UNITED NATIONS DEVELOPMENT PROGRAMME

Project of the Government of the Peoples' Republic of China

PROJECT DOCUMENT

Project Number:	CPR/00/G61/A/AS/99
Project Title:	Solvent Sector Plan for ODS Phaseout in China
Project Short Title:	Solvent Sector Plan
Estimated Start Date:	May, 2000
Estimated End Date:	December, 2010
Management Arrangement:	NEX
Government Co-ordinating Agency:	State Environmental Protection Administration
Designated Institution:	Foreign Economic Cooperation Office, SEPA
Domestic Implementing Agency:	To be contracted through competitive bidding
Project Site:	China
LPAC Approval Date:	10 May 2000

Summary of UNDP and Cost sharing (as per attached budget)	
UNDP TRAC:	
UNDP Montreal Protocol Trust Fund:	US$ 52,000,000
Total UNDP	**US$ 52,000,000**

Classification Information:

ACC sector & sub-sector:	Environment Enhancement/Management	Primary Type of Intervention:	Investment
DCAS sector & sub-sector:	Environmental Preservation	Secondary type of Intervention:	Training
Primary areas of focus/sub-focus:	Promoting Sustainable Atmospheric Quality	Primary target beneficiaries:	Private Sector
Secondary areas of focus/sub-focus:	Application of Science and Technology for Sustainable development	Secondary target beneficiaries:	Government

Brief Description: This project is designed to phaseout all Ozone Depleting Substances (ODS) currently used as solvents by Chinese industry. The project will assist approximately 2,200 Chinese enterprises in converting their industrial cleaning processes to ozone friendly alternatives. The project will provide eligible ODS solvent consumers with alternative equipment and alternative cleaning technologies. The project will also assist in building technical and managerial capacity to ensure an efficient and timely phaseout at the National Level. The detailed operational mechanism for implementing the project will be covered by a separate manual.

The funding and implementation of the project is governed by the *Agreement for ODS Phaseout in China's Solvent Sector*, as approved by the 30th Executive Committee of the Multilateral Fund of the Montreal Protocol and the Memorandum of Understanding (MOU) to be signed between SEPA and UNDP.

Signed on behalf of:	**Signature**	**Name/Title**	**Date**
Government Co-ordinating Agency:		Wang Jiarui, Vice Minister	2000.6.21
Designated Institution:		LIU YI	19/6-2000
UNDP:		LEITNER, RR	22/6/2000

UN official exchange rates at date of signature: US$1.00 = RMB Y8.267

Table of Contents

A. CONTEXT

1. Description of the Subsector

In 1974 the first theory blaming CFCs for destroying the ozone layer was presented. After a few years of initial skepticism towards this finding, the ozone hole over Antarctica was discovered and the world community was convinced that large-scale ozone destruction was taking place. Stratospheric ozone in its natural state is constantly being destroyed and regenerated by natural photochemical processes. However, a clear link had been established between the release of man-made chemicals into the air and the rapidly declining presence of ozone in the stratosphere.

A damaged ozone layer would lead to increased amounts of harmful ultraviolet radiation reaching the earth surface causing serious threats to human health, animals, plants and materials. Some of the potential negative impacts of a thinner ozone layer are widespread eye cataracts, increased incidence of skin cancers, slower growth of plants and crops, as well as reduced ocean plankton.

Realizing the dangers of ozone layer depletion, Governments adopted the Vienna Convention (1985) and the Montreal Protocol on Substances that Deplete the Ozone Layer (1987), as well as amendments to the Protocol in London (1990), Copenhagen (1992), Vienna (1995) and Montreal (1997). The Montreal Protocol and its amendments set out a schedule to reduce consumption and production of Ozone Depleting Substances (ODS) and has up to now been ratified by 172 countries. Industrialized countries (Non-Article 5 Parties) basically eliminated Halon consumption as of 1 January 1994 and CFC consumption as of 1 January 1996, except for so called essential uses. Developing countries (Article 5 Parties), including China, have agreed to freeze most CFC consumption on 1995-1997 averages from July 1999, to reduce this consumption by 50% by 2005 and to fully eliminate CFCs by 2010.

To assist developing countries in their effort to phaseout ODS and meet the control measures specified under the Montreal Protocol, the Multilateral Fund (MLF) was established in 1990. The MLF is managed by an Executive Committee (ExCom) responsible for the allocation of funds among participating countries, including preparation and implementation of the corresponding policies, standards and procedures in the utilization of the MLF. The MLF Secretariat manages the day-to-day business of the ExCom. Project activities under the MLF are carried out by four implementing agencies: UNDP, UNEP, UNIDO and the World Bank.

ODS are used in a number of applications in China; e.g. as cooling agents in refrigerators and air conditioners, blowing agents in different kinds of foamed plastic products, for fire fighting purposes and as solvent for electronic and metal cleaning. ODS solvent consumers in China are present in many different industries including electronics, post and tele-communication, aviation and astronavigation, light industry, textile, mechanics, medical appliances, automobiles and precision instruments. The two main ODS solvents are CFC-113 and TCA. A smaller amount of CTC is also used as solvent.

In 1997, the solvent sector accounted for about 11,500 tons ODS or 16 % of the country's total ODS consumption. However, there are a large number of primarily small consumers

in the solvent sector, in the range of 1,800 – 2,200 enterprises. This accounts for an estimated 40-50% of the total number of ODS-using enterprises in China. In addition, the solvent sector includes many new and fast developing industries (information technology sector for example) and under an uncontrolled scenario the ODS solvent consumption would grow rapidly in the coming years (see Solvent Sector Plan Chapter III A).

2. Host Country Strategy

China ratified the Montreal Protocol in 1991 and the China's Country Programme for Ozone Depleting Substances Phaseout was approved by ExCom in 1993. The Country Programme sets out the framework for China's actions to meet the requirements of the Montreal Protocol. Based on experiences gained from earlier years of project implementation, the China Country Programme was updated in 1999 to reformulate the country's strategy to more effectively meet the ODS phaseout targets.

The Country Programme Update (CP Update) gives attention to new guidelines provided by MLF ExCom regarding incremental investment and operational cost calculations, operation, and implementation of sector plans, substitute technologies, as well as regulations and policies established suitable to the market economic system. During preparation of the CP Update, ODS production, consumption, import and export data was surveyed and analyzed. The overall phaseout strategy and phaseout plan for sectors concerned was further developed. The policy, monitoring and supervision system was revised and improved.

For achieving the proposed ODS phaseout targets efficiently and effectively, China has set up an important policy framework (further reference is made to the CP Update). The main policies are:

Production Management Policy. China is strictly controlling or banning the installation of facilities which are new, expansion, modernization of ODS production and consumption projects. China has introduced a tradable production quota system to control Halon and CFCs production, including all Halon and CFC producers. Annual quota will be reduced gradually through a bidding system according to the approved Sector Plan for Halon Phaseout and Sector Plan for CFCs Production Phaseout.

Import and Export Management Policy. While introducing the production quota system, China has also introduced ODS import permit and quota system. All the importers and enterprises that need to import ODS, should apply for import permit following the related regulations. By controlling domestic production and by introducing import management policy to control the ODS import, the domestic supply of ODS can be controlled. An export registration and reporting system will be introduced. Export registration and reporting system aims at collecting accurate information on domestic ODS production, and to control the illegal trade of ODS. China is going to adopt strict penalties for the illegal ODS trade.

Consumption Management Policy. The essential uses and non-essential uses areas for ODS products is/will be identified according to the changes of situation. Bans will be issued for uses of ODS products of non-essential use. China will also issue bans on consumption of ODS for specific sectors or implement ODS consumption quota system according to the requirements of related sector plans.

