

UNITED NATIONS ENVIRONMENT PROGRAMME



# **1972-2012:**Serving People and the Planet

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#### 1. Introduction

Hydrochlorofluorocarbons (HCFCs) are ozone depleting substances (ODS) controlled under the Montreal Protocol on Substances that Deplete the Ozone Layer. Forty different HCFCs of Ozone Depletion Potentials (ODPs) varying from 0.001 to 0.52 are listed in Group I of Annex C to the Montreal Protocol. Due to their low ODPs, HCFCs were widely used as transitional replacements for chlorofluorocarbons (CFCs), more potent ODS which were phased out in developed countries by 31 December 1995 and in developing countries by 31 December 2009. In 2009 the global annual production of HCFCs reported to the UNEP Ozone Secretariat was about 38,000 ODP tonnes, which corresponds to about 700,000 metric tonnes. In the same year, the global annual consumption of HCFCs was about 42,000 ODP tonnes, of which some 85% was attributed to developing countries. While the ODPs of HCFCs are in the low range, large quantities which are emitted during production, transportation, storage and use contribute significantly to ozone layer depletion. Since most HCFCs are also potent greenhouse gases having Global Warming Potentials (GWPs) in some cases thousand of times higher than that of CO<sub>2</sub> and comparable with CFC-12 (see Table 1), phase-out of these substances will not only help in the recovery of the ozone layer, but also significantly mitigate climate change.

Today, HCFCs are widely used as refrigerants, foam blowing agents, solvents, aerosol propellants and fire fighting agents. Large quantities of HCFCs are also used as feedstock in chemical processes, but according to the Montreal Protocol provisions, quantities used in this application are not counted in the consumption calculation,<sup>4</sup> so the HCFC production and consumption figures quoted above do not include quantities produced or consumed as feedstock. However, it can be assumed that HCFC quantities produced and used globally for feedstock applications presently amount to about 500,000 metric tonnes per annum. As significant quantities of HCFCs are used in mixtures with other HCFCs or with other substances, the

Parties to the Montreal Protocol decided that quantities of ODS (including HCFCs) contained in mixtures shall be part of the consumption calculation. However, ODS (including HCFCs) contained in products (including equipment) are not controlled.<sup>5</sup>

Table 1. ODP and GWP values of the most commonly used HCFCs and HCFC-containing mixtures

| Substance or mixture | ODP   | GWP <sup>6</sup> |
|----------------------|-------|------------------|
| CO <sub>2</sub>      | 0     | 1                |
| CFC-12               | 1     | 8 500            |
| HCFC-21              | 0.040 | 151              |
| HCFC-22              | 0.055 | 1 810            |
| HCFC-123             | 0.020 | 77               |
| HCFC-124             | 0.022 | 609              |
| HCFC-141b            | 0.110 | 725              |
| HCFC-142b            | 0.065 | 2 310            |
| HCFC-225ca           | 0.025 | 122              |
| HCFC-225cb           | 0.033 | 595              |
| R-401A               | 0.037 | 1 100            |
| R-402A               | 0.020 | 2 600            |
| R-409A               | 0.039 | 1 585            |
| R-411A               | 0.048 | 1 597            |
| R-414A               | 0.034 | 1 478            |
| R-418A               | 0.053 | 1 753            |

Parties to the Montreal Protocol are obliged to follow the phase-out schedules for HCFC production and consumption that were agreed upon in 2007 in Montreal (Decision XIX/6). Figure 1 presents the phase-out schedule of HCFC consumption to be followed by countries operating under Article 5(1) of the Montreal Protocol (i.e. developing countries).

The Montreal Protocol calculation of ODS consumption:

Consumption = Production + Imports - Exports

The Executive Committee of the Multilateral Fund for the Implementation of the Montreal Protocol requires in Decision 63/17 that from the 68<sup>th</sup> meeting of the Executive Committee (i.e. from early 2013) onwards for all submissions of new HCFC projects, countries must confirm that they have established an enforceable licensing and a quota system for HCFC imports, and – if relevant – also for HCFC production. Furthermore, this decision requires that the system is

% of 2009-2010 baseline 90 75 60 2030-2040 45 **Servicing only** 30 15 0 2013 2015 2020 2025 2030 2040

Figure 1. Phase-out schedule of HCFC consumption to be followed by developing countries

capable of ensuring the country's compliance with the Montreal Protocol HCFC phase-out schedule for the duration of HCFC Phase-out Management Plan (HPMP) agreed for that country.

Years

Since the majority of developing countries - particularly low volume consuming countries - only consume HCFCs and do not produce them, this booklet only addresses the development of quota systems that control HCFC imports. Developing countries that produce HCFCs should also establish specific quota systems for HCFC production.

#### **Executive Committee Decision 63/17**

"That, for all submissions from the 68<sup>th</sup> Meeting onwards, confirmation has been received from the Government that an enforceable national system of licensing and quotas for HCFC imports and, where applicable, production and exports is in place and that the system is capable of ensuring the country's compliance with the Montreal Protocol HCFC phase-out schedule for the duration of this agreement."

UNEP/OzL.Pro/ExCom/63/60

#### 2. Policies facilitating implementation of HCFC phase-out

Any developing country wishing to receive assistance for the phase-out of HCFCs from the Multilateral Fund must have its HPMP approved by the Executive Committee. Though all HPMPs are prepared according to the Multilateral Fund guidelines, the individual HPMPs may contain different approaches to HCFC phase-out based on the specific conditions in the individual country. In 2010, UNEP DTIE OzonAction developed a guidebook for developing countries entitled "HCFC Policy and Legislative Options – A Guide for Developing Countries" which lists and explains in detail a range of policy options available to facilitate the HCFC phase-out process. The options include trade and use restrictions, fiscal measures, special record keeping, reporting and labeling requirements as well as training and awareness raising activities. One of the substantial measures recommended in this guide is establishing import

quotas for HCFCs which – if effectively implemented and enforced – will ensure that the country remains in full compliance with its commitments in phasing out HCFCs under the Montreal Protocol.

#### 3. Principles of an import quota system

Many developing countries established CFC import quota systems in the past as part of their strategies to comply with the Montreal Protocol's CFC consumption phase-out schedule, so most National Ozone Units (NOUs) are familiar with the main principles of such systems. It is anticipated that countries which had CFC import quota systems in place will amend the relevant legal provisions to adjust these systems to include HCFCs. Nevertheless, it may be useful to discuss the principles of import quota systems here in detail and emphasise certain important features of the system which may be especially relevant to HCFCs.

An import quota system is usually part of an ODS licensing system which has been established in a country, although some countries may decide to establish it based on a separate administrative order, which may be easier than amending the existing ODS legislation. An import quota can be defined as the quantity of individual substance (or group of substances) covered by the quota system which is allocated to an eligible importer for a given period of time (usually for one calendar year). The eligibility of the importer to receive an allocation of the import quota and the possible allocation mechanisms are discussed in Section 4.

The objective of establishing any import quota system is to ensure that the country will not import more of a substance (or group of substances) than the limit for that country according to its relevant legislation. The sum of the quotas allocated to all eligible importers should therefore be equal to or lower than this limit. In the case of ODS, and HCFCs in particular, the limit set for a country by the Montreal Protocol and reflected in the country's national legislation<sup>8</sup> is for total consumption, not just for import. For countries which do not produce HCFCs, consumption is equal to imports minus exports, therefore the total import quota theoretically available for allocation may be higher than the country's consumption limit - if the country exports HCFCs. However, except for countries with *significant exports* of HCFCs,<sup>9</sup> it is recommended that the maximum total import quota available for allocation within the country is equal to or slightly lower than the consumption limit set in the relevant national legislation. The policy options related to establishing the HCFC import quota system are discussed in Section 4.

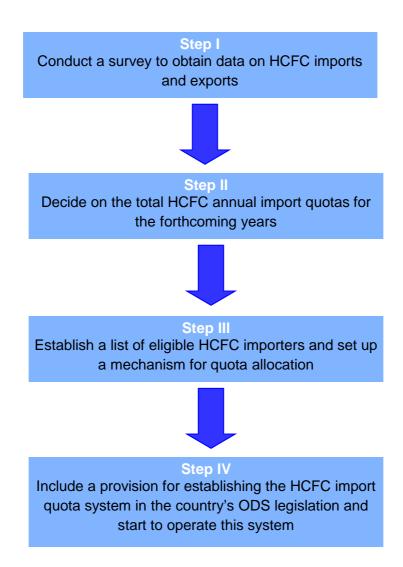
As mentioned in Section 1, HCFCs are often imported as components of mixtures, e.g. refrigerant blends. Therefore, quotas allocated to individual importers should also include quantities of HCFCs contained in mixtures to be imported. An updated list of the most commonly used mixtures containing HCFCs, including their trade names and compositions, is presented in Annex 1.

