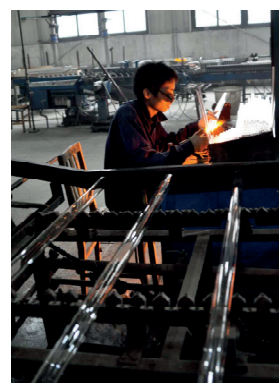


Independent UNIDO Country Evaluation
People's Republic of CHINA



UNIDO EVALUATION GROUP

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People's Republic of CHINA



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1. Guizhou Province: Rural entrepreneurship development;
2. Liaoning Province: Replacing ozone depleting substances;
3. Beijing: Promoting the development of renewable energy.

Abbreviations and acronyms

ACYF	-	All China Youth Federation
ADB	-	Asian Development Bank
AI	-	Active ingredient
BAT	-	Best Available Technology
BEP	-	Best Environmental Practice
BJ	-	Beijing
BTO	-	Back-to-office
CBMA	-	China Building Materials Academy
CCICED	-	China Council for International Cooperation on Environment and Development
CCPF	-	China Climate Change Partnership Framework
CDM	-	Clean Development Mechanism
CDPF	-	China Culture & Development Partnership Framework
CEIT	-	Countries with Economies in Transition
CFC	-	Chloroflourocarbon
CHEEA	-	China Household Electrical Appliances Association
CHUEE	-	China Utility-Based Energy Efficiency Finance Program
CICETE	-	China International Centre for Economic & Technical Exchanges
CIO	-	Convention Implementation Office
CO	-	(UNIDO) Country Office
COD	-	Chemical Oxygen Demand (related to wastewater quality)
COP	-	Conference of the Parties
CP	-	Country Programme
CPIT	-	Chambers for Promotion of Investment and Trade
CPU	-	Cleaner Production Unit (in UNIDO)
CQ	-	Chongqing
CRO	-	(UNIDO) China Regional Office
CS	-	Capsule Suspension
CSF	-	Country Service Framework (forerunner of the UNIDO Country Programme)
CSSCPC	-	China south-south cooperation Promotion Centre
DFID	-	Department for International Development (UK)
DOFTEC	-	Department of Foreign Trade and Economic Cooperation
DPRK	-	Democratic People's Republic of Korea
ECDC	-	Economic Cooperation Among Developing Countries
EE	-	Energy and Environment

EMG	-	Expert Group Meeting
EPB	-	Environmental Protection Bureau
EPE	-	Expanded Polyethylene
ERP	-	Enterprise Resource Planning
EST	-	Environmentally Sound Technology
ET	-	Evaluation Team
EU	-	European Union
ExCom	-	Executive Committee (of the Montreal Protocol)
FDI	-	Foreign Direct Investment
FECO	-	Foreign Economic Cooperation Office
FO	-	Field Office (of UNIDO)
GDP	-	Gross Domestic Product
GEF	-	Global Environmental Facility
GHG	-	Greenhouse gas
GiZ	-	German International Development Corporation (former GTZ)
GNERI	-	Gansu Natural Energy Research Institute
GNI	-	Gross National Income
GRRFA	-	Global Resource Regeneration Fund Association
HACCP	-	Hazard Analysis and Critical Control Points
HC	-	Hydrocarbon
HCFC	-	Hydrochloroflourocarbon
HHCW	-	Hazardous healthcare waste
HIV/AIDS	-	Human Immunodeficiency Virus/Acquired Immune Deficiency Syndrome
HQ	-	Headquarters
IBRD	-	International Bank for Reconstruction and Development (World Bank)
ICAMA	-	Institute for Control of Agrochemicals of the Ministry of Agriculture
ICM	-	International Centre for Materials Technology Promotion
ICSHP	-	UNIDO International Centre for Small Hydro Power
ICT	-	Information and Communication Technology
IDA	-	International Development Association (World Bank)
IDF	-	Industrial Development Fund
ILO	-	International Labour Organisation
IFC	-	International Finance Corporation (World Bank)
INCHP	-	International Network for Small Hydro Power
IMR	-	International Institute for Monitoring and Management of Environment and Resources
IREC	-	International Renewable Energy Centre

ISEC	-	UNIDO International Solar Energy Centre for technology Promotional Transfer
ISO	-	International Organisation for Standardisation (“International Standards Organisation”)
IT	-	Information Technology
ITC	-	International Technology Centre
ITPO	-	Investment and Technology Promotion Office
IW	-	International waters
MAC	-	Mobile Air Conditioner
MB	-	Methyl Bromide
MDG	-	Millennium Development Goal
MDG-F	-	(Spanish) Millennium Development Goal Fund
MDI	-	Metered Dose Inhalers
M&E	-	Monitoring and evaluation
MEA	-	Multilateral Environmental Agreements
MEP	-	(Chinese) Ministry of Environmental Protection
MHRSS	-	Ministry of Human Resource and Social Services
MIT	-	Massachusetts Institute of Technology
MLF	-	Multilateral Fund
MP	-	Montreal Protocol
MOFCOM	-	Ministry of Commerce
MoA	-	Ministry of Agriculture
MoU	-	Memorandum of Understanding
MWM	-	Medical Waste Management
MWR	-	Ministry of Water Resources
NCPC	-	National Cleaner Production Centre
NIHA	-	National Institute for Health Administration
NIP	-	National Implementation Plan
NORAD	-	Norwegian Agency for Development Assistance
NPFS	-	Nantong Pesticides Formulation Centre
ODA	-	Official Development Assistance
OECD/DAC	-	Organisation for Economic Cooperation and Development/Development Assistance Committee
ODG/EVA	-	Office of the Director General/Evaluation Group (in UNIDO)
ODP	-	Ozone Depleting Potential
ODS	-	Ozone Depleting Substance
PDC	-	Project Development Committee
PIR	-	Project Implementation Report
PM	-	Project Manager
POPs	-	Persistent Organic Pollutants
PRN	-	Project Reference Number

PRSP	-	Poverty Reduction Strategy Paper
PSD	-	Private Sector Development
PTC	-	Programme Development and Technical Cooperation Division (UNIDO)
QPS	-	Quarantine and Pre-shipment
RAC	-	Room air-conditioner
RBM	-	Results-based Management
RCF	-	Rolling Capital Fund
R&D	-	Research and Development
RECP	-	Resource Efficient and Cleaner Production
RMB	-	Ren Min Bi /Chinese currency – “yuan”)
RO	-	Regional Office (UNIDO)
ROK	-	Republic of Korea
RSA	-	Republic of South Africa
RSF	-	Regional Strategies and Field Operations Division (UNIDO)
RSS	-	Really Simple Syndication
SCORE	-	Sustainability through competitive and responsible enterprises
SEAC	-	State Ethnic Affairs Commission
SESTPC	-	Shandong Environmental Sound Technology Promotion Centre
SH	-	Shanghai
SHP	-	Small hydropower
Sida	-	Swedish Agency for Development Assistance
SIPC	-	Shanghai Investment Promotion Centre
SITPC	-	Shanghai International Informatization Technology Promotion Centre
SIYB	-	Start and Improve Your Business
SMEs	-	Small and Medium Size Enterprises
SOE	-	State-Owned Enterprises
SPX	-	Subcontracting and Partnership Exchange
SSS	-	Service Summary Sheet
TA	-	Technical Assistance
TC	-	Technical Cooperation
TCB	-	Trade Capacity Building
TCDC	-	Technical Cooperation between Developing Countries
TJLB	-	Tianjin Labour Bureau
ToR	-	Terms of reference
TOE	-	Training of enterprises
TOT	-	Training of trainer
TVE	-	Town and Village Enterprise
UBO	-	UNIDO Beijing Office
UCSSIC	-	UNIDO Centre for South-South Industrial Cooperation

UNDAF	-	United Nations Development Assistance Framework
UNDG	-	United Nations Director General
UNDP	-	United Nations Development Programme
UNEP	-	United National Environmental Programme
UNESCO	-	United Nations Educational, Scientific and Cultural Organisation
UNFPA	-	United Nations Population Fund
UNICEF	-	United Nations Children's Fund
UNIDO	-	United Nations Industrial Development Organisation
UNRC	-	United Nations Resident Coordinator
UR	-	UNIDO Representative
URO	-	UNIDO Regional Office in Beijing
USD	-	United States dollars
USSIC	-	UNIDO Centre for South-South Industrial Cooperation
WHO	-	World Health Organisation
WHRPG	-	Waste heat recovery power generation
WTO	-	World Trade Organisation
X'A	-	Xian
XPS	-	Extruded Polystyrene
YEM	-	Joint Programme on Youth, Employment and Migration

Glossary of evaluation related terms

Conclusions	:	Conclusions point out the factors of success and failure of the evaluated intervention, with special attention paid to the intended and unintended results and impacts, and more generally to any other strength or weakness. A conclusion draws on data collection and analyses undertaken, through a transparent chain of arguments.
Logframe	:	Management tool used to improve the planning and design of interventions, most often at the project level, also in literature referred to as LFA – Logical Framework Approach. It involves identifying strategic elements (inputs, outputs, outcomes, impact) and their causal relationships, indicators, and the assumptions or risks that may influence success and failure. It thus facilitates planning, execution and evaluation of a development intervention. Related term: results-based management (RBM)
Outcome	:	The likely or achieved short-term and medium-term effects (including policy and institutional changes) of an intervention's outputs, will materialise after the intervention outputs have been delivered. Related terms: result, outputs, impacts, effect
Outputs	:	The products, capital goods and services which result from a development intervention (the deliverables); may also include changes resulting from the intervention which are relevant to the achievement of outcomes.
Effectiveness	:	The extent to which the development intervention's objectives and deliverables were achieved, or are expected to be achieved, taking into account their relative importance.
Efficiency	:	A measure of how economically resources/inputs (funds, expertise, time, etc.) are converted to results/outputs.
Impacts	:	Positive and negative, primary and secondary long-term effects produced by a development intervention, directly or indirectly, intended or unintended.
Relevance	:	The extent to which the objectives of a development intervention are consistent with beneficiaries' requirements, country needs, global priorities and partners' and donors' policies. Note: Retrospectively, the question of relevance often becomes a question as to whether the objectives of an intervention or its design are still appropriate, given changed circumstances.
Indicator	:	Quantitative or qualitative factor or variable that provides a simple and reliable means to measure achievement, to reflect the changes connected to an intervention, or to help assess the performance of a development actor. Indicators should preferably be measured in quantitative terms, but also qualitative indicators are used.

