



**United Nations
Environment
Programme**



Distr.
LIMITED

UNEP/OzL.Pro/ExCom/19/53
12 April 1996

ORIGINAL: ENGLISH

Executive Committee of
the Multilateral Fund for the
Implementation of the Montreal Protocol

Nineteenth Meeting
Montreal, 8-10 May 1996

**INNOVATIVE APPROACHES FOR THE PHASING OUT OF
OZONE-DEPLETING SUBSTANCES IN LOW ODS CONSUMING COUNTRIES**
(Submitted by UNEP)

INNOVATIVE APPROACHES FOR THE PHASING OUT OF OZONE-DEPLETING SUBSTANCES IN LOW ODS CONSUMING COUNTRIES

Background

1. Due to the extremely low ODS consumption levels in Low and Very Low Volume ODS Consuming Countries, the cost-effectiveness of ODS phase-out activities, including Country Programme formulation and Institutional Strengthening projects, is considered to be extremely poor in comparison with Large Volume ODS Consuming countries. This situation was encountered while considering the funding for the Institutional Strengthening projects for Togo (ODS consumption of 1.15 tonnes per year) and St Lucia (ODS consumption of 7.49 tonnes per year). Consequently, the Executive Committee, at its 17th meeting, requested UNEP to prepare a paper on "Innovative Approaches to Phasing out Ozone Depleting Substances in Low ODS Consuming Countries". This paper deals mainly with innovative approaches for formulation of Country Programmes and implementation of Institutional Strengthening projects.

This is a shortened version of the complete paper which may be obtained from UNEP IE on request.

Definitions

2. "Low Volume ODS Consuming Countries (LVCs)" are defined as countries with ODS consumption of less than 360 metric tonnes (17th meeting of the Executive Committee, decision 17/11 (a)) and for the purpose of this paper, the group of LVCs whose ODS consumption is less than 30 tonnes per year are defined as "Very Low Volume ODS Consuming Countries (VLVCs)".

Status and Characteristics

3. *Status*
 - * 27 LVCs and VLVCs have initiated Country Programme formulation, mostly through UNEP. These are expected to request funding for Institutional Strengthening in the near future (Annex A).
 - * there are still about 35 LVCs and VLVCs that have not received any assistance from the Multilateral Fund, but which are expected to apply for it in the near future (Annex B).
4. *Characteristics*

LVCs might differ from VLVCs mainly in their use pattern, i.e., most of ODS use in LVCs and VLVCs is concentrated in servicing and maintenance of

refrigeration equipment, LVCs, on the other hand, may have some manufacturing facilities and that the industry structure might be relatively diverse, characterized by small ODS consumption in the areas of aerosol fillers, recharging of Halon 1211 and 1301 and uses of Methyl Bromide for soil fumigation, preshipment and structural fumigation. However, there are some common characteristics of both LVCs and VLVCs:

- * LVCs and VLVCs consume small amounts of ODS but these ODS can be critical to their economy, especially in export and foreign exchange earning sectors eg fisheries and tourism.
- * Unnecessary uses in the servicing and maintenance field are more frequent in LVCs and VLVCs. This use is predominantly in the Small Sized servicing sector.
- * Unnecessary installations of halon extinguisher systems (often supplied as a 'safety accessory' by package unit suppliers) are more significant in LVCs and VLVCs.

Barriers to phase-out in LVCs and VLVCs

5. There are a number of barriers to the phase-out of ODS in LVCs and VLVCs. These include, inter alia:
 - * Inadequately skilled manpower and lack of involvement to deal with ozone issues due to their focus on other important mainstream environmental problems [waste disposal, fresh water etc].
 - * Lack of information, and training on the ozone issue, alternative technologies and policies.
 - * Lower cost-effectiveness for phase-out projects due to lower scale of economies which puts them at a disadvantage for getting approval from ExCom in comparison with larger projects.
 - * Lower safety and health standards requiring special initiatives to adapt alternatives.
 - * Failure to attract technology and product suppliers who prefer to develop their business in larger economies.

Existing Approach

6. Present implementation of the phase-out of ODS consumption is generally done through several interrelated processes which can be separated in two distinct groups of activities or phases: Country Programme preparation and Country Programme implementation. The later stage includes Institutional Strengthening and investment as well as support projects (eg training in recovery/recycling).

Country Programme Preparation

7. The countries, with the assistance of an Implementing Agency and technical expertise provided by its consultant, undertake the Country Programme formulation in two phases: phase I, a survey of the current use and consumption of the ODS and of the national industry structure and phase II, analysis and forecast of data, and development of a Country Strategy and Action Plan

for phasing out the consumption of controlled substances. The Action Plan often includes projects for strengthening the national institutional mechanism, raising public awareness, training for specific industry sectors and other investment projects.

Country Programme Implementation

8. Institutional Strengthening projects focus on the development of a national institutional mechanism (a National Ozone Unit or NOU) to coordinate national efforts for the expeditious phase-out of controlled substances. Although such projects facilitate ODS phase-out in LVCs and VLVCs, they tend to remain inactive for some time, even after approval of funding and do not result in any actual phase-out.