Product Quality Management Policy. China will continue to design product quality standards, environmental standards, and standards for safety for ODS substitutes/products in order to improve the quality of substitutes/products and in order to ensure the ODS phaseout process moved smoothly.

Environmental Labeling System. To encourage substitution, China will continue to revise the requirements related to environmental labeling and issue environmental labels to ODS substitute products.

Other Policies. China will continue to implement other related policies, including bans, policies for recycling and recovery, management for service of products using ODS, policy for industry restructuring, policy for development management.

Monitoring and Supervision. China will continue to establish a monitoring and supervision system for ODS phaseout. This system includes data registration, reporting and monitoring system, management information system, as well as enforcement instruments. This system will increasingly be relied upon to track phaseout performance and ensure compliance with the phaseout targets as established in the CP Update.

China is currently both the largest ODS consumer and ODS producer in the world. With around one third of the available MLF funding allocated to China, a large number of ODS phaseout projects is being implemented. Traditionally the phaseout projects have been carried out on individual enterprise level. However, to more efficiently and rapidly phaseout ODS, China has been promoting the development of sector plans, where funding is approved for complete phaseout of all ODS used in one sector. Such sector approaches provide the Chinese Government with more flexibility in the use of the funds, compared to individual projects that are subject to a number of specific ExCom rules and regulations. Sector Approaches also ensure a better integration of Government policies and phaseout actions, than achieved by implementation of individual projects. Sector approaches have been approved by the ExCom for phaseout of Halon, CFCs used in Mobile Air Conditioners and for CFC Production. While giving more flexibility in the implementation, the sector plan also shifts more responsibility for achieving targets to the Recipient Country.

3. Prior or Ongoing Assistance

UNDP MP projects started implementation in China in 1993. More than 100 projects have since been approved. On the invitation of State Environmental Protection Administration (SEPA), the designated Chinese Government Coordinating Agency for Ozone Layer Protection, UNDP was the lead agency in developing China's Country Programme for Ozone Depleting Substances Phaseout, as well as the Country Programme Update. The vast majority of ExCom-approved projects are technology transfer investment projects to convert industrial processes into ozone-friendly alternative production methods. UNDP has focused its efforts on ODS phaseout in Refrigeration, Foam and Solvent sectors. World Bank and UNIDO are also implementing a large number of MP technology transfer projects in many subsectors in China.

UNDP has been the lead Implementing Agency for implementation of individual phaseout projects in China's solvent sector. A total of 26 ODS solvent phaseout projects are being

implemented with financing from MLF. Of the 26 projects, five are technical assistance and project-preparation projects and 21 are technology transfer investment projects. UNDP has through technical assistance projects, funded by MLF, helped China in establishing a technical center for non-ODS solvent applications (No 46 Institute in Tianjin) and a production facility for non-ODS cleaning equipment (No 2 Institute in Taiyuan). The technical expertise established at the above mentioned institutes will be fully utilized in the implementation of the Solvent Sector Plan.

With funding from the Swedish Government, UNDP has also provided assistance in setting up a technical center in Shanghai (Shanghai Academy of Environmental Sciences - SAES) for ODS solvent phaseout and are currently undertaking three projects to demonstrate cost-effective phaseout options at small users. These demonstration projects will help other small ODS solvent users to identify environmentally friendly, cost-effective alternative cleaning technologies and will be an important source of information and of awareness raising in the implementation of the Solvent Sector Plan. The experience of SAES in implementing these demonstration projects, as well as the transfer of knowledge from Swedish Solvent Experts, will also be valuable to the implementation of the Solvent Sector Plan.

As the number of projects grew larger and the size of the projects smaller, China and the Implementing Agencies have been working on developing innovative approaches to ensure that projects are implemented as efficiently as possible, this include sector approaches as well as umbrella projects where technically or geographically related projects are grouped together. In view of the large number of enterprises consuming ODS solvent, phaseout on a project by project basis is not an efficient way for ODS phaseout in solvent sector. Thus, in 1997, ExCom approved a request from UNDP to prepare a strategy for complete ODS phaseout in the Solvent Sector in China.

Funding for closure of production of CFC-113 is covered by the CFC Production Sector Plan approved by the ExCom in March 1999 and implemented by World Bank. This project is designed to ensure that supply on the Chinese market of CFCs will gradually be reduced down to zero. The Solvent Sector Plan will be implemented in consistency with the CFC Production Sector Plan. Production closure plans for other ODS solvents will also be developed by SEPA and the World Bank.

4. Institutional Framework for the Subsector

In May 1991, the State Council of China approved China's accession to the MP and designated what was then the National Environmental Protection Agency (NEPA) to be the co-ordinating and organizing body for MP implementation and compliance. Following a government re-organization in 1998, NEPA was upgraded to the current State Environmental Protection Administration of China (SEPA), a ministry-level organization directly under the State Council in the organizational framework of the Government of China.

The Chinese Government established a National Leading Group for Ozone Layer Protection of China (the Ozone Leading Group) in 1992 as the highest decision-making authority for the overall MP programme in China. The Ozone Leading Group is a task force for inter-ministry co-ordination at the country level, and now consists of 17 member ministries, state commissions, bureaux, and administrations. SEPA is the leader of the

Ozone Leading Group, and thus is China's National Co-ordinating Agency for all Montreal Protocol programmes and projects that are channeled through the four Implementing Agencies, UNDP, UNEP, UNIDO, and the World Bank.

In this capacity, SEPA assumes the responsibility for the overall management of the MP programme to phase out ODS in China. SEPA serves as UNDP's Government counterpart agency for the preparation and management of all MP projects. For the management of MP Programme in China, SEPA has established an internal task force for inter-department co-ordination. The task force is named the "(Ozone) Programme Management Office (PMO)", and also serves as the Secretariat for the National Ozone Leading Group.

As a major part of industries using ODS solvent are under the responsibility of Ministry of Information Industry (MII), MII is working as co-ordination line Ministry in the Solvent Sector Plan.

B. PROJECT JUSTIFICATION

1. Problems to be Addressed: The Present Situation

ODS solvent users in China represent a significant threat to the ozone layer. In 1997, the solvent sector accounted for about 11,500 tons ODS or 16 % of the country's total ODS consumption. The large number of primarily small consumers in the solvent accounts for an estimated 40-50% of total number of ODS-using enterprises in China.

In order to eliminate the threat to the ozone layer and in order to comply with the agreed phaseout targets committed to by the Chinese Government, all Chinese ODS solvent consumers should convert to using ozone-friendly alternatives by 2010. This conversion will require a large number of enterprises investing in new cleaning equipment and/or retrofitting their current machinery. However, the following problems are currently facing the sector.

- **Limited knowledge about alternative cleaning technologies.** The alternative technologies to ODS solvent cleaning are complicated and multi-dimensional. Some enterprises may use one alternative solvent, some may use non-cleaning or aqueous cleaning and the proper alternative technology can only be found after careful diagnosis. Because of the difference of size, technical levels and profit levels, some alternative technologies applicable abroad may not be applicable in China.

- **Lack of incentive framework for enterprises to undertake phaseout projects.** Many ODS solvent consuming enterprises are not aware of the ODS phaseout rules and regulations, including the requirement to phaseout ODS solvents by 2010. The cleaning process is often only a minor part of an enterprise's production process, thus limiting the time and money it is willing to spend on changing to alternative cleaning technologies. The interest by enterprises to undertake phaseout projects is therefore low.

- **Limited capacity to manage ODS Solvent Sector**. There are a large number of ODS solvent consumers distributed all over China and it is therefore difficult to manage the phaseout. Knowledge of ODS phaseout related polices is limited at the local Government levels. Enforcement of ODS policies are also further complicated

by the fact that ODS solvent consumers are distributed in a number of different industrial fields making monitoring more difficult.