Institutional development impact	:	The extent to which an intervention improves or weakens the ability of a country or region to make more efficient, equitable, and sustainable use of its human, financial, and natural resources, for example through: (a) better definition, stability, transparency, enforceability and predictability of institutional arrangements and/or (b) better alignment of the mission and capacity of an organization with its mandate, which derives from these institutional arrangements. Such impacts can include intended and unintended effects of an action.
Lessons learned	:	Generalizations based on evaluation experiences with projects, programs, or policies that abstract from the specific circumstances to broader situations. Frequently, lessons highlight strengths or weaknesses in preparation, design, and implementation that affect performance, outcome, and impact.
Recommendations	:	Proposals aimed at enhancing the effectiveness, quality, or efficiency of a development intervention; at redesigning the objectives; and/or at the reallocation of resources. Recommendations should be linked to conclusions
Results	:	The output, outcome or impact (intended or unintended, positive and/or negative) of a development intervention at various levels and points in time. Related terms: outcome, effect, impacts
Sustainability	:	The continuation of benefits from a development intervention after major development assistance has been completed. The probability of continued long-term benefits. The resilience to risk of the net benefit flows over time.

Executive Summary

1. Background

1.1 The Evaluation Team's mandate and approach

The Evaluation Team (ET) comprised six persons (three international and three national evaluators), two of which undertook a full mid-term evaluation of two Persistent Organic Pollutants (POPs) projects (submitted in a separate report). Following the review of documents, and interviews in UNIDO Headquarters (HQ) in Vienna, the ET undertook the joint fieldwork in PR China during 13–28.01.2011. The ET evaluated UNIDO's entire presence in the country, with a special emphasis on the Country Programme (CP) 2008-2010. The evaluation was based on assessments of selected projects under each programme component, but also the performance of the China Regional Office (RO) and some crosscutting issues were reviewed.

1.2 Country context

UNIDO started its operations in China in 1979 and has followed China's remarkable transformation into today's dynamic market economy, bringing millions out of poverty (reduced by 600 million in 30 years). Today, industry and construction sectors contribute 48% of the Gross Domestic Product (GDP). 60% of the manufacturing industry is financed by foreign capital. Small and Medium Size Enterprises (SMEs) contribute a share of 60% to the national GDP. Urbanisation rate has reached 45% in 30 years (taking 200 years in the Western world). Industry takes about 70% of the total energy consumption, where 2/3 is produced by coal.

There are many challenges associated with this rapid industrial development in China, and the Chinese 11th and 12th 5-Year Plans clearly aim to meet these through reduction of energy consumption and pollution; in addition to increasing economic growth, mostly in the domestic market.

The relative importance of official development assistance (ODA) has decreased significantly. Between 1990 and 2005 China's ODA as a percentage of GDP declined from 0.6% to 0.1%. Furthermore, the key donor countries (e.g. Japan and UK) are taking a phase-out strategy for their bilateral ODA grants to China.

The United Nations Development Assistance Framework (UNDAF) 2011-2015 has identified three key areas for support to China:

i) institutional cooperation to ensure environmental sustainability, address climate change and promote green, low carbon economy; ii) support to the poorest and most vulnerable population groups; and iii) support to China's enhanced participation in the global community.

1.3 UNIDO'S activities in China

UNIDO has since 1979 implemented around 550 projects in China, mobilising around USD 250 million. The UNIDO Country Programme (CP) for the period 2008-2010 had the following main components with a total budget of around USD 95 million: 1) Energy and climate change, 2) Environment (95%), 3) Agro-industries and food safety, 4) Productivity, technology and competitiveness enhancement; and 5) Cooperation Activities and Partnership Centres.

The CP has during the period evaluated merely been a list of individual projects, and not a holistic strategic "programme", and there are few synergies observed between the projects. Most of the portfolio (over 90% in terms of budget) addresses *global* environmental issues (China's fulfilment of international conventions) in the field of chemicals (Ozone Depleting Substances – ODS, and POPs), with only a few projects targeting *local* environmental issues (increasing in number in the next CP under preparation), food safety and south-south cooperation in different technology fields.

UNIDO's main counterpart in the country is the Ministry of Commerce (MOFCOM) and cooperation at the operational level is coordinated with China International Centre for Economic & Technical Exchanges (CICETE). Meanwhile, UNIDO implements ODS and POPs projects by sub-contracting (national execution) to the Foreign Economic Cooperation Office (FECO) under the Ministry of Environmental Protection (MEP).

2. Observations and assessment

2.1 Alignment and relevance of the UNIDO project portfolio

According to the CP document UNIDO cooperation in China aimed at contributing to global environmental benefits in the ODS and POPs fields; China's south-south cooperation; climate change mitigation (energy efficiency and renewable energy); improved productivity of SMEs; and enhanced food safety. While in the ODS and POPs areas considerable project portfolios have been maintained, with a constantly increasing importance of POPs projects; the expectations in the two areas of energy efficiency and food safety did not materialise.

The UNIDO project portfolio as a whole is considered highly relevant to China, with a high degree of national ownership (especially within the fields of energy &

environment (EE) and agriculture & food safety, in spite of small UNIDO portfolio in the latter). The relevance of the project portfolio is also high for UNIDO as most of the projects fall under the main competence areas of UNIDO (Energy, Environment, and Trade Capacity). UNIDO's cooperation is also well aligned with the priorities of UN cooperation in China, as reflected in the current United Nations Development Assistance Framework (UNDAF) 2011-2015, but most limited in the outcome for poor and vulnerable population groups.

2.2 Assessment of the various country programme components

Component 1: Energy and climate

The objective of this component is to assist China in reducing the greenhouse gas (GHG) emissions from industry and energy sectors, and diversifying energy sources through renewable energy technologies. Focus is e.g. on capacity building in renewable energy in the relevant partnership centres.

The component only comprises two projects, being part of the China Climate Change Partnership Framework (CCPF) that ends in May 2011, financed by the UN-Spanish Millennium Development Goal Achievement Fund (MDG-F).

The UNIDO-supported project "Promoting the adoption of heat power generation in the coal gangue brick-making sector", implemented with the Ministry of Agriculture (MoA), is the largest under CCPF. This relevant project is seriously delayed, but if the pilot is successful it might have a wide application in China and outside the country. There is however no funding mechanism available to support installation of the required heat power generation equipment in private industries.

The second project demonstrates best practices of "green employment" in companies, through workshops and development of Corporate Social Responsibility (CSR) policies. The effectiveness and efficiency are not yet fully satisfactory, due to insufficient English language proficiency resulting in additional work and delays.

Based on successful previous energy efficiency projects UNIDO had, by the start of the CP 2008-2011, good hopes of increasing the involvement in energy efficiency projects and therefore located an Industrial Development Officer in the Regional Office (RO) to specifically develop such opportunities. However, these efforts were not successful, as UNIDO did not get access to the required Global Environmental Facility (GEF) funds.

Component 2: Environment

The objective of this component, being by far the largest in the CP portfolio, was to assist China in meeting the obligations in the two international conventions on ODS (Montreal Protocol) and POPs (Stockholm Convention), through technology

transfer, training and policy measures as part of a suitable management structure. There was only one relatively small project addressing local environmental challenges through the transfer of Environmentally Sound Technology (EST) in the Shandong Province.

For POPs and ODS projects FECO is the main implementing agency having strong ownership and specialised divisions handling such projects, also with delegated decision-making in procurement for participating companies/institutions.

The seven GEF projects on POPs are all considered relevant with satisfactory performance. A full mid-term evaluation was undertaken of the projects: “Environmentally sustainable management of medical waste” and “Institutional strengthening related to the National Implementation Plan (NIP)” (submitted in a separate report). The ET concludes that the projects are highly relevant and overall performance of both projects is satisfactory, with good Chinese ownership and appropriate co-financing. A minor weakness is delay due to UNIDO management procedures (medical waste). The findings also coincide with the positive evaluation of the NIP in 2008.

The 25 Montreal Protocol (MP) projects (by far the largest group, 63% of the component) are mostly financed by the Multilateral Fund (MLF). They focus on ODS phase-out through policy support, training and awareness raising, and technology substitution/transfer. The effectiveness and sustainability of the projects is considered satisfactory, with some project experiencing delays.

