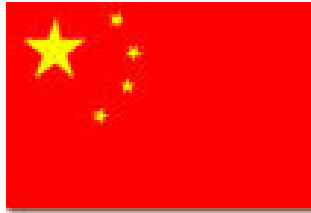




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**EVALUATION OF THE COUNTRY SERVICE FRAMEWORK (CSF)
UNIDO Contribution
to
Environmentally Sustainable Industrial Development of China**

Report of the Evaluation Mission*

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This document has not been formally edited.

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Map of the People's Republic of China



Abbreviations and acronyms used in the report

AAITPC	Asia-Africa Investment and Technology Promotion Centre Project
ABC	Agricultural Bank of China
ACISC	All-China Investor Services Centre
ADB	Asian Development Bank
BISnet	Shaanxi Business Information Network
BPC	Beijing Productivity Center
CAPPC	China Association of Productivity Promotion Centers
CBMA	China Building Materials Academy
CCSN	China Commerce Service Network
CDM	Clean Development Mechanism (Kyoto Protocol)
CEC	Chongqing Exhibition Center
CFC	Chloroflourocarbons (Montreal Protocol)
CGE	Computable General Equilibrium
CHNT	Chongqing High-Tech Development Zone
CICETE	China International Centre for Economic & Technical Exchanges
CIDA	Canadian International Development Agency
CIP	Competitive Industrial Performance
CNSDC	Commercial Network Sites Development Centre
COMFAR	Computer Model for Feasibility Analysis and Reporting
CPR	China People's Republic
CSF	Country Service Framework
CTA	Chief Technical Adviser
CTEC	Chongqing Technology Exhibition Center
DDP	Department of Development Planning
DENA	Shenzhen Dena Energy and Environment Technology Institute
DPRK	Democratic People's Republic of Korea
DRC	Development Research Center
EC	European Commission
EEUEP	Energy End Use Efficiency Programme
EPB	Environmental Protection Bureau
EST	Environmentally Sound Technologies
EST	Environmentally Sustainable Technologies
EU	European Union
EW	Emulsion in Water
FDI	Foreign Direct Investment
FECO	Foreign Economic Cooperation Office
FS	Flowable Seed Dressing
FYP	Five-Year-Plan
GEF	Global Environment Facility
GHG	Green House Gas
HQs	Headquarters
ICM	International Centre for Building Materials
ICSC	Investment Consultancy Services Centre
IC-SHP	International Center for Small Hydropower
ICT	Information and Communication Technology
IDF	Industrial Development Fund
IITPC	International IT Promotion Center
IN-SHP	International Network for SHP
IP	Integrated Programme

IPA	Investment Promotion Agency
IRC	International Reference Center
IT	Information Technology
ITC	International Technology Centre
ITPC	UNIDO International Technology Promotion Center for Sustainable Development (Shenzhen)
ITPO	Investment and Technology Promotion Office
ITPS	China's Investment and Technology Promotion System
MDGs	Millennium Development Goals
MEA	Multilateral Environmental Agreements
MOA	Ministry of Agriculture
MOFTEC	Ministry of Foreign Trade and Economic Cooperation
MOST	Ministry of Science and Technology
MP	Montreal Protocol
MP/MF	Montreal Protocol / Multilateral Fund
MSW	Municipal Solid Waste
NCPC	National Cleaner Production Centre
NDRC	National Development and Reform Commission
NIP	China's POPs National Implementation Plan
NPD	National Project Director
NPFC	Nanshen Pesticide Formulation Centre
ODP	Ozone Depleting Potential
ODS	Ozone Depleting Substances
OECD	Organisation for Economic Co-operation and Development
OSS	One-Stop-Shop
PAD	Project Allotment Document
PAT	Project Advisory Team
PCF	Programme Coordination and Field Operations Division
PCF/ASP	UNIDO Asia and the Pacific Bureau
PDC	Programme Development Committee
PEPB	Provincial Environmental Protection Bureau
PIC	Policy Implementation Committee
PM	Programme Manager
PMO	Project Management Office
POPs	Persistent Organic Pollutants
PPR	Project Progress Report
PRC	People's Republic of China
PSC	Program Support Costs
PSN	Project Serial Number
R&D	Research and Development
RCF	Revolving Capital Fund
RCOCI	Regional Cooperation Office for City Information of Shanghai
RENAPAP	Regional Network on Pesticides for Asia and the Pacific
RETI	Renewable Energy Technology and Investment
SARS	Severe Acute Respiratory Syndrome
SDPC	State Development and Planning Commission
SEC	Shenzhen Energy Group
seco	State Secretariat for Economic Affairs of Switzerland
SEPA	State Environmental Protection Administration
SESTPC	Shandong EST Promotion Centre
SID	Sustainable Industrial Development

SINOTRANS	Sinotrans Limited
SIPC	Shanghai Investment Promotion Centre
SME	Small and Medium Enterprise
SOE	State Owned Enterprises
SOIDB	Shanghai Overseas Investment Development Board
SPX	Subcontracting and Partnership Exchange
SW	Solid Waste
TL	Team Leader
TOR	Terms of Reference
TRICI	Tianjin R&D Institute of Chemical Industry
TRIS	Tumen River Investor Services Network
TVE	Town and Village Enterprise
UBO	UNIDO Beijing Office
UN/DESA	United Nations Department of Economic and Social Affairs
UNCT	UN Country Team
UNDAF	United Nations Development Assistance Framework
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNF	United Nations Foundation
UNFIP	United Nations Fund for International Relationships
UNIDO	United Nations Industrial Development Organization
UNRC	United Nations Resident Coordinator
UR	UNIDO Representative
US\$	United States dollar
USDOE	U.S. Department of Energy
VCF	Venture Capital Fund
WB	World Bank
WTO	World Trade Organizaton
Yuan RMB	China currency (Renminbi)

VOLUME I: PROGRAMME-WIDE EVALUATION

EXECUTIVE SUMMARY

The Country Service Framework (CSF) for China, signed in December 2001, was formulated jointly by UNIDO and the Government of China in order to function as a guide for UNIDO operations in China and as an instrument for the Government to monitor the progress of cooperation with UNIDO during the five-year period (2001-2005). Two development objectives (Strategic Thrusts) of the CSF, namely

- increasing the competitiveness and sustainability of the industry, especially in the Eastern region,
- accelerating industrial development of the Western provinces in order to become more competitive & environmentally sustainable

are supported by programmes and projects organized in 8 components.

As of July 2004, the CSF consisted of 93 projects (out of which 52 Montreal Protocol projects) with total expenditures of almost US\$60 million (out of which almost US\$42 million were spent on the Montreal Protocol projects). This evaluation deals primarily with the non-Montreal Protocol projects.

The CSF concept and its impact

Application of the CSF concept contributed to upgrading UNIDO programme in China both in terms of scope and impact.

Formulation of CSF followed draft guidelines for CSF and envisaged two integrated programmes as part of CSF. However, as only a fraction of the proposed integrated programmes could be elaborated for implementation, in real terms the CSF consists of individual projects only. In spite of that the concept of CSF with its team leader in the field proved viable and effective. For a systemic approach to UNIDO technical assistance in the framework of the CSF the UNIDO Beijing office elaborated the "Cycle of UNIDO Assistance to the Government of China". Its application together with research activities carried out by the UNIDO Beijing office (UBO) made it possible for UNIDO to become one of the two most important multilateral advisors to the Government on sustainable development with impact on Government policy formulation in energy policy, cleaner production, municipal solid waste treatment and restructuring of resource-based industrial cities. In policy and strategy discussions on sustainable industrial development UNIDO Beijing office also became a key partner in the UN Country Team in China and a well established and recognized source of information sought for by bilateral donors and the diplomatic community in general. Upgraded role of the UNIDO office in policy dialogue contributed to increased identity of the UNIDO programme in China and increased its visibility.

Average annual delivery of project services was increased from US\$11.5 million in the foregoing cycle (1996-2000) to US\$16 million under the CSF programme.

Programme relevance

CSF Development Objectives were derived from principal Government objectives and can be considered as fully relevant for the country.

Environmental Management and Energy Efficiency projects represent the thrust of the non-MP part of CSF and this thrust is highly relevant. Projects for the Western region, a new avenue for the UNIDO programme in the country, have so far represented a small fraction of the programme.

Strong features are combination of demonstrations in pilot companies with feedback for policy advice and subsequent broader replication; strong capacity building elements, implemented mainly through interaction of national teams with international experts and training; and extensive use of national expertise.

Funds mobilization

With the exception of the ITCs and programmes for the Western region, mobilization of financial resources has been generally successful.

In general, funding of the CSF has been successful and according to plan, with the exception of the components South-South cooperation and projects for the Western region. Funds mobilization for the programmes in the Western region turned out to be more difficult than anticipated.

The Multilateral Environmental Agreements (MEAs) and the special purpose donor contributions of The Netherlands and Switzerland reached by far the highest funding levels each while the United Nations Foundation (UNF) and the Chinese Government as special purpose donor to the IDF feature prominently among the five most important funding sources.

Direct funding from national counterpart agencies was significant and particularly dynamic when the projects met strong local demand and/or were business driven.

Most of the ITCs have too optimistic funding expectations which did neither seem to take into account donor priorities nor the financial potential of the host institutions.

Project Results

In total, over 30 institutions were strengthened or established and in most cases the institutional capacity building was successful. Almost 3,000 people were trained. Demonstrations in energy conservation expect annual saving of US\$3.8 million. Approx. 4,300 jobs were created through investment promotion.

The most significant results were achieved in environmental management and energy conservation. In this problem area significant results were achieved both at policy level, establishment or strengthening of institutions, human resource development, as well as at industry level in pilot plants. Demonstration projects have high probability of countrywide replication. Very good results of the Montreal Protocol programme could be included in this thematic group as well (17.3% of ODP phased out in China).

Due to insufficient funding and recent start of the few approved projects very limited results could so far be achieved in Western provinces; this is the weakest point of the CSF, particularly in view of the top priority of this objective both for the Government and UNIDO.

Contribution of CSF to job creation was rather limited, mainly through inward investment promotion. Indirectly, some environmental management related projects (including the MP projects) may have contributed to job saving through helping companies "to stay in business".

Results in South-South cooperation have been modest.

Implementation

In most cases implementation was very dynamic, also due to strong ownership and counterpart support. Counterparts expressed satisfaction with UNIDO inputs and services.

In financial terms implementation reached 71% of the total mobilized funds. Almost two thirds (63%) of outputs were completed either fully or at least by more than 50%. There is still a quite significant segment of outputs (19%) which are at the early stages of production or have not started yet.

Most advanced implementation was achieved by the „old“ projects (Component 1 and 2) and by the new Montreal Protocol projects (Component 3) and Technology and Investment Promotion projects (Component 6). The least progress in meeting the targets was reached in Component 7 (Western region).

Implementation was very dynamic particularly in demand and/or business driven projects, and speed of implementation the higher the more stakeholders and target beneficiaries actively participated in project steering committees.

Sometimes, implementation was delayed due to administrative delays in transferring funds or when UNIDO rules and regulations for cost recovery were not fully understood by counterparts. An exogenous factor for implementation delays was SARS in 2002/2003.

Counterparts expressed in most cases great satisfaction with UNIDO inputs and services. Use of national expertise was significant and reflected professional capabilities of the country. In several projects the subcontracting of national expertise constituted the major or one of the main input categories.

Management

Management would improve with better coordination between field and HQ.

The large CSF programme is managed in the field by a team of UBO which is much smaller than teams managing similar or smaller programmes of other international organizations. In this respect the field management of the CSF is very efficient.

While there is in principle continuous dialogue between UBO and CICETE, the Programme Development Committee (PDC) originally set up to develop new projects/programmes did not meet regularly.

In view of the fact that the CSF does not have a standing and regularly meeting team of all participating programme managers, the assignment of an alternate team leader at headquarters (HQs) appears to be required.

Uncoordinated development and implementation of projects by HQs staff led in some cases to stopping such initiatives by UBO and missing of promising opportunities to realize synergies with other projects of the CSF.

In the case of some ITCs, the possibility of making better use of UNIDO's technical expertise in the relevant area was sometimes missed for lack of cooperation by the relevant programme manager with the substantive branches at HQs.

Cooperation within and outside CSF

Limited cooperation among CSF projects.

UNIDO programme in China was not designed as an integrated programme so that cooperation among CSF projects was not an explicit objective of CSF design. A number of projects, including Montreal Protocol projects, were too specific to allow for any synergy effects from cooperation with other projects. However, some cooperation possibilities among projects existed based on similarity or complementary nature of individual projects themselves. Some of the possibilities for cooperation were utilized, such as use of expertise developed by other projects, but in a number of cases possibilities for cooperation were missed.

Sustainability

Most capacity building projects have good prospects for sustainability. Demonstrations of technologies in energy conservation are likely to be replicated.

Due to strong national ownership and high professional competence most capacity building projects have good prospects for sustainability but intensity of continuous upgrading may differ. To some extent it will depend on the capability to adjust to the continuously increasing role of the market mechanism in the operations of service organizations. The International Technology Centres depend a lot on the continuous support of the host organizations and on the Government continuous support in pursuing the objectives of South-South cooperation and providing the relevant funding. Demonstrations of technologies in energy conservation have good prospects for replication provided the supportive policy framework is finalized and operational and additional financing sources are mobilized.

Some major recommendations

CSF strategy

- 1) Design of the current CSF need not be changed at this stage of implementation. The programme should be continued and further efforts should be undertaken and stakeholders motivated to increase the components addressing reduction of regional disparities. Follow-up of strategy for the Shaanxi Province could be an entry point. The SPX programme with its emphasis on local demand and business orientation is one of the model projects for replication, possibly later in the context of a national SPX network.
- 2) The new phase should continue to have two main thrusts for intervention:
 - a. Reduction of regional disparities aiming at poverty alleviation.
 - b. Environment and energy management addressing global environmental threats.
- 3) Structure of the new CSF should allow for flexibility to accommodate both integrated programmes and individual projects. However, it is recommended to:
 - a. cluster environmental management projects (including POPs) and energy conservation projects into separate components,
 - b. keep the MP programme as a separate component of CSF (though related to the environmental management component).

Management

- 1) The Programme Development Committee (PDC) originally set up to develop and/or review new projects/programmes based on the agreed criteria for inclusion in the CSF should meet regularly. Arrangements should be made between CICETE and UBO for joint monitoring and joint assessment of new projects before they are officialized vis-à-vis the UBO.
- 2) A CSF alternate team leader should be assigned at HQs as soon as possible. All HQs official missions to China should be endorsed by the CSF team leader or, in his/her absence, by the CSF alternate team leader and a copy of travel request sent

to the Asia and the Pacific Bureau. Project progress reports should also be copied to both team leader and alternate team leader.

- 3) If in the course of the ongoing restructuring of the UNIDO field representation the UBO cannot be upgraded to a regional center, at least a deputy UR should be assigned to the UBO to allow the UR to spend more time on field visits of programmes/projects and institutions that could participate in new projects in the framework of the CSF. The research group should be maintained and any future UR should have the capability to manage and use it.
- 4) Meetings of counterparts of all CSF projects or at least of thematic clusters of projects should be organized to increase their awareness of possibilities of cooperation. By organizing such meetings the potential for cooperation among projects should be analyzed. This is particularly relevant for the environmental cluster, the energy efficiency and energy conservation cluster and the technology and investment promotion cluster, incl. the SPXs.
- 5) Field missions and technical backstopping of ITCs should be coordinated with the relevant substantive branches at HQs.
- 6) Splitting responsibility for delivery of inputs between UNIDO and an external source of expertise in the donor country, without giving the UNIDO programme manager effective control over coordination of both inputs, does not appear to be conducive to consistent and objective oriented implementation and should be reconsidered if not discouraged.

FOLLOW-UP ON RECOMMENDATIONS

Note: The ones in red refer to action, which has to be taken by the Executive Board, and the ones in blue refer to issues which need to be addressed through the decisions of the Managing Directors. Time-bound recommendations from Chapter 7 and Volume II selected for monitoring by OCG/EVG of follow-up.

No.	Issue	Recommendations	Comments by responsible body/person	Responsible for Decision	Control Timeline
1.	Relevance and design	Design of the current CSF, though not flawless, need not be changed at this stage of implementation. The programme should be continued with consideration and subsequent implementation of CSF-relevant recommendations as well as project-specific recommendations		CSF TL CICETE	n.a.
2.		The new phase, while considering the 11 th National Five-Year-Plan, the new CCA completed in December 2004, and the UNIDO Corporate Strategy, should continue to have two main thrusts for intervention: a. Reduction of regional disparities aiming at poverty alleviation. b. Environment and energy management addressing global environmental threats.		CSF TL CICETE	12 months
3.		Structure of the new CSF should allow for flexibility to accommodate both integrated programmes and individual projects. However, it is recommended to a. Cluster environment management projects (including POPs) and energy conservation projects (including CDM) into separate components, b. Keep the MP programme as a separate component of CSF (though related to the environment management component).		CSF TL CICETE	12 months
4.		Special efforts should be undertaken and stakeholders motivated to increase the components addressing reduction of regional disparities. Follow-up of strategy for the Shaanxi Province could be an entry point. SPX is one of the model projects for possible replication.		CSF TL CICETE	6 months
5.		When designing and starting new projects, special attention should be paid to the formation of project steering committees and their membership, placing emphasis on the participation of target beneficiaries to the extent possible.		CSF TL CICETE	12 months
6.	Funds mobilization	A dialogue with potential special purpose donors should start in parallel to designing the new phase of the CSF to harmonize funding requirements with their priorities and programming cycles.		CSF TL PCF/FRM	12 months
7.		Funding options for new South-South cooperation projects, particularly for additional ITCs, should be checked with the Chinese authorities and counterpart organizations as well as with potential special purpose donors prior to designing the relevant programme/project proposals.		CSF TL PCF/FRM	6 months
8.	Implementation	UNIDO rules and regulations regarding cost recovery at the project level in the field should be better explained to counterparts, particularly travel entitlements and the relevant forms.		CSF TL	6 months
9.		Ways should be found to make UNIDO rules and regulations for subcontracting requiring competitive bidding more compatible with the particular requirements of small subcontracts at the field level, in order to speed up their processing.		ADM	6 months
10.	Management	The Programme Development Committee (PDC) originally set up to develop and/ or review new projects/programmes based on the agreed criteria for inclusion in the CSF should make arrangements to meet regularly. Arrangements should be made between CICETE and UBO for joint monitoring and joint assessment of new projects before they reach UBO.		CSF TL CICETE	3 months
11.		A CSF alternate team leader should be assigned at HQs as soon as possible.		MD/PCF	3 months

12.		If in the course of the ongoing restructuring of the UNIDO field representation the UBO cannot be upgraded to a regional center, at least a deputy UR should be assigned to the UBO to allow the UR to spend more time on field visits of programmes/projects and institutions that could participate in new projects in the framework of the CSF.		MD/PCF	9 months
13.		The research group within UBO should be maintained and any future UR should have the capability to manage it.		MD/PCF	12 months
14.		The UR and his/her programme assistant should have financial means for a more frequent exchange of views with project counterparts through field visits to improve day-to-day management of the CSF and to strengthen coordination activities aiming at cooperation among projects.		CSF TL ADM PCF/ASP	6 months
15.		All HQs official missions to China should be endorsed by the CSF team leader or, in his/her absence, by the CSF alternate team leader and a copy of travel request sent to the Asia and the Pacific Bureau.		PCF/ASP	3 months
16.		UNIDO programme managers and UBO should better observe the regularity of project steering committee meetings and consult with counterparts on the establishment of such committees where they do not yet exist. The operation of established steering committees should be reviewed and corrective action be taken to ensure their regular functioning and representative membership of relevant stakeholders and target beneficiaries.		PTC branches PCF/ASP	6 months
17.		UNIDO programme managers should better observe the preparation of project progress reports according to established time schedules and provide UBO and the UNIDO Asia and the Pacific Bureau with a copy.		PTC branches PCF/ASP	6 months
18.		Field missions and technical backstopping of ITCs should be coordinated with the relevant substantive branches at HQs.		PCF/ASP PM	3 months
19.		The management arrangements where UNIDO project management does not have responsibility for most international experts due to their management by a separate entity identified by the donor, should be reviewed.		MD/PCF	3 months
20.	<u>Cooperation among projects within CSF and with other external programmes</u>	Meetings of counterparts of all CSF projects or at least of thematic clusters of projects should be organized to increase their awareness of possibilities of cooperation. By organizing such meetings the potential for cooperation among projects should be analyzed. This is particularly relevant for the environmental cluster, the energy efficiency and energy conservation cluster and the technology and investment promotion cluster, incl. the SPXs.		CSF TL	6 months
21.		Once the Climate-Friendly Technology Financing Facility has taken off the ground, close cooperation should be sought with other projects to identify appropriate investment opportunities and secure their national and international financing. The potential for cooperation of both projects with others can be assessed jointly already at this stage.		PM of the C-F Financing Facility	6 months
22.		More cooperation should be sought with the NCPC Beijing, particularly by the environment related projects, to make better use of available national expertise in the field of environment and industry and the NCPC's access to international sources of environment information and technologies.		Relevant PMs identified by CSF TL	6 months
23.	<u>PSN 2: Energy Conservation and GHG Emissions Reduction in Chinese Township and Village Enterprises – Phase II</u>	Establish contact and review possibilities of cooperation with the two CSF projects as specified in the section "Synergy effects..." (see Volume II – PSN 2).		MOA CSF TL	6 months
24.		Harmonize reporting requirements between UNDP and UNIDO in order to reduce the number of similar reports requested from PMO.		PM	6 months
25.		Include the Tongxiang recommendation regarding utilization of waste heat on the agenda of PIC and follow it up.		MOA	6 months

26.	<u>PSN 3: China Motor System Energy Conservation Programme</u>	Establish contacts with other CSF projects in the field of energy conservation and review possibility of cooperation in using the developed capabilities and/or promoting services of other projects among clients; this applies in particular to the TVE energy conservation project and, once operational, to the Climate-Friendly Technology Financing Facility project. The National Cleaner Production Centre in Beijing may also benefit from cooperation with this project, particularly through the use of its experts.		CECIC CSF TL	6 months
27.		In view of the experience accumulated by UNIDO in the course of this project make arrangements to involve UNIDO in the implementation of the follow up programme (EEUEP – Energy End Use Efficiency Programme).		CICETE	6 months
28.	<u>PSN 4: Preliminary Assessment to identify the Requirements for Developing a National Implementation Plan in the People's Republic of China as a First Step to Implement the Stockholm Convention on Persistent Organic Pollutants (POPs)</u>	In view of the size and complexity of the follow-up project, its extensive linkages with numerous implementation partners and a relatively short duration of the project (which can not be extended) i) ensure a strong project management team at the HQs, ii) analyse reasons for different duration of some processes driven by UNIDO and the World Bank (as indicated in Volume II, PSN 4).		Branch Director, PTC/MEA	6 months
29.		Review usefulness of cooperation with the two Swiss funded CSF projects		PM	6 months
30.	<u>PSN 7: Environmentally Sound Technologies Programme in China</u>	In-depth evaluation of the project is under preparation. Consider the issues identified in the project evaluation note in the course of in-depth evaluation		EVAL	6 months
31.	<u>PSN 17: Initial Establishment of the International Centre on Small Hydropower (IC-SHP) in Hangzhou, China</u>	Include on the agenda of the Coordinating Committee issues of participation of commercial organizations in the Network and of funds mobilization (recommendation was conveyed to IC-SHP in the draft prior to the meeting).		IC-SHP	3 months
32.	<u>PSN 18: Establishment of Climate-Friendly Technology Financing Facility</u>	The project should establish contacts with other CSF projects that may generate investment ideas for the VCF, in particular the TVE energy conservation project, the Electrical Motor Systems project, the POPs/NIP project and the EST project in Shandong Province.		PM CSF TL	6 months
33.		When the Technical Bureau for the Climate-Friendly Financing Facility is considered to be established in Beijing, professional capabilities developed under other UNIDO projects (such as the CECIC Energy Centres, the Hong Yuan Company established under the TVE energy conservation projects) should be considered as sources of expertise and information. They could identify and/or assess projects technically while the Fund in Shanghai would carry out the relevant financial analysis, in a complementary manner.		PM CSF TL	12 months
34.		The project document should be updated to the new situation after the ITPC Shenzhen could not provide logistic and secretariat support at the initial stage of the project and DENA not cofinance the project as originally foreseen.		PM CSF TL	6 months
35.		At a later stage, when designing and implementing the technical arm(s) of the project, relevant technical Branches of UNIDO should be involved in the process.		PM	12 months
36.	<u>PSN 21: Investment Promotion Center Shanghai (SIPC) – Assistance to Shanghai Foreign Economic Relations and Trade Commission/Shanghai Foreign Investment Commission in Inward and</u>	The UNIDO website on investment opportunities worldwide should be dynamized and information more frequently updated; UNIDO Exchange may be considered as a more business oriented alternative for posting investment opportunities.		PM PTC/IPT	6 months

	Outward Investment Promotion				
37.	PSN 23: Promotion of High Technology and Cooperation	Programme manager to work more closely with related technical branches in house, as relevant, to increase substantive technical inputs from UNIDO.		PM	6 months
38.	Partnership for Sustainable Development (IIPC) - Shenzhen	Programme manager together with national project management to take relevant steps towards reestablishment of the steering committee or finding another way of assuring continuous development and monitoring of the business plan.		PM	3 months
39.		Settle financial situation of project staff including establishment of formal contractual arrangements. The Board Chairman of SEC should not be funded by the project, not even pro forma.		PM	3 months
40.		Establish contacts and review possibilities of cooperation with relevant UNIDO projects in China, in particular <ul style="list-style-type: none"> o the Cleaner Solid Waste Management Project Phase II, o China Motor System Energy Conservation (contact CECIC Beijing, also their Centres in Shanghai and Jiangsu), o the Climate-Friendly Technology Financing Facility in Shanghai, the Project Advisory Team, o the Energy Conservation and GHG Emissions Reduction Programme in Chinese TVEs, PMO in the Ministry of Agriculture. 		PM CSF TL	6 months
41.	PSN 28/29: Enhancing IT Cooperation and Partnerships in the Asia-Pacific Region (Shanghai International IT Promotion Center – IIPC)	UNIDO to assure greater substantive support to IIPC in promoting private sector related informatization activities at the city level, to contribute to a more conducive environment for business development.		PM	9 months
42.	PSN 30: Assistance in Establishing an Industrial Subcontracting and Partnership Exchange in Beijing (SPX)	In order to realize synergies and enhance access of SPX Beijing to potential clients in terms of awareness raising SPX Beijing should cooperate more closely with Beijing Township Enterprises Bureau and the Beijing Municipal Bureau of Industrial development Management.		PM SPX	6 months
43.		Enhance company visits to start with the registration of members, both subcontracting companies and main contractors.		SPX	3 months
44.		Establish working contacts with SPX Chongqing and share experience in applying UNIDO SPX tools.		PM SPX	3 months
45.		Assist SPX Beijing in settling problems with system configuration of Outsourcing 2002 and application of tools and methodologies, particularly the questionnaires, and relevant coding.		PM	3 months
46.		For the sake of efficiency, continue as far as possible to coordinate deliveries of UNIDO inputs to both SPX projects		PM SPX	3 months
47.		Postpone active promotion of National SPX network to a stage of significant practical experience of the two existing and a number of new SPXs already in the pipeline (Guantong Province, Jiangsu Province, and Xingtiao).		PM in consultation with CICETE	24 months
48.	PSN 33: Assistance in Establishing an Industrial Subcontracting and Partnership Exchange in Chongqing, China (SPX)	The company questionnaires should be revisited to eliminate information not really required for the purpose		PM	3 months
49.		Ways should be examined to facilitate and speed up the translation of the tools and methodologies.		PM	6 months
50.	PSN 34: I.P. for Shaanxi Province, Component 1: Industrial Development	Involve Provincial Government in the forthcoming review of survey findings as well as in the process of elaborating the strategy.		NDRC	9 months

51.	<u>Policies and Strategies- Reduce Regional Disparities and Enhance Industry Competitiveness and Evaluation and Adjustment of China's Industrial Policies for Key Industries to Promote Sustainable Development – Phase II</u> <u>PSN 39: Technology Transfer for Sustained Economic Growth and South-South Industrial Partnership (ICM)</u>	Involve in the above reviews and discussions also other selected professionals from departments and organizations relevant for strategies for the Western province, such as the Leading Group for the Western Province Development		NDRC	9 months
52.		Review possibilities for cooperation with the Business Information Network project.		PM	3 months
53.		Efficient implementation may require frequent guidance and communication of the national staff with UNIDO HQs or the international expert. To allow for this arrangement it is essential that at least one professional of the counterpart is in good command of English.		SMED, Xi'an	6 months
54.		Provide necessary information on administrative procedures regarding cost recovery of project expenditures.		PM	3 months
55.		Programme manager to work more closely with related technical branches in house, as relevant, to increase technical input from UNIDO.		PM PTC branches	6 months
56.		Try to bring more technical staff under project payroll rather than the President of CBMA.		PM	3 months
57.		Assure forthcoming of additional funds for project continuation as per Trust Fund Agreement.		ICM	3 months

1. INTRODUCTION

In accordance with UNIDO evaluation policy the independent evaluation of the China Country Service Framework (CSF) was included in UNIDO evaluation plan for 2004 and agreed upon with the Government of China. Subsequently the Terms of Reference (TOR) were prepared and agreed upon (Annex 1). A short version was distributed to the project counterpart organizations for preparation in English and Chinese

Preparatory activities for evaluation started in July 2004 (preparation and review of self-evaluation project reports, compilation of CSF data, interviews of UNIDO programme managers and other relevant UNIDO staff, etc.). When launching preparatory work for the evaluation (31 July 2004), the CSF comprised 93 projects approved through 99 PADs¹ broken down as follows:

Number	Total	MP	Non-MP
PAD	99	52	47
Projects	93	52	41

According to the TOR, the Multilateral Fund for Montreal Protocol (MP) projects were excluded from evaluation (except for visit of one MP project in the Western region). Thus, the evaluation deals primarily with 41 non-MP projects.

For reasons of convenience in making frequent references to projects, every project was allocated a Project Serial Number (PSN), irrespective of the number of PADs issued per project (Annex 2).

Out of 41 non-MP projects 32 projects were self-evaluated by UNIDO programme managers. Out of these 32 projects 19 projects were selected for review by the evaluation team in the field. They were selected in consultation with the UNIDO Beijing Office (UBO) according to the criteria given in the TOR:

- a. All large non-MP projects (with budget exceeding US\$1 million) except those that have already been subject to in-depth evaluation or that had been de facto completed before the CSF became operational
- b. Projects under implementation in the Western region
- c. Projects dealing with South-South cooperation
- d. A sample of several projects dealing with technology and investment promotion

As the counterpart of one project could not be reached, in total 18 projects were reviewed by the team in the field.

The field mission was carried out from 16 October to 7 November 2004. During the field mission, 30 meetings in Beijing and 8 other cities (Jinan, Shanghai, Nantong, Tongxiang, Hangzhou, Shenzhen, Chongqing, and Xi'an) were held with UBO, CICETE, some donors and project stakeholders (Annex 5A). Only two planned meetings could not take place.

As stipulated in the TOR the evaluation was conducted at two levels: evaluation of the CSF as a whole and evaluation of selected programmes and projects. This is reflected in the structure of the report: Volume I presents evaluation of the CSF as a whole, Volume II comprises evaluation notes on the 18 individual projects. Given the limited time the evaluation team had for each project it is understood that these evaluation notes cannot substitute project-specific in-depth evaluation but they could serve as a basis for CSF-

¹ Some projects are funded from two sources, each one with a separate PAD.

wide general findings and conclusions presented in Volume I (in particular Chapters 4 and 6).

Evaluation followed a participatory approach. Preliminary findings, conclusions and recommendations were presented at the end of the field mission to UBO, CICETE and the relevant programme managers and the Evaluation Group at UNIDO. All draft project evaluation notes were made available for comments to the programme managers, the project counterpart organizations, UBO and CICETE and feedback received was considered when finalizing the evaluation notes. Similarly, the draft main report (Volume I) was made available to UBO and CICETE before finalizing the report.

The evaluation was carried out by

- Mr. Jaroslav NAVRATIL, evaluation consultant, team leader,
- Mr. Klaus BILLAND, Deputy to the Director, Asia and the Pacific Bureau, UNIDO,
- Mr. Yong LIU, national consultant.

The evaluation team was assisted by Ms. Zhiling ZHANG, interpreter.

The evaluation team wishes to express appreciation for professional feedback and a flawless logistical support extended to the team by UBO and for cooperation of most UNIDO programme managers. Special thanks are extended to CSF stakeholders in China, particularly to project counterpart organizations for their full cooperation and spirit of dedication, not to speak of generous logistical support.

2. THE CHINA COUNTRY SERVICE FRAMEWORK: AN OVERVIEW

2.1 Evolution of UNIDO-China cooperation

In the past, UNIDO technical assistance in China focused mainly on investment and technology promotion as well as capacity building (particularly R&D) in industry. Since 1997, the focus has shifted significantly towards environmental projects, in particular the MP programme, which has accounted for about 80 per cent of the total UNIDO project delivery in the country. This shift is justifiable since rapid industrial growth of the country has resulted in significant degradation of the environment, which needs to be curbed or reduced in order to ensure sustainable development. However, since the inception of the CSF, UNIDO has been changing the pattern of technical assistance and the share of MP projects has come down to less than 70% of total delivery in 2003 with a tendency to decline further to around 60% in 2005.

At the time of the preparation of the CSF, the portfolio of on-going projects in China was structured in a way that the following service modules (SMs) were provided, with a heavy orientation towards environmental programmes:

- Industrial Governance;
- Investment and Technology Promotion;
- Environmental Management;
- Industrial Energy and Implementation of Kyoto Protocol, and
- Implementation of Montreal Protocol.

Apart from technical assistance, UNIDO has also provided services in the context of its global forum function in China to provide a platform for exchanging views and disseminating knowledge and information on pertinent industrial development issues affecting developing countries. An important event in this regard was the "Asia-Pacific Regional Forum on Industrial Development, Shanghai 2000" which was held in cooperation with the Government in December 2000 and considered by the over 200 participants as an excellent opportunity to discuss the relevant linkages - from regional perspective - among technology (incl. environment), sustainable development and trade.

Before the start of the CSF in 2001, UNIDO, in close coordination with the Government authorities, concentrated its operations in China on activities which were very much client-oriented, focused, highly objective, strategic, and linked to major FDI and sources of global funding. With this strategy, it was expected that UNIDO's contribution would result in a more positive impact on the fast development of the country. Analysis of the programmes at the time revealed that, apart from the MP programme, UNIDO interventions in China were sometimes rather ad hoc in nature. A more integrated approach combined with concerted planning should be adopted to take advantage of synergies and achieve higher impact. Before this background, and based on the analysis of salient industrial development issues and Government priorities, UNIDO then defined, jointly with the Government, the most important priorities and demand for its services and molded them in a two-pronged objective, which became the main orientation of the CSF:

- (i) Increasing competitiveness and sustainability of the industry (especially in the Eastern provinces) through industrial restructuring, technological upgrading and environmental projects in the face of the impending accession of China to the WTO; and

- (ii) Accelerating sustainable industrial development of the Western provinces as a way to reduce economic and social disparities, particularly between the Eastern and Western regions of the country.

With the CSF started in 2001, the UNIDO project delivery in China went up from US\$11.48 million p.a. during the five-year-cycle 1996-2000 to US\$16.03 million p.a. during the present five-year-cycle 2001-2005, which corresponds with the 10th National Five-Year-Plan period. Thus, the China programme is the largest of UNIDO worldwide and represents approx. 17% of the Organization's annual TA delivery.

Since the start of the CSF, UNIDO-China cooperation was further diversified, although the Montreal Protocol continues to be the main programme component. Significant new projects were approved in the framework of the CSF and its established priorities in the following areas:

- a. Environment: (i) cleaner solid waste management; (ii) environmentally sound technology development; (iii) climate friendly technology financing; (iv) persistent organic pollutants (POPs).
- b. Investment and Technology Promotion: (v) inward and outward investment promotion; (vi) international subcontracting and partnership exchanges; (vii) business information network; and
- c. (viii) ECDC/TCDC projects.

Because of important future business opportunities for individual bilateral donors UNIDO may have to consider that a certain competition with other service providers and the speed of development (GDP growth) of the Chinese economy will be very important variables affecting the performance of UNIDO's programme in the near future.

2.2 CSF in the context of socio-economic development in China

The Chinese economy is still in the process of transition from a command economy to a socialist market economy. Governance is a strategic concern of the Party and the Government. The role of the state continues to evolve: narrowing down the nature and scope of state intervention; placing increased reliance on policy levers and market mechanisms rather than administrative commands; and working to create an environment for civil society to emerge as partners in development.

China's accession to the World Trade Organization in 2001 helped strengthen the country's ability to maintain strong growth rates but at the same time put additional pressure on the hybrid system of political control and growing market influences. According to the World Bank, measured on a purchasing power parity basis, China stood as the second-largest economy in the world after the US in 2002. In nominal GDP, China was in the sixth place, between France and Italy. However, with its 1.3 billion people, the PPP GDP per capita was just US\$4,400². Nominal GDP per capita was US\$940.

The challenges China has to face today include growing rural-urban income disparities, growing regional disparities, rising unemployment due to lay-offs in loss-making state-owned enterprises, and environmental deterioration.

While the Eastern, especially the coastal provinces have enjoyed rapidly improving per-capita incomes, the Western (inland) region (Shaanxi, Gansu, Qinghai, Ningxia, Xinjiang, Sichuan, Chongqing, Yunnan, Guizhou, and Xizang) remains largely underdeveloped, with little industry. Of China's poor who lack adequate food and clothing, the majority live in this region. But also the old industrial bases in the

² www.worldbank.org/data/databytopic/GDP_PPP.pdf, retrieved on Sept. 29th 2003.