#### 4. How to establish an HCFC import quota system

A typical process for establishing an HCFC import quota system is presented in Figure 2 and described below.

Some of the steps described may not be relevant if the country has already implemented these. It is very important that a country wishing to establish an HCFC import quota system already has an ODS import/export licensing system in place that meets the requirements of Article 4B of the Montreal Protocol. That is that it covers imports and exports of all HCFCs controlled under the Montreal Protocol, both virgin and used (which includes 'recovered, recycled or reclaimed'). Since ODS contained in mixtures fall under the definition of controlled substances, mixtures containing HCFCs should also be covered by the licensing system. If any of these elements are missing in the country's ODS licensing system, it should be amended to include them. If the

Figure 2. Steps to establish an HCFC import quota system



country has no HCFC licensing system in place, it should make an effort to establish such a system as an urgent priority.

The Parties to the Montreal Protocol have made significant efforts in the establishment and operation of licensing systems under Article 4B of the Protocol: as of November 2011, 182 Parties have such systems in place. <sup>10</sup> However, in spite of this achievement, there are two special cases where an HCFC import quota systems may be introduced independently of the ODS licensing system:

- Countries that have not established their licensing system
- Countries that have a licensing system but this does not yet cover HCFCs, and the government expects that amending the licensing system to include HCFCs will take a long time.

In both of these cases the HCFC import quotas may be introduced temporarily based on special government orders or decrees.<sup>11</sup>

It is also very important that the HCFC import/export licensing system is operational and enforced. "Operational" should be understood to mean "fully controlled by the governmental body that has been designated in the country's legislation to operate it." If there are problems in enforcement of the licensing system, these have to be addressed before establishing the HCFC import quota system, otherwise, the whole process will not be as effective and the objectives of establishing the quotas for HCFCs may not be achieved.

#### Step I:



#### Conduct a survey to obtain data on HCFC imports and exports<sup>12</sup>

In many developing countries imports and exports of HCFCs were not controlled or even monitored until 2009. However, developing countries applying for HCFC-related assistance from the Multilateral Fund are obliged to conduct surveys to obtain data on their recent HCFC imports and exports (e.g. for the last two or three years), since they are obliged to report the data (Article 7 data) to the Ozone Secretariat for the baseline years of 2009-2010 for their HPMPs. For the purpose of establishing an HCFC import quota system, quite detailed data on imports and exports are needed, so a survey should be directed towards potential importers and exporters.<sup>13</sup> The inclusion of Customs in the survey may also help, but since the new Harmonised System (HS) codes for individual HCFCs only entered into force from 1 January 2012, <sup>14</sup> Customs data on specific HCFCs imports or exports may be available only if the country has had implemented a national Customs classification of HCFCs based on the HS with Customs codes extended to 8 digits or more. However, since the new HS codes for mixtures containing ODS (including those containing HCFCs) entered into force in 2008, the Customs data concerning import and export of mixtures containing HCFCs may be quite accurate.

The relevant authority (normally the NOU) should send a letter to importers, exporters and Customs explaining the reasons for conducting the survey, emphasizing the importance of providing the answers for the participation of the company in HCFC import quota system (Annex II provides an example of a possible letter). In the questionnaire enclosed with the letter, potential importers and exporters should be asked to provide the quantities of individual HCFCs and HCFC-containing mixtures they imported during the previous years. In the case of importers, the answers should be supplemented, if possible, with an estimation of quantities reexported or placed on the market (or acquired on the company's own account) for particular uses (e.g. refrigeration and air conditioning, foam blowing including production of polyol premixes for polyurethane foams, solvents, aerosol production, fire extinguishing and feedstock and process agent uses, if any). It is recommended that the relevant authority questions the potential importers and exporters on the import and export forecast for future years. Moreover, in order to be included in the list of eligible importers, the potential importers should provide proof that imports in a given period actually took place. Such proof could be the relevant Customs documentation where the names of substances (or mixtures) and the quantities actually imported are specified. In this way, the survey of potential importers and exporters of HCFCs will not only provide data on quantities of HCFCs they imported and exported in previous years, but also it will help the government to decide on the country's total HCFC import quotas for the forthcoming years, and identify entities eligible for an HCFC import quota allocation - see Steps II and III, respectively. A different format of the questionnaire should be designed if the country decides to extend the survey to Customs (Annex II provides suggested formats). If the country already has reliable data on HCFC imports and exports for previous years (starting no later than 2007<sup>15</sup>), there is no strong need to conduct surveys either of potential importers and exporters, or of Customs.

#### Step II



# Decide on country-wide HCFC total annual import quotas for the forthcoming years

A country's decision on its country-wide HCFC total annual import quotas for the next few years <sup>16</sup> may be based on either:

- (1) The Montreal Protocol HCFC phase-out schedule which is mandatory for developing countries (or on a specific accelerated HCFC phase-out regime already agreed by the country in the framework of its HPMP), or;
- (2) The predicted decline in HCFC consumption taking into account data acquired from importers and exporters of HCFCs (see Step I).

These two possible approaches to setting the total annual country import quotas are further explained below:

(1) Taking the Montreal Protocol consumption limit or a specific agreed accelerated phaseout regime as a basis

Even in cases where the country exports some quantities of HCFCs, it is recommended that the total annual country-wide import quotas are set at a level that does not exceed the HCFC consumption limits under the Montreal Protocol (or limits agreed in a specific accelerated phase -out regime). It is also suggested that the HCFC import quota for a given calendar year is fixed at a level of 90% of the value resulting from those presumptions – simply because it would allow for safety margin in case some importers exceed their individual quotas (i.e. a buffer). However, from a legal perspective, it may appear difficult for some governments to set up the country's official import quota at a level lower than that allowable based on international agreements signed by the country.

(2) Taking the actual level of imports over the last few years and predicted imports in the next few years as a basis

This approach can be applied only if the actual imports over the last few years were distinctly lower than the level resulting from the Montreal Protocol provisions or from the agreed accelerated phase-out regime. In such a case, the total annual country-wide import quotas for the forthcoming years may be set up at levels corresponding to the predicted levels of imports in the forthcoming years based on the actual import data from the previous years and the importers' forecast (see Step I). When taking this approach, the government may also decide to set the total country-wide quota at a level that would allow for a safety margin of 10% or more.<sup>17</sup>

#### Step III:



# Establish a list of eligible importers and set up a mechanism for quota allocation

Once the total annual country HCFC import quotas for the forthcoming years are determined, the next step is to establish a list of eligible importers and set up a mechanism for allocating the quotas to the individual importers. It is strongly recommended that eligible importers are only those entities which have imported HCFCs in the past. Additionally, it is recommended that the quantity of HCFC (in ODP tonnes) allowed for imports in a given calendar year is based on the total quota and is allocated only to those eligible importers. The allocation principle should be based on their historical share of the country's total imports of HCFCs (in ODP tonnes) over a specific period of time. 18 One approach to decide on this period is to take as the basis for the calculation the two years which form the basis for the 2013 HCFC freeze level (i.e. 2009-2010) - data on HCFC imports for the 2009-2010 period are usually available. Another approach could be to take two (or three) consecutive years preceding the year of establishment of the import quota system. Still another approach could be to take a certain period of time in the past, e.g. the two years preceding the year when the restrictions on HCFCs were agreed upon under the Montreal Protocol (i.e. 2005-2006). However, if this approach is taken, it would be more appropriate to take into account the combined imports of HCFCs and CFCs, since before 2007 developing countries could still use relatively large quantities of CFCs. Considering that the ODPs of HCFCs are about 20 times lower in general than the ODPs of CFCs, the basis for the calculation on allocation of the quotas for individual importers should be calculated in metric tonnes, although the allocation for the HCFC quotas should always be in ODP tonnes.

### Examples illustrating possible practical approaches to the challenge of quota allocation to importers for 2013

Let us assume that a country's annual limit for HCFCs consumption resulting from the Montreal Protocol for the year 2013 is 17.5 ODP tonnes (equal to the country's reported average annual consumption in 2009-2010). However, the country agreed in its HPMP to accelerate its HCFC phase-out, so its actual limit for this year is agreed to be reduced to 15 ODP tonnes.