The projects largely cover the following themes: Phase-out of Chloroflourocarbon-12 (CFC-12) in expanded polyethylene(EPE) foam; phase-out of ODS in domestic refrigeration and fridge compressors; increased CFC re-use in refrigeration servicing sector; CFC phase-out in metered dose inhalers (MDI) sector; phase-out of use and production of Methyl Bromide (MB); and phase-out of Hydrochloroflourocarbon (HCFC) in air conditioners and extruded polystyrene(XPS) foam.

Of the 38 industries using CFC in MDI (2007), around half would stop production and the other half would change to other gases. The phase-out issue is sensitive and highly political (environment vs. human health), and the phase-out plan is thus delayed. Once started, the phase-out is assumed to be effective, enforced by the Government.

The phase-out of MB use in agriculture seems to be progressing well (good national ownership), with efforts especially on awareness raising and demonstrations in “Model Farms”, and with alternative chemicals and more pest-resistant vegetables being introduced. In Shandong Province (Shouguang

County) the Environmental Protection Bureau (EPB) is subsidising each farmer RMB 2,000 to encourage smooth cooperation in the programme (through various kinds of incentives). Effectiveness and sustainability is expected to be satisfactory.

Effects in the refrigeration production sector are reported to be good, but the refrigeration service sector still has challenges (started in 2004), although the planned results for 2010 were met. The aim is to reuse as much as possible of the CFC gas in refrigerators and air-conditioners in cars when on service and being repaired, through introduction of better servicing/repair techniques and training. But the issue of collecting damaged equipment (cars, refrigerators), before ODS is released into the environment, remains a major challenge.

The project on Environmentally Sound Technology (EST) in Shandong Province started in 2004 and ended in 2010. The project started out with too high ambitions (and without the appropriate technical assistance (TA) on board) and was suspended for two years during re-planning. 10 companies were assisted in EST assessments, leading to identified potentials for reduced pollution levels. A study tour to Europe was considered the most useful activity, although no procurement contracts were concluded (Western equipment to textile industry is too expensive for China). The project itself is not sustainable, but this is not necessarily required as the established EST centre has been strengthened and will continue operating with own resources.

Component 3: Agro-Industries and food safety

This component, being new to UNIDO in China under the CP, covers mostly domestic and international trade-related dimensions, the former connected to SMEs being most challenging. The objective of the component is to contribute to improved safety throughout the overall food-processing sector, i.e. farm/factory to point of sale; and relates mainly to the public health (food-borne illnesses and chemical contamination).

The implementation on International Standards Organisation (ISO) standards in food safety is considered relevant and effective. It reached around 200 companies, focusing on awareness raising, showing proven outcomes at 10 export-oriented enterprises. However, so far very limited attention has been paid to SMEs catering to *domestic* markets, which are more important for local food safety concerns.

The project on promoting bio-pesticides has shown tangible results in identifying water-based formulations having high biological efficiency and contributing to public health improvements. While the project has performed well in terms of technology transfer from research to production and also with regard to

international cooperation, a national window is missing to disseminate the results within China, in particular to local manufacturers of pesticides.

The projects in this component have satisfactory effectiveness, but lack focus on food consumed locally. The projects have high levels of ownership and a solid base for sustainable results. However, with the current focus on exporting industry the potential for impact in poorer areas in Western China is marginal.

Component 4: Productivity, technology and competitiveness enhancement

This component covers four projects, where the “Sustaining Competitive and Responsible Enterprises”, the “China Culture and Development Partnership Framework” and the “Protecting and Promoting the Rights of China’s Migrants” projects are funded by the MDG-F; whereas the “Advisory Assistance to MOFCOM” covers policy guidelines to enhance outsourcing through network of six Information and Communication Technology (ICT) parks, and is funded by the Industrial Development Fund (IDF).

Overall, Component 4 has a very relevant objective, being better exploitation of the private sector’s potential to contribute to poverty alleviation. Three of the four projects under this component contribute to this objective. The social issues related to migrant workers and labour conditions are clearly recognised by the Government, and several UN agencies work in this field. The only exception is the project on ICT parks, which does not have a focus on vulnerable groups or poverty alleviation. The sector of software outsourcing also does not seem to offer much potential for poverty alleviation and a more equitable industrial development.

The effectiveness of Component 4 cannot be assessed as none of the projects has been analysed in detail. However, in terms of efficiency there are clear indications that the joint projects have caused difficulties for UNIDO to match implementation with other partners. This is partly due to the HQ-based implementation modality usually applied by UNIDO. In principle, UNIDO’s efforts to promote pro-poor industrial development are highly relevant to UNIDO and China. However, the chances for future funding for such activities seem rather limited, given the trend of traditional UNIDO donors to focus on other issues, mostly the environment.

Component 5: Other cooperation projects. (UNIDO Centres).

This component largely covers support to the International Technology Centres (ITCs), Industrial Subcontracting and Partnership Exchange Centres (SPXs), the UNIDO Investment and Technology Promotion Offices (ITPOs), and the South-South Cooperation Centre (in total 14 centres). Useful and relevant recommendations on the centres were given in the Country Strategy Framework (CSF) Evaluation (2005), the evaluations of the International Centre for Materials

Technology Promotion (ICM) and Shanghai International Information Technology Promotion Centre (SITPC, both in 2009), and the ITPO Evaluations in Beijing and Shanghai (2009). But most of the issues raised in these evaluations still remain to be implemented.

Some of the centres were visited by the ET and assessments can be found in *Annex 6*: UNIDO Centre for South-South Industrial Cooperation in China (UCSSIS); UNIDO International Solar Energy Centre for Technology Promotional Transfer (ISEC); UNIDO International Centre for Small Hydro Power (ICSHP); International Institute for Monitoring and Management of Environment and Resources (IMR); UNIDO Subcontracting and Partnership Exchanges (SPX).

In general, the centres are managed as *projects* and not as *institutions* (except ITPO and ISEC), but with notably very little UNIDO funding and little UNIDO value added in capacity building. The recent placement of a Senior Technical Advisor at UNIDO Beijing office for the purpose of centre coordination is a step in the right direction. However, coordination meetings are good but not enough; some centres are still living “their own life” without significant UNIDO input, quality control and proper reporting to UNIDO. A clear distinction should be made between “UNIDO Centres” (e.g. ITPO) and “UNIDO Partner Centres” (e.g. ISEC, ICSHP).

2.3 Processes and performance at country level

The reporting on the Country Programme has been discontinued, as there was no feedback from the HQ on the reports. The CP is in general not considered a “live” document in the present form, but merely an “umbrella” for many individual projects. There is also no evidence that the Results-based Management (RBM) work plans are used by HQ for management of, and strategic interaction with, the Regional Office (RO).

The organisational set-up of the UNIDO Regional Office (RO) in Beijing is not easily understood, as there are many lines of command and reporting within the RO, and between HQ and RO, resulting from historic reasons. This, to some degree, limits the possibility of the UNIDO Representative (UR) to manage resources effectively.

An overall process of restructuring UNIDO operations has started, with more involvement of the Field Offices (FOs) in technical cooperation (TC) management. However, at the time of the evaluation the division of responsibilities and obligations between HQ and the FOs remained unclear.

The Chinese counterparts and partner agencies of UNIDO clearly point at the lack of decentralised decision-making to the RO in Beijing as a weakness in the operations. Other donors decentralised “long time” ago. Some Chinese

counterparts also pointed at the “complicated” administrative routines in UNIDO. Cooperation partners to China in general have to be close to the market, in order to respond to the changes induced by the rapid socio-economic development.

2.4 Other relevant topics

The ET observed that some Chinese partners (notably UNIDO centres) do not adhere to the rules for using the UNIDO name and logo. However, several centres consider the logo as very important in their marketing, as door-opener that gives a certain “legitimacy” to their operations.

Most procurement in the projects is undertaken from UNIDO HQ in Vienna (the MP and POPs projects being the exception, where FECO has been delegated all procurement responsibility). However, criticism has been raised by some Chinese stakeholders as to remaining rigidity and delays in procurement as under UNIDO rules procurement cannot be delegated to final beneficiaries (companies). Also, all parties believe that the RO’s delegated procurement threshold of 20,000 is too low (compared e.g. to UNDP, having higher threshold). FECO, in the MP/POPs projects, has also raised a suggestion of smaller easy-to-monitor hardware procurement being delegated to the companies/institutions.

3. Main Recommendations

Administration, management, processes:

- UNIDO should as soon as possible empower the RO in Beijing to play a more active role in project management, reserving the role of HQ for technical advice, quality control, checks and balances. Decentralization of decision-making/project management for most projects is essential for being closer to the market (in line with what other UN originations and other development cooperation institutions have done already).
- When the Project Managers (PMs) are located in the RO, “Focal Point Officers” (or “Deputy Project Managers”), should be appointed in HQ Vienna, as the HQ will still play an important role in providing technical expertise to the projects.
- The RO should maintain both international and national staff with specialized qualifications, including environmental project management and specialized key sector knowledge. Replacement of departing staff.
- Possibilities of a more flexible procurement modality should be explored, involving companies/institutions in smaller hardware procurement to the project.. More procurement responsibility should be delegated to the RO (e.g. up to USD 50,000, as with the UNDP).
- A “one-line” reporting from the RO China to the HQ should be initiated,

through the UR.

The Country Programme:

- The UNIDO project activities outside the environmental area should gradually be concentrated on fewer thematic areas. Furthermore UNIDO should concentrate more geographically and on projects that can be used as “pilots” or “models” for future replication and upscaling by Chinese authorities and partners..
- The Country Programme should in the future be used as a strategic tool also to plan the use of IDF funds and UNIDO Seed Funds more “targeted”. The RO’s role in project identification could be strengthened. “Calls for proposals” in targeted thematic/geographical focal UNIDO areas should be considered.
- An increased focus on the sector of Food Safety should be considered.
- The focus on poverty alleviation should be sharpened and more profoundly addressed.
- The potential for increasing leverage through co-financing should be more actively explored.