The main responsibilities of a NOU are: the formulation and implementation of regulations, fulfillment of reporting requirements under the Protocol, conduction of public awareness campaigns, and coordination of all national phase-out efforts.

9. The most common phase-out projects tend to be small and are often training projects in the refrigeration sector. The underlying strategy guiding the phase-out efforts in the refrigeration sector for these countries has been the promotion of better containment of ODS and that refrigeration equipment be used to the end of their working life time as much as possible, where the decision to do so or otherwise should be based in a Refrigerant Management Plan¹.
10. Other phase-out projects may include refrigerant recovery and recycling programmes, retrofitting of existing CFC-containing refrigeration equipment and, to a lesser extent, industrial conversion projects, e.g., for small foam blowers or aerosol fillers.

Key Issues related to existing approach

Country programme format not adapted to the needs of LVCs and VLVCs

11. For many LVCs and VLVCs, the data requested as per the existing guidelines may not be relevant and the details requested may be inappropriate given the fact that the country is a very small consumer of ODS in limited user sectors.

Format for consumption data not adapted to the specific needs of LVCs and VLVCs

12. Existing guidelines do not focus on a detailed survey on the number and type of refrigeration servicing workshops, number and skill level of refrigeration technicians, installed base of CFC-containing equipment, etc. which is of key importance for project development for LVCs and VLVCs.

¹ A Refrigerant Management Plan aims at preparing a strategy for containment/conversion/replacement based in a technical and economic evaluation of the options available for a given equipment.

Low cost-effectiveness of implementation

13. Under the existing procedures, average funding sought for the formulation of a Country Programme, for an LVC with typical ODS consumption of 50 tonnes per year, is in the order of US\$40,000 and funding sought for the associated Institutional Strengthening can be in the range of US\$ 60,000. Total funding for these two "support" activities will then be in the order of US\$ 100,000. The average "phase-out support cost" comes to US\$2/kg.

For a country with ODS consumption of 2 tonnes per year, assuming a cost of US\$ 30,000 for Country Programme preparation and US\$50,000 for Institutional Strengthening implementation, the 'phase-out support cost' would then be US\$ 40/kg.

Long period of inactivity after approval of funding

14. Establishment and effective operationalization of National Ozone Units in some LVCs and VLVCs are characterized by a period of inactivity after approval of the funds, due to slow mobilization of in-country resources.

Inconsistent formulation of projects

15. Projects in LVCs and VLVCs fall mainly in the categories of training, recovery and recycling and other technical assistance. Such projects presented for approval within Country Programmes, usually do not provide the necessary information for their evaluation and get deferred pending further development.

Suggested Options

16. Option 1. Do nothing about ODS phase-out in the remaining LVCs and VLVCs, with the assumption that ODS phase-out in those countries will eventually take place and that even if delayed, its impact in terms of protection of the ozone layer will be insignificant. This option runs counter to the equality and inclusive principles of the Protocol. Consequently the option is not recommended.
17. Option 2. Continue the existing approach in the remaining LVCs and VLVCs. The total estimated cost of Country Programme and Institutional Strengthening Projects for these LVC and VLVC countries using the existing approach, is estimated at US\$ 7.7 million.
18. Option 3. Develop cost-effective alternative approaches. Under this option, several approaches are proposed for the formulation of Country Programmes. The common element is that every country continues to receive assistance to prepare a Country Programme. Such preparation should follow a new simplified and abridged Country Programme format which would be designed to address the needs of both LVC and VLVC countries.

The Country Programme formulation could be facilitated with industry surveys adapted to the needs of typical LVC and VLVC projects, a 'self help

guide', typical information and training packages and 'sectoral guidelines'.

Several approaches are also proposed for the implementation of the Institutional Strengthening projects. The 'focal point' is needed in each country for any of the approaches selected. However, the responsibilities of such focal point may vary according to the selected approach.

This option for formulation of Country Programmes and implementation of Institutional Strengthening projects is estimated to cost approximately US\$ 3.6 million as compared to the cost of the "status quo" option which is US\$ 7.7 million.

Common Tools for phase-out in LVCs and VLVCs

19. It is suggested that key 'common tools' be utilized in order to proceed with option 3 as mentioned above:

- * Simplified Country Programme format adapted for both LVCs and VLVCs;
- * Self help guide;
- * Support activity (institutional Strengthening and training) templates adapted to LVCs and VLVCs;
- * Examples of legislation and regulation;
- * Sectoral Guidelines for preparing and prioritizing the projects;
- * Training packages and information kits; and
- * Project templates adapted to LVCs and VLVCs.

All of the above have been, or are in the process of being developed by UNEP and other implementing and bilateral agencies, except for the 'Self Help Guide'.

Suggested New Approaches for Phase-out in LVCs

LVC Country Programme Formulation

20. Option 1: The cost-effectiveness problem associated with LVCs could be addressed by 'regionalizing' their Country Programme formulation processes and emphasizing the self-help approach. Representatives from LVCs in a 'region' could meet a consultant at a central point. The consultant would then instruct these representatives as a group, on preparation, formulation, presentation and implementation of their Country Programmes.