Northeastern provinces of China (Heilongjiang, Jilin and Liaoning) are posing problems. Covered with obsolete and unprofitable factories, the area has become known as the Chinese "rust-belt". The CSF addresses the problem of regional disparities by its second main objective, i.e. to reduce disparities between the Eastern and Western regions. The Government has been struggling to keep afloat the large state-owned enterprises, many of which had been shielded from competition by subsidies and had been losing the ability to pay full wages and pensions. Employment in the state-owned sector continues decreasing. According to the National Bureau of Statistics – NBS, the labour force in China in 2003 was around 740 million people, 66 million of which worked in the SOE sector. The CSF addresses the problem of SOEs by projects aiming to increase their efficiency through good governance and industrial restructuring. Another problem is China's huge force of rural surplus labour. From 80 to 120 million surplus rural workers are adrift between the villages and the cities, many subsisting through part-time low-paying jobs. The promotion of economic growth in rural areas, the creation of new jobs for the poor, the development of the urban social safety net and the reform of the social security system are therefore needed to ameliorate the abovementioned social costs of the economic reform programme. The CSF addresses this problem through its objective to develop the SMEs in the Western region through capacity building and establishment of linkages with large firms (*inter alia*, subcontracting and strategic alliances), within and outside the region, as well as with foreign countries.

China has serious pollution problems. Urban areas suffer from a growing number of vehicles, many of them with inadequate exhaust controls. These same areas are often the home to a multitude of factories without proper effluent management and during the winter are polluted by household burning of coal and other inefficient fuels. China's rivers and lakes are polluted by improperly treated industrial, agricultural and urban waste. Industries in certain sectors (e.g. brewery, chemical, energy, metallurgy, petrochemical/refinery, pulp and paper, textile) are far more likely to be sources of pollution than others. Environmental problems are fully recognized by the Government. China was one of the first countries to formulate a national Agenda 21 following the United Nations Conference on Environment and Development, held in Rio de Janeiro in 1992. Several environmental protection laws, standards and regulations have been passed, but enforcement remains a challenge. One of the main thrusts of the CSF is to tackle pollution problems at all levels, through environmental management, cleaner production technologies, and under the multilateral environmental agreements (MEAs), such as the Montreal Protocol, the Stockholm Convention on POPs, the Kyoto Protocol and the Global Environment Facility (GEF).

China's energy consumption per capita, though still relatively low, is growing rapidly. Over 50 million rural residents do not have access to electricity. Many cities, such as Guangzhou, urgently need more electricity to meet their economic development targets. The Government estimates that, assuming GDP growth of 7.5-8% a year, demand for power will expand by 5% a year over the next five years. The CSF addresses this problem with its assistance in energy saving and energy conservation in industry with the aim to demonstrate their viability and replicate the results in industry at large. Thus, the CSF also corresponds also to a large extent with the major objectives of the 10th Five-Year Plan, 2001-2005, i.e. (i) Maintaining rapid economic development and achieving strategic restructuring of the economy; (ii) Achieving significant progress in the establishment of modern corporate system in State-Owned Enterprises (SOEs), improving the socialist market economy, and increasing involvement in international

economic cooperation and competition; (iii) Creating employment opportunities, improving the living standard of the people while continuing to strengthen ecological and environmental protection; (iv) Accelerating the development of science, technology and education. The priority to reduce regional disparities with a focus on the Western region was added late to this catalogue.

2.3 Objectives, scope and structure of the CSF

The Country Service Framework for China, signed in December 2001, was formulated jointly by UNIDO and the Government of China in order to function as a guide for UNIDO operations in China and as an instrument for the Government to monitor the progress of cooperation with UNIDO during the five-year period (2001-2005).

2.3.1 Objectives

Objectives and areas of UNIDO interventions as outlined in the CSF document are presented in the Figure on the next page. Two principle Government objectives, namely

- strengthening industrial competitiveness in face of the accession to the WTO and
- reducing disparities between the Eastern and Western regions

were reflected in two development objectives (Strategic Thrusts) of the CSF, each one of them with different geographical focus, and complemented by the South-South Cooperation.

Under the CSF UNIDO was expected to focus its interventions on the following areas:

Eastern region:

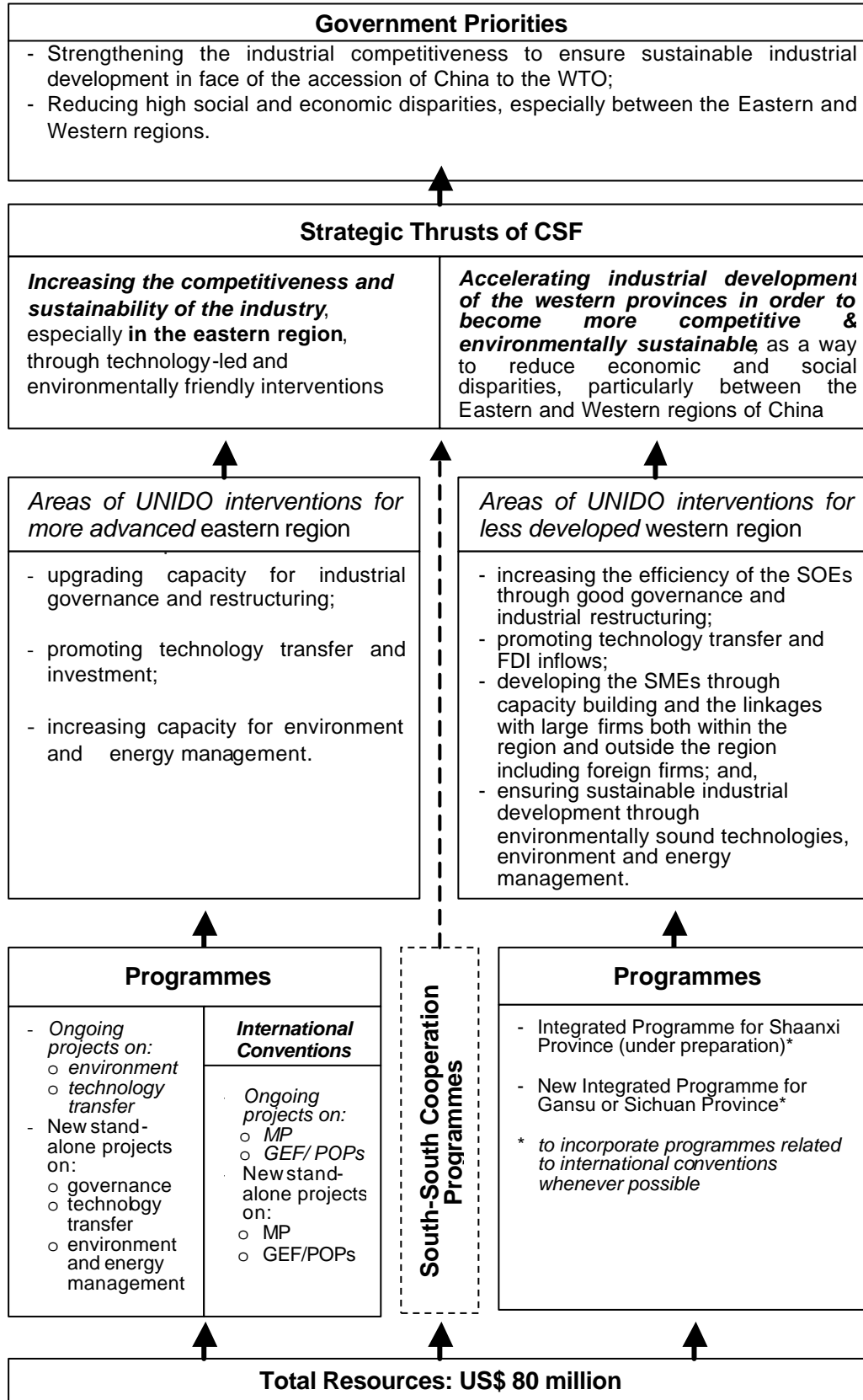
- Upgrading capacity for industrial governance and restructuring;
- Promoting technology transfer and investments;
- Increasing capacity for environment and energy management.

Western region:

- Increasing the efficiency of the SOEs through good governance and industrial restructuring;
- Promoting technology transfer and FDI inflows;
- Developing the SMEs through capacity building and the establishment of linkages with large firms, both within and outside the region including foreign countries; and,
- Ensuring sustainable industrial development through the promotion of “Environmentally Sound Technologies” (EST) plus environment and energy management.

The Government objectives are mutually not exclusive: strengthening industrial competitiveness can contribute to reduction of regional disparities. Relating the first objective in the CSF strategic thrusts primarily to the Eastern provinces is, therefore, rather a general guidance than a straight jacket, as it is apparent from the similarity of areas of UNIDO interventions to achieve the two strategic thrusts in the two geographical regions. The only significant difference in the interventions in Western provinces is special focus on SMEs and restructuring of SOEs. Therefore, while it is well substantiated to have special programmes for the Western region, the first objective turned out to be applied for the whole country.

**Figure 1: Country Service Framework for China
2001-2005**



2.3.2 Scope and structure

At the time of signing the CSF document it was estimated that the whole CSF programme would require ambitious US\$80 million, including psc (programme support costs). Later (2002) the target was raised to US\$80 million excluding psc. The CSF was structured in components as follows:

Table 1: Formal CSF structure

Component		Planning Figure (US\$)
Number	Title	
1	Ongoing MP projects	29,000,000
2	Other ongoing projects	10,000,000
3	Phase-out of CFCs and Methyl Bromide	23,000,000
4	Energy efficiency/POPs	5,000,000
5	Environmental management and energy efficiency	6,000,000
6	Technology and investment promotion	2,000,000
7	Two integrated programmes for Western region	4,000,000
8	South-South Cooperation	1,000,000
	<i>Total</i>	<i>80,000,000</i>

The first two components consist of projects which were ongoing at the time of CSF formulation. For the newly envisaged programmes and projects the CSF outlined five new components, out of which three are thematic (Component 4-6), one has a distinct geographical orientation (Component 7) and one has an international orientation (Component 8).

Under CSF Component 7 it was envisaged to have two integrated programmes in Western provinces. This was in accordance with the draft guidelines for Country Service Frameworks (Addendum 6 to Guidelines for integrated programmes) which stipulate that CSFs "...consist of integrated programmes of local/sectoral nature and/or projects." Based on a programming mission, one integrated programme containing four IP components was outlined for the Shaanxi province but only a fraction of the proposed programme could be elaborated for implementation so that the CSF consists of individual projects only.

2.4 Funds mobilization

Table 2: Actual funding (US\$) as of 30 September 2004³

Component		Planning figure	Total Allotment	%
Number	Title			
1	Ongoing MP projects	29,000,000	27,413,351	94.5
2	Other ongoing projects	10,000,000	11,536,011	115.4
3	Phase-out of CFCs and Methyl Bromide	23,000,000	23,179,435	100.8
4	Energy efficiency/POPs	5,000,000	5,356,531	107.1
5	Environmental management and energy efficiency	6,000,000	4,161,275	69.4
6	Technology and investment promotion	2,000,000	2,293,468	114.6
7	Two integrated programmes for Western region	4,000,000	696,222	17.4
8	South-South Cooperation	1,000,000	372,750	37.3
	General management		58,465	n.a.
	Total	80,000,000	75,067,508	93.8

In general, funding of the CSF projects has been successful and according to plan, with the exception of Component 8 South-South Cooperation, Component 7, i.e. the two originally planned integrated programmes which never materialized, and to some extent Component 5. In real terms, funds mobilization for Component 5 may be a bit more successful because some of the projects under Component 2, which exceeded the planning target, would in fact strengthen Component 5, as the analysis in Chapter 2.5 suggests. Very good funds mobilization was achieved for Component 6. Funds mobilization will continue until the end of 2005. Therefore, the possibility exists that the US\$80 million target is reached, although for individual components the "imbalance" shall remain.

Table 2 also shows that the highest funding levels were attained with the Multilateral Environmental Agreements (MEA). In spite of the high priority set for the Western region in the CSF to reduce the East-West disparities in economic development, funds mobilization for this purpose was very limited. As manifested in the case of the two integrated programmes for the Shaanxi Province, some other international or bilateral agencies with readily available sources of funds (in this case EC) were in a better position to offer faster and a larger package of services to the provincial stakeholders. However, the successful self-financing of the SPX in Chongqing shows a certain potential for local funds mobilization if projects in this region are particularly demand and business driven.

Given the dominance of the Montreal Protocol in the CSF, the Multilateral Fund of the Montreal Protocol (MP/MF) is by far the main funding source with over 65 % of the total allotment (US\$50.6 million as of September 2004). Apart from the MP/MF, the following funding sources played a major role in financing the projects of the CSF:

1. Global Environment Facility (GEF), incl. POPs (approx. US\$8.33 million).
2. Special Purpose Donor contributions from The Netherlands and Switzerland to the Industrial Development Fund (IDF) (approx. US\$8.24 million).
3. United Nations Fund for International Partnerships (UNFIP) of the United Nations Foundation (UNF) (approx. US\$1.87 million).

³ Source: Progress Report, as of 30 September 2004.

4. Direct funding from Chinese counterpart agencies (approx. US\$1.58 million)
5. Special Purpose Donor contributions of China to the IDF (approx. US\$1.51 million).

With its significant contribution to the Industrial Development Fund, China has joined the group of Special Purpose Donors, which has become an important feature for funding projects under the CSF primarily conceived and proposed by the Government. China has a standing convertible and non-convertible IDF account with UNIDO from which CICETE authorizes the Organization to draw for specific projects in the framework of the CSF. Often project requests by CICETE are already accompanied by the relevant funding authorization from their IDF account with UNIDO.

The Special Purpose Donor funding of several large-scale projects in the environmental and industrial policy areas by The Netherlands and Switzerland has been swiftly forthcoming.

Direct funding from national counterpart agencies was in some cases particularly dynamic when the projects met strong local demand and/or were business driven. This was the case for the SPX in Chongqing and the Shanghai Investment Promotion Centre (SIPC), both projects in regions with particularly dynamic economic development.

Funding from UNFIP plays a particular role in the environmental management and energy area. The UNF financed projects in energy conservation (motor systems) and energy generation through hydropower (IC-SHP) as well as the preparations for establishing a climate friendly financing facility (venture capital fund). This facility would promote national and FDI in environment friendly technologies in the medium and long run. GEF funding played a prominent role in the energy conservation and GHG emissions reduction in TVEs and in preparing China's POPs National Implementation Plan (NIP) project, which led to the approval of the large-scale follow-up project with Italian co-financing shortly after the evaluation mission.

A particular feature of the ITCs are their too optimistic funding expectations which did neither seem to take into account donor priorities nor the financial potential of the host institutions at the time of project preparation. This led in several cases to significant delays in implementation and even deviation from originally established work plans. Particularly special purpose donor contributions from donor countries did never materialize.

The SARS crisis in 2002/3 also contributed to funding delays in some cases.

2.5 Status of implementation

2.5.1 Status of expenditures

Status of implementation can be measured by status of expenditures and status of completion of outputs. The latter indicator was assessed in the course of self-evaluation by UNIDO programme managers (see Chapter 3). In terms of expenditures the sum of expenditures of all CSF projects reached 70% of the total CSF planning figure (see Table 3).

Table 3: Expenditures (US\$) as of 30 September 2004⁴

Component		Planning figure	Expenditures	%
Number	Title			
1	Ongoing MP projects	29,000,000	26,614,798	91.7
2	Other ongoing projects	10,000,000	6,993,884	69.9
3	Phase out of CFCs and Methyl Bromide	23,000,000	17,590,207	76.5
4	Energy efficiency/POPs	5,000,000	346,167	6.9
5	Environmental management and energy efficiency	6,000,000	2,875,811	47.8
6	Technology and investment promotion	2,000,000	1,608,924	80.4
7	Two integrated programmes for western regions	4,000,000	285,481	7.1
8	South-South Cooperation	1,000,000	151,926	15.2
	General management		30,130	n.a.
	<i>Total</i>	<i>80,000,000</i>	<i>56,497,328</i>	<i>70.6</i>

Most advanced implementation was achieved by the “old” projects (Component 1 and 2) and by the new Montreal Protocol (MP) projects (Component 3) and Technology and Investment Promotion projects (Component 6). The least progress in meeting the targets was reached in Component 7 (Western region) and Component 4 (Energy and POPs). The latter component, however, will increase implementation considerably within the next year and – in view of the recently approved additional funding – it is likely that it will reach the planning target, though probably slightly beyond the time horizon of December 2005.

2.5.2 Adjustment of non-MP components

When launching preparatory work for the evaluation (31 July 2004), the CSF comprised 93 projects approved through 99 PADs⁵ broken down as follows:

Number	Total	MP	Non-MP
PAD	99	52	47
Projects	93	52	41

According to the Terms of Reference the Montreal Protocol projects are not subject of the evaluation so that the evaluation focuses on non-MP projects. Due to time pressure some of the non-MP projects were not properly allocated to thematic components. For the purpose of evaluation the non-MP components were adjusted in consultation with the UNIDO Beijing Office as follows:

- all projects listed under Component 2 (“Other ongoing projects”) were distributed (in accordance with their purpose) among components 4 – 8 ;
- several projects listed under components 4 – 8 were reallocated in order to improve compliance between project and component objectives.

It would have been possible to reconstruct some components even further, for example POPs currently in Component 4 (together with Energy projects) would be more appropriate in Component 5 (Environmental management) but the evaluation team preferred to respect some original decisions on project allocations in order not to lose at least an elementary relation with the original structure.

⁴ Source: Progress Report, as of 30 September 2004.

⁵ Some projects are funded from two sources, each one with a separate PAD.

Based on the above changes the list of projects was restructured. For reasons of convenience in making frequent references to projects every project was allocated a Project Serial Number (PSN), irrespective of the number of PADs per project (see Annex 2).

2.5.3 Expenditures by adjusted components

Adjusted (non-MP) components – because of their different project composition - do not allow comparison with planning targets of the original components but they allow comparison of expenditures with allotments.

**Table 4: CSF Allotments and Expenditures by Adjusted Components (US\$)
(as of 31 July 2004)**

Component No.	Adjusted Component	Allotments	Expenditures	%
1	Ongoing MP projects	27,413,351	25,966,664	94.7
3	Phase out of CFCs and Methyl Bromide ("new" MP projects)	23,159,435	15,718,843	67.9
Sub-total for MP projects		50,572,786	41,685,507	82.4
4	Energy Efficiency/POPs	10,754,522	6,410,678	59.6
5	Environmental management	10,218,467	8,559,070	83.7
6	Technology and investment promotion	3,346,232	2,626,054	78.5
7	Western regions	770,404	372,396	48.3
8	South-South Cooperation	372,750	149,578	40.1
Sub-total for non-MP projects		25,462,375	18,117,776	71.2
<i>Total</i> ⁶		76,035,161	59,803,283	78.6

Adjusted components provide a good overview about thematic orientation of the CSF and its status of implementation. The following findings are apparent from the table:

- (i) After 3.5 years of implementation, the total expenditures reached almost US\$60 million; even though a part of it was spent on inputs and services delivered prior to 2001, it is apparent that annual delivery must have been very high during the implementation years (annually approx. US\$16 million).
- (ii) The overall level of expenditures compared with actual funding (78.6%) is adequate to the implementation time and it is likely that in the remaining time till December 2005 the continuing deliveries will bring expenditures close to the total budget allotments and overall implementation close to the originally planned targets.
- (iii) Break down of the components shows that progress in implementation is not equal: MP components are doing a bit better than non-MP components.
- (iv) From among the non-MP components, which are in the focus of the evaluation, the most advanced implementation is recorded by Component 5 and Component 6 while Component 7 and Component 8 are lagging behind even in relation to actual funding.
- (v) In absolute terms it is apparent that Environmental Management and Energy Efficiency/POPs represent the thrust of the non-MP part of the CSF and that projects for western regions and South-South Cooperation have so far represented a very small share in total delivery of UNIDO inputs and services.

⁶ For some reasons not analyzed by the evaluation the aggregate figures for the CSF calculated on the basis of the complete list of UNIDO projects (with cut off date 31 July 2004) are somewhat higher when compared with the aggregate figures taken from the UBO Progress Report (30 September 2004). Possibly the Progress Reports do not include some projects (such as the projects that were cancelled).

2.5.4 Delivery by category of inputs

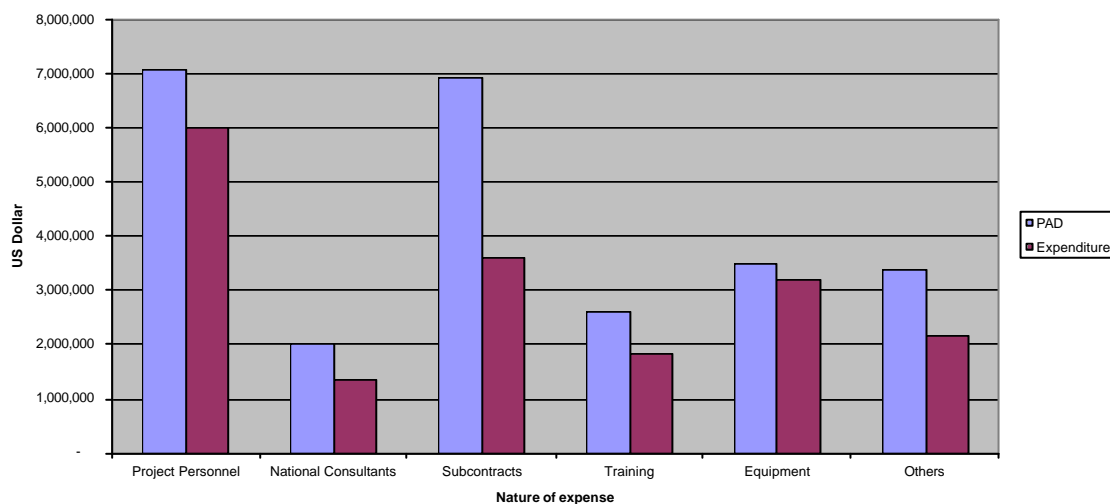
Breakdown of UNIDO delivery of inputs and services for implementation of the non-MP components is reflected by nature of expenses shown in the bar chart. Comparison with UNIDO programmes in two other countries evaluated in the previous years shows that salient feature of implementation in China is a relatively higher use of subcontracts.

Input Category	IP Ethiopia	IP Uganda	CSF China
Project Personnel	40	37	33
National Consultants	11	21	7
Subcontracts	1	2	20
Training	14	13	10
Equipment	26	17	18
Others	8	10	12
<i>Total</i>	<i>100</i>	<i>100</i>	<i>100</i>

Use of national consultants is nominally lower than in the other two countries but given the fact that subcontracts in China are concluded usually with national organizations, the use of national expertise in China is the highest among the three countries. This reflects the high potential of the country to engage national expertise in implementation of technical cooperation projects.

The PAD and expenditure of CSF CPR by nature of expense is as follows.

PAD and Expenditure of CSF CPR by nature of expense (as at 31 July 2004)



2.6 Coordination with UNDAF and other programmes

The goals of the UNDAF in China are the following three:

- Goal One: Promote sustainable development to reduce disparities.
- Goal Two: Support favorable conditions for the national reform and development process.

Goal Three: Assist China's efforts in meeting global challenges and promote international cooperation.

The CSF responds to a varying degree to all these goals. In short, Goal One is addressed by the CSF priority to reduce regional disparities in economic development between the Eastern and Western regions though this could not be realized to the extent originally foreseen. Goal Two is addressed particularly by the environmental focus of CSF operations, especially as far as environmental management is concerned. And Goal Three is addressed by the South-South oriented projects, *inter alia*, through the ITCs, and the integration of the conclusions of international conventions such as POPs and others.

The UN Resident Coordinator (UNRC) system in China, represented by the UNDP Resident Representative, holds regular meetings of the UN Country Team (UNCT) in which the UR and team leader of the CSF is an active member. UNDP is not actively involved in the CSF; any involvement in terms of coordination of cooperation takes place through the UNCT. Therefore, there is also no UNIDO interlocutor at the UNDP office. This function has become superfluous since the so-called theme groups have been established, as follows: (i) Sustainable Industrial Development and Energy, (ii) Basic Education and Human Resource Development; and (iii) Disaster Management. The UNIDO Representative co-chairs the first theme group and is a member of the other two groups, in the second one as an active member in the UNESCO/UNICEF run team and in the third group for reporting only. Through the co-chairmanship of the first theme group on SID and energy and UNDP's reconfirmation that environment and energy are key in the UN cooperation agenda with a view to the UNDAF, a certain degree of CSF coordination with UNDAF seems to be assured. However, UNIDO does not participate in the regular informal donors group meetings since the Organization has not reached the defined threshold in terms of annual implementation required for membership of the informal donors group. Here the UN agencies (15) in China are represented by the UNRC. The UBO has also significantly contributed to the new CCA.

Since the World Bank and UNIDO have become the two most important multilateral advisors to the Government on SID, there is a certain exchange of information between the UBO and the Bank with regard to either's activities in this field.

The UBO has become a well established and recognized source of information sought for by bilateral donors and the diplomatic community at large. Frequent meetings and presentations are a basis for disseminating the achievements of the CSF and thus paving the ground to possible coordination where this is deemed relevant and possible. However, rather than coordinating concrete activities with bilateral donors and aid agencies, it is the strategic advice of the UBO based on experience with CSF operations which render benefits to other actors of the multi- and bilateral development community on the ground.

2.7 CSF management

At its outset, it was decided that the CSF be managed by a management team comprising UBO, on behalf of UNIDO, and CICETE, on behalf of the Government. It was further agreed that it be reviewed on an annual basis to assess its progress. A Programme Development Committee (PDC) was set up to develop new projects/programmes based on the agreed criteria for inclusion in the CSF from time to time.

The UNIDO Representative in China is the team leader of the CSF while the programme managers are all based at HQs. There is no assigned alternate team leader which would be advantageous when the UR/TL is absent from the office for longer periods and when issues have to be primarily handled at HQs. Different from the integrated programmes, the CSF has no formally established and regularly meeting CSF team. Both facts can lead to a lower degree of control and day-to-day management and coordination of CSF operations as well as project identification and development in the framework of the CSF.

The management issues of the CSF can basically be grouped in two, as follows:

- Project development
- Programme monitoring

a) Project development

Partly also in view of the relatively broad coverage of the CSF priorities, all projects recently developed fall under the CSF. There are, however, serious shortcomings in the coordination of project initiation and development activities. Sometimes, projects are initiated and developed by UNIDO technical staff at HQs without awareness or participation of UBO and/or CICETE. As a consequence, some project ideas and proposals had to be stopped by UBO, as they did not meet the CSF criteria. On the other hand, promising opportunities to realize synergies with other projects of the CSF are missed from the outset or not even developed during project implementation. In so far, this is also a problem of project monitoring. In the case of the "Establishment of a Climate-Friendly Technology Financing Facility" UBO was not aware of the activities of the project being implemented in the country up to a point when the UNF (the funding agency) visited them in Beijing and could not understand such lack of information and coordination. When UBO presented their views about environmental management in China, the UNF was surprised that despite UBO's awareness of the subject, the referred project was "ignoring" the other UNIDO activities in the country. UNF was so disappointed with the management of the project at HQs that they asked whether it could be managed by UBO. Shortcomings in managing and coordinating project development are also partly due to the fact that the PDC did not meet regularly as originally planned.

b) Programme monitoring

Normally twice a year so-called CSF Progress Reports are foreseen for submission to the meetings of the UNIDO Governing Bodies. These reports are prepared by UBO in cooperation with HQs. They were prepared regularly providing a general overview of the development of CSF operations. The UBO has a National Programme Assistant who is permanently in touch with project counterpart agencies all over the country, while the UR places more emphasis on the general programme management and refining concepts to improve the adequacy of UNIDO's response to the development requirements of the country. While there is a fluent and continuous dialogue between the UBO and CICETE, full transparency of HQs field missions and operations was not always given, leading to management and sometimes serious coordination problems. It is understood that the very reduced staffing of the UBO (UNIDO is one of the three largest UN agencies in terms of programme volume, but with only 10-15% of the staff of the other two, UNDP and UNICEF) makes it difficult to be in continuous touch with all relevant project counterpart organizations on the ground. However, visits of the Programme Assistant at project sites and a closer involvement of the UR in programme monitoring at the field level when this is required may strengthen the management role of UBO towards CSF programme monitoring, also with regard to early identification of new project ideas and proposals and their screening. This would be facilitated by the strengthening of the UBO through the assignment of a Deputy UR.

3. SELF-EVALUATION OF NON-MP PROJECTS

3.1 Projects subject to self-evaluation

In the course of preparatory evaluation activities UNIDO programme managers of most non-MP projects prepared self-evaluation reports (SERs) with assessment of completion of project outputs and their performance rating. Out of 41 non-MP projects the self-evaluation of project outputs was carried out for 32 projects (though in the case of the programme manager for International Technology Centres – ITCs – the process was considerably delayed and incomplete). Self-evaluation of project outputs was not carried out for 9 projects either because they serve as contracts for using associate experts (2) or because they were cancelled before implementation started (3) or due to other reasons (project approved but only starting, project too small, a regional project with its regional focus outside China, and an old project completed shortly after CSF started with no information on outputs available). For project specific details see Annexes 3 or 4. In total, 167 outputs were identified within the non-MP projects, out of which 146 were self-evaluated (87%). Self-evaluation assessed two dimensions of implementation: completion of outputs and rating of the performance. In most cases the subsequent verification by the evaluation mission in the field confirmed that assessments by programme managers were fair but in a few exceptions, such as in the case of the ITCs, they were on the optimistic side, particularly in the case of performance rating. This needs to be kept in mind when interpreting the data. In spite of that the self-evaluation provides a reasonably good orientation about the status and performance of the totality of non-MP projects, including those not reviewed by the evaluation mission in the field.

3.2 Completion of outputs

Completion of project outputs (%)

	Total	Not yet started	< 25%	26-50%	51-75%	76-99%	100%
Number	146	17	14	24	20	23	48
%	100	12	9	16	14	16	33

According to the assessments by programme managers almost two thirds (63%) of outputs were completed either fully or at least by more than 50%. There is still a quite significant segment of outputs (19%) which are at early stages of production or have not started yet.

Compared with financial implementation (71% - see Chapter 2.5) the assessment signals a risk of a small discrepancy: completion of outputs seems to be less advanced than financial implementation.

For project-specific details see Annex 3.

3.3 Performance rating

Rating of project outputs

	Total	1	2	3	4
Number	146	4	122	18	2
%	100	3	84	12	1

Explanatory note: 1 highly satisfactory, more than planned
 2 satisfactory, as planned
 3 less than satisfactory, less than planned
 4 unsatisfactory, a failure

The rating reflects primarily the quality of deliveries (inputs and services) and of the resulting outputs, disregarding delays, if occurred.

Self-evaluation by UNIDO programme managers shows a very positive situation: almost 90% of outputs are rated as satisfactory or highly satisfactory. Subsequent review of a number of projects in the field confirmed that in principle the quality of majority of services and resulting outputs reviewed by the evaluation mission has been indeed satisfactory or highly satisfactory, but the percentage of category 2 seems too high. Its reduction by several points “in favour” of category 3 would bring the overview picture closer to reality.

For project-specific details see Annex 4.

4. EVALUATION FINDINGS ON NON-MP PROJECTS

This chapter presents programme-wide findings of the evaluation team based on review and field visits of 18 projects (for project details see Volume II).

4.1 Relevance and design

4.1.1 Relevance

Relevance is the extent, to which a programme/project addresses key industrial development constraints, is related to Government policies and priorities, the Millennium Development Goals and other international targets/agreements and is related to UNIDO Business Plan.

Relevance of the CSF development objectives (their derivation from Government priorities) is explained and documented in Chapter 2.3. There is continuing agreement among the stakeholders that the objectives of the CSF are still valid. The issue is to what extent objectives of individual projects are in compliance with these CSF development objectives, that is with

- strengthening industrial competitiveness in face of the accession to the WTO and
- reducing disparities between the Eastern and Western regions

and with thematic interventions elaborated for the Eastern and Western regions. Implicitly, compliance with these objectives and thematic interventions, elaborated jointly with the Government, should ensure demand orientation of the projects at the time of formulation and approval but in real terms it needs not be always the case. Furthermore, the issue is to what extent individual projects are in compliance with internationally sanctioned goals as well as with UNIDO strategy (Business Plan).

CSF development objectives are broad enough to accommodate easily objectives of all CSF projects, particularly if sustainable industrial development is viewed as a dimension of long-term competitiveness. While all CSF projects complying with CSF development objectives meet a demand, the category or intensity of demand may differ:

- Projects meeting a pressing Government need to comply with obligations arising from international conventions and agreements (the Stockholm convention on POPs, and of course the Montreal Protocol).
- Projects identified and requested by the Government to support explicit government priorities or programmes (SID, regional policy for Western provinces, three-way catalysts for automobiles, advanced pesticides for seed dressing, e-commerce in China Commerce Service Network – CCSN).
- Projects not identified but strongly supported by the Government because they address Government priorities of distinct importance (Energy conservation in TVEs, Electrical motor systems).
- Projects initiated by provincial governments, municipalities, or other organizations (Shanghai Investment Promotion Centre, Chongqing and Beijing SPX, Shaanxi Information Network).
- Projects initiated by external stakeholders, addressing problems of the country but requiring promotion to raise interest of Chinese stakeholders (EST Shandong, Climate-Friendly Technology Financing Facility).

As apparent from Chapter 2.5, in absolute terms the Environmental Management and Energy Efficiency/POPs projects represent the thrust of the non-MP part of the CSF and this thrust is highly relevant. Unfortunately, projects for the Western region, also highly relevant, represent a small fraction of the programme.

Several projects pursued the complementary CSF objective: the South-South cooperation (ITCs - the International Technology Centres, including the International Centre for Small Hydropower IC-SHP). These projects pursue either of two Government objectives (or both): disseminating Chinese technology competence and experience in other regions and countries (example: IC-SHP) and acting as platform for transferring advanced technology from abroad, adapting it and sharing the results of adaptation with other developing countries (example: ITPC Shenzhen). While compliance with objectives of the Chinese Government is apparent, most of the Chinese technology and research centers face problems in identifying and marketing their services in other developing countries, in some cases even in spite of internationally proven technical competence of the center (IC-SHP). In 2002, UBO prepared a draft project proposal on South-South cooperation aiming at overcoming the specific shortcomings and difficulties in this field.

In view of on-going reforms in the country in the course of CSF implementation, some projects became less relevant (support to the China Commerce Service Network). In one case the needs analysis to ensure full relevance of the service was still in process at the time of evaluation (Shaanxi BISnet). In one case (Strengthening the Investment and Technology Promotion System - ITPS) was questionable due to duplication with another project and frequent changing of the problem area for intervention; the project was terminated before completion.

All projects claim to operate within UNIDO's mandate and Business Plan and indeed the argument can be accepted. Some doubts could be raised about relevance of assisting a prime recipient of FDI in Asia in investment promotion but the Shanghai Investment Promotion Centre shifts emphasis more and more on outward investment. In a few cases, the projects ventured into areas partly outside of traditional competence of UNIDO (city information systems, venture capital fund in the Climate-Friendly Technology Financing Facility project; e-commerce in the CCSN).

The CSF and its projects are to a certain extent in line with the MDGs. Particularly the components with the environment theme, i.e. the Montreal Protocol projects, POPs, and environmental management and energy efficiency projects are well in line with MDG 7 "Ensure Environmental Sustainability".

The SPX projects are supportive to MDG 8 "Develop a Global Partnership for Development" in as much they foster cooperation with the private sector to make available the benefits of new technologies. The emphasis of new technologies in information and communication technologies under the MDG could possibly be particularly addressed by the IITPC in Shanghai, if its operations were more tuned to the needs of the private business sector, particularly to the requirement of small and medium industries.

Finally, the CSF placed emphasis in its original priorities on the alleviation of regional disparities between the Eastern and Western provinces, thus addressing MDG 1 "Eradicate Extreme Poverty and Hunger" which is very relevant in the Western region. However, this MDG could only be marginally addressed in the course of its implementation.

4.1.2 Design

Large projects were designed with care and full consideration of important factors, in some cases broken down in components similar to the approach of an integrated programme (Energy conservation in TVEs). Very rational and potentially effective is a combination of demonstrations in pilot companies with feedback for policy advice and broader replication, a principle which deserves general application.

Most project documents follow logical framework but sometimes its application is inconsistent (Catalysts, CCSN, ITPC, ITPS).

Some large projects have well elaborated indicators and a good system for monitoring and evaluation (Electrical motor systems, EST Shandong, SID). It seems that these features are cultivated particularly in those projects that were designed with active participation of the donor. It is a commendable achievement in spite of the fact that often the performance indicators proved to be too optimistic (EST Shandong, SID).

Some projects turned out too optimistic not only in terms of quantitative dimensions of the indicators but also in terms of assumptions and type of expected results so that the project document requires revision to make it more realistic (EST Shandong).

In the case of EST Shandong another design feature appeared problematic: splitting responsibility for delivery of inputs between UNIDO and an external source of expertise in the donor country, without giving the UNIDO programme manager effective control over coordination of both inputs. Serious operational problems signal that such an arrangement is not optimal.

Most projects had strong capacity building components, implemented mainly through interaction of national teams with international experts and training abroad (mainly study tours). Extensive use of national expertise for project implementation also contributed to national capacity building.