The Centres:

- Full responsibility of projects supporting centres should be with the China RO, and backed up by technical assistance (TA) from UNIDO HQ.
- A distinction should be made between “UNIDO Centres” (ITPOs and South-South Centres) and “UNIDO Partner Centres” (ISCHP and ISEC), receiving different levels of UNIDO support and follow-up, but with minimum requirements for capacity and quality, and procedures for quality assurance (QA) established.
- The centres where such quality assurance (QA) does *not* apply should be removed from the list of UNIDO ITCs, and the logo not allowed to be used.
- There should be a clear strategy to “market” both the UNIDO-supported centres in the HQ and other UNIDO Field Offices (FOs), for services to be utilised in other developing countries.

4. Main lessons learned

About centres:

When a new UNIDO centre is established and consequently the UNIDO name (and logo) is used by a new and rather weak organisation, there is a tendency for the name and logo to be used indiscriminately and without a clear “firewall” between the UNIDO-related activities and those under counterpart control. There is also a considerable risk that the existing rules for the use of the UN name, in

particular the use for commercial purposes that has been prohibited by the UN General Assembly, are not adhered to. As a result there are risks to the reputation of UNIDO. Consequently, a strong and continuous involvement of UNIDO in the management and activities of such UNIDO-related centres are required during the initial years of establishment.

About decentralisation:

Posting project managers in the field office does not *necessarily* lead to increased project portfolios in the relevant area. When such professionals are placed in a field office the UR should be actively involved and it should be a coordinated effort, based on identified funding possibilities, interest of counterparts and a match of the project manager's competence and experience with the positions requirements, combined with proper management from the head of the field operations. .

About UNIDO value added:

UNIDO has offered capacity building support to a wide range of institutions in China ("the centres" in particular). In several cases UNIDO did not possess the necessary capacities, be in terms of sectoral competence (e.g. ITC, materials, recycling) and/or in terms of staff availability (e.g. renewable energy). As a result, the ambitious objectives of such projects are often not achieved and half-functioning entities remain operating without clear guidance and an uncertain future. More rigorous planning is required when partnerships are established, including firm commitments with regard to UNIDO inputs and longer-term scenarios that go beyond the project planning horizon.

Introduction and background

1.1 The evaluation team's mandate and approach

1.1.1 The evaluation team

The Evaluation Team (ET) comprised the following persons:

- Mr. Tore Laugerud, Nordic Consulting Group Norway (Team Leader)
- Mr. Johannes Dobinger, Evaluation Group, UNIDO, Vienna
- Mr. Hongbo Shang, Policy Research Centre for Environment and Economy, Beijing
- Mr. Daniel Dexiang Wang, Bio & Eco Solutions, Beijing
- Mr. Nee Sun Choong Kwet Yive ("Robert"), University of Mauritius
- Mr. Zhu Jianxin, Research Centre for Eco-Environmental Sciences, Beijing)

Four UNIDO team members were Mr. Laugerud, Mr. Dobinger, Mr. Wang and Mr. Kwet Yiwe, whereas the two Chinese team members were from MOFCOM/CICETE (the Chinese counterpart organization of UNIDO). These two Chinese team members formed a sub-team undertaking full mid-term evaluation of two POPs project (see below).

The Evaluation Team (hereafter also referred to as "the Team" or "the ET") was fully independent and was given the clear mandate to submit its own assessments and recommendations. One team member was from the independent Evaluation Group of UNIDO, reporting directly to the Director General. It is a noted common practice in the UN System that evaluation group staff takes part in evaluations as evaluators, although also operating as "backstopping officer" for the ET. This "double" role however did not pose any problems or limit the independence of the ET's work. On the contrary, it proved to be a great advantage to have a team member who was very familiar with UNIDO operations and this clearly increased the usefulness of the evaluation.

1.1.2 Evaluation objectives

The Terms of Reference (ToR) for the Evaluation Team is enclosed in *Annex 1*. The evaluation, covering all UNIDO's activities in China with emphasis on the 2008-2010 Country Programme (CP), was initially proposed by UNIDO's Regional Strategies and Field Operations Division (RSF). Consequently the country evaluation was included in the Work Programme 2010/2011 of the Evaluation Group of the Office of the Director General of UNIDO (ODG/EVA) and later approved by the Executive Board of UNIDO.

In general, country evaluations look at UNIDO's entire presence in a country. Therefore, in addition to assessing China's Country Programme, the country evaluation would also include an assessment of UNIDO Regional Office (RO) in Beijing, Global Forum activities and regional programmes covering China; in addition to stand-alone projects, including Montreal Protocol (MP) and Global Environment Facility (GEF) projects. The ToR state that the country evaluation would feed into four thematic evaluations: UNIDO's contribution to the MDGs; Field office performance; UNIDO Persistent Organic Pollutants (POPs) projects; and Montreal Protocol (MP) projects evaluations.

The China country evaluation was largely undertaken during the period December 2010 to March 2011, meaning at a time when the CP was ending (2008-2010), and a new Country Programme was in the process of being prepared. The evaluation was forward-looking, identifying best practices, areas for improvement and lessons learned to enhance the design and performance of future UNIDO interventions in China. The evaluation assessed the normal criteria used by Organisation for Economic Cooperation and Development/Development Assistance Committee(OECD/DAC), being relevance, efficiency, effectiveness, impact and sustainability) and would, in addition to documenting the results of the project, identify factors that have facilitated or impeded the achievement of the programme objectives.

1.1.3 Evaluation approach and methodology

The Evaluation Team's approach to the evaluation followed a common and well-proven modality: data collection through review of documents, semi-structured interviews with UNIDO HQ officers and field visit to China (visiting project sites and interviews with key stakeholders); followed by de-briefing before leaving China, de-briefing in the UNIDO Headquarters (HQ) in Vienna, and draft and final reporting. The findings of the ET are to the degree possible evidence-based. However, in many cases, as time did not allow for in-depth inspections at site, the assessments are based on the comparison of written documentation (project documents, progress reports), statements of the interviewed project staff and available evaluations, as well as the experience of the ET from similar evaluations in the country and elsewhere. The ET invited the persons met to give their honest views and opinions on both project implementations in general and UNIDO's role in particular, and in that respect the evaluation was "participatory".

The ET reviewed an enormous amount of documents received from UNIDO prior to the evaluation, comprising e.g. strategic UNIDO documents, project documents, project and programme progress reports, back-to-office (bto) reports, evaluation reports (including reports from other UN organisations, GEF, the Millennium Development Goal Fund (MDG-F) Secretariat), etc. Overlapping with document reviews, the Team Leader and the UNIDO team member initially interviewed selected Project Managers (PMs) at the UNIDO HQ, or previous PMs/project officers (including former staff of the UNIDO Regional Office (RO) in China) through meetings, Skype and telephone conferences. The two international members in the ET also jointly met with key PMs and other officers at the UNIDO HQ in Vienna during a couple of days before directly proceeding to China for field work (13-28 January 2011, which was pre-set in time without much

flexibility of changing)¹. A brief Inception Note was prepared by the Team Leader (TL) and the UNIDO team member at the end of the Vienna visit, summarising the main focus of the evaluation prior to going to China (enclosed in *Annex 1*).

The fieldwork in China started with joint team meetings with the key project partners in Beijing: UNIDO Regional Office (RO); Ministry of Commerce (MOFCOM); China International Centre for Economic & Technical Exchanges (CICETE, affiliated with MOFCOM); and Foreign Economic Cooperation Office (FECO, Division III and V), an affiliated institution under the Ministry of Environment (MoE, former State Environmental Protection Agency - SEPA). Also three UNIDO centres in Beijing (being part of the UNIDO project portfolio) were visited: UNIDO Centre for South-South Industrial Cooperation (UCSSIC), Subcontracting and Partnership Exchanges (SPX) Centre in Beijing, and the International Institute for Monitoring and Management of Environment and Resources (IMR). Additionally, in Beijing the Team met with the UN Resident Coordinator, United Nations Development Programme (UNDP), International Labour Office (ILO), the Delegation of the European Union (EU), the World Bank, and German International Development Corporation (GiZ, former GtZ). The programme of the ET is enclosed in *Annex 2* and the list of persons met in *Annex 3*.

During the second week of the fieldwork, the ET split in three sub-teams having their own travel itinerary in order to cover more project locations and meet with more partners and stakeholders. One of the sub-teams undertook a full mid-term evaluation of two POPs projects (with Project Reference Numbers 2.4 and 2.5 in *Annex 5*) and largely followed their own ToR and itinerary during the work in China (except for the first common meetings and the de-briefing meeting). Map showing the locations and projects visited by the three sub-teams are presented in *Figure 1.1* in *Annex 7*.

1.1.4 Evaluation process and limitations

The project portfolio of UNIDO in China is very large, and the ET had, mostly in consultation with the UNIDO Project Managers and the UNIDO Regional Office (RO, somewhere also hereafter referred to as the Country Office – CO, being the previous nomination), selected a sample of projects to assess in more detail, and where eventually the project sites were visited and project staff interviewed. The rest of the project portfolio has been assessed overall, divided in respective thematic groups (CP components), but also with reference to the selected projects. It is assumed that the projects visited were at least *indicative* of the performance of the respective component. When statements are made regarding a group of projects under the same component, this is based on the combination of the ET's own observations, statements presented in the meetings with project partners and written documentation reviewed by the Team.