- **Limited scope for individual project.** Individual projects have taken three years or more from project preparation to commissioning. That is too long for a minor production process, as phaseout is likely to influence the enterprises' production. This in turn affects the willingness of enterprises to undertake phaseout projects. The project by project approach can also not ensure ODS phaseout on national scale as consumption could be transferred from one enterprise to another.

- **Insufficient supply of alternative solvents at acceptable quality and reasonable price.** Currently the price of imported alternative is high, local production capacity is limited and the quality cannot be assured, therefore one of the major challenges facing China in the phaseout of ODS in the solvent sector is to ensure sufficient and good quality alternative solvents and equipment are supplied to the market at reasonable prices to meet the increase in demand. If this situation is not improved, it could negatively affect the willingness of enterprises, more significantly SMEs, to undertake phaseout projects, especially in the earlier years. This risk is being reduced by efforts that will be taken by SEPA and MII to put forth a strategy to improve the attractiveness, availability and cost of alternative solvents.

2. Expected End of Project Situation

At the end of the project, knowledge about non-ODS cleaning technologies and methods will have been increased through training programmes, transfer of international expertise and through experience gained from implementing a large number of phaseout projects. National expertise will have been built to sustain the non-ODS solvent industry. Awareness and knowledge of non-ODS alternative cleaning options at the enterprise level will have been raised through advertisement campaigns, through training and through the technical assistance provided by the national experts.

By 2010, more than 10,000 tons of ODS used as solvent in China will have been phased out. Eligible ODS solvent consumers will have been provided with new equipment and technical knowledge to convert to non-ODS cleaning technologies. Through conducting international competitive bidding and through bulk purchases, equipment will have been provided in as cost-effective manner as possible.

Awareness of Ozone Layer protection rules and regulations will have been raised through advertisement campaigns, training, project implementation and other activities. Enterprises will be aware of the gradual decline in supply of ODS solvent on the Chinese market and interest in undertaking phaseout projects will have increased. Incentives to motivate early undertaking of phaseout projects will also have been put in place. Capacity to implement and monitor the phaseout of ODS in solvent sector will have been strengthened both at national and local Government level through training activities and through establishment of an information management system.

3. Target Beneficiaries

(a) Direct Beneficiaries

Enterprises undertaking phaseout projects, receiving equipment and knowledge to change their cleaning processes, will be the direct beneficiaries. National experts and national technical centers will also benefit directly from training and increased exposure to non-ODS solvent technologies and methods.

(b) Indirect Beneficiaries

Indirect beneficiaries include every individual in China and the rest of the world, as the threat of increased harmful UV-radiation will be reduced. The Chinese Government will benefit indirectly from the project, as the project will facilitate the achievement of the phaseout targets that the Government has committed itself to under the Montreal Protocol.

4. Project Strategy and Implementation Arrangements

The three year long preparation of the Solvent Sector Plan included significant research on the current ODS solvent consumers. Surveys were sent out to a large number of enterprises to identify the ODS consumption eligible for funding according to ExCom policies. (In Annex 2 of the Solvent Sector Plan the data collection processes are summarized.)

The phaseout strategy was then designed based on survey results, funding eligibility criteria established by the ExCom and future forecast on production and consumption of ODS solvents and their substitutes. A special Working Group was set up to evaluate the proposal submitted to the ExCom and several revisions were undertaken based on the comments of the Working Group regarding baseline data, implementation mechanism and phaseout monitoring. At its 30th meeting, the ExCom agreed to provide China with US$ 52 million to complete the phaseout of all ODS solvents used in China by 2010. Attached to this project document is the Solvent Sector Plan, as agreed by ExCom (Annex 1).

The phaseout in the Solvent Sector will follow a phased approach, first addressing phaseout of large and medium users, then gradually including phaseout implementation with small users. A phased approach will also be employed regarding phaseout of different solvents.

CFC-113 will be phased out by 1 January 2006 and TCA use will be phased out by 1 January 2010. Implementation of CFC-113 and TCA phaseout projects will start immediately after the start-up of the Solvent Sector Plan. CTC phaseout will start in 2002-2003 and CTC solvent use will be phased out by 1 January 2004. Any large and medium solvent user that consumes several different ODS solvents will be required to include phaseout of all solvents used under one single project.

Supply of CFC-113 on the Chinese market is being controlled and will gradually be reduced to zero under the CFC Production Sector Plan. Supply of TCA and CTC will be controlled under similar production phaseout plans, currently being developed. In addition, a number of policy actions will be undertaken, including controlling and subsequently banning imports/exports of ODS solvents. For CTC, a special control mechanism to ensure that CTC used for feedstock uses is not diverted into solvent use is

described in Paragraph c of the Agreement (Annex 2).

As a certain part of counterpart funding might be required to finance investment in alternative cleaning technologies, many enterprises might be reluctant to undertake phaseout projects in the early years of the plan. By ensuring that all enterprises are aware that supply of ODS solvents will be gradually reduced, the pressure on enterprises to phaseout their ODS solvent use will increase. A mechanism giving further incentives for enterprises to undertake phaseout projects early by providing higher funding levels in the early years of implementation is also being considered. China is studying and developing strategies that can reduce the total cost of phaseout and achieve the ODS phaseout targets smoothly. Strategies could include promoting the domestic development of sufficient low cost and good quality alternative solvents to encourage an early shift away from ODS solvent at the enterprise level.

The Solvent Sector Plan will be executed through Annual Programmes, starting shortly after ExCom approval. The Solvent Sector Plan and the associated Annual Programmes will be managed using annual performance indicators. Funding for meeting China's 2000 phaseout target and making preparations for meeting 2001 phaseout target has been provided to China. Funding for 2001 will be provided in January 2001 based on satisfactory verification that China has finished the bidding process for phaseout in 2001. Funding for subsequent years will be made available based on verification that China has met the phaseout targets agreed upon for the preceding year and has made satisfactory preparations for phaseout the following year.

Should China not meet its phaseout obligations as stated in the Agreement (See Annex 2), funding for subsequent tranches will be withheld. The total amount of funding will also be reduced. For CFC-113 and CTC consumption phaseout, funding will be reduced on the basis of US$ 6,000 per ODP[1] ton of reductions not achieved in any year and for TCA consumption by US$ 15,600 per ODP ton of reduction not achieved in any year.

China is provided with maximum flexibility in using the agreed funds to meet the ODS reduction requirements. During implementation of the Solvent Sector Plan, as long as it is consistent with the Agreement, the funds provided to China may be used in any manner that China believes will achieve the smoothest possible ODS solvent consumption phaseout possible, consistent with operational procedures as agreed between China and UNDP in the Solvent Sector Plan, Annual Programmes and the Project Implementation Manual. The phaseout mechanism will differ between large/medium-sized users and small users. A Project Implementation Manual will provide detailed operational procedures for implementation of ODS solvent phaseout projects.

Reduction of all ODS solvent consumption in the large and medium users will be managed through ODS Reduction Contracts. Phaseout will be undertaken by industrial subsectors. For each subsector a number of technical phaseout options will be developed. The eligible enterprises will bid to undertake phaseout projects on the basis of these standard technical options. Procurement will be undertaken for each ODS Reduction Contract to supply the enterprise with new cleaning equipment. Some demonstration

[1] ODP: Ozone Depletion Potential. Every ODS chemical is given an ODP figure to enable comparisons between chemicals on their impacts on the Ozone Layer.

projects will be developed with various enterprises in certain subsectors to test out and draw experience on the conversion technologies and operational procedures of the alternatives so that it can be extended to the whole subsectors. Careful advance planning on the schedule of demonstration projects and design of the phaseout is crucial to achieve successful results.