In case of the International Technology Centres the projects are supposed to develop some capabilities of teams within existing institutions. Sometimes the project design does not distinguish enough between capacity building activities aiming at those team and those supporting operations of the host organizations. Very often project documents for ITCs are too optimistic about funding possibilities. Besides, in some projects the target beneficiaries and/or target countries for South-South cooperation are spelled out only vaguely, if at all. Some of them have not specified the way of how and whom to address through these projects (mainly the ITCs), in which regions or countries. At least a typology of the institutions/agencies to be addressed in the first place would be supportive for the reach of the ITCs. The above-mentioned draft proposal on South-South cooperation presented by UBO indicated possibilities how shortcomings and difficulties in this field can be overcome. Only recently, the Chinese Government has officially requested UNIDO to assist them in the establishment of a South-South cooperation promotion center.

Ownership and participation of national stakeholders in project implementation are built in well in the project design. Only in one case no national ownership was envisaged for the preparatory phase of the project and in one case involvement of a provincial government as one of the stakeholders was not sufficiently built in the design.

In some cases project formulation was facilitated by availability of a UNIDO standard project design (SPX, investment promotion). Some project documents had to comply with design requirements of donor agencies (GEF, UNF). In one case of a UNF project the design did not address satisfactorily national ownership.

4.2 Ownership

Ownership is the extent of counterpart motivation and capability to plan, manage and absorb technical cooperation and provide inputs to achieve and sustain results.

In general, ownership by the counterparts of the CSF projects can be characterized as high, which, in most of the cases, is closely correlated with the institutional stability and long-term experience of the host institutions and their possibility to mobilize professional support in the relevant technical area. Wherever projects are linked to such institutions or government agencies, the counterpart motivation is high in most of the cases and there is a genuine interest in the project objectives and their achievement through cooperation with UNIDO, outweighing to some extent the sometimes reduced scope of the newly created institutional structures (particularly the ITCs).

The fact that the Chinese Government manifests its interest in UNIDO cooperation with the provision of direct funding through a standing convertible and nonconvertible account at the Industrial Development Fund, whereby the respective financing authorization frequently accompanies CICETE proposals and requests, also underlines strong ownership on behalf of the Government. This is later often translated into CICETE's close monitoring of project implementation.

The following - relatively broad - categories of ownership could be observed in the projects of the CSF:

- Very strong ownership at highest policy level – NDRC (SID project, though weakness in involving provincial government unit; Motor System Energy Conservation Programme).
- Very strong and competent, as well as particularly motivated ownership of directly benefiting technical institutions and enterprises (Seed dressing; Three-way catalysts; TVEs, where beneficiary companies became drivers of the process, however only after promotional work).
- Very strong ownership by counterparts with very demand oriented and business driven projects (SPX Chongqing; Shanghai Investment Promotion Center)
- Strong ownership of PMO in implementing MEA projects, also supported by the commitments of the Government in fulfilling the special requirements of the relevant Protocols and the respective time frames (Montreal Protocol projects; POPs National Implementation Plan, GEF in general).
- Strong ownership by national host institutions supporting technically and sometimes also financially and institutionally rather small ITCs (ICM; to some extent IITPC, but marred by unfulfilled funding expectations).
- Moderate ownership and project control in view of inability of counterparts to establish properly functioning project planning and monitoring arrangements, i.e. a steering committee (ITPC Shenzhen) or as consequence of some weaknesses of host organizations (EST Shandong; Info Shaanxi).
- Weak ownership due to unfulfilled funding obligations (SPX Beijing).
- In one case the host organization was dissolved and the created capacity partly taken over by another organization (SINOTRANS).
- In one case (Planning Phase of the Climate-Friendly Technology Financing Facility) there was no national counterpart which, among others, may hamper swift continuation of project implementation.

Ownership had a particularly high impact on project planning and implementation where the relevant stakeholders, also including the direct beneficiaries, were members and actively participating in the project steering committees (SPX Chongqing; Shanghai Investment Promotion Center) or so-called Policy Implementation Committees (TVEs).

4.3 Implementation and management

Implementation

Implementation was very dynamic when ownership and counterpart support were strong, particularly in demand and business driven projects (SPX Chongqing, Shanghai IPC, Seed dressing, Three-way catalysts). There also seems to be a clearly positive correlation between pace of implementation and provision of funding according to the established schedule. The speed of implementation was the better the more relevant stakeholders and target beneficiaries were members of and actively participating in project steering committees. Where such committees did not meet regularly or not exist at all, there was often a delay or irregular pace of implementation.

Implementation was also delayed and outputs not fully achieved when:

- Project objectives were designed too optimistically (some of the ITCs, EST Shandong, ITPS/ACISC).
- Funding expectations were too optimistic and also not revised in the course of project implementation (particularly the ITCs).
- Counterpart structures were insufficient (Climate-Friendly Technology Financing Facility).
- Counterpart had problems with applying UNIDO tools and methodologies (SPX Beijing).
- Counterpart changed top management at early stage of project implementation (ITPC Shenzhen).
- Administrative delays occurred in transferring funds (POPs, some ITCs) or UNIDO rules and regulations for cost recovery were not fully understood (ICM).
- Project was very complex and had to be promoted among target groups (TVEs).

Another, however, exogenous factor for implementation delays was SARS in 2002/2003, affecting several projects with serious delays, partly due to the non-availability of international experts.

In the following, the main categories of inputs provided by UNIDO are presented with regard to their role and adequacy in implementation. The main input categories were (i) International experts; (ii) National experts; (iii) Subcontracts; (iv) Training activities, particularly international workshops and seminars; and (v) Equipment. (For quantitative share of inputs in the CSF see Chapter 2.5).

(i) International experts

With a few exceptions, counterparts expressed in most cases great satisfaction with the competence, experience and devotion of UNIDO's international experts. In several cases, the experts even continued providing advice upon request of the counterparts from their home base (Motor systems, EST Shandong, SPX Chongqing). In two cases the role of CTAs was highly praised (TVEs, SID), in one case the full-time CTA played too dominant a role in the project, leading to the desire of the counterpart for more participation and information in project implementation (EST Shandong). In some cases, start of implementation was delayed due to difficulty of finding the desired profile of international experts.

(ii) National experts

National expertise was widely used in most of the projects. In some cases, national experts even constituted the only source of individual expertise (SIPC Shanghai, IC-SHP, ICM). The ITCs could draw on high quality and known national specialists from the host institutions, which increased the provision of expertise and reduced the necessity to obtain more costly international experts. The contractual situation of some national experts in ITCs was not conducive to stable working conditions and should be reviewed and settled (ITPC Shenzhen, ICM). In general, the counterparts are satisfied with the quality of national experts.

(iii) Subcontracts

In several projects the subcontracting of national, but also international expertise constituted the major or one of the main input categories, particularly in large TVE and Motor Systems projects, but also in POPs, IITPC and ITPC Shenzhen. Subcontracts with national organizations are a factor of project efficiency (producing outputs with minimum costs) and in most cases the delivered services were satisfactory, particularly in technical fields (TVEs, Motor systems, POPs, etc.) In the case of subcontracts making the bulk of implementation for the TVE sub-projects, the progress in implementation depended and still depends to a great extent on the speed of making sub-contracting arrangements. Compliance with UNIDO rules and regulations for subcontracting requiring competitive bidding sometimes ran counter to speed requirements.

(iv) Training activities

Training activities were twofold: as input for institutional capacity building and as a service for broader human resource development in industry. The former activities consisted primarily of study tours and fellowships. For example, the SID project relied on a heavy fellowship component, which was successfully implemented. This type of training was generally in line with project objectives, and satisfaction of trainees, study tour and fellowship participants was noted.

Training activities for industry in general played a particularly important role in the ITCs where international workshops and seminars were frequently held to train both national and international participants in the area of competence (IC-SHP, IITPC, ICM). In general, implementation of these training events benefited from an established organizational structure of the respective host institutions and their experience with the required logistics. This led to a positive perception of the training events which are also used to spread widely the information of the institution in question and strengthen its participation in the relevant, sometimes worldwide network.

The UNIDO delegate programme played a fairly reduced role.

(v) Equipment

The delivery of equipment played only a minor role in most of the CSF projects. Wherever equipment was provided, the counterparts were satisfied with its quality, adequacy to the purpose, and it was also regularly used. Delivery was smooth, the equipment properly installed and maintained and the relevant training for its use provided. Problems of arranging local purchase of equipment of a diversified though small nature was settled with the establishment of an imprest account (EST Shandong).

Management

Only in a few cases - apart from the MEA projects, where established reporting procedures exist and have to be strictly adhered to - project progress reports were prepared regularly. In several cases they were, in fact, prepared irregularly and often not in the established format, or not at all. When project steering committees were established they often did not meet regularly and sometimes not at all. In a few cases there were no steering committees established (Shenzhen ITPC, to some extent also relevant for Climate-Friendly Technology Financing Facility). In several cases, particularly with regard to the ITCs, the possibility of making use of UNIDO's technical expertise in the relevant area was missed for lack of coordination of project activities and field missions by the relevant programme manager with the substantive branches at HQs. This could have led to deeper involvement of UNIDO in the technical field concerned and possibly to follow-up projects, in the framework of the CSF. The potential for a more technical approach in the management of the ITCs was felt when talking to some of them (particularly ICM, IITPC, Shenzhen ITPC) and also explicitly articulated in some cases.

Some counterparts expressed their difficulties in understanding and managing certain administrative procedures related to project implementation, particularly cost recovery and funds transfers, and also expressed concern over delays in this context.

In one case (EST Shandong) management of the project was adversely affected by exclusion of most international experts from responsibility of the UNIDO programme manager and their management by a separate entity identified by the donor.

The concrete case of uncoordinated project development and management with the CSF team leader in the UBO mentioned on para 4.3 above also shows that the recent proposal to consider the CSF equal to the integrated programme falls short of reality at least as far as project monitoring is concerned: the absence of a standing and regularly meeting CSF team contributes to difficulties in coordination and finding appropriate synergies. Although attempts have been made to achieve this through e-mail correspondence, only partial results have been achieved.

4.4 Cooperation within CSF and with other programmes

4.4.1 Cooperation among projects within CSF

As explained in Chapter 2, the UNIDO programme in China was not designed as an integrated programme and none of the two integrated programmes within CSF (for the Western provinces) could take off so that the CSF consists of stand-alone projects only. Thus, cooperation among CSF projects did not have to be built in the CSF in the course of CSF formulation and evaluation cannot apply the same criteria as in the case of integrated programmes. However, irrespective of the absence of integration planning at the formulation stage some cooperation possibilities appeared among projects in the course of CSF implementation, derived from nature of the projects themselves. Some of the possibilities were utilized, some of them were missed.

A model cooperation was established by the Shaanxi Information Network with other projects (SINOTRANS, Shaanxi policy project) from the very beginning of implementation.

The Shanghai Investment Promotion Centre cooperated with the Shanghai based International IT Promotion Center (IITPC) to which they refer IT investment cases. The Center has also established contacts with the Shenzhen International Technology Promotion Center (ITPC).

Chongqing SPX used the UNIDO SIPC in Shanghai to promote business ventures with Chongqing; one joint venture emanating from this mission is under negotiation.

There were contacts also among some of the International Technology Centres. ICM keeps contact with the Shenzhen International Technology Promotion Center for Sustainable Development (ITPC) on environment and energy issues. Their dialogue with the IC-SHP serves mainly to learn from their long-range experience as an ITC under the auspices of UNIDO.

The SID and Shaanxi policy projects opened and enhanced a communication channel between the UNIDO Beijing Office and NDRC which in turn dynamized UR's access to and exposure in industrial policy and strategy related issues so that not only the project but also the UBO with the backing of CSF became a partner at high-level policy discussions in the country.

Some projects were too specific to allow for any synergy effects from cooperation with other projects (Seed dressing; Three way catalysts). However, in a number of cases, possibilities for cooperation existed and they were missed, particularly

- among the energy-related projects (Energy conservation in TVE, Electrical motor systems, ITPC Shenzhen) and
- between ITPC Shenzhen and the Swiss funded projects in Municipal waste management and ESTPC Shandong.

In addition to sharing information about technologies the projects could benefit from mutual use of engineering and consulting capabilities developed by the projects. Besides, the Montreal Protocol projects might have tried to apply the energy conservation methods introduced by the Motor Energy conservation project and/or the TVE Energy Conservation project.

The opportunities were missed either due to lack of coordination or lack of interest of the projects involved. On the part of some programme managers there still exists a mindset favouring rather fragmented approach. Geographical distance among some project sites may also have been a factor of insufficient cooperation as well as different project cycles in chronological terms, which sometimes were not conducive to cooperation. As a result, knowledge of counterparts about other projects was limited to some of them.

In two cases cooperation with other CSF projects was not pursued even though it was promoted by the UNIDO programme management (ITPS, SPX Beijing). In general, however, the local management were interested in being informed about other CSF projects, their objectives and activities. There is, therefore, considerable scope for improvement. The possibilities will even increase in the future once two projects will have fully taken off: the POPs project and the Climate-Friendly Technology Financing Facility (if national ownership is established and the necessary financial resources are raised for the latter project). Both projects will provide ample opportunities for cooperation with other projects, as specified in the project evaluation notes in Volume II (POPs – SESTPC Shandong; Venture Capital Fund – energy conservation and technology transfer projects, etc.). Potential for their cooperation with other projects can be assessed jointly already at this stage.

To improve the coordination it is, however, necessary to strengthen staffing of the UNIDO office to allow for closer monitoring of projects, including more frequent visits of project sites.

4.4.2 Cooperation with other external programmes

Coordination of the CSF as a programme with other programmes was done primarily through the UNDAF mechanism (see Chapter 2). Individual CSF projects developed contacts with other projects or programmes outside CSF in a number of cases, usually in the same problem area. The energy conservation projects were in contact with related

World Bank and GEF projects. The POPs project also established extensive contacts with other external programmes which will be involved in the POPs programme (World Bank, Italy, Canada, etc.) The Shaanxi Business Information Network established contact with the EU-China Enterprise Reform Project and its SME Promotion Centre.

NDRC complemented inputs from the SID policy project by inputs from a WB project on measuring economic performance and an ADB project on the institutional system.

The Shanghai Investment Promotion Centre and SPX Chongqing cooperated with some ITPOs of the UNIDO ITPO network or with the UNIDO Asia-Africa Investment and Technology Promotion Centre. Some CSF projects cooperated with other UNIDO projects in the country (ITPO Beijing) or in the region (RENPAF) but some opportunities for cooperation with other former UNIDO projects in the country were not attempted (NCPC Beijing).

International Technology Centres operated their own networks of R&D institutions, both Chinese and international, the most extensive being the network of the IC-SHP (in total 240 members from 60 countries). Cooperative programme with the UNIDO International Centre on Hydrogen Energy Technology in Turkey is under discussion.

Main benefit of such contacts was avoidance of duplication or some support for implementation of the projects concerned.

Detailed information on cooperation contacts kept by individual projects is presented in Volume II.

4.5 Results

*Result is a generic term for **outputs** produced and **outcomes** and **impact** achieved.*

Results of the CSF have two layers:

- i) Compilation or summation of results of individual CSF projects reviewed by the evaluation mission.
- ii) Results of interventions of the UNIDO Beijing Office in policy and strategy discussions in the country.

The latter results are to some extent based on and derived from results of some CSF projects and to some extent they are based on the work of UBO itself and its research fellows.

4.5.1 Overview of results of CSF projects

Overview of results is structured according to the level and area of intervention as follows:

- policy level
- institutional level
- industry level

Besides, results in Human Resource Development are singled out even though in some cases they are a part of institutional capacity building.

(i) Results at policy level

- The most significant results were achieved by the SID project (“Evaluation and Adjustment of China’s Industrial Policies for Key Industries to Promote Sustainable Development”). The project trained national professionals in techniques such as the Computable General Equilibrium (CGE) model and

prepared a number of analytical reports with policy recommendations, published in English and Chinese. The Deputy Director General of NDRC as the main counterpart of the project highlighted continuous dialogue with project experts as the mechanism for the main contribution to formulation of the 10th Five-Year-Plan (FYP), particularly as regards adoption of SID principles in energy policy and restructuring of resource-based industrial cities. Implementation of such policies, to which this dialog contributed, resulted among others in closing down large numbers of small plants not corresponding to energy conservation and other environmental requirements. Currently a follow-up project is conducting analyses for formulation of an industrial development strategy in one of the Western provinces (Shaanxi).

- There are some possibilities for the Policy Implementation Committee of the TVE energy conservation project to induce changes in some parts of industrial policy, particularly as regards promotion of selected technologies, for example in the coking sector, and amendment of an existing law on waste utilization. Nothing has been done so far but some proposals are expected to be prepared after experience of the pilot companies is evaluated. It is also expected that the energy conservation project will be replicated countrywide, with support of a policy decision.
- Success of the Electrical Motor System Energy Conservation Programme is likely to induce replication in the whole country (to be supported by a GEF project).
- A National Strategy Paper on Municipal Solid Waste Management was prepared.
- The POPs project supported the Government in preparation for the National Implementation Plan to comply with requirements of the Stockholm Convention.
- A report on establishment of a venture capital fund was prepared, with recommendations related to the legal system of China, but a follow-up of the report recommendations is not yet assured.

(ii) Results at institutional level

In total, over 30 institutions were strengthened or established and in most cases the institutional capacity building or strengthening was successful.

- A number of institutions to manage or support energy conservation programmes in TVEs were established or strengthened:
 - Policy Implementation Committee (PIC) was established, with a small secretariat (1 professional, 2 general service staff); PIC meets once a year.
 - Local PICs (LPICs) were established in 4 pilot counties; in 4 pilot counties they are under preparation.
 - A coordination company (Hong Yuan - H.Y.) was created, with a network of 40 experts from various professional organizations. It has acquired competence to support programme replication in the whole country.
 - Revolving Capital Fund (RCF) was established with the Agricultural Bank of China (ABC) but the lending system was fine-tuned only recently so that loans to the first three pilot companies were expected to be granted in December 2004. The scope of funds mobilized for the RCF was below expectations.
- Two provincial Energy Conservation Service Centres were strengthened by training a core of 5-6 professionals in each Centre, provision of testing equipment and methodological tools. The Shanghai Centre (visited by the evaluation team) developed sufficient competence to conduct system analysis in pumps and fans and to train factory people in these fields. Air compressor systems can be handled as well but more training by international experts and more equipment are needed for handling large systems.

- The Development Research Centre (DRC), the most influential think-tank in the country and adviser to the Chinese State Council, was strengthened through training and interaction with international experts.
- The Nanshen Pesticide Formulation Centre (NPFC) was successfully strengthened to develop and produce advanced pesticides. Besides, two seed dressing stations were upgraded. However, countrywide marketing of the product is still weak.
- The Tianjin R&D Institute of Chemical Industry (TRICI) was successfully strengthened with the result that a new technology was adopted and the three-way catalyst actually developed. The upgraded technology was transferred for pilot production.
- Shandong EST Promotion Centre (SESTPC) was established, with adequate offices, staff of 8 (three of them part-time senior experts) and well established working practices. It concluded partnership agreements with some large companies and a bank. However, its technical staff, except for the part-time senior experts, are rather inexperienced and not yet in a position to handle technical and managerial issues of transfer of EST with companies without support of international experts.
- Shanghai Investment Promotion Center (SIPC) was established and consolidated fast, with very good results in terms of actual flow of investment, both inward and outward.
- Two SPX offices were established, with one of them progressing fast in developing its competence in subcontracting and recording first contract negotiations.
- China Commerce Service Network (CCSN) was strengthened as planned but later CCSN was merged with SINOTRANS.
- Five international technology centers were established or strengthened, as a rule hosted and backstopped by existing professional organizations. These centers have modest but competent staffing. Their mission is to support technology transfer to and from China. Due to limited funding their activities are limited and depend to a great extent on activities of the host organizations. Some of them operate or participate in operating rather extensive networks with members all over the world (IC-SHP).

(iii) Human Resource Development

Almost 3,000 people were trained. A small part constituted the core of institution strengthening. Most of the training was targeted at technicians and management staff of companies or government organizations with the purpose to support introduction of more advanced technologies or production processes, primarily in energy conservation. Some of the most important training activities can be highlighted as follows:

- 10 workshops on energy conservation were conducted for 660 trainees from 450 TVEs, resulting in increased awareness and established contacts with 60 TVEs as candidates for replication. Besides, a training course on voluntary agreements between companies and local governments was conducted for more than 50 participants.
- Approximately 1,000 people (most of them from factories) were trained in short-term workshops on energy conservation in electrical motor systems (the project target was 400) and a very positive feedback was received from them. The workshops also provided a good platform for establishing longer lasting working contacts and promoted energy conservation assessments and measures in the companies.

- 510 people were trained in workshops (duration usually 7 days) on advanced pesticides and their application in seed dressing.
- 370 people were trained in 12 workshops on investment promotion (3-6 days each).
- A few hundred companies were exposed to the principles and advantages of subcontracting.
- International Technology Centres organized training also for participants from abroad. Two major conferences on small hydro power plants were conducted for participants from developing countries. Around 85 people from various countries were trained in several technical seminars on new materials. 100 national and 100 international people have been trained under the Distant Learning System for IT in city informatization and e-government and some 150 of the trainees are still in contact with the IITPC Shanghai through the Alumni-web applying lessons learned in their respective countries.

Training of national professionals in policy-related techniques is mentioned under (i) Results at policy level.

(iv) Results at industry level

Direct CSF support to industrial companies was provided in most cases in the context of larger programmes within which interventions at company level served as demonstrations of approaches to be tested and replicated (Energy conservation, Waste management). In other cases industrial companies or other business organizations are beneficiaries of services provided by organizations established or strengthened by CSF projects (R&D institutes, SIPC, SPX, ITCs). In both cases such interventions result in actual impact which can be highlighted as follows:

- Energy conservation in TVEs: technology improvements in 9 pilot companies (investment US\$49 million) in 4 sectors will result in saving of more than 100,000 t of normal coal equivalent and a reduction of 250,000 t of CO₂. Investment projects in technology improvements are at different stages of implementation; the first ones should be completed early 2005, the last ones in October 2005. The projected data for the 9 pilot companies indicate possibility of energy conservation of approx. 28% on average which is a very encouraging indicator for a replication programme. Assuming average price of RMB 200 per tonne coal equivalent (tce) the annual saving amounts to approx. US\$2.4 million.
- Electrical motor systems: From among 41 plant assessments 14 investment projects were prepared in Shanghai and the Jiangsu Province and either implemented (11) or under implementation at the time of the evaluation mission. Actual savings of electricity in the 11 completed projects ranged between 20% and 50% and the total savings amounted to 23 million kWh per year. At the price of RMB 0.50 per kWh it amounts to approximately US\$1.4 million. Payback period is very favorable, between one and three years. Thus, the results confirm a great potential for economically interesting energy conservation in this field of electrical motor systems.
- NPFC: the Centre produced and sold 6,500 t of pesticides in 2003, out of which 1,000 t as Flowable Seed Dressing (FS) and 1,500 t as Emulsion in Water (EW). The above production represents 50% of market share in the Jiangsu Province and 70% in the Yunnan Province. It is estimated that the above production was applied at 4 million ha of cropland with increased yield and income of farmers up to US\$400 million.
- TRICI: 80,000 sets of catalysts were produced and sold but large-scale market penetration is difficult.

- SIPC: US\$52.2 million of inward investment (34 projects) and US\$33.24 million of outward investment (51 projects) were recorded. Approximately 4,300 new jobs were created by the promotional activities in the Shanghai region.
- SPX Chongqing: a joint venture is under discussion between an automotive supplier in Shanghai and a local company in Chongqing; the contract would be worth US\$11 million.

Transfer of technology by ITCs: ITCs transferred or assisted in transferring six technologies from abroad to China (mainly ITPC Shenzhen) and two technologies abroad (ICM). Besides, several Chinese experts were sent on UNIDO projects to other countries in Africa and Asia (mainly from IC-SHP and ICM).

(v) Assessment of project results

From the above results one can draw the following conclusions:

- The most extensive results have been achieved in capacity building at institutional level. Good level of capability development was achieved particularly in the case of technology-focused R&D organizations (energy conservation, NPFC, TRICI), policy formulation (DRC) and investment promotion (SIPC). Good results can be expected in the case of SPX. Less successful have been centers dealing with management of technology transfer.
- The most significant results were achieved in environmental management and energy conservation. In this problem area significant results were achieved both at policy level, establishment or strengthening of institutions, human resource development, as well as at industry level in pilot plants. Demonstration projects have high probability of countrywide replication. Very good results of the Montreal Protocol programme could be included in this thematic group as well.
- Due to insufficient funding and recent start of the few approved projects very limited results could so far be achieved in Western provinces; this is the weakest point of the CSF, particularly in view of the top priority of this objective both for the Government and UNIDO.
- Contribution of CSF to job creation was rather limited, mainly through inward investment promotion. Indirectly, some environmental management related projects may have contributed to job saving through helping companies “to stay in business”, on the other hand some environment related policy decisions, formulated with support of the SID project, resulted in closing down a number of small plants not complying with environmental standards.
- Results in South-South cooperation have been modest. Some networks have been strengthened but actual transfer of Chinese technology abroad has been limited to a few cases. The draft project proposal on South-South cooperation prepared by UBO in 2002 and aiming at overcoming the specific shortcomings and difficulties in this field was not followed up by the Government at that time. However, CICETE sent an official request to UNIDO in 2004 to assist them in establishing a South-South cooperation promotion center.

4.5.2 UBO as a partner in policy and strategy dialogue

UNIDO Beijing Office, together with the World Bank, became one of the two most important multilateral advisors to the Government of China on sustainable development. In policy and strategy discussions on sustainable industrial development UNIDO has become a partner recognized by several Government bodies, such as the National Development Reform Commission (NDRC), a key body in coordinating national economic policies and formulating industrial policy, and the Development Research

Centre (DRC), the most influential think-tank in the country and adviser to the Chinese State Council. UBO also became a key partner in this field in the UN Country Team (UNCT) in China and a well-established and recognized source of information sought-for by bilateral donors and the diplomatic community in general.

The project platform for policy dialogue, represented mainly by the SID project, was complemented and enhanced by research activities of the UNIDO Beijing Office itself. Supported by 120 work months (free of charge to the Organization) of research fellows UBO elaborated a clear and well-documented position on the perspectives for SID in China and in the other three countries covered by the office. Application of the acquired professional competence of UBO is reflected in numerous responses to inquiries, meetings and presentations on SID-related policy and strategy issues, as follows:

- Between three to four technical meetings per year, both formal and informal (a total of around 15 from March 2000 to November 2004) with officials from DRC – the Development Research Centre of the State Council.
- Briefing in several occasions (and more than once for some Embassies) of Ambassadors/Embassies, followed by the hand-out of key prospective documents prepared by UBO, as follows:
 - 7 for 6 African countries
 - 21 for 9 countries of the Americas, incl. Canada and the US
 - 7 for 5 Asian countries incl. Japan
 - 29 for 12 European countries and the European Commission
 - 1 for Australia
 - This includes a presentation to the donor community (approx. 30 diplomats) in the field of industrial environmental management in July 2004, and two formal presentations followed by discussions made at the Embassy of Turkey for a total of approx. 25 Ambassadors.
- Several presentations of UNIDO programme and suggestions (policy advisory service) were also made, with the following 11 examples:
 - NDRC – Office of the Leading Group for Western Development Initiative
 - SEPA – “Workshop on Capacity Building for Accessing Environmental Development Assistance for PRC’s Western Development Strategy”
 - OECD-MOFTEC – Chongqing Regional Development Forum
 - Stanford Business School – Alumni Chapter – Beijing (High-Level Government officials and entrepreneurs from China and abroad) – “UNIDO’s Programme in China”
 - CICETE/MOFTEC (Policy Advisory Service) – “Briefing Note”
 - UN Theme Group on Education
 - UN Theme Group on Environment
 - Tsinghua University (2 presentations on UNIDO’s view on the perspectives for Sustainable Development in China)
 - “Economist Corporate Network” – Briefing of CEOs of some 30 major international companies operating in China
 - DRC – “Global Food Safety Forum in China” (UNIDO’s position on Food Safety in China).

4.6 Sustainability

Sustainability is the capability to maintain and keep upgrading the results achieved.

Two categories of CSF projects are subject of sustainability evaluation: projects developing organizational capabilities and demonstration projects intended for replication.

4.6.1 Organizational capabilities

Due to strong national ownership and high professional competence most capacity building projects have good prospects for sustainability but intensity of continuous upgrading may differ. To some extent, it will depend on the capability to adjust to the continuously increasing role of the market mechanism in the operations of service organizations.

Upgraded capacity of national research institutes participating in the SID project is likely to be maintained. Management of NPFC Nantong is also confident that even without UNIDO project support the Centre will sustain its operations. They continue research on new types of water based pesticides and plan to build another four pesticide plants using NPFC technology. However, additional marketing efforts are needed to increase the market share.

Technical capability developed in TRICI will be also sustained but promotional efforts are needed to penetrate the market car catalysts and increase the impact.

Organizations established and supported by municipalities or provincial governments for the purpose of promoting business in their regions have also good prospects for sustainability due to highly motivated and dedicated ownership and demand driven character of operations (SIPC Shanghai, SPX Chongqing). In some cases, however, such organizations are at an early stage of development to allow for assessment (SPX Beijing, BISnet Shaanxi).

The International Technology Centres have the advantage of being hosted by strong organizations whose functions in the institutional framework are well established but it does not imply that sustainability of the Centres (ITPC Shenzhen, IITPC Shanghai, UNIDO IC-SHP) is certain. The ITCs depend a lot on the continuous support of the host organization and on the Government continuous support in pursuing the objectives of South-South cooperation. As regards the UNIDO IC-SHP, without further UNIDO support it may become a hollow entity, used for the UNIDO logo only (while the IC-SHP itself is more likely to sustain).

In a few cases, the process of developing institutional capacity signals that the new organization may face problems after project completion (SESTPC Shandong) or that the developed capacity was affected by institutional reforms (CCSN). SESTPC Shandong project is only in the middle of implementation so that there is still time left for upgrading the capacity in EST advisory services but some critical interventions are needed to increase likelihood of sustainability of the developed capacity and to unfold transfer of EST in the province and beyond.

As the CCSN team was released from Government services and merged with a logistical company SINOTRANS, only a part of the capability developed by the project was transferred and put in use by the new owner.

In the case of the Climate-Friendly Technology Financing Facility sustainability is not yet assured due to the lack of a formal national counterpart structure, with the relevant consequence for national ownership, and still insecure financing for the main project phase, as well as uncertainties regarding legal aspects of the establishment of a national VCF.

4.6.2 Replications

Demonstration projects with outlook for replication were implemented primarily in energy conservation in TVEs and Electrical motor systems.

The demonstrations in TVEs have good prospects for large-scale replication with significant impact, particularly if additional financing sources are mobilized. There are approx. US\$3 million in the project budget reserved for supporting replication of the pilot cases in approx 100 companies. Strategy for replication is outlined and local governments are keen to support companies willing to introduce technology improvements. H.Y. Company is considered as competent enough to coordinate the programme, using the network of associated professionals. Thus, the critical factor seems to be access to financing. RCF alone, even if running smoothly, will not be able to support sufficiently such a large programme. Other sources of finance will have to be mobilized.

In the Electrical motor systems the two Centres are likely to sustain services but additional upgrading for air compressors is needed and dissemination of newly mastered tools and approaches in the whole country will have to be supported. Fortunately, additional funding from GEF (US\$15 million) was mobilized for energy conservation programmes covering several sectors including industry. There are, therefore, good prospects for additional upgrading of the Centres in handling large air compressor systems and for completing the missing national plan so that the programme in Electrical motor systems will unfold in the whole country. It is estimated that replications in the whole country may save 6.5 billion kWh/year.

The Block-B preparatory assistance project successfully implemented by UNIDO to prepare the POPs National Implementation Plan (NIP) led already to the approval of the large-scale POPs follow-up project with GEF and Special Purpose Donor funding, i.e. the process of tackling POPs in China will continue in a sustainable manner, possibly leading to a significant contribution to alleviating POPs in the near-term future.

Out of the four technologies transferred from abroad with assistance of ITPC Shenzhen (and adapted) particularly the municipal waste incineration technology is intended for replication but scope of replication in the country or abroad cannot be envisaged at this stage.

5. UNIDO MONTREAL PROTOCOL PROGRAMME IN CHINA

According to the Terms of Reference projects supporting implementation of the Montreal Protocol convention are not subject of this CSF evaluation. In spite of that it is deemed useful to complement the CSF evaluation with some cardinal information about the UNIDO MP programme in China.

5.1 Scope of the UNIDO MP programme in China

The MP programme is covered by two components of CSF:

- Component 1 "Ongoing MP projects" contains all ongoing projects as of the start of CSF (2001).
- Component 2 "Phase-out of CFCs and Methyl Bromide" contains all MP projects approved after that date.

As of July 2004 the above two MP components counted 52 projects representing 66% of the approved CSF budget and almost 70% of total CSF expenditures. Due to the current geographical distribution of industry most of the projects are located in the coastal provinces.

UNIDO started MP projects in China in 1995. By the time the CSF started in 2001, some MP projects had been completed. On the basis of data provided by the UNIDO MP Branch the following overview can be compiled:

UNIDO MP programme in China (July 2004)

	No. of projects	Approved funding (US\$)	Expenditures (US\$)
Total MP programme	65	94,005,019	77,843,328
MP as part of CSF	52	50,572,786	41,485,507

MP projects have been implemented primarily through subcontracts (87%) and procurement of equipment (9%). Subcontracting represents a complex process as it stipulates manifold obligations of the subcontractor(s) in terms of technical services, transfer of technology with delivery of equipment, training, etc., all that in coordination with inputs provided and activities carried out by the company management at the plant level.

The MP projects are managed and implemented by UNIDO programme managers with a considerable degree of autonomy from the CSF team leader. One staff seconded by the Ozone Office to UNIDO Beijing Office (UBO) and paid by SEPA, while trained on UNIDO procedures, handles administrative aspects of the MP projects but most strategic and operational decisions are discussed and taken by the UNIDO programme managers directly with the national Ozone Office (Programme Management Division III at SEPA). Since 2001, in total 5 SEPA staff have been trained and worked at UBO (one per year on average). This is a concern for UBO as frequent changes of SEPA staff increase the training time required for this purpose by the UBO staff, including the UR.

SEPA appreciates the capacity building support as well as the cooperation spirit and flexibility of UNIDO. According to them there were some operational problems at the beginning of the programme but the issues were resolved and the cooperation proceeds smoothly now. SEPA highlighted in particular the pioneering role UNIDO played in

introducing a modality of implementing a number of projects of similar type in the foam sector under one umbrella project. After good experience with the first umbrella project the modality is now adopted on a broader scale and seven new umbrella projects and sector plans are under implementation.

It is worth mentioning in this context that based on the experience of the MP programme UBO in cooperation with HQs managed to elaborate and negotiate with the Government an increased role of UNIDO in the preparatory project for implementation of the Stockholm Convention.

5.2 Impact

The objective of the MP programme is to assist the country in phasing out Ozone Depleting Substances (ODS), such as CFCs, methyl bromide, etc. As the substances have different potentials to deplete the ozone layer, ODS are measured by their Ozone Depleting Potential (ODP), which is a unit of a gas emitted into the atmosphere relative to the calculated depletion for the reference gas CFC-11 (ODP = 1.0).

It is estimated that in 1995, at the peak of ODS consumption in the country, China consumed 105,061 t of ODP. Since that time approximately 70,000 t (approx 67%) have been phased out, at the cost of US\$350 million. UNIDO programme accounts for 12,361t (17,6%). It is the second largest cooperation programme (after the World Bank programme).

The data about phase-out are based on project calculations. When the projects are implemented as planned and the project is completed it is assumed that the actual phase out of ODP equals to the planned one. Completion of a project means:

- No further use of CFCs is in evidence;
- The alternative product is being produced and/or production has begun; and
- The CFC-using equipment has been destroyed/dismantled/rendered unusable with CFCs.

SEPA delegated responsibility for checking compliance with these terms to the Provincial Environmental Protection Bureaus (EPB). As a UNEP extensive in-depth evaluation (2001) of the MP projects in a number of countries revealed, in some cases, particularly in the foam sector, some companies destroyed only a part of the equipment and can revert to the old technology easily, or they implemented the changes, destroyed the equipment but did not start production with new substitutes as their market share was taken over by SMEs using CFC. The reasons are primarily economic: while the MP project helps the company to introduce a more advanced technology (with 30% of the costs paid by the company and 70% by the project) allowing it to operate the plant in compliance with environmental requirements, the substitutes are usually more expensive and less functional.

SEPA cannot exclude that something similar may exceptionally happen in China as well but considers as more important to focus attention on controlling production and import of ODS in the country. The Government advanced the deadline for eliminating ODS production from 2010 to June 30, 2007.

In addition to the primary objective and main impact of phasing out ODS the MP projects had also other positive impact. Besides the ODP related technological upgrading some companies made use of the opportunity for modernising and/or relocating the plant to new industrial zones or broader restructuring, including management upgrading. In some cases production or productivity and exports could be increased. Cases of improving

environmental performance in other aspects or in work safety were also reported. However, such programme “by-products” were not systematically monitored and, therefore, there is no central evidence about their scope.

It was, however, also reported that some small companies could not meet the challenge of change and had to be closed. Apparently the most significant non-ODS impact of the MP programme is that the vast majority of companies who managed the change could stay in business and safeguard production and employment.

5.3 Findings from a plant visit

The evaluation mission visited one of the plants (Factory No. 3 in Xi'an) of the umbrella project in the foam sector referred to above. The plant was selected for evaluation on the basis of three criteria: i) Location in Western province; ii) project completed; iii) minimization of incremental travel for the evaluation team.

The plant produces packaging nets for vegetables and fruits. It is owned fully by a Chengdu based private owned “umbrella company” which operates approximately 20 plants in the foam sector, producing foam packaging for various products (including furniture).