In retro perspective it is concluded that the preparation time for the field visit was on the short side for the ET to be fully acquainted with all the background

¹ The initial plan was to spend 2-3 days in Vienna interviewing staff, then retreat and prepare the Inception report, followed by the field visit to China. Due to other assignments of the team members, such approach was not possible.

documents provided and UNIDO operational modalities². This was largely steered by the fixed timing and duration of the China field visit and of other ongoing assignments of the team members (before Christmas). It is however assumed that this minor shortcoming in the project planning did not influence significantly on the quality of the evaluation or the conclusions and recommendations thereof.

Unfortunately, due to reasons beyond the control of the ET and UNIDO RO, it was not possible to meet representatives from the Norwegian, Spanish and Italian Embassies in Beijing. Whereas this was a pity, it is not assumed that such interviews would have significantly altered the main conclusions of the ET.

1.2 Country context

1.2.1 Historic context

China has undergone a remarkable transformation from being a highly plan economy and centralised country of the 1970s to becoming a dynamic market economy today. UNIDO has witnessed the whole process of China's raising economy from 1979 when the organisation started its assistance to China.

Before the reform began, China had a command/plan economy where the means of production and even livelihoods were nationalised. There were separated urban and rural societies, characterising a traditional dual economy. Most of the urban economic activities, even residential housing, was basically state or collectively owned. In rural China, land and all other means of economic activities were owned by rural communes and the village production teams. Both the urban and rural residents had good access to social welfare, especially healthcare and education. In those days, the Government had deliberately suppressed the agricultural products with low pricing to compensate the industries for implementing industrialisation, which aggregated the rural-urban income gap, where urban income per capita was 2.6 times rural per capita income (National Bureau of Statistics, 2004). China's overall level of economic and social development was also very low.

Since 1979, China carried out a series of economic reforms starting from the so-called "Production Responsibility System" in rural areas, followed by a "Dual Track" pricing system for industrial and agricultural products. The open-up policy to foreign investments had driven a rapid economic growth but also widening the regional gaps. This significant geographical gap called for the central Government to launch a massive Western Region Development Strategy in 2000. The reform of State-Owned Enterprises (SOEs) in the mid-1990s had improved their economic efficiency and competitiveness, while "creating" hundreds of thousands laid-off workers. A stronger booming took place in late 1990s and accelerated by China successfully entering the WTO in 2001. This also marked the start of China to become the world economic "powerhouse". The strong economic growth in China has brought many millions Chinese out of poverty. Based on the USD 1 per day poverty line, the poor population in China has declined from 730 million in 1981 to 106 million in 2005; in other words, the poor population has been reduced by 624 million in less than 30 years.

² Especially valid for the external Team Leader.

This booming created more urban income and opportunities for the urban people and also part of the rural people/migrants, but even more significant to elite groups. Income gaps among social groups and between regions became more significant, e.g. the *urban* income per capita is about 3.3 times *rural* per capita income today. In response to the emerging social inequities and uneven development, the Chinese Government has redefined its development vision as that of building an all-round “Xiaokang”³, or well-off society by 2020. The national strategies resulting from this shift of focus go well with the international commitment to human development codified in the Millennium Development Goals (MDGs).

1.2.2 An overview of recent economic development

China’s Gross Domestic Product (GDP) reached to a total of USD 4.8 trillion and per capita GDP (2009) was reported as USD 3,678 in 2009. Between 1978 and 2007, China’s GDP grew annually on average by 9.8%. Over the same period, urban disposable income per capita increased from RMB 343 to RMB 13,786 while rural income grew from RMB 134 to RMB 4,140. Foreign Direct Investment (FDI) was less than USD 20 million in 1978 and reached to USD 105.7 billion in 2010. International trade expanded from USD 20.6 billion in 1978 to almost USD 3 trillion in 2010.

China’s rapid growing economy was affected by the global financial crisis and consequently slowing down. . China’s GDP growth was 13% in 2007, but only 9% in 2008. This was China’s first single-digit growth since 2003, falling sharply to 6.8% in the fourth quarter of 2008 and further down to only 6.1% in the first quarter of 2009, while it improved after the second quarter 2009 with the results of the Chinese Government’s fiscal stimulus package of RMB 4,000 billion (USD 586 billion) and the recovery of other economies. The national economy recovered to an annual average growth of 8.7% in 2009, and 10.1% in 2010. The non-financial channels, mainly international trade, have had the most impact due to the relatively lower level of external dependency of China’s financial and capital markets.

1.2.3 The industrial situation

Almost 40% of China's labour force is engaged in agriculture, even though only 13.5% of the land area is suitable for cultivation; and agriculture contributes only 11% to China's GDP, whereas industry and construction sectors account for about 48.6% of China's GDP. China has become a preferred destination for the relocation of global manufacturing facilities; the tertiary and service industry takes a remaining 40.4% share of the national GDP.

China highly depends on foreign investment that accounts for 2% of the primary industry, approximately 68% of the secondary industry and 30% of the tertiary

³ The issue of income distribution came into the spotlight at the Communist Party National Congress in October 2003 as well as the National People's Congress and the Political Consultative Conference in March 2004. In an effort to correct the imbalance and strive for stable, sustainable growth, China's leadership unveiled a strategy to "build a *xiaokang* (well-off) society in an all-round way." This signifies a major shift in China's development strategy from exclusively focusing on efficiency to paying due attention to equity, a Chinese version of the MDGs.

industry. More than 60% of the manufacturing industry is financed by foreign capital, including the electronic communication devices, automobiles, electrical equipment, precision machinery and other technology-intensive sub-sectors (together amounting to 35% of the manufacturing industry).

China's exports are mainly concentrated in textiles, clothing, electronics and communication equipment, machinery manufacturing, steel and plastics manufacturing industry, and hi-tech products. The exports of these industries account for 90% of China's total exports.

According to the National Bureau of Statistics, the private sector, mainly Small and Medium Size Enterprises (SMEs), has contributed a share of 60% to the national GDP; the State-Owned Enterprises (SOEs) and state shareholding enterprises take a share of 40% in national GDP today. According to recent statistics, the number of employees working for SOEs was 42.7 million, and workers in (self-employed) individual and private enterprises reached 87.3 million in 2008. China's SMEs contribute 68% of the country's exports. Chinese SMEs have risen from almost nothing to become a significant national and international economic force in the last 10 years. They are becoming the most important part of the country's economy and development, although the number of SOEs had declined to almost half during the same period.

Changes in type of industrial enterprises in PR China the last decades

Type of Enterprise	1989-1990	2009-2010
Foreign (co)-funded enterprises	16,000	690,000
SOEs	238,000	154,000*
Private enterprises	90,000	10,230,000
"Individual" businesses**	12,470,000	31,300,000

(Source: National Bureau of Statistics)

*Number of SOEs at the end of 2008.

**In this context meaning self-employed people

The presence of the private sector is still uneven across the industry spectrum. In general, large state enterprises dominate *upstream* industries (sectors at the beginning of the industrial chain i.e. directly using national resources, raw materials and manufacturing of parts and components), while private enterprises tend to populate downstream industries (sectors at the end of the industrial chain to process raw materials, final products and tertiary and service industry).

1.2.4 Development challenges facing the country

China's "quality of growth" in terms of balanced and sustained economic development is essential to the remaining "core" poverty and the "transitional" poverty, the increasing in equality in income distribution and social disparities, demographic changes in the process of China's urbanisation, and in the industrialization process, as well as climate changes.

China has experienced the largest migration in human history. This has resulted in about 150 million rural migrants at present, and it is expected that some 380 million additional people will move to towns and cities in the next 20 years. The rapid rural-urban integration will likely end the Lewis model of a dual economy for

China⁴. China's labour transition from the agricultural sector to the non-agricultural sector will be nearly complete for the younger generation in the coming decade. In 1980, only 4% of rural workers did full-time off-farm work. By 2007, this was true for 55% of all rural workers and for 80% of young (16-25 years) workers. China now starts experiencing "jobless growth". The country has used only 30 years to reach the present urbanization rate of 45%, which took the Western world more than 200 years. China continues to develop the 80 first tier mega cities in the next decade to achieve a high urbanisation. A significant gap in national and local capacity for managing this population movement and delivery of public goods for this rapid urbanization will further demand necessary policy reform and put tremendous pressure on national resources.

The increased risk of global climate change forms a major threat to the environment and people living in ecologically vulnerable areas. As China takes on an increasing role in the world economy, the country also expands its "ecological footprint" with growing impacts on the global ecosystem and climate change.

According to an ecological footprint analysis, in the past 40 years, China has increased its resource use from 0.8 to 2 times its annual bio-capacity to meet its resource demand. Coal has been the dominant source and contributes to two-third of China's primary energy. China is also a net energy importer, mainly of oil and natural gas. Industrial energy consumption takes about 70% of the total energy consumption. The Chinese Government's target on reducing carbon intensity reflects the vision to drive the country's economic to a high quality low carbon economic growth and transitioning to a green economy, not relying so heavily on high polluting fuels any more.