With the help of the common tools mentioned above, and with minimal external assistance, the countries could then prepare their Country Programme in a similar manner to the present, but using a the simplified Country Programme format.

This 'regional' approach has the advantage of reducing duplication of efforts, time and hence costs, but has the disadvantage that requires that several countries in a region be ready to start formulation of their Country Programmes at the same time.

21. Option 2: in the case where only one country in the region is ready to start formulation of its Country Programme, then the consultant would visit the country concerned and the rest of the process would continue as in the regional approach.

LVC Country Programme implementation

22. The basic elements of the present Institutional Strengthening guidelines would remain, except for reduction of in-country personnel cost and strengthening of regional support through Networking activities, specifically through the Regional Network Coordinators, or through on-going support of a bilateral agency in the region. It is considered essential that countries still have a focal point having responsibilities for monitoring phase-out activities, when they commence. This focal point should have the expertise and capabilities to identify and manage the implementation of phase-out activities within a specific time frame.

Suggested New Approaches for Phase-out in VLVCs

VLVC Country Programme Formulation

23. VLVCs are characterized by ODS consumption mainly in the refrigeration servicing sector. Hence, to formulate a Country Programme in each VLVC country, a technically (refrigeration expert) qualified consultant could visit the country and work directly with the Government-designated focal point, to identify the uses of ODSs and formulate a simplified Country Programme (using the new format) that would identify the critical needs of the country and include the specific actions needed to proceed to complete phase-out. It might be possible for the consultant to prepare a Refrigerant Management Plan and formulate any training projects, if any, during the same visit.

VLVC Country Programme implementation

24. The Institutional Strengthening project is suggested to include a part-time focal point to monitor phase-out. The following options are proposed for implementation:

Option 1: regionalize the Country Programme implementation activities for selected neighboring countries. This activity could be undertaken by a technical consultant at the regional level, who would work in close cooperation with the Regional Network Coordinator and with the focal point of each country to draw up regional strategies and action plan for phase-out in the region. Upon approval of funds for such activities, the technical consultant would provide technical assistance and guidance in the implementation of phase-out activities. The assistance of the Regional Network Coordinator would be provided as an extension of his existing role. The technical consultant could be appointed from the region or a bilateral agency.

Option 2: in those countries where there is only a single sector (refrigeration), a qualified and experienced local refrigeration technician or engineer could be engaged on a full or part-time basis as project manager, to work as a focal

point. In cases where such a local technician/engineer is not available, a part-time government focal point could carry out the same function.

Option 3: allocate a "bulk sum" for phase-out which could be calculated "a priori" based on the expected ODS consumption and a maximum cost-efficiency threshold level. The lump sum would be administered by an Implementing Agency but the country would be responsible for implementing its own phase-out strategy, within the allotted 'bulk sum'. This option would work only in cases where an effective and transparent administration of funds can be ensured.

For any of the three options above, a national focal point would still be required. The main functions of such local focal point in the above three options is to collect data to fulfil the Government's data reporting obligations, organize training sessions of service technicians, follow-up training activities, monitor the implementation of any approved recovery/recycling programme and, where available, assisting the relevant implementing agency in developing and implementing the phase-out projects (expected to be small in number, if at all) in the country.

Any of the three options above could be adopted on a case-by-case basis.

Associated Issues for LVCs and VLVCs

25. Without specific initiative and commitment from the Governments themselves, phase-out will not be possible; and without the passage of legislation, phase-out efforts will be ineffective. Implementation of the phase-out package would be timed to meet a country's requirements and need not commence immediately on approval of a Country Programme. Funding for Country Programme implementation, including Institutional Strengthening could then be estimated, and approved by the Executive Committee when the country is ready, based on a package of identified necessary phase-out projects, as well as a commitment to regulatory support. Funding could depend on agreement by the country that the complete package would be implemented.
26. There are a number of other associated issues which are recognized but not explicitly addressed in the paper. These include the need of public awareness, training, and formulation and enactment of legislation. Reporting requirements under the Protocol are increasing and will need adequate monitoring and coordination. The issues related to dumping of used ODS-containing equipment are also important for the Government.

It is also recognized that in a particular region, various states may be in different stages of phase-out implementation, that the time taken by a consultant to identify ODS use and produce a containment/conversion/replacement strategy, would vary, according to the number of ODS equipment identified. Additionally, the geographical size of a state may require special attention in spite of the country being an LVC or VLVC.

SUMMARY OF RECOMMENDATIONS

Country Programmes formulation:

1. Every country should continue to receive assistance to prepare a simplified Country Programme.
2. A simplified Country Programme format should be adopted appropriate to the specific needs of LVCs and VLVCs. The format should be designed to provide all the information required for developing the phase-out activities characteristic to these countries.
3. LVC and VLVC Country Programmes should identify the specific actions needed to proceed to complete phase-out. For VLVCs, Country Programmes should define a complete phase-out package.
4. The common tools should be compiled and/or developed as a package for LVCs and VLVCs. UNEP could undertake this task in consultation with the Multilateral Fund Secretariat and other Implementing Agencies.

