	2,0 – 7,0	148
	Total						100		148
6.	"Di & TRADE S.R.L."	MD-2012 Chişinău, M-t G.Bănulescu Bodoni, 12	Şuşu Vladimir Ion	Tel.: 212262 Fax.: 229561 info@climate.md	RAS-07,10,13, RAS-18,24,30 38YCC 24, 36, 38YCC 48, 60, +FB4B MSE-07,09,12, MSE-18,24,36	2005 2000 2007	110 30 70	2 – 8 6,7 – 16,7 2,1 – 10,3	135 120 80
	Total						210		335
7	"AZIMUT GRUP" S.R.L. Echipamente a firmei DAIKIN, Japonia	Chisinau, Sciuseva, 87	Voitenco Larisa	Tel: 272456 Fax: 229597 culibacinii@azimut.md	ATUD20F ATUD35F	2007	160 130	2,0 3,4	121,6
	Total						290		121,6

Nr.	Organization name	Address	Contact person	Tel, fax, e-mail	Equipment specifications				
					Model, type	**Year installed**	**# of units**	**Qo.kW**	**R22 for maintenance of equipment (kg)**
8	AIRclimat by JLC GROUP HUNDAI Corporation, Coreia MITSUBISHI Heavy Industries, Japonia	Chinau Renasterii, 22	Gudumac Igor Petru	Tel: 245848	HRH-E097BE HRH-E127BE HRH-E187BE HRH-E247BE HRH-E307BE HRH-E367BE HSH-097BE HSH-127BE HDH-487BE HDH-607BE HCH-E427BE HCH-E507BE SRC28 HJ SRC40 HJ SRC28 HG SRC40 HG-1 SRC52 HE-2 SRC63 HE2 SRC71 HE-2 FDUR 508 A FDC508HES3 RCD-H-E	2,6 3,5 5,3 7,0 8,2 9,5 2,6 3,4 4,7 6,57 4,6 4,52 2,5 3,6 2,53 3,5 5,4 6,1 6,7 12,5	20 22 19 11 5 5 15 15 3 3 3 3 23 31 49 42 11 5 5 3	2008	13,6 21,12 34,77 26,62 14 14,8 10,2 14,4 10,2 11,7 9,6 11,1 17,48 35,65 46,55 54,6 23,1 11,5 12,5 40,5
	Total						293		434

1.1.4. Table A. 14 – Inventory of Available Air Conditioners in Stock in 2009

Nr.	Organization name	Address	Contact person	Tel, fax, e-mail	Equipment specifications				
					Model, type	Year installed	# of units	Qo.kW	R22 for maintenance of equipment (kg)
1.	"ALINA ELECTRONIC"	MD-2012 Chişinău, M-t Bănulescu-Bodoni, 45		Tel.: 836000 Fax.: 836001 503503 – informaţie info@alina.md	C09LHD LG		1	2,6	0,96
					A12LHE LG		2	3,5	2,6
					C12LHE LG		3	3,5	3,9
					C07LHD LG		1	2,1	0,7
					C09LHR (N)LG		1	2,6	0,96
					A12LHH LG		1	3,5	1,3
					S12LHP LG		3	3,5	3,9
					C12LHD LG		2	3,5	2,6
					C12LHW LG		1	3,5	1,3
					C09LHE LG		2	2,6	1,92
					A12LHR LG		8	3,5	10,4
					S07LHP LG		1	2,1	0,7
					S09LHX LG		1	2,6	0,96
					S09LHP LG		8	2,6	7,68
					A12LHM LG		4	3,5	5,2
					A18LHD LG		1	5,4	1,85
					C07LHB LG		1	2,1	0,7
					M18L2H LG		2	5,4	3,7
					S18LHP LG		3	5,4	5,55
					S18LHX LG		1	5,4	1,85
					A09LHE LG		3	2,6	2,88
					C07LHE LG		6	2,1	4,2
					C07LHR LG		1	2,1	0,7
					S24LHX LG		5	7,0	12,5
					A18LHM LG		4	5,4	7,4
					A09LHH LG		2	2,6	1,92
					C07LHM LG		3	2,1	2,1
					A12LHI LG		4	3,5	5,2