Out of 1,146⁷ t of ODP phased out by all plants of the umbrella company the phase-out by Factory No. 3 is indicated as 47 t. This number could not be verified as production and market data are recorded and kept centrally by the umbrella company. In spite of that the following information could be provided:

- i) The project proceeded smoothly, cooperation with the national subcontractor was satisfactory, the plant technicians could put forward proposals and comments in the course of the design work. Training organized by the subcontractor was adequate.
- ii) Before the project started the factory had 8 lines, after completion it has 6 lines and 2 are leased out. The old equipment was removed (it is piled in the backyard, no possibility to use it again, except for some general spare parts)
- iii) Both employment and production were halved. Reasons:
- iv) Higher costs (fire prevention/mitigation equipment, new pumps with higher electricity consumption)
- v) Competition by SMEs who did not have to change the technology and can operate the existing and cheaper one till 2008.
- vi) At the time of the visit the plant was idle. Explanation: the season will start late November.
- vii) The plant manager is confident they will not close down but the competition is tough and reduces profits to a minimum.

No general conclusion can be drawn from this experience as firstly the case is too isolated and secondly it could not be verified by inquiries with the SME competitors. However, this experience seems to support the finding from the UNEP evaluation that in some cases in the foam sector the phase-out of ODS in the plants participating in the MP programme may be to a certain degree and temporarily (till 2008) offset by increased production of SMEs in the sector.

⁷ This amount is indicated in the Project Completion Report; the print out “Details of Ongoing and Completed Projects in China”, as of July 2004, handed over by the UNIDO MP Branch, indicates 825.7 t for the pertinent umbrella project.

6. CONCLUSIONS

Relevance

1. CSF Development Objectives were derived from principal Government objectives and can be considered as fully relevant for the country.
2. The CSF responds to a varying degree to all the UNDAF goals in China in as much it aims (i) at reducing regional disparities in economic development between the Eastern and Western regions; (ii) through the environmental focus of the CSF operations, especially as far as environmental management is concerned; and (iii) through the South-South oriented projects, *inter alia*, through the ITCs, and the integration of the conclusions of international conventions such as the Montreal Protocol, POPs and others.
3. Environmental Management and Energy Efficiency/POPs projects represent the thrust of the non-MP part of CSF and this thrust is highly relevant. Unfortunately, projects for the Western region, also highly relevant, represent only a small fraction of the programme.
4. CSF development objectives are broad enough to accommodate easily objectives of all CSF projects but relevance of individual projects needs to be verified in terms of effective demand. Most projects are justified by actual demand, though intensity of demand differs. The strongest demand is for services supporting implementation of international conventions, for projects addressing critical environmental problems including energy conservation and for projects addressing the East-West disparities. A few projects are addressing actual problems but demand for their services needs to be promoted.
5. In the course of CSF implementation only in two cases the relevance of a project was reduced (due to institutional reforms) or the project had to be terminated before completion (due to questionable relevance).
6. The South-South cooperation projects pursue a distinct Government objective but most of them face problems of identifying effective demand in the developing countries.
7. All projects claim to operate within the UNIDO Business Plan but a couple of projects ventured partly in areas outside of traditional competence of UNIDO.

Design

1. Formulation of CSF followed draft guidelines for CSF and envisaged two integrated programmes as part of CSF. However, as only a fraction of the proposed integrated programmes could be elaborated for implementation, in real terms the CSF consists of individual projects only. This, however, is not a problem of design but of funds mobilization.
2. CSF was structured by components but due to time pressure during formulation the structure followed three different criteria (time, problem area, geography) without hierarchy, thus making the structure somehow inconsistent, incl. a certain overlapping (energy efficiency). Besides, allocation of projects to components was in a few cases not fully appropriate. Structure of the future programme needs improvement.
3. In most cases design of individual projects is satisfactory. Strong features are combination of demonstrations in pilot companies with feedback for policy advice and subsequent broader replication; strong capacity building elements, implemented mainly through interaction of national teams with international experts and training; and extensive use of national expertise. Some large projects have well elaborated indicators and a good system for monitoring and evaluation. Ownership and participation of national stakeholders in project implementation are built in well in project design.

4. Most project documents follow logical framework but sometimes its application is inconsistent. A few projects are too optimistic, most ITC projects are also too optimistic in terms of funding and even scope of envisaged operations. Some of the respective project documents lack stringency and focus. In some projects the target beneficiaries and/or target countries for South-South cooperation are spelled out only vaguely, if at all.

Funds mobilization

1. In general, funding of the CSF has been successful and according to plan, with the exception of the components South-South cooperation and the two originally integrated programmes for the Western region, which never materialized. Funds mobilization for the Western region was very limited in spite of the high priority of reducing regional disparities in the CSF. As manifested in the case of the two integrated programmes for the Shaanxi Province, some other international or bilateral agencies with readily available sources of funds (in this case EC) were in a better position to offer faster and a larger package of services to the provincial stakeholders.
2. The Multilateral Environmental Agreements (MP, GEF, POPs) showed together with the special purpose donor contributions of The Netherlands and Switzerland by far the highest funding levels with over US\$8 million each, followed by the United Nations Foundation (UNF) with approx. US\$1.9 million, with emphasis in energy conservation, generation and in Climate-Friendly Technology Financing.
3. China as a Special Purpose Donor to the IDF features among the five most important funding sources.
4. Direct funding from national counterpart agencies was significant and particularly dynamic when the projects met strong local demand and/or were business driven. This could be a way to mobilize additional funds in the Western region.
5. Most of the ITCs have too optimistic funding expectations which did neither seem to take into account donor priorities nor the financial potential of the host institutions at the time of project preparation.

Ownership

1. Ownership is closely correlated with institutional stability and long-term experience of the host institutions and their possibility to mobilize professional support in the relevant technical area. In general, ownership by the counterparts of the CSF projects can be characterized as high.
2. Ownership is very strong at highest policy level as well as at directly benefiting technical institutions and enterprises and counterparts with very demand oriented and/or business driven projects.
3. The Chinese Government manifests strong ownership with the provision of direct funding through a standing convertible and non-convertible account at the IDF, whereby the respective financing authorization frequently accompanies CICETE proposals.
4. Ownership is strong at PMO in implementing MEA projects, also supported by the commitments of the Government in fulfilling the special requirements of the relevant Multilateral Environmental Protocols.
5. Ownership is moderate or weak in a few cases when funding obligations are unfulfilled or due to weaknesses of national counterpart structures.
6. Ownership contributed to swift implementation and funds mobilization where relevant stakeholders, including the direct beneficiaries, were members of and actively participating in the project steering committees.

Implementation

1. According to self-evaluation by programme managers almost two thirds (63%) of outputs were completed either fully or at least by more than 50%. There is still a quite significant segment of outputs (19%) which are at the early stages of production or have not started yet. Compared with financial implementation (71%), the assessment signals a risk of a small discrepancy: completion of outputs seems to be less advanced than financial implementation.
2. Most advanced implementation was achieved by the „old“ projects (Component 1 and 2) and by the new Montreal Protocol projects (Component 3) and Technology and Investment Promotion projects (Component 6). The least progress in meeting the targets was reached in Component 7 (Western region) and Component 4 (Energy and POPs). The latter component, however, will increase implementation considerably within the next year and – in view of the recently approved additional funding – it is likely that Component 4 will reach the planning target, though probably slightly beyond the time horizon of December 2005.
3. In most cases implementation was very dynamic, also due to strong ownership and counterpart support. There seems to be a clearly positive correlation between pace of implementation and provision of funding.
4. In some cases implementation was delayed and outputs not fully achieved particularly when project objectives and funding expectations were too optimistic and when counterpart structures were insufficient. Sometimes administrative delays occurred in transferring funds or when UNIDO rules and regulations for cost recovery were not fully understood by counterparts.
5. An exogenous factor for implementation delays was SARS in 2002/2003.
6. In general, counterparts expressed in most cases great satisfaction with the competence, experience and devotion of UNIDO's international experts and subcontracts.
7. Use of national expertise was significant and reflected professional capabilities of the country. In several projects the subcontracting of national expertise constituted the major or one of the main input categories, and in most cases the delivered services were satisfactory. Counterparts were also satisfied with the expertise of most national experts.
8. In some large projects where national subcontracting constituted the main input category, compliance with UNIDO rules and regulations for subcontracting requiring competitive bidding sometimes ran counter to speed requirements but efforts were undertaken to speed up the process.
9. Training as input for institutional capacity building consisted primarily of study tours and fellowships and, with a few exceptions, was generally in line with project objectives. Training activities for industry in general, mainly in the form of workshops and seminars, was found satisfactory as well.
10. Equipment played only a minor role in most of the CSF projects and counterparts were, wherever it was provided, satisfied with its quality, adequacy to the purpose, and it was also adequately used.

Management

1. The large CSF programme is centrally managed in the field by a team of UBO which is much smaller than teams managing similar or smaller programmes of other international organizations. In this respect, the field management of the CSF is very efficient.
2. While there is in principle a fluent and continuous dialogue between UBO and CICETE, certain shortcomings in managing project development and monitoring (see also para 5. below) are also partly due to the fact that the Programme Development

Committee (PDC), originally set up to develop new projects/programmes based on the agreed criteria for inclusion in the CSF, did not meet regularly, as originally planned.

3. In view of the fact that the CSF does not have a standing and regularly meeting team of all participating programme managers, the assignment of an alternate team leader at HQs appears to be required.
4. A more frequent exchange of views with project counterparts through field visits would strengthen UBO's role in day-to-day management of the CSF. This would require proper staffing of the office.
5. Sometimes, projects were initiated and developed by UNIDO technical staff at HQs without awareness or participation of the UBO and/or CICETE, which led in some cases to stopping such initiatives by UBO, or missing of promising opportunities to realize synergies with other projects of the CSF.
6. The afore-mentioned example of uncoordinated project development and management also shows that the recent proposal to consider the CSF equal to the integrated programme falls short of reality at least as far as project development and monitoring are concerned: the absence of a standing and regularly meeting CSF team favors the lack of coordination and realization of synergies.
7. Project progress reports were prepared in some cases irregularly or not at all, and when project steering committees were established they often did not meet regularly and sometimes not at all.
8. Particularly in the case of the ITCs, the possibility of making better use of UNIDO's technical expertise in the relevant area was often missed for lack of coordination by the relevant programme manager with the substantive branches at HQs.

Cooperation among projects within CSF

1. UNIDO programme in China was not designed as an integrated programme; the CSF consists of stand-alone projects only. Thus, cooperation among CSF projects did not need to be built in CSF design and evaluation cannot apply the same approach for evaluating synergies as in the case of integrated programmes.
2. Some cooperation possibilities among projects existed based on similarity or complementary nature of individual projects themselves. Some of the possibilities were utilized, such as use of expertise developed by other projects or sharing information on experience with implementation of UNIDO projects. The economic impact of such cooperation has been rather limited, the most significant and easily identifiable result being progress in developing business contacts between Shanghai and the Shaanxi Province.
3. A number of projects were too specific to allow for any synergy effects from cooperation with other projects. However, in a number of cases, possibilities for cooperation existed and were missed, particularly among the energy-related projects and between ITPC Shenzhen and the Swiss funded projects in municipal waste management. The opportunities were missed either due to lack of coordination or lack of interest of the projects involved. On the part of some programme managers there still exists a mindset favouring a rather fragmented approach. Geographical distance among some project sites may also have been a factor of insufficient cooperation as well as different project cycles in chronological terms, which sometimes were not conducive to cooperation. As a result, knowledge of counterparts about other projects was limited to some of them. At the same time, a number of counterparts expressed interest to be informed about other CSF projects.
4. Possibilities for cooperation may increase in the future once two projects will have fully taken off: the POPs project and the Climate-Friendly Technology Financing Facility. The potential for cooperation of both projects with others can be assessed jointly already at this stage.

5. To improve the coordination it is required to strengthen staffing of the UNIDO office to allow for closer monitoring of projects, including more frequent visits of project sites.

Cooperation with other external programmes

1. Several individual CSF projects developed contacts with other projects or programmes outside CSF, usually in the same problem area. Some CSF projects were linked to UNIDO networks worldwide and some cooperated with other UNIDO projects in China (ITPO) or in the region (RENPAP). Main benefit of such contacts was avoidance of duplication or some support for implementation of the projects concerned. The scope of contacts with other projects and programmes seems to be in general adequate except for inadequate contacts with NCPC Beijing.
2. While UNDP is not actively involved in the CSF, the UNIDO Representative and CSF team leader is an active member of the UN Country Team (UNCT) and any involvement in terms of coordination or cooperation within the UNDAF takes place through the UNCT.
3. The UNIDO Representative co-chairs the first UN China theme group "Sustainable Industrial Development and Energy" which assures a certain degree of CSF coordination with UNDAF since environment and energy are key in the UN cooperation agenda within UNDAF.
4. UNIDO does not participate in the regular informal donor group meetings, where the UN system is represented by the UNRC.
5. Since the World Bank and UNIDO have become the two most important multilateral advisors to the Government on SID, there is a certain exchange of information between the UBO and the Bank with regard to either's activities in this field.

Results

1. Results of the CSF have two layers:
 - a. Compilation or summation of results of individual CSF projects reviewed by the evaluation mission.
 - b. Results of interventions of the UNIDO Beijing office in policy and strategy discussions in the country.The latter results are to some extent based on and derived from results of some CSF projects and to some extent they are based on the work of UBO itself and its research fellows.
2. The most extensive results of CSF projects have been achieved in capacity building at institutional level. In total, over 30 institutions were strengthened or established and in most cases the institutional capacity building was successful. Good level of capability development was achieved particularly in the case of technology focused R&D organizations (energy conservation, NPFC, TRICI), policy formulation (DRC) and investment promotion (SIPC). Good results can be expected in the case of SPX. Less successful have been centers dealing with management of technology transfer.
3. Almost 3,000 people were trained. A small part constituted the core of institution strengthening. Most of the training was targeted at technicians and management staff of companies or government organizations with the purpose to support introduction of more advanced technologies or production processes, primarily in energy conservation, but also in IT.
4. The most significant results were achieved in environmental management and energy conservation. In this problem area significant results were achieved both at policy level, establishment or strengthening of institutions, human resource development, as well as at industry level in pilot plants (expected annual saving of US\$3.8 million from energy conservation measures). Demonstration projects have

high probability of countrywide replication. Very good results of the Montreal Protocol programme could be included in this thematic group as well (12,361 t = 17.3 percent of ODP phased out in China).

5. Due to insufficient funding and recent start of the few approved projects very limited results could so far be achieved in Western provinces; this is the weakest point of the CSF, particularly in view of the top priority of this objective both for the Government and UNIDO.
6. Contribution of CSF to job creation was rather limited, mainly through inward investment promotion (approx. 4,300 new jobs). Indirectly some environmental management related projects may have contributed to job saving through helping companies "to stay in business", on the other hand some environment related policy decisions, formulated with support of the SID project, resulted in closing down a number of small plants not complying with environmental standards.
7. Results in South-South cooperation have been modest. Some networks have been strengthened but actual transfer of Chinese technology abroad has been limited to a few cases.
8. Over and above the CSF projects, UNIDO Beijing Office became one of the two most important multilateral advisors to the Government on sustainable development. The project platform for policy dialogue, represented mainly by the SID project, was complemented and enhanced by research activities of the UNIDO Beijing Office itself. In policy and strategy discussions on sustainable industrial development UNIDO also became a key partner in the UN Country Team in China and a well established and recognized source of information sought for by bilateral donors and the diplomatic community in general.

Sustainability

1. Due to strong national ownership and high professional competence most capacity building projects have good prospects for sustainability but intensity of continuous upgrading may differ. To some extent it will depend on the capability to adjust to the continuously increasing role of the market mechanism in the operations of service organizations.
2. Organizations established and supported by municipalities or provincial governments for the purpose of promoting business in their regions have also good prospects for sustainability due to highly motivated and dedicated ownership and demand driven character of operations.
3. The International Technology Centres depend a lot on the continuous support of the host organizations and on the Government continuous support in pursuing the objectives of South-South cooperation, as well as on envisaged funding which appears doubtful in some cases.
4. Demonstrations of technologies in energy conservation have good prospects for replication provided the supportive policy framework is finalized and operational and additional financing sources are mobilized. Under such conditions the demonstrations of energy conservation in TVEs have particularly good prospects for large-scale replication with significant impact. In the Electrical motor systems the two Centres are likely to sustain services but additional upgrading for air compressors is needed and dissemination of newly mastered tools and approaches in the whole country will have to be supported by the new GEF project and a national plan.

7. RECOMMENDATIONS

Relevance and design

1. Design of the current CSF, though not flawless, need not be changed at this stage of implementation. The programme should be continued with consideration and subsequent implementation of CSF-relevant recommendations contained in this Chapter as well as project-specific recommendations contained in Volume II.
2. The new phase, while considering the 11th National Five-Year-Plan, the new CCA completed in December 2004, and the UNIDO Corporate Strategy, should continue to have two main thrusts for intervention:
 - a. Reduction of regional disparities aiming at poverty alleviation.
 - b. Environment and energy management addressing global environmental threats.
3. Structure of the new CSF should allow for flexibility to accommodate both integrated programmes and individual projects. However, it is recommended to
 - a. Cluster environmental management projects (including POPs) and energy conservation projects (including CDM) into separate components,
 - b. Keep the MP programme as a separate component of CSF (though related to the environmental management component).
4. Special efforts should be undertaken and stakeholders motivated to increase the components addressing reduction of regional disparities. Follow-up of strategy for the Shaanxi Province could be an entry point. SPX is one of the model projects for possible replication. Suitability of the Business Information Network project in Shaanxi for replication in other Western provinces will have to be evaluated at a later and more advanced stage of its implementation.
5. Identification and formulation of new programmes and projects should build on the good experience recorded so far by CSF in terms of
 - a. demand orientation,
 - b. selection of counterpart (institutional stability, long-term experience of the host institutions, counterparts who have the capacity to start projects with a significant amount of seed money, etc),
 - c. very effective combination of demonstrations with feedback to policy level
 - d. extensive use of national expertise,
 - e. performance indicators.
6. Identification and formulation of new programmes and projects should avoid weaknesses experienced in some projects in the past (insufficient identification of target beneficiaries and effective demand in developing countries for South-South cooperation, unrealistic funding targets).
7. When designing and starting new projects, special attention should be paid to the formation of project steering committees and their membership, placing emphasis on the participation of target beneficiaries to the extent possible.

Funds mobilization

1. A dialogue with potential special purpose donors should start in parallel to designing the new phase of the CSF to harmonize funding requirements with their priorities and programming cycles.
2. Funds mobilization for the Western region should, *inter alia*, follow the successful pattern of particularly local demand driven and business oriented projects like the SPX in Chongqing.
3. Funding options for new South-South cooperation projects, particularly for additional ITCs, should be checked with the Chinese authorities and counterpart organizations

as well as with potential special purpose donors prior to designing the relevant programme/project proposals.

Implementation

1. UNIDO rules and regulations regarding cost recovery at the project level in the field should be better explained to counterparts, particularly with regard to travel expenses.
2. Ways should be found to make UNIDO rules and regulations for subcontracting requiring competitive bidding more compatible with the particular requirements of small subcontracts at the field level, in order to speed up their processing.

Management

1. The Programme Development Committee (PDC) originally set up to develop and/or review new projects/programmes based on the agreed criteria for inclusion in the CSF should meet regularly. Arrangements should be made between CICETE and UBO for joint monitoring and joint assessment of new projects before they reach UBO.
2. A CSF alternate team leader should be assigned at HQs as soon as possible.
3. If in the course of the ongoing restructuring of the UNIDO field representation the UBO cannot be upgraded to a regional center, at least a deputy UR should be assigned to the UBO to allow the UR to spend more time on field visits of programmes/projects and institutions that could participate in new projects in the framework of the CSF. The research group should be maintained and any future UR should have the capability to manage and use it.
4. The UR and his/her programme assistant should have financial means for a more frequent exchange of views with project counterparts through field visits to improve day-to-day management of the CSF and to strengthen coordination activities aiming at cooperation among projects.
5. All HQs official missions to China should be endorsed by the CSF team leader or, in his/her absence, by the CSF alternate team leader and a copy of travel request sent to the UNIDO Asia and the Pacific Bureau, PCF/ASP.
6. UNIDO programme managers and UBO should better observe the regularity of project steering committee meetings and consult with counterparts on the establishment of such committees where they do not yet exist. The operation of established steering committees should be reviewed and corrective action be taken to ensure their regular functioning and representative membership of relevant stakeholders and target beneficiaries.
7. UNIDO programme managers should better observe the preparation of project progress reports according to established time schedules and provide UBO and the UNIDO Asia and the Pacific Bureau with a copy.
8. Field missions and technical backstopping of ITCs should be coordinated with the relevant substantive branches at HQs.
9. Reporting requirements for GEF projects should be harmonized between UNIDO and UNDP to avoid duplication and overlapping in the request for information from the counterparts.

Cooperation among projects within CSF and with other external programmes

1. Meetings of counterparts of all CSF projects or at least of thematic clusters of projects should be organized to increase their awareness of possibilities of cooperation. By organizing such meetings the potential for cooperation among projects should be analyzed. This is particularly relevant for the environmental

- cluster, the energy efficiency and energy conservation cluster and the technology and investment promotion cluster, incl. the SPXs.
2. Once the Climate-Friendly Technology Financing Facility has taken off the ground, close cooperation should be sought with other projects to identify appropriate investment opportunities and secure their national and international financing. The potential for cooperation of both projects with others can be assessed jointly already at this stage.
 3. More cooperation should be sought with the NCPC Beijing, particularly by the environment related projects, to make better use of available national expertise in the field of environment and industry and the NCPC's access to international sources of environment information and technologies.

Selected project-specific recommendations

Numerous project-specific recommendations are spelled out in project evaluation notes in Volume II. They are an integral part of the evaluation report and in a number of cases they interpret at project level the applicability of some generic recommendations made above. A few of them deserve to be singled out and highlighted here:

1. The management arrangement for the EST Shandong project where UNIDO project management does not have responsibility for most international experts due to their management by a separate entity identified by the donor should be reviewed.
2. In view of the size and complexity of the POPs National Implementation Plan project a strong project management team at HQs is required.
3. The reasons for different duration of some processes in the POPs project driven by UNIDO and the World Bank should be analyzed.
4. The UNIDO website on investment opportunities worldwide should be dynamized and information more frequently updated to meet up-to-date requirements of interested parties in China and elsewhere.

8. LESSONS LEARNED

Country Service Framework as programmatic concept

1) Country Service Framework versus no programmatic framework at all - any value added?

The draft guidelines for CSF formulation assume that CSF would consist of integrated programmes and projects. This was not the case of CSF China, in reality the CSF consisted of projects only. This fact, however, does not eliminate the advantages of the CSF concept.

In general, the management of a UNIDO programme consisting of many stand-alone projects in a large country belongs to the tasks of the UNIDO field office. The case of China gives some indications that the CSF concept adds value to the management and visibility of UNIDO's programme in a given country, as follows:

- the CSF gives the UNIDO programme a better identity since the Framework becomes a thematic reference point for UNIDO's role in the country;
- the CSF allows for better policy guidance of UNIDO's operations;
- both aspects above provide UNIDO's programme with higher visibility in the field and among potential and special purpose donors, as well as vis-à-vis the Government, with positive influence on fund raising;
- the CSF further enhances the role and visibility of the UNIDO field office not only by managing the framework but also through its global forum functions emanating from the all-encompassing and thematic concept of the CSF;
- it is more likely that management of a UNIDO programme at the country level is stronger in form of a CSF since the team leader (UR) would assure a closer and therefore more client oriented and consistent management approach and be able to identify the potential for coordination and synergies within the Framework, having also the authority to mobilize them as CSF team leader.

All aspects above lead to a stronger role of the field office and thus to a stronger programmatic field decentralization going significantly beyond the mainly institution driven debate on decentralization. In combination with the research activities carried out by the office the experience can be repeated in other countries and might be particularly relevant for the UNIDO regional centers.

2) Country Service Framework versus Integrated Programme

Unlike in the case of integrated programmes, in the case of CSF cooperation and synergies among projects need not be built in the design of CSF. Therefore it is very important in the case of CSF to have a carefully designed management system to support and ensure cooperation among projects in the course of project screening and approval and in particular in the course of implementation.

However, it should be noted in this context that a similar lesson is learned also from the evaluation of integrated programmes. Very often the principle of integration is built in the design only formally, in reality the cooperation among projects stems mainly from managerial interventions during implementation and depends primarily on the capacity of programme management in the field to identify possibilities for cooperation among projects and to promote them.

The experience described above infers that the difference between integrated programmes and CSF in terms of cooperation mechanisms for synergies is in practice

not as big as the two concepts imply. Intended simplification of Programme/Project Cycle Management (PCM) guidelines through merging the two concepts could, therefore, apply the CSF concept as a general scheme for UNIDO programmes in the countries. In practical terms the change would entail

- allowing for combination of integrated programmes with stand-alone projects, and
- confining the integrated programmes to focused interventions with true and real potential for synergies.

The latter principle may result in smaller integrated programmes within a UNIDO country programme but it would be easier for such integrated programmes to comply with the original concept of an integrated programme.

UNIDO office as a partner in policy discussions

UNIDO Beijing Office became one of the two most important multilateral advisors to the Government of China on sustainable development. In policy and strategy discussions on sustainable industrial development the UNIDO office has become a partner recognized by several Government bodies. UBO also became a key partner in this field in the UN Country Team in China and a well established and recognized source of information sought for by bilateral donors and the diplomatic community in general.

What were the factors of success? Some CSF projects served as entry points and platform for policy dialogue with the counterpart Government organizations, but equally if not more important were research activities of the UBO itself. Supported by 120 work months of research fellows UBO elaborated a clear and well-documented position on the perspectives for SID in China and in the other three countries covered by the office. This knowledge and professional competence was essential for acquiring the current high reputation of the office in China. To maintain it requires continued presence of (relevant and successful) policy dialogue projects in the CSF, keeping and making use of the research capacity in the office and coordination with research activities at HQs. Needless to say that professional profile of the UR, capable to design and elaborate concepts for development strategy, is essential for integrating the two inputs and marketing them.

How to evaluate large programmes

The CSF has two types of outcomes and impact: one related to interventions of the UNIDO office at policy and strategy level as explained above, and one related to the results of individual projects. Evaluation of CSF China represented a methodological problem: how to evaluate a programme consisting of approximately 40 projects (MP projects excluded)?

Experience from this evaluation can be summarized in the following principles:

- (i) Carry out outputs-focused self-evaluation of all projects which started implementation;
- (ii) Select a number of projects for independent evaluation on the basis of predefined criteria, such as (in this particular case)
 - large projects with budget over US\$1 million,
 - projects with interventions at policy level,
 - projects combining demonstrations with feedback to policy level (with potential for replication),
 - projects in the priority geographical area, and
 - sample of projects representing certain thematic categories (transfer of technology).

It is important for the evaluation of a large programme not to reduce the scope of project coverage too much and to ensure that the projects reviewed include both the largest projects and a sample of different project categories.

(iii) When reviewing individual projects focus on Relevance, Results and Cooperation but cover also other evaluation criteria. Though review of individual projects can not be as detailed and verified as in the case of in-depth evaluation it provides a good base for programme-wide evaluation.

South-South cooperation programmes

Before programming South-South cooperation programmes and projects there should be a concrete definition of effective demand for the services in question and confirmation of full commitment from the Government counterparts. Moreover, budgeting should be done on the basis of realistic expectations for fund raising from national authorities and third parties.

Ownership

Ownership is closely related with institutional stability and long-term experience of the host institutions and their possibility to mobilize professional support. It can be very strong with demand oriented and/or business driven projects. Unfulfilled funding obligations point normally to weaker ownership.

Synergies at HQs

Experience with the China CSF has shown that the programme manager of projects developed and implemented by PTC/IPT did not coordinate or consult with the substantive and sectoral branches in house to enrich the UNIDO input with the whole potential of services UNIDO was able to offer in the case in question. Had this been done, the impact and visibility of UNIDO's response could have been more consistent and significant. It could also have generated ideas for further programming.

Coordination of field missions of HQs' staff with the CSF team leader

During the implementation of the China CSF field activities of HQs, particularly field missions were frequently not announced to and coordinated with UBO. This led to uncoordinated action, sub optimal utilization of the mission's inputs and sometimes inappropriate timing with regard to the management of the CSF. Full awareness of the CSF team leader in China of all field operations of HQs appears to be essential to allow for adequate CSF management. This should not and does not need to increase bureaucracy.

Field operations officer as a member of the evaluation team

The inclusion of the field operations officer of the UNIDO Regional Bureau in the evaluation team is an option if he/she neither participated in the conception nor in the formulation of the CSF. It carries several advantages and one disadvantage, as follows:

- a) Advantages
 - the field operations officer becomes much more acquainted with the situation *in situ* of UNIDO's programme/projects in the country as well as with the country

- itself than through any other type of programming or programme monitoring mission possible under the given financial constraints for staff travel in the Regional Bureaus;
- the knowledge of the real situation of programmes/projects in the field enables the field operations officer to assess more realistically requests for expenditures to be approved by the Regional Bureau;
 - the perception of the situation and problems of programmes/projects in the field enables the field operations officer to propose solutions for problem solving from an independent perspective;
 - the visit of programmes/projects in the field and meetings with relevant stakeholders enable the field operations officer to identify programming potential and make suggestions for follow-up activities.

b) Disadvantage

- Due to the normal workload of the functions of the field operations officer the completion of the evaluation report may be delayed, also if limited inputs are obtained from the national expert. In the preparation phase the assistance of an intern can be very beneficial in reducing the time of the field operations officer spent on the evaluation.

It is felt that the advantages outweigh by far the disadvantage of including the field operations officer in the evaluation team.



Picture 1: Counterpart Representatives in Shandong; (Ref.: EST Project, PSN 7).



Picture 2: Energy Conservation Service Center Shanghai; (Ref.: China Motor System Energy Conservation Programme, PSN 3).



Picture 3: Counterpart Representatives in Regional Office for City Information (RCOCI), Shanghai; (Ref.: IITPC, PSN 28/29).



Picture 4: Nanshan Waste-to-Energy Power Plant in Shenzhen; (Ref.: Shenzhen International Technology Promotion Centre for Sustainable Development - ITPC, PSN 23).



Picture 5: Brick making operations on new production line, Brick plant near Xi'an; (Ref.: TVE project Phase II, PSN 2).



Picture 6: Recently produced bricks on new production line, Brick plant near Xi'an; (Ref.: TVE project Phase II, PSN 2).



Picture 7: Destroyed equipment foaming production line; Factory No 3 in Xi'an, MP programme.



Picture 8: New production facility of foaming line; Factory No 3 in Xi'an, MP programme.



Picture 9: Packaging nets for fruits and vegetables; Factory No 3 in Xi'an, MP programme.

VOLUME II: EVALUATION NOTES ON PROJECTS VISITED BY THE EVALUATION TEAM

ADJUSTED COMPONENT 4: ENERGY EFFICIENCY/PERSISTENT ORGANIC POLLUTANTS (POPs)

PSN 2: Energy Conservation and GHG Emissions Reduction in Chinese Township and Village Enterprises – Phase II

Budget (excl. support costs) and expenditures (US\$)

PAD No.	Budget	Expenditures	%
CPR/99/G31	7,979,454	3,656,706	45.8

Funding

Funded by GEF.

Design

An elaborate concept with potentially high impact.

In order to introduce energy conservation measures on a wide scale the project pursues three factors of technological change: building up engineering capability to identify and design energy conservation measures, introducing policy changes to eliminate barriers to energy conservation, and creation of a revolving fund. These system factors are complemented by demonstrations of technological changes at company level. The project is designed to operate in 8 counties. After project completion nation-wide replications are expected, with the support of advisory engineering capacity developed under the project. The design includes appropriate activities to support replication. While limited geographical focus is rational for intervention at company level, removal of policy barriers and introduction of promotional policies requires intervention at central level. The project builds in a mechanism for feedback to the central level (PIC – Project Implementation Committee).

Relevance

Objective highly relevant; selection of TVEs as target group was based probably on organizational advantages.

Energy conservation and reduction of GHG emissions are priorities of economic and environmental policies of the Government, with importance for global climate. Companies targeted by the project were selected on the basis of ownership pattern. The reasons might have been organizational as all TVEs were under responsibility of one central body (Ministry of Agriculture). Replication of the technological experience should preferably target all categories of companies.⁸

Ownership

⁸ Currently the concept of Town and Village Enterprises (TVEs) is complemented by the concept of SMEs. TVEs are not limited by size. SMEs in China may in some sectors have up to 2000 employees which explains why it is possible that TVEs are said to represent about 95 % of SMEs.

Strong ownership by MOA but commitment of companies required extensive promotional activities.

Ministry of Agriculture (MOA) is the counterpart for the project because it has the Government responsibility for TVEs. The Project Management Office (PMO) has 7 staff, one of them is paid by the project. There is no Steering Committee, its functions are discharged by the Policy Implementation Committee (PIC) consisting of 7 members representing related ministries and central organizations (MOA, NDRC, MOST, SEPA, etc) and the Agriculture Bank of China (ABC). There were some personnel changes in the PMO, currently the PMO appears rather strong and competent.

For companies the savings from energy conservation are an inherent business objective while reduction of GHG emissions is an external objective. The need of technological change is not always felt by the companies so that their “ownership” of project objectives and commitment to invest time and resources required promotional work. Once convinced on the basis of professional advice and a decision to go ahead was taken they became the drivers of the process, sometimes pushing for faster implementation.

Implementation

Slower than planned due to complexity; critical node: subcontracting; satisfaction with quality of inputs and services.

UNIDO inputs have so far consisted mainly of subcontracts (52% of expenditures), international experts (15%) and national experts (14%). Given the fact that subcontracts are implemented by national organizations the share of national expertise used for implementation of the project is considerable and reflects well professional capabilities of the country. In the field the activities were managed by a PMO supported by a very competent and effective part-time CTA.

Start of implementation was rather slow, it took more than two years for the project to build the institutional framework. Selection of companies and assuring their commitment was a time consuming process as well; out of 8 companies selected in the first attempt 5 dropped out and it was necessary to search for replacement⁹.

As most activities are performed by national engineering and consultancy organizations sub-contracted by the project, the progress in implementation depends to a great extent on the speed of making sub-contracting arrangements. Compliance with UNIDO rules and regulations for subcontracting requiring competitive bidding sometimes runs counter to speed requirements. In spite of that the counterpart is satisfied both with UNIDO management (fast feedback, flexibility) and international experts. Apart from the CTA also the foundry expert was highly praised. The only critical comment referred to the fact that often very similar or the same monitoring reports were requested by both UNDP and UNIDO.

Visited companies also expressed satisfaction with the quality of technical support provided by the project (usually implemented by national design institutes or other organizations subcontracted by the project).

Synergy effects resulting from cooperation within and outside the CSF

Cooperation with programmes outside CSF, some cooperation possibilities within CSF to be analyzed.

⁹ Reasons for discontinuation: closure of company because of stricter environmental regulations; bankruptcy; refusal to make a commitment with financial obligations.

The project was in contact with several other programmes in energy conservation (WB ESCO, WB in the steel sector, GEF "Green Light", French-China Environment 2000). In future possibilities of cooperation should be analyzed at least in the case of the following two CSF projects:

- China Motor System Energy Conservation Programme (mutual use of engineering and consulting capabilities developed by the projects).
- Climate-Friendly Technology Financing Facility (possible source of financing of investment in technology changes, if the venture capital fund is established; expected preferred scope of investment of the Fund: US\$0.5-1 million).

Results

Institutional mechanisms established (RCF still weak), technology demonstrations in pilot companies well in progress with good prospects for exceeding the targets in CO₂ reduction, local governments mobilized and actively supporting, awareness about energy conservation raised among a large number of TVEs, representing also a basis for replication.

In addition to programme management infrastructure the following results have been achieved:

Institutional mechanisms

- Policy Implementation Committee (PIC) was established, with a small secretariat (1 professional, 2 general service staff); PIC meets once a year (last meeting Sept 2004 with 50 participants)
- Local PICs (LPICs) were established in 4 counties, in 4 counties they are under preparation.
- Production Technology and Product Marketing Consortium (PTPMC): the original plan was changed and instead of a consortium a coordination company (Hong Yuan - H.Y.) was created, with a network of 40 experts from various professional organizations. A database of candidate TVEs was created. Two websites are operational.
- Revolving Capital Fund (RCF) established with the Agricultural Bank of China (ABC) but the lending system has been finetuned only recently so that loans to the first three pilot companies were expected to be granted in December 2004. The scope of funds mobilized for the RCF is below expectations.

Technology demonstrations in pilot companies

9 companies (original target: 8) in 4 sectors carry out technology improvements requiring total investment over US\$49 million. Investment projects in technology improvements are at different stages of implementation, the first ones should be completed early 2005, the last ones in October 2005. Expected results are summarized in the table.

Table 5: Projected Energy Savings and Emissions Reduction in Pilot TVEs

Sector	Company	Baseline		Energy saving		Reduction of emissions
		Energy (tce)	Emissions CO ₂ t	tce	%	CO ₂ t
Bricks	Yongxing	9,840	24,533	4,385	44.6	10,931
	Xi'an	3,736	10,813	560	15.0	1,622
	<i>Sub-total</i>	13,584	35,346	4,945	36.4	12,553
Cement	Lufeng	64,414	160,583	39,148	60.8	93,097
	Zhejiang	97,012	241,850	8,480	8.7	21,136
	Guangdong	29,562	69,004	6,208	21.0	16,561
	<i>Sub-total</i>	190,988	471,437	53,836	28.2	130,794
Foundry	Dalian	517	1,736	140	27	350
	Nanjing	8,021	22,273	1,618	20.2	4,156
	<i>Sub-total</i>	8,538	24,009	1,758	20.6	4,506
	<i>Total</i>	213,110	530,792	60,539	28.4	147,853
Coke	Taiyuan	???	???	43,200		107,676
	Xinggao	???	???	???		???

tce....ton of coal equivalent

Complete data for the coke sector are not yet available and with the progress in implementation some data may be slightly amended. Even in that case it is very likely that the original project target for reduction of CO₂ in the pilot TVEs (85,000 t) will be exceeded by far. In some cases the energy-related technological improvements incited overall improvement of machinery and increase of production (and employment).