ODS phaseout by the small users will be implemented through a Voucher System. The Voucher System will provide small users with a system of technical support centers, equipment suppliers and dealers from which the enterprises can procure technology and knowledge with their vouchers, once registered with SEPA.

Sufficient alternative solvent supply of high quality and at reasonable price can increase the cost-effectiveness of the Solvent Sector Plan, minimize the shortage of funds and reduce the burdens of the enterprises, especially the SMEs. An operational mechanism will be developed by SEPA and MII to promote the development and domestic manufacture of good quality alternative solvents and equipment, at reasonable prices to the market to encourage participation of ODS phaseout activities in the solvent sector.

SEPA has the overall responsibility for ODS phaseout in all sectors in China. Under SEPA, a Project Management Office (PMO), consisting of International Cooperation Department, Pollution Control Department and Foreign Economic Cooperation Office (FECO) has been established to manage China's MP Programme. For the Solvent Sector Plan, SEPA through PMO, will retain the overall management responsibility, will approve the Annual Programmes for submission to ExCom and will formulate policies related to ODS solvent phaseout e.g. on import and export control. SEPA will also coordinate with other sector plans, particularly with the CFC Production Sector Plan. MII will assist SEPA in coordination activities related to industrial policies and will be involved in all major decisions regarding the Solvent Sector Plan.

Within PMO and under its overall policy guidance, FECO assumes the main responsibility for project management, since FECO is the operational arm of SEPA for the execution of environmental projects funded by or through UN Agencies. FECO will be assisted by a Special Working Group that will manage the detailed phaseout work for both investment projects and technical assistance.

Since 1997, the Special Working Group has been deeply involved in every steps of the preparation of this sector plan. SWG led the effort to collect, organize and analyze extensive data relating to ODS solvent consumption. During the several surveys undertaken and the many visits to ODS solvent consuming enterprises by the SWG, it has built extensive knowledge on the ODS consuming enterprises, a thorough understanding of the characteristics of the different subsectors and invaluable information on alternative technologies. Through participation in the design, formulation, negotiation and finalization of this sector plan, the SWG has acquired unique and in-depth knowledge and understanding of the complex issues of the solvent sector in China. This experience will be crucial in the identification and implementation of ODS solvent phaseout projects. The contacts established by the SWG with key actors in the implementation of the Solvent Sector Plan, e.g. industrial associations, technical centers, technology associations etc. made it uniquely qualified and placed it in an exceptional position to effectively organize the network of national experts and phaseout activities needed to implement the Solvent Sector Plan.

As already identified under Chapter VI Operating Mechanism of the Solvent Sector Plan and designated by PMO, PMO will be assisted by the Special Working Group established for the solvent sector, therefore the Special Working Group will be responsible for formulating the Annual Programme and will monitor all phaseout actions undertaken in the solvent sector. As the work load of managing the many phaseout projects is expected to be large, the Special Working Group will be assisted by a Domestic Implementing Agency (DIA), that will deal with the day-to-day operations of the ODS Reduction Contract program and the Voucher system. The DIA will either by itself or through cooperating with a Tendering Company undertake equipment procurement. The DIA will be selected through international competitive bidding and will be compensated for services rendered under separate funding from this project.

FECO and the Special Working Group, with support of DIA, will ensure that all large and medium sized enterprises are commissioned, that all ODS equipment is scrapped and that the enterprise will stop using ODS solvent. FECO and the Special Working Group, with support of the DIA, will undertake spot-checking of the phaseout projects implemented with the small users, with a target of verifying results in 25% of vouchers (on a CFC-113 volume basis.). Progress under the Solvent Sector Plan and Annual Programmes will be monitored by a Solvent Sector Management Information System (SSMIS), with periodic progress reports prepared by DIA, FECO and UNDP as appropriate.

FECO, through its Finance and Accounting Division (FAD), will establish and manage a Solvent Sector ODS Phaseout Account that will handle all MLF funds for the Solvent Sector Plan.

At the request of FECO, UNDP may provide support services to the national execution of this project. Specifically, UNDP China Country Office may provide the following support services:

- Recruit international sector experts mainly for the following work:

  a) develop standard technical phaseout options for each subsector;
  b) assist in the determination of funding levels for each subsector and phaseout cost threshold per subsector;
  c) prepare generic equipment specifications and terms of reference for sub-contracts;
  d) training for and certification of national experts;
  e) general quality control and technical backstopping.

- On an exceptional basis to the normal procedure of quarterly advance and disbursement by FAD, review and process direct payment from FECO.

UNDP Montreal Protocol Unit will, in consultation with FECO and UNDP China Country Office, identify international sector experts and secure their availability.

Costs for such support services provided by UNDP will be financed from separate funding sources.

An Alternative Technical Support System (ATSS) will be set up to assist in the technical management of the many phaseout projects. The system will consist of three alternative technology support centers, a limited number of qualified local manufacturers designing and producing alternative cleaning equipment, national experts and solvent dealers qualified to recommend alternative technologies and/or systems, a selected number of local manufacturers skilled at developing and producing alternative solvents and industrial associations to assist in identifying small users and promoting phaseout actions. The ATSS is building on experience and knowledge transfer acquired from earlier MP phaseout projects including the Swedish funded support to establish Shanghai Academy of Environmental Sciences as one center and the MLF funded projects to develop the capacity of No 46 and No 2 Institutes. The capacity of the ATSS will be strengthened through training activities during the first years of implementation of the Solvent Sector Plan.

France and Japan have shown interest in participating in the Solvent Sector Plan under the bilateral program under the Multilateral Fund. The extent of their involvement is governed by Paragraph f in the Agreement.

Information regarding the operating mechanism, the funding mechanism and the roles of different actors involved in the Solvent Sector Plan is provided in the Solvent Sector Plan in Chapter VI Operating Mechanism. More detailed Terms of References for the above actors are also provided in the Project Implementation Manual.

5. Special Considerations

The ExCom at its 30th meeting held in Montreal in March 2000 agreed in principle to fund the China Solvent Sector Plan. The Agreement is attached in Annex 2.

Funding for the first year of implementation has been provided. Funding for subsequent years will be made available based on the fulfillment of conditions, as stated in the agreement.

UNDP has agreed to act as implementing agency for this project for the first three years at a fee of 10% of funds allocated during that time period. The fee for future years will be agreed between the ExCom and the implementing agency for the project. Funds for the independent technical audits and independent financial audits shall be agreed to and approved by the ExCom separately from the agency fee, on a periodic basis as deemed necessary.

The Solvent Sector Plan represents an innovative approach to ODS phaseout and is the first large scale consumption phaseout sector plan that has been approved by ExCom. Although China has experience from implementing sector approaches for other ODS phaseout sectors, this is the first large scale consumption phaseout sector plan. This is also the first ODS phaseout sector plan implemented by UNDP. The sector approach represents the new direction for UNDP's assistance in the field of ODS phaseout in China.

6. Reasons for Assistance from UNDP

As one of the four designated Implementing Agencies for Montreal Protocol projects, UNDP has a long experience of implementing ODS phaseout projects in China. UNDP

was the lead agency in developing the China's Country Programme for Ozone Depleting Substances Phaseout, as well as the Country Programme Update. With the exception of three projects implemented by UNIDO, UNDP is also the only agency that has been working on individual phaseout projects and technical assistance projects in China's solvent sector and thus has accumulated a large experience in this area.

The implementation of the Solvent Sector Plan also requires strengthening of managerial and technical capacity of the Chinese organizations involved in the phaseout. UNDP has been successfully undertaking capacity building efforts in China during its 20 years presence in the country. The focus of UNDP on achieving Sustainable Human Development, while minimizing adverse social impact places UNDP in a good position to work with the phaseout of ODS in Small and Medium sized Enterprises (SMEs), who are financially most vulnerable to undertake phaseout projects.