Nr.	Organization name	Address	Contact person	Tel, fax, e-mail	Equipment specifications				
					Model, type	**Year installed**	**# of units**	**Qo.kW**	**R22 for maintenance of equipment (kg)**
1.	"ALINA ELECTRONIC"	MD-2012 Chişinău, M-t Bănulescu-Bodoni, 45		Tel.: 836000 Fax.: 836001 503503 – informaţie info@alina.md	A09LHM LG C09LHM LG S24LHP LG M21L2H LG KS-H126LLA4 S30LHP LG A09LHR LG C09LHH LG S36LHP LG EACS-24HD EACS-18HD EACS-09HD EACS-12HD EACS-07HD DSB-075IH DWB-056C DSB-185IH DWB-072C DSB-0910LH DSB-1210LH DSB-0910LHR DSB-1210LHR VT-2012 VT-2007 VT-2019 VT-2022 12000BTU 9000BTU CS/CU-PA16GKD		3 2 13 1 2 13 4 4 5 3 1 6 9 2 3 2 40 3 31 4 14 3 7 2 3 4 4 5 2	2,6 2,6 7,0 3,5 3,5 8,5 2,6 2,6 10,55 6,7 5,3 2,6 3,4 2,1 2,05 1,5 2,3 2,0 2,5 3,5 2,5 3,5 3,5 2,0 2,5 3,5 3,5 2,6 4,6	2,88 1,92 32,5 1,3 2,6 39,0 3,84 3,84 18,5 7,2 1,85 5,76 11,7 1,4 0,7 1,1 32,2 2,1 28,0 3,84 12,6 3,9 9,1 0,7 2,88 3,84 5,2 4,8 3,2
	Total						**293**		**336**

5.5 Annex to Law nr. 852-XV dated 14.02.2002

List of chemical substances regulated under the Montreal Protocol

Nr.	Annex, group	Name	Formula	Customs code
1	2	3	4	5
			Chlorofluorocarbons (CFCs)	
1.	A I	CFC-11	CFCl3	2903 41 000
2.	A I	CFC-12	CF2Cl2	2903 42 000
3.	A I	CFC-113	C2F3Cl3	2903 43 000
4.	A I	CFC-114	C2F4Cl2	2903 44 100
5.	A I	CFC-115	C2F5Cl	2903 44 900
			Halons	
6.	A II	Halon-1211	CF2BrCl	2903 46 100
7.	A II	Halon-1301	CF3Br	2903 46 200
8.	A II	Halon-2402	C2F4Br2	2903 46 900
		Other fully halogenated CFCs (CFCs)		
9.	B I	CFC-13	CF3Cl	2903 45 100
10.	B I	CFC-111	C2FCl5	2903 45 150
11.	B I	CFC-112	C2F2Cl4	2903 45 200
12.	B I	CFC-211	C3FCl7	2903 45 250
13.	B I	CFC-212	C3F2Cl6	2903 45 300
14.	B I	CFC-213	C3F3Cl5	2903 45 350
15.	B I	CFC-214	C3F4Cl4	2903 45 400
16.	B I	CFC-215	C3F5Cl3	2903 45 450
17.	B I	CFC-216	C3F6Cl2	2903 45 500
18.	B I	CFC-217	C3F7Cl	2903 45 550
			Carbon tetrachloride	
19.	B II		CCl4	2903 14 000
			1,1,1-trichloroethane	
20.	B III		C2H3Cl3*	2903 19 100

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* This formula does not refer to 1,1,2-trichloroethane.

			Hydrochlorofluorocarbons (HCFC)	
21.	C I	HCFC-21	CHFCl2	2903 49 100
22.	C I	HCFC-22	CHF2Cl	2903 49 100
23.	C I	HCFC-31	CH2FCl	2903 49 100
24.	C I	HCFC-121	C2HFCl4	2903 49 100
25.	C I	HCFC-122	C2HF2Cl3	2903 49 100
26.	C I	HCFC-123	C2HF3Cl2	2903 49 100
27.	C I	HCFC-124	C2HF4Cl	2903 49 100
28.	C I	HCFC-131	C2H2FCl3	2903 49 100
29.	C I	HCFC-132	C2H2F2Cl2	2903 49 100
30.	C I	HCFC-133	C2H2F3Cl	2903 49 100
31.	C I	HCFC-141	C2H3FCl2	2903 49 100
32.	C I	HCFC-141b	C2H3FCl2 (CH3CFCl2)	2903 49 100
33.	C I	HCFC-142	C2H3F2Cl	2903 49 100
34.	C I	HCFC-142b	C2H3F2Cl (CH3CF2Cl)	2903 49 100
35.	C I	HCFC-151	C2H4FCl	2903 49 100
36.	C I	HCFC-221	C3HFCl6	2903 49 100
37.	C I	HCFC-222	C3HF2Cl5	2903 49 100
38.	C I	HCFC-223	C3HF3Cl4	2903 49 100
39.	C I	HCFC-224	C3HF4Cl3	2903 49 100
40.	C I	HCFC-225	C3HF5Cl2	2903 49 100
41.	C I	HCFC-225ca	C3HF5Cl2 (CF3CF2CHCl2)	2903 49 100
42.	C I	HCFC-	C3HF5Cl2	2903 49 100

