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EXECUTIVE COMMITTEE OF
THE MULTILATERAL FUND FOR THE
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**RESPONSIBILITY OF THE MULTILATERAL FUND AND POTENTIAL
ELIGIBILITY REQUIREMENTS FOR STUDIES ON THE MANAGEMENT OF HCFCs
(Decision 42/7 (b))**

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POLICY PAPER
ON THE RESPONSIBILITY OF THE MULTILATERAL FUND
AND POTENTIAL ELIGIBILITY REQUIREMENTS
FOR STUDIES ON THE MANAGEMENT OF HCFCs

**Submitted to ExCom by the Government of Germany
Through the Delegation of the United Kingdom**

History of discussion and mandate for policy paper

1. For discussion at the 42nd meeting of the Executive Committee, Germany submitted a project proposal called “Development of a suitable strategy for the long term management of HCFC-22 as well as other HCFC in China” (China HCFC Management Study). The project proposed to develop a strategy for the long-term management of HCFCs in China.

2. The MLF Secretariat noted in the preparation papers for the ExCom¹ that no such project had as yet been approved; Multilateral Fund policy specifically excluded funding second-stage industrial conversions from HCFCs to non-ODS substances and the “Assessment of the funding requirement for the replenishment of the Multilateral Fund for the period 2003-2005” of the Technology and Economic Assessment Panel did not include funding for HCFC-related activities. In addition, it was mentioned² that the Indicative List of incremental costs does not include policy or institutional support activities, although this project might be considered to fall within item (c)(iii), End Use: cost of providing technical assistance to reduce consumption and unintended emission of ozone depleting substances.

3. The project proposal initiated an intensive discussion in ExCom and in a informal group meeting. The report of the ExCom notes that “although some representatives expressed concern that the proposal as submitted did not currently qualify for funding under the rules of the Fund and that its approval might be seen as a precedent for the approval of similar projects, others felt that the study could provide useful information to help both China and other Article 5 countries manage the use of HCFCs. It was noted that, as the use of HCFCs would have to be phased out, it was important to study the options for domestic policies that would assist countries to do so.”

4. Noting that a number of representatives had expressed differing views on the eligibility of funding HCFC phase-out management studies by the Multilateral Fund, the Executive Committee decided:

- (a) To request the Government of Germany to take into account the views expressed on the eligibility of funding HCFC phase-out management studies by the Multilateral Fund at the 42nd Meeting of the Executive Committee, in the informal group meeting and, in addition, further submissions of additional ideas and opinions sent by e-mail to GTZ-Proklima, as the German bilateral implementing agency, provided that they were received 10 weeks prior to the 43rd Meeting of the Executive Committee; and
- (b) Also to request the Government of Germany to circulate to the Executive Committee, through the United Kingdom delegation, a policy paper on the issues of the responsibility of the Multilateral Fund and potential eligibility requirements for such a

¹ UNEP/OzL.Pro/ExCom/42/7, para 35, and UNEP/OzL.Pro/ExCom/42/16, para.5

² UNEP/OzL.Pro/ExCom/42/16

study and to reformulate the project proposal for submission and consideration at the 43rd Meeting of the Executive Committee on that basis.

5. This paper represents the policy paper requested by that ExCom decision 42/7 .

Objective of the China HCFC Management Study

6. The China HCFC Management Study will develop the basis for the formulation of HCFC management policies, and will present different policy options to the Government of China. The basis for the formulation is an assessment of the availability and suitability of different technical options (containment, alternative technologies, ...) for the various uses and for the specific social, economic and climatic conditions in the country. This requires major data collection efforts in different parts of China, and will result in top-down and bottom-up data collection and comparison.

7. The policies developed as part of the strategy will be designed to enable the management of the TEAP-predicted increase of HCFC consumption and the subsequent phase-out through a policy where users are encouraged to replace old, HCFC-depending equipment at the end of its useful life (e.g. foaming machines, air conditioning equipment, ...) by non-ODS equipment. Because of the remaining availability of HCFC in comparison to the life time of equipment, such a strategy is viable for the first time under the Montreal Protocol. This will avoid the need for equipment conversion and, therefore, will minimize the costs of technology change in Article 5 Countries.

8. Through a case study being developed at the very end of the project, the material collected and the lessons learned will be presented. The case study will be conducted in a way enabling its use as a reference for similar undertakings in the future.

Discussion of policy issues related to the proposal

General approach

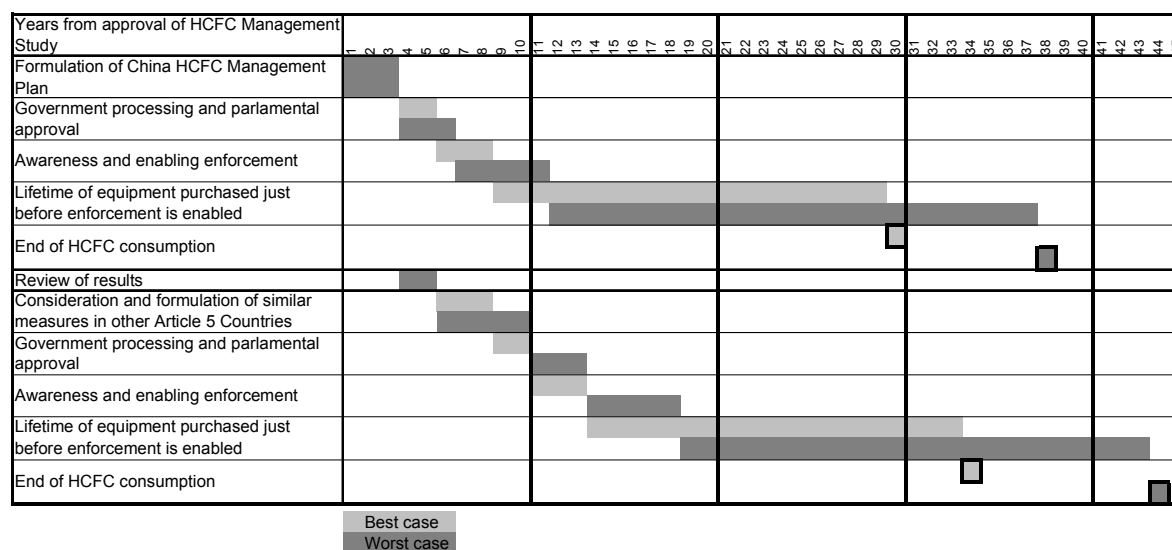
9. In the history of the Multilateral Fund, the majority of projects were meant to achieve reductions in ODS consumption either through conversion of equipment using ODS, or through measures like training, ..., meant to support responsible use of ODS and the introduction of alternatives. With a view of the long-term availability of HCFC until 2040, it was commonly accepted that these substances could be used as an interim, easily applicable and cost effective replacement to facilitate the speedy phase-out of CFCs, provided the beneficiary understood and agreed that the Multilateral Fund would not take over the costs for a second conversion away from HCFC.