1.2.5 Relevant government policies, strategies and initiatives

The goal of the Government's 11th Five-Year Plan, 2006–2010 was building a harmonious and moderately prosperous ("Xiaokang") society. The Plan included two key quantitative targets. Firstly, it aimed to achieve annual GDP growth of 7.5%, with the goal of doubling Year 2000 GDP per capita by 2010, largely relying on the international market. Secondly, it aimed to reduce energy consumption per unit of GDP by 20%, and the total discharge of major pollutants by 10% by 2010, with a view to relieving mounting pressure on resources and environment. This was achieved with very aggressive national and local measures by sacrificing a double-digit economic growth compared to the previous five-year plans.

The global financial crisis consequently requested China to increase its domestic consumption instead of expanding the export market. The "bailout plan" imposed in November 2009 appeared to stimulate growth largely through investment and state-directed lending to government infrastructure projects and the public sector. Since then, the Government has pursued not only growth itself, but also the

⁴ The Lewis model, is a model in Development Economics that explains the growth of a developing economy in terms of a labour transition between two sectors, a traditional agricultural sector and a modern industrial sector. This generation comprises the most mobile component of the total rural labour force, then the trend will be slowed down as a changing point of rural labour transition.

mentioned “quality of growth”, i.e. structural changes in the economy towards more value addition. In the coming period, China needs to pursue an economic growth that is more inclusive, combining greater equality of opportunity and enhanced social protection with sustainable growth. However, as China takes on an increasing role in the world economy, the country also potentially expands its "ecological footprint" with growing impacts on the global ecosystem and climate change. Such a need to transform the economic development pattern has been explicitly recognised by the Chinese leaders at the December 2009 Central Economic Work Conference.

The draft 12th Five-Year Plan, 2011-2015 no longer emphasizes building a “rich” country. Rather, the priority is enriching China’s citizens and the need to expand domestic demand has become a key national strategy in the draft plan. The new plan also emphasizes the need to keep primary energy consumption below 4.2 billion metric tonnes of standard coal in the next five years, with a similar plan on energy consumption per unit of GDP to ensure an overall achievement by reducing 40-45% as of 2020.

In recent years, China’s role and influence in the world has grown rapidly. China is now pursuing a double agenda: On the one hand, continuing its efforts to maintain its economic growth, further reduce poverty, inequality and address the remaining challenges especially in the areas of the climate change and demographic changes and population movements. On the other hand, exploring ways and means to strengthen its contribution to global affairs and share with the rest of world its success in reforms and poverty reduction. At the Copenhagen Conference (COP⁵ 15 in December 2009), China committed to take measures and reduce the carbon intensity of its growth by 40-50% by 2020.

China has taken steps to promote south-south cooperation. The Chinese Premier Wen Jiabao attended the UN high-level meeting on the MDGs in September 2010 and raised some new policies and strategies in this area and announced that China would offer free aid of USD 20 million in health, education and agricultural training programmes to African countries, and reduce the least developed countries’ debts, as well as offering developing countries with some concessional and favourable loans.

1.2.6 Initiatives of China’s international cooperation partners

China had for many years previously been a recipient of large official development assistance (ODA) disbursements. Total ODA grant to China was USD 1.5 billion in 2008, among which over 90% has been provided by bilateral country donors. The largest country donor was Germany, which provided 30% of the 2008 country donor total (USD 412 million), followed by Japan providing 20% (USD 278 million). After France, the UK was the 4th largest donor to China. The largest multilateral donor in 2008 was the European Commission (USD 125 million). Taken together, the 15 major EU donors plus the EU provided USD 1 billion in development assistance to China in 2008, two-thirds of the total aid.

⁵ Conference of the Parties

The assistance of the main donors are characterised as follows:

- ADB: Country partnership strategy (CPS) 2008-2010 focused on four priorities (i) equitable and inclusive growth; (ii) market barriers; (iii) environment; and (iv) regional cooperation. Key sectors include transport, water supply/wastewater, agriculture, natural resources, energy and environment.
- EU: Country Strategy Paper 2002–2006 identified key areas incl. social and economic reform, especially trade capacity to comply with WTO rules; environment and sustainable development; good governance and the rule of law.
- IFC: having specific mandate to support the private sector development, USD 50 million to the China Utility-Based Energy Efficiency Finance Program (CHUEE) programme of establishing a Loan Loss Reserve Fund to finance energy end users/SMEs.
- UNDP: The 2006–2010 country programme covered MDGs; reduction of poverty; environment and energy; HIV/AIDS; etc. The five-year programme of USD 280 million included initiatives to integrate Xiaokang (all-round well-off society) and MDGs, South-south cooperation through China International poverty Centre and China-Africa business council, GEF funds for POPs, biodiversity and energy efficiency, etc. UNDP has a joint initiative with UNEP and UNIDO to support China in the development of “Low Carbon Cities”. UNDP is also cooperating with China and other multilateral and bilateral donors by devoting more efforts and resources in sharing China’s experiences and lessons learnt in economic growth and poverty reduction with the developing countries.
- World Bank (IBRD/IDA): Country assistance strategy 2006-2010 focused on decentralization; education; energy and mining; environment; health, nutrition and population; HIV/AIDS; private sector development; rural and social development; and urban development. Currently, World Bank has 6-8 projects in POPs and Montreal Protocols. In GEF-4, the World Bank supports China with a total of 18 GEF projects among which 14 projects are with bank loans. Two-third of the GEF fund is allocated to climate change. World Bank also implements two agro-industrial projects, one in agro-tech and the other in food safety; and has also initiatives in supporting Low Carbon City development in Shanghai, Ningbo and Beijing.
- Australia/AusAID: Strategy (2006-10) aims to support China’s own balanced development policies through building capacity and technical assistance (TA), mainly with focus on environment related water resource management.
- Germany/GIZ: Sustainable economic development and legal cooperation, environment policy, protection and sustainable use of natural resources (incl. energy and urban development). The German ODA grants to China in the future will concentrate mainly on environment and climate change. In this field, GIZ has supported China in greenhouse gas (GHG) monitoring and helped the development of low carbon cities and provinces in areas such as allocation of carbon targets, transport management and energy efficiency in building and industrial sectors.
- UK/DFID: Strategy (2006-2011) focuses on meeting MDGs for basic

education, health (HIV/AIDS, TB, health system reform) and access to water and sanitation, plus developing a partnership with China on international development issues, with a strong interest to introduce China's experiences to Africa.

With China's rapid economic growth, the international aid relationship of the donors with China had already come under scrutiny from 2006. The UNDP Human Development Report 2007/2008 showed that between 1990 and 2005 China's ODA as a percentage of GDP declined from 0.6% to 0.1%. Furthermore, the key donor countries are taking a phase-out strategy for their bilateral ODA grants to China from 2011.

The UN team in China has identified some key areas to work with over the next five years: 1) work with Government institutions and other stakeholders to ensure environmental sustainability, address climate change, and promote a green, low carbon economy; 2) support the poorest and most vulnerable to increasingly participate in and benefit more equitably from China's social and economic development; 3) support China's enhanced participation in the global community, bringing wider mutual benefits. For UNIDO's role, reference is made to UNDAF 2011-2015.

1.3 Description of UNIDO activities in PR China

China's cooperation with UNIDO dates back to 1979. Since then, UNIDO has implemented 555 projects for which it mobilised USD 240 million. This is equivalent to approx. 50% of Germany's ODA to China in the period 2008/2009⁶, and based on rough estimates this is less than 0.5% of net Official Development Assistance (ODA) inflows to China and less than 0.03% of net Foreign Direct Investment (FDI) inflows in that period. UNIDO maintains a Regional Office (RO) in Beijing⁷, which also covers the Democratic People's Republic of Korea (DPRK), Mongolia and the Republic of Korea (ROK). Following the 2001-2005 Country Service Framework (CSF), UNIDO established the current Country Programme (CP) that covered the period 2008-2010. Through the Country Programme UNIDO has aimed at assisting China in the following areas:

- Ensuring environmental protection and sustainability
- Improving agro-industry and food safety
- Increasing SME competitiveness through productivity and technology enhancement
- Fostering south-south cooperation and capacity building through cooperation activities

Accordingly, the CP has five main components:

- Energy and climate change
- Environment
- Agro-industries and food safety
- Productivity, technology and competitiveness enhancement
- Cooperation activities and Partnership Centres

⁶ OECD/DAC aid statistics; <http://www.oecd.org/dataoecd/1/21/1880034.gif>

⁷ In some previous cases also referred to as the "Country Office" (CO)

Table 1.1 in Annex 7 provides an overview of the financial resources used for these five components. It also provides information on resources used for overall country programme management and regional/global activities in which China participated. The below table presents the key figures:

Key figures of UNIDO’s assistance/technical cooperation to China divided on components

Component	Total expenditure 2008-2010 (ongoing and completed)		“Pipeline” (per 3/2011) of ongoing projects	
	USD	%	USD	%
1. Energy and climate	970,285	1.02%	265,487	0.90%
2. Environment	89,330,604	94.35%	28,019,814	95.32%
3. Agro-industries and food safety	323,078	0.34%	200,000	0.68%
4. Productivity, Technology and Competitiveness Enhancement	531,343	0.56%	300,000	1.02%
5. Other cooperation activities	3,525,572	3.72%	609,000	2.07%
6. CP management	0	0%	0	0%
Total	94,680,882	100%	29,394,301	100%

Note: the expenditure figures also include projects that were started before 2008 and carried into the 2008-2010 CP

“Pipeline” refers to project in the process of being prepared, but not yet officially approved (but standing a good chance of being approved).