In addition the country decided that the total HCFC import quota to be allocated to importers in 2013, would be 90% of the 15 ODP tonne limit = 13.5 ODP tonnes (to leave 1.5 ODP tonne buffer)

Example 1 - based on average annual imports and exports of HCFCs in the period 2009-2011

| Company | Average annual imports of HCFCs in the period 2009-2011 in ODP tonnes (% share in total imports- in brackets) | Average annual exports/re-exports of HCFCs in the period 2009-2011 in ODP tonnes |
|---------|---|--|
| А       | 5.25 (26.81%)   | -  |
| В       | 2.87 (14.66%)   | -  |
| С       | 11.46 (58.53%)  | 1.48   |
| Total   | 19.58   | 1.48   |

Total average annual consumption\* in the period 2009-2011 is: 19.58 - 1.48 = 18.10 ODP tonnes

So allocation of HCFC import quota to companies for 2013 is as follows:

- ⇒ Company A 26.81% of 13.5 ODP tonnes = 3.62 ODP tonnes
- ⇒ Company B 14.66% of 13.5 ODP tonnes = 1.98 ODP tonnes
- ⇒ Company C 58.53% of 13.5 ODP tonnes = 7.90 ODP tonnes

Example 2 - based on average annual imports of HCFCs and CFCs in a specific period

| Company | Average annual imports of HCFCs in a specific period (metric tonnes) | Average annual imports of CFCs in a specific period (metric tonnes) | Average annual imports of HCFCs and CFCs in a specific period (metric tonnes) (% share of total imports - in brackets) |
|---------|--|---|--|
| А       | -  | 100.00  | 100.00 (30.58%)  |
| В       | 70.00  | 50.00   | 120.00 (36.70%)  |
| С       | 32.00  | 75.00   | 107.00 (32.72%)  |
| Total   | 102  | 225   | 327  |

So allocation of HCFC import quota to companies for 2013 is as follows:

- $\Rightarrow$  Company A 30.58% of 13.5 ODP tonnes = 4.13 ODP tonnes
- ⇒ Company B 36.70% of 13.5 ODP tonnes = 4.95 ODP tonnes
- ⇒ Company C 32.72% of 13.5 ODP tonnes = 4.42 ODP tonnes

† actual period to be selected by the country \* = imports - exports Why is it recommended that new importers should not be eligible to share the annual import quotas? The reason is that phasing out HCFCs (and prior to this, CFCs) often meant losing money (or even total collapse) for certain companies that built their business on the HCFC trade (or previously, on the CFC trade). Taking this into account, allowing new importers to compete with the existing ones on a "free market" basis would not be a fair approach. However, new importers could be allowed to enter the HCFC import quota system if the existing importers agree to transfer their rights to them or declare that a certain part of the quantity they are eligible to receive is not needed by them and hence would not be used (see Step IV). Only in the latter case could both new and existing importers be allowed to compete for any 'remaining' quotas on "first come, first served" basis. A useful provision that could be included in the relevant legislation is that quotas can be sold and traded between importers at prevailing market prices to service areas of greatest need. If such an approach is taken, the new importers themselves would need to negotiate with the old importers to buy their quotas. The quota allocation mechanism described above is intended to be transparent and fair and therefore is suggested that countries apply it when they decide to establish an HCFC import quota system, thus avoiding the "first come, first served" approach which could be considered unfair and not transparent and which may invite corruption.

#### Step IV:



# Include the provision of establishing the HCFC import quota system in the country's ODS legislation and start to operate this system

All of the provisions described above have to be translated into legal language and included in the country's ODS legislation – most likely in the part that deals with the country's ODS licensing system. The following elements have to be addressed:

(1) Principles for establishing country-wide annual import quotas for the forthcoming years It is recommended that in the main ODS legislative act only principles of establishing the country-wide annual import quotas for the forthcoming years are established. Further it is recommended that the national authority that deals with ODS licensing (usually the Ministry of the Environment or Ministry of Nature Protection, and sometimes the Ministry of Finance/Economics) is delegated to establish an annual quota for each year based on these principles in the form of an official announcement that is either published in the country's Official Gazette or placed on the Ministry's official website by a deadline specified in the legislation. The deadline most appropriate from a practical point of view would be the 30 June of the year preceding the that in which the quota will be used (or any earlier deadline) since the importers should have sufficient lead time for submitting import declarations for the forthcoming year (see item (2) below).

#### (2) List of eligible importers

It is important that the legislation requires that the list of importers eligible to import HCFCs in the forthcoming years, based on the principles described above, is published by the national authority named in the legislation. That list should be published not later than 30 June of the calendar year preceding the year when the provision on establishing the quota system will enter into force. The reason for setting an early publishing deadline is to inform the relevant entities of their eligibility for imports and to allow them to apply for a quota (see item (3) below). Such an early deadline also allows the entities which were not included in the list to submit their relevant claims. The procedure of submission of claims and dealing with claims by the designated national authority has to be included in the legislation.

It is recommended that the publicly available list of eligible importers does not provide details of their maximum share of the total annual country import quota resulting from their historical share in total country imports (see Step III). Instead, the national authority should inform the individual entities privately about their actual share since this information may be considered to be commercially sensitive.

#### (3) Procedure for allocating quotas to importers

While the mechanism of allocating quotas to importers should be included in the country's ODS legislation, it is recommended that the national authority is delegated to produce an annual list of importers eligible to receive the quotas for the next calendar year, and that it be required to place that list on its website in the form of an official announcement. The basis for the allocation of quotas to individual importers for a given calendar year should be their share in total country quota for that year and their declaration about their intended imports in that year. It is suggested that the declarations should be submitted to the national authority by 31 July of the year preceding the year of imports and that the declarations contain information about the quantity of particular HCFCs and HCFC-containing mixtures (in metric tonnes) intended to be imported the following year for specific uses. This information will allow the national authority to calculate the total quantity of HCFC in ODP tonnes that the particular entity intends to import, and also to eliminate the quantities intended for the uses which are banned (if any). Based on these calculations the allocation of quotas for the importers which submitted declarations can be made.

If it appears that a certain number of ODP tonnes from the country's total annual quota remained unallocated, the national authority should be allowed either take no action (so the quantity remains unallocated) or to announce on its website that any entity may apply for the remaining part of the country's HCFC import quota. The actual approach taken by the national authority will depend on the country's general policy with regard to HCFCs. If the national authority decides to allow for 'open bidding' for the remaining quota, it should therefore add the "new" importers to the list and/or change the quotas allocated to the "existing" importers.

It is recommended that the ODS legislation allows importers who were given an HCFC import quota to decide to transfer all or part of this quota to another entity, if they so desire. In such a case, the importer has to inform the relevant national authority as soon as possible and that

#### **Checklist for NOUs**



Identify the legal basis for HCFC quota system → ASAP



Identify the base years for establishing HCFC quotas → ASAP



Identify entities that imported HCFC in the baseline years and produce the list of eligible importers, e.g. through surveys of potential importers and Customs → by 31August 2012



Identify HCFC quantity (in ODP tonnes) imported in the base years, e.g. through surveys of potential importers and Customs → by 31 August 2012



Publish the list of eligible importers and request them to submit applications for quotas for the first year (2013) → by 30 September 2012



Decide on the country's total HCFC quota for the first year (2013) and on the share of that quota between eligible importers → by 31 October 2012



Inform eligible importers on the quotas allocated to them for the first year (2013) → by 31 October 2012



Publish the final list of eligible importers to whom quotas have been allocated for the first year (2013) → by 31 November 2012

authority has to accordingly amend the published list of entities eligible for imports in a given calendar year.

The quotas eventually allocated to importers for each calendar year should remain confidential and should be privately communicated to the individual importers by the national authority as soon as the relevant decision has been made. It is recommended that the deadline for publishing the final list of importers and providing information to them on their import quotas is the 31 November of the year preceding the year of imports, so the importers would be able to submit their claims (if any).

#### (4) Licensing the allocated quotas

The allocation of quotas to individual importers does not mean that they are allowed to import. In order to initiate an import, the importer with an allocated quota has to apply to the relevant national authority for an HCFC import license. Depending on the request from the importer, the license may be issued either for the whole quantity allocated for a given calendar year or for part of the allocated quantity and it may be valid either for the whole year or for a few months only. Issuing a permit (or a license) for each shipment is another possible approach (see Section 5 below). It is important to note that regardless of the type of license/permit, the import consignment receipt in the entry port has to take place within the calendar year that the relevant quota was assigned for.

Taking into account the Executive Committee requirement in Decision 63/17 that the HCFC import quota system should to be operational by the 68<sup>th</sup> meeting (in practice, starting from 2013) it is strongly recommended that the NOUs start preparations for introducing this system as soon as possible. A "Checklist for the NOUs" is shown in the box above.