Assuming average price of 200 RMB per 1 tce the annual saving amounts to 20.7 million RMB (approx. US\$2.5 million) Compared to the investment outlay the financial saving seem modest but more detailed calculations are needed for every investment project since some energy is saved in the form of kWh which is priced higher.

Management teams of two (cement and brick) companies visited by the evaluation mission are keen and take practical steps to implement the investment projects fast, in one case even without waiting for financial support from RCF.

Actual policy interventions

The project found it difficult to change central policy through project intervention alone. There are some possibilities for the PIC to induce changes of some parts of industrial policy, particularly as regards promotion of selected technologies, for example in the coking sector. Nothing has been done so far but some proposals can be prepared after the experience of the pilot companies is evaluated.

LPICs seem to have more opportunities for immediate interventions: advising TVEs on available promotional policy tools at hand of local government; initiating negotiations and signature of voluntary agreements between TVEs and the local government; identification of new TVEs for replication. According to representatives of local governments in the two visited counties the local governments have diverse promotional tools at hand, such as favourable taxation, accelerated depreciation, direct subsidy for technical improvement, preference in allocation of power supply (in the region short of power), subsidy for using clay from the river, support in access to loans and to land, etc. In order to promote use of perforated bricks the city government can for example introduce a fine on the use of low-quality bricks in city construction.

Most of the measures have not been applied so far as the investment projects are still under implementation but the government representatives confirmed strong support for

the companies participating in the programme and, no doubt, the companies' image benefits from their participation in the programme.

Local representatives in Tongxian (LPIC was about to be established in November) and the management of the cement factory recommend that utilization of waste heat in cement plants be included by central authorities in the "Favourable Regulations for Comprehensive Utilization of Three Wastes".

Awareness raising and training workshops

- 10 workshops on energy conservation, duration usually one or two days; 660 trainees from 450 TVEs; as a result increased awareness and established contacts with possible candidates for replication (60).
- a training course on voluntary agreements (over 50 participants); however, neither the two visited companies nor local governments were aware of this tool.
- two training sessions on capacity building for LPICs (80 participants).

Replication

- Country-wide surveys of 3 sectors (cement, bricks, coking sector) carried out and strategies for technology improvements identified.
- Target numbers of TVEs proposed for replication in the four sectors stipulated (110-120 in total).
- Emission reductions in each sector and for the whole replication programme estimated (over 1 million t of CO₂).

Almost all TVEs envisaged for participation in the replication programme have been identified (except for the brick sector where the target number is 60 and 46 were identified) but no commitments have been made so far. In view of the experience from the on-going pilot phase it can be expected that a part of the currently targeted TVEs will drop out.

Sustainability

Good prospects for large-scale replication with significant impact if additional financing sources mobilized.

There are approx. US\$3 million in the budget reserved for supporting replication of the pilot cases in approx 100 companies. Strategy for replication is outlined and the project could achieve considerable impact even if not all currently aspired 120-130 TVEs actually implement the intended improvements. It is, however, important that most of them do. It is a rather challenging task. Its achievement will depend among others on

- promotional activities and creating conducive policy framework by local governments
- sustainable capability of H.Y. to advise companies and coordinate required professional and financial inputs
- access to loans with longer repayment period.

It seems that local governments are keen to support companies willing to introduce technology improvements. H.Y. company is considered by some interviewed stakeholders as competent enough to coordinate the programme, using the network of associated professionals. They plan to charge fees for some services but feasibility of this intention is yet to be tested. Thus the critical factor seems to be access to financing.

RCF alone, even if running smoothly, will not be able to support sufficiently such a large programme. Other sources of finance will have to be mobilized.

Recommendations

- 1) Establish contact and review possibilities of cooperation with the two CSF project as specified in the section "Synergy effects...".
- 2) In case of significant drop out of TVEs from the replication programme consider extending the company coverage outside TVEs, without regard to the ownership pattern.
- 3) Harmonize reporting requirements between UNDP and UNIDO in order to reduce the number of similar reports requested from PMO.
- 4) Include the Tongxian recommendation regarding utilization of waste heat on the agenda of PIC and follow it up.

An in-depth evaluation of the project planned for March 2005 will verify validity of the projected data including the optimistic indicator of energy conservation as well as the economic results of individual projects as a basis for promotion of replication. The in-depth evaluation will result in more detailed recommendations.

PSN 3: China Motor System Energy Conservation Programme

Budget (excl. support costs) and expenditures (US\$)

PAD No.	Budget	Expenditures	%
FI/CPR/00/122	1,447,619	1,434,154	99

Funding

Funded by the UN Foundation (UNF) with complementary funding by USDOE and Chinese stakeholders.

Additionally to UNF, the following funding was agreed upon:

- US\$220,500 in kind by State Development Planning Commission (SDPC) to support programme management (subcontractor and lead agencies)
- US\$800,000 by factories and financial institutions to finance implementation of projects
- US\$449,000 in kind by the U.S. Department of Energy (USDOE) to finance experts and partly the CTA; in addition, USDOE was to provide most of the technical information.

In the case of additional sources of fund the actual expenditures were not monitored by UNIDO but the counterpart believes that Chinese stakeholders met their commitments fully.

Design

A comprehensive project document with an ambitious project strategy, verifiable indicators and a provision for extensive cooperation with other programmes.

The project was developed with technical support of USDOE provided under a US-China cooperation agreement. It is a pivotal segment of a broader technical cooperation scheme, which includes complementary inputs from a number of US and Chinese agencies.

A rather ambitious programme aims at controlling greenhouse gas emissions by promoting improvements in energy usage in motor-driven systems in the country. The project should develop methodological and training tools, implement and test the concept in two provinces and, based on evaluation of the experience, assist the Government in preparing a country-wide programme.

The project document includes well formulated verifiable indicators and a provision for elaborated monitoring and evaluation.

The prodoc envisaged extensive cooperation with numerous other energy conservation oriented programmes going on in China (Sino-US Motor Systems Team, World Bank/GEF Energy Management Company Project, etc.) and organizations (such as China Energy Conservation Information Dissemination Centre, etc.).

Prodoc also envisaged additional funding (from GEF) for follow-up and replication in the whole country.

Relevance

High potential for energy conservation; in full compliance with promulgated Government policy.

It is estimated that electrical motors consume approximately 50% of electricity in China and that this consumption can be reduced by 20%, particularly through optimizing the whole motor systems (by appropriate sizing, use of speed control, etc.) Most Chinese enterprises are either not aware of it or do not have the competence to design properly the required changes.

The Energy Conservation Law 1997 includes optimization of motor systems as a specific policy objective.

Ownership

Very strong national ownership by a competent and prominent counterpart.

The project was initiated and funds were mobilized by Chinese authorities, including UNF funding. UNIDO was selected for project execution by UNF.

The National Development and Reform Commission was the main institutional counterpart of the project. Its counterpart role is a continuation of the same role the Commission (the then SDPC) played in the US-Chinese cooperation programme since 1996. Operational management and coordination was entrusted to CECIC (China Energy Conservation Investment Corporation), the most prominent Chinese agency in energy conservation, currently supervising 3,000 energy conservation projects in China, having invested RMB 23 billion to date and contributing inputs to formulation of government policy. They are also engaged in several international projects in energy conservation, UNIDO's only being one of these.

Provincial infrastructure supported by the project (Energy Conservation Service Centres) is owned by local/municipal governments. In the case of the Shanghai Centre visited by the evaluation team a strong ownership of the Municipality is apparent (subsidy of RMB70 million to purchase critical missing equipment).

Implementation

Satisfaction with most project inputs and services but complaints about initial delays.

Project inputs consisted mainly of subcontract with a national organization (54%) and international expertise (27%) complemented by some equipment (6%), training and national short-term experts (approx 5% each). In addition, the project was supported by extensive use of international expertise funded by the U.S. Department of Energy (technical information, training modules, experts).

The counterpart was satisfied with project services, highlighting particularly competence and devotion of international experts. Training by international experts was very useful as it was always related to practical demonstrations. Upon request the experts still provide CECIC with advice from home base, which is considered timely and useful. International experts participated in the first 6 plant assessments. (In total 41 assessments were conducted, exceeding the target of 32).

Testing equipment procured by the project was found appropriate and is used. However, it had to be complemented by procurement of some equipment by the Government and more equipment is needed to carry out assessments of large complex systems.

Contribution of some national experts working on standards was rather academic and of limited practical value.

Project had a slow start and the counterpart complained that UNIDO did not consult them on the problems of delay and postponement of some activities. Against a completion date of June 2004 the project will now only terminate in March 2005. Part of the delays though was attributed to SARS.

Synergy effects resulting from cooperation within and outside the CSF

So far no cooperation with other projects or programmes.

There are plans to make use of the China Energy Conservation Information Dissemination Centre for dissemination of the case studies but so far no cooperation was established either with projects within or outside CSF. The counterpart expressed a wish to be informed about other CSF projects, including the ITPC Shenzhen (TF/TN/GLO/02/002) engaged in energy and environment projects promotion, and the Climate-Friendly Financing Facility (FI/CPR/02/237).

Outside the CSF, the project helped the Shanghai Center to establish cooperation with other institutions, including universities.

Results

Methodological tools transferred by the project are used to a great extent, competence of two provincial Centres was upgraded to engage in electrical motor systems, a number of technology improvements through investment projects were implemented. Training activities exceeded the targets but some outputs were not completed as planned (case studies, national plan).

-Methodological and application tools and standards

Two sets of training materials were translated into Chinese: for engineering experts, and for the centers to train factory personnel. They are viewed as very useful, with some reservations. CECIC suggested that the information contained in the training manual was derived mostly from industrialized countries. The "problem" can be overcome by incorporation of case studies from Chinese companies elaborated under this project. The Shanghai Center viewed parts of the training manual as elementary and suggested it could have been prepared as well by national experts.

Software tools were also transferred but they are hardly used because they were not translated in Chinese and because they were not adjusted to Chinese conditions (frequency of 60 Hz assumed in the software against 50 Hz in Chinese equipment). More training is needed to train Chinese experts how to use the software without translating it.

Updating of standards on parameters of electrical motors was completed only partly.

Much of the training material is in the public domain and, thus, available for UNIDO to make use of it in other countries. Some parts have already been used for lectures in three countries and more applications are expected in 2005.

-Capacity building

i) Two provincial Energy Conservation Service Centres (in Shanghai and Jiangsu) were strengthened by training a core of 5-6 professionals in each Centre, provision of testing equipment and methodological tools (testing procedures, a labeling programme, training materials).

The evaluation mission visited the Shanghai Centre. This Centre has a double legal entity: as a public body affiliated to the local government (the Economic and Trade Commission) and a commercial company selling services to companies. As a public body it is in charge of inspections, training and public awareness raising. As a commercial company they provide testing and engineering services to companies. The same team of 20 permanent and approximately 50 part-time staff can engage in either activities. Out of the 20 permanent staff, 12 are technical professionals (fluid physics, boilers, measurement and instruments, etc.) In the Shanghai Centre, the commercial

activities dealing with the electrical motor systems represent 25-50% of all commercial activities.

The Shanghai Centre developed sufficient competence to conduct system analysis in pumps and fans and to train factory people in these fields. Air compressor systems can be handled as well but more training by international experts and more equipment are needed for handling large air compressor systems.

ii) Approximately 1,000 people were trained in short-term workshops on energy conservation in electrical motor systems (the project target was 400) and very positive feedback is received from them.

The Shanghai Centre trained in 9 training workshops (duration one day each) approximately 250 people, 90% were factory staff from 200 factories. The workshops provided a good platform for establishing longer-lasting working contacts and promoting energy conservation assessments and measures in the companies.

-Plant demonstrations

From among 41 plant assessments 14 investment projects were prepared in Shanghai and the Jiangsu Province and either implemented (11) or at the time of evaluation mission they were under implementation. This exceeds the sum of targets of 4-6 projects to be implemented in each province. Number of projects elaborated as case studies (for promotional and demonstration purposes) remained under the planned target of 4 case studies in each province.

As recorded in Annex C of the in-depth evaluation report completed recently¹⁰, actual savings of electricity in the 11 completed projects ranged between 20% and 50% and the total savings amounted to 23 million kWh per year (at the price of 0.50 RMB per kWh it amounts to approximately US\$1.4 million). Pay-back period is very favorable, between one and three years. Thus the results confirm a great potential for economically interesting energy conservation in this field of electrical motor system.

In the Shanghai Province 20 projects were formulated, out of which 4 were implemented and one is under implementation. Contracts for implementation of two additional projects are under negotiation, 4-5 additional projects (compressors, pumps) are expected to be implemented in 2005 (in total value of RMB10 million=US\$1.18 million).

Implementation of projects is on behalf of the companies also supervised by the Centre, with actual implementation subcontracted by the Centre to specialized organizations and suppliers.

The four implemented projects were in the range between US\$36,000 and US\$300,000 (total almost US\$0.6 million). This is too small an investment for a World Bank loan (preferred amount over US\$10 million). For the time being the Center could mobilize funding from the Shanghai Municipal Industrial Investment Company.

-National programme (Output 4)

National programme for dissemination of experience and methodology in the whole country has not been prepared because the budget was exhausted before these activities could be started.

Sustainability

The Centres are likely to sustain services in the electrical motor system but additional upgrading for air compressors is needed. Dissemination of the newly mastered tools and

¹⁰ "Second Process Evaluation Mission Report" (J. Peters, S. Nadel, November 2004).

approaches in the whole country will have to be supported through the forthcoming GEF project.

Professional profiles of the Centres and their operational modalities are factors of sustainability of both Centres. Both Centres have developed good competence for advisory services in pumps and fans. However, perspective market for their services lies primarily in the compressors subsector. The Shanghai Centre is also planning more assessments of compressor systems in 2005. However, in this field both Centres need further upgrading to be able to handle large and complex systems.

The Shanghai Centre conducts training and in-plants assessments free of charge but shares the proceeds from the implemented energy conservation projects. Thus the design and consultancy capability developed in the Centre in Shanghai is likely to sustain the plant-oriented advisory services also in the area of electrical motor systems. Jiangsu Centre focuses on dissemination of the new energy conservation approaches through broadly conceived awareness raising and training. The evaluation team could not verify whether Jiangsu charges fees for the training of company staff and/or what is their financial standing or backing by the provincial owner.

Equally important as sustainability of the two Centres is replication of the experience accumulated through project activities in the whole country. Dissemination of the energy conservation methods and approaches in the electrical motor systems in the whole country will be constrained by absence of the national plan.

Fortunately, additional funding from GEF (US\$15 million) was mobilized for energy conservation programmes covering several sectors including industry. There are, therefore, good prospects for additional upgrading of the Centres in handling large air compressor systems and for completing the missing outputs so that the programme in electrical motor systems will unfold in the whole country.

Recommendations

CECIC, UBO:

- 1) Establish contacts with other CSF projects in the field of energy conservation and review possibility of cooperation in using the developed capabilities and/or promoting services of other projects among clients; this applies in particular to the TVE energy conservation project and, once operational, to the Climate-Friendly Technology Financing Facility project. The National Cleaner Production Centre in Beijing may also benefit from cooperation with this project, particularly through the use of its experts.

Government:

- 2) In view of the experience accumulated by UNIDO in the course of this project make arrangements to involve UNIDO in the implementation of the follow up programme (EEUEP – Energy End Use Efficiency Programme).

Detailed recommendations for the follow up programme are elaborated in the above mentioned project/specific in-depth evaluation report.

PSN 4 Preliminary Assessment to identify the Requirements for Developing a National Implementation Plan in the People's Republic of China as a First Step to Implement the Stockholm Convention on Persistent Organic Pollutants (POPs)

Budget (excl. support costs) and expenditures (US\$)

PAD No.	Budget	Expenditures	%
GF/CPR/02/010	349,500	342,122	97,8
Chinese Gov in kind	50,000	not monitored	
UNIDO in kind	70,000	„	
<i>Total</i>	<i>469,000</i>		

Funding

Funded primarily by GEF and complementarily (in kind) by the Chinese Government and UNIDO.

Design

Project documents complies with GEF requirements.

Purpose of the project is to enable the Government and cooperating agencies to prepare project document(s) in support of developing a National Implementation Plan.

Three outputs were envisaged in the prodoc: i) overview of infrastructure important for the implementation of the Stockholm Convention, ii) extent and nature of POPs releases and iii) Enabling Activities Project Brief

Relevance

Commitment to implement the Stockholm Convention on POPs.

The Government signed the Convention in May 2001, the National Congress confirmed it in June 2004 and in April 2004 SEPA established a Steering Committee to implement the Stockholm Convention

Ownership

Very strong national ownership of the project.

The counterpart and driver of the project was SEPA where an Implementation Office was established. A Steering Committee, chaired by the Vice-Minister, supervised the work.

Implementation

Satisfaction with quality of inputs but some processes took long time.

Project inputs consisted mainly of subcontracts with national organizations (46%) complemented by international experts (15%), national experts (11%) and training (10%). Management of the process by the UNIDO programme manager was facilitated by his continuous working contact with GEF and by the coordination role of SEPA in the

field. While SEPA staff were highly satisfied with professional competence of UNIDO staff and experts, they were critical of long time needed for some processes:

Approval of prodoc	Dec 2001
Subcontract signed	July 2, 2002
Activities started	August 2002
Project Brief completed	March 2003
Project Brief approved	May 2003
Project document completed	March 2004
Project document approved	August 2004

While substantive activities proper lasted 7 months only (August 02 – March 03), it took 6 months to sign the subcontract with SEPA. However, it should be recognized that – within these 6 months - it took two months to transfer the funds from GEF and that it took another two months to agree on the Terms of Reference with SEPA.

It took also long time (15 months) to prepare and approve the project document (after approval of the Project Brief).¹¹ In this case, however, the delay was to some extent caused by negotiating details of the Financial Procedures Agreement between GEF and UNIDO allowing UNIDO to have as of now and in the future direct access to GEF Funds. Thus, inauguration of the new modality took some extra time but it will save time in the following phases of implementation.

Synergy effects resulting from cooperation within and outside the CSF

Contacts with external programmes only.

No cooperation with other projects within CSF was reported but contacts were established with a number of other external programmes which will be involved in the POPs programme (World Bank, Italy, Canada, etc.)

In the next phase it will be desirable to review possibilities of cooperation particularly with the Swiss funded CSF projects „Cleaner Solid Waste Management in China“ (Hazardous Waste component) and the „Environmentally Sound Technologies Programme in China“. The cooperation should be facilitated by the fact that SEPA is a key stakeholder in all three projects.

Results

Outputs produced in the required quality.

All three outputs were produced and made it possible to prepare the project document and thus to achieve the objective, though with some delay.

Sustainability

A follow-up project is in the initial stage of implementation

¹¹ According to SEPA in the case of cooperation with the World Bank the corresponding processes lasted 2.5 months (pre-activities phase) and 2 months (preparation of the prodoc).

Recommendations

UNIDO:

- 1) In view of the size and complexity of the follow-up project, its extensive linkages with numerous implementation partners and a relatively short duration of the project (which can not be extended)
 - iii) ensure a strong programme management team at the HQs,
 - iv) analyse reasons for different duration of some processes driven by UNIDO and the World Bank (as indicated under Implementation).
- 2) Review usefulness of cooperation with the two Swiss funded CSF projects (see Synergy effects above)

ADJUSTED COMPONENT 5: ENVIRONMENTAL MANAGEMENT

PSN 7: Environmentally Sound Technologies Programme in China

Budget (excl. support costs) and expenditures (US\$)

PAD No.	Budget	Expenditures	%
US/CPR/02/009	1,440,000	578,531	40

Funding

Funded by Switzerland (seco).

Complementarily seco provided US\$1,231,700 to fund inputs of the International Reference Centre (IRC).

Design

A very ambitious project document needs a revision.

Project document prepared by the donor's consultant is very elaborate, reflecting experience from evaluations of Cleaner Production (CP) projects and venturing over and above traditional CP activities in transfer of environmentally sustainable technologies (EST). It pursues three objectives:

- including EST in design of new plants,
- including EST in a significant number of existing plants,
- upgrading capacity of local (existing) institutions to deliver services in EST, CDM, POPs, and social accountability.

Prodoc elaborates detailed quantified indicators for outputs. However, the prodoc does not address sufficiently the problem of financing technology changes. It includes a number of significant assumptions (important role to be played by national organizations such as SEPA, MOST, etc., inputs to be provided by design centers and by clients). Most of the assumptions turned out unrealistic and, thus, the whole project and its objectives and indicators too ambitious. Besides, the prodoc splits responsibility for delivery of inputs between UNIDO and IRC, without giving the UNIDO programme manager effective control over coordination of the UNIDO and IRC inputs. Hence, the project document requires a substantial revision.

Relevance

Overall objective of promoting EST relevant, project strategy needs adjustment.

In view of huge environmental risks accompanying the rapid growth of the country the overall objective of promoting transfer of EST is highly relevant. It is also appropriate that the project does not aim at promoting CP alone as there is sufficient capacity and mechanisms in the province for conducting CP audits. However, one of the three objectives (introducing EST in the design of new products) seems to be supply driven as there seems to be no effective demand for it on the part of design institutes. Besides, demand for EST by existing companies is very limited if its promotion is not supported by easy access to financial resources. These issues need to be addressed in order to make not only the overall objective but also the project strategy fully relevant.

Ownership

Ownership of a business oriented project by a primarily regulatory body is complemented by formalized partnerships with large companies.

According to the valid project document the counterpart is SEPA but actual ownership responsibility was handed over to the Shandong Environment Protection Bureau (EPB). As a result, though foreseen by the project document, no Steering Committee was established at the national level. Steering Committee at provincial level was established and meets but industry is represented through the Economic and Trade Commission only.

EPB discharges both supervisory (regulatory) and advisory functions. EPB staff in charge of the project are competent and dedicated and have the benefit of a direct personal link to the Cleaner Production Centre (an association of more than 100 companies in the province). However, based on experience from other countries, the fact of EPB ownership may weaken marketing position of the project towards the business community which – in spite of EPB advisory functions – usually associates EPB primarily with regulatory functions. The project tries to abate this perception by establishing partnerships with large companies with the ultimate goal of creating once a Business Advisory Council for the Centre.

Implementation

In order to adjust to current conditions the activities diverted from those planned in the prodoc; management responsibilities and control over inputs need to be reviewed.

The project had a slow start due to delays in selecting the CTA and due to SARS. Project inputs controlled and delivered so far by UNIDO consisted primarily of international expertise (CTA, 50%), some equipment and short-term national experts (12% each input). A comprehensive overview of IRC inputs is not available.

After arrival of the CTA the activities unfolded fast. However, for reasons explained above they diverted from the original plan: developing capacity for introducing EST in the design of new products was completely abandoned, developing capacity in the existing design centres for introducing EST in existing plants was replaced by developing this capacity in a new center created by the project (SESTPC-Shandong EST Promotion Centre). Project activities focused on establishing the center, promoting its services and image (workshops, exhibition stand, partnership agreements, website) and carrying out visits and advisory services to industry (more than 100 companies visited, 25 selected for cooperation, 10 short-listed, 3 contracts on cooperation signed). A study tour to Europe was organized for 12 Chinese participants. The latter activities were carried out with extensive support of the IRC experts.

The project owner is satisfied with the managerial competence of the CTA but wishes to be more involved in the decision making process and have insight into project financing. (This is a frequent side effect of an active full time CTA: feeling of the counterpart about not being the driver of the project.) On the other hand the CTA – while appreciating the fact of having an imprest account since some time - considers UNIDO control of expenditures still too tight. The counterpart was highly satisfied with the study tour but expressed reservation about performance of one of the IRC experts (the concept for technology change took long to prepare and had to be re-elaborated after it was translated into Chinese) and about slow e/mail communication with some IRC experts. (There was no possibility to verify/discuss these issues with IRC.) The counterpart

recommended to subcontract more national experts who are cheaper and know Chinese conditions.

Substitution of IRC experts by national experts is however very much constrained if not impossible given the present separation of control over UNIDO budget (with budget lines for national experts and subcontracts) and IRC budget (for international expertise except CTA). This is just one example of an anomaly when UNIDO has overall responsibility for the project but does not have control over the use of all inputs. CTA's proposal (Project Performance Report No. 2, dated 5 Oct 2004) that "IRC should be given the full control of the technical support to the EST project, including the selection and the management of local experts..." would eliminate the dichotomy but at the price of UNIDO losing any control over technical affairs while still being nominally responsible for the whole project. Should also the other recommendation be adopted that the donor (seco) be "... systematically invited to participate in the operational decision-making process" then UNIDO will have to assess whether it still can bear full responsibility for implementation of the whole project.

Synergy effects resulting from cooperation within and outside the CSF

Except for one case opportunities for cooperation with other projects not examined so far.

The project is well aware about the other Swiss funded project in the CSF (waste management) but a number of opportunities for cooperation with other UNIDO projects under implementation within the CSF have not been examined so far:

- Persistent Organic Pollutants (POPs); counterpart SEPA,
- EG/CPR/99/G31 Energy Conservation and GHG emissions reduction in Chinese TVEs Phase II, counterpart Ministry of Agriculture,
- FI/CPR/00/122 China Motor System Energy Conservation Programme, counterpart CECIC,
- FI/CPR/02/237 Climate-Friendly Technology Financing Facility, Project Advisory Committee with an office in Shanghai,
- TF/TN/GLO/02002 International Technology Promotion Centre, Shenzhen,
- US/CPR/04/003 Shaanxi Business Information Network.

In some cases the SESTPC could perhaps implement a part of other programmes (POPs), in other cases SESTPC could perhaps use technical competence developed by the other projects (Energy Conservation in TVEs, Motor Technology Systems). Some projects are in the initial phase of implementation (Climate-Friendly Financing Facility, Shaanxi Info Network) but in all cases the actual possibilities of cooperation need to be reviewed by the parties themselves.

Results

Good progress in institution building, results is actual transfer of EST still awaited.

As regards capacity building, the project advanced considerably in institution building of the SESTPC proper: the Centre has adequate offices, staff of 8 (three of them part-time

senior experts), well established working practices reflected among others in availability of standard formats for cooperation contracts with companies. It concluded partnership agreements with some large companies and a bank. However, the institution still does not have its own account to receive payments for services. A more important weakness of the Centre is the profile of its technical staff: except for the part-time senior experts the full-time technical experts are rather inexperienced and not in a position to handle technical and managerial issues of transfer of EST with companies without support of IRC experts. It is doubtful that this constraint can be alleviated through additional training only.

Results of promotion of EST among companies have been rather modest so far. Three contracts were concluded early 2004 with companies on EST advisory services to be provided by SESTPC. At a later stage one of the three companies withdrew from the arrangement with the justification that the price for consulting services offered by a Swiss consulting company (mediated by SESTPC/IRC) was too high for the company. There are other experiences revealing that awareness raising and dissemination of information are not sufficient mechanisms to raise effective demand for such EST services and subsequent transfer of technology and some financial backing is needed. The performance indicators set in the project document are, however, no more realistic.

Sustainability

Some interventions are needed to increase likelihood of sustainability of the developed capacity and to unfold transfer of EST in the province and beyond.

The project is only in the middle of implementation so that there is still enough time left for upgrading the capacity in EST advisory services. Developing this capacity in SESTPC will require not only considerable training and accumulation of experience by the junior technical experts but most probably also additional recruitment of senior national experts. Even then it would be difficult for the center to sustain in financial terms (as a commercial entity).

Developing this capacity in the SESTPC alone need not be the only option for capacity building. The original concept of the project document to build this capacity in existing organizations is still worth of trying. Experience from other UNIDO project suggests that some design or research organizations are ready to carry out some tasks/services if contracted by the project. In this way project activities are implemented (in this case technological audit, for example) and at the same time professional competence of the subcontractor is increased (for example through interaction with international expertise in some specific fields).

As mentioned elsewhere, unfolding actual transfer of EST in the Shandong Province and in other provinces will require finding a solution for the financing problem.

Recommendations

- 1) Most of the issues raised in this report are known to the stakeholders and were supposed to be handled by the Steering Committee in October 2004. As the meeting was postponed till February, there is some time left for analysis of some specific aspects (in particular re-assessing the possibility of using subcontracts for building up the EST capacity in some existing design institutes) and preparing proposals for revision of the project document.

- 2) Without waiting for the Steering Committee it is desirable to establish contact with other UNIDO projects as specified in the paragraph on synergy effects and review jointly possibilities for cooperation.

PSN 10: Evaluation and Adjustment of China's Industrial Policies for Key Industries to Promote Sustainable Development

Budget (excl. support costs) and expenditures (US\$)

PAD No.	Budget	Expenditures	%
UC/CPR/96/108	1,403,008	1,303,192	92.8

Funding

Embassy of the Netherlands in China. Mobilized by UNIDO with the Dutch Ministry of Environment. Later the originally promised funding in the range of US\$3 millions was halved.

Design

Project objective very challenging; a well conceived strategy for national capacity building.

The project objective was to establish national capacity "to design, formulate, implement, monitor and revise industrial policies in order to enhance the contribution of industry to sustainable development". The building blocks (Components) of the project combined analytical studies, model development and case studies with the ultimate objective of formulating a plan and integrated policies for sustainable development of the country. The strength of the design is its focus on national capacity building through interaction of national teams with international experts and training abroad and, secondly, use of verifiable success indicators. The ultimate objective was very challenging. Perhaps with the hindsight experience one can view as a design weakness the anticipation that through partial (stand-alone) analysis of the three dimensions (economic, social, environmental) of development one can capture the problem of integrating them.

Relevance

Project demand driven, initiated by Chinese authorities.

The project was one of several projects identified by Chinese authorities for implementation of Agenda 21. This fact signals that Chinese authorities themselves attempted to address a very difficult task of coordination of environmental policy and industrial policies.

Ownership

The best possible counterpart for a policy project.

Key partner organization (counterpart) and owner of the project was the Department of Development Planning (DDP) of the then State Development and Planning Commission (SDPC), now National Development and Reform Commission (NDRC). NDRC plays a key role in coordinating national economic policies and formulating industrial policy. The counterpart was very active in interaction with the project.

Implementation

Heavy inputs of international expertise, counterpart satisfied with quality of inputs.

Project inputs consisted mainly of international experts (almost 50%), training (27%), mainly national subcontracts (17%) and a small provision for equipment (6.6%). In view of methodological novelties and extensive transfer of foreign experience the heavy segment of international expertise and training (18 fellowships) seems adequate in general but a cursory review of some experts' reports suggests that their reports sometimes contained general advice probably known to the Chinese partners. However, the counterpart expressed satisfaction with all the inputs, including international experts, highlighting the partnership and professional and managerial competence of the CTA.

Activities consisted of preparing research papers, models, case studies, and their review and discussion at workshops. Not all activities were implemented as planned, though.

The case studies were supposed to be the basis for formulating a policy for sustainable industrial development integrating all three objectives (economic, social, environmental). However, the automotive sector study pursued a different purpose. Only the cement study came close to what was expected.

Synergy effects resulting from cooperation within and outside the CSF

No cooperation with other UNIDO CSF projects but intense communication between UBO and NDRC and other government organizations.

The project did not establish cooperation with other CSF projects; one of the CSF projects (Strategy for the Shaanxi Province) is a follow up of this project.

However, this project opened and enhanced a communication channel between the UNIDO Beijing Office (UBO) and NDRC which in turn dynamized UR's access to and exposure in industrial policy and strategy related issues so that not only the project but also the UBO with the backing of CSF became a partner at high level policy discussions in the country.

NDRC complemented inputs from this project by inputs from a WB project on measuring economic performance and an ADB project on the institutional system.

Results

Not all planned outputs were produced but the counterpart appreciates contribution to the formulation of the FYP.

The project objective was achieved only partly, a consistent plan and integrated policies for sustainable development were neither submitted to the State Council for approval nor drafted. With the reduced budget the task turned out to be too ambitious. Some critical outputs for achieving this outcome could not be produced:

- methodology for evaluation of the FYP,
- policy matrix,
- system of indicators for SID,
- operational plan for backward regions.

On the other hand the CGE – Computable General Equilibrium – model was produced and applied, dialog among agencies on sustainable development was strengthened and preparation of the 10th FYP influenced through frequent dialog between project experts and national research staff and decision makers. The major research outputs were

published in a 3-volume publication¹², both in English and Chinese. The counterpart highlights the continuous dialog with project experts as the mechanism for the main project contribution to formulation of the FYP, particularly as regards adoption of SID principles in the energy policy, cleaner production and restructuring of resource-based industrial cities. Implementation of such policies resulted among others in closing down large numbers of small TVEs not corresponding to energy conservation and other environmental requirements.

Sustainability

The upgraded capacity of national research institutes participating in the project is likely to be maintained.

The follow up project for the Shaanxi Province is to some extent using and building on capabilities developed under this project. For example the CGE model was mastered well by the research people and was used by the Development Research Centre for the Shaanxi Province.

¹² Research on Integrated Policies for China's Sustainable Industrial Development, NDRC, 2004.

ADJUSTED COMPONENT 6: TECHNOLOGY AND INVESTMENT PROMOTION

PSN 15: Integrated Programme for Cleaner and Safer Pest Control in Selected Backward Areas of China Sub Prog.1: Promotion of Seed Dressing Application in Yunnan, Guangxi, Guizhou

Budget (excl. support costs) and expenditures (US\$)

PAD No.	Budget	Expenditures	%
US/CPR/99/130	280,001	279,223	100

Funding

China.

Design

A very good design, reflecting well the needs and objectives of the new phase.

Project combines strengthening of the Nanshen Pesticide Formulation Centre (NPFC) in capability to produce and market more advanced pesticides (environment friendly water based formulations) with building model seed treatment stations and seed testing laboratories in three backward provinces.

Relevance

Both technological upgrading and dissemination of technology to other provinces contribute to environment protection and increase yield of field crops.

The project is a follow up of previous UNDP funded projects going back to the early 1990s. At that time the problem area of seed dressing for pest control had not been addressed and the projects assisted in establishing the Centre the importance and relevance of which has been proven by continuous demand for its services. In the meantime other producers of pesticides in China started business but the Centre remains at the forefront of technological upgrading.

Ownership

Strong and competent ownership.

The main counterpart was the Nanshen Pesticide Formulation Centre. The Director and the staff have been keen to make good use of project support for strengthening the Centre.

NPFC has close working links with the Ministry of Agriculture and Ministry of Public Health. The Centre holds two national and one provincial awards.

Implementation

Smooth implementation, with a large study tour component.

Project inputs consisted mainly of training (40%), international expertise (32%) and equipment (20%). Training included an extensive study tour of 14 national experts to several countries with high level of seed dressing technology and 12 training workshops

for 510 participants (duration usually 7 days). All inputs were provided as planned, on time and to full satisfaction of the project owner. Equipment was purchased both for the laboratory, for the formulation factory and the seed dressing stations. Due to seasonal work it is not used all the time.

Synergy effects resulting from cooperation within and outside the CSF

On-going cooperation with the UNIDO regional RENPAP project.

The project is too specific to allow for any synergy effects from cooperation with other projects within CSF except for the regional RENPAP projects (RAS/00/114 and US/CPR/02/011).

Results

NPFC was successfully strengthened and production of advanced pesticides introduced but marketing still weak.

NPFC is a well established organization of 54 staff (out of which 30 highly competent technical staff work in the research center, 15 work in the production plant), well equipped laboratories and dedicated management. The UNIDO project under evaluation managed to upgrade the capacity of the Center to produce water based pesticides. Besides, the project also upgraded two dressing stations (instead of three): one in the NPFC and one in the Yunnan Province. As a result the Centre produced and sold 6,500 t of pesticides in 2003, out of which 1,000 t as Flowable Seed Dressing (FS) and 1,500 t as Emulsion in Water (EW). The above production represents 50% of market share in the Jiangsu Province and 70% in the Yunnan Province. It is estimated that the above production was applied at 4 million ha of crop land with increased yield and income of farmers up to US\$400 million.

The NPFC production represents only 1% of total pesticides consumption in China which, however, still consists mainly (73%) of less advanced Emulsifiable Concentrates (EC) and Wettable Powder (WP). There seems to be considerable potential for expanding the sales, also in view of the fact that the pilot plant is not operating at full capacity and a large quantity of produced pesticides is stored in the warehouse. The project apparently was less successful in strengthening the marketing capabilities as they seem to remain a weak point of the Centre.

In addition to the above production the strengthened NPFC provided other services, such as technical services (78) and R&D work (10) for other organizations. The developed technology was transferred to other organizations (6 times) and in one case NPFC used its technology as investment. These services are a source of income for NPFC.

Sustainability

With developed competence and a good technology/product at hand sustainability of the Centre is very likely.

During the project period the Centre was financed as follows:

- 60% income from sales of services, implementation of Government projects and income from investment in other companies,
- 20% Government subsidy,
- 20% UNIDO project.

Management is confident that even without UNIDO project support the Centre will sustain its operations. They continue research on new types of water based pesticides and plan to build another 4 pesticide plants using NPFC technology. Additional marketing efforts are needed to increase the market share outside of the Jiangsu and Yunnan Provinces.

PSN 17: Initial Establishment of the International Centre on Small Hydropower (IC-SHP) in Hangzhou, China

Budget (excl. support costs) and expenditures (US\$)

PAD No.	Budget	Expenditures	%
SF/CPR/01/001	132,748	118,269	88

Funding

China (CICETE).

Design

Support for an institution established with UNIDO assistance.