Through implementation of technical assistance projects building the capacity of Chinese experts to identify non-ODS solvent alternative technologies, develop non-ODS cleaning equipment and to implement ODS solvent phaseout projects, UNDP has been involved in an important part of the development in the solvent sector. Working with the national team and SEPA, UNDP has been instrumental in the development of the Solvent Sector Plan, providing the necessary technical and managerial guidance to China in the development, refinement and approval processes of the Solvent Sector Plan.

7. Coordination Arrangements

Coordination with the CFC Production Sector Plan, implemented by the World Bank, will be very important, as the CFC Production Sector Plan controls the supply of CFC-113 produced in China. Coordination is necessary to ensure that production phaseout targets established under the CFC Production Sector Plan are coherent with the consumption phaseout targets established under the Solvent Sector Plan. Such coordination will ensure a smooth phaseout from the ODS solvent consumers' angle, with as little price fluctuations and disruption in production process as possible.

In China, many of the industries using ODS solvents fall under the Ministry of Information Industry (MII). MII is represented in the Special Working Group established under PMO for the implementation of the Solvent Sector Plan. SEPA will throughout the implementation of the Solvent Sector Plan, coordinate with MII on all major issues.

8. Counterpart Support Capacity

PMO of SEPA has extensive experience of management of ODS phaseout activities. More than 250 individual projects, 3 umbrella projects and 3 sector plans for ODS phaseout have been completed or are under implementation. A number of these projects are in the field of phaseout in the solvent sector and national technical expertise on ODS and alternative solvents has been developed within two technical centers, through earlier projects implemented by UNDP, through funding support by MLF and Swedish Government. The technical expertise of these centers will be valuable to SEPA in the phaseout.

Implementation of the Solvent Sector Plan will be time consuming and therefore a Domestic Implementing Agency (DIA) will be recruited to assist in the day to day

operations of the Sector Plan.

ATSS capacity will be strengthened through training. Alternative technology consultants and services will be provided to the Special Working Group, DIA and enterprises, as well as to the demonstration projects in certain subsectors. The service network of alternative solvent and equipment will be set up under the assistance of ATSS to provide consultants, services and alternative products to the SMEs spread all over the country.

C. DEVELOPMENT OBJECTIVE

The development objective of this project is to protect the global environment by phasing out 10,450 tons ODS that would, if released into the stratosphere, have contributed to the on-going man-made destruction of the ozone layer.

D. IMMEDIATE OBJECTIVE, OUTPUTS AND ACTIVITIES

1. Immediate Objective 1

Controlling and reducing aggregate ODS solvent consumption in China down to zero by undertaking phaseout projects.

Success Criteria: The performance targets established in each Annual Programme fully met. ODS solvent consumption does not exceed the requirements in the Agreement.

Output 1.1: ODS Reduction Contracts signed and implemented for large and medium sized users.

Activities for Output 1.1

1.1.1 Define detailed operational procedures for ODS Reduction Contracts and incorporate into Project Implementation Manual. (May 2000)

1.1.2 Identify relevant industrial subsectors and determine the priority order of these subsectors' phaseout. (June 2000)

1.1.3 Organize expert group to develop 2-4 standard technical phaseout options for each subsector, strategy for determining the funding levels for each sub sector as well as phaseout cost thresholds per subsector. (June 2000 - and annually to 2005)

1.1.4 Undertake promotion activities, such as publicity in national newspapers etc to increase large and medium sized users' awareness and interest of ODS phaseout. As deemed useful, cooperate with industrial associations, solvent dealers and equipment manufacturers. (July 2000 - December 2006)

1.1.5 Provide training courses for ODS solvent users to help them prepare phaseout proposals. (August 2000 to December 2008)

1.1.6 Carry out bidding yearly to identify enterprises that will undertake phaseout projects at lowest cost. (September/October 2000 and annually in June/July to 2008)

1.1.7 Sign a 15-20 ODS Reduction Contracts every year with selected enterprises to achieve annual phaseout target. The ODS Reduction Contracts will include a commitment from the enterprises to stop using ODS after a certain time period. (November 2000 and annually to December 2008)

1.1.8 Undertake competitive bidding to procure equipment, trial solvent, local works etc to complete the activities under the ODS Reduction Contracts. (December 2000-December 2008)

1.1.9 Implement ODS Reduction Contracts. (December 2000- December 2009)

1.1.10 Commissioning of projects, including destruction of equipment and confirmation that phaseout has taken place. (August 2001 - December 2009)

1.1.11 Prepare project completion reports. (August 2001-December 2009)

Output 1.2: Vouchers issued and implemented to phaseout ODS solvent consumption at small users.

Activities for Output 1.2

1.2.1 Define/Review the detailed operational procedures of the Voucher System and incorporate into Project Implementation Manual. (November 2001 and annually to 2008)

1.2.2 Determine phaseout targets and funds available for Voucher system each year. Determine other parallel funding options available for SMEs, e.g. Government funding, commercial banks, based on analysis conducted. (June 2000 and annually to 2008)

1.2.3 Organize expert group, industrial associations and ATSS to advise on technical options for small users. (January 2001-December 2009)

1.2.4 Conduct publicity and promotion campaigns to raise the awareness of ODS solvent phaseout and to identify small ODS solvent users. (July 2000 - December 2006)

1.2.5 Prepare an information package to distribute to small users including information on funding eligibility, technical cleaning alternatives to ODS solvents, the role of ATSS in providing technical support to the small users, the declining supply of ODS solvents, Government policies, how to register for voucher etc. (November 2000 - January 2001)

1.2.6 Conduct regional seminars to inform small users on ODS phaseout in solvent sector, voucher system etc. (January 2001 - December 2009)

1.2.7 Small users, with support of ATSS if needed, designs their own ODS phaseout proposals. (January 2001 - December 2009)

1.2.8 Enterprises register vouchers with DIA, including a commitment to ODS phaseout within a certain time limit. (January 2001 - December 2009)

1.2.9 Enterprises contacts ATSS members to procure technical assistance and equipment, using their registered vouchers. (May 2001-December 2010)

1.2.10 ATSS members submit vouchers to DIA, PMO for redemption. (May 2001-December 2010)

1.2.11 ODS phaseout is verified on a spot check basis. In the first year 25% checking level. This level will be adjusted to a higher or lower level depending on the results of the first year. (May 2002-December 2010)

Output 1.3 Japanese and French Bilateral Phaseout projects contribute to overall achievement of phaseout target.

Activities for Output 1.3

1.3.1 Coordinate with Japanese and French bilateral project formulation missions, funded separately by the ExCom, in addressing priority subsectors identified. (May 2000 - November 2000)

1.3.2 Conduct discussions and possible technology transfers during project formulation missions. (May 2000 - November 2000)

1.3.3 Evaluate and provide comments on bilateral investment project proposals, prior to submission to ExCom. (September 2000)

1.3.4 If projects below average cost of Solvent Sector Plan, implement projects in coordination with ODS Phaseout Contract Implementation. (November 2000 and onwards)

2. Immediate Objective 2

Enhanced Implementation Mechanism for ODS phaseout in Solvent Sector

Success Criteria: Annual Programmes are satisfactory to ExCom. Financial and Technical Evaluations are satisfactory. ATSS and DIA provide satisfactory support to PMO and to enterprises undertaking phaseout projects.