10. In recent years the economies of a number of Article 5 Countries have improved significantly, leading to investment into new manufacturing equipment. As in every economic environment, the related decisions to a choice of technology typically take into account costs and availability of the different options. Often, HCFC technologies have been selected as a basis for such investments. Through these investments, a long term dependence on the HCFC supply is being created.

11. The Multilateral Fund is not responsible for the conversion of manufacturing equipment which has already received assistance for a conversion from CFC to HCFC³. The Multilateral Fund is also not responsible for the conversion of capacity installed after 1995⁴. Independent of the responsibility for these conversions, the related HCFC consumption and its subsequent limitation and phase-out will pose a problem to Article 5 Countries. This problem might be further amplified by the phase-out schedule for HCFC, requesting a one-time drop from 100% of the baseline to 0% after 25 years of constant consumption.

12. Since self-financed conversion would put a huge burden on Article 5 Countries and their enterprises, a possible way forward might be to control the installation of more HCFC-related capacity, and to initiate and, subsequently, require that HCFC-related capacity decommissioned due to age or economic reasons be replaced by ODS-free technologies. Once such policies are in place, HCFC consumption will cease automatically. Consequently, related policies have to be approved, communicated and, where applicable, enforced at least one lifetime of equipment prior to the phase-out date.

13. Experience of the Multilateral Fund during the phase-out of various ODS demonstrated clearly that it takes several years after a measure is suggested before most Article 5 Countries can commit to undertake such measures. Also, from RMP implementation experience and phase-out efforts concerning MeBr, it is known that the development of a strategic approaches for phase-out and the related involvement of stakeholders take years, as does any subsequent approval of legislation. Finally, the legislation has to be communicated and enforced, again a lengthy process. Graph 1 provides an overview of the timing issues, assuming that Article 5 Countries evaluate and, subsequently, decide to undertake similar HCFC managing policies based on the experience documented in a case study concerning the China HCFC Management Study. From the graph it can be seen that such a cost effective approach would require first steps very soon in order to be effective before the 2040 phase-out date.



Graph 1: Timing of a HCFC Management Study and subsequent activities related to HCFC phase-out

³ Decision 19/2

⁴ Decision 17/7

14. The benefits of an approach, as outlined, are clear: The phase-out of HCFC will take place in time, with minimum costs and with a significant reduction in consumption long before the 2040 phase-out date. But this approach is inevitably linked with an early start of the work to be undertaken.

15. China is the most suitable candidate to undertake such a HCFC Management Study. The Government has proven through its leadership in ODS phase-out that it is willing and capable to pilot and rapidly implement new approaches to ODS phase-out. According to the TEAP HCFC Task Force Report, China is also the dominant consumer of HCFC, in particular HCFC-22, and will be the main cause for a predicted HCFC-22 shortfall in the near future. A HCFC management study for China, when transferred into national policy, will have the greatest possible leverage on world-wide HCFC-22 consumption, since in TEAPs business-as-usual scenario actually foresees that China will demand almost 60% of the world-wide HCFC-22 consumption by 2015. Consequently, the HCFC management study focuses to the larger part on HCFC-22, while also providing information and developing policy for the other HCFCs prevalent in China. Information about the consumption of HCFC in China, related industries etc. can be found in Annex 1 to this study paper, “Main characteristics of the project proposal ‘Development of a suitable strategy for the long term management of HCFC-22 as well as other HCFC in China’ (China HCFC Management Study)”.

Responsibility of the MLF and eligibility of a study

16. Article 10 (Financial Mechanism) of the Montreal Protocol states that the Parties shall establish the Multilateral Fund for the purposes of providing financial and technical co-operation to Parties operating under paragraph 1 of Article 5 to enable their compliance with any control measures in Articles 2F to 2H⁵. There is no principle discrimination based on the timing of any control measures foreseen. The status of the controls on HCFC consumption at the present point in time can be compared to the situation of CFCs and Halons before 1997 or MeBr before 1998; all of those received significant funding for reductions in consumption despite the fact that not even a baseline had been established; and, contrary to the measures proposed here, the projects were typically not on a national level and did therefore not allow accurate impact monitoring.

17. It is further said that the Multilateral Fund shall meet all agreed incremental costs of Article 5 Countries in order to enable their compliance with the control measures of the Protocol. Clearly, a HCFC Management Study falls under those definitions. Since similar activities have already received funding before, and since similar activities are even defined as eligible in guidelines such as the RMP guidelines, the general eligibility is given⁶.

18. The China HCFC Management Study does not result in any conversion of equipment. Consequently, ExCom decisions 17/7 (no funding of conversion if capacity installed after July 1995) and 19/2 (no second-stage conversion) have no relevance to the proposed project.⁷

⁵ Article 2F deals with HCFC

⁶ For more details, see Annex 3, in particular issue 3

⁷ For more detail on eligibility and replies to issues raised in discussions during the 42nd ExCom, please refer to Annex 3, in particular to issues 1 to 8

Timing of a study

19. Several aspects related to the timing of the China HCFC Management Study were raised, such as: the scarcity of funds given the priority for projects related to the 2005 and 2007 deadlines; and the priority that such a project should have; and the question of the maturity of technical development and information. These questions were examined in detail⁸. It is believed while these issues are all important, the present situation in terms of available funding, funding decisions of ExCom and technical development in combination with the aims of the study does indicate that there are no barriers to approving the China HCFC Management Study now, and the issues raised are not likely to lead to any compromise concerning result or quality of the study.⁹

20. Of all those concerns, the main question seems to be if it is meaningful to start with any HCFC phase-out project now, 35 years before the phase-out date. There are two aspects to this: The technical aspect relates to the time between project approval and the effects on the ground. The political aspect relates to the general objective of the Montreal Protocol, i.e. the minimization of consumption and production of Ozone Depleting Chemicals.