		225cb	(CF2ClCF2CHClF)		
43.	C I	HCFC-226	C3HF6Cl	2903 49 100	
44.	C I	HCFC-231	C3H2F6Cl	2903 49 100	
45.	C I	HCFC-232	C3H2F2Cl4	2903 49 100	
46.	C I	HCFC-233	C3H2F3Cl3	2903 49 100	
47.	C I	HCFC-234	C3H2F4Cl2	2903 49 100	
48.	C I	HCFC-235	C3H2F5Cl	2903 49 100	
49.	C I	HCFC-241	C3H3FCl4	2903 49 100	
50.	C I	HCFC-242	C3H3F2Cl3	2903 49 100	
51.	C I	HCFC-243	C3H3F3Cl2	2903 49 100	
52.	C I	HCFC-244	C3H3F4Cl	2903 49 100	
53.	C I	HCFC-251	C3H4FCl3	2903 49 100	
54.	C I	HCFC-252	C3H4F2Cl2	2903 49 100	
55.	C I	HCFC-253	C3H4F3Cl	2903 49 100	
56.	C I	HCFC-261	C3H5FCl2	2903 49 100	
57.	C I	HCFC-262	C3H5F2Cl	2903 49 100	
58.	C I	HCFC-271	C3H6FCl	2903 49 100	
			Hydrobromfluorocarbons (HBrFC)		
59.	C II		CHFBr2	2903 49 300	
60.	C II	(HBrFC-22B1)	CHF2Br	2903 49 300	
61.	C II		CH2FBr	2903 49 300	
62.	C II		C2HFBr4	2903 49 300	
63.	C II		C2HF2Br3	2903 49 300	
64.	C II		C2HF3Br2	2903 49 300	
65.	C II		C2HF4Br	2903 49 300	
66.	C II		C2H2FBr3	2903 49 300	
67.	C II		C2H2F2Br2	2903 49 300	
68.	C II		C2H2F3Br	2903 49 300	
69.	C II		C2H3FBr2	2903 49 300	
70.	C II		C2H3F2Br	2903 49 300	
71.	C II		C2H4FBr	2903 49 300	
72.	C II		C3HFBr6	2903 49 300	
73.	C II		C3HF2Br5	2903 49 300	
74.	C II		C3HF4Br4	2903 49 300	
75.	C II		C3HF4Br3	2903 49 300	
76.	C II		C3HF5Br2	2903 49 300	
77.	C II		C3HF6Br	2903 49 300	
78.	C II		C3H2FBr5	2903 49 300	
79.	C II		C3H2F2Br4	2903 49 300	
80.	C II		C3H2F3Br3	2903 49 300	
81.	C II		C3H2F4Br2	2903 49 300	
82.	C II		C3H2F5Br	2903 49 300	
83.	C II		C3H3FBr4	2903 49 300	
84.	C II		C3H3F2Br3	2903 49 300	
85.	C II		C3H3F3Br2	2903 49 300	
86.	C II		C3H3F4Br	2903 49 300	
87.	C II		C3H4FBr3	2903 49 300	
88.	C II		C3H4F2Br2	2903 49 300	
89.	C II		C3H4F3Br	2903 49 300	
90.	C II		C3H5FBr2	2903 49 300	
91.	C II		C3H5F2Br	2903 49 300	
92.	C II		C3H6FBr	2903 49 300	
93.	C III		CH2BrCl	2903 49 800	
			Methyl bromide		
94.	E		CH3Br	2903 39 110	
			Blends		
95.		2903 41 000 2903 45 550			3824 71 000
96.		de la 2903 46 100 până la 2903 46 900			3824 72 000
97.		2903 14 000 2903 19 100 2903 39 110 2903 49 100 sau			3824 75 000 3824 76 000 3824 77 000 3824 74 000

2903 49 300	3824 73 000 3824 79 000

LIST
of equipment and products containing ODS

Nr.	Equipment and products	Customs code
1	2	3
1.	Automobile and truck air conditioning units (whether incorporated in vehicles or not)	8415
2.	Domestic and commercial refrigeration and air conditioning/heat pump equipment	
	Refrigerators	from 8418
	Freezers	from 8418 8418 30 8418 40 8418 50 8418 61 8418 69
	Dehumidifiers	8415 8424 8479 89 970
	Water coolers	from 8419
	Ice machines	8418 8479
	Air conditioning and heat pump units	8415 8418 61 8418 69
3.	Aerosol products, except medical aerosols	
	Foodstuffs	0404 90 from 1901 90 from 1517 90 2106 90
	Paints and dyes, pigments,	from 3208 3209 3210 3212 90 3213
	Perfumery, cosmetics	from 3303 3304 30 3305 3306 from 3307(exception-3307 41)
	Detergents	3402
	Lubricants	3403
	Maintenance agents for technical equipment	3405
	Products made of inflammable materials	3606
	Insecticides, herbicides and fungicides	3808
	Decoration materials	3809 10
	Organic solvents	3814
	Defrosting liquids	3820
	Products of the chemical industry and branches connected with the chemical industry	3824
	Silicones in primary form	3910
	Arms	9304
4.	Portable fire extinguisher	from 8424 10
5.	Insulation boards, panels and pipe covers	from 3920 3925 3926

6. Pre-polymers	from 3901 to 3911