Output 2.1: Alternative Technology Support System (ATSS) established and functional

Activities for Output 2.1

2.1.1 Identify potential participants in ATSS, including national experts, three technical centers (in Shanghai, Tianjin and Guangzhou respectively), industrial associations, local equipment suppliers, solvent producers, network of dealers. (May 2000)

2.1.2 Hold meetings to develop the TOR of the ATSS. Define the role of different participants. (June 2000)

2.1.3 Develop the capacity of the participants through training activities, procurement of necessary equipment etc. (June 2000 - December 2006)

2.1.4 Establish the third technical center in Guangzhou. (September 2000-December 2001)

2.1.5 ATSS to assist in implementation of ODS Reduction contracts at the request of PMO, DIA or enterprises. (September 2000-December 2008)

2.1.6 ATSS to assist in implementation of Voucher system by identifying technical options, providing equipment etc. (January 2001-December 2009)

Output 2.2: Domestic Implementing Agency (DIA) contracted and operational.

Activities for Output 2.2

2.2.1 Finalize the TOR for the DIA. (May 2000)

2.2.2 Conduct International Competitive Bidding. (April 2000-June 2000)

2.2.3 UNDP Headquarters Advisory Committee on Procurement to recommend approval of contract with DIA (July 2000)

2.2.4 Sign contract between UNDP MPU and DIA. DIA to report to SEPA. (August 2000)

2.2.5 Conduct training for DIA to familiarize DIA staff with the requirements of the implementation of the Solvent Sector Plan, including UNDP and MLF policies and procedures. (August 2000-December 2000 and annually thereafter)

Output 2.3: Project Implementation Manual finalized and established.

Activities for Output 2.3

2.3.1 Draft Project Implementation Manual (PIM). (May 2000)

2.3.2 SEPA and UNDP review and approve (PIM). (May 2000)

2.3.3 Translate PIM into Chinese. (June 2000)

2.3.4 Distribute selected parts to enterprises involved in ODS solvent phaseout. (June 2000-December 2009)

Output 2.4: Solvent Sector Management Information System finalized (SSMIS).

Activities for Output 2.4

2.4.1 First version of Management Information System reviewed by SEPA/Working Group and changed to meet the demands of revised Solvent Sector and Project Implementation Manual in terms of monitoring, evaluation and reporting. (July 2000)

2.4.2 Coordinate with other ODS phaseout Management Information Systems (August 2000)

2.4.3 Use the Management Information System on a trial basis (August 2000-November 2000)

2.4.4 Substations to use the Management Information System established in DIA and in MII. (October 2000)

2.4.5 Adjust based on experience from trial period and establish final version (December 2000).

2.4.6 Annual reporting on data of CFC-113, TCA and CTC production and consumption. Monitoring of exempted feedstock use and process agent use so that these exempted uses are not diverted into solvent use. (November/December 2000 and annually to 2010)

Output 2.5: Annual financial audits and performance verifications undertaken in a timely manner. Annual programmes prepared and submitted to the last calendar meetings of the ExCom for funding approval of subsequent years.

Activities for Output 2.5

2.5.1 Independent auditing entity identified and selected to undertake annual financial audit. (June/July 2001 and annually to 2010)

2.5.2 Independent and qualified entity identified and selected to undertake annual performance verification. (June/July 2001 and annually to 2010)

2.5.3 Prepare mid-year and year-end progress reports for submission to ExCom Meetings. (May and October respectively annually to 2010)

2.5.4 With input from PMO, prepare Annual Programme, incorporating results of financial audit and performance verification, and submit to the last calendar year meeting of the ExCom for approval of required funding for the next year's phaseout projects. (September 2001 and annually)

3. **Immediate Objective 3**

Strengthened regulatory framework for ODS phaseout management.

Success Criteria: Supply of ODS solvents on Chinese market gradually reduced down to zero. Import and export of ODS solvents gradually controlled. Quality, safety and environmental standards for non-ODS solvents developed and approved.

Output 3.1: Policies to support efficient ODS phaseout in Solvent Sector established and implemented

Activities for Output 3.1

3.1.1 Conduct studies and design recommendations on procedures, policies and regulations on managing imports and exports of ODS solvents. (June 2000-December 2000)

3.1.2 Conduct studies on Solvent Management Plans and development of Alternative Solvents, building on experiences from developed countries and

earlier project implementation, and prepare proposals to support ODS phaseout in China's Solvent Sector Plan. (September 2000-December 2003)

3.1.3 Conduct training on enforcement of ODS solvent phaseout targets, policies and regulations, as well as implementation mechanism of Solvent Sector Plan with local Environmental Protection Bureaus, as well as local bureaux of line Ministries. (December 2000-December 2003)

3.1.4 Establish technical norms and standards related to use of flammable solvents and toxic solvents. (October 2000-December 2006)

3.1.5 Establish environmental regulations on solvents without ODS. (January 2002 -December 2006)

3.1.6 Develop Quality Standards for non-ODS solvents and non-ODS alternative cleaning technologies. (October 2000-December 2006)

3.1.7 Other studies as required during implementation of the sector plan.

E. INPUTS

1. Chinese Inputs (in-kind)

In the *Agreement for ODS phaseout in China's Solvent Sector* between ExCom and China, China commits to contribute the necessary level of resources for the implementation of the Sector Plan and for achieving the agreed ODS solvent reductions. It is estimated that the total cost of the ODS phaseout in China's Solvent Sector will exceed the US$ 52 million provided by MLF under the Agreement. This would mean that funding for the remaining cost of ODS solvent phaseout will be born by China. The main part of this counterpart funding will be provided in-kind by Chinese ODS solvent users.

2. UNDP Inputs

A. International Consultants - Will be recruited to provide training and technical expertise. The total budget for International Consultants is US$ 100,000.

B. Local Consultants - Will assist in the implementation of the Solvent Sector Plan by providing technical advise, training, conduct studies, help develop policy alternatives etc. The total budget for national experts amounts to US$ 235,000.

C. Subcontracts - A number of subcontracts will be signed with institutions that can provide policy support, develop publicity campaigns and can assist in developing the ATSS etc. The total budget for subcontracts amounts to US$ 2,565,000.

D. Training - Training activities for local EPBs and local line ministries will be organized to increase the capacity to enforce ODS solvent related policies and regulations. Training will also be given to enterprises that are interested in phasing out their ODS solvent consumption on the implementation procedures of the Solvent Sector. The total budget for training is US$ 300,000.

E. Equipment - Equipment will be procured under ODS Reduction Contracts for the Large and Medium sized users and under the Voucher system for the small users. The total amount budgeted for the phaseout of the three ODS solvents, i.e. CFC-113, TCA

and CTC is US$ 40,800,000.

F. Miscellaneous - As the Solvent Sector Plan is designed to provide China with a maximum flexibility in achieving the phaseout commitments, US$ 8,000,000 have been budgeted for under Contingency. Part of this money could be used for development of alternative solvents.

G. Total UNDP Input - The budgets for international and national consultants, subcontracts and training totally amount to US$ 3,200,000, which is the funding made available for Technical Assistance activities under the Agreement. The total budget provided for investment oriented phaseout activities is US$ 48,800,000, inclusive of $8,000,000 budgeted under Contingency.

The total project budget is thus US$ 52,000,000.

F. RISKS

There are several risks that could adversely affect the success of this project. These include:

Failure to meet agreed ODS phaseout targets - As stipulated in the Agreement, China does not only have to meet the overall annual phaseout targets, it must also meet its annual phaseout target for each of the three ODS solvents, i.e. CFC-113, TCA and CTC. Delays in implementation of phaseout projects would lead to that agreed phaseout targets would not be met. Subsequently the total funding available to China for phaseout of ODS solvents would be reduced (see Agreement in Annex 2). This would make future phaseout more difficult as a larger share of the phaseout cost would have to be born by China. A lot of work has been done to ensure that the implementation mechanism will be as efficient as possible and to ensure that China will have the maximum flexibility in the use of the funding. The risk of failure to meet agreed phaseout targets still remain, but this risk has been fully evaluated by SEPA and MII before committing to the agreement.