21. *Technical aspect:* Graph 1 above shows a best and worst case scenario for a case where after a HCFC Management Study has been developed successful, other countries decide to follow suit with similar measures. As can be seen, a final phase-out of HCFCs can be expected approximately between 34 and 43 years after approval of the China HCFC Management Study. Germany is certainly open to discussions how realistic the assumed life times of 20 and 25 years are, and where, through parallel action, a year might be saved. It should be noted that in implementation, many of the countries will turn out to be slow in their legislative and communicative processes. In the end, while the total time to implement such a project can not be assessed exactly, it is urgent to start since the estimates here lead close to, partially beyond the 2040 phase-out date.

22. *Political aspect:* The general objective of the Montreal Protocol is to reduce Consumption and Production of Ozone Depleting Chemicals. The TEAP HCFC Task Force Report has demonstrated that we face a significant increase in the consumption of HCFC in the foreseeable future.¹⁰ This increase will, according to the TEAP report, probably also lead to investments into new HCFC production facilities, which will likely sustain the use of HCFC beyond what is actually necessary for Article 5 Countries. In addition, also destruction needs for CTC, a by-product of a HCFC-22 pre-production, will be significant since the production of 1 ODP ton of HCFC-22 leads approximately to the by-production of 8 ODP tons of CTC. The activities described above, bundled into an HCFC Management Study, will be on the one hand a very cost effective and eligible way to avoid consumption and production of considerable amounts of HCFC by means of early demand management. The success of such measures, on the other hand, depends on their implementation before the large amount of the capacities are installed; delays will endanger the benefits of reducing early the predicted demand increase.

23. Based on the above, the China HCFC Management Study should be approved and implemented at the earliest possibility. While the results will help China to manage its

⁸ An overview of questions and issues raised from members of ExCom as well as from the Multilateral Fund Secretariat is shown in Annex 2.

⁹ Detailed replies to the concerns raised can be found in Annex 3, issues 9 to 14

¹⁰ For more detail on HCFC consumption forecast, please refer to the TEAP HCFC Task Force Report (2003) and, for data focussing on China and its role in HCFC-22 consumption, to Annex 1 of this paper

demand and will ease the tense HCFC supply situation, the resulting case study will enable assessment of measures and possible ways forward.

Suggested way forward

24. The ExCom might, in light of the above explanations, consider to approve conducting a HCFC Management Study for China in order to support China in initiating measures to manage its significant growth in HCFC consumption, in particular HCFC-22. The project is aimed at both supporting China and improving the supply situation, in particular concerning HCFC-22, in a way which reduces or eliminates the demand for new HCFC-22 production capacities that TEAP has forecasted in their HCFC Task Force Report. ExCom requires the submission of a detailed case study, which should include inter alia technical information and data assembled, policy measures considered and their evaluation for the situation in China.

ANNEX 1:

Main characteristics of the project proposal “Development of a suitable strategy for the long term management of HCFC-22 as well as other HCFC in China” (China HCFC Management Study)

General

A consumption forecast for China’s HCFC consumption until 2015 was developed as part of the work of TEAPs HCFC Task Force. This forecast shows huge growth, in particular in the HCFC-22 consumption, leading to a tripling in consumption until 2015. These forecasts are confirmed by new production data of the China State Environmental Protection Agency, which also indicates a significant increase in HCFC-22 production over the last few years. More moderate growth is also expected for the use of other HCFC, in particular HCFC-141b. One of the conclusions of that TEAP report, that “*HCFC-22 and HCFC-141b are, and will remain, the most significant HCFCs in use particularly in Article 5(1) countries*”, is also correct for China. Of these two substances, in particular HCFC-22 seems to undergo a very worrisome trend.

China is in a unique situation, being the largest manufacturer of air conditioners world wide. Only an early management of the expected growth of HCFC-22 consumption by the Government of China will enable the phase-out of HCFC-22 consumption latest by the year 2040 including the service demand, without seeking additional funding. China is producing more than 60% of the air conditioners manufactured in Article 5 countries, dominating export markets. Policy decisions in China might lead to a lower export of HCFC-22 air conditioners, with subsequently a lower HCFC-22 service demand in many Article 5 countries. Consequently, the project has excellent prospects for additional benefits for other countries.

Preliminary information gathering suggest that the consumption in HCFC-22 originates to a large extent from capacities installed after 1995, mainly in the sector of unitary air conditioning (to a large extent split units). The service refrigerant demand of split units is significant because of their specific design with non-permanently sealed couplings, leaking refrigerant over time. China has become the largest manufacturer of such air conditioning products world wide. The HCFC-22 air conditioning units are to a large part being exported, also to other Article 5 Countries; commercial data suggests that presently more than 2/3rd of the total production is being exported. Potential changes in Chinas policy concerning HCFC-22 use in manufacturing new equipment could therefore influence the HCFC-22 service sector consumption in other Article 5 Countries as well.

The China HCFC Management Study aims at developing the necessary data and options, e.g. technology and policy options, for policy makers for HCFC-22 and also for HCFC-141b . This work is meant to be well documented and converted into a case study, showing the information needs, the ways of collection and assembly of such information, its evaluation and the extrapolation into a consumption forecast. The case study will further show how different options for action were evaluated, including their benefits and drawbacks. This documentation will be made accessible to A5 Countries for supporting them in long-term HCFC-22 management.

The future growth of HCFC-22 consumption might be managed by the Government of China to ensure the phase-out of HCFC-22 consumption in China latest by the year 2040 including the service demand. In addition, a China HCFC Management Study might support strongly a large number of Article 5 Countries in their efforts to subsequently phase out the manufacturing and service related consumption of HCFC-22 in their respective countries.

The objective of this China HCFC Management Study is to develop

- Detailed HCFC-22 supply and demand data and forecast as a basis for the development of policy options
- A strategy to control the growth in the consumption of HCFC-22 in China until 2015 and to allow meeting the subsequent total phase-out of HCFC-22 consumption with minimum economic disruption, and
- Policy options for the Chinese Government in order to address HCFC-22 growth and associated problems
- Supply and demand data for other HCFC, such as HCFC-141b and HCFC-123, and, where appropriate and meaningful, inclusion of those in the policy options
- A case study on HCFC-22 consumption patterns and possible steps for its management; this case study is to be distributed among A5C as a contribution to formulating HCFC-management policy.