The clear thematic focus on the “environment” (as seen in the table) is paralleled by the strong reliance on environmental multilateral funds (MLF) as a source for funding (see Table 1.2 in Annex 7) and the corresponding focus on global environmental benefits (ozone layer, POPs reduction). During the last couple of years the GEF funding has gradually increased on account of MLF. It is noted that in 2004 MLF still accounted for 65% and GEF for approximately 10% of the funding; in 2009 MLF had 54% and GEF had 30%; and in 2010 MLF accounted for 31% and GEF for 59% respectively. The slow down of implementation in the MP programme in 2010 could be explained by the fact that UNIDO was preparing a multi-million programme for HCFC phase-out, which is expected to be in the range of about USD 100 million for the next 5 years.

The “pipeline” figures, however, include a number of projects that aim at *local* environmental benefits (pollution prevention), indicating a potential future re-orientation towards this field.

During the period 2008 to 2010 the Spanish Millennium Development Goals Fund (MDG-F) has become another important source of funding for joint projects in different fields, including energy/climate change, food safety and support of productive activities in poor regions.

Table 1.2 in Annex 7 shows the volumes of technical cooperation per expenditure type and source of funds. The table shows that much more than in other countries, UNIDO uses sub-contracts with local governmental authorities as a modality for project implementation, which account for 90% of the expenditures in 2010 (as compared to 83% in 2009). Most importantly this is done through a close partnership with the Foreign Economic Cooperation Office (FECO) of the Ministry of Environmental Protection (MEP) for the implementation of MP and GEF projects. (Reference is made to *Figures 1.2 and 1.3* in Annex 7 showing the organisational charts of MEP and FECO for easy reference).

1.4 Relevant previous evaluations

1.4.1 Evaluation of UNIDO-China Country Service Framework (CSF) in 2005

The report “Evaluation of Country Service Framework (CSF). UNIDO contribution to environmentally sustainable industrial development in China” (dated 24 February 2005) is the most relevant previous evaluation⁸. Notably, the CSF (2001-2005) was the term used for the UNIDO country portfolio *before* the term “Country Programme (CP)” was adopted more recently. As such, the CSF is the forerunner of the CP and directly comparable with the CP. Two development objectives (“Strategic Thrusts”) were formulated for the CSF: increasing the competitiveness and sustainability of the industry, especially in the Eastern region; and accelerating industrial development of the Western provinces in order to become more competitive & environmentally sustainable. These two objectives were supported by programmes and projects organized in 8 components. In July 2004, the CSF consisted of 93 projects (out of which 52 Montreal Protocol (MP) projects), and the evaluation dealt mainly with non-Montreal Protocol projects.

The evaluation concluded that the CSF consisted of individual projects only, whereas the projects were envisaged grouped under two main integrated programmes. The main overall observations of the 2005 evaluation were:

- UNIDO had become one of the two most important multilateral advisors to the Chinese Government on sustainable development, with impact on the Government’s policy formulation in energy, cleaner production, municipal solid waste treatment and restructuring of resource-based industrial cities.
- The UNIDO Beijing office had become a key partner in policy and strategy discussions on sustainable industrial development 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.

Other important findings of the 2005 CSF evaluation were:

⁸ Evaluation team: 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.

- Average annual financial delivery was USD 11.5 million before CSF and USD 16 million during the CSF period.
- Environmental Management and Energy Efficiency projects represented the thrust of the non-MP part of CSF and this thrust was highly relevant.
- Support to Western provinces was yet a minor part of the programme.
- Strong features were found to be combination of demonstrations in pilot companies with feedback for policy advice and subsequent broader replication; strong capacity building elements; and extensive use of national expertise.
- Funds mobilisation was dominated by MEA (Multilateral Environmental Agreements) funds and special purpose donor contributions (esp. from Switzerland and Netherlands). (Funds for Western regions were difficult to obtain from donors).
- The most significant results were achieved in environmental management and energy sectors. Demonstration projects had high probability of countrywide replication. Very good results were found in the Montreal Protocol programme.
- There were modest results in south-south cooperation and projects for the Western regions.
- The large project portfolio was managed in the field by a team in UNIDO Country Office (CO) being much smaller than teams managing similar or smaller programmes of other international organisations. (In this respect the field management of the CSF was very efficient.)
- A Project Development Committee (PDC⁹) had been set up but did not meet on a regular basis.
- Uncoordinated UNIDO HQ-based project development sometimes led to the field office stopping such developments.
- Potential synergies among projects were in many cases not exploited (not designed as an integrated programme so that cooperation among projects was not an explicit objective. Many projects, including Montreal Protocol projects, were too specific to allow for any synergy effects).
- International Technology Centres (ITCs): overoptimistic funding expectations did not meet donor priorities nor centres' capacities. (ITCs depended a lot on continuous support of the host organizations and the Government in pursuing the objectives of south-south cooperation. Demonstrations of technologies in energy conservation had good prospects for replication).

The following recommendations were given in 2005:

- Programme strategy should in the continuation strengthen initiatives that reduce regional disparities and address global environmental problems.
- The Programme should cluster environmental projects (incl. POPs) and energy conservation projects into separate components, and keep the MP projects as a separate component (related to the "environmental management" component).

⁹ Initially established by UNIDO and CICETE as an arena to discuss new projects/programmes

- The PDC should meet regularly.
- An Alternate Team Leader should be assigned at HQ as soon as possible.
- All HQ missions should be endorsed by the UNIDO Representative (UR).
- Subcontracting and Partnership Exchange (SPX) network could be a model for replication and creation of a national SPX network.
- The “research group” should be maintained.
- The field office should be strengthened (by a Deputy UR) so the UR can be more involved in field visits of institutions and projects.
- Regular meetings of project staff and counterparts should be organised, by clusters of projects (thematic themes), especially ITPOs, SPX etc.
- Field missions and technical backstopping of ITCs should be coordinated with the relevant substantive branches at HQs.

Some of the above issues will be commented upon later related to the findings of the ET.

1.4.2 Other evaluations of some relevance

Some other evaluations are more or less related to and relevant for the country evaluation. They are just listed below (with some key conclusions mentioned in brackets), and could be studied further by the ones interested:

- Independent Review of UNIDO Montreal Protocol Projects. July 2010, by Mr. Bjorn Bauer and Mr. Tomas Sander Poulsen. (Covered 20 out of total 1,100 UNIDO MP projects, representing a large part of UNIDO’s TA portfolio. Projects had been successful in achieving the targeted ODS phase-out. The specific UNIDO approach providing agency expertise directly to enterprise management had proven effective. Lessons learned had not systematically contributed to learning across UNIDO branches. The potential for cooperation with other initiatives and stakeholders had not been exploited, with only limited cooperation with other UNIDO programmes and branches. UNIDO had not sought to target non-ODS effects in MP projects (side-effects unintentionally provided a significant reduction of the global warming impact of industries covered by the projects). The potential for supporting sustainable industrial development had not been exploited).
- GEF Annual Report on Impact 2009 (GEF/ME/C.36/2), with special focus on phase-out of Ozone Depleting Substances (ODS) in Countries with Economies in Transition (CEITs, with 71 firms visited).(GEF support for the phase-out of consumption and production of ODS in the said countries had made a contribution to global environmental benefits. Legislative and policy changes supporting ODS phase-out provided a foundation for success and ensured sustainability. Both Government and especially private sector commitment to ODS phase-out were critical drivers for the success of the GEF investments in CEITs. Illegal trade threatened to undermine gains in ODS reduction in the non-EU CEITs. Halon recovery and banking had been neglected in the non-EU CEITs. In some countries the National Ozone Units ceased to function after GEF support ended and this may prevent measures being put in place to address the remaining threats to the ozone layer).
- Act Ozone Friendly, Stay Sun Safe. Achievements of the ozone layer

protection in China, in connection with 20th anniversary of the MP. (Contains fact and figures on all ODSs. Achievements in phase-out of CFC and Halon, but many challenges: CFC substitution in pharmaceutical aerosols; phase-out of MB in agricultural sector, HCFCs; combating illegal production and trading and recycling and disposing of ODS).

- Independent Evaluation of International Centre for Materials Technology Promotion (ICM), Beijing (January 2010). (Centre operations since 2003, UNIDO support ended in 2008. The relevance for developing countries and to UNIDO could be enhanced through an increased demand orientation and more alignment to technology needs of developing countries. It had supported the green industry agenda through the provision of training programmes related to the promotion of cleaner production and energy efficiency, but the actual or potential effects on policies, practices or the environment were not known. Cooperation with other UNIDO entities in China, and elsewhere, had been limited. The absence of a strategy and annual work programmes and a clear intervention logic guiding the activities of the Centre, was noticed. There had been limited substantial backstopping or management on the part of UNIDO (limited technical expertise and programmes in the field of building materials). The formal affiliation with UNIDO had, undoubtedly, contributed to the high level of credibility that the Centre enjoys and had provided access to UNIDO's network of partner organizations/offices and the Government. Good prospects for long-term sustainability, but not able to operate as a neutral international technology broker (operated by China Building Materials Academy – CBMA).
- Independent Evaluation of Shanghai International Informatization Technology Promotion Centre (SITPC) (February 2010). (Operational since 2002, with much less support from UNIDO than anticipated. Second phase started in 2009, lasting 3 years. The application and thus the relevance of benefits arising from SITPC's membership of this UNIDO Network had been limited. The absence of a formal reporting system to UNIDO and UNIDO's lack of capacity to provide technical management had resulted in the absence of quality control by UNIDO, casting doubt whether UNIDO had the technical expertise and capacity to deliver... No screening by UNIDO of the technologies promoted by SITPC, which expose UNIDO to some risk. The UNIDO logo and name provided SITPC with its own highly valued UN identity, endorsing its credibility. Given the ready availability of qualified, experienced staff, and given the long-term commitment of the Municipality, it was likely that the project would survive without UNIDO.)
- Independent evaluations of the Investment and Technology Promotion Offices (ITPOs) in Beijing and Shanghai, carried out in 2009. (Both evaluations confirmed the relevance of the ITPOs and recommended: a) stronger focus on outward investment to developing countries, especially Africa; b) for inward investment more attention should be given to the less developed regions of China; c) a stronger integration of the ITPOs work with other UNIDO services and projects; d) a more rigorous use of the UNIDO name, avoiding confusion between UNIDO and ITPO and by renewing old agreements. The effectiveness of ITPO work was assessed as satisfactory or above, in terms of concluded investments and capacity building).