# 5. Additional measures which may help in the enforcement of HCFC import quota systems

Once the import quota system has been established based on the guidelines described above, as part of the country's ODS licensing system, its operation by the national authority named in the relevant legislation should not create problems. However, the HCFC import quota system will not work properly if there is no reporting system in place. The competent authority has to be aware of the actual quantities imported each year based on the allocated individual quotas, since it will not only allow for checking whether the imports carried out by the relevant entities followed these quotas, but it will also help to create the future government policy with respect to HCFCs. It is recommended that it is stated in the ODS legislation that the reports on quantities of HCFCs and HCFC-containing mixtures imported (and exported) in a given year should be delivered to the national authority by 31 March of the following year.

It is recommended that if the relevant legislation states that if the importer does not submit its report for the previous year, if it presents a false report, or it is involved in illegal trade in ODS, it will not be eligible for imports in the following year.

Apart from reporting requirements, another important additional measure that may help in the enforcement of the HCFC import quota system is establishing a requirement for obtaining a permit for each HCFC shipment.<sup>19</sup> This will allow the competent authority to follow stepwise how the individual import quotas are being used throughout the year. Obviously, also establishing the informal Prior Informed Consent (iPIC) procedure with HCFC exporting countries will help significantly in effectively operating the HCFC import quota system.<sup>20</sup> Training of Customs officers and importers should certainly be considered as another crucial support measure that may assist in the effective implementation of such a system.<sup>21</sup>

Other effective measures that can be introduced in parallel to import quotas in order to facilitate smooth HCFC phase-down are use-bans and mandatory registration of HCFC users. It the

country so wishes, quota systems may be extended to not only cover HCFC substances, but also equipment containing or relying on HCFCs – see Section 6 below for details.

# 6. Import quota system for equipment containing or relying on HCFCs

Introducing an import quota system for equipment containing or relying on HCFCs is considered a very effective administrative measure which supplements the HCFC import quota system and facilitates a smooth HCFC phase-down according to the schedules prescribed in the Montreal Protocol. However, in contrast to an HCFC import quota system, it is quite difficult to establish and to manage. Moreover, under the Montreal Protocol, equipment falls under the general term "products", and products containing ODS are not controlled in the Protocol (see Section 1), therefore introducing HCFC import quotas on equipment would go beyond its requirements. While a number of countries have introduced such measures to monitor and control import of equipment containing ODS or relying on ODS, few have quota systems in place in this respect.

The most important issue for the national authority that will be responsible for the system (usually the Ministry of Nature Protection, Ministry of Trade or Ministry of Finance/ Economics) is to obtain reliable information on actual market demand and market trends for equipment containing or relying on HCFCs. The first step towards establishing such a system is to introduce a requirement for importers to report on quantities of equipment of different types containing or relying on HCFCs that were imported in a given calendar year and either placed on the local market or used by those companies. The manufacturing plants, if any, should also have an obligation to report on the quantities of equipment manufactured and placed on the local market in a given calendar year, because imposing restrictions on imports and at the same time allowing local manufacturing, will be against international trade rules, specifically those of the World Trade Organization (WTO). In their first report, equipment importers and manufacturers should also be obliged to provide information on equipment quantities placed on the local market or used by the company in at least the last three years. Only when such detailed information is available, the national authority may decide on the establishment of the system and on the types of equipment it would cover. Similarly as in case of HCFCs, it is unlikely to be possible to acquire reliable information from Customs since the Customs codes for equipment do not allow for the identification of equipment containing HCFCs nor for detailed differentiation between various types of equipment. Obviously, if the national authority feels that it would be useful to introduce national codes, i.e. two or more digits added to the six digits of the applicable HS code for equipment in the domestic Customs classification in order to allow for identification of the number of units of equipment of a specific type imported in a given calendar year, such an extension of HS codes may help in acquiring reliable data.

Another important question that has to be answered before an equipment import quota system is established is whether the number of specific key parts of equipment (e.g. compressors relying on HCFCs) should also be subject to quantitative restrictions. Since such parts are needed to replace defective parts in already existing equipment, there is no rationale for imposing any restrictions on them unless they will be used for assembling new equipment. It is then recommended that either a ban on assembling/installing new equipment containing/relying on HCFCs<sup>22</sup> (if in the country concerned there are no equipment manufacturing plants) or a quota system for equipment manufacturing (if there are such plants in the country) is established along with the introduction of import quotas for such equipment.

Once the strategic decision concerning the establishment of an import (and also, if relevant, a manufacturing) quota system for equipment containing or relying on HCFCs has been made, it is strongly recommended that the general rules for selection of importers and of the baseline as well as the methodology for allocation of quotas to the selected importers (and manufacturers, if any) will be the same as those described in Section 4 above for the HCFC import quota system.

The only substantial difference between quota systems established for HCFCs and for equipment containing or relying on HCFCs, will be that in the latter systems the annual quota will be given for units of equipment of a particular type, rather than HCFC quantities. Usually, quotas are established for refrigeration, air conditioning and heat pump equipment only, and in particular for small air conditioning units.

It is worth noting that usually when a quota system for imports of equipment is introduced, the relevant country already has a ban in place on imports of used equipment, so the quotas for equipment will concern only new units.

#### 7. Example of an existing quota system for HCFCs - Australia

Australia has much experience in operating an import quota system for HCFCs as part of the country's ODS import/export licensing system. Australia's quota is established by law and is 40% lower than the limit resulting from the Montreal Protocol consumption reduction schedule. The system assumes a reduction of 30 ODP tonnes every two years, with HCFC consumption eventually phased out by 2016, apart from a small servicing tail. The quotas are allocated to importers based on their share of imports in the previous quota period. No new importers are allowed to enter the system of quota allocation though they may purchase quotas from eligible importers. This approach is designed to provide certainty to industry and assists enforcement agencies, as the quotas are restricted to a small number of companies. The impact on competition has been minimal because the quotas are readily tradable, and indeed considerable trading has taken place. The quota system allows the importer to select the type of HCFC it wishes to import within its quota (expressed in ODP tonnes) and may be used within a two year period. The applicants have to pay AUD\$15,000 for a two-year license to import bulk HCFCs and for each import the applicants need to pay an additional fee according to the amount of HCFC imported. The collected fees are deposited in an 'Ozone Account' that can only be used for ozone protection activities in Australia.

The HCFC import quota system in Australia was based on availability of alternatives and the time it will take industry sectors to move to the alternatives. Support was sought from the industry prior to the measures being established. Moreover, bans on most HCFC equipment and on disposable cylinders and licenses for the businesses and technicians that use HCFC were introduced in parallel to the import quotas. At present there are some 80,000 businesses registered under this scheme. As the result of these measures, HCFC imports are now used in Australia almost exclusively for refrigeration and air conditioning applications, as well as a very small quantity for fire protection. <sup>23</sup>

Australia has also introduced a licensing system for import of pre-charged HCFC equipment, though no quotas have been established.

# 8. Lessons learnt from the operation of the quota system for HCFCs –The European Union

In the Regulation 2037/2000 (in 2009 it was replaced with Regulation 1005/2009) the European Union (EU) introduced a quota system for placing HCFCs on the market by producers and importers or using HCFCs for their own purposes. The total HCFC limit for the EU for each year was determined in the Regulation. The quotas were allocated to importers which imported HCFCs in 1999 based on their market share in that year. For importers from new Member States, which acceded to the EU in 2004, the base years were 2002 and 2003. The following allocation mechanism was laid down in the EU legislation, (transfer of quotas was allowed provided that the European Commission was informed):

- Eligible importers, i.e. those listed in the relevant Commission Decision, could apply for HCFC quotas for the forthcoming year. If any importer entitled to do so did not apply for a quota, the remaining HCFC quantities were re-allocated between the other eligible importers on a proportional basis in reference to the size of the quotas already determined for those importers.
- Reporting to the Commission on the quantities imported in a given calendar year was mandatory by 31 March of the following year.

In the EU imports of HCFCs are presently banned (with a few exemptions), and HCFC quotas allocated to importers for exempted uses are equal to the requested quantities because there is no legal ground for setting up limits. However, the lessons learnt during several years of allocating HCFC quotas to importers in the EU when HCFCs were widely used and HCFC imports were still allowed may be useful for those countries which have not yet established such quotas. The following observations can be made:

- (1) The quota system combined with licensing and use bans allowed the trade in HCFCs to be monitored and controlled and hence to diminish the supply and demand of these substances, so the actual consumption of HCFCs in the EU was much lower than the consumption limit laid down by the Montreal Protocol.
- (2) A clear and transparent mechanism for quota allocation made the HCFC import quota system in the EU fully enforceable and operational despite the large number of entities involved. It should be emphasized that systems where the national authority decision on quota allocation to a particular importer is not based on clear and transparent principles laid out in the legislation (or at least in a separate government ordnance), may lead to an unfair share of a country's quota between importers and possibly to corruption.
- (3) It was found that importers usually apply for larger HCFC quantities than they actually are later able to import. Thus, the quota system creates another "buffer" for the national authorities, which facilitates keeping the total quantity imported to the country below the determined limit.
- (4) The import quota system helps to prevent illegal trade since the eligible importers would not accept any new suppliers of HCFCs which would take their market share. It was found that any such cases if identified by eligible importers were communicated to the national authorities in the Member States or to the Commission.