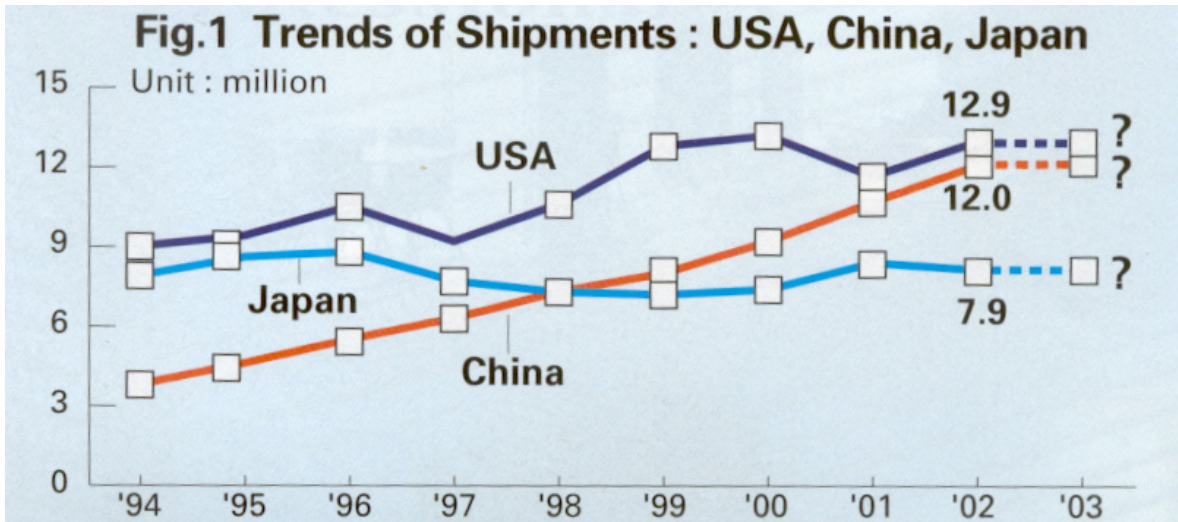
The China HCFC Management Study will not lead to a conversion funding request towards the MLF but is meant to support the Chinese Government in their search for a sustainable, responsible policy for the future use of HCFC-22. The study will not lead to phase-out of HCFC-consumption, but to a better understanding of the challenges to be met in case of unconstrained growth, which might lead to HCFC growth limitations through e.g. national policy. Nevertheless, this project proposal for a China HCFC Management Study does not prescribe any such outcome.

Background

As already outlined above, for China an only moderate growth of HCFC-141b consumption is expected, while a very substantial growth of HCFC-22 consumption is forecasted. In addition, HCFC-141b use, largely associated with foaming operations, does not require constant supply after goods are being manufactured. HCFC-22, being largely used as refrigerant, is needed for a long time after the equipment has been manufactured in order to keep it functional and protect the related investment. Consequently, the project proposal focuses stronger on HCFC-22 than on HCFC-141b despite the fact that these two are both important HCFCs.

HCFC-22 is a low ODP refrigerant which has been traditionally used in unitary air conditioner products, such as window air conditioners and split air conditioners. A second important user of HCFC-22 is the small to medium capacity chiller market. In addition, HCFC-22 has also been used as CFC-replacement in commercial refrigeration equipment, and has developed as the standard choice for the increase in manufacturing capacity for new commercial refrigeration equipment. The air conditioning use is believed to be the predominant use and, at the same time, the use influencing through exports of equipment also other countries.

The importance of China as a manufacturer of air conditioning products can be seen in graph 2 displaying the situation mid 2003. The actual shipment information from both China and US from October 2003 (latest available data) suggest that in a presently fast growing world wide air conditioning market, China will have produced 16.8 million units vs. a US production of 15.7 million units. Thus, China is apparently now being the largest producer of air conditioning units world wide. Estimated data for 2003 suggest that China manufactures more than 30% of the total world production and well more than 2/3rd of the air conditioners produced in A5 Countries.



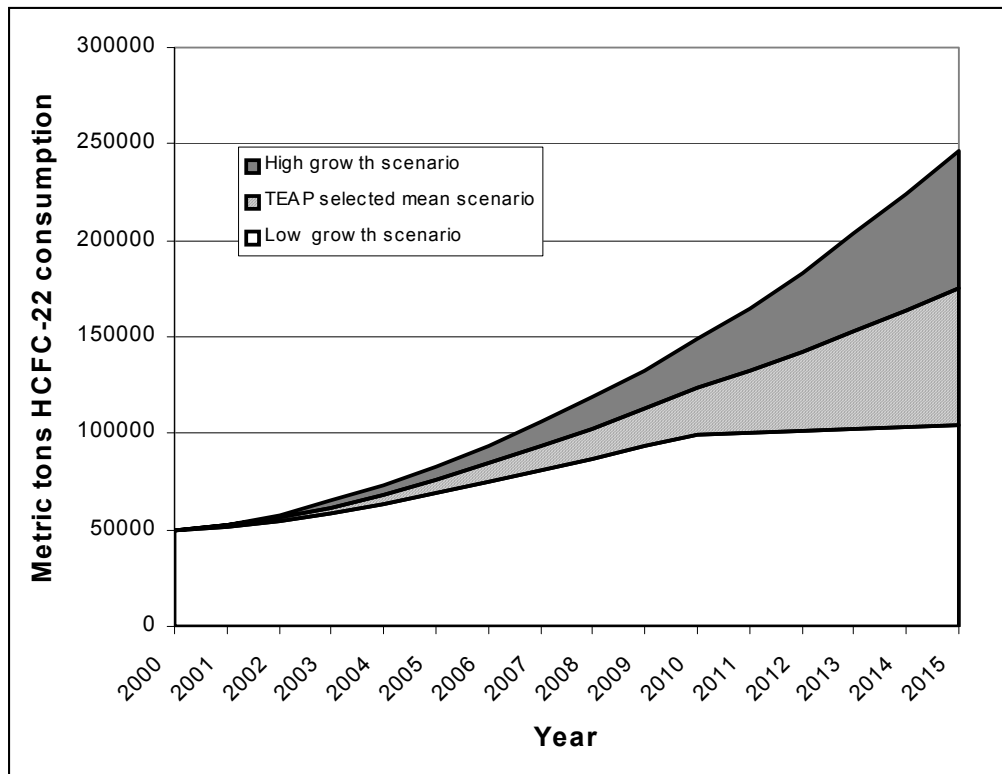
Graph 2: Trends of shipments of World Wide Unitary A/C market

China produces predominantly national brands (Haier, Kelon, Gree, ...). Presently, a large portion of the units produced are being exported, although only a part of them from national brand production (19.5% in 2002). While no consolidated data is available, the known data suggests that the main markets for at least the national brand air conditioning products are other Article 5 Countries, predominantly in South and South-East Asia. Information showing the export history of China is given in Graph 3.