Institutional Strengthening:

1. Institutional Strengthening is vital need for LVCs and VLVCs. Such assistance should be provided as part of an overall package of measures to produce complete phase-out. The package should include limited support for an ozone focal point in the country. Such support should go towards performing specific tasks, during the specific time frame for implementation of phase-out, including fulfilling reporting requirements, implementing support activities like public awareness and training.

Additional support may be provided on regional basis either through the regional network coordinator and/or bilateral initiatives.

2. Implementation of the phase-out package should be timed to meet a country's requirements and need not commence immediately on approval of a Country Programme.
3. Due to the number of implementation issues which need to be addressed, the strategies outlined in the paper should be implemented on a "trial basis" in a manner which is consistent with the above recommendations. Such a trial should be based on the simplest scenario ie, ODS phase out in a geographically small country, with a small population and an ODS consumption of less than 30 tonnes.
4. The implementation of the phase-out could be implemented with a bilateral initiative i.e with assistance from appropriate Implementing Agency and a developed country from the region concerned.

Specific recommendations for immediate implementation

1. For LVCs, two options for Country Programme preparation are recommended:-
 - when several countries in the region are ready for Country Programme formulation: with Bilateral Assistance, a regionalized approach, where countries will meet a consultant at a central point, then utilizing 'self-help' guides would prepare their Country Programme in a simplified format;
 - when only one country in the region is ready for Country Programme formulation: a country by country approach, similar to the existing (ie consultant travels to each country), but using the simplified format and 'self-help' approach.
2. For VLVCs, the following initiatives are recommended:
 - As an initial pilot exercise, simplified Country Programmes which include a complete ODS phase-out package should be developed for the Solomon Islands, Vanuatu and Kiribati, using the amount of US \$60 000 approved for their Country Programmes.
 - The VLVC approach for Country Programme formulation should also be used for other South Pacific VLVC countries with a bi-lateral partner.
 - The project manager/regional consultant approach, in a VLVC country or group of VLVC countries identified as having the refrigeration sector as the only ODS-consuming sector.
3. For On-going Country Programmes:

Country Programme formulation whose funding has already been approved should proceed as per the former guidelines for Country Programmes, while including the new Institutional Strengthening concepts.
4. For Pending Institutional Strengthening Projects:

The countries with newly approved Country Programmes but with Institutional Strengthening projects pending, should have those IS projects revisited, in accordance with the above recommendations. Funding should be approved at the 19th Executive Committee meeting and disbursement of funds should be made upon presentation of an Institutional Strengthening project formulated as per the new concepts expressed in this paper.

ANNEX A

COUNTRIES WHOSE COUNTRY PROGRAMMES ARE BEING FORMULATED (AND NOT YET APPROVED)

LVCs		VLVCs	
COUNTRY	ODS Consumption (estimated tonnes/year)	COUNTRY	ODS Consumption (estimated tonnes/year)
Macedonia**	100*	Antigua and Barbuda	5*
Bahamas	68	Gambia	23
Brunei	93	Gabon	30*
Chad	50	Myanmar	20*
Ethiopia	50	St. Kitts and Nevis	14*
Croatia	150	Guyana	20*
Honduras	200	Kiribati	20*
El Salvador	100*	Western Samoa	30*
Jamaica	161	Solomon Islands	20*
Papua New Guinea	56	Zaire	20*
Nicaragua	150*	Vanuatu	20*
Tanzania	98	Paraguay	20*
		DPR of Korea	20*
		Lesotho	6
		Trinidad & Tobago**	20*
TOTAL	1,276		288

Total Number of Countries and Estimated Consumption:

LVCs: 12 1,300 tonnes

VLVCs: 15 300 tonnes

Total: 27 1,600 tonnes

*: Data not available, hence grossly estimated

** : Country programmes are being undertaken by Implementing Agencies other than UNEP

ANNEX B

COUNTRIES THAT HAVE NOT YET REQUESTED COUNTRY PROGRAMME FORMULATION

LVCs	VLVCs
COUNTRY	COUNTRY
Libyan Arab Jamahiriya	Haiti*
Afghanistan*	Comoros
Angola*	Dominica
Albania*	Grenada
Democratic Yemen	Marshall Islands
Lao Peoples' Democratic*	Nepal
Republic Liberia	Tuvalu
Bosnia and Herzegovina	Sierra Leone*
Mali	Djibouti*
Morocco	Democratic Kampuchea*
Oman*	Belize*
Qatar	Bhutan*
Guinea Bissau*	Burundi*
Suriname*	Somalia*
	Cape Verde*
	Equatorial Guinea*
	Madagascar*
	Tonga*
	Rwanda*
	Palestine*
	Sao Tome and Principe*

* Countries that are not Party to the Protocol

Total Number of Countries and Estimated Consumption:

LVCs:	14	1,400 tonnes (average of 100 tonnes each)
VLVCs:	21	420 tonnes (average of 20 tonnes each)
Total:	35	1,820 tonnes