#### 9. Conclusion

Parties to the Montreal Protocol are obliged to follow the phase-out schedules for HCFC production and consumption which were agreed upon in 2007 in Montreal (Decision XIX/6). Furthermore, submissions from Article 5 countries to receive any further funding for HCFC phase out beyond 2012 from the Multilateral Fund will require confirmation that an enforceable national system of licensing and quotas for HCFC imports and, where applicable, production and exports is in place (Decision 63/17).

Since the first control measure for developing countries for HCFCs enters into force on 1 January 2013, Article 5 countries are therefore urged to design and implement such an HCFC quota system without delay, that will contribute to ensuring the country's compliance with the Montreal Protocol HCFC phase-out schedule. UNEP OzonAction CAP is available to assist NOUs with this process.

#### **Notes and References**

- 1. ODPs of the most commonly used ODS vary from 0.055 assigned for HCFC-22 to 10.0 assigned for halon 1301. ODPs 13. "Potential importers and for chlorofluorocarbons (CFCs) which were replaced by HCFCs are in the range of 0.6 to 1.0.
- 2. ODP tonnes are metric tonnes multiplied by ODP values assigned for ODS in the Montreal Protocol.
- 3. The Montreal Protocol defines consumption as production + imports – exports.
- 4. See Decision VII/30 of the Parties to the Montreal Protocol.
- 5. Correctly understanding the term "product containing ODS" is therefore crucial. According to Article 1 of the Montreal Protocol ODS or mixture containing ODS product" only if it is not in a container used for transportation or storage. This provision was further clarified in Decisions I/12A and XIV/7 of the Parties to the Montreal Protocol.
- 6. According to WMO's Scientific Assessment 2006
- 7. The book can be downloaded from the OzonAction website: http://www.unep.fr/ozonaction/ ebooks/hcfc-policy
- 8. The country may decide to set a limit which will be more ambitious than the one resulting from the Montreal Protocol phase out schedule.
- understood as exceeding 20% of imports.
- 10. As of November 2011, of the Parties that have not reported the establishment of ODS licensing systems - Ethiopia, Timor Leste and San Marino - the first two countries have reported that they 18. Allocation to only one importer are in the process of completing it. (UNEP/OzL.Pro/ ImpCom/47/4/Rev.1).
- 11. Such an "interim" HCFC import quota system has been introduced in Mauritius. More information can be obtained from Mr. Dinkar Sharma Chamilall , Member of National Ozone Unit, Ministry of Civil Service and Administrative Reforms, Port Louis, Mauritius, E m a i l dchamilall@mail.gov.mu
- 12. If the country already included HCFCs in its import/export

- licensing system, Step I will not be relevant for that country and can be skipped.
- exporters" group may include dealers of industrial gases and solvents, representatives of major 20. The iPIC procedure is described producers of HCFCs and refrigerants, refrigeration and air conditioning equipment producers, foam or aerosol manufacturing plants, big chemical plants, dealers of laboratory and analytical reagents.
- 14. See the "Customs and Changes in the 2012 HS nomenclature for HCFCs and certain other ODS" published by UNEP OzonAction in 2012.
- may be regarded as "contained in 15. The year 2007 was mentioned here because this is a year when HCFC controlled measures for upon by the Parties to the Montreal Protocol. However, when selecting the base years for allocation of quota to importers the country may decide on taking as a basis either years when HCFC imports were already well established (e.g. 2009-2010) or - 23. In order to learn more about the if data are available - earlier years, e.g. 2005-2006 - a three year period before agreement on HCFC phase out was concluded see a detailed discussion on that subject contained in Step III.
- 9. Here "significant exports" can be 16. It is always set up in ODP tonnes, not metric tonnes.
  - 17. This approach is highly 24. More detailed information on the recommended since it would prevent crossing the country's limit set up in the Montreal Protocol if illegal import takes place.
    - should be avoided, so in specific cases when only one company imported HCFC in the past (which may be faced by the governments of countries consuming very low volumes of HCFCs), allocation of HCFC quotas to new importers can be accepted while leaving a reasonable share of the one that used to import HCFCs before.
  - address: 19. For details concerning establishing and operation of such HCFC import permit system see "Permits for each shipment"

- section in Chapter 1 of the book "HCFC policy & legislative options" available on UNEP DTIE website http:// www.unep.fr/ozonaction/ebooks/ hcfc-policy
- in detail in a brochure entitled "Informal Prior Informed Consent on Trade in Ozone Depleting Substances - A Tool to Strengthen ODS Licensing Systems" published by UNEP DTIE and available on UNEP DTIE website http:// www.unep.fr/ozonaction
- enforcement officers quick guide: 21. UNEP DTIE published "Customs Training Manual" that is available on UNEP DTIE website http:// www.unep.fr/ozonaction and presently is being revised to accommodate changes in the Montreal Protocol and in the HS system of classification of ODS.
- developing countries were agreed 22. For details concerning such ban see "Ban on new HCFC installations" section in Chapter 2 of a book "HCFC policy & legislative options" available on UNEP DTIE website http:// www.unep.fr/ozonaction/ebooks/ hcfc-policy
  - control measures established in Australia with regard to HCFCs trade and use see: P. McInerey, S. Anderson: Australia in Fast Lane for HCFC Phase-out (http:// www.unep.fr/ozonaction/ information/mmcfiles/7508-e-OASI2011\_TippingtheBalance.pdf
  - HCFC quota system established in Australia can be obtained from Ms Annie Gabriel, Assistant Director, Ozone and Synthetic Gas Team, Department of the Environment, Water, Heritage and the Arts, Canberra, Australia, e-mail address: annie.gabriel@environment.gov.au
  - 25. Commission Decision 2002/654/ EC determining the mechanism of HCFC quota allocation producers and importers repealed by Commission Decision 2005/103/EC and again repealed by Commission Decision 2007/195/EC

### **ANNEX I - Updated list of HCFC-containing mixtures**

(mixtures containing CFCs and HCFCs have not been included since imports of such mixtures has not been allowed under the Montreal Protocol since 1 Jan 2010)

 $(HCFC = hydrochlorofluorocarbon, \ HFC = hydrofluorocarbon, \ PFC = perfluorocarbon, \ HC = hydrocarbon)$ 

| ASHRAE number | Other names | Composition, substances                | Composition, %     |
|---------------|-------------|--|--------------------|
| R-401A        | MP-39       | HCFC-22/HFC-152a/HCFC-124              | 53/13/34           |
| R-401B        | MP-66       | HCFC-22/HFC-152a/HCFC-124              | 61/11/28           |
| R-401C        | MP-52       | HCFC-22/HCFC-152a/HCFC-124             | 33/15/52           |
| R-402A        | HP-80       | HFC-125/HC-290/HCFC-22                 | 60/2/38            |
| R-402B        | HP-81       | HFC-125/HC-290/HCFC-22                 | 38/2/60            |
| R-403A        | 69-S        | HC-290/HCFC-22/PFC-218                 | 5/75/20            |
| R-403B        | 69-L        | HC-290/HCFC-22/PFC-218                 | 5/56/39            |
| R-406A        | GHG-12      | HCFC-22/HC-600a/HCFC-142b              | 55/4/41            |
| R-408A        | FX-10       | HFC-125/HFC-143a/HCFC-22               | 7/46/47            |
| R-409A        | FX-56       | HCFC-22/HCFC-124/1HCFC-142b            | 60/25/15           |
| R-409B        | FX-57       | HCFC-22/HCFC-124/HCFC-142b             | 65/25/10           |
| R-411A        | G-2018A     | HC-1270/HCFC-22/HFC-152a               | 1.5/87.5/11.0      |
| R-411B        | G-2018B     | HC-1270/HCFC-22/HFC-152a               | 3/94/3             |
| R-412A        | TP5R        | HCFC-22/PFC-218/HCFC-142b              | 70/5/25            |
| R-414A        |             | HCFC-22/HCFC-124/HC-600a/<br>HCFC-142b | 51.0/28.5/4.0/16.5 |
| R-414B        | Hotshot     | HCFC-22/HCFC-124/HC-600a/<br>HCFC-142b | 50.0/39.0/1.5/9.5  |
| R-415A        |             | HCFC-22/HFC-152a                       | 82.0/18.0          |
| R-416A        | -           | HFC-134a/HCFC-124/HC-600               | 59.0/39.5/1.5      |
| R-418A        | -           | HC-290/HCFC-22/HFC-152a                | 1.5/96.0/2.5       |