Graph 3: China's room air conditioners exports for the past decade

Based on recent data developed by TEAP, it became apparent that the increase in HCFC-22 consumption in China is significantly higher than expected, and is assumed that there will be a tripling in HCFC-22 consumption until 2015. TEAP estimated a minimum and a maximum growth scenario, and used the arithmetic mean of both for the final version of the study. An overview of the data used by TEAP to forecast the HCFC-22 consumption in China is given in graph 4.



Graph 4: TEAP – determined scenarios for China's HCFC-22 growth

The HCFC-22 consumption forecasted shows an increase of HCFC-22 consumption between 2002 and 2015 of more than 6500 ODP-tons or 310%, based on the medium scenario. Looking at the high growth scenario, an increase of more than 400% compared to the 2002 consumption seems possible.

These forecasts are based on a business as usual scenario, i.e. assuming that exclusively the economic conditions are driving the development of the HCFC-22 market, plus existing legal constraints in the export markets (largely Europe).

Depending on data and subsequent measures to be developed under the China HCFC Management Study, China could decide to monitor, influence and/or control the HCFC-22 consumption and might therefore force a deviation from the business as usual scenario developed by TEAP. For such an undertaking, a good understanding of the consumption sector is important – this understanding is meant to be developed under this project.

The study will as well target the HCFC-141b consumption, although with a lower intensity. The HCFC-141 consumption forecast for China is at the moment not available with reasonable detail. Consequently, no forecast and no policy measures can be envisioned at the present point in time. The study will attempt to form the basis for a subsequent evaluation of HCFC-141b data by the Chinese Government, followed, if appropriate, by measures to manage the HCFC-141b consumption..

Content

The China HCFC Management Study to be undertaken will need several nation-wide surveys. These will ensure that the data collected presents a sufficient basis for action on a national level or, if meaningful, on provincial levels.

The China HCFC Management Study involves and combines different fields of expertise: Technical, logistical, economical, administrative and political. Thus, the study is a fairly

complex undertaking, involving several national and political actors as well as bilateral support for transfer of A2C experience.

The China HCFC Management Study is aiming at data development from a top-down as well as a bottom-up approach and will therefore cover the following :

- Historic HCFC-22 consumption data collection
- Collection and evaluation of information available within SEPA, at the National Planning and Development Committee, accessible in other administrative bodies and in research institutes
- Distribution pathway survey:
 - o Distribution pattern
 - o State wise distribution of consumption
 - o Manufacturers vs. service enterprises
 - o Increase in amount of manufacturing, amount of service over the past years
- Refrigeration equipment survey
 - o Existing quality standards; adaptation of those standards in practice
 - o Tooling of the assembly/service sector, procedures followed in assembly, maintenance
 - o Leak prevention, testing for leaks
 - o Operation conditions of refrigeration equipment, expected lifetime, limiting factors, amount of compressor failures, amount of repairs requiring opening of refrigeration cycle
- User survey
 - o Income level when purchasing luxury goods
 - o Replacement culture / reselling of equipment / customer lifetime expectations
 - o Use of HCFC-22 refrigeration equipment in supermarkets – characteristics, expected life, ...
 - o Forecast of income development (for consumer goods – a/c); spreading of supermarkets (for commercial); other
- Unconstrained HCFC-22 demand forecast
- Other HCFCs user pattern and consumption forecast – unconstrained
- Pattern and forecast of HCFC use not constituting consumption
- Development of possible measures to manage growth in HCFC-22 use
 - o Technical possibilities to utilise non-ODS alternatives to HCFC-22 and other HCFCs (HFCs, HCs, NH₃, other); technical constraints
 - o Existing standards (national and international) supporting or limiting the use of different alternatives
 - o Cost and market implications of using alternatives
 - o Improving assembly and maintenance, including viability of recovery and recycling
 - o Legal possibilities to manage supply of HCFC-22, potentially other HCFCs to the market
 - o Legal possibility to manage demand of HCFC-22, potentially other HCFCs to the market
 - o Assessing the environmental impact of continuous HCFC use and use increase
 - o Technical, regulatory and other possibilities to minimise the environmental impact of HCFC use
- Kick-off and interim workshop to ensure that the study covers the necessary information and policies and to keep national stakeholders fully involved.

- National focused workshop with national and international experts to discuss the results of the strategy and, if deemed appropriate, to develop recommendations
- Development of a national strategy document concerning HCFC demand, supply and related data, both in terms of the present situation as well as a long-term forecast. This document will also describe the related policy options for the Government of China
- Development of a case study document detailing the information collected, experience gained, different technologies, policies and scenarios evaluated, their specific benefits and drawbacks

ANNEX 2:

Views of delegations expressed on the eligibility of funding and other aspects

The representatives of the government of Germany, being part of the UK Delegation, noted duly all the views expressed in the forum of ExCom as well as in the informal group discussions on the eligibility of funding by the Multilateral Fund for HCFC phase-out management studies in general and the China HCFC Management Study in particular. No further comments have been received by the Government of Germany within the time frame specified in ExCom decision 42/7.

Since the objective of this policy paper is to provide information relating to concerns of members of the ExCom about eligibility, funding, content or other aspects of such a HCFC Management Study, the below list of comments is almost exclusively focussing on the more critical comments of members. Nevertheless, it should be noted that a large part, according to the understanding of the German representatives actually the majority of delegations participating in the discussion felt that a HCFC Management Study would be useful and that they supported its idea.

The comments fall into a number of groups and can be summarized as follows:

Responsibility of the MLF and eligibility of a study

The contributions of members of the ExCom were focussing on the following issues:

- (1) There was some uncertainty if the MLF would be the appropriate body to undertake a China HCFC Management Study as planned, as compared to the GEF or TEAP
- (2) Some ExCom members pointed to the indicative list of incremental cost, mentioning that policy support is not specifically mentioned there and, therefore, might not be eligible.
- (3) There was some uncertainty if and to what degree the support of a countries policy formulation are covered by the mandate of the Multilateral Fund, and if such activities would be eligible for funding.
- (4) In that regard, it was also discussed if the proposal might be divided into an eligible and a non-eligible part. It was suggested to assume that the eligible part would be the investigation into the present status (technical part) and the non-eligible part would be the development of policy measures (policy part).
- (5) With a view on the uncertainty of the eligibility assumed by some delegates, it was discussed if additional funding might be found to supplement for study parts found to be non-eligible

In addition to the above remarks, the MLF Secretariat, in their comments in documents UNEP/OzL.Pro/ExCom/42/7 and UNEP/OzL.Pro/ExCom/42/16, had also raised the following issues

- (6) The Fund policy specifically excludes funding of any second-stage industrial conversions from HCFCs to non-ODS substances (Decision 19/2).
- (7) The ExCom has established a policy not to fund the conversion of capacity installed after July 25th, 1995 (decision 17/7).
- (8) No such project has so far been approved

Timing of a study

The contributions of members of the ExCom were focussing on the following issues:

- (9) The last negotiations on replenishment in 2002 used as one important element for the determination of the replenishment level a study performed by TEAP named "Assessment of the Funding Requirement for the Replenishment of the MLF for the

period 2003-2005". This study did not foresee any funding for the phase-out of HCFCs in the current triennium. Consequently, there might not be sufficient funding available for such an undertaking at the present point in time.