UNEP

United Nations Environment Programme
Programme des Nations Unies pour l'environnement
Industry and Environment / Industrie et Environnement

Tour Mirabeau, 39-43, quai André Citroën, 75739 Paris Cedex 15, France

Tél. : (33-1) 44 37 14 50 • Facsimilé : (33-1) 44 37 14 74 • Télex : 204 997 F • E-mail : unepie@unep.fr

INNOVATIVE APPROACHES FOR THE PHASING OUT OF
OZONE-DEPLETING SUBSTANCES IN
LOW ODS CONSUMING COUNTRIES

INNOVATIVE APPROACHES FOR THE PHASING OUT OF OZONE-DEPLETING SUBSTANCES IN LOW ODS CONSUMING COUNTRIES

Background

1. Due to the extremely low ODS consumption levels in Low and Very Low Volume ODS Consuming Countries, the cost-effectiveness of ODS phase-out activities, including Country Programme formulation and Institutional Strengthening projects, is considered to be extremely poor in comparison with Large Volume ODS Consuming countries. This situation was encountered while considering the funding for the Institutional Strengthening projects for Togo (ODS consumption of 1.15 tonnes per year) and St Lucia (ODS consumption of 7.49 tonnes per year). Consequently, the Executive Committee, at its 17th meeting, requested UNEP to prepare a paper on "Innovative Approaches to Phasing out Ozone Depleting Substances in Low ODS Consuming Countries". This paper deals mainly with innovative approaches for formulation of Country Programmes and implementation of Institutional Strengthening projects.

This is a shortened version of the complete paper which may be obtained from UNEP IE on request.

Definitions

2. "Low Volume ODS Consuming Countries (LVCs)" are defined as countries with ODS consumption of less than 360 metric tonnes (17th meeting of the Executive Committee, decision 17/11 (a)) and for the purpose of this paper, the group of LVCs whose ODS consumption is less than 30 tonnes per year are defined as "Very Low Volume ODS Consuming Countries (VLVCs)".

Status and Characteristics

3. *Status*
 - * 27 LVCs and VLVCs have initiated Country Programme formulation, mostly through UNEP. These are expected to request funding for Institutional Strengthening in the near future (Annex A).
 - * there are still about 35 LVCs and VLVCs that have not received any assistance from the Multilateral Fund, but which are expected to apply for it in the near future (Annex B).
4. *Characteristics*

LVCs might differ from VLVCs mainly in their use pattern, i.e., most of ODS use in LVCs and VLVCs is concentrated in servicing and maintenance of

refrigeration equipment, LVCs, on the other hand, may have some manufacturing facilities and that the industry structure might be relatively diverse, characterized by small ODS consumption in the areas of aerosol fillers, recharging of Halon 1211 and 1301 and uses of Methyl Bromide for soil fumigation, preshipment and structural fumigation. However, there are some common characteristics of both LVCs and VLVCs:

- * LVCs and VLVCs consume small amounts of ODS but these ODS can be critical to their economy, especially in export and foreign exchange earning sectors eg fisheries and tourism.
- * Unnecessary uses in the servicing and maintenance field are more frequent in LVCs and VLVCs. This use is predominantly in the Small Sized servicing sector.
- * Unnecessary installations of halon extinguisher systems (often supplied as a 'safety accessory' by package unit suppliers) are more significant in LVCs and VLVCs.

Barriers to phase-out in LVCs and VLVCs

5. There are a number of barriers to the phase-out of ODS in LVCs and VLVCs. These include, inter alia:
 - * Inadequately skilled manpower and lack of involvement to deal with ozone issues due to their focus on other important mainstream environmental problems [waste disposal, fresh water etc].
 - * Lack of information, and training on the ozone issue, alternative technologies and policies.
 - * Lower cost-effectiveness for phase-out projects due to lower scale of economies which puts them at a disadvantage for getting approval from ExCom in comparison with larger projects.
 - * Lower safety and health standards requiring special initiatives to adapt alternatives.
 - * Failure to attract technology and product suppliers who prefer to develop their business in larger economies.

Existing Approach

6. Present implementation of the phase-out of ODS consumption is generally done through several interrelated processes which can be separated in two distinct groups of activities or phases: Country Programme preparation and Country Programme implementation. The later stage includes Institutional Strengthening and investment as well as support projects (eg training in recovery/recycling).

Country Programme Preparation

7. The countries, with the assistance of an Implementing Agency and technical expertise provided by its consultant, undertake the Country Programme formulation in two phases: phase I, a survey of the current use and consumption of the ODS and of the national industry structure and phase II, analysis and forecast of data, and development of a Country Strategy and Action Plan

for phasing out the consumption of controlled substances. The Action Plan often includes projects for strengthening the national institutional mechanism, raising public awareness, training for specific industry sectors and other investment projects.

Country Programme Implementation

8. Institutional Strengthening projects focus on the development of a national institutional mechanism (a National Ozone Unit or NOU) to coordinate national efforts for the expeditious phase-out of controlled substances. Although such projects facilitate ODS phase-out in LVCs and VLVCs, they tend to remain inactive for some time, even after approval of funding and do not result in any actual phase-out.