The project document aims at establishing a UNIDO International Centre for Small Hydropower (IC-SHP). In practical terms it is a way how to support through a UNIDO logo an international institution located in China which was established with UNIDO support many years ago. The project is inseparable from two previously existing legal entities (see Ownership).

Relevance

Due to high competence of Chinese experts in SHP is TCDC in this field potentially very useful.

China became No 1 in the world as regards number and total MW capacity installed in small hydro-power plants (below 25 MW). Chinese experts developed very good professional competence which can be used for the benefit of other countries and the Chinese Government is keen to make use of this competence for TCDC. In view of the importance of SHP for rural development in the developing countries it is very relevant for UNIDO to support technical cooperation among developing countries in this particular field. The promotion of Chinese technology in small hydro power stations ranks also high on the Government's TCDC agenda, particularly for Africa.

Ownership

No distinct national owner; the Centre established by the project is linked to autonomous international organizations located in China.

Before the project was approved, there existed an International Network (IN-SHP) and an International Centre for SHP (IC-SHP), hosted originally by the National Research Institute for Rural Electrification (established 1981). Both new entities were supported in the past by UNDP and UNIDO. Later the Institute was converted into a consulting and design company and both the Centre and the Network became independent. The International Centre has nominally 30 staff, the core staff consists of 18 Chinese experts, the quota for 12 foreign experts at the time of the evaluation mission was occupied only partly. Foreign experts are expected to bring in new technologies, assist in database management, cultivate cooperation with foreign partners of the Network and help in funds mobilization. While both entities have support of three national organizations (Ministry of Water Resources, State Regulatory Committee and the State Grid

Company), their legal status is autonomous. Their activities are guided by an international Coordinating Committee meeting once a year.

The UNIDO International Centre (UNIDO IC-SHP) adds a third legal dimension to the same staff. Formally it involves only a part of the staff of the International Centre (5-6) but in practice the activities carried out under the logo of the UNIDO International Centre may draw on the professional experience of other staff of the International Centre. Furthermore, as Prof. Tong, a broadly recognized high level expert on SHP and an undisputable director of all three entities is also Chairman of the Chinese Association of Manufacturers of SHP Equipment, the activities of the UNIDO Centre can draw also on this pool of expertise.

Implementation

International conferences, advisory missions implementing other UNIDO projects abroad.

Project inputs consisted of national consultants (19%), support to holding international workshops and meetings in China and travel and DSA for Chinese experts on mission abroad. Major conferences on SHP were organized, in the framework of other UNIDO projects some Chinese experts from the Centre carried out technical advisory missions to some countries in Africa and Asia. However, in view of identity of staff serving all three legal entities (UNIDO International Centre, International Centre, International Network) it is difficult to separate clearly the activities carried out by the UNIDO Centre from activities of the other entities.

Synergy effects resulting from cooperation within and outside the CSF

Within CSF contacts with ICM only; extensive contacts with IN-SHP members.

The International Centre is in contact with the International Centre for Building Materials (ICM) in Beijing supported by one of the CSF projects. Opportunities for cooperation with the new project Climate-Friendly Technology Financing Facility need to be reviewed once the new project enters into phase 2.

Outside CSF the IC-SHP is in contact with a number of the SHP Network members (in total 240 members from 60 countries). Cooperative programme with the UNIDO International Centre on Hydrogen Energy Technology in Turkey is under discussion.

Results

UNIDO CSF project: some capacity building, some services for developing countries.

The IC-SHP is a well established and internationally recognized body with extensive technical knowledge and accumulated experience, numerous publications and a broad international network (IN-SHP) of partners in 60 countries in the whole world. In addition to UNIDO it has job/project contracts with some other organizations (CIDA, EU, etc.)

As regards results of the current CSF project alone, it is difficult to separate them clearly from the results achieved under all three legal entities. The project included in the CSF seems to have resulted in two major conferences on SHP for developing countries, the last one conducted in April 2004 with proceedings and recommendations well captured on the website of the IC-SHP. Contribution of the Centre's experts to implementation of UNIDO SHP projects in Africa and Asia could not be assessed on the spot but UNIDO programme managers expressed satisfaction with their performance. Besides, the

UNIDO project contributed to establishing a regional branch of the IC-SHP in Kerala, India.

Sustainability

IC-SHP is likely to sustain; as regards the UNIDO IC-SHP, without further UNIDO support it may become a hollow entity.

Sustainability of the UNIDO IC-SHP is derived from sustainability of the International Centre (IC-SHP). Ministry of Water Resources invested a lot of money in establishing the International Centre and is keen that it serves well customers both in China and abroad. However, the Government currently covers only one third of the operating expenditures and their further funding is subject to availability of external funding. One third is covered by support of international organizations including income from project work for them, one third is covered by income from sales of services in China.

While the Centres' staff have very good technical competence, they need upgrading in investment project analysis and formulation. As recommended by one participant of the April 2004 Conference, the Network also needs to attract commercial organizations. If upgraded in the above direction, the Centre could expand as a source of comprehensive advisory services on SHP for the developing countries and possibly also as a source of neutral expertise in assessing projects in the CDM trade.

For the above reasons additional funds mobilization is essential for further upgrading of the IC-SHP. Currently steps are being taken, also with support of the UNIDO programme manager, to approach a number of potential donors (including UNF, E7, etc.) In the more distant future the Centre's Coordinating Committee will be faced also with the need of finding an equally prominent new Director should the current one once retire.

As regards the UNIDO IC-SHP, without further UNIDO support it may become a hollow entity, used for the UNIDO logo only.

Recommendations

UNIDO:

- Continue supporting IC-SHP in funds mobilization and using its services for SHP projects in the developing countries.

IC-SHP:

- Include on the agenda of the Coordinating Committee (expected to meet in December) issues of participation of commercial organizations in the Network and of funds mobilization (recommendation was conveyed to IC-SHP in the draft prior to the meeting).

PSN 18: Establishment of Climate-Friendly Technology Financing Facility

Budget (excl. support costs) and expenditures (US\$)

PAD No.	Budget	Expenditures	%
FI/CPR/02/237	285,714	250,798	87.8

Funding

Funded by UNF.

The originally planned budget was US\$2,500,000 with basic financing from UNF (US\$1,500,000) and co-funding from the Blue Moon Foundation (US\$200,000) and DENA and ITPC/Shenzhen (US\$800,000). However, only UNF funding for the preparatory phase was actually mobilized so far (11% of the original budget). The Mayor of Beijing is reported to plan US\$1 million for a Technology Centre which would provide technical support services for the new Venture Capital Fund. UNF will consider US\$2.2 million for continuation of the project.

Design

Unconventional approach for financing environmentally friendly technologies with potentially high impact, however, relatively low technical content for UNIDO's involvement.

Very detailed project document designed by UNF according to their requirements and format and completed by UNIDO programme manager. The project foresees four phases as follows: Planning phase; Creation of the Venture Capital Fund; Capacity Building Components; and Implementation of the Venture Capital Fund. All phases as well as as the project document are well designed including a tentative work plan and a detailed work plan for Phase I, the Planning Phase. At least at the beginning, UNIDO's role seems rather remote because main thrust lays on establishment of the financing facility. Only at a later stage, the Technical Center, closer to UNIDO's competence, would be established in Beijing as technical arm of the Fund. That Center would define the technologies for the industries and put up bankable projects (with COMFAR) through UNIDO. Investment promotion was the driving argument for UNIDO to come in. The shortcoming of the design is that it refrains from national institutional ownership during the preparatory phase.

Relevance

High relevance in view of inadequate financial resources for projects to reduce green house gas emissions through energy conservation and efficiency and clean/renewable sources of energy but applicability of the financing mechanism in China not yet confirmed.

The project aims at establishing a private investment fund to provide capital to Chinese enterprises engaged in businesses of products or services, which promote energy conservation and efficiency, the use of clean and renewable energy resources or both. The objective of the fund is to reduce greenhouse gas emissions in China by catalyzing investment in energy efficiency and clean energy business activities. China is second in global carbon dioxide emissions and the government has recognized increasing value in carbon mitigation. The transition to a market economy has rendered many of the formerly useful command and control measures either ineffective or contradictory to

other policy objectives. Given the overall trend towards privatization, market forces will be the most effective tool for energy savings and efficiency improvements. Hence the rationale for the establishment of a venture capital fund. Apparently, the role of the UNIDO flag plays an important role in the work of the Project Advisory Team (PAT).

Ownership

Implementation of the Preparatory Phase did not foresee national institutional ownership for this stage, thus lacking national driving force and institutional responsibility.

The project was managed from the UNIDO HQs and all issues should have been channeled to UNIDO. PAT has been composed of individual experts, who lived in different places, it was not an autonomous unit with legal status. For the second phase, the Shanghai Municipal Government was requested to provide an office, which was recently provided next to the premises of the UNIDO Shanghai Investment Promotion Centre (SIPC). A true national ownership is yet to be created.

The project document does not foresee a formal national counterpart agency. However, in the Work Plan for Phase One it spells under "Preplanning Stage" the following activity: "Discuss and agree with ITPC/Shenzhen on providing logistic support for the initial stage of the project activities and cost coverage. In the same place it goes on under Outputs "Agreement with ITPC/Shenzhen on logistic and secretariat support at the initial stage". And only for the 6th and last month of Phase One it says under Activity: "Ensure the contribution of DENA and ITPC/Shenzhen of US\$800,000 as matching fund and allocate them to the appropriate activities". Whole the Shanghai Municipal Government was meant to be the counterpart agency and the Shanghai Trade Commission on Investment Promotion its executive arm, no reference to either of the them can be found in the project document.

Implementation

Implementation delayed but project activities to date established good base for establishment of Venture Capital Fund, pending the availability of additional financial resources.

Project implementation suffered from a certain delay in the beginning due to management changes on counterpart side and SARS. The Planning Phase (Phase I) can be considered concluded and yielded a detailed 167 pages report on the establishment of the Climate-Friendly Technology financing facility by the PAT, dwelling in all relevant detail on the legal problems associated with the establishment of a national fund for the purpose. It concludes that due to yet non-existent legal arrangements in China first an overseas fund (possibly in the Cayman Islands) would have to be established and the national fund thereafter as soon as the relevant legal framework is in place, which may still take some time. The PAT consists of a highly qualified group of professionals from the private financial business sector who made also detailed recommendations for the TOR of the Fund Management Team and could possibly be taken over for this purpose. The PAT carried out the planned market research, a legal environment survey and designed a fund establishment strategy. The PAT also prepared 5 high-quality and profitable indicative "deal flows" to share with potential investors (i.e. Compound heated gas generator; Small hydraulic pressure rock drill; Envirotech partition wall panel system; Heat pump water heater; and Solar energy application product). The above report on Phase I was very positively evaluated in Shanghai in May 2004. 81% of the project budget for this preparatory stage was spent on international and national experts, practically the only expenditure so far on the project.

Synergy effects resulting from cooperation within and outside the CSF

There is a need to realize more coordination/cooperation and synergies with UNIDO projects in China reducing GHG emissions.

Close cooperation is pursued with the SIPC Shanghai, which functions in the same premises. PAT visited CECIC in search of cooperation in technology issues but no cooperation materialized so far. In the very beginning the project was oriented to associate with the Shenzhen ITPC, but due to management and strategy changes in the Energy Group, the company backing the ITPC, this did not materialize. The PAT is in contact with the UNF funded US\$3 billion Municipal Solid Waste Project in Shanghai. Contacts need to be established with other UNIDO CSF projects that may generate investment ideas for the VCF, such as the Energy Conservation and GHG Emissions Reduction Project in Chinese TVEs – Phase II.

Results

Too early to report, apart from preparatory activities required for designing and establishing the venture capital fund.

Too early to state since only Programming Phase concluded. However, the preparatory activities and the report emanating from the work of the PAT are a useful basis for designing further steps towards completion of the project's development objective.

Sustainability

Sustainability not yet assured.

Sustainability is not yet assured since the project (i) is only at the end of its Programming Phase One, (ii) no formal national counterpart structure is in place and (iii) funding is still pending for the crucial Phase II, i.e. the commercial phase which foresees the establishment of the overseas fund. A decision both by the national authorities and the donor in this regard is pending. The fact that there is no formal institutional counterpart structure yet in place can become an impediment to sustainability in the medium and long term.

Recommendations

The Project/PAT:

- The project should establish contacts with the UNIDO projects in China that may generate investment ideas for the VCF, in particular the TVE energy conservation project, the Electrical Motor Systems project, the POPs/NIP project and the EST project in Shandong Province.
- When the Technical Bureau for the Climate-Friendly Financing Facility is considered to be established in Beijing, professional capabilities developed under other UNIDO projects (such as the CECIC Energy Centres, the Hong Yuan Company established under the TVE energy conservation projects) should be considered as sources of expertise and information. They could identify and/or assess projects technically while the Fund in Shanghai would carry out the relevant financial analysis, in a complementary manner.

UNIDO:

- The project document should be updated to the new situation after the ITPC Shenzhen could not provide logistic and secretariat support at the initial stage of the project and DENA not co-finance the project as originally foreseen.
- At a later stage, when designing and implementing the technical arm(s) of the project, relevant technical Branches of UNIDO should be involved in the process.

PSN 21: Investment Promotion Center Shanghai (SIPC) – Assistance to Shanghai Foreign Economic Relations and Trade Commission/Shanghai Foreign Investment Commission in Inward and Outward Investment Promotion

Budget (excl. support costs) and expenditures (US\$)

PAD No.	Budget	Expenditures	%
TF/CPR/01/002	287,950	77,007	26.7
TN/CPR/01/002	566,972	407,725	71.9
<i>Total</i>	<i>854,922</i>	<i>484,732</i>	<i>56.7</i>

Funding

Funded by China (City Government of Shanghai).

Design

Appropriate and realistic design for a UNIDO investment and technology promotion office in a new setting.

Institutional building *cum* direct support. The project should establish an Investment Promotion Center (SIPC) to assist the City of Shanghai in expanding cooperation between Shanghai industries and foreign partners, with emphasis on SMEs. Main thrust of the project is to increase inflow of resources to Shanghai and promoting Shanghai capital overseas. Project objectives and outputs are well designed, with performance indicators listed. Coordination and cooperation with other ITPOs is envisaged through the link of the Shanghai Center to the UNIDO Investment and Promotion Network. The project represents a novelty for the UNIDO ITPO programme since it is the first time that an ITPO is established at a municipality.

Relevance

Dynamizing national efforts in inward and outward investment promotion.

The project addresses the rising needs of internationalizing efforts of a dynamically growing city region in China with regard to establishing and expanding international business contacts. Although a city like Shanghai may have well-developed inward looking instruments for business promotion, the project fills an important gap in a complementary manner to City endeavors by making use of UNIDO's role as a global authority in inward and outward investment promotion and as honest broker, network provider, information source at the global level, also including the provision of the relevant tools and methodologies. This was particularly relevant at the time of China's expected admission to the WTO.

Ownership

Exceptionally strong ownership by national stakeholders both in programmatic and financial terms.

From the very beginning of project negotiations in 2000, the City authorities demonstrated strong ownership. Given the demonstrated interest of the City Government (Shanghai Foreign Economic Relations and Trade Commission/Shanghai Foreign Investment Commission) as the project counterpart agency, the fluent and

generous forthcoming of project financing (TF scheme) and the speedy implementation of activities well before planned duration, as well as the early and strong request for extension with relevant funding envisaged, show that the project is clearly demand driven and enjoys strong and continued ownership by both counterpart/funding agency and the SIPC itself. The project figures also high in the priorities of the government coordinating unit CICETE.

Implementation

Mobilizing and upgrading national expertise to support Shanghai 2-way investment opportunities in a relatively cost-effective manner.

Project/SIPC started gradually in 2001 with portfolio development and therefore with reduced staff for a relatively long time, to allow for checking of adequacy of project approach and initial impact. This might have contributed to success of project so far and generated savings now available for continuing activities, since project ended before its planned duration of three years mid 2004. The SIPC is now established with Head of Office, three investment project officers and one secretary. 44.3% of the project budget was spent on national experts, 9% on project travel and 8.5% for secretarial service. 12 training workshops, seminars&business round tables and forums on investment promotion were carried out and 5 promotion tours organized abroad; 21 presentations/speeches were carried out on investment/technology transfer. There were no international experts, showing the high quality of national expertise which is facilitated by the fact that SIPC can select them through the Shanghai Overseas Investment Development Board (SOIDB) which it serves. Therefore high degree of satisfaction with national experts. SIPC initiates/assists two thirds of its portfolio from the very beginning, while one third come to the Center for assistance to mount their international business ventures. Since some time project emphasis was shifted nearly exclusively to outward promotion of Shanghai investments. In fact, the promotion of Shanghai's image and information on other investment locations overseas gets more and more into project focus. In this regard the UNIDO website information on overseas investment project opportunities was criticized as too slow and out of date. Therefore, direct contact with IPAs (e.g. Ghana, Nigeria) was preferred. Project coordination with PM in Vienna was considered very satisfactory. The delegate programme appears to be of relatively low priority in business terms because of limited possibilities to support delegates financially and their sometimes inadequate preparation, also, at least in one case, coming with an insufficient project portfolio. However, at the time of CSF evaluation, two delegates from DPRK (UNIDO TRIS programme) just started their assignment.

Synergy effects resulting from cooperation within and outside the CSF

Fairly high degree of synergies resulting from cooperation within and outside the CSF.

Close dialogue and coordination with the UBO nearly on daily basis facilitates realization of synergies within the CSF. Thus, the SIPC carries out joint events with the ITPO Beijing and also maintains close cooperation with the China NCPC. SIPC also cooperates with the Shanghai based International IT Promotion Center (IITPC) to which they refer IT investment cases. The Center has established contacts with the Shenzhen International Technology Promotion Center (ITPC) and was helpful in finding experts for the Shaanxi policy project. Cooperation is bound to develop with the Project Advisory Committee of the Climate-Friendly Financing Facility (UNF funded), as this project develops further, due to its location in the same premises. While this project has not yet taken off the ground, the proximity to the demand side through the SIPC may facilitate its effectiveness once the financing facility is established and seeking investment projects.

Outside the CSF the SIPC cooperates with UNIDO's Asia-Africa Investment and Technology Promotion Centre Project (AAITPC) on the basis of a yearly business cycle. This includes the delegates programme; seminars; identification of investment opportunities (Asian Eyes Initiative); fact-finding missions to priority regions and countries; investment seminars in Asia; and AAITPC business missions to Africa. Contacts were established with several integrated programmes in Africa.

Results

Dynamic promotion of Shanghai inward and outward industrial investment on basis of stable institutional capacity.

The originally planned results of the project, particularly a "2-way" inward and outward promotion of Shanghai's business opportunities have been reached before the end of envisaged project duration. According to the Annual Report 2003, 265 investment projects were identified; 74 investment profiles promoted; \$52.2 million of inward investment (34 projects) and \$33.24 million of outward investment (51 projects). Approximately 4,300 new jobs were created by the promotional activities of the SIPC in the Shanghai region to date. This figure can vary to a certain extent due to the implementation stage of the projects promoted. 205 advising/consultancy services were delivered to foreign companies. Thus, the project addressed all planned outputs to a significant degree. The data bank of the SIPC comprises at present 2,000 enterprises with interest in investment abroad. SIPC edits a newsletter twice a month and sends it via e-mail/fax to some 4,000 companies.

Sustainability

Strong financial and institutional sustainability through highly motivated and dedicated national stake holdership.

Statements of the main stakeholder, the Shanghai Foreign Economic Relations and Trade Commission/Shanghai Foreign Investment Commission suggest that the SIPC will also be sustainable without UNIDO assistance in view of the relevant long-term objective of the Shanghai Municipal Government. Since 2001, the SIPC has also gained considerable recognition in the business community and a certain institutional capacity has been built up by now. An extension on the basis of the existing project document was already agreed and relevant funding announced. A shift of priorities, particularly with regard to more outward promotion and technology transfer, will only be introduced through the new work programme.

Recommendations

- The UNIDO website on investment opportunities worldwide should be dynamized and information more frequently updated; UNIDO Exchange may be considered as a more business oriented alternative for posting investment opportunities.
- Delegate candidates should be better screened by HQs in close cooperation with the SIPC in line with the latter's exigencies.

PSN 23: Promotion of High Technology and Cooperation Partnership for Sustainable Development (ITPC) - Shenzhen

Budget (excl. support costs) and expenditures (US\$)

PAD No.	Budget	Expenditures	%
TF/GLO/02/002	81,788	15,383	18,8
TN/GLO/02/002	100,134	88,444	88,3
<i>Total</i>	<i>181,922</i>	<i>103,827</i>	<i>57,1</i>

Funding

China; The Shenzhen Energy Group Co. Ltd. (SEC), against an originally planned contribution of US\$970,000 and US\$1million to be raised from donors.

Design

Project objectives too ambitious and design rather blurred in spite of very concrete project purpose.

Project objectives and outputs (9) appear to be inflated and therefore too ambitious, also in view of rather unrealistic funding expectations. Immediate objective 4 “Mobilize financial resources for the development and implementation of project activities” is not a project objective but a *conditio sine qua non* for project implementation. However, since the ITPC draws heavily on the technical competence and backing of the host institution and counterpart agency SEC with 160 experienced professionals and a strong R&D capacity, the ITPC appears to be adequately designed as an operational platform of small institutional dimensions to promote technology transfer and cooperation partnership, policy dialogue, exchange of experience, information dissemination and technology business linkages in the South-South and North-South context. It might be doubtful though, whether the development of databases on selected technologies and related expertise really meet the actual demand and whether such information can be properly transferred to clients in China and abroad.

Relevance

Mobilizing existing national technical expertise with minor, but well targeted UNIDO inputs towards acquisition of advanced technologies and their adaptation to national conditions and for transfer to developing countries.

The project has a very demand driven origin since it was conceived as follow-up to an International City Waste Incineration Meeting in 2001, which was held in light of ever growing rural-urban migration in China with the concurring city waste problems. Thus, waste incineration, and power generation as by-product, became the focus of interest in the first place, particularly in a densely populated and rather small spatial community like Shenzhen. At the same time, China, with the speed of its present economic growth, has a growing interest in addressing the need for identifying, acquiring and adapting advanced technologies for improving energy efficiency and protecting the environment. Thus, the expansion of the terms of reference of the ITPC to a catalyst agency in facilitating the acquisition and adaptation of advanced technologies in these two areas for application in China and in other developing countries appears to be highly relevant.

Ownership

Moderate ownership so far, due to moderate commitment of the Mayor of Shenzhen and absence of a functional standing steering committee.

The Shenzhen Energy Group Co. Ltd. (SEC)/DENA, a state-owned power provider supported by Municipality of Shenzhen, has demonstrated ownership by its - so far relatively reduced - international financing of the project, but also by the provision of its expertise of its professional cadre to feed the ITPC with the required substantive inputs to deliver their international services. At present, the steering committee is not meeting at all due to the frequently changing positions of its members. The national programme management consults with the main stakeholders on business development instead. The absence of a standing steering committee is seen as a problem but also demonstrates a certain lack of ownership by the stakeholders. However, SEC, in addition to their hard currency contribution, have made a significant in kind contribution to running project operations, in the value of approx. RMB2 million (US\$240,000). Notwithstanding, the use of UNIDO's label seems to play an important role in employing the Organization in this project.

Implementation

ITPC staff significantly involved in transfer of technology by the host organization; conducting workshops on energy issues; future orientation of activities could be more effective through guidance of a steering committee and a medium to long-term business plan.

At the beginning, the project implementation was seriously delayed because of a change in the top management of SEC with an interim period of some 8 months, and SARS. 53% of the available budget was so far spent on the National Professional Officer (ITPC Project Director, at the same time Board Chairman of SEC) and 4 national experts, although only the Project Director is formally on the UNIDO payroll. UNIDO contracts for 4 national experts have not yet been established. The Steering Committee was established but entered into problems with regard to meeting regularly and consistently. The ITPC introduced or assisted in introducing four new technologies in China this being the major substantive success in concrete terms regarding the TOR of the Center. Preparations are now under way to issue a Blue Sky Award for the top ten investment scenarios to apply new technologies for renewable energy utilization. The ITPC plays a leading role in the realization of the yearly RETI Workshops (Shenzhen International Workshop on Renewable Energy Technology and Investment) with active participation of the UNIDO programme manager. The last RETI was part of the XI China High-Tech Fair with 300,000 participants from over 40 countries. The presentation of the UNIDO PM, however, did not address the topic of the Workshop, but rather focused on a general presentation of UNIDO's approach to investment promotion, transfer of technology, trade capacity building and related issues. It is obvious that UNIDO could make better use of such events if the relevant substantive branches (in this case the Energy and Cleaner Production Branch) were consulted and provide their inputs beforehand. Furthermore, some workshops and technology demonstrations were held in the framework of the project and several contacts established with future partners, *inter alia*, Mongolia.

Synergy effects resulting from cooperation within and outside the CSF

There is considerable potential to realize synergy effects within the CSF by coordinating/cooperating with other projects in the environment sector

The ITPC maintains close contacts with the International Center on Small Hydro Power (IC-SHP) in Hangzhou since SEC promotes also investment in mountain SHP stations. They are aware of the other Chinese ITCs, i.e. IITPC and the ICM, but no closer coordination seems to be established. In connection with the discussions on the Blue Sky Award for the top ten investment scenarios to apply new technologies for renewable energy utilization, the Center had a meeting with the UNIDO Director-General and the Beijing ITPO, among others, at the BOAO Forum.

The project did not establish a contact with the Swiss funded UNIDO project on municipal waste management in spite of the fact that one of the transferred technologies was municipal waste incineration (to power generation). Similarly ITPC, when transferring energy efficiency technologies for ac motors in industrial usage, was not informed about the large-scale Electrical Motor System project.

Results

Four relevant technologies successfully promoted and applied in Shenzhen.

ITPC was established with strong back up by the Energy Group (SEC) with 5 staff. With significant involvement of the SEC staff 4 technologies were successfully promoted and introduced in China for technological adaptation and, in some cases, later transfer to other developing countries, namely (i) Municipal waste incineration to power generation; (ii) Sea water Flue Gas Desulphurization (FGD) for coal fired power plants; (iii) Energy efficiency technologies (phascon) for ac motors in industrial usage and (iv) Recovery of City Landfill Gas (LFG).

Sustainability

Institutional sustainability not yet assured.

At this stage of the project, its sustainability does not appear to be too certain. The institutional base of the ITPC is very small and the national staff endowment very limited and volatile as SEC may withdraw them at any time. Much will depend on the successful promotion of new technologies of relevance in the two areas and also on the continued interest of the Shenzhen Municipality to pursue the goals under which the ITPC was established which does not appear to be certain. An important first step towards re-assuring ITPCs mandate would be to reestablish a functioning steering committee.

Recommendations

UNIDO:

- Programme manager to work more closely with related technical branches in house, as relevant, to increase substantive technical inputs from UNIDO.
- Programme manager together with national programme management to take relevant steps towards reestablishment of the steering committee or finding another way of assuring continuous development and monitoring of the business plan.
- Help ITPC in better identifying relevant technologies in both areas in concurrence with Chinese demand, i.e. in consultation also with the UNIDO Office in Beijing.

- Settle financial situation of project staff including establishment of formal contractual arrangements. The Board Chairman of SEC should not be funded by the project, not even *pro forma*.

SEC/ITPC:

- Establish contacts and review possibilities of cooperation with relevant UNIDO projects in China, in particular
 - the Cleaner Solid Waste Management Project Phase II,
 - China Motor System Energy Conservation (contact CECIC Beijing, also their Centres in Shanghai and Jiangsu),
 - the Climate-Friendly Financing Facility in Shanghai, the Project Advisory Team,
 - the Energy Conservation and GHG Emissions Reduction Programme in Chinese TVEs, PMO in the Ministry of Agriculture.

PSN 24: Development of Three-Way Catalysts for Automobile Emission Pollution Control

Budget (excl. support costs) and expenditures (US\$)

PAD No.	Budget	Expenditures	%
US/CPR/00/053	239,202	239,202	100

Funding

China (CICETE).

Design

A very clear justification; some activities do not match (exceed) an output.

Project document justifies well the purpose of the project, outputs are simple and clear but some activities reach beyond the planned outputs: national workshop and carrying out research and development under Output 2 (=lab and pilot plant upgraded with equipment) reach beyond this output.

Relevance

Highly relevant.

Controlling and reducing emissions from automobiles is an important environmental objective of the Government. The Government issued a decree which implies that all cars produced as of 2000 needed to be equipped with a three-way catalyst.

Ownership

The best possible selection of the project owner; competent and motivated.

Main counterpart was the Tianjin R&D Institute of Chemical Industry (TRICI). TRICI was the key R&D organization mandated by the Ministry of Chemical Industries to develop catalysts. At the time of project approval it had 600 technical staff, laboratories and four pilot plants, one of them for developing catalysts. TRICI developed and produced oxidation catalysts and was well motivated to absorb new technology to develop a three-way catalyst.

Implementation

Except for slow start very smooth implementation and high satisfaction with project services.

Project inputs consisted mainly of training including a study tour (52%), equipment (32%) and international expertise (11%). In addition to two test cars some laboratory equipment was procured by the project.

Project start was slow because of problems in getting top international expertise and local administrative problems in procuring a test car from Japan. The know-how was transferred through initial general workshop with lectures by top experts, a study tour and a tailor-made direct expert advice. The inputs and services were of very good quality. All TRICI participants at the study tour are still with the institute.

Synergy effects resulting from cooperation within and outside the CSF

Too specific for cooperation with other CSF projects.

Results

Project outputs were produced and yielded a good outcome: the three way catalyst was developed. A good example of a pointed intervention, cost-effective and with tangible results.

TRICI was strengthened as planned, the new technology was adopted and the three-way catalyst was actually developed. The upgraded technology was transferred for pilot production. Since that time 80,000 sets of catalysts were produced.

Sustainability

Developed capability will be sustained but promotional efforts are needed to increase the impact.

The capacity of the pilot plant is 400,000-500,000 sets of catalysts (depending on the size). Currently the demand is approx. 7 million. However, is it very difficult for TRICI to penetrate the market. Cars produced in joint ventures with foreign companies (approx 70-80 percent of all cars produced in China) have their own suppliers. Besides, new producers of catalysts appear on the market, even though with products of lower quality. To challenge the competition TRICI started a promotional campaign and considers establishing a joint venture with a sealing company who is actually selling the complete product.

PSN 27: Strengthening the Investment and Technology Promotion System (ITPS) through Capacity Building and Networking

Budget (excl. support costs) and expenditures (US\$)

PAD No.	Budget	Expenditures	%
US/CPR/99/072	265,486	196,057	73.8

Funding

China: IDF contribution to UNIDO.

Design

Project design follows established methodologies of UNIDO's investment and technology promotion services but stated objectives apparently did not reflect fully all objectives.

Institution building *cum* direct support. Project aimed at creating technical and business capacity of China's Investment and Technology Promotion System (ITPS). The ITPS was later renamed All-China Investor Services Centre (ACISC) with special emphasis on its Investment Consultancy Services Center (ICSC) in Beijing, to provide services in investment and technology, project identification, formulation, appraisal and promotion, as well as in management of investment technology projects. Project document is well designed, outputs and activities clearly spelt out, and responsibilities assigned. However, outputs 4 and 6 should have been merged and, *de facto*, there was an unclear view of what the project was expected to achieve in concrete terms, given the structure already established through the ITPO in Beijing. This was, *inter alia*, demonstrated by the difficulty to find an adequate designation for the entity, by changing of the business agenda every six months, and changing of business location five times in three years.

Relevance

Project was developed disregarding existing UNIDO and government operations in this field and construed a second layer in international investment and technology promotion.

Although there was a need for China to upgrade its international investment and technology promotion operations in view of the then forthcoming accession to the WTO, this area was already covered to a significant extent by the ITPO in Beijing. Thus, the project established a second layer of operations in a field already covered by another UNIDO project. Project established even an undue competition to the ITPO Beijing. Moreover, the project appears to have been conceived and started in a particularly supply driven manner on the part of the national counterpart agency. Relevance of the project was therefore remote if not nil. Better appraisal of project relevance by former UR could have avoided development and early closure of the project.

Ownership

Weak ownership because the project was owned by an entity established by the project.

Ownership of the recipient entity the Investment and Technology Promotion System (ITPS), later renamed All-China Investor Services Centre (ACISC) appears to have been quite weak. In addition, a high staff turnover has been characteristic for the ACISC from

the beginning, and resulting resource constraints caused repeated delays in delivery of agreed ACISC inputs. It appears the ACISC management wanted to earn money with brokering of international business contacts but this was not clearly spelt in the project document, and had it been, this would not have been assisted by UNIDO. This was also the reason why the UNIDO programme manager called continuously for adherence to the established terms of reference in the Project Document or revise it completely.

Implementation

Irregular pace of implementation with unexpected changes in course of actions leading finally to early closure of project.

43% spent on international experts; 26% on equipment; 8% on national experts; and 9.6% on individual fellowships. Though institutional training plays an important role in the project document, not much interest was shown in this regard. There was also a considerable lack of interest and delays in the delegates programme. However, the programme management emphasized the study tour component and two study tours were carried out which served to make series of international contacts with similar entities and potential partners. Implementation was particularly delayed at project start through a number of new/additional and unexpected demands for UNIDO assistance not covered by the project document. Several international expert assignments were cancelled.

Synergy effects resulting from cooperation within and outside the CSF

Deliberate avoidance of coordination or cooperation with other UNIDO projects (e.g. ITPO Beijing).

Deliberately no synergies were sought by national programme management/NPD. Efforts of UNIDO PM in this direction failed and, *inter alia*, contributed to early closure of project.

Results

Rather modest results.

ACISC was involved in the successful conclusion of an international business contract in April 2002 on the establishment of the Beijing International Biomedicine Co. Ltd., following an agreement with the Russia International Bio-medicine Center. Some training effects and international contacts through two study tours.

Sustainability

Early closure of project, not applicable.

Recommendations

None, since project closed early.

**PSN 28/29: Enhancing IT Cooperation and Partnerships in the Asia-Pacific Region
(Shanghai International IT Promotion Center – IITPC)**

Budget (excl. support costs) and expenditures (US\$)

PAD No.	Budget	Expenditures	%
XP/RAS/01/022	24,520	24,520	100
XP/RAS/02/022	75,000	74,891	100
<i>Total</i>	<i>99,520</i>	<i>99,411</i>	<i>100</i>

Funding

Insufficient funding in the light of too optimistic expectations.

The originally planned budget was US\$1.45 million, of which US\$450,000 under TF agreements, US\$200,000 from UNIDO/XP; and US\$800,000 from donors. However, only XP funding was received and fully spent. TF was meant to set up facilities for IITPC for the first 2 years. SARS delayed also funding.

Design

Project objectives rather optimistic and some outputs vague.

Project document is relatively vague in terms of outputs to be achieved and their quantification. Activities dwell to an undue extent on logistic actions (recruitment of experts, arrangement of workshop facilities etc.) rather than on substantive activities leading to achievement of project outputs and objectives. The project was designed for Regional Asia-Pacific coverage, however neither countries, cities nor institutions with which cooperation in the IT business would be envisaged, at least in the first round, are mentioned. The regional targeting is therefore quite blurred in the project document. Number and scope of immediate objectives appear to be too optimistic in the light of reduced funding expectations. However, a considerable strength in the institutional set-up of the IITPC is its close affiliation with the Regional Cooperation Office for City Information (RCOCI) of Shanghai, which has already experience with other UN bodies.

Relevance

Project objective relevant in general but UNIDO's role questionable.

Bridging the digital divide between cities and countries in the Asia-Pacific Region is an important issue to harmonize regional development efforts. E-government is growing in importance and relevant for saving costs in public administration. Cooperation in this field has a significant potential for South-South operations, particularly with a partner like Shanghai, where city informatization has reached fairly advanced levels due to the booming economic development in the area. The Shanghai Municipal Government pioneered in 1994 "City Informatization" and constructed the "Shanghai Information Port". Nevertheless, the project bears little relevance to UNIDO's mandate since the promotion of city information and communication technologies does not fall into its core competence. There is practically no mentioning of industry in the project document. Thus, UNIDO's role as a specialized agency to promote sustainable industrial development is questionable in this project. The involvement of the IITPC in the annual High-Level Forum on City Informatization in the Asia-Pacific Region (CIAPR) results in

high visibility for UNIDO, all the more that several UN agencies, international organizations and well-known personalities use to attend the CIAPR Forums.

Ownership

Counterpart agency is strong but funding below expectations.

A considerable strength in the institutional set-up of the IITPC is its close affiliation with the RCOCI, which has already experience with other UN bodies. The RCOCI is responsible for sponsoring and coordinating conferences, training programmes and exhibitions on city informatization and is thus well linked to the relevant players in this field in the Shanghai area. It has a significant manpower of 25 full-time staff which are supporting also the IITPC. With the affiliation of the IITPC to RCOCI ownership of the Shanghai Municipal Government started to grow, also in as much the Municipal Government provides sufficient and adequate office space to the IITPC. The IITPC operates under the supervision of the Shanghai Informatization Division of RCOCI, which supports the Center technically, and the Center also integrates its work plan with that of the Division. This underlines also substantive interest and ownership with regard to the Center's operations. However, full ownership is not yet reflected in provision of the agreed project funding which may make the project fall short of original expectations.

Implementation

Project triggered a wider scope and scale of relevant operations, beyond the project budget.

The IITPC was established in October 2001 as close affiliation of the RCOCI with 4 full-time professionals and some general service staff. Implementation so far concentrated on a series of international workshops and seminars and other types of training programmes in the field of digital divide, city informatization, e-education and similar. Several of them were funded from the project budget. Thus, 20% were spent so far on non-UNDP meetings and 19% on a subcontract which led to the (i) Shanghai Distant Learning System for IT and (ii) Technology Training Programmes at the Shanghai East China Normal University. 3 workshops were held between 2001 and 2003 on which most of the training funds were spent, and a website was created. The National Project Director expressed the desire that UNIDO provide, apart from the funding so far, also technical support, particularly in the training programmes, similar to the other UN bodies cooperating with RCOCI.