- (10) In 2003 the resources of the MLF were assessed as being very scarce to fulfil only the most urgent needs, i.e. the necessary support for all A5 parties to achieve compliance with the control schedules for CFC, Halon, MeBr and CTC in the 2005-2007 period. HCFCs were not addressed in the 3-year phase-out plan and none of the criteria for accelerated phase-out/maintaining momentum apply to HCFC consumption. Again, this might indicate that after high-priority projects have been funded, insufficient funding might remain for such a project.
- (11) The technical progress for CFC phase-out has been rapid, thus, until 2040, it could be expected that new solutions for HCFC replacement might be developed which could not be taken into account in a study performed in the near future
- (12) The phase-out of HCFCs is a significant task for A5C governments in the future, when both in A2C as well as A5C awareness of ODS and related issues will probably be lower than today. It is therefore very meaningful to address these issues and make the necessary decisions at a time when the ODS issue has still a high visibility and the MLF is still a strong organisation.
- (13) It was pointed out that such a country-specific study, relating to China, might lead to a subsequent demand for a similar undertaking from other countries, which might cause further demand on the scarce resources of the MLF. Other delegations suggested to broaden the scope of the study by including additional countries.

In addition to the above remarks, the MLF Secretariat, in their comments in document UNEP/OzL.Pro/ExCom/42/16, had also raised the following issue:

- (14) The submission of the project raises the policy issue of the priority to be accorded at the present time to the funding of projects addressing HCFCs.

Content expected / Benefits of a study

Many delegations formulated their expectations towards such a study:

- (15) The study should take into account the existing information, in particular the TEAP HCFC Task Force Report of 2003.
- (16) The study must clearly be targeted to help China to cease the consumption of HCFCs
- (17) The study should be formulated in a realistic and practical way, and should not be overly academic
- (18) The study should take into account the transfer of information from A2 Countries which have already limited or phased out HCFCs, and facilitate information transfer from A2 Country experience to A5 Countries.
- (19) Since TEAP in its HCFC task force report had predicted a shortfall in the supply of certain HCFC, in particular HCFC-22 in the near future, policies developed through such a study might help to reduce the shortfall and manage within the existing supply. This aspect should find its way into the study.
- (20) One important HCFC, HCFC-22, is being manufactured using CHCl_3 as a necessary pre-product. Manufacturing this pre-product, CCl_4 (CTC) is inevitably co-produced. Consequently, the management of HCFC-22 is expected to also influence CTC surplus.

Germany would like to use this opportunity to sincerely thank the participants in the discussions for their remarks, efforts and insights.

ANNEX 3:

Direct replies to views of delegations and the MLF Secretariat expressed on the eligibility of funding and other aspects

Responsibility of the MLF and eligibility of a study:

- (1) *There was some uncertainty if the MLF would be the appropriate body to undertake a study as planned, as compared to the GEF or TEAP*

According to the GEF's operational procedures, the GEF provides support for ODS phaseout in cases where activities in an A5 Country (such as China), while consistent with the objectives of the Montreal Protocol, are of a type not covered by the Multilateral Fund. The precondition for funding of such an HCFC study by the GEF would therefore be that this *type* of activity is not covered by the MLF. As shown below e.g. in the reply to issue (2), the MLF has already funded this type of activity in the past for other ODS, when those were in a similar status in terms of a not-yet fixed baseline etc. Consequently, the GEF is not allowed to take over the funding of such an activity.

The mandate of TEAP, aside from those related to changes in the control mechanism, are specific mandates given from time to time from Meetings of the Parties. According to its Terms of Reference, "TEAP analyses and presents technical information. It does not evaluate policy issues and does not recommend policy. The TEAP presents technical and economic information relevant to policy. Furthermore, the TEAP does not judge the merit or success of national plans, strategies, or regulations."¹¹ It can therefore be concluded that a study as the one proposed does not fall under the Terms of Reference of TEAP.

As outlined above, the objective of the China HCFC Management Study is to develop the basis for policy making and, subsequently, policy options with and for the Government of China. TEAP, by definition, is a body operating on the level of the Meeting of the Parties, not a single country. The information from TEAP is supposed to provide advice concerning the policy options of the level of the MoP, not a national level. The TOR specifically exclude any judgement on national issues.

- (2) *Some ExCom members pointed to the indicative list of incremental cost, mentioning that policy support is not specifically mentioned there and, therefore, might not be eligible.*

Article 10 (Financial Mechanism) of the Montreal Protocol states that the Parties shall establish a mechanism for the purposes of providing financial and technical co-operation to Parties operating under paragraph 1 of Article 5 of this Protocol to enable their compliance with *any* control measures in Articles 2F to 2H¹². The mechanism shall meet all agreed incremental costs of such Parties in order to enable their compliance with the control measures of the Protocol." The Indicative List of Incremental Cost provided by the Meeting of the Parties does not mention policy support measures as such, although, the List included the more general statement to

¹¹ Annex V of the report of the Eighth Meeting of the Parties

¹² Article 2F deals with HCFC

cover the cost of providing technical assistance to reduce consumption and unintended emission of ozone depleting substances.

Independently, incremental costs that once agreed are to be met by the Financial Mechanism include not only those in the Indicative List of Categories of Incremental Costs. If incremental costs other than those mentioned in the Indicative List are identified and quantified, a decision as to whether they are to be met by the Financial Mechanism shall be taken by the Executive Committee consistent with any criteria decided by the Parties and elaborated in the guidelines of the Executive Committee.¹³ According to its Terms of Reference, the MLF shall meet the agreed incremental costs; other than those, it is only meant to fund clearinghouse functions and the secretarial activities. Consequently, any project approval not specifically relating to clearinghouse functions constitutes an identification of incremental costs. A number of examples for activities closely mirroring the activities proposed for the study can be found below in the comments relating to issue (3)..