Of other non-key evaluations, but having some elements that might be relevant

also to UNIDO, can be mentioned:

- Evaluation of development results. Evaluation of UNDP contribution, China (April 2010). (“By and large, the development results achieved by most projects in the area of poverty reduction are sustainable. ... However, concerns of long-term sustainability arise even in cases when sustainability concerns have been integrated into the design of interventions. ... Most stakeholders rate as ‘highly satisfactory’ the effectiveness of UNDP supported energy projects rated the technical support from UNDP for their project as ‘good’ or ‘very good’. However, stakeholders also raised concerns about UNDP project. Like other independent evaluations, the ADR found systemic weaknesses in UNDP programme management that are not specific to UNDP China but applicable to many country offices. The capacities management. They pointed to gaps in UNDP procedures as well as the limited knowledge and competencies of UNDP personnel to address many of the complex issues in some of the practice areas.There is considerable scope for improving programme management in UNDP China”).
- Mid-term evaluation of Millennium Development Goals Fund (MDG-F). China Culture & Development Partnership Framework (CDPF) (June 2010). (This mid-term evaluation expressed some rather critical views, also in relation to UNIDO. The weaknesses identified with regard to UNIDO concerned mainly that implementation of the UNIDO project component was lagging behind schedule and that the limited technical capacity of UNIDO in the county was found to be weakening project progress. Overall the coordination among agencies was found to be weak and a long list of recommendations was made to overcome these problems).
- Mid-Term Evaluation of the MDG-F “China Joint Programme on Environment and Climate Change” (CCPF)¹⁰, July 2010. (This was the first joint MDG-F programme in China (starting May 2008-ending May 2011, total budget USD 19 mill., with USD 12 mill. from MDG-F, involving 9 UN agencies and 10 national institutions). The report showed that the complex CCPF was well aligned with the development objectives of China (especially GHG mitigation and adaptation), and contributed to the MDG implementation in the country. The design process comprised significant elements of strong participation and bottom-up planning, learning from previous experience and development of stakeholder capacities. Most achievements were notably information material (publications, presentations, manuals, policy recommendations, etc.). Each set of programme achievements were part of larger strategies and programmes *outside* the CCPF, although well coordinated and managed, but too activity-based as opposed to result-based and a wider “vision”. No gender focus and weak monitoring framework (55 indicators – too many). There were many clusters of results that would contribute to greater impacts in the future. Results from the demos should be replicated for wider use¹¹. It was concluded that the CCPF was a good model to implement the “One UN” approach).

¹⁰ Climate Change Partnership Framework

¹¹ Notably HRP, see *Section 2.2.2*

II

Observations and assessment

2.1 Alignment and relevance of the UNIDO project portfolio

2.1.1 Introduction

The objectives of UNIDO cooperation in China are:

- Contribution of global environmental benefits through the implementation of multilateral environmental agreements for ODS and POPs phase out.
- Contribution to China's south-south cooperation through enhancing capacity of selected institution related to industrial development.
- Contribution to climate change mitigation through energy efficiency and renewable energy.
- Improving productivity of SMEs.
- Contribution to enhanced food safety.

It is evident that most of the activities are concentrated in the field of environment with an almost exclusive focus on global environmental benefits (ODS, Climate Change and POPs). 90% of the funding comes from the GEF and the Multilateral Fund (MLF) of the Montreal Protocol. This is largely in line with the planning as reflected in the Country Programme document for the period 2008 to 2010. However, at the outset of the CP period the two areas of energy efficiency and food safety were expected to lead to more important sub-portfolios. This did not materialise.

2.1.2 Relevance in Chinese Context and Chinese Ownership

During the past decade the issues of energy saving, renewable energy, climate change, environmental protection, food safety, development of SMEs, promotion of international trade, and south-south cooperation between China and other developing countries have been given more and more attention by the various stakeholders in China, including the central and local governments, the enterprises, news media, and the public, and have become the priority (and most "popular") issues high on the agenda of the Government. The main areas of UNIDO's cooperation with China are well aligned with these priorities.

Regarding energy and environment, it is noted that China's energy consumption has been rising dramatically and environmental pollution has been heavy during the past decade, which is also continuously referred to in the international arena. To tackle these challenges, the Chinese Government had issued a series of laws and regulations to promote energy saving and environmental protection, such as the Law on Energy Conservation (1997), Law on Renewable Energy in (2005),

Medium and Long Term Development Plan on Renewable Energy (2007), Decision of the State Council on Implementing the Scientific View of Development and Strengthening Environmental Protection (2005), China's National Climate Change Programme (2007), etc. China is also a party to major international environmental conventions and their protocols, including Vienna Convention for the Protection of the Ozone Layer, Convention on Biological Diversity, Stockholm Convention on Persistent Organic Pollutants (POPs), United Nations Framework Convention on Climate Change, etc., and has made commitments under these conventions and protocols, which indeed constitute huge challenges for China. Both domestic action and international assistance in these areas are carried out at a large scale in China, and China's efforts and achievements in this regard have also been recognised by the international community.

For instance, the 11th Five-Year Plan for National Economic and Social Development (2006-2010) considered it a major strategic task for China to build an energy-conserving and environmental-friendly society. It stipulated that the energy consumption per-unit GDP in 2010 should be 20% lower than that in 2005, and the major pollutants (COD and SO₂) should be 10% lower than in 2005, and both targets were binding. According to the latest statistics from the website of National Development and Reform Commission, during the 11th five-year period, the energy consumption per-unit GDP had decreased by 19.1%, SO₂ had decreased by 14.3%, and COD had decreased by 12.5%. The Outline of the 12th Five-Year Plan for National Economic and Social Development (2011-2015) continues to put energy and environment in the highest agenda. During this period, the energy consumption per-unit GDP should decrease by 16%, the carbon dioxide emission per unit GDP should decrease by 17%, COD and SO₂ should decrease by 8%, ammonia nitrogen and NO_x should decrease by 8%. It can thus be concluded that the project portfolio of UNIDO in environment and energy is very relevant to, and is directly supporting, China's efforts in the sectors.

The issue of agricultural products and food safety in China have also been focused by the Government, the food industry, media and the public. In the past few years, several food safety accidents have boosted the public's worry for food safety and brought even stronger attention of the Government and public on food safety. To tackle this problem, China issued some laws and regulations on food safety, including the "Law on Quality and Safety of Agricultural Products" in 2006, the 11th Five-Year Plan for Food and Medicine Safety, Food Safety Law in 2009, etc. Among others, some of the major measures of the Government to improve food safety include strengthening supervision, law enforcement, improvement of food safety standards, and public awareness-raising, but there are still big challenges ahead in improving the level of food safety, since there are many small agricultural and food producers in China. The producers are scattered with different sizes and technical capacity, which also poses huge challenges for the food safety supervision authorities. In the draft 12th Five-Year Plan for National Economic and Social Development, the issue of food safety had been given stronger attention with a special section of food and medicine safety, including setting up standards, liability tracking mechanism, monitoring system, etc. The UNIDO support to the food safety sector falls well in line with the above Chinese efforts, but the volume of the UNIDO input is still less than anticipated and

expected.

South-south cooperation, or cooperation between China and other developing countries, has long been an important effort in China. Since the founding of the Republic, when China was still facing economic difficulties, it had already started its cooperation with and various kinds of assistance to, other developing countries, which today covers sectors like agriculture, fishery, small hydropower, energy, machinery, environmental protection, etc. The aim has mainly been to improve mutual financial benefits and political ties with other developing countries. The section on International Economic Cooperation, the Outline of the 11th Five-Year Plan for National Economic and Social Development further stressed the “strategy of Chinese companies’ going abroad” and more assistance to other developing countries, under which south-south cooperation is an important channel. For the next five years, the Outline of the 12th 5-year Plan for National Economic and Social Development decides to strengthen south-south cooperation with a clear thinking of optimizing and innovating the assistance to other countries, including more focus on, and financial and technical assistance to, the social welfare projects, self-developing capacity building projects, etc., in other developing countries.

Although a number of large companies in China have already set up regular contacts and cooperation with foreign companies, the capability of the organizations and enterprises to enhance international trade and south-south cooperation are still limited. Especially, there are still a major part of the smaller companies or institutions that have difficulties in finding international partners. Except for holding and participating in international exhibition events, other credible communication and exchange channels or platforms are mostly needed by Chinese companies and institutions. International organizations can provide very useful help in this regard because of their credibility and sources of information, which also includes UNIDO. The potential for China as a south-south partner is still largely untapped.

In terms of the size of budget and number of project, most of UNIDO’s projects and activities in China are focusing on energy conservation