The main responsibilities of a NOU are: the formulation and implementation of regulations, fulfillment of reporting requirements under the Protocol, conduction of public awareness campaigns, and coordination of all national phase-out efforts.

9. The most common phase-out projects tend to be small and are often training projects in the refrigeration sector. The underlying strategy guiding the phase-out efforts in the refrigeration sector for these countries has been the promotion of better containment of ODS and that refrigeration equipment be used to the end of their working life time as much as possible, where the decision to do so or otherwise should be based in a Refrigerant Management Plan¹.
10. Other phase-out projects may include refrigerant recovery and recycling programmes, retrofitting of existing CFC-containing refrigeration equipment and, to a lesser extent, industrial conversion projects, e.g., for small foam blowers or aerosol fillers.

Key Issues related to existing approach

Country programme format not adapted to the needs of LVCs and VLVCs

11. For many LVCs and VLVCs, the data requested as per the existing guidelines may not be relevant and the details requested may be inappropriate given the fact that the country is a very small consumer of ODS in limited user sectors.

Format for consumption data not adapted to the specific needs of LVCs and VLVCs

12. Existing guidelines do not focus on a detailed survey on the number and type of refrigeration servicing workshops, number and skill level of refrigeration technicians, installed base of CFC-containing equipment, etc. which is of key importance for project development for LVCs and VLVCs.

¹ A Refrigerant Management Plan aims at preparing a strategy for containment/conversion/replacement based in a technical and economic evaluation of the options available for a given equipment.

Low cost-effectiveness of implementation

13. Under the existing procedures, average funding sought for the formulation of a Country Programme, for an LVC with typical ODS consumption of 50 tonnes per year, is in the order of US\$40,000 and funding sought for the associated Institutional Strengthening can be in the range of US\$ 60,000. Total funding for these two "support" activities will then be in the order of US\$ 100,000. The average "phase-out support cost" comes to US\$2/kg.

For a country with ODS consumption of 2 tonnes per year, assuming a cost of US\$ 30,000 for Country Programme preparation and US\$50,000 for Institutional Strengthening implementation, the 'phase-out support cost' would then be US\$ 40/kg.

Long period of inactivity after approval of funding

14. Establishment and effective operationalization of National Ozone Units in some LVCs and VLVCs are characterized by a period of inactivity after approval of the funds, due to slow mobilization of in-country resources.

Inconsistent formulation of projects

15. Projects in LVCs and VLVCs fall mainly in the categories of training, recovery and recycling and other technical assistance. Such projects presented for approval within Country Programmes, usually do not provide the necessary information for their evaluation and get deferred pending further development.

Suggested Options

16. Option 1. Do nothing about ODS phase-out in the remaining LVCs and VLVCs, with the assumption that ODS phase-out in those countries will eventually take place and that even if delayed, its impact in terms of protection of the ozone layer will be insignificant. This option runs counter to the equality and inclusive principles of the Protocol. Consequently the option is not recommended.
17. Option 2. Continue the existing approach in the remaining LVCs and VLVCs. The total estimated cost of Country Programme and Institutional Strengthening Projects for these LVC and VLVC countries using the existing approach, is estimated at US\$ 7.7 million.
18. Option 3. Develop cost-effective alternative approaches. Under this option, several approaches are proposed for the formulation of Country Programmes. The common element is that every country continues to receive assistance to prepare a Country Programme. Such preparation should follow a new simplified and abridged Country Programme format which would be designed to address the needs of both LVC and VLVC countries.

The Country Programme formulation could be facilitated with industry surveys adapted to the needs of typical LVC and VLVC projects, a 'self help

guide', typical information and training packages and 'sectoral guidelines'.

Several approaches are also proposed for the implementation of the Institutional Strengthening projects. The 'focal point' is needed in each country for any of the approaches selected. However, the responsibilities of such focal point may vary according to the selected approach.

This option for formulation of Country Programmes and implementation of Institutional Strengthening projects is estimated to cost approximately US\$ 3.6 million as compared to the cost of the "status quo" option which is US\$ 7.7 million.

Common Tools for phase-out in LVCs and VLVCs

19. It is suggested that key 'common tools' be utilized in order to proceed with option 3 as mentioned above:

- * Simplified Country Programme format adapted for both LVCs and VLVCs;
- * Self help guide;
- * Support activity (institutional Strengthening and training) templates adapted to LVCs and VLVCs;
- * Examples of legislation and regulation;
- * Sectoral Guidelines for preparing and prioritizing the projects;
- * Training packages and information kits; and
- * Project templates adapted to LVCs and VLVCs.

All of the above have been, or are in the process of being developed by UNEP and other implementing and bilateral agencies, except for the 'Self Help Guide'.

Suggested New Approaches for Phase-out in LVCs

LVC Country Programme Formulation

20. Option 1: The cost-effectiveness problem associated with LVCs could be addressed by 'regionalizing' their Country Programme formulation processes and emphasizing the self-help approach. Representatives from LVCs in a 'region' could meet a consultant at a central point. The consultant would then instruct these representatives as a group, on preparation, formulation, presentation and implementation of their Country Programmes.