- (3) *There was some uncertainty if and to what degree the support of a countries policy formulation are covered by the mandate of the Multilateral Fund, and if such activities would be eligible for funding.*

The support of a countries policy formulation concerning ODS phase-out has been funded frequently by the Multilateral Fund, and has therefore been accepted as eligible for funding. An example are the guidelines for Country Programmes:

The Fifth Meeting of the Executive Committee decided that country programmes should be prepared by countries to the extent possible based on the guidance approved by the Executive Committee. The country programme is expected to contain, inter alia, a description of policy framework, regulatory and incentive systems, a description of government and industry activities in response to the Protocol, an action plan encompassing investment and technical assistance projects, pre-investment studies, and any policy analysis required.¹⁴

Another example are the guidelines for the development of an RMP. The RMP preparation requires to undertake country-specific review and analysis of the consumption of ODS and their availability, sources of supply and distribution channels, production of equipment; characterization of the relative importance of sub-sectors on the basis of level of consumption of ODS, economic importance and trade orientation; assessment of the available and feasible options, including technical options, policy options such as legislation and regulations and economic instruments; evaluation of alternative options for cost-effectiveness, feasibility, timing and maximum impact; formulation of a management policy.¹⁵

For MeBr projects, non-investment projects have been defined as one project category. These are specified as “projects focused on creating and disseminating information and/or educating stakeholders, and the provision of assistance, where needed, on the creation of policy instruments to restrict or ban the use and/or import of MB.”¹⁶

¹³ UNEP/OzL.Pro/2/3 Appendix I of Decision II/8, para. 2; UNEP/OzL.Pro/4/15 Decision IV/18 Annex VIII

¹⁴ UNEP/OzL.Pro/ExCom/3/18/Rev.1 Annex III (section II.1.2), UNEP/OzL.Pro/ExCom/5/16, para. 22-23

¹⁵ Guidelines for the preparation of Refrigerant Management Plans

¹⁶ Revised strategy and guidelines for projects in the Methyl Bromide Sector

Consequently, it can be stated that all the various technical, economic, logistical and policy parts planned for the proposed China HCFC Management Study have been performed in a similar way for other substances and other countries.

- (4) *It was also discussed if the proposal might be divided into an eligible and a non-eligible part. It was suggested to assume that the eligible part would be the investigation into the present status (technical part) and the non-eligible part would be the development of policy measures (policy part).*

Since the project is as per above explanations fully eligible, a division is not meaningful and necessary.

- (5) *With a view on the uncertainty of the eligibility assumed by some delegates, it was discussed if additional funding might be found to supplement for study parts found to be non-eligible.*

It was not possible to find additional funding for a China HCFC Management Study, in particular because the eligibility of the study was demonstrated, which prohibits the use of GEF funds for such an undertaking in an Article 5 Country.

- (6) *The Multilateral Fund policy specifically excludes funding of any second-stage industrial conversions from HCFCs to non-ODS substances (Decision 19/2).*

The purpose of the China HCFC Management Study is to allow China as well as, on the basis of Chinas experience, other Article 5 Countries to establish policies and enforcement measures which will support the use of non-ODS technologies when equipment depending on HCFC has reached the end of its useful life and therefore has to be replaced by its user. Thus, no conversion takes place, and no conversion project is being funded. Therefore, neither does the strategy to be developed constitute funding for a second conversion, nor is the explicit or implicit objective of it to develop projects on that basis.

- (7) *The ExCom has established a policy not to fund the conversion of capacity installed after July 25th, 1995 (decision 17/7).*

Out of the same reason explained in the comment concerning issue (6) above, decision 17/7, specifying not to fund the conversion of capacity installed after July 25th, 1995, is not applicable for the study or its intended results.

- (8) *No such project has so far been approved*

So far, no project specifically and solely addressing the phase-out of HCFCs has been approved. But HCFCs have been addressed in a number of phase-out projects jointly with CFCs or other substances. Another example are the RMP guidelines, which require specifically addressing HCFC and which are asking for similar assessments to be performed as is the case in the China HCFC Management Study.

Timing of a study:

- (9) *The last negotiations on replenishment in 2002 used as one important element for the determination of the replenishment level a study performed by TEAP named “Assessment of the Funding Requirement for the Replenishment of the MLF for the period 2003-2005”. This study did not foresee any funding for the phase-out of HCFCs in the current triennium. Consequently, there might not be sufficient funding available for such an undertaking at the present point in time.*

The study mentioned served as advice for the replenishment discussions and was and is not at all policy prescriptive. Independent of this study, ExCom has decided and continues to decide to fund projects at levels which are similar, lower or higher than assumed in that study, and to fund other or additional projects not included in the study. The important factor limiting the freedom of ExCom is not a two year old forecast, but the actually available funds (see issue 10).

- (10) *In 2003 the resources of the MLF were assessed as being very scarce to fulfil only the most urgent needs, i.e. the necessary support for all A5 parties to achieve compliance with the control schedules for CFC, Halon, MeBr and CTC in the 2005-2007 period. HCFCs were not addressed in the 3-year phase-out plan and none of the criteria for accelerated phase-out/maintaining momentum apply to HCFC consumption. Again, this might indicate that after high-priority projects have been funded, insufficient funding might remain for such a project.*

In the 42nd meeting of ExCom, the MLF Secretariat reported that the 2004-2006 business plans addressed all the phase-out needs up to and including 2007, and that funds will remain. On that background, ExCom noted that all projects in the bilateral and implementing agencies business plans could be considered for funding in 2004, since sufficient funding is available.¹⁷ The China HCFC Management Study had actually already been included in Germany's 2003 business plan, was again included in the 2004 business plan and falls therefore in the category of projects which can be considered for funding in 2004.

- (11) *The technical progress for CFC phase-out has been rapid, thus, until 2040, it could be expected that new solutions for HCFC replacement might be developed which could not be taken into account in a study performed in the near future.*

The development of alternatives for HCFCs for the main uses of HCFCs – HCFC-22 for refrigeration and air-conditioning, HCFC-141b for rigid PUR foams - has not progressed significantly in the last years. Non-ODS replacements for HCFC-141b for rigid polyurethane foaming have been developed several years back, today essentially three technologies are commercially available (HFC-245fa, HFC-356mfc, pentane). For the replacement of HCFC-22 as refrigerant, several HFC (R407C, R410A, R507) and hydrocarbon (propane, propene) refrigerants are available. Alternatives are needed in the EU where HCFCs are banned from 1.1.2010 (in foams already from 1.1.2004) onwards. Presently, it is not visible that any efforts are undertaken to develop this selection of available and sufficient substances further. Since a large number of alternative candidates has been screened

¹⁷ UNEP/OzL.Pro/ExCom/42/54 para. 32.b, 38

and tested, and a sufficient number of alternatives has been materialized, further developments are in the opinion of Germany rather unlikely.