It appears that the IITPC embarked on several activities beyond the financing provided by the project, which might have played a conducive role to this effect.

Synergy effects resulting from cooperation within and outside the CSF

Synergy effects with other UNIDO ITCs still to develop but initiated.

Inside the CSF the IITPC is in contact with the Investment Promotion Center Shanghai (SIPC) with which they see later the possibility of outsourcing the software, given the experience of the Head of SIPC with IT companies during his 10 years stay in the United States. Outside the CSF, IITPC is linked through its affiliation with RCOCI with other cooperating agencies, i.e. UN/DESA; UNDP; the Ministry of Information Industry of China and the Chinese Academy of Sciences. The fact that the Director General of RCOCI UN Operations is also the NPD suggests that a certain consistence and coordination of the operations of these agencies is assured.

Results

Significant number of international professionals trained in city informatization and other good results achieved.

The IITPC was established as close affiliation of the RCOCI with four professionals and some general service staff. Under the Distant Learning System for IT, 200 international participants have been trained to date, among them 100 Chinese. 150 of the trainees are still in contact with IITPC through the so-called Alumni-web established by the project, with over three messages per day in the mailbox. In December 2002 a Comparative Study on Informatization Development of Cities in the Asia-Pacific Region was carried out, including 15 cities with an average population of 3.72 million. The IITPC has reached the third stage of five to develop an Assessment Index System for Asia-Pacific City Informatization, having prepared a detailed report on the issue in February 2004. 160 participants were trained in workshops and seminars held by IITPC in the framework of the project, but not all financed by it. They came from 23 countries in the Asia-Pacific Region, apart from China, and some from Africa, the Caribbean and Australia and New Zealand. There is evidence that lessons learned in training events are applied at home, as a case in Pakistan suggests. Thus, the project seems to have had so far a relatively strong and regionally wide spread training impact in e-government for nationals and international participants of its training seminars and workshops.

Sustainability

Sustainability not yet proven since project kept behind its expectations due to reduced funding available.

Though the IITPC is technically and financially supported by the RCOCI, its institutional structure appears to be somehow volatile, since it fully depends on RCOCI and has also only a very reduced number of staff from RCOCI which can be recalled at any time, particularly if the future funding of the project is not coming forth. The interest of IITPC in establishing a company in another Asian country to assist in daily software management points to certain sustainability in the medium term. The UNIDO logo would play an important role in this context to get private sector sponsoring.

Recommendation

- UNIDO to assure greater substantive support to IITPC in promoting private sector related informatization activities at the city level, to contribute to a more conducive environment for business development.

PSN 30: Assistance in Establishing an Industrial Subcontracting and Partnership Exchange in Beijing (SPX)

Budget (excl. support costs) and expenditures (US\$)

PAD No.	Budget	Expenditures	%
SF/CPR/03/005	45,818	26,055	56.9

Funding

China; Beijing Productivity Center (BPC).

Only US\$45,818 have been received to date though SPX management informed that budget total of US\$114,400 had been transferred to UNIDO Vienna in June 2004. This could not be verified with the Financial Services of UNIDO.

Design

Appropriate design following established UNIDO methodology for worldwide SPX programme.

Project follows a successful experience UNIDO made with establishing SPXs and related networks in other countries and regions using the SPX and partnership exchanges as a tool to better integrate into domestic and international markets. Project document is well designed and follows successful UNIDO pattern for the worldwide SPX programme. Objectives and outputs are precise, quantifiable, and responsibilities clearly indicated.

Relevance

Dynamic development and number of SMEs in Beijing area represent good opportunities for SPX and partnership exchanges in several sectors.

In the context of the general dynamic growth of the Chinese economy, industrial enterprises in Beijing are planning expansions, new investments and opening up to new markets and products, including the world market. Beijing has designed for itself a role of incubator for high-tech, innovative industries and service-oriented creative enterprises. There is a generally favorable attitude from outsourcing companies in Europe and in the industrialized world towards China joint ventures. In this generally favorable context for SPX development and with the corresponding high potential demand, the BPC as main stakeholder of the SPX wants to use the SPX as a tool to help Beijing industrial enterprises to obtain access to international markets, provide the relevant business opportunities, acquaint them with international standards and upgrade their management skills.

Ownership

Institutionally strong ownership, however not yet substantiated at the operational level.

BPC, a science and technology institution established and supported by the Municipality of Beijing under the Beijing Science&Technology Commission, is one of 1,070 Chinese productivity centers under the umbrella of CAPPC (China Association of Productivity Promotion Centers), a non-profit and non-governmental national institution. Its aim is to promote the productivity of SMEs in China, particularly in Beijing. BPC focuses primarily

on high-tech sectors such as IT, automation, software and biotechnology. The BPC has accepted the SPX concept in principle as a strategic tool for SME development in Beijing and supports the project financially, though funding is forthcoming slowly and project implementation did not start as dynamically as usual when new SPXs are established in the framework of the UNIDO worldwide network.

Implementation

Difficulties in applying tools and methodologies of usually well operating UNIDO programme.

SPX Beijing was inaugurated on 31 May 2004 but implementation appears to be considerably delayed against common standards, particularly with regard to the number of companies visited for application of questionnaires and subsequent registration as members of the SPX. Only 10 companies had been visited at the time of the evaluation and no main contractor yet. SPX management has problems with applying the questionnaires which apparently do not correspond with the relevant nomenclature at use in Beijing (industrial production processes at UNIDO vs. lines of products in China) and questionnaire coding appears to be a problem for the enterprises and the staff of SPX. Assistance in this respect by UNIDO's int. experts did not yield significant effect. Besides, there are problems with the computer configuration of the UNIDO software Outsourcing 2002. Proposed mission of software expert could not take place in August due to alleged differences between his work plan and job description. SPX management would also wish stronger involvement in selection and timing of international experts and establishment of a mutually agreed implementation plan. In general, however, the counterpart is very satisfied with UNIDO's experts (so far the only project expenditure with 44% of total) who are considered very devoted, with good knowledge and experience. A certain delay may also have been caused by the fact that the SPX Beijing should have another sectoral focus than others where the metalworking sector ranks high at the beginning. The SPX management sees the focus rather on electrical equipment, electronics and later adding software industries for which a great potential is expected. While the SPX can make business related decisions independently they have to obtain clearance for international business operations from the Beijing Science&Technology Department.

Two UNIDO experts trained staff, and several awareness and promotion seminars on subcontracting were carried out. Outsourcing 2002 was temporarily installed for staff training purposes but could not yet be made operational because of system configurations. No matchmaking has yet materialized.

Synergy effects resulting from cooperation within and outside the CSF

Potential for enhancing synergy effects at the national level, both within and outside the CSF.

SPX has frequent contacts with the ITPO and the UNIDO Office in Beijing. With the ITPO they organize mainly promotion seminars for the SPX. At a later stage, more promotional activities are envisaged for business development. There is no business related coordination/cooperation with the SPX Chongqing. Contacts so far focused on the technical adaptability of Outsourcing 2002. Cooperation with UNIDO International Technology Promotion Center for Sustainable Development (ITPC) in Shenzhen, which is also engaged in subcontracting, has not yet been initiated but would be welcome in the medium term.

Results

Results still moderate due to early stage of implementation and difficulties at the operational level.

The SPX is established with four professionals and one GS staff at full time. The engineer requested by a UNIDO expert was recruited. The SPX occupies a representative office in the Beijing City Commercial Bank and has also a large meeting room at its disposal. 20-30 enterprises are considering registering with the SPX as members. Some 220 enterprises participated in conferences and became aware of the SPX Beijing and its services. Due to the early stage of implementation the outputs have only been achieved to a limited degree.

Sustainability

Too early to judge.

Not yet clear due to early stage of implementation. However, there appears to be a strong interest of the BPC to run the SPX in the long run as an instrument to expose Beijing SMEs to international competition and provide access to business opportunities.

Recommendations

BPC/SPX:

- In order to realize synergies and enhance access of SPX Beijing to potential clients in terms of awareness raising SPX Beijing should cooperate more closely with Beijing Township Enterprises Bureau (covers 150,000 enterprises of which 23,000 industrial) and the Beijing Municipal Bureau of Industrial Development Management (covers some special industries, *inter alia*, IT, transportation, electro mechanics, biochemical and consumer goods, i.e. priority sectors as per SPX management).
- Enhance company visits to start with the registration of members, both subcontracting companies and main contractors
- Establish working contacts with SPX Chongqing and share experience in applying UNIDO SPX tools

UNIDO:

- Assist SPX Beijing in settling problems with system configuration of Outsourcing 2002 and application of tools and methodologies, particularly the questionnaires, and relevant coding.
- For the sake of efficiency, continue as far as possible to coordinate deliveries of UNIDO inputs to both SPX projects
- Postpone active promotion of National SPX network to a stage of significant practical experience of the two existing and a number of new SPXs already in the pipeline (Guantong Province, Jiangsu Province, and Xingtiao).

PSN 32: Strengthening the Capacity of the Commercial Network Sites Development Centre (CNSDC) in Designing, Developing and Operating a Nation-Wide Network

Budget (excl. support costs) and expenditures (US\$)

PAD No.	Budget	Expenditures	%
US/CPR/00/149	100,001	100,091	100

Funding

China (CICETE).

Design

Project described but logical framework not fully followed.

Project was expected to provide technical support to on-going efforts of a Government agency (CNSDC) in introducing a nation-wide commercial network of services offering e-commerce to retail operations. Project design is a bit blurred by defining outputs through compilation of activities (in particular Output 1) and defining purpose through listing of outputs.

Relevance

Relevant for the country; outside of the traditional main thrust of UNIDO but aligned to trade facilitation.

Project was initiated and requested by the then Ministry of Internal Trade under which a network of retail trade shops (large and small) was operated for 30 years. The CNSDC was to upgrade the network to include suppliers (business-to-business) and to support big retail stores in management of their business, including introduction of e-commerce. Economic benefits of e-commerce among retailers and suppliers are apparent and demand for such systems is reported as high. Manufacturing companies as suppliers are among potential target group of the network. Retail operations were outside of the main thrust of UNIDO but several in-house workshops contributed to understanding that logistic management and e-commerce can be relevant for trade facilitation as supported by UNIDO.

Ownership

Strong at project start, weaker at its end.

The counterpart of the project was the Commercial Network Sites Development Centre (CNSDC) within which the China Commerce Service Network (CCSN) was established as a company. This group of professionals was well motivated to exercise strong ownership over the project and make use of its results. However, in the course of project implementation the institutional framework changed and the ownership suffered from organizational changes (the original team was reduced and its core taken over by SINOTRANS).

Implementation

Full satisfaction with project inputs and services.

UNIDO provided expertise (international experts 51%, national experts 15%) and organized a study tour to Australia (15%). UNIDO programme manager himself acted in the capacity of an expert and his contribution to the project was in particular appreciated by the counterpart staff.

Synergy effects resulting from cooperation within and outside the CSF

Possibilities for cooperation narrow but exploited.

Cooperation with the Shaanxi Business Information Network (BISnet) was agreed upon and actually introduced: one of the counterpart staff was recruited as national expert to accompany the international expert on his mission in the Shaanxi Province. Use of some elements of the logistics model (now operated by SINOTRANS) by BISnet is under consideration. SINOTRANS can provide inputs for BISnet website on logistical operations (regulations, forms, local agents, etc.) and offer to SMEs in the province services of the SINOTRANS company in Xi'an.

Results

Outputs produced but impact much less than originally expected.

CCSN was strengthened as planned: staff was trained, hardware was made operational and a detailed Business Plan was prepared. An upgraded management system was introduced in three large supermarkets, with 200 suppliers linked. This is much less than what was expected in the business plan (at least 2000 suppliers and 15 supermarkets) but due to the organizational changes and discontinuation of CCSN the business plan became irrelevant.

Given the general trend of changes in the institutional framework, merging of CCSN with SINOTRANS represents a reasonably good solution for preserving at least partly the project results.

Sustainability

Only a part of the developed capability will sustain.

As the CCSN team was released from Government services and merged with a logistical company SINOTRANS only a part of the capability developed by the project was transferred and put in use by the new owner. (Primarily the part related to logistical operations.) This part became an integral part of SINOTRANS business operations and is likely to sustain given the fact that SINOTRANS is a well established large organization (approximately 40,000 employees, 300 offices worldwide).

PSN 33: Assistance in Establishing an Industrial Subcontracting and Partnership Exchange in Chongqing, China (SPX)

Budget (excl. support costs) and expenditures (US\$)

PAD No.	Budget	Expenditures	%
SF/CPR/03/004	57,982	42,025	72.5

Funding

China, Chongqing Technology Exhibition Center (CTEC), now Chongqing Exhibition Center (CEC), under SF Trust Fund Scheme.

Design

Appropriate design following established UNIDO methodology for worldwide SPX programme.

Project follows a successful experience UNIDO made with establishing SPXs and related networks in other countries and regions using the SPX and partnership exchanges as a tool to better integrate into domestic and international markets. Project document is well designed and follows successful UNIDO pattern for the worldwide SPX programme. Objectives and outputs are precise, quantifiable, and responsibilities clearly indicated.

The SPX Chongqing is also conceived as a tool to bridge development disparities between Eastern and Western provinces.

Relevance

High relevance due to great universe of SMEs and main contractors in the most traditional sector for national and international subcontracting, the vehicle and components sector.

Chongqing, the key city of industry and trade in Southwest China and sole Municipality has 40 districts with over 30 million inhabitants and is one of the fastest growing regions in China: The Chongqing High-Tech Development Zone (CHNT) is expanding from 70 to 600 square km. More than 10,000 technological enterprises are registered 4,000 of which high-tech. Business volume of CHNT is expected to reach 6 billion Euros in 2005. The vehicle industry is a major business in Chongqing ranking fourth in auto production with 326,700 units/a and 10% of total Chinese production. About 4.5 million motorcycles were produced in 2003, about 50% of total Chinese production. Since these sectors are traditionally the priority sectors for national and international subcontracting, the establishment of the Chongqing SPX was highly relevant. Additionally, the Municipality wants to achieve with the SPX better communication of the rather traditional local industrial community with international markets, updating their technological base at the same time.

Ownership

Strong ownership of all local stakeholders concerned and active role of beneficiaries in steering committee.

Ownership is particularly strong through the direct involvement of all relevant stakeholders in the Chongqing SPX. CEC, the Chongqing Foreign Trade Commission and the Chongqing Economic Commission are the main stakeholders of the SPX and also raised the project funds. Swift forthcoming of SF funding and dynamic project implementation so far further underline interest and ownership which is further strengthened through the participation - in addition to the above - of all principal beneficiaries in the Steering Committee, such as, the Chongqing Hi-Tech Industry Development Zone; the Chongqing Economic & Technological Development Zone; the Chongqing General Chamber of Commerce; and the Chongqing Motorcycle Manufacturers' Association. This appears to guarantee a very demand driven operation of the SPX. Stakeholders are already considering funding of the next phase. The Steering Committee is meeting regularly. Full support by CICETE in view of priority for Western provinces development.

Implementation

Dynamic implementation drive through proactive attitude of national programme manager.

Although starting from scratch and being the first SPX in China, project implementation started very swiftly and gained considerable dynamism, particularly through a very proactive attitude of its Director, as well as of the very engaged industrial business community in Chongqing. Only some 6 months after its establishment, about 75% of project objective have been achieved. The website was established within 3 weeks only. 84% of project budget has been spent/committed so far on international experts. SPX management is very satisfied with the quality and dedication of international experts who often still provide advice by e-mail after their departure. 78 companies were visited to date and 48 of them had the questionnaires filled in. 10 main contractors were visited. The engineer suggested by two UNIDO experts early 2004 was recruited. SPX tools and methodologies were adapted with minor changes and only few difficulties. The work plan provided by UNIDO needed only minor amendments. However, some of the information required in the questionnaires was considered less or even irrelevant. 7 SPX awareness seminars and presentations, one auto components seminar and one Outsourcing 2002 Seminar to explain the software, were carried out. One international fair was visited (MIDEST 2004), in the course of which 4 seminars were held. Staff was properly trained in applying tools and methodologies. Concern was raised over the difficulty to translate the tools into Chinese.

Synergy effects resulting from cooperation within and outside the CSF

Synergies with some other business development agencies inside and outside the CSF.

Chongqing SPX used the UNIDO ITPO in Shanghai to promote business ventures with Chongqing; the Director went there and was introduced to 2 Shanghai companies. One joint venture emanating from this mission is at contract stage. Contacts also with ITPO Beijing established. Cooperation and joint use of UNIDO international expert was tried with SPX Beijing, to no avail.

Chongqing SPX is facing competition from other city areas enjoying more international recognition. However, the early success of the Chongqing SPX has triggered interest of other cities, i.e. Qingdao and Kunming.

Results

Significant results after a very short implementation period in a so far unknown field of business promotion.

The SPX is established with 5 professional staff and one secretary and has 2 large rooms at the CEC for its operations.

Awareness of advantages of subcontracting and partnership exchanges widely created among the Chongqing industrial community, particularly in the vehicle and components industry. 42 companies and 5 main contractors registered as members of the SPX to date with increasing tendency to 130 members in 2004. One joint venture with a Shanghai business brought to contract stage. SPX website established on basis of UNIDO Exchange, however, only in Chinese so far. Website triggered interest of 20 companies.

Sustainability

High sustainability due to demand and private sector driven character of operations and strong interest and support of all relevant stakeholders.

Sustainability is very likely due the fact that the SPX Chongqing is demand and private sector driven at a time, when the services of an SPX are very beneficial to business expansion and development, particularly in an area with a large number of SMEs. The Chongqing Economic Commission sees the SPX as a business platform for Chongqing industries to the world market at low cost, starting with the vehicle and component sector, later possibly to be joined by the textile and chemical industry sectors. Since the Municipality of Chongqing and other stakeholders express their strong commitment and financial support for the SPX it is likely that the SPX will be sustainable beyond UNIDO's assistance.

Recommendations

UNIDO:

- The company questionnaires should be revisited to eliminate information not really required for the purpose

UNIDO/SPX:

- Ways should be examined to facilitate and speed up the translation of the tools and methodologies.

ADJUSTED COMPONENT 7: WESTERN REGION

PSN 34: Integrated Programme for Shaanxi Province, Component 1: Industrial Development Policies and Strategies- Reduce Regional Disparities and Enhance Industry Competitiveness and Evaluation and Adjustment of China's Industrial Policies for Key Industries to Promote Sustainable Development – Phase II

Budget (excl. support costs) and expenditures (US\$)

PAD No.	Budget	Expenditures	%
US/CPR/03/051	100,000	33,525	33.5
US/CPR/04/108	233,716	234,402	100.2
<i>Total</i>	<i>333,761</i>	<i>267,927</i>	<i>80.3</i>

Funding

Funded by China and the Embassy of the Netherlands in Beijing.

The project builds up on the preceding project US/CPR/96/108 (Evaluation and adjustment of China's industrial policies for key industries to promote sustainable development) referred to as the SID project (see Component 5). The SID project well over US\$1 million was funded fully by the Embassy of the Netherlands. Early 2003 in response to the Chinese Government request and with full consent of the donor the remaining as well as newly provided funds were (re)allocated to allow for expanded UNIDO support to policy formulation, but this time geared more specifically towards bridging the development gap between coastal China and the country's Western provinces.

Design

Project strategy and design rational; due to the decision making system involvement of the provincial government marginal.

Detailed and well conceived project document pays due attention to making use of the results of the SID project. Project strategy is rational (elaboration of methodological tools, their application primarily in the Shaanxi Province with subsequent formulation of growth strategies and then dissemination of experience). The project document contains some provisions for involving the Shaanxi Province in project implementation but no representative of the Province is envisaged for the Steering Committee. As it was explained, the project was expected to make recommendations at central government level for possible use by the NDRC in its own strategy work on development in Western provinces.

Relevance

The objective of narrowing development gap between coastal China and Western provinces is one of the top priorities for the Government.

A rather generic methodology for industrial strategy/policy formulation will be introduced and applied in the specific context of the promotion of development of Western provinces. Experience from methodological and analytical work in the Shaanxi Province may be replicated in other Western provinces. NDRC expects from the project some advice for the 11th Five Year Plan.

Ownership

NDRC is nominally a strong counterpart; involvement of the Shaanxi Province in the project needs to be upgraded.

The key counterpart of the project is the Department for Development Planning, National Development and Reform Commission (DDP/NDRC) who has the advantage of having acquired experience as counterpart for the SID project. The counterpart is keen to test formulation of regional strategies for the forthcoming 11th FYP but does not seem to drive fully the implementation process of this project. Preparatory activities for the elaboration of the regional strategy have so far been to a great extent expert-driven. As the methodology is rather new, the driving role of experts is to some extent understandable but a strong local management of operational activities is also needed. Furthermore, involvement of the Shaanxi Province as target beneficiary in the project which is essential for its ultimate relevance and effectiveness has been inadequate. This was also confirmed by the fact that the evaluation mission, when in the province, did not find any government partner feeling responsible for the Province's participation in the project in spite of the fact that an (unidentified) department of the Provincial Government issued 3 instructions to the companies to support collection of data by the project national experts. Particularly in the final stages of project implementation the Provincial Government should be involved in the process.

Implementation

Implementation slower, also because of complexity of managing and integrating work of three national subcontractors and international experts.

Some delay was caused by SARS, problems with availability of an expert and difficulties to consolidate and manage the team of subcontractors (see below). So far project inputs consisted mainly of international experts (48%), subcontracts with national organizations (33%) and training (14%). Some training activities (fellowships) carried out under this project were implementing obligations made under the previous project and do not tally any longer with the regional policy focus of this project. Subcontracts with national organizations carrying out surveys and analyses under methodological guidance by experts stationed at the HQs in Vienna are a factor of project efficiency (producing outputs with minimum costs) but at the same time they are a factor of delays in implementation ("remote control" from Vienna and complexity of integrating activities carried out by numerous actors). Some analytical work is conducted by experts in Vienna. The process was further constrained by the fact that it was not easy to identify national subcontractors competent enough to meet the requirements of the terms of reference. In one case out of three, the issuance of the subcontract had to be cancelled last minute and a new subcontractor identified and engaged. Discontinuation of the subcontracting process with one organization after a workshop with sub-contractors' presentations suggests that workshops proved to be a very effective mechanism of implementation management: they serve not only as tools for consolidating progress of activities but also as a platform for verification of sub-contractors' competence. (The latter function of the workshop was facilitated by the fact that the short-listed candidates for the subcontracts were ready to participate in the inception workshop prior to the formalization of their involvement.)

Well documented progress reports indicate a good level of programme management and monitoring by UNIDO programme manager (except for delays in submitting the reports to the donor).

Synergy effects resulting from cooperation within and outside the CSF

Follow-up of another CSF projects but no other cooperation.

The project is an extension/follow up of another CSF project (SID) but otherwise no cooperation with other CSF projects was reported. Some potential exists for cooperation with the recently started Business Information Network in the Shaanxi Province project which carried out a survey of SME needs. Though that survey is focused on information needs its results may complement the surveys carried out under this project.

Results

Some important milestones have been reached but strategy relevant findings from surveys not yet consolidated.

So far some milestones have been reached: CGE model was tested in one province; methodology for assessment of industrial performance was consolidated; rapid performance and capability assessments were carried out in three provinces, three subsectors were selected in the Shaanxi Province for elaboration of detailed competitiveness profiles. At the time of the evaluation mission data from the survey of three subsectors (90 questionnaires) were compiled and sent to the experts in Vienna. Capacity building may be weakened by some critical analytical activities carried out in Vienna and by lack of training of the national staff in preparation of data for and computation of the CIP (Competitive Industrial Performance) index. In spite of that the teams of subcontractors feel competent to prepare the strategy for the Shaanxi Province. Thereafter, it is expected to disseminate the results to central and provincial level decision-makers, alongside with the introduction of the methodology. One of the subcontractors is DRC. As the national expert in the evaluation team happens to be from DRC he suggested that a broader platform of sharing and discussing also the interim project results be pursued, also in order to widen the capacity building effect of the project.

Sustainability

Too early to comment on.

Recommendations

- 1) Involve Provincial Government in the forthcoming review of survey findings as well as in the process of elaborating the strategy.
- 2) Involve in the above reviews and discussions also other selected professionals from departments and organizations relevant for strategies for the Western province, such as the Leading Group for the Western Province Development
- 3) Review possibilities for cooperation with the Business Information Network project.

PSN 35: Shaanxi Business Information Network (Shaanxi BISnet)

Budget (excl. support costs) and expenditures (US\$)

PAD No.	Budget	Expenditures	%
US/CPR/04/003	100,000	13,649	13,6
Provincial Gov in kind	150,000	not monitored by project	
<i>Total</i>	<i>250,000</i>		

Funding

Funded by China (CICETE and the Provincial Government).

Design

Comprehensive justification with careful formulation of objectives and outputs.

The project should establish a One-Stop-Shop (OSS) providing information and e-commerce services to SMEs. Project purpose and outputs are clearly formulated, unlike in other similar UNIDO projects in other countries here the expected services of the new OSS do not include those already well supplied by the market (IT training). Coordination with other UNIDO and EU projects/programmes is envisaged. The concept of establishing OSS as commercial or not-for-profit organization with shareholders from the public and private sectors is however not yet verified by detailed needs analysis.

Relevance

To ensure relevance of the project it is necessary to find a balance between results of the needs analysis and expectations of the project owner while avoiding duplication with existing service organizations.

China's SME¹³ promotion law, enforced in 2002, delegates elaboration of detailed measures for SME support to provinces. Promotion of and support to SMEs is also one of the top CSF priorities for UNIDO programme in the Western provinces. However, relevance of this particular project is yet to be established by elaborating some project details (a business plan for the service) based on the SME needs assessment and with consideration of the expectations of the project owner (SME Department - SMED). SMED in consultation with other departments of the Provincial Government and the Provincial Service Association of SMEs identified 12 information "products" for SMEs they would like to have on the website (credibility guarantee system, start up/incubation support, consulting services, policies, training possibilities, lessons from management experience, sales of idle assets, product and process certification, market information and logistical services, legal advice, technical and technology advice, international cooperation). To avoid duplication one has to consider existing providers of information, such as the sectoral websites, the Shaanxi Provincial Information Centre and in particular the SME Promotion Centre established with the EU support which also offers information services. Given the number of organizations in the province serving SMEs and the EU project it might not be easy to find a niche for the OSS. On the other hand the 16% of SMEs estimated to be linked to Internet (18,000 companies) represent a considerably large target group.

¹³ According to a NDRC- promulgated regulation (2003) SMEs in China may include companies up to 500 employees, but in some sectors (cement) up to 2000 employees are still considered medium scale.

Ownership

Ownership by a Government agency may influence the business model by abating pressure on commercial aspects of OSS.

The counterpart is the SMED of the Shaanxi Provincial Office for Industry and Transportation. The OSS should be established in and hosted by the Service Centre for SMEs which has 6 staff. The Department Director seems to be a good organizer and dedicated to the task but the capabilities of the staff of the Service Centre could not be assessed. None of them speaks English enough to be able to communicate. Project ownership by a Government agency may create favorable conditions for a partial but mid-term financial sponsoring of OSS and release pressure on engaging in activities competing with the private sector (such as ICT training).

Implementation

Project started recently, an extensive survey for needs analysis at advanced stage.

The project is at an early stage of implementation, one visit of the international expert was carried out. His report scales down the purpose and outputs for this project, confining them to elaboration of the business model and launching a SME -focussed web portal while postponing actual delivery of OSS business services (value-added information and e-business support) to the next phase of the project. The expert assumes that ICT training will be among the core services of OSS in spite of the fact that sufficient ICT training facilities are available in Xi'an.

At the time of the evaluation mission collection of data by national experts in an extensive survey was completed (600 SMEs, 30 service organizations, 10 Government departments, 4 information providers) but some of the expert's recommendations were not followed up (such as strengthening of the SME Service Center by an English speaking professional).

Completion of activities by March 2005 is probably no more feasible.

Synergy effects resulting from cooperation within and outside the CSF

Initiatives taken to establish cooperation both within and outside CSF.

Project made use of the results of another CSF project (CSNDC/SINOTRANS – US/CPR/00/149); a national expert from SINOTRANS accompanied the international experts on mission in the Shaanxi Province. An e-logistic module developed by CSNDC/SINOTRANS may be incorporated in the SME Web Portal. Sharing of information collected through surveys in this project and in the policy project (once processed) is promoted by the programme manager.

Contacts with the EU-China Enterprise Reform Project and its SME Promotion Centre were established.

Results

Needs analysis is about to be completed soon. Completion of some outputs will be probably postponed to the next phase.

Sustainability

Not applicable at this stage.

Recommendations

- 1) Make use of the institutional setting of the project in the government structure entrusted with SME support and adjust the business model accordingly. In practical terms: do not pursue financial sustainability at the price of developing services competing with services already developed by the private sector or other organizations.
- 2) Efficient implementation may require frequent guidance and communication of the national staff with UNIDO HQs or the international expert. To allow for this arrangement it is essential that at least one professional of the counterpart is in good command of English.
- 3) At a later stage an establishment of SPX can be considered, either as a spin-off or as a part of the future OSS.

ADJUSTED COMPONENT 8: SOUTH-SOUTH COOPERATION

PSN 39: Technology Transfer for Sustained Economic Growth and South-South Industrial Partnership (ICM)

Budget (excl. support costs) and expenditures (US\$)

PAD No.	Budget	Expenditures	%
TF/GLO/02/006	147,727	44,664	30,2
TN/GLO/02/006	125,000	60,755	48,6
<i>Total</i>	<i>272,727</i>	<i>105,419</i>	<i>38,7</i>

Funding

China, Ministry of Science and Technology (MOST), against a proposed total funding target of US\$1 million, of which US\$500,000 expected to be raised by UNIDO.

Design

Project design rather blurred in spite of a very concrete objective.

The project document is very generally designed and not all outputs are clearly quantifiable.

The number of outputs seems too high and ambitious (13), particularly also with regard to a relatively unrealistic assumption of the external funding potential. A sharper focus on the institutional establishment of ICM on the one hand and its promotional activities on the other could have been realized with a merger of certain outputs and subsequently a clearer orientation of the logical project framework and its time framework against a more realistic funding level. The focus on promoting technological options in the building materials sector in industry should have been explicitly addressed in project title.

Relevance

Internationalisation through South-South cooperation of available advanced national expertise in a very relevant field of technology development; demand by other countries assumed and needs to be promoted.

The materials technology, having a multidisciplinary nature and trans-sectoral impact, has become a key enabling technology for a wide range of industrial sectors which have a major influence on social-economic development and industrial competitiveness. New and advanced materials constitute one of the key trends in the technology of engineering industries today, leading to major qualitative changes in the production cycle. The developing countries lack the knowledge, expertise and information on possible technological solutions and expertise available which could help apply new technologies and innovations in their national context. In the course of China's recent development, the building materials sector has gained considerable importance in the national economy and the country gained significant experience in the relevant technological field. The project objective to enhance the competitiveness of the materials sector in industry in developing countries is not only highly relevant in general but also in view of post crisis operations by the UN system and UNIDO in particular.

Ownership

Strong ownership, supported by long established technical host institution.

The China Building Materials Academy (CBMA) is a 50-year-old R&D center in building materials and the largest comprehensive national R&D institute and technology development center in the fields of building materials and advanced inorganic non-metallic minerals. In 1999 CBMA became the key R&D institute under the Central Government (Ministry of Science and Technology), with 1,150 employees of which 630 are professionals. CBMA has the ability, based on advanced research and innovations, to produce new materials, incl. high-efficient, cost-effective and ecologically friendly cement for the construction sector. There is a strong ownership of both the CBMA - the owner and official counterpart - and the ICM itself, which is an affiliate to the CBMA since the promotion of Chinese technologies in the South-South context through international partnerships ranks high on the development agenda of China. The CBMA can thus use the ICM as platform to disseminate Chinese technologies in this field worldwide and also obtain international technologies for national use.

In addition to the relevant national authorities, some of the members of the Steering Committee represent the various sectors in the field of building materials in China. An "ICM Council" was established in March 2004, with relevant research and development and other institutes and companies as members, subject to change upon project implementation.

Implementation

Several international cooperation projects started.

Most of the funds were spent so far on national experts and equipment. The national programme management expressed satisfaction with the equipment. The President of the CBMA as Director of ICM, and the Deputy Director and International Coordinator of ICM are the only staff on UNIDO's payroll as national experts, while the ICM draws on four additional engineers and advisors of the CBMA, as long-term national experts making it a core staff of 6 in its daily operations.

The ICM was formally established in October 2003 and the Steering Committee immediately thereafter. The pilot phase is partly completed, executed to finish only in June 2005. However, very relevant promotional activities/projects have been started either through own contacts within the ICM worldwide network or through UNIDO, as follows: (i) Establishment of cooperation programme with Vietnam; (ii) support of UNIDO project "Post-Conflict Rehabilitation of the Housing Sector in Afghanistan" with proposed Japanese financing (US\$840,000); support to UNIDO's Reconstruction Programme in the area of Low-Cost Housing in Sudan; (iii) signing of a technical cooperation agreement with Reichhold Specialty Latex LLC (Dow Chemical); (iv) investment promotion in Brazil through participation in "Technical Fair for the Future" co-organized by UNIDO in Sao Paulo; (v) signing of an agreement with the National Engineering Service (NESPAK) of Pakistan for promotion of Chinese special engineering materials in Pakistan; (vi) and a Seminar on Sustainable Materials Technology with attendance of 6 high-level US experts. Cooperation talks with Zambia, Japan, Kazakhstan, Venezuela and an American company in the production of fiber cement products were started.

The ICM faces a lack of information on technical demand from the target developing countries and also faces problems in further fund raising for completion of the pilot phase and the main project phase.

As far as project administration is concerned, the International Coordinator raised the need for more transparency and simplicity of the UNIDO cost recovery procedures which were considered too time consuming and difficult to understand.

Synergy effects resulting from cooperation within and outside the CSF

Relevant exchange of information in area of competence with other UNIDO ITCs in China and abroad.

Within the CSF, the ICM maintains close contacts with the Shenzhen International Technology Promotion Center for Sustainable Development (ITPC) on environment and energy issues. The dialogue with the IC-SHP serves mainly to learn from their long-range experience as an ITC under the auspices of UNIDO. Both inside and outside the CSF, the ICM is developing further its worldwide network of R&D institutions in the building materials sector, also making use of UNIDO's ITCs in other countries, such as India.

Results

ICM responded successfully to several international requests for new technologies in building materials at an early stage of project implementation.

ICM established and operational. Around 85 people trained from various countries in several technical seminars. 2 Chinese technologies transferred (Pakistan and USA) abroad and one inflow (USA). 4 more outgoing technologies under active consideration (Afghanistan, Sudan, Brazil and Vietnam).

Sustainability

Though at an early stage, sustainability of the Center appears to be likely.

Though it might be too early to judge on sustainability in view of the reduced budget and the early implementation stage, the substantive and strong institutional and technical back-up of the ICM through the CBMA and the high-ranking priority of the Chinese Government in South-South cooperation and partnerships suggest that under such conditions the sustainability of the ICM may be considered high, in spite of a relatively low institutional capacity of the Center proper.

Recommendations

UNIDO:

- Provide necessary information on administrative procedures regarding cost recovery of project expenditures.
- Assist ICM better with information on technical demand of target developing countries.
- Programme manager to work more closely with related technical branches in house, as relevant, to increase technical input from UNIDO.
- Try to bring more technical staff under project payroll rather than the President of CBMA.

ICM

- Assure forthcoming of additional funds for project continuation as per Trust Fund Agreement.

Terms of Reference

EVALUATION OF THE COUNTRY SERVICE FRAMEWORK (CSF)**IN CHINA****"UNIDO Contribution to
Environmentally Sustainable Industrial Development of China"****1. THE COUNTRY SERVICE FRAMEWORK**

The Country Service Framework (CSF) for China has been formulated jointly by UNIDO and the Government of China (GoC) in order to function as a "guide" for UNIDO operations in China during the five-year period from 2001 to 2005.

The CSF adopts a two-pronged objective for China:

Increasing competitiveness and sustainability of the industry, especially in the Eastern provinces, through technology-led and environmentally friendly interventions (including compliance with international conventions);

Accelerating sustainable industrial development of the Western provinces as a way to reduce economic and social disparities.

Under the CSF, UNIDO is focusing its interventions on the following areas:

Eastern region: Upgrading capacity for industrial governance and restructuring; promoting technology transfer and investments; increasing capacity for environmental and energy management.

Western region: Increasing the efficiency of the state-owned enterprises through good governance and industrial restructuring; promoting technology transfer and FDI inflows; developing the small and medium enterprises through capacity building; and, ensuring sustainable industrial development through the promotion of "Environmentally Sound Technologies" plus environmental and energy management.