Enterprises might be reluctant to undertake ODS solvent phaseout projects - As cleaning is often only a minor part of an enterprise's production process, the industry might be reluctant to undertake what is perceived as time-consuming and non-profitable phaseout projects. The surveys undertaken also show that many enterprises have an installed cleaning capacity often much larger than the current ODS solvent consumption. As the funding available for each enterprise will be calculated based on ODS solvent consumption, the funding might be substantially lower than the cost of investing in a similar sized cleaning equipment. Enterprises might thus prefer to make use of their installed ODS cleaning equipment for as long as possible, which would translate into a difficulty in identifying phaseout projects in the early years of the plan. This risk will be minimized through ensuring that all enterprises are aware that supply of ODS solvents will be gradually reduced down to zero and thus the price of ODS solvent is expected to rise. A mechanism giving incentives for enterprises to undertake phaseout projects early, by providing higher funding level in early years of implementation is also being considered. Information that funding will no longer be available once it is exhausted will also promote early participation in the phaseout.

Failure to identify small ODS solvent users - One of the major challenges of the

Solvent Sector Plan is the large number of smaller users. These small users have not all yet been identified and failure to do so during the implementation of the Sector Plan would mean difficulties in phasing out their ODS solvent consumption. The chances of identifying small users is increased through undertaking media campaigns to raise the awareness of ODS solvent phaseout, as well as by involving industrial associations and solvent dealers in reaching out to small users. The small users that cannot be identified will still, as all users of ODS solvents, find it increasingly difficult to purchase ODS solvents as the market supply is being reduced. Should enterprises not come forward they will eventually have to phaseout ODS solvent use at their own cost.

Potential adverse social impact of phaseout projects. As the funding provided under the Solvent Sector Plan is not sufficient to fully fund all phaseout activities, part of the cost will have to be born by the enterprise undertaking the project. In the case of SMEs, that often are in a difficult financial situation, the cost of undertaking phaseout project could be preemptively high. There is a risk that if prices of ODS solvents rise and a SME is not able to co-fund a phaseout project, its production and its competitiveness in the market would be affected and thus also the employment situation. However, as cleaning is most often only a small part of any enterprise's production process, the risk of large scale unemployment as a consequence of ODS phaseout in the sector is considered low. To mitigate this risk options to assist SMEs in obtaining additional funding will be explored.

G. PRIOR OBLIGATIONS AND PREREQUISITES

ExCom has agreed in principle to fund a total of US$ 52 million to phaseout ODS solvents in China. US$ 6.75 million has been made available upon ExCom approval of the Solvent Sector Plan. An additional US$ 6.955 million will be made available in March 2001 upon satisfactory verification that China has finished the bidding process for phaseout in 2001. ExCom also agrees in principle that the funds will be provided on the basis of Annual Programmes submitted following the funding schedule in Table 2 in the Agreement (Annex 2). Payments are conditioned on the completion of the agreed ODS solvent consumption reduction.

H. PROJECT REVIEWS, REPORTING AND EVALUATION

An annual Tripartite Review meeting will be held to review implementation of the Solvent Sector Plan. SEPA PMO, MII, UNDP and selected beneficiary enterprises will participate in the Tripartite Review meetings.

PMO will report to UNDP, SEPA, MII and to the National Leading Group for Ozone Layer Protection on implementation progress under the Solvent Sector Plan. DIA will implement the Annual Programmes, track implementation of ODS solvent reduction projects and submit written progress reports to PMO four times a year. DIA progress reports will include review against performance indicators in each Annual Programme. Large and medium users will prepare completion reports on their conversion projects, reporting on ODS phaseout, equipment destruction/disposal and results on the alternate technology that was used. PMO should report to UNDP on the progress of Annual Programmes in connection with the quarterly requests for funding.

PMO will also track implementation of policy measures, import/export information and TA

activities, and report on an annual basis. Initially, reporting tables, which have been agreed between UNDP and PMO, will be prepared by PMO. These tables will be revised each year as needed during Annual Programme preparation as more experience is gained. PMO's annual progress report will include a coordinated report with the CFC Production Sector Plan implementation to confirm aggregate national production of CFC-113 compared with the CFC-113 consumption phaseout results realized under the Solvent Sector Plan.

UNDP will report twice annually to ExCom based on indicators agreed in the Annual Programme. A mid-year progress report will be submitted each year. The end-of-year report will be submitted along with UNDP's annual performance verification report, annual financial audit report and the Annual Programme funding request for the next year. UNDP will also monitor implementation of Annual Programmes including, periodic visits to PMO, review of performance under the Annual Programmes, spot checks of programme records in PMO/DIA and random visits to ODS solvent sector enterprises. UNDP will also assist PMO in preparing Annual Programmes

In addition to the annual financial audit and performance verification, two mid-term evaluations will be carried out to review the overall implementation of the Solvent Sector Plan, once after the 4th year of implementation and once after the 7th year of implementation.

UNDP will undertake two kinds of audits of the Solvent Sector Plan. One annual financial audit will cover the ODS Phaseout Account to be established and managed by FECO, SEPA. One annual performance verification will verify performance and results of the Annual Programmes using the agreed performance indicators. Funds for independent technical audits and independent financial audits shall be agreed to and approved by ExCom separately, as deemed necessary. Independent auditors selected by UNDP will follow established UNDP guidelines. SEPA will prepare a crosscheck of the performance audit reports of the Solvent Sector Plan and the CFC Production Sector Plan and report to UNDP.

I. LEGAL CONTEXT

This project document shall be the instrument referred to as such in Article 1 of the Standard Basic Assistance Agreement between the Government of the Peoples' Republic of China and the United Nations Development Programme signed by the parties on 29 June, 1979. The host country, implementing and executing agencies shall, for the purpose of the Standard Basic Assistance Agreement, refer to the Government cooperating agency described in that Agreement. The following types of revisions may be made to this Project Document with the signature of the UNDP Resident Representative only, provide she or he is assured that the other signatories of the Project Document have no objections to the proposed changes:

1. Revisions in, or additions to, any of the annexes of the Project Document;
2. Revisions which do not involve significant changes in the immediate objectives, outputs or activities of the Project, but are caused by rearrangements on inputs already agreed to or by cost increases due to inflation; and
3. Mandatory annual revisions, which rephrase the delivery of, agreed project inputs or increased expert or other costs due to inflation or taking into account agency expenditure flexibility.

J. BUDGET

The Solvent Sector Plan will be managed through Annual Programmes that will establish the detailed annual budgets. The Annual Programmes are subject to ExCom approval and thus also MLF fund availability. The budget presented herein is therefore only a rough budget with estimates of budget posts in view of the long implementation horizon. Adjustments will be made based on Annual Programmes providing China with maximum flexibility in the use of funds to achieve established targets.

