

Name of the Initiative

The Sino-Italian Cooperation Program for Environmental Protection towards Sustainable Development

Expected date of initiation: February 2002

Expected date of completion: 2008

Partners Involved:**A. Governments:**

- Italy: Italian Ministry of the Environment and Territory
- China: The State Environmental Protection Administration (SEPA); municipality of Shanghai, Suzhou, Jinan and Taiyuan, InnerMongolia Autonomous Region, China; Xinjiang Uygur Autonomous Region.

B. Scientific organisation:

Italian National Research Council - Institute for air pollution (CNR - IIA)

Department of Valorization and Protection of the Agroforest Resources (Di.Va.P.R.A.) of the University of Turin

Regional Center for Agricultural Experimentation and Extension of the Chamber of Commerce of Savona, Italy

State Economic and Trade Commission

Peking University, Center for Environmental Sciences

China Petroleum and Chemical Industry Association

Institute for the Control of Agrochemicals

Chemical Registration Center

Institute for Pesticides Control of Agriculture

Academy of Preventive Medicine

National Termite Prevention and Control

Zhejiiang University and Tsinghua University

China Research Academy of Environmental Sciences

China Academy of Agriculture Sciences

China Agriculture University

China National Monitoring Station.

C: Technological partners:

- Sartec Saras Tecnologie s.r.l, Ecotema Ecologia Terra Mare s.r.l., CETMA Consortium-D'Appolonia s.p.a.

- Novamont - Mater.Bi S.p.A., Novara, Italy

- Italian and Chinese boiler manufacturers (TBC through bidding procedure).

D: International organizations:

United Nations Development Program (UNDP)

United Nations Office for Projects Services (UNOPS)

World Bank (WB)

United Nations Industrial Development Organization (UNIDO)

Leading Partners:

The State Environmental Protection Administration of China (SEPA) and the Italian Ministry of the Environment and Territory (IMET).

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Main objectives of the Initiative

In the year 2000, the Ministry of the Environment and Territory (IMET) launched a co-operation program with the State Environmental Protection Administration (SEPA) of China. The program, financed by the Ministry for the Environment and Territory and co-financed by the Chinese Government and several

Municipalities, consists of the implementation of pilot projects and feasibility studies for the development of scientific and commercial projects on environmental protection, including ecological conservation, air quality improvement, sustainable agriculture development.

With the unremitting efforts for many years, the environmental quality in China is now upgrading from the "overall deterioration and improvement in certain areas" towards the situation with preliminary control on pollution level and certain improvement in some cities and areas. During the "Ninth-five year (1995-2000)" period, with the annual average GDP growth rate of 8.3%, the discharging level of the 12 type major pollutants, including SO₂, soot, COD in waste water, heavy metals etc have been reduced by 10-15% in comparison with that of the year between 1990-1995.

However the environmental pollution still remains stern, with large amount of pollutants discharge and in some regions the environment quality is worsening. The ecological deterioration is not put under effective control and the damages thereof in some areas are being aggravated.

The environmental pollution and ecological destruction in some areas have become a key element with harms on the public health and restrictions on the economic development. In addition to the task in reducing traditional pollutants, vehicle emissions, non-point source pollution and hazardous and toxic wastes are becoming increasingly prominent.

China signed the Stockholm Convention in May 2001 and is in the process of ratifying the Agreement. As per requirements of the Convention, China has begun to develop a National Implementation Plan (NIP) for POPs and to undertake enabling activities. To enhance its domestic capacity to meet obligations arising from the Convention, China is working with a range of bilateral partners including the Government of Italy, and with various intergovernmental organizations.

In this respect, the Italian Ministry for Environment and Territory together with SEPA has launched a broad cooperation program directed to the development of the following pilot projects in selected areas aimed at the improvement of air quality and control:

1. Air Quality Monitoring Systems
2. Urban Sustainable Mobility
3. Technology Transfer for the construction of low capacity boilers fed with diesel oil
4. Urban Energy Plans for a Sustainable Environment
5. Strengthening Technology and Capacity of Sustainable Agriculture
6. Control and phase out of POPs

In particular the main objectives of each project activity are:

1. Air Quality Monitoring Systems

The project consists in the establishment of an air monitoring system in the city of Suzhou, including all the equipment needed to provide data collection and analysis, and in the management of the system for one year after installation of the equipment. Furthermore, the project will support the municipal authorities in the policy making process to elaborate appropriate guidelines for establishing the AQMS, facilitating the eventual introduction of AQMS services to further Chinese cities.

The scope of the project consists in the supply of an AQMS

network, including nine fixed stations, equipment (analysers for gases and particulate), twenty saturation stations, a data quality control centre, one conventional mobile unit and 6 advanced mobile units.

The proposed monitoring network is characterised by a high degree of innovation, which has been extensively tested in Italy with positive results directed to pollution control and prevention. The proposed network is intended to demonstrate the potential applications of the suggested innovations and to demonstrate how they provide added value when compared to a more conventional approach. The implementation of the project will be carried out through a Sino-Italian Joint venture.

2. Urban Sustainable Mobility

The program "sustainable mobility" has as main objective to provide an environmental performance of advanced Italian technologies for the public transportation system, especially on clean diesel technology in Shanghai.

- The common municipal policy of reducing transport sector pollution by shifting passengers from private to public modes of transportation makes the reduction of emissions from public transport fleets even more critical.

The program is intended to promote the advantages in air quality pollution arising from the implementation of advanced technologies in the urban public transportation system.

The success of Shanghai project may provide a basis for dissemination of this type of technology in China.

3. Technology Transfer for the construction of low capacity boilers fed with diesel oil

The co-elaborated project of "Technology Transfer for the Construction of Low Capacity Boiler Fed With Diesel Oil" supports the transfer of boiler technology. The project consists in the replacement of 30 low capacity boilers in Taiyuan to shift fuel use from coal to diesel oil, which is a relatively low-carbon fuel. The municipality of Taiyuan was selected for the implementation of the pilot project due to its environmental situation. Located in the Shanxi Province, one of the main areas for the coal mining, Taiyuan suffers of a low air quality due to the heavy use of coal as fuel.

The program will support the transfer of boiler technology. The transfer of technology will be realized through:

a) A Pilot Project involving the construction and installation of 30 advanced boilers fueled by diesel oil. The transfer of technology will be from an Italian boiler manufacturer to a suitable Chinese partner for the production in China of low capacity boilers (1 ton/h of steam) shifting fuel from coal to diesel oil (lower carbon fuel), with a clear improvement in the emissions quality.

b) The Pilot Project will also lay the foundation for an industrialized phase during which the market for such advanced boilers in China will be expanded. The above technological cooperation will also set out the principles for the establishment of a joint venture, which the Italian Company and the Chinese Company aim to set up for the fully commercialized production of the 4 boilers in China.

Through the implementation of the project, Taiyuan municipality will benefit of an improvement of air and environment quality, which will contribute to the sustainable development of the economy, society and environment.

4. Urban Energy Plans for a Sustainable Environment (UENPs)

UENPs will be developed within China focusing on the fields of energy and environment. In particular, the main objective of the proposed Partnership is to identify and evaluate optimal solutions to save energy and to improve energy efficiency, thus improving the integrated environmental quality at local, regional and global level in the long run. So through the implementation of the UENPs, the following activities will be elaborated:

- Changes in the energy production mixture - especially increasing the provision of high quality energy
- Promotion of clean-energy production and consumption technologies
- Improvements in energy efficiency
- Introduction of energy plans for a sustainable environment
- Introduction of environmental regulations and economic instruments which facilitate the implementation of the energy plans for a sustainable environment
- Strengthening of international co-operation and transfer of technology

The UENPs effort will be initially focused on Suzhou municipality and will be then extended to other municipalities (Taiyuan, Jinan), which represent widely different situations in China. The implementation of UENPs will assist the local governments in decision-making and policy formulating with the aim to implement the harmonious and sustainable development strategy of economy, energy and environment.

5. Strengthening Technology and Capacity of Sustainable Agriculture

The project will be developed in Inner Mongolia and Xinjiang Autonomous Regions, where the overexploitation of water and the high use of chemical pesticides in the agricultural sector is seriously threatening the environment. The main objective of the project is to improve the rural and/or regional ecological environment, and develop pollution-free agricultural products. The transfer of innovative technologies along with the carrying out of training activities will promote:

- reduction and substitution of pesticides and chemical fertilizers;
- adoption of integrated management system for disease and pest control;
- introduction of water-saving irrigation system for enhancing the water utilization rate;
- reduction of pollution from agricultural wastes;
- introduction of the use of degradable mulching film;
- assessment of the economic and social feasibility of the introduced agricultural technologies.

The training activities will foresee the organization of local and remote training courses and of regional workshops to publicize the sustainable agricultural technology and improve the awareness of local communities on environmental protection.

6. Control and phase out of POPs

This project will be built on an existing initiative in the framework of the co-operation program, such as the National Strategy and Programme on Reduction and Phase-Out of Pesticides POPs. It will include two separate but complementary and interrelated components:

A. National Strategy and Programme on Reduction and Phase Out of Pesticides POPs in China". - Design of Financial Package and B. Development of a PCB Inventory Methodology and A Draft Strategy on PCB Reduction and Disposal in China.

The overall intent of this project and its components (A and B) is to enhance China's capacity to address global environmental challenges including POPs and to assist China in complying with international environmental conventions (e.g. Stockholm Convention).

In particular:

Component A - to be implemented by UNDP

The main objective of the proposed Partnership is to identify and design a financing package for certain pioneering components, initiatives, or sub-sectors that could potentially move faster in the "Pesticides Strategy and Programme" which is currently expected to be available in the second half of 2003.

This financial package could include:

- policy and institutional options;
- other economic incentive measures;
- public awareness;
- demonstration projects;

It is expected that, based on the design of the financial package, the subsequent implementation of this package will provide a sound foundation for a pilot and demonstration experiences to support the NIP.

Component B - to be implemented by the World Bank

The key objectives of this component are to:

- a) develop a PCB inventory methodology based on results of pilot projects; and
- b) prepare a draft strategy on approaches and options for disposal/reduction of PCB. The draft strategy will provide an assessment of current PCB disposal, reduction, management, policy and regulation and identification of approaches and options (or course of actions) that are suitable for China.

Both the inventory methodology and the draft strategy will be integrated into the development of a PCB Action Plan in the NIP. SEPA and relevant departments such as National Electric Power Corporation and industry associations will be fully involved in the project.

Agenda 21 and Millennium Declaration Goals.

This partnership reflects many goals indicated by Agenda 21 and the Millennium Declaration Goals:

POLICY-MAKING FOR SUSTAINABLE DEVELOPMENT

Agenda 21 proposes the full integration of environmental and developmental issues for government decision-making on economic, social, fiscal, energy, agricultural, transportation, trade and other policies. Governments should also seek a broader range of public participation.

The Sino-Italian Cooperation Program provides through the four pilot projects training programs for the public sector, with

expertise in environmental matters, helping in the policy-making process for sustainable development.

PROTECTING THE ATMOSPHERE

Research and more extensive climatic observation should be promoted. Air pollution harms human health, and causes tree and forest loss and the acidification of bodies of water. The AQMS project in particular provides early-warning systems, response mechanisms and instruments to establish and/or strengthen the monitoring and control of air pollution and atmosphere in urban environment. The other 3 pilot projects gives a concrete response to the improvement of the air quality thus on the protection of the atmosphere.

PROMOTING SUSTAINABLE HUMAN SETTLEMENTS

Improving management of urban settlements - By the turn of the century, the majority of the world's population will be living in cities. The Sino-Italian Program will help, inter alia, to accelerate efforts to improve urban infrastructure and train managers, technicians and administrators. Providing environmentally sound infrastructure facilities - The sustainability of urban development depends greatly on the availability of air quality and of monitoring network to control it.

PROMOTING ENVIRONMENTAL AWARENESS

Training is one of the most important tools to facilitate the transition to a more sustainable world. Scientific training requires the transfer of new environmentally sound technology and know-how. Environmental technicians will be locally and remotely trained in the developing of the pilot projects, promoting an understanding of the interrelationship between good environment and good business practices.

INTERNATIONAL LEGAL INSTRUMENTS AND MECHANISMS

The different initiatives of the program have been developed under the framework of the Multilateral Environmental Agreements therefore the SICP will provide technical and financial assistance to enhance the Chinese ability to participate in national and international negotiations and to implement national and international agreements relating to sustainable development.

BRIDGING THE DATA GAP

The SICP, through the Sustainable Mobility and the Air Monitoring projects provide an important contribution for bridging this data gap including improvement of data collection and analysis, carrying out inventories of environmental, resource and developmental data.

SUSTAINABLE AGRICULTURE AND RURAL DEVELOPMENT

The Chairman text negotiated in Bali during the CSD PrepCom 4th (May 27th - June 7th, 2002) individuate agriculture as an important instrument for the achievement of the **Millenium Declaration** goals, particularly poverty eradication and environment protection. Para 35 of the text clearly states that "agriculture plays a crucial role in addressing the needs of a growing global population, and is inextricably linked to poverty eradication, especially in developing countries.

Sustainable agriculture and rural development (SARD) is essential

to the implementation of an integrated approach to increasing food production and enhancing food security and food safety in an environmentally sustainable way", and indirectly links agriculture to other important aspects of sustainable development (e.g. natural resource degradation reduction, chemical management, sustainable water management). In the same way, chapter 14 of **Agenda 21** (Sustainable Agriculture and Rural Development) recognizes the multifunctional role of agriculture as a mean to ensure food quality and supply, to protect our environment and human health, and to promote rural development.

ENVIRONMENTALLY SOUND MANAGEMENT OF TOXIC CHEMICALS

Chapter 19 of the agenda 21 states "A substantial use of chemicals is essential to meet the social and economic goals of the world community.....However, a great deal remains to be done to ensure the environmentally sound management of toxic chemicals.." POPs are highly toxic chemicals that last for long time in the environment and accumulate in fatty tissue of living organisms posing potential risks of adverse health effects. It is widely recognized that strengthening the ability of countries to eliminate sources of these substances is a fundamental step towards the safeguarding of the public health and the environment.

As far as the United Nation Millennium Declaration is concerned, this project is directly related to the Chapter IV "Protecting Our Common Environment", Paragraph 22-23, Goal 7 "Ensure environmental sustainability" and Target 9 "Integrate the principles of sustainable development into country policies and programmes and reverse the loss of environmental resources."

Expected results:

In general:

- Increasing Monitoring capacity so that regulatory agencies can improve their knowledge and understanding of the nature of this pollution problems;
- Reducing ambient air pollution in urban areas;
- Promoting and developing cleaner and more efficient energy sources and energy technologies
- Promoting sustainable agriculture and rural development

In particular:

1. Air Quality Monitoring Systems

- to establish a complete Air Quality Monitoring System facility providing data collection analysis and elaboration;
- to provide direct and rapid transfer of innovation in the field of air pollution monitoring
- to carry out an extensive training program on AQMS ;
- to build up a model for the management of the AQMS service in other Chinese cities, to support the Chinese authorities in the policy making process to elaborate appropriate guidelines in the field of Air Quality;
- to build up a feasible economic and financial model to facilitate the investment for the AQMS service in other Chinese cities;
- to enforce the public health protection, including accurate and precise data collection for epidemiological or long trend studies, as well as for short term studies;
- to achieve an Italian technology transfer (compliance with recognized legislation) and to build up Chinese scientific

capacity and capability;

- to be coherent with the sustainable development strategies of China;
- to ensure integration of economic, social and environmental dimensions of sustainable development in the design and implementation of the project.

2. Urban Sustainable Mobility

To confirm the expected outcomes of white diesel technology, on an appreciable scale in Shanghai, the environmental performances will be monitored by SEPA in Cooperation with CNR according to the Chinese standards.

Evaluation of the cost-effectiveness of emissions reductions attained by white diesel compared to alternative emission reduction strategies will be carried out.

Based on this, SEPA will support dissemination of this technology in other suitable municipalities.

3. Technology Transfer for the construction of low capacity boilers fed with diesel oil

Improvement of air quality is expected, together with a reduction of the emissions of many pollutants due to the use of finer fuel (diesel oil).

It is also important to stress that the cooperation between the Italian and Chinese manufacturer could further develop this technology for use in municipalities where natural gas is/will be available. This would increase the market potential for these boilers and the environmental impact of their use.

4. Urban Energy Plans for a Sustainable Environment

Within the pilot areas, the UENPs will assess the potential for energy efficiency increase in the most significant energy consumption sectors, taking into account the general structure of energy supply and use and the related environmental pollution issues. In particular, the main objective will be to identify and evaluate optimal solutions to improve the air quality and to improve the integrated environmental quality in the long run. Feasible energy planning of the pilot areas has to be formulated, which may serve as the basic support and guidance to the local authorities and 8 interested bodies in energy development and environmental protection sectors. The UENPs will enable local governments to take appropriate decisions about the energy production and consumption at local level for the industry, agriculture, service, and civil infrastructure sectors in the next 5 to 10 years.

5. Strengthening Technology and Capacity of Sustainable Agriculture

The transfer of innovative agricultural techniques (e.g. dripping irrigation systems, low dosages fertilizer and pesticides distribution systems, biodegradable mulching films, integrated pest management systems) along with a full packages of training and information activities (e.g. district workshops, training courses, manuals and handbook for farmers, technical and scientific publications) will favor the conversion to innovative agricultural production systems, will improve the competitiveness of the local horticulture while increasing farmers' incomes and contributing to poverty eradication in rural areas. Moreover, projects activities will contribute to prevent soil erosion in

rural areas affected by desertification.

6. Control and phase out of POPs

This overall project is intended to provide a context for and link between the aforementioned two components that will collectively support efforts by China to address POPs and other global environmental challenges. The aim is to contribute to the drafting of China National Implementation Plan (NIP) as the framework to develop and implement policy, regulatory and institutional measures as well as a practical response actions and capacity to reduce or eliminate releases of POPs. To this regard, this project will be developed in close cooperation with UNIDO which is carrying on a project in China, financed by the GEF, on preliminary assessment to identify the requirements for developing a NIP as a first step to implement the Stockholm Convention on Persistent Organic Pollutants (POPs Convention).

Specific targets of the Initiative and timeframe for their achievement:

The targets of each project activity will be:

1. Air Quality Monitoring Systems

- The implementation of the project is following the scheduled steps according to the agreement signed in June 2002. All relevant agreements between the parties involved have been signed.
- The duration of the first phase of the project, including planning, supply, installation, testing and operation is estimated as 24 months, starting from June 19, 2002.
- The duration of the second phase will be determined in future.
- The project entered in the preliminary assessment phase with the aim of evaluates the background status of air pollution in the municipality of Suzhou.
- The technological partners have already started the preparation of the equipment that will be utilized during the implementation of the project, including the installation of Data Quality Control Centre. All the goods are ready for the shipment and will be transferred to the operational sites at due time.
- A technical mission led by CNR completed the selection, in cooperation with the local staff, of the sites where the monitoring stations will be installed.
- The installation of Data Quality Control Centre should end in nine months from the project start date; subsequently will start the operation stage.
- The installation of Fixed Stations should end in ten months from the project start date; subsequently will start the operation stage.
- The installation of Saturation Stations should end in eight months from the project start date; subsequently will start the operation stage.
- The operation stage of Data Quality Control Center, Fixed Stations and Saturation Stations will end two years from the project start date.
- Procedures to allow the Chinese staff to attend a training session in Italy are on going and the training is foreseen by March 2003.

2. Urban Sustainable Mobility

The implementation of the project is following the scheduled steps according to the agreement signed in October 2002. All relevant agreements between the parties involved have been signed. The initiative intends to contribute to the improvement of air quality in Beijing, taking into account the Olympic games of 2008 (the Beijing Green Olympics Program encourages, inter alia, the

application of cleaner fuel in public transportation).

A technical kick off meeting was held in November 2002 between Camtec and Shanghai No.1 Bus Company to define all preparatory arrangements for the installation of the pilot production plant.

A study tour of a Chinese delegation composed by representative of the Bus Company and Shanghai Environmental Protection Bureau will visit some production plant of Gecam in Italy and some municipal Bus Company that run fleet fed with Gecam in February 2003.

3. Technology Transfer for the construction of low capacity boilers fed with diesel oil

Longer-term target is the establishment of a joint venture between the Italian and Chinese boiler manufacturers for the production and commercialization in China of high efficiency boilers fueled by low carbon fuels.

The Pilot Project will be implemented as follows:

- Identification of a Chinese boiler manufacturer (hereafter named chinese partner) who could be interested in this operation.
- Identification of an Italian boiler manufacturer (hereafter named italian manufacturer) that can provide the specific know-how for the kind of boilers taken into consideration, and that could build (in parts/pieces) the 30 boilers in Italy (see Table 1), according to the Chinese Laws on the production of pressure parts, certified by SQL0.
- Training in Italy of 5 technical experts of the Chinese partner during the construction phase, in order to transfer advanced technology and manufacturing procedures.
- Transfer of paper documents containing know-how to the technical experts of the Chinese partner, during the training period.
- Commissioning and start-up of boilers c/o end-user, carried out by Chinese partner with the assistance of technical experts (Italian and local ones) of the Italian manufacturer.
- Training of the technicians of the end-user
- A contract between FECO-SEPA and the Implementation Agency has been signed and the Management Committee of the project has approved that agreement.
- An International Competitive Bid has been organized and the process for awarding the Italian manufacturer will be completed by the end of January
- A contract between the Italian manufacturer and the Implementation Agency will be signed within February 2003.

4. Urban Energy Plans for a Sustainable Environment

The project started during March 2002. Among the Partners involved in the Project we confirm the full commitment of IMET, SEPA as Government and CETMA CONSORTIUM-D'Appolonia S.p.A. as Technology Partners. To these it is important to add the commitment of the local Environmental Protection Bureau (EPB) of Suzhou, Jinan and Taiyuan, also fully involved according to the Initial Plan.

The following activities have been performed up to December 2002:

- identification of energy consumption, renewable energy sectors and data collection organization, together with energy diagnosis;
- site visits in Suzhou, Jinan and Taiyuan Municipalities both with local Environmental Protection Bureau(EPB)
- energy surveys in 10 major energy consumers

The following activities are currently under development, in accordance to the Project's timeframe:

- extending the analysis of the relevant sectors on the municipalities selected additional data collection and reporting (July 2003);
- specific strategies will be presented and focused both on the identification of the most efficient actions and on the development of specific policies in the energy sector at the municipal level (July 2003).

5. Strengthening Technology and Capacity of Sustainable Agriculture

The implementation of the project is following the scheduled steps according to the agreement signed in March 2002.

The first phase of the project implementation (autumn 2002 - spring 2003) foresees:

- a study tour in Italy took place in last September 2002 with representatives of SEPA and local EPBs and Chinese technicians for technical training and political exchanges;
- material and equipment expedition will finish by January 2003, and on-spot activities will start in March with training courses for local growers and technicians and organization of two laboratories for the diagnostic of pests incidence and soil fertility, one in Inner Mongolia and one in Xinjiang;
- medium-term workshop on March-April 2003 in Xinjiang, for a broader diffusion of the transferred technologies.

The second phase of the project implementation (spring 2003 - spring 2004) foresees:

- the conduction of field trials on grape, corn, ornamental and vegetable crops for the demonstration of the technical feasibility of transferred technologies;
- the development of manuals and technical brochures for farmers and technicians;
- the assessment of the economic and social feasibility of the transferred technologies;
- the organization of a regional workshop for widespreading the project results.

6. Control and phase out of POPs

The activities have not yet begun.

On 16th December the needed agreements for the Development of a PCB Inventory Methodology and a draft strategy on PCB reduction and Disposal in china have been signed between the Italian Ministry of the Environment and the Territory and World Bank, between the Italian Ministry of the Environment and the Territory and the State Environmental Protection Administration of China, and between World Bank and the Territory and the State Environmental Protection Administration of China. The work plan will be decided in a meeting of mid-January. The activities will start at the beginning of February.

Component A

The package will be an additional output of the National Strategy (i.e. the financing package for implementation of pioneer and fast track components).

- a. It is expected that by the 3rd quarter 2003 the Strategy and the financial component/package 12 will be available.
- b. By mid 2004 some financial resources will have been put in place

to allow implementation of portions of the Strategy by 2005. The completion of the pilot project demonstration implementation is expected to be in 2008.

Component B

Based on the partnership objectives and outputs, outcomes and deliverables are expected to include:

- a. An inventory of PCB production and consumption in two (2) pilot provinces - by 3rd quarter 2003;
- b. Report on current management system of PCB in two (2) pilot provinces - by 4th quarter 2003;
- c. An MIS (Management Information System) incorporating all data and information on PCB collected during the two (2) pilot projects - by 1st quarter 2004;
- d. A PCB inventory methodology based on findings on the two pilot projects - by 2Q 2004; and e. A draft strategy of PCB reduction / disposal in China by the end of 2nd quarter 2004.

These deliverables - the PCB inventory methodology and the draft Strategy - will be integrated into the development of a PCB Action Plan in the China National Implementation Plan (NIP). In addition, it will be linked as appropriate to: "*National Strategy and Programme on Reduction and Phase Out of Pesticides POPs in China*"

Coordination and Implementation mechanism

The program will be coordinated in the framework of the Sino-Italian Cooperation Program for Environmental Protection (SICP). SEPA and Italian Ministry for the Environment and Territory (IMET), have established a Joint Program Management Office, based in Beijing, staffed by an innovative working team of Sino-Italian experts and headed by a Chinese and an Italian Program Manager to carry out the overall program management. The political guidance is reserved to a Steering Committee which consists of both SEPA and IMET and is extended to Italian Trade Commission in Beijing and the Italian Embassy in China.

The scientific and industrial partners involved will provide the management of each pilot project. The intergovernmental organizations invited as implementing/executing agencies, will be involved in the decision making process.

The projects will also be implemented in collaboration with the Chinese Municipalities (Environmental Protection Bureau) depending on the area where the project will be developed.

Arrangements for funding

The total funding provided for this partnership initiative is 8 million Euro. In particular this amount is allocated as follows:

- Air Quality Monitoring Systems:

The total value of the two phases is 5.9 million euro. Contribution for the two phases of the project has been already approved and agreement with the subcontractors already signed. The total cost of the project for the first phase is 3.616 million Euro. In the first Phase, IMET will fund the Italian supply of equipment and services, with co financing from CNR in collaboration with the two Italian companies. The total value of the supply of equipment and services from the Italian side for the first phase is estimated as 3.242 million Euro. CNR will act as the implementing agency for the Italian contribution.

The municipality of Suzhou will be the beneficiary of the Italian contribution. The municipality will also contribute equipment and services totalling up to a maximum of 0.347 million Euro for the first phase (0.458 million Euro for the two phases).

- Sustainable Mobility:

The Italian Ministry for Environment will co-finance the project with 0,90 million EURO and the Shanghai Municipality will provide up to 1 million RMB as counter fund. The follow up of the project will be submitted to International Financing Institutions for financing.

- Technology Transfer for the construction of low capacity boilers fed with diesel oil:

Total investment costs for the Pilot Project are estimated at 2.4 million Euro. The investment will be financed with a grant from the Italian Ministry of the Environment and Territory (IMET) for an amount up to 2.2 million Euro and contribution from the Municipality of Taiyuan for an amount up to 0.2 million Euro.

- Urban Energy Plans:

Italian Ministry of Environment and Territory will contribute 1,1 million Euro as a grant.

- Strengthening Technology and Capacity of Sustainable Agriculture

Italian Ministry of Environment and Territory will contribute 1,5 million Euro, Chinese contribution is 211.900 Euro.

- Control and phase out of POPs

Component A

Funding for the preparation of the financial package element of the overall National Strategy will come from the Sino Italian Cooperation Program (SICP) project with funding from the Italian Ministry of Environment and Territory (i.e. 25,000 Euros). Funding for the implementation of the package will be mobilized from the Global Environment Facility (GEF), the Government of Italy, and other interested partners and parties.

Component B

A total grant of Euro 1,500,000 is provided by the Government of Italy for this component is fixed at. Project funds will be transferred from the Government of Italy to the World Bank that will act as the Implementing Agency. The Bank will manage it through a Trust Fund (TF) based on the Bank's established TF procedures.

Arrangements for capacity building and technology transfer

All the activities included in the program will be performed through a close cooperation between the Italian and Chinese expert team. In particular:

- Air Quality Monitoring Systems: A wide training program is included as an important part of the monitoring network project with the purpose to establish a technology transfer and a capacity building.

The training will be carried out , locally and remotely (on-line), for each activity.

The training course (theory and practice) will target the Chinese staff and technicians responsible for the management of the network.

The courses will be divided into:

- Conventional training in China and in Italy;

- On-line training and assistance carried out from remote stations (i.e. Italy-China or vice versa). The areas that the training program will cover are: Chemical analysis and calibration;

Maintenance of the equipment; Data interpretation ; Air pollution management, Conventional mobile unit; Passive samplers; Fixed stations; Saturation stations and laboratory; Advanced mobile units.

- Sustainable Mobility: Arrangements for transferring Italian methodology for certification process and procedures, and training will be provided to the local staff.

- Technology Transfer for the construction of low capacity boilers fed with diesel oil: In the Pilot Project, transfer of the advanced technology and the relevant manufacturing procedures will be realized through the transfer of all the relevant technical documentation and blue prints to the Chinese manufacturer and a three-month training in Italy for technical experts of the Chinese manufacturer. The Italian manufacturer will also provide technical assistance and training during 12 the assembly stage in China and the commissioning of the boilers.

- Urban Energy Plans: During the project, a specific program of training and capacity building for the Chinese experts will be activated. Technical training will also be organized in Italy. The implementation of UENPs will also represent the framework for the screening and evaluation of the available Italian technologies for potential future cooperation in Suzhou Taiyuan, Jinan etc.

- Strengthening Technology and Capacity of Sustainable Agriculture:

The training activities foresee:

- training courses to local farmers and technicians;
- district workshops to publicize the sustainable agricultural technologies and improve the awareness of local communities on environmental protection;
- a study tour in Italy for Chinese officers and experts;
- training of Chinese students (with degree in Agricultural Science) throughout a Ph.D. programme to be followed at the Faculty of Agriculture of the University of Torino.

- Control and phase out of POPs

Capacity building and technology transfer through: the promotion of information workshops, the use of national experts and consultants to assist with data collection, methodology formulation, and preparation and the MIS. Project documentation and reports will be made available and ongoing dialogue with other related activities being conducted under the GEF

Monitoring Arrangements

SEPA, IMET, SICP, Italian and Chinese private and public bodies and other interested organizations, will jointly implement this Partnership. The Sino - Italian Partners will provide six monthly progress reports on each specific project, which will be also reported to the Steering Committee of the SICP.

Meetings and other substantial activities related to the initiative

Air Quality Monitoring System

17-21 December 2002: Technical meeting between Italian and Chinese project staff members, the meeting was held in Suzhou during a technical mission

16 December 2002: Steering Committee

Gecam Shanghai

11 October 2002: Meeting for the signature of the Grant Management Agreement between ICE Beijing and FECO-SEPA

15 October 2002: Meeting for the signature of the General Agreement between IMET, FECO-SEPA, Shanghai EPB and Shanghai Transport Bureau

11-14 November 2002: Technical kick off meeting between Camtec and Shanghai No.1 Bus Company

16 December 2002: Steering Committee

18-28 January 2003: Study Tour in Italy

Small Boilers Taiyuan

27 September 2002: 1st meeting for the constitution of Grant Management Committee composed by representatives of the Sino Italian Cooperation Program Management office, ICE Beijing and SEPA. The Committee manage and supervise all the relevant activities related to selection through a bidding procedures of the Italian and Chinese manufacturers.

11 November 2002: 2nd meeting of the Grant Management Committee

16 December 2002: Steering Committee

3 January 2003: 3rd meeting of the Grant Management Committee

15 January 2003: 4th meeting of the Grant Management Committee

18 February 2003: 5th meeting of the Grant Management Committee

Energy Planning

8-14 December 2002: Mission to Jinan and Taiyuan and meetings between Italian Experts and local Environmental Protection Bureaus representatives

16 December 2002: Steering Committee

PCBs

16 December 2002: Steering Committee

17 January 2003: Kick off Meeting

Sustainable Agriculture

18-27 September: Study Tour and Training in Italy

16 December 2002: Steering Committee

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