# ANNEX II - Suggested formats for questionnaires and accompanying letters to be used in a survey of potential HCFC importers and exporters and Customs authorities

|   | uestionnaire IMP-EXP<br>otential HCFC importers or exporters)       |
|---|---|
|   |   |
| Date and place:   |   |
| Company name:   |   |
| Company address:  |   |
| Name, phone number and e-mail of the  |   |
| person who can be contacted with  |   |
| respect to this questionnaire:  |   |
| Q1. Has your company imported or/and HCFCs in the period 2009-2012? <sup>26</sup> | exported hydrochlorofluorocarbons (HCFC) or mixtures containing     |
| YES NO  |   |
| If your answer is <b>NO</b> , please send back letter.                            | c your questionnaire to the authority indicated in the accompanying |
| If your answer is <b>YES</b> , proceed with the                                   | remaining questions.  |

Q2. Which HCFCs has your company imported or/and exported within the period indicated in Q1 and what is the forecast for the next year? In your answer please follow the format below:

|  | Quantity (ro | Quantity (rounded to 1 kg) imported<br>in | g) imported | Forecast for                    | Quantity (ro | unded to 1 k | Quantity (rounded to 1 kg) exported in <sup>27</sup> | Forecast for                    |
|--|--------------|---|-------------|---------------------------------|--------------|--------------|--|---------------------------------|
| Name of HCFC   | 2009         | 2010                                      | 2011        | imports in the<br>next year, kg | 2009         | 2010         | 2011   | exports in the<br>next year, kg |
| HCFC-22, R-22<br>(Chlorodifluoromethane)   |              |   |             |                                 |              |              |  |                                 |
| HCFC-123, R-123<br>(Dichlorotrifluoroethane)   |              |   |             |                                 |              |              |  |                                 |
| HCFC-141b, R-141b<br>(Dichlorofluoroethane)  |              |   |             |                                 |              |              |  |                                 |
| HCFC-142b, R-142b<br>(Chlorodifluoroethane)  |              |   |             |                                 |              |              |  |                                 |
| HCFC-225ca, R-225ca<br>or<br>HCFC-225cb, R-225cb<br>(Dichloropentafluoropropanes)                  |              |   |             |                                 |              |              |  |                                 |
| Other HCFCs<br>(if imported or exported – add rows<br>below providing the names and<br>quantities) |              |   |             |                                 |              |              |  |                                 |

If you only exported HCFCs, go directly Q4. If you imported HCFCs, answer Q3 below:

Q3. Please, provide your best estimates of percentage of HCFC quantities imported and then either re-exported or placed on the market (or used for your own account) for various purposes during the period indicated in Q2, as listed in the table below:

|   |                   |                        | % place                    | d on the mark                 | cet or used fo | % placed on the market or used for your company's own account for : | y's own acco | ount for : |         |                           |
|---|-------------------|------------------------|----------------------------|-------------------------------|----------------|---|--------------|------------|---------|---------------------------|
|   |                   | RAC & HP <sup>28</sup> | , HP <sup>28</sup>         |                               |                |   |              |            |         |                           |
| Name of HCFC  | % re-<br>exported | Equipment              | Equipment<br>manufacturing | Foam<br>blowing <sup>29</sup> | Aerosols       | Fire  | Solvents     | Feedstock  | Process | Other<br>uses<br>(if any) |
| HCFC-22, R-22<br>(Chlorodifluoromethane)  |                   |                        |                            |                               |                |   |              |            |         |                           |
| HCFC-123, R-123 (Dichlorotrifluoroethane)   |                   |                        |                            |                               |                |   |              |            |         |                           |
| HCFC-141b, R-141b<br>(Dichlorofluoroethane)                                       |                   |                        |                            |                               |                |   |              |            |         |                           |
| HCFC-142b, R-142b<br>(Chlorodifluoroethane)                                       |                   |                        |                            |                               |                |   |              |            |         |                           |
| HCFC-225ca, R-225ca<br>or<br>HCFC-225cb, R-225cb<br>(Dichloropentafluoropropanes) |                   |                        |                            |                               |                |   |              |            |         |                           |
| Other HCFCs (if relevant – add rows below providing the names and percentages)    |                   |                        |                            |                               |                |   |              |            |         |                           |

Which HCFC-containing mixtures has your company imported or/and exported within the period indicated in Q1 and what is the forecast for the next year? In your answer please follow the format below: 

| Name of HCFC-containing mixture  | Quanti<br>1 kg | Quantity (rounded to 1 kg) imported in | led to | Forecast for imports in the next | Quantii<br>kg) | Quantity (rounded to 1 kg) exported in 30 | ed to 1 | Forecast for exports in the next year. |
|--|----------------|--|--------|----------------------------------|----------------|---|---------|--|
|  | 2009           | 2010                                   | 2011   | year, kg                         | 2009           | 2010                                      | 2011    | kg                                     |
| R-502 <sup>31</sup>  |                |  |        |                                  |                |   |         |  |
| R-401A (MP-39)   |                |  |        |                                  |                |   |         |  |
| R-401B (MP-66)   |                |  |        |                                  |                |   |         |  |
| R-401C (MP-52)   |                |  |        |                                  |                |   |         |  |
| R-402A (HP-80)   |                |  |        |                                  |                |   |         |  |
| R-402B (HP-81)   |                |  |        |                                  |                |   |         |  |
| R-403A (69-S)  |                |  |        |                                  |                |   |         |  |
| R-403B (69-L)  |                |  |        |                                  |                |   |         |  |
| R-406A (GHG-12)  |                |  |        |                                  |                |   |         |  |
| R-408A (FX-10)   |                |  |        |                                  |                |   |         |  |
| R-409A (FX-56)   |                |  |        |                                  |                |   |         |  |
| R-409B (FX-57)   |                |  |        |                                  |                |   |         |  |
| R-411A (G-2018A)   |                |  |        |                                  |                |   |         |  |
| R-411B (G-2018B)   |                |  |        |                                  |                |   |         |  |
| R-412A (TP-5R)   |                |  |        |                                  |                |   |         |  |
| R-414A   |                |  |        |                                  |                |   |         |  |
| R-414B (Hotshot)   |                |  |        |                                  |                |   |         |  |
| R-415A   |                |  |        |                                  |                |   |         |  |
| R-416A   |                |  |        |                                  |                |   |         |  |
| R-418A   |                |  |        |                                  |                |   |         |  |
| Other HCFC-containing mixtures (if imported or exported – add rows below providing the names and quantities) |                |  |        |                                  |                |   |         |  |
|  |                |  |        |                                  |                |   |         |  |

05. Please, provide your best estimates of percentage of quantities of HCFC-containing mixtures imported and then either re-exported or placed on the market (or used for your own account) for various purposes during the period indicated in Q4, as listed in the table below:

| Process   Proc   |   |              |                     | % place                 | % placed on the market or used for your company's own account for | et or used for | your company | y's own accou | unt for : |         |                  |
|--|---|--------------|---------------------|-------------------------|---|----------------|--------------|---------------|-----------|---------|------------------|
| NAP-56)         Processor         Free special protection         Processor         Processor </th <th></th> <th>-<u>-</u>-</th> <th>RAC 8</th> <th>8 HP<sup>32</sup></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th>Other</th>  |   | - <u>-</u> - | RAC 8               | 8 HP <sup>32</sup>      |   |                |              |               |           |         | Other            |
| R-401A (MP-39)       R-401A (MP-39)         R-401A (MP-39)       R-401B (MP-66)         R-401B (MP-66)       R-401B (MP-67)         R-402A (PP-81)       R-402A (PP-81)         R-403A (PP-81)       R-403A (PP-81)         R-413B (PP-81)       R-414A (PP-81)         R-413A       R-413A  | Name of HCFC-containing mixture   | exported     | Equipment servicing | Equipment manufacturing | Foam blowing <sup>33</sup>  | Aerosols       | Fire         | Solvents      | Feedstock | Process | uses (if<br>any) |
| R-401A (MP-39) R-401B (MP-66) R-401B (MP-66) R-402A (HP-81) R-403A (GP-12) R-403A (GP-12) R-403A (FX-10) R-413A (FX-10) R-414A (HP-10) R-415A | R-502 <sup>31</sup>   |              |                     |                         |   |                |              |               |           |         |                  |
| R-401B (MP-66) R-401C (MP-52) R-402A (HP-81) R-402A (HP-81) R-402A (HP-81) R-402A (HP-81) R-402A (HP-81) R-402B (99-1) R-402B (99-1) R-402B (99-1) R-402B (FX-10) R-402B (F | R-401A (MP-39)  |              |                     |                         |   |                |              |               |           |         |                  |
| R-40C (WP-52)       R-40C (WP-52)         R-402A (HP-80)       R-402A (HP-81)         R-402B (HP-81)       R-402B (B-81)         R-403A (89-5)       R-403B (B-4)         R-403A (B-42)       R-403B (B-42)         R-403A (FX-50)       R-403B (FX-57)         R-403B (FX-57)       R-414A (P-5C)         R-414A (P-5C)       R-414A         R-414A       R-415A         R-415A   | R-401B (MP-66)  |              |                     |                         |   |                |              |               |           |         |                  |
| R-402A (HP-80) R-402B (HP-81) R-403B (69-L) R-403B (69-L) R-403B (69-L) R-403B (69-L) R-403B (69-L) R-403B (78-7) R-404B (78-57) R-411B (6-2018B) R-411B (6-2018B) R-414A R-414A R-414B (Hotshot) R-415A R-416A R-418A R-41 | R-401C (MP-52)  |              |                     |                         |   |                |              |               |           |         |                  |
| R-402B (HP-81)         R-402B (HP-81)           R-403A (69-S)         R-403A (69-S)           R-403B (69-L)         R-403B (69-L)           R-403B (69-L)         R-403B (69-L)           R-403B (69-L)         R-403B (69-L)           R-403B (FX-50)         R-403B (FX-50)           R-403B (FX-57)         R-411B (G-201BB)           R-411B (G-201BB)         R-414B           R-414B (Hoshord)         R-414B           R-414B (Hoshord)         R-414B           R-416A         R-416A           R-416A   | R-402A (HP- 80)   |              |                     |                         |   |                |              |               |           |         |                  |
| R-403A (69-S)         R-403A (69-S)           R-403B (69-L)         R-403B (69-L)           R-406A (GHG-12)         R-406A (GHG-12)           R-406A (FX-56)         R-406B (FX-50)           R-409B (FX-57)         R-409B (FX-57)           R-414A (G-2018A)         R-414B (G-2018B)           R-414B (HOShot)         R-414B           R-414A         R-414A           R-414A         R-414A           R-414B         R-414B   | R-402B (HP-81)  |              |                     |                         |   |                |              |               |           |         |                  |
| R-403B (99-L)       R-4040 (94G-12)       R-406A (GHG-12)       R-406A (GHG-12)       R-406A (GHG-12)       R-406A (GHG-12)       R-406A (FX-50)       R   | R-403A (69-S)   |              |                     |                         |   |                |              |               |           |         |                  |
| R-406A (GHG-12)       R-408A (GHG-12)         R-408A (FX-56)       R-409A (FX-56)         R-409B (FX-57)       R-414A (G-2018A)         R-411B (G-2018B)       R-414A         R-414B (Hotshot)       R-414B (Hotshot)         R-415A       R-415A         R-416A       R-416A  | R-403B (69-L)   |              |                     |                         |   |                |              |               |           |         |                  |
| R-408A (FX-5G)       R-409B (FX-5G)       R-410B (FX-5T)       R-410B (G-2018A)       R-411B (G-2018A)       R-411B (G-2018B)       R-411B (G-2018B)       R-412B (G-2018B)       R-412   | R-406A (GHG-12)   |              |                     |                         |   |                |              |               |           |         |                  |
| R-409A (FX-56)       R-409A (FX-56)         R-409B (FX-57)       R-411A (G-2018B)         R-411B (G-2018B)       R-412A         R-412A (TP-5R)       R-414A         R-414B (Hotshot)       R-414B         R-415A       R-416A         R-418A       Other HCFC-containing mixtures (if relevant – add rows below providing the names and percentages)       R-416A  | R-408A (FX-10)  |              |                     |                         |   |                |              |               |           |         |                  |
| R-409B (FX-57)       R-411A (G-2018A)       P <t< td=""><td>R-409A (FX-56)</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>   | R-409A (FX-56)  |              |                     |                         |   |                |              |               |           |         |                  |
| R-41A (G-2018A)       R-41A (G-2018B)  | R-409B (FX-57)  |              |                     |                         |   |                |              |               |           |         |                  |
| R-411B (G-2018B)       R-411B (G-2018B)         R-412A (TP-5R)       R-414A         R-414B (Hotshot)       R-415A         R-416A       R-416A         R-416A       R-418A         Other HCFC-containing mixtures (if relevant – add rows below providing the names and percentages)       R-418A   | R-411A (G-2018A)  |              |                     |                         |   |                |              |               |           |         |                  |
| R-412A (TP-5R)       R-412A (TP-5R)       R-414A       R-414B       R-414B       R-414B       R-414B       R-415A       R-416A       R-416A       R-416A       R-416A       R-416A       R-418A       <   | R-411B (G-2018B)  |              |                     |                         |   |                |              |               |           |         |                  |
| R-414A         R-414B (Hotshot)       (Page 1984)       (Page 1984) <t< td=""><td>R-412A (TP-5R)</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>   | R-412A (TP-5R)  |              |                     |                         |   |                |              |               |           |         |                  |
| R-414B (Hotshot)       R-416A         R-416A       R-416A         R-416A       R-416A         R-418A       Other HCFC-containing mixtures (if relevant – add rows below providing the names and percentages)   | R-414A  |              |                     |                         |   |                |              |               |           |         |                  |
| R-415A       R-416A         R-416A       R-418A         Other HCFC-containing mixtures (if relevant – add rows below providing the names and percentages)       R-418A   | R-414B (Hotshot)  |              |                     |                         |   |                |              |               |           |         |                  |
| R-416A         R-418A         Other HCFC-containing mixtures (if relevant – add rows below providing the names and percentages)  | R-415A  |              |                     |                         |   |                |              |               |           |         |                  |
| R-418A  Other HCFC-containing mixtures (if relevant – add rows below providing the names and percentages)  | R-416A  |              |                     |                         |   |                |              |               |           |         |                  |
| Other HCFC-containing mixtures (if relevant – add rows below providing the names and percentages)  | R-418A  |              |                     |                         |   |                |              |               |           |         |                  |
|  | Other HCFC-containing mixtures (if relevant – add rows below providing the names and percentages) |              |                     |                         |   |                |              |               |           |         |                  |

|  | Questionnaire CUST        |
|--|---------------------------|
|  | (for Main Customs Office) |
| Date and place:  |                           |
| Name, phone number and e-mail of the person who can be |                           |
| contacted with respect to this questionnaire:          |                           |

Q1. Please, provide in the table below the quantities of hydrochlorofluorocarbons (HCFCs) imported and exported in the period of 2009-2011 and the names of importers and exporters. [QI will be relevant only if the country has established separate classification of individual HCFCs (or at least of the whole HCFCs group) by adding more digits to 6-digit HS code 2903.49 which covered not only HCFCs but also other substances]

| nded to 1 kg)<br>ed in <sup>34</sup>         | Names of exporters   |  |  |   |   |   |             |
|--|--|--|--|---|---|---|-------------|
| Quantity (rounded to 1 kg)<br>exported in 34 | 2009 2010  |  |  |   |   |   |             |
|  | Names of importers   |  |  |   |   |   |             |
| kg) imported                                 | 2011   |  |  |   |   |   |             |
| Quantity (rounded to 1 kg) imported<br>in    | 2010   |  |  |   |   |   |             |
| Quantity (r                                  | 2009   |  |  |   |   |   |             |
|  | Name of HCFC   | HCFC-22, R-22<br>(Chlorodifluoromethane) | HCFC-123, R-123<br>(Dichlorotrifluoroethane) | HCFC-141b, R-141b<br>(Dichlorofluoroethane) | HCFC-142b, R-142b<br>(Chlorodifluoroethane) | HCFC-225ca, R-225ca<br>or<br>HCFC-225cb, R-225cb<br>(Dichloropentafluoropropanes) | Other HCFCs |
| Customs code of HCFC [relevant Customs codes | established in national Customs statistics for HCFCs shall be listed in this column] | 2903.49.xx                               | 2903.49.yy                                   | 2903.49.zz                                  | 2903.49.mm                                  | 2903.49.nn  |             |

02. Please, provide in the table below the quantities of mixtures containing hydrochlorofluorocarbons (HCFCs) imported and exported in the period of 2009-2011 and the names of importers and exporters.