Main Source of Funds: AS - MPU STF - Solvent Sector Plan for
Executing Agency: SEPA - State Environmental Protection Admi

SBLN	Description	Implementing		Total	2000	2001	2002	2003	2004	2005
010.	***PERSONNEL***									
011.	***International Consultants***									
011.01	International Consultants	SEPA	Net Amount	100,000	20,000	20,000	20,000	10,000	10,000	10,000
011.99	***Line Total***		Net Amount	100,000	20,000	20,000	20,000	10,000	10,000	10,000
017.	***National Consultants***									
017.01	National Consultants	SEPA	Net Amount	235,000	25,000	25,000	25,000	25,000	25,000	25,000
017.99	***Line Total***		Net Amount	235,000	25,000	25,000	25,000	25,000	25,000	25,000
019.	***PROJECT PERSONNEL TOTAL***		Net Amount	335,000	45,000	45,000	45,000	35,000	35,000	35,000
020.	***CONTRACTS***									
021.	***Contract A***									
021.01	Management Information System	SEPA	Net Amount	50,000	25,000	25,000				
021.02	Public Awareness Campaigns	SEPA	Net Amount	170,000	50,000	20,000	20,000	20,000	20,000	20,000
021.04	Guangzhou Technology Center	SEPA	Net Amount	200,000	50,000	150,000				
021.05	Standards and technical norms	SEPA	Net Amount	600,000	80,000	170,000	100,000	100,000	50,000	50,000
021.06	Develop ATSS	SEPA	Net Amount	620,000	105,000	65,000	100,000	100,000	100,000	100,000
021.07	Study Alternative Solvent	SEPA	Net Amount	480,000	90,000	190,000	100,000	100,000		
021.08	Other TA activities	SEPA	Net Amount	445,000			95,000	105,000	65,000	65,000
021.99	***Line Total***		Net Amount	2,565,000	400,000	620,000	415,000	425,000	235,000	235,000
029.	***SUBCONTRACTS TOTAL***		Net Amount	2,565,000	400,000	620,000	415,000	425,000	235,000	235,000
030.	***TRAINING***									
032.	***Other Training***									
032.01	Training on Solvent Sector & PIM	SEPA	Net Amount	260,000	50,000	20,000	30,000	30,000	30,000	30,000
032.02	Training for EPBs & Local Ministry	SEPA	Net Amount	25,000	5,000	10,000	5,000	5,000		
032.03	Training on Audit	SEPA	Net Amount	15,000		5,000	5,000	5,000		
032.99	***Line Total***		Net Amount	300,000	55,000	35,000	40,000	40,000	30,000	30,000

Main Source of Funds: AS - MPU STF - Solvent Sector Plan for
Executing Agency: SEPA - State Environmental Protection Admi

SBLN	Description	Implementing		Total	2000	2001	2002	2003	2004	2005
039.	***TRAINING TOTAL***		Net Amount	300,000	55,000	35,000	40,000	40,000	30,000	30,000
040.	***EQUIPMENT***									
045.	***Equipment***									
045.01	ODS Reduction Contracts	SEPA	Net Amount	29,140,000	6,250,000	4,755,000	4,330,000	3,255,000	2,255,000	2,380,000
045.02	Voucher system	SEPA	Net Amount	11,660,000		1,000,000	1,000,000	1,000,000	2,000,000	2,000,000
045.99	***Line Total***		Net Amount	40,800,000	6,250,000	5,755,000	5,330,000	4,255,000	4,255,000	4,380,000
049.	***EQUIPMENT TOTAL***		Net Amount	40,800,000	6,250,000	5,755,000	5,330,000	4,255,000	4,255,000	4,380,000
050.	***MISCELLANEOUS***									
053.	***Sundries***									
053.01	Contingency (other phaseout act.)	SEPA	Net Amount	8,000,000		500,000	500,000	1,000,000	1,000,000	1,000,000
053.99	***Line Total***		Net Amount	8,000,000		500,000	500,000	1,000,000	1,000,000	1,000,000
059.	***MISCELLANEOUS TOTAL***		Net Amount	8,000,000		500,000	500,000	1,000,000	1,000,000	1,000,000
099.	***BUDGET TOTAL***		Net Amount	52,000,000	6,750,000	6,955,000	6,330,000	5,755,000	5,555,000	5,680,000

Main Source of Funds: AS - MPU STF - Solvent Sector Plan for
Executing Agency: SEPA - State Environmental Protection Admi

SBLN	Donor Funding		Total	2000	2001	2002	2003	2004	2005
999.	***NET CONTRIBUTION***	Net Contrib.	52,000,000	6,750,000	6,955,000	6,330,000	5,755,000	5,555,000	5,680,000
		Total	52,000,000	6,750,000	6,955,000	6,330,000	5,755,000	5,555,000	5,680,000

Main Source of Funds: AS - MPU STF - Solvent Sector Plan for
Executing Agency: SEPA - State Environmental Protection Admi

SBLN	Description	Implementing		2006	2007	2008	2009	2010	
010.	***PERSONNEL***								
011.	***International Consultants***								
011.01	International Consultants	SEPA	Net Amount	10,000					
011.99	***Line Total***		Net Amount	10,000					
017.	***National Consultants***								
017.01	National Consultants	SEPA	Net Amount	25,000	15,000	15,000	15,000	15,000	
017.99	***Line Total***		Net Amount	25,000	15,000	15,000	15,000	15,000	
019.	***PROJECT PERSONNEL TOTAL***		Net Amount	35,000	15,000	15,000	15,000	15,000	
020.	***CONTRACTS***								
021.	***Contract A***								
021.01	Management Information System	SEPA	Net Amount						
021.02	Public Awareness Campaigns	SEPA	Net Amount	20,000					
021.04	Guangzhou Technology Center	SEPA	Net Amount						
021.05	Standards and technical norms	SEPA	Net Amount	50,000					
021.06	Develop ATSS	SEPA	Net Amount	50,000					
021.07	Study Alternative Solvent	SEPA	Net Amount						
021.08	Other TA activities	SEPA	Net Amount	115,000					
021.99	***Line Total***		Net Amount	235,000					
029.	***SUBCONTRACTS TOTAL***		Net Amount	235,000					
030.	***TRAINING***								
032.	***Other Training***								
032.01	Training on Solvent Sector & PIM	SEPA	Net Amount	30,000	10,000	10,000	10,000	10,000	
032.02	Training for EPBs & Local Ministry	SEPA	Net Amount						
032.03	Training on Audit	SEPA	Net Amount						
032.99	***Line Total***		Net Amount	30,000	10,000	10,000	10,000	10,000	

Main Source of Funds: AS - MPU STF - Solvent Sector Plan for
Executing Agency: SEPA - State Environmental Protection Admi

SBLN	Description	Implementing		2006	2007	2008	2009	2010	
039.	***TRAINING TOTAL***		Net Amount	30,000	10,000	10,000	10,000	10,000	
040.	***EQUIPMENT***								
045.	***Equipment***								
045.01	ODS Reduction Contracts	SEPA	Net Amount	2,755,000	1,955,000	750,000	455,000		
045.02	Voucher system	SEPA	Net Amount	1,000,000	1,500,000	705,000	1,000,000	455,000	
045.99	***Line Total***		Net Amount	3,755,000	3,455,000	1,455,000	1,455,000	455,000	
049.	***EQUIPMENT TOTAL***		Net Amount	3,755,000	3,455,000	1,455,000	1,455,000	455,000	
050.	***MISCELLANEOUS***								
053.	***Sundries***								
053.01	Contingency (other phaseout act.)	SEPA	Net Amount	1,000,000	2,000,000			1,000,000	
053.99	***Line Total***		Net Amount	1,000,000	2,000,000			1,000,000	
059.	***MISCELLANEOUS TOTAL***		Net Amount	1,000,000	2,000,000			1,000,000	
099.	***BUDGET TOTAL***		Net Amount	5,055,000	5,480,000	1,480,000	1,480,000	1,480,000	

Main Source of Funds: AS - MPU STF - Solvent Sector Plan for
Executing Agency: SEPA - State Environmental Protection Admi

SBLN	Donor	Funding		2006	2007	2008	2009	2010	
999.	***NET CONTRIBUTION***		Net Contrib.	5,055,000	5,480,000	1,480,000	1,480,000	1,480,000	
			Total	5,055,000	5,480,000	1,480,000	1,480,000	1,480,000	