With the help of the common tools mentioned above, and with minimal external assistance, the countries could then prepare their Country Programme in a similar manner to the present, but using a the simplified Country Programme format.

This 'regional' approach has the advantage of reducing duplication of efforts, time and hence costs, but has the disadvantage that requires that several countries in a region be ready to start formulation of their Country Programmes at the same time.

21. Option 2: in the case where only one country in the region is ready to start formulation of its Country Programme, then the consultant would visit the country concerned and the rest of the process would continue as in the regional approach.

LVC Country Programme implementation

22. The basic elements of the present Institutional Strengthening guidelines would remain, except for reduction of in-country personnel cost and strengthening of regional support through Networking activities, specifically through the Regional Network Coordinators, or through on-going support of a bilateral agency in the region. It is considered essential that countries still have a focal point having responsibilities for monitoring phase-out activities, when they commence. This focal point should have the expertise and capabilities to identify and manage the implementation of phase-out activities within a specific time frame.

Suggested New Approaches for Phase-out in VLVCs

VLVC Country Programme Formulation

23. VLVCs are characterized by ODS consumption mainly in the refrigeration servicing sector. Hence, to formulate a Country Programme in each VLVC country, a technically (refrigeration expert) qualified consultant could visit the country and work directly with the Government-designated focal point, to identify the uses of ODSs and formulate a simplified Country Programme (using the new format) that would identify the critical needs of the country and include the specific actions needed to proceed to complete phase-out. It might be possible for the consultant to prepare a Refrigerant Management Plan and formulate any training projects, if any, during the same visit.

VLVC Country Programme implementation

24. The Institutional Strengthening project is suggested to include a part-time focal point to monitor phase-out. The following options are proposed for implementation:

Option 1: regionalize the Country Programme implementation activities for selected neighboring countries. This activity could be undertaken by a technical consultant at the regional level, who would work in close cooperation with the Regional Network Coordinator and with the focal point of each country to draw up regional strategies and action plan for phase-out in the region. Upon approval of funds for such activities, the technical consultant would provide technical assistance and guidance in the implementation of phase-out activities. The assistance of the Regional Network Coordinator would be provided as an extension of his existing role. The technical consultant could be appointed from the region or a bilateral agency.

Option 2: in those countries where there is only a single sector (refrigeration), a qualified and experienced local refrigeration technician or engineer could be engaged on a full or part-time basis as project manager, to work as a focal

point. In cases where such a local technician/engineer is not available, a part-time government focal point could carry out the same function.

Option 3: allocate a "bulk sum" for phase-out which could be calculated "a priori" based on the expected ODS consumption and a maximum cost-efficiency threshold level. The lump sum would be administered by an Implementing Agency but the country would be responsible for implementing its own phase-out strategy, within the allotted 'bulk sum'. This option would work only in cases where an effective and transparent administration of funds can be ensured.

For any of the three options above, a national focal point would still be required. The main functions of such local focal point in the above three options is to collect data to fulfil the Government's data reporting obligations, organize training sessions of service technicians, follow-up training activities, monitor the implementation of any approved recovery/recycling programme and, where available, assisting the relevant implementing agency in developing and implementing the phase-out projects (expected to be small in number, if at all) in the country.

Any of the three options above could be adopted on a case-by-case basis.

Associated Issues for LVCs and VLVCs

25. Without specific initiative and commitment from the Governments themselves, phase-out will not be possible; and without the passage of legislation, phase-out efforts will be ineffective. Implementation of the phase-out package would be timed to meet a country's requirements and need not commence immediately on approval of a Country Programme. Funding for Country Programme implementation, including Institutional Strengthening could then be estimated, and approved by the Executive Committee when the country is ready, based on a package of identified necessary phase-out projects, as well as a commitment to regulatory support. Funding could depend on agreement by the country that the complete package would be implemented.
26. There are a number of other associated issues which are recognized but not explicitly addressed in the paper. These include the need of public awareness, training, and formulation and enactment of legislation. Reporting requirements under the Protocol are increasing and will need adequate monitoring and coordination. The issues related to dumping of used ODS-containing equipment are also important for the Government.

It is also recognized that in a particular region, various states may be in different stages of phase-out implementation, that the time taken by a consultant to identify ODS use and produce a containment/conversion/replacement strategy, would vary, according to the number of ODS equipment identified. Additionally, the geographical size of a state may require special attention in spite of the country being an LVC or VLVC.

SUMMARY OF RECOMMENDATIONS

Country Programmes formulation:

1. Every country should continue to receive assistance to prepare a simplified Country Programme.
2. A simplified Country Programme format should be adopted appropriate to the specific needs of LVCs and VLVCs. The format should be designed to provide all the information required for developing the phase-out activities characteristic to these countries.
3. LVC and VLVC Country Programmes should identify the specific actions needed to proceed to complete phase-out. For VLVCs, Country Programmes should define a complete phase-out package.
4. The common tools should be compiled and/or developed as a package for LVCs and VLVCs. UNEP could undertake this task in consultation with the Multilateral Fund Secretariat and other Implementing Agencies.