It should be noted, though, that the objective of the China HCFC Management Study is also not to demonstrate technical solutions or to transfer know-how as part of that undertaking. Rather, it is aimed at demonstrating in which sectors and/or which regions available technical solutions are feasible given the circumstances prevailing in the country, and in which cases and with which preparation any administrative or legislative steps to phase-out HCFCs can be taken. If more alternatives emerge over time, this will be highly beneficial for the users, but is only secondary to the purpose of the China HCFC Management Study.

- (12) *The phase-out of HCFCs is a significant task for A5C governments in the future, when both in A2C as well as A5C awareness of ODS and related issues will probably be lower than today. It is therefore very meaningful to address these issues and make the necessary decisions at a time when the ODS issue has still a high visibility and the MLF is still a strong organisation.*

This statement is self-explanatory and needs no further comment, other than we agree with it and find it to address a very important issue.

- (13) *It was pointed out that such a country-specific study, relating to China, might lead to a subsequent demand for a similar undertaking from other countries, which might cause further demand on the scarce resources of the MLF. Other delegations suggested to broaden the scope of the study by including additional countries.*

Although all elements of the China HCFC Management Study as proposed are eligible and not uncommon in ODS phase-out projects in the MLF, the thrust of the China HCFC Management Study is unique in its attempt to minimize conversion needs by developing and implementing a long term strategy. While it is expected that such an undertaking will yield significant benefits for related Article 5 Countries as well as the MLF, its merits and first lessons learned should be assessed on the basis of a pilot undertaking, before guidelines for such projects are being issued. Consequently, it seems the most appropriate way forward to carry out, on a pilot basis, such a HCFC Management Study for one suitable country. Results and experiences from that study will then be available for the ExCom as guidance in the decision if and how such type of activity might be pursued further.

- (14) *The submission of the project raises the policy issue of the priority to be accorded at the present time to the funding of projects addressing HCFCs.*

The aim of the policy to be formulated under such a project as proposed is to allow equipment using HCFC to operate until the end of its useful life, thus avoiding conversion costs and minimizing efforts to switch technologies. For both foaming equipment as well as for refrigeration and/or air conditioning equipment, the useful life in developing countries is typically between 14 and 30 years; in case of medium to large size refrigeration applications it could be more than 50 years. If policies are developed, adapted and communicated not to continue purchasing HCFC dependent equipment, the HCFCs have still to be around for this period of time to allow utilization of the invested capital. One can safely assume a mean lifetime of 20 years for HCFC-using equipment (refrigeration and foaming alike). If one allows

for the necessary piloting of one HCFC Management Study, policy and guideline formulation by ExCom, development of strategies in/for other countries, time for discussion and adoption of proposed legislation by parliaments, communication and built-up of enforcement support, the time until 2040 is just sufficient to discontinue the use of HCFCs by then.

Content expected / Benefits of a study

- (15) *The study should take into account the existing information, in particular the TEAP HCFC Task Force Report*

The China HCFC Management Study will take into account the existing technical and other information insofar as it fits the purpose of the study, which is to provide the Government of China with a full overview of the situation in the country, options to avoid unnecessary consumption, the available alternatives and their characteristics, possible actions the government might want to take and associated time lines.

- (16) *The study must clearly be targeted to help China to cease the consumption of HCFCs*

The China HCFC Management Study will have the focus to manage, i.e. limit the increase in China's HCFC use, as well as, subsequently, cease the HCFC use in the country. The measures suggested in the study will be targeted at the complete phase-out of HCFC consumption.

- (17) *The study should be formulated in a realistic and practical way, and should not be overly academic*

The data collection parts of the China HCFC Management Study will include both top-down as well as bottom-up approaches. Data for bottom-up approaches, forming the basis for forecasts, will be developed through extensive field visits. The technical parts of the study will also be based on field experience, and will take into account both the general technical possibilities as well as the challenges that new technologies will or might face in the economic, social and climatic environments found in China.

- (18) *The study should take into account the transfer of information from A2 Countries which have already limited or phased out HCFCs, and facilitate information transfer from A2 Country experience to A5 Countries.*

There are two types of experiences made in A2 Countries concerning HCFC replacement and subsequent phase-out. There is for once the technical experience, which is already fairly well documented. Where necessary, the available documentation will be further developed, and/or exchange of experts up to visits might be organized to clarify specific questions. The second type of experience is the political and legal experience developed. In particular the EU member states, which have essentially phase-out the use of HCFCs already, can provide related advice; but also other countries will have experience in the assessment of their specific HCFC phase-out plans and results. Through various means, such as questionnaires, exchanges and, potentially, visits, the existing experience in A2

Countries will be made available to China as well as, subsequently and also through this process, to the other Article 5 Countries. The project will put a large focus on proper documentation of the information gained, thus aiming at forming a compendium of possible policies and technologies which might be used later by other countries as resource.

- (19) *Since TEAP in its HCFC Task Force Report had predicted a shortfall in the supply of certain HCFC, in particular HCFC-22 in the near future, policies developed through such a study might help to reduce the shortfall and manage within the existing supply. This aspect should find its way into the study.*

Among other reasons the TEAP report and, specifically, its findings concerning HCFC-consumption in China was one of the criteria leading to the selection of China as the candidate for a pilot study on HCFCs, in particular HCFC-22. Because of the magnitude of China's HCFC-22 consumption, which the TEAP HCFC-report forecasts to be almost 60% of world HCFC-22 consumption in 2015 (2002: below 40%) , the early HCFC-22 management in China can reduce the world-wide demand for HCFC-22 significantly. China is the country where any given reduction in consumption would have the largest leverage in terms of the world HCFC-22 market.

- (20) *One important HCFC, HCFC-22, (CHClF_2) is being manufactured using CHCl_3 as a necessary pre-product. Manufacturing this pre-product, CCl_4 (CTC) is inevitably co-produced. Consequently, the management of HCFC-22 is expected to also influence CTC surplus.*

The production of HCFC-22 needs the pre-product CHCl_3 , which in turn can only be co-produced with CTC. It is correct that management of HCFC-22 would reduce the related output of CTC and, thus contribute to reduction of CTC production. Both China as well as India as the two major producers of CTC in Article 5 Countries have entered into agreements with the Multilateral Fund, which foresee the reduction and, subsequent, phase-out of CTC in production and consumption.