| Customs code of HCFC- | Name of HCFC-containing  | Quanti | Quantity (rounded to 1 kg) imported in | to 1 kg) | Names of  | Quan | Quantity (rounded to 1 kg)<br>exported in <sup>36</sup> | to 1 kg) | Names of  |
|-----------------------|--|--------|--|----------|-----------|------|---|----------|-----------|
|                       | mixture  | 2009   | 2010                                   | 2011     | importers | 2009 | 2010  | 2011     | exporters |
|                       | R-502 <sup>37</sup>  |        |  |          |           |      |   |          |           |
|                       | R-401A (MP-39)   |        |  |          |           |      |   |          |           |
|                       | R-401B (MP-66)   |        |  |          |           |      |   |          |           |
|                       | R-401C (MP-52)   |        |  |          |           |      |   |          |           |
|                       | R-402A (HP- 80)  |        |  |          |           |      |   |          |           |
|                       | R-402B (HP-81)   |        |  |          |           |      |   |          |           |
|                       | R-403A (69-S)  |        |  |          |           |      |   |          |           |
|                       | R-403B (69-L)  |        |  |          |           |      |   |          |           |
|                       | R-406A (GHG-12)  |        |  |          |           |      |   |          |           |
|                       | R-408A (FX-10)   |        |  |          |           |      |   |          |           |
|                       | R-409A (FX-56)   |        |  |          |           |      |   |          |           |
|                       | R-409B (FX-57)   |        |  |          |           |      |   |          |           |
|                       | R-411A (G-2018A)   |        |  |          |           |      |   |          |           |
|                       | R-411B (G-2018B)   |        |  |          |           |      |   |          |           |
|                       | R-412A (TP-5R)   |        |  |          |           |      |   |          |           |
|                       | R-414A   |        |  |          |           |      |   |          |           |
|                       | R-414B (Hotshot)   |        |  |          |           |      |   |          |           |
|                       | R-415A   |        |  |          |           |      |   |          |           |
|                       | R-416A   |        |  |          |           |      |   |          |           |
|                       | R-418A   |        |  |          |           |      |   |          |           |
|                       | Other HCFC-containing mixtures (if imported or exported – add rows below providing the names and quantities) |        |  |          |           |      |   |          |           |

\* Relevant Customs codes established in national Customs statistics for HCFC-containing mixtures shall be listed in this column. Since 1 January 2007 the correct HS code for those mixtures (except for R-502) is 3824.71. The correct HS code for R-502 is 3824.71.

## Suggested text of the accompanying letter to be sent by the NOU to the potential importers and exporters of HCFCs with the relevant questionnaire attached:

Based on our best knowledge we consider your company to be a potential importer of hydrochlorofluorcarbons (HCFCs) or/and mixtures containing those substances in the years [2009-2011]. Under the Montreal Protocol on substances that deplete the ozone layer [name of the country] is obliged to monitor and control imports and exports of ozone depleting substances (ODS), including HCFCs, also if contained in mixtures. Based on the HCFC Phase out Management Plan (HPMP) signed by the government of [name of the country] total consumption (imports – exports) of HCFCs in 2013 shall not exceed [country's HCFC consumption limit for 2013 in ODP tonnes] ODP tonnes (one ODP tonne = one metric tonne x ozone depletion potential of the substance). In order to follow that requirement the government of [name of the country] intends to introduce an import quota system for HCFCs. In that system, companies which provide proof that they imported a specific quantity of HCFCs or/and mixtures containing HCFCs in the period of [2009-2011] will be included in the list of eligible HCFC importers and will receive import quotas for 2013 proportional to their share in total HCFC imports in that period.

Therefore, we request that by completing the attached questionnaire you confirm any imports of HCFCs or/and mixtures containing HCFCs in the period of [2009-2011]. If such imports took place we request you to provide the relevant documentation including a copy of the Customs documents confirming the name of the substance or mixture, the actual imported quantity and the date of imports. Based on this information we will include your company in the list of eligible HCFC importers for 2013. The deadline for submission of the completed questionnaire and the copies of relevant Customs documentation is [date of deadline].

## Suggested text of the accompanying letter to be sent by the NOU to the Customs authorities with the relevant questionnaire attached:

Under the Montreal Protocol on substances that deplete the ozone layer [name of the country] is obliged to monitor and control imports and exports of ozone depleting substances (ODS), including HCFCs, including if contained in mixtures. Based on the HCFC Phase out Management Plan (HPMP) signed by the government of [name of the country], the total consumption (imports - exports) of HCFCs in 2013 shall not exceed [country's HCFC consumption limit for 2013 in ODP tonnes | ODP tonnes (one ODP tonne = one metric tonne x ozone depletion potential of the substance). In order to follow that requirement the government of [name of the country] intends to introduce an import quota system for HCFCs. In this system, companies which provide evidence that they imported specific quantities of HCFCs or/and mixtures containing HCFCs in the period of [2009-2011] will be included on the list of eligible HCFC importers and will receive import quotas for 2013 proportional to their share in total HCFC imports in that period. The evidence requested of countries includes a copy of relevant Customs documentation containing information on the name of the substance or mixture, the actual quantity imported and the date of imports. The information we ask you to provide in the attached questionnaire will help us to verify the data on imports and exports of HCFCs during the [2009-2011] period.

Therefore, we kindly ask you complete the attached questionnaire by [date].

#### Notes on Annexes (p18-27)

- 26. The period is to be selected by the authority which is sending out the questionnaire
- 27. Including re-export (if any)
- 28. Refrigeration, air-conditioning and heat pump sector
- 29. Including quantities used for production of polyol blends for further polyurethane foam production.
- 30. Including re-export (if any)
- 31. This mixture contains HCFCs and CFCs. It should be noted that since 1 Jan 2010
- imports of CFCs and any mixtures containing CFCs shall be considered illegal.
- 32. Refrigeration, air-conditioning and heat pump sector
- 33. Including quantities used for production of polyol blends for further polyurethane foam production.
- 34. Including re-export (if any)
- 35. HCFC-containing mixtures could have been imported or exported also under Customs codes related to the function of the mixture. The following HS codes may
- apply: 3814.00 (for HCFC-containing mixtures used as solvents), 3813.00 (for HCFC-containing mixtures used as fire-fighting agents), though also other HS codes could have been used by importers or exporters.
- 36. Including re-export (if any)
- 37. This mixture contains HCFCs and CFCs. It should be noted that since 1 Jan 2010 imports of CFCs and any mixtures containing CFCs shall be considered illegal.

#### About the UNEP Division of Technology, Industry and Economics

The UNEP Division of Technology, Industry and Economics (DTIE) helps governments, local authorities and decision-makers in business and industry to develop and implement policies and practices focusing on sustainable development.

#### The Division works to promote:

- > sustainable consumption and production,
- > the efficient use of renewable energy,
- > adequate management of chemicals,
- > the integration of environmental costs in development policies.

### The Office of the Director, located in Paris, coordinates activities through:

> The International Environmental Technology Centre - IETC (Osaka, Shiga), which

implements integrated waste, water and disaster management programmes, focusing

in particular on Asia.

- > Sustainable Consumption and Production (Paris), which promotes sustainable consumption and production patterns as a contribution to human development through global markets.
- > Chemicals (Geneva), which catalyzes global actions to bring about the sound management of chemicals and the improvement of chemical safety worldwide.
- > Energy (Paris), which fosters energy and transport policies for sustainable development

and encourages investment in renewable energy and energy efficiency.

- > **OzonAction** (Paris), which supports the phase-out of ozone depleting substances in developing countries and countries with economies in transition to ensure implementation of the Montreal Protocol.
- > Economics and Trade (Geneva), which helps countries to integrate environmental considerations into economic and trade policies, and works with the finance sector to incorporate sustainable development policies.

UNEP DTIE activities focus on raising awareness, improving the transfer of knowledge and information, fostering technological cooperation and partnerships, and implementing international conventions and agreements.

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Parties to the Montreal Protocol are obliged to follow the phase-out schedules for Hydrochlorofluorocarbon (HCFC) production and consumption which were agreed upon in 2007. Furthermore submissions from Article 5 countries to receive any funding for HCFC phase out beyond 2012 from the Multilateral Fund for the Implementation of the Montreal Protocol will require confirmation that an enforceable national system of licensing and quotas for HCFC imports and, where applicable, production and exports is in place.

Since the first control measures for developing countries for HCFCs come into force on 1 January 2013, actions to ensure an effective licensing and quota system before this date are essential. This booklet provides the necessary information and practical guidance for developing countries to design and implement a workable and effective quota system that will contribute to ensuring the country's compliance with the Montreal Protocol HCFC phase-out schedule.