Institutional Strengthening:

1. Institutional Strengthening is vital need for LVCs and VLVCs. Such assistance should be provided as part of an overall package of measures to produce complete phase-out. The package should include limited support for an ozone focal point in the country. Such support should go towards performing specific tasks, during the specific time frame for implementation of phase-out, including fulfilling reporting requirements, implementing support activities like public awareness and training.

Additional support may be provided on regional basis either through the regional network coordinator and/or bilateral initiatives.

2. Implementation of the phase-out package should be timed to meet a country's requirements and need not commence immediately on approval of a Country Programme.
3. Due to the number of implementation issues which need to be addressed, the strategies outlined in the paper should be implemented on a "trial basis" in a manner which is consistent with the above recommendations. Such a trial should be based on the simplest scenario ie, ODS phase out in a geographically small country, with a small population and an ODS consumption of less than 30 tonnes.
4. The implementation of the phase-out could be implemented with a bilateral initiative i.e with assistance from appropriate Implementing Agency and a developed country from the region concerned.

Specific recommendations for immediate implementation

1. For LVCs, two options for Country Programme preparation are recommended:-

- when several countries in the region are ready for Country Programme formulation: with Bilateral Assistance, a regionalized approach, where countries will meet a consultant at a central point, then utilizing 'self-help' guides would prepare their Country Programme in a simplified format;
- when only one country in the region is ready for Country Programme formulation: a country by country approach, similar to the existing (ie consultant travels to each country), but using the simplified format and 'self-help' approach.

2. For VLVCs, the following initiatives are recommended:

- As an initial pilot exercise, simplified Country Programmes which include a complete ODS phase-out package should be developed for the Solomon Islands, Vanuatu and Kiribati, using the amount of US \$60 000 approved for their Country Programmes.
- The VLVC approach for Country Programme formulation should also be used for other South Pacific VLVC countries with a bi-lateral partner.
- The project manager/regional consultant approach, in a VLVC country or group of VLVC countries identified as having the refrigeration sector as the only ODS-consuming sector.

3. For On-going Country Programmes:

Country Programme formulation whose funding has already been approved should proceed as per the former guidelines for Country Programmes, while including the new Institutional Strengthening concepts.

4. For Pending Institutional Strengthening Projects:

The countries with newly approved Country Programmes but with Institutional Strengthening projects pending, should have those IS projects revisited, in accordance with the above recommendations. Funding should be approved at the 19th Executive Committee meeting and disbursement of funds should be made upon presentation of an Institutional Strengthening project formulated as per the new concepts expressed in this paper.

ANNEX A

COUNTRIES WHOSE COUNTRY PROGRAMMES ARE BEING FORMULATED (AND NOT YET APPROVED)

LVCs		VLVCs	
COUNTRY	ODS Consumption (estimated tonnes/year)	COUNTRY	ODS Consumption (estimated tonnes/year)
Macedonia**	100*	Antigua and Barbuda	5*
Bahamas	68	Gambia	23
Brunel	93	Gabon	30*
Chad	50	Myanmar	20*
Ethiopia	50	St. Kitts and Nevis	14*
Croatia	150	Guyana	20*
Honduras	200	Kiribati	20*
El Salvador	100*	Western Samoa	30*
Jamaica	161	Solomon Islands	20*
Papua New Guinea	56	Zaire	20*
Nicaragua	150*	Vanuatu	20*
Tanzania	98	Paraguay	20*
		DPR of Korea	20*
		Lesotho	6
		Trinidad & Tobago**	20*
TOTAL	1,276		288

Total Number of Countries and Estimated Consumption:

LVCs: 12 1,300 tonnes

VLVCs: 15 300 tonnes

Total: 27 1,600 tonnes

*: Data not available, hence grossly estimated

** : Country programmes are being undertaken by Implementing Agencies other than UNEP

ANNEX B

COUNTRIES THAT HAVE NOT YET REQUESTED COUNTRY PROGRAMME FORMULATION

LVCs	VLVCs
COUNTRY	COUNTRY
Libyan Arab Jamahiriya	Haiti*
Afghanistan*	Comoros
Angola*	Dominica
Albania*	Grenada
Democratic Yemen	Marshall Islands
Lao Peoples' Democratic*	Nepal
Republic Liberia	Tuvalu
Bosnia and Herzegovina	Sierra Leone*
Mali	Djibouti*
Morocco	Democratic Kampuchea*
Oman*	Belize*
Qatar	Bhutan*
Guinea Bissau*	Burundi*
Suriname*	Somalia*
	Cape Verde*
	Equatorial Guinea*
	Madagascar*
	Tonga*
	Rwanda*
	Palestine*
	Sao Tome and Principe*

* Countries that are not Party to the Protocol

Total Number of Countries and Estimated Consumption:

LVCs:	14	1,400 tonnes (average of 100 tonnes each)
VLVCs:	21	420 tonnes (average of 20 tonnes each)
Total:	35	1,820 tonnes