Budget and expenditures as of 30 April 2004

Current Planning Figures (incl. psc): \$90,400,000

Current Planning Figures (excl. psc): \$80,000,000

	Component	Current Planning Figure	Total Allotment	Total Expenditure
1.0.00	Ongoing MP projects	\$29,000,000	\$27,413,351	\$25,966,664
2.0.00	Other ongoing projects	\$10,000,000	\$11,436,194	\$6,126,580
3.0.00	Phase out of CFCs and Methyl Bromide	\$23,000,000	\$23,159,435	\$15,718,843
4.0.00	Energy Efficiency/POPs	\$5,000,000	\$349,500	\$341,339
5.0.00	Environmental management and energy efficiency	\$6,000,000	\$4,161,275	\$2,518,499
6.0.00	Technology and investment promotion	\$2,000,000	\$1,901,525	\$1,356,288
7.0.00	Two integrated programmes for western regions	\$4,000,000	\$782,403	\$346,853
8.0.00	South-South Cooperation	\$1,000,000	\$372,750	\$140,250
	<i>Total</i>	<i>\$80,000,000</i>	<i>\$69,576,434</i>	<i>\$52,515,317</i>

The CSF is being managed by a management team comprising of the UNIDO Beijing Office, on behalf of UNIDO, and the China International Centre for Economic and Technical Exchanges (CICETE), on behalf of the GoC. It is being reviewed on an annual basis to assess its progress. A Programme Development Committee has been

set up to develop new projects/programmes based on the agreed criteria for inclusion into the CSF from time to time.

As of June 2004 the CSF comprised 50 MP projects (Components 1 and 3) and 42 non-MP projects (Component 2, 4-8) authorized through 47 Project Allotment Documents (PAD).

2. EVALUATION

2.1 Purpose

The purpose of this evaluation is to enable the Government of China, UNIDO and donors to assess

- relevance, efficiency, effectiveness, potential and actual impact and sustainability of selected projects and programmes implemented or under implementation within the CSF
- relevance and effectiveness of the Country Service Framework as a planning and implementation modality for UNIDO support to the country

The evaluation is expected to result in lessons learned and recommendations to the Government and UNIDO both on the selected programmes/projects and on the Country Service Framework as a whole.

2.2 Method and Project Coverage

1. The evaluation will be conducted at two levels: evaluation of selected programmes and projects and of the CSF as a whole.
2. Evaluation of selected programmes/projects assesses the achievements of the programmes/projects against their key objectives, as set in the programme/project documents, including re-examination of the relevance of the objectives and of the programme design. In view of the large number of projects implemented within the CSF it will be necessary to make a selection of projects subject to project-specific evaluation by the evaluation team. Such projects will be selected as follows:
 - a. All large non-MP projects (with budget exceeding US\$1 million) except those that have already been subject to in-depth evaluation or that had been de facto completed before the CSF became operational
 - b. Projects under implementation in the Western provinces
 - c. Projects dealing with South-South cooperation
 - d. A sample of several projects dealing with technology and investment promotion
 - e. MP projects (Components 1 and 3) will be excluded from evaluation as they are subject to evaluation according to the rules established by the MP Multilateral Fund. One MP project in the Western province may be visited in order to assess its role in upgrading the plant technology level as a means of "staying in business" and securing employment at the project site and to verify sustainability of results achieved.

Exact list of projects subject to project-specific evaluation will be established in coordination with the Government and UNIDO field office in the course of detailed elaboration of the plan of project site visits.

3. The CSF-wide evaluation will address cross-programmatic issues and management issues of the CSF. It will be based on the findings of evaluation of the selected programmes/projects and some desk analysis of the CSF as a whole. Programmes/projects not selected for project-specific evaluation will be overviewed on a broader basis by deskwork at HQs and the local UNIDO Office and results of this overview will be used in the context of the CSF wide

assessment. In this context the current Component 2 (“on-going” non-MP projects) will be dissolved and individual projects allocated to the other (programmatic) components as far as feasible.

4. The evaluation will be carried out through the analysis of various sources of information such as progress or terminal reports, self-evaluation reports (SER), interviews with counterparts, beneficiaries, partner agencies, donor representatives and programme managers (PM). While maintaining independence the evaluation will be carried out based on a participatory approach which seeks the views and assessments of all parties involved.

2.3 Issues for CSF-wide evaluation

1. Relevance, Ownership and Participation

The extent to which:

- The CSF was formulated jointly with the Government authorities.
- The CSF includes development objectives which will contribute to goals established by the country.
- There is continuing agreement among the stakeholders that the objectives of the CSF and its projects are still valid in light of the present national industrial strategy or if deletions, adjustments or refocusing are required.

2. Programme management

- To what extent has the Government central authority and UNIDO field office been in a position to set priorities for CSF and play a role in project selection and monitoring of implementation.
- How successful has the Programme Development Committee been in developing new projects/programmes.
- Benefits of the UNIDO Field Representative also performing the tasks of Team Leader of the CSF.
- External factors (rules and regulations, procedures, administrative mechanisms, etc.) that have impeded the discharge of management responsibilities and TL control of implementation and its speed.

3. Funds mobilization and administration

- The role and ability of the Government and counterparts to contribute (in kind and/or cash) to the programme and their taking an active part in funds mobilization.
- Priorities of Government (co-) funding.
- Problems encountered in balancing UNIDO policy and CSF priorities with donor priorities and funding modalities.
- The adequacy and effectiveness of funds mobilization and administration by UNIDO HQs.

4. Coordination and synergy effects

The extent to which:

- The CSF facilitates coordination with other development cooperation programmes, both bilateral and multilateral ones (in particular UNDAF).
- Coordination and synergy among components or projects has been a declared objective of the CSF.
- The CSF directly or indirectly promotes improved national inter-institutional cooperation arrangements, including public-private sector cooperation and partnerships.

5. Overall CSF results

- Major results in policy formulation, capacity building and at company level.
- Discernible contribution of the results achieved so far to progress in economic, environmental and social areas (impact).
- Potential to contribute to the achievement of the Millennium Development Goals.
- The result (success) indicators, which have been developed for the CSF, if any, and whether they facilitate the assessment of progress towards national and international development targets.

2.4 Issues for project-specific evaluation

1. Ownership, relevance and design:

The extent to which:

- The project was formulated with full and active participation of the national counterpart and/or target beneficiaries, in particular the industrial stakeholders.
- Coordination was envisaged with other projects within the CSF or with any other development cooperation programmes in the country.
- The logical framework has been applied in the formulation of the project document.
- The outputs as formulated in the planning document are still relevant and sufficient to achieve the planned objectives or whether amendment and/or discontinuation of the project is recommended.

2. Efficiency of implementation

The extent to which:

- UNIDO and Government/counterpart inputs in kind and in cash have been provided as planned and on time and were adequate to meet requirements.
- The quality of UNIDO services (expertise, training, equipment, methodologies, etc.) was as planned and met expectations.
- Resources/inputs were economically used for activities and led to outputs as planned.

3. Effectiveness and impact of the Component

The extent to which:

- The target beneficiaries are using outputs produced.
- Outcomes have been or are likely to be realized through utilization of outputs.
- There are prospects for developmental impact. What changes (economic, environmental, social) at the target beneficiary level (industry, community) have occurred or are likely to occur?

2.5 Composition of the evaluation team

The evaluation will be carried jointly by UNIDO and the Government. Therefore, the team will be composed as follows:

- A staff of UNIDO with field experience in a large country
- One national expert nominated by the Government of China, well acquainted with policy and institutional framework for industrial development in the country
- One international expert with knowledge of development issues, extensive evaluation experience and knowledge of UNIDO services, policies and procedures.

Members of the assessment team should not have been directly involved in the design and/or implementation of the programme/projects.

UNIDO office in the country will support the evaluation team.

Representatives of major bilateral donors will be briefed and debriefed; they will be offered to participate as observers during the evaluation of projects they have funded.

Although the members of the evaluation team should feel free to discuss with the authorities concerned all matters relevant to their assignment, they are not authorized to make any commitment on behalf of UNIDO or a donor.

2.6 Work plan

In detail the evaluation will consist of the following steps:

- Collection of available progress and terminal reports.
- Requesting and collection of Self-evaluation reports to be prepared by programme managers.
- Studying of documentation.
- Interviews with Team Members and other stakeholders at UNIDO HQs (MP Programme, selected Branch Directors).
- Elaboration of a detailed plan of meetings and visits of project sites (in coordination with the UNIDO field office).
- Introductory meeting in the field with the Team leader/UNIDO Field Representative and key CSF stakeholders to provide a briefing on the exercise and the key issues to be addressed.
- Meetings with relevant Government Representatives, programme level counterparts and partners, including UNDP and donor representatives.
- Visits of project sites and interviews with relevant counterparts, target beneficiaries and donors of the projects selected for project-specific evaluation.
- Preparation in the field of preliminary findings and recommendations.
- Debriefing meeting in the field to present preliminary findings and recommendations.
- Meetings at HQs' level with the team members to present the preliminary findings and recommendations.
- Drafting of report.
- Inviting comments on the draft report.
- Finalization of the reports.

As the report is the product of independent team acting in their personal professional capacities, it is up to that team to make use of the comments made by the parties on the draft report and to reflect them in the final report. However, the evaluation team is responsible for reflecting any factual corrections brought to their attention prior to the finalization of the report.

The field mission is suggested to take place from 18 October till 5 November. Preparatory work should start in August; the final report should be delivered by mid December at the latest.

The final report will be submitted on a diskette (in Word) to the UNIDO Evaluation Group that will take care of its printing, distribution and dissemination of evaluation results.

Annex 2: China CSF: Adjusted list of non-MP projects

Project Serial No.	Project No.	Project Title	Programme Manager	Comp.	Adj. Comp.	Total Allotment (US\$)	Total Expenditure (US\$)	Donor	Project included evaluation (x) / Notes
1	EGCPR95G31	Energy Conservation and Pollution Control in Township and Village Enterprises (TVES)	WILLIAMS ROBERT OWEN	2.0.00	4	977,947	977,706	UNDP	Completed before CSF
2	EGCPR99G31	ENERGY CONSERVATION AND GHG EMISSIONS REDUCTION IN CHINESE TVES - PHASE II	KHAN ENVER FARID	2.0.00	4	7,979,456	3,656,706	UNDP	X
3	FICPR00122	CHINA MOTOR SYSTEM ENERGY CONSERVATION PROGRAMME	WILLIAMS ROBERT OWEN	2.0.00	4	1,447,619	1,434,154	Un Fund For International Partne	X
4	GFCPR02010	Preliminary Assessment To Identify The Requirements For Developing A National Implementation Plan In The People's Republic Of China As A First Step To Implement The Stockholm Convention On Persistent Organic Pollutants (POPS)	PENG, Zhengyou	4.0.00	4	349,500	342,112	Global Environment Facility	X
						10,754,522	6,410,678		
5	FICPR01187	Accelarating Industrial Cogeneration in China - Planning Grant.	WILLIAMS ROBERT OWEN	5.0.00	5	66,408	66,408	Un Fund For International Partne	Study
6	USCPR01166	Cleaner Solid Waste Management in China - Phase II	SANCHEZ OSUNA MAYRA	5.0.00	5	2,654,867	2,116,610	Switzerland	Already evaluated
7	USCPR02009	Environmentally Sound Technologies Programme In China	SANCHEZ OSUNA MAYRA	5.0.00	5	1,440,000	578,531	Switzerland	X
8	USCPR04150	Municipal Solid Waste Management Systems, Technical Standars, Treatment and Disposal, Capacity Building in China (China's Agenda 21)	SANCHEZ OSUNA MAYRA	2.0.00	5	257,624	-	Switzerland	Just started
9	USCPR93003	Demonstration Plant for Oxygen Pulping and Bleaching of Non-Wood Fibrous Raw Materials	VOLODIN IGOR NIKOLAEVICH	2.0.00	5	1,946,884	1,946,884	Germany	Completed before CSF

10	USCPR96108	Evaluation and Adjustment of China's Industrial Policies for Key Industries to Promote Sustainable Development	REINHARDT JUERGEN	2.0.00 and 7.0.00	5	1,403,008	1,403,008	Embassy of the Netherlands in China-US/CPR/96/108	X
11	USCPR96150	Municipal Solid Waste Management Systems Technical Standards, Treatment and Disposal, Capacity Building in China (China's Agenda 21)	SANCHEZ OSUNA MAYRA	2.0.00	5	2,250,610	2,250,610	Switzerland	Already evaluated
12	NCCPR99703	Forward Looking Policies On Agrochemicals To Take China Into the 21st Century	SANCHEZ OSUNA MAYRA	2.0.00	5	6,316	6,316	UNDP	Negligible
13	USCPR99005	Assistance in Cleaner Production of Basic Chemicals	CLARENCE-SMITH EDWARD PA	2.0.00	5	30	30	China	Cancelled
14	TFCPR00001	Associate Expert Michele Amadeo	SUH JANG-WON	2.0.00	5	192,719	190,673	Italy	Associate Expert
						10,218,467	8,559,070		
15	USCPR99130	Int.Prog. for Cleaner and Safer Pest Control in Selected Backward Areas of China-Sub Prog.1: Promotion of Seed Dressing Application in Yunnan,Guangxi,Guizhou,	SANCHEZ OSUNA MAYRA	2.0.00	6	280,001	279,223	China	X
16	FICPR01186	Strengthening of Mechanisms for Technology Transfer for Small Hydropower Equipment for China	BROMLEY ANTHONY JOHN	6.0.00	6	71,430	58,675	Un Fund For International Partne	X
17	SFCPR01001	INITIAL ESTABLISHMENT OF THE INTERNATIONAL CENTRE ON SMALL HYDROPOWER (IC-SHP) IN HANGZHOU, CHINA	BROMLEY ANTHONY JOHN	6.0.00	6	132,748	118,269	China	X
18	FICPR02237	Establishing Climate-Friendly Technology Financing Facility	KOZHARNOVICH VLADIMIR	6.0.00	6	285,714	250,798	Un Fund For International Partne	X
19	KORAS01A02	TUMEN RIVER INVESTOR SERVICES (TRIS) NETWORK - STAGE II	PADICKAKUDI CHACKO OUSEP	6.0.00	6	399,500	343,446	Undefined	Regional
20	SFCPR97001	Implementation of the Build-Operate- Transfer (BOT) Framework	SEIDL DA FONSECA RICARDO	2.0.00	6	73,497	73,497	China	Completed before CSF

21	TFCPR01002	INVESTMENT PROMOTION CENTRE SHANGHAI -ASSISTANCE TO SHANGHAI FOREIGN ECONOMIC RELATIONS AND TRADE COMMISSION/SHANGHAI FOREIGN INVESTMENT COMMISSION IN INWARD AND OUTWARD INVESTMENT PROMOTION	ZAKHARIAN VICTOR SOURENO	6.0.00	6	287,950	77,007	China	X
21	TNCPR01002	ASSISTANCE TO SHANGHAI FOREIGN ECONOMIC RELATIONS AND TRADE COMMISSION IN INWARD AND OUTWARD INVESTMENT PROMOTION - INVESTMENT PROMOTION CENTRE SHANGHAI TOTAL: CNY 1,844,350 ROE 8.2660	ZAKHARIAN VICTOR SOURENO	6.0.00	6	566,972	407,725	China	X
22	TFCPR03003	Associate Expert Mr. Ralf Bredel	SUH JANG-WON	6.0.00	6	124,680	111,923	Germany	Associate Expert
23	TFGLO02002	PROMOTION OF HIGH TECHNOLOGY AND COOPERATION PARTNERSHIP FOR SUSTAINABLE DEVELOPMENT	KOZHARNOVICH VLADIMIR	6.0.00	6	81,788	15,383	China	X
23	TNGLO02002	PROMOTION OF HIGH TECHNOLOGY AND COOPERATION PARTNERSHIP FOR SUSTAINABLE DEVELOPMENT	KOZHARNOVICH VLADIMIR	6.0.00	6	100,134	88,444	China	X
24	USCPR00053	Development of Three-Way Catalysts for Automobile Emission Pollution Control	ISHCHENKO VALENTIN YAKOV	2.0.00	6	239,202	239,202	China	X
25	USCPR02011	Strengthening the partnership between the Nantong Pesticide Formulation Research Center (NPFC) and the Regional Network on Pesticides for Asia and Pacific (RENAP) for the development of environmentally friendly pesticide formulations	TZOTZOS GEORGE THEODORE	6.0.00	6	20,000	15,199	China	Too small
26	USCPR98033	Investment Promotion for the Hunchun Border Economic Zone (HBEZ)	REINHARDT JUERGEN	2.0.00	6	71,791	71,791	China	Completed before CSF
27	USCPR99072	Strengthening the Investment & Technology Promotion System (ITPS) through Capacity Building and Networking	REINHARDT JUERGEN	2.0.00	6	265,486	196,057	China	X
28	XPRAS01022	ENHANCING IT COOPERATION AND PARTNERSHIPS IN THE ASIA PACIFIC REGION	LIN YING	6.0.00	6	24,520	24,520	XP	X

29	XPRAS02022	Enhancing IT Cooperation and Partnership in the Asia Pacific Region	KOZHARNOVICH VLADIMIR	6.0.00	6	75,000	74,891	XP	X
30	SFCPR03005	Assistance in Establishing an Industrial Subcontracting and Partnership Exchange in Beijing, China	GILBERT PATRICK JEAN	6.0.00	6	45,818	26,055	China	X
31	USCPR00146	Support To CICETE and the Counterpart Project Institutions Through Capacity Building for Enhancing Project Development and Management	KOZHARNOVICH VLADIMIR	2.0.00	6	30,000	21,585	China	CICETE
31	UTCPR00146	Support To CICETE and the Counterpart Project Institutions through Capacity Building for Enhancing Project Development and Management - Yrmb 578,620	KOZHARNOVICH VLADIMIR	2.0.00	6	70,000	32,272	China	CICETE
32	USCPR00149	Strengthening the Capacity of the Commercial Network Sites Development Centre (CNSDC) in Designing, Developing and Operating a Nation-Wide Network...	GONG WEIXI	2.0.00	6	100,001	100,091	China	X
						3,346,232	2,626,054		
33	SFCPR03004	Assistance in Establishing an Industrial Subcontracting and Partnership Exchange in Chongqing, China	GILBERT PATRICK JEAN	7.0.00	7	57,982	42,025	China	X
34	USCPR03051	I.P. for Shaanxi Province, Component 1: Industrial Development Policies and Strategies- Reduce Regional Desparities and Enhance Industry Competitiveness	REINHARDT JUERGEN	7.0.00	7	100,000	33,525	China	X
34	USCPR04108	Evaluation and Adjustment of China's Industrial Policies for Key Industries to promote sustainable development	REINHARDT JUERGEN	7.0.00	7	233,716	134,586	Embassy of the Netherlands in China-US/CPR/96/108	X
35	USCPR04003	Shaanxi Business Information Network (Shaanxi BISnet)	PRUIM JOHANNES FRANCISCU	7.0.00	7	100,000	13,649	China	X

36	USCPR04008	Investment Promotion and Business Matching Support for small and Medium Sized Enterprise (SMEs) of Southwest China and Neighbouring Asian Countries	GILBERT PATRICK JEAN	7.0.00	7	130,000	5,675	China	Just started
37	XPCPR01017	PROGRAMMING MISSION TO SHAANXI, CHINA	MIRANDA DA CRUZ SERGIOM	7.0.00	7	28,706	28,706	Regular Programme Of Technical C	Programming mission
38	NCCPR97001	Township and Village Enterprise Development Study (TVES)	PRUIM JOHANNES FRANCISCU	2.0.00	7	120,000	114,230	UNDP	X
						770,404	372,396		
39	TFGLO02006	Technology Transfer for Sustained Economic Growth and South-South Industrial Partnership	KOZHARNOVICH VLADIMIR	8.0.00	8	147,727	44,664	China	X
39	TNGLO02006	Technology Transfer for Sustained Economic Growth and South-South Industrial Partnership	KOZHARNOVICH VLADIMIR	8.0.00	8	125,000	60,755	China	X
40	USCPR02027	Assistance to enhance ECDC/TCDC information network and formulate demonstration programme to promote cooperation partnerships	KOZHARNOVICH VLADIMIR	8.0.00	8	50,000	9,136	China	X
40	UTCPR02027	Assistance to enhance ECDC/TCDC information network and formulate demonstration programme to promote cooperation partnerships	KOZHARNOVICH VLADIMIR	8.0.00	8	50,000	35,000	China	X
41	USINT01154	SUPPORT TO THE "1ST WORLD CONFERENCE ON TECHNOLOGY INNOVATION AND INDUSTRIALIZATION OF NATURALLY COLOURED COTTON" BEIJING ,CHINA	LEE YUEN-HOI	8.0.00	8	23	23	China	Cancelled
						372,750	149,578		
		Total				25,462,376	18,117,777		

Annex 3: Status of Completion

Project Serial No.	Total (prodoc)	Cancelled	Reviewed	Status of completion (%)					
				Not yet started	<25	26-50	51-75	76-99	100
1	2		2						2
2	17		17		3	4	4	4	2
3	5		5				1	3	1
4	3		3						3
5	2		2						2
6	4		4				3	1	
7	7		7	1	2	4			
8	4		0 starting						
9	?not available								
10	6		6	3	1	1			1
11	7		7						7
12	?not available	X							
13	?not available	X							
14	0 AE		0						
15	5		5						5
16	1		1						1
17	3		3						3
18	5		5					5	
19	8		0 regional						
20	1		1						1
21	6		6						6
22	0 AE		0						
23	9		9		1		6	2	
24	2		2						2
25	4		0 two small						
26	4		4						4
27	6		6	1		4	1		
28/29	2		2		1				1
30	5		5	2	2	1			
31	2		2					2	
32	3		3						3
33	5		5			1	2	1	1
34	6		6	3	1	1			1
35	4		4	3		1			
36	4		4	4					
37	2		2					1	1
38	1		1						1
39	14		14		3	4	3	4	
40	3		3			3			
41	5	5							
Total	167	5	146	17	14	24	20	23	48
Percentage			100	12	9	16	14	16	32

Annex 4: Rating

Project Serial No.	Outputs						
	Total	Cancelled	Reviewed	Rating			
				1	2	3	4
1	2		2		2		
2	17		17		13	4	
3	5		5		4	1	
4	3		3		3		
5	2		2		2		
6	4		4		4		
7	7		7		1	6	
8	4		0 starting				
9	? Not available		0				
10	6		6		6		
11	7		7		7		
12	? Not available	x	0				
13	? Not available	x	0				
14	0 AE		0				
15	5		5		5		
16	1		1		1		
17	3		3		3		
18	5		5		5		
19	8		0 regional				
20	1		1		1		
21	6		6		6		
22	0 AE		0				
23	9		9		9		
24	2		2	2			
25	4		0 too small				
26	4		4		4		
27	6		6			4	2
28/29	2		2		1	1	
30	5		5		4	1	
31	2		2		2		
32	3		3	1	1	1	
33	5		5	1	4		
34	6		6		6		
35	4		4		4		
36	4		4		4		
37	2		2		2		
38	1		1		1		
39	14		14		14		
40	3		3		3		
41	5	5					
Total	167	5	146	4	122	18	2
Percentage			100	3	84	12	1

Annex 5A: Schedule of Mission and Persons met

City/town	Date	Time	Organizations	Meeting attendants	PSNs
Beijing	18.10. (Mon.)	09:30 – 11:30	UBO	Mr. Sérgio M. Miranda-Da-Cruz Mr. MA Jian, National Programme Coordinator, Tel: 6532 3440 ext. 230	
		14:00 – 15:00	Embassy of the Netherlands	Mr. Martien Beek, First Secretary Ms. TIAN Hong, Programme Officer, Tel: 6532 1131 ext. 202	34
		15:20 – 16:20	UNDP	Mr. Nyirongo MacLeod, Senior DRR, Tel: 6532 3358 Mr. Miao Hongjun, Tel: 65323731 ext. 243 Ms. DING Ying, Programme Coordination Assistant, Tel: 6532 3731 ext. 230	38
	19.10. (Tue.)	9:00 – 10:30	Sinotrans Limited Information Management Dept.	Mr. FENG Weiwei, Deputy General Manager of the Dept, Tel: 6229 5133 or 13601009504 Ms. ZHANG Siyu, Deputy General Manager of the Dept, Tel: 6229 5121 Mr. LIU Minsheng, Chief Information Officer, Tel: 6229 6660	32
		11:30 – 13:30	CICETE/MOFCOM	Mr. WANG Yue, DG, Tel: 6201 3086 Mr. DENG Zhihui, Division Chief, Tel: 6238 0920 Mrs. JIANG Lingyuan, Deputy Division Chief, Programming Division, Tel: 6201 6340 Mr. Zhou Taidong, Programming Officer, Tel:6204 9988 ext.7750	
		14:00 – 17:00	State Environmental Protection Administration (SEPA) MP PMOs	Mrs. Song Xiaozhi, Deputy Director-General Mr. Mr.Li Yonghong, Team Leader Mr. XIONG Kang, Division Chief, PMO MP, Tel: 6711 6463	4 plus PMO MP
	20.10. (Wed.)	09:00 – 12:00	Ministry of Agriculture(MOA) PMO including PIC, PTPMC and RCF	Mr. Gao Shangbin, Division Chief, Tel: 6419 3079 Mr. Wang Xiwu, Senior Engineer, Tel: 6506 8591 Mrs. WANG Guiling, Deputy PMO Director, TVE II, MOA, Tel: 65389066 ext. 209 Mr. Zheng Ge, Project Assistant, PMO Mr. Xion Wei, Deputy General Manager, Hongyun Company Mr. Song Dongfeng, Contract Officer	2
		13:30 – 15:00	Development Research Center (DRC)	Mr. Li Shantong, Former DG, Tel: 6559 5692 Mr. Huang Hanquan, Institute of Industrial Development of NDRC Mr. Qi Dongping, Business School of Renmin University of China Mr. Wang ChengZhu, Business School of Renmin University of China	34
		15:30 – 17:00	China Energy Conservation Investment Company (CECIC) PMO	Mr. ZOU Guijin, Deputy Director, Investment Management Dept. CECIC, Tel: 6836 5345 Mr. Kuai Ming, Investment Management Dept. CECIC	3

	21.10. (Thu.)	09:00 – 11:00	Beijing Productivity Centre SPX Beijing	Mrs. Chen Sihong, DDC, Int'l Cooperation Division of Beijing MSTC, Tel: 6615 3430 Mr. ZHANG Qiang, Director, Beijing Productivity Centre, Tel: 82003628 Mr. Liu Daochun, Senior Engineer, National Expert, Tel: 8200 2903 Ms. Li Hongjuan, SPX Beijing Centre Mr. Wang Chenggang, SPX Beijing Centre	30
13:30 - 15:00		Tianjin CCTJ TRICI	Mr. XUE Qunshan, Deputy Director, Senior Engineer, CCTJ, Tel: 022-6621 1533 or 13602092851 Mr. Xiao Yan, Head of the Institute, Senior Engineering, TRICI, Tel: 022-2668 9246	24	
15:30 – 16:30		NDRC	Mr. XU Lin, DDG, Tel: 6850 1512 Mr. MING Xiaodong, Division Chief, Tel: 6850 1504	10/ 34	

Jinan (Shandong Prov.)	22.10. (Fri.)	09:00 – 18:00	Environmental Protection Bureau of Shandong Province PMO	Mr. PENG Zhenhua, Division Chief, Int'l Cooperation Division, Tel: 0531 6106151 Mrs. Hua Fang, Acting Director, Tel: 0531-6106150 Mr. Ji Ming, Acting Director, Tel: 0531-8031485-8002 Mrs. Yan Yan, Textile Expert, Tel: 0531-8031485-8004 Mrs. Lin ChunLan, Food Expert, Tel: 0531-8031485-8003 Mrs. Xie Jun, Chemical Expert, Tel: 0531-8031485-8006 Mr. Eric Shang, Interpreter, Tel: 0531-8031485 ext. 8005 Mr. Serge de Klebnikoff, CTA, Tel: 013505318565	7
Shanghai	25.10. (Mon.)	09:00 – 11:00	Shanghai Energy Conservation Service Centre	Mr. YE Wenbiao, Director, Tel: 021 5228 3666 ext. 803 or 013331913657 Mr. Zhang Tiecheng, DD, Senior Engineer, SECSC, Tel: 021-5228 3666 ext.813 Mr. Wang Guoxiang, General Supervisor, MSEC Dept. SECSC, Tel: 021-5228 3666	3
		14:00 – 17:00	Shanghai Investment Promotion Centre	Mr. Zhao Kangmei, Secretary-General, Tel: 021-62750235 Mr. DONG Tao, Head of SIPC, Tel: 021 62368800 ext. 215 or 013601627988 Mr. Huang Jiangnan, Project Director, Tel: 010-8447 7148 Mr. WU Zili, Finance-Investment Advisor, Tel: 013764303220 Mr. Wang Beng, Senior Engineer	21
	26.10. (Tue.)	08:30 – 19:00	Nantong	Mr. Leng yang, Senior Professor, Chemist, Tel:0513-3527462 Prof. HONG Chuanyi, NPD, Tel: 013901481358	15
	27. 10. (Wed.)	09:00 – 11:30	Shanghai International IT Promotion Centre	Mr. Bob H. Dong, Director of IITPC, Tel: 021 64157520 ext. 257 Ms. Joanne Song, Program Officer, Tel: 021-6415 7520 ext. 156 Ms. Janice Ji, Tel: 021-6415 7520 ext. 151 Mr. Yue Shiyuan, Deputy Director, Tel: 021-6415 7520 ext. 249	28/29
		13:00 – 19:00	Tongxiang(Zhejiang Prov.) to visit one of the pilot TVEs, the Henghe Cement factory. Making use of waste heat to produce electricity.	Mr. Zhou Yaxin, Vice Mayor, Tel: 0573-8106035 Mr. Shen Caifang, Deputy, Environment Bureau, Tel: 0573-8063492 Mr. Wu Juanfen, Vice Director, Local People's Congress, 0573-8677958 Mr. Jing Shenyang, Deputy Bureau, Local Economic and Trade Bureau, Tel: 0573-8063492 Mr. Lu Daming, Party Secretary, Heshan Town, Tel: 0573-8107422, 13905837523 Mr. Pu Zhanghao, Deputy Bureau, Local Science and Technology Bureau, Tel: 0573-8102015 Mr. Xu Lei, Vice Head of Heshan Town, Tel: 0573-8677020, 13967363326 Mr. Wei Songgen, Chairman of Board, General Manager, Tel: 13605837077 Mr. Shen Fuqiang, Executive Deputy General Manager, Tel: 13819391567 Ms. WANG Guiling, Deputy PMO Director, TVE II, Ministry of Agriculture, Tel: 65389066 ext. 209	2

Hangzhou (Zhejiang Prov.)	28.10. (Thu.)	09:00 – 15:00	International Centre on Small Hydro Power (IC-SHP)	Prof. TONG Jiandong, Director, Ms. Zeng Yuehua, Deputy Director, Tel: 0571 - 87070070 ext. 6316 Mr. Li Zhiming, Chief Engineer, Tel: 0571- 87070070 ext. 6234 Mr. He Zhicheng, Chief Engineer, Tel: 0571- 87070070 ext. 6234 Ms. Elizabeth Marshall, Deputy Division Chief of International Cooperation Division Ms. HU Xiaobo, Tel: 0571 87023380 or 057187070070 ext. 6317	16/17
Shenzhen (Guangdong Prov)	29.10. (Fri.)	09:00 – 18:00	Shenzhen International Technology Promotion Centre For Sustainable Development	Mr. Tian Jufeng, Board of Chairman of SEC, Tel: 0755-83684088 Mr. YU Yuanqi, Senior Project Officer, Tel: 0755 – 83684102 or 13005469792 Mr. Wang Xiaokui, Tel: 0755-3684301 Tan Weidong, Senior Engineer, Desulfuration Project Dept. Tel: 0755-2668 1188 ext. 8501	23
Chongqing	30.10. (Sat.)	09:30 – 15:00	Meeting with SPX Chongqing (see Annex Chongqing)	Jim Wu, Manager, Tel: 023 68633464, Add. : No. 269 Keyuansi Road, High-Tech Development Zone Ms. He Yuhan, 023-6863 4034 Ms. Christine Chen, Staff Engineer, Tel: 023-6888 3981 Mr. Yang Lin, Vice Director, Chongqing MEC Mr. Chen Shuwei, Representative of Chongqing MFTC Mr. Dai Zhenlong, Head of Financial & Economic Committee of the Municipal Congress	33
Xi'an (Shaanxi Prov.)	01.11. (Mon.)	08:30 – 12:00	Shaanxi Provincial Office for Industry and Transportation	Mr. Tian Li, Vice Director, Tel: 029-87292472 Mr. Wang Zhiguo, Deputy Chairman, Shaanxi Provincial Service Association of SMEs, Tel: 028-8786 0426 Mr. YANG Guiquan, Division Chief, SME Division, Tel: 029-87291829 or 013572826578 Ms. Lei Xiaoying, Vice Director, Service Center of SMEs, Tel: 029-6231 816 Mr. Zuo Xuanju, Office Clerk, Tel: 029-8729 1829	35
		15:00 – 16:00	EU Project in Shaanxi	Mr. Tim Wilkinson, Project Director, Enterprise Development Adviser, Tel: 029-8833 5648	
		16:30- 18:00	One of the pilot TVEs, the Liucun brick-making factory (Baqiao District in Xi'an City's suburban area)	Mr. Wang Yuman, Director of TVEs Management Bureau of Baqiao District of Xi'an, Tel: 029-3518584 Mr. Yan Kaifang, Senior Engineer/Deputy Director of the China Academy of Research and Design of Well Building Material in Xi'an, Tel: 029- 5221 470 Mr. Zhou Chan, Senior Engineer/ Deputy Director, Tel: 029-522 4662 Mr. Wang Baocai, Secretary-General, Xi'an Association of Well Building Material Industry, Tel: 029 5224662 Mr. Ling Fuhe, Director of the Liucun BrickMaking factory	2
	02.11. (Tue.)	09:00 – 12:00	No. 3 Factory in Xi'an MP/CPR/98/054 A fruit processing factory (Pucheng County of Xi'an City)	Mr. Zhou Daping, Director of the Factory, Tel: 0913-7530856 Mr. TANG Boming, Programme Officer, SEPA, Tel: 6711 6382	MP

Beijing	3.11. (Wed.)	09:00 – 10:00	POPs PMO SEPA	Mr. Luo Gaolai, Deputy Direct General of Stockholm Convention Implementation Office, Tel: 6713 6958 Mr. Zhang Qinglai, Division Chief, PMO POPs, e-mail: zhang.qinglai@sepa.gov.cn Ms. DING Qiong, Senior Programme Officer, PMO POPs, Tel: 6711 7548 (not yet) Mr. Sun yangzhao, Senior Programme Officer, PMO POPs, Tel: 6711 7548 Mr. Gao Ganglei, Senior Programme Officer, PMO POPs, Tel: 6711 7548	4
		10:30 – 11:30	Embassy of Switzerland	Mr. Patrick Freymond, Counsellor, Tel: 6532 2736 Ext. 311 M s. ZHANG Huihui, Programme Officer, Tel: 65322736 ext. 313 (not yet)	7
		14:00 – 16:00	International Centre for Materials Promotion (ICM), China Building Materials Academy (CBMA)	Prof. Wang Yimin, Vice President of CBMA, Tel: 5116 7285 Prof. Sui Tongbo, Vice Director of ICM, International Coordinator, Tel: 5116 7809, Mobil: 13910720269 Prof. Sun Guokuang, National Consultant, Tel: 6205 8518 Prof. Shen Rongxi, National Consultant Ms. Tan Li, Director Senior Engineer, Foreign Affairs Department, Tel: 5116 7296 Ms. LI Juan, Engineer Tel: 5116 7499 or 13167566930 Ms. Kong Ningning, ICM staff	39
	4.11. (Thu.)		Preparation of the team		
	5.11. (Fri.)	09:00 – 11:30	Meeting with UBO	Mr. Sérgio M. Miranda-Da-Cruz Mr. Ma Jian, National Programme Coordinator, Tel: 6532 340 ext. 230 Mr. Ralf Bredel, Junior Professional Officer	
		14:00 – 16:00	Debriefing CICETE	Mr. Deng Zhihui, Division Chief, Programming Division Tel: 6204 9988 ext. 7757 Mr. Zhou Taidong, Programming Officer, Tel:6204 9988 ext.7750	
	16:00 – 16:40	Meeting with South- South Division, CICETE	Mr. Zhao Yongli, Division Chief, South-South Division Tel: 6201 3082		

Annex 5B: Names of Persons met at UNIDO HQ

Name	Function / Branch
Mr. Jang-Won Suh	Director Asia and the Pacific Bureau
Ms. Dan Liang	Director Industrial Promotion and Technology Branch
Mr. Victor Zakharian	ITPO Coordinator Field Coordination and Resource Mobilization Branch
Mr. Akira Uriu	Senior Programme Management Officer Programme Coordination and Field Operations
Ms. Mayra Sanchez	Deputy to the Director Energy and Cleaner Production Branch
Mr. En ver Khan	Senior Industrial Development Officer Energy and Cleaner Production Branch
Mr. Edward Clarence-Smith	Senior Industrial Development Officer Energy and Cleaner Production Branch
Mr. Anthony Bromley	Senior Industrial Development Officer Energy and Cleaner Production Branch
Mr. Ricardo Seidl da Fonseca	Industrial Development Officer Industrial Promotion and Technology Branch
Mr. Patrick Gilabert	Industrial Development Officer Industrial Promotion and Technology Branch
Mr. Vladimir Kozharnovich	Industrial Development Officer Industrial Promotion and Technology Branch
Mr. Ouseph Padickakudi	Industrial Development Officer Industrial Promotion and Technology Branch
Mr. Tamas Grof	Senior Industrial Development Officer Multilateral Environmental Agreements Branch
Mr. Vladzimir Bysyuk	Senior Industrial Development Officer Multilateral Environmental Agreements Branch
Mr. Valentin Ishchenko	Industrial Development Officer Multilateral Environmental Agreements Branch
Mr. Zhengyou Peng	Industrial Development Officer Multilateral Environmental Agreements Branch
Mr. Hans Pruim	Industrial Information Officer Small and Medium Enterprises Branch
Mr. Juergen Reinhardt	Industrial Development Officer Small and Medium Enterprises Branch
Mr. Weixi Gong	Industrial Information Officer Small and Medium Enterprises Branch (at time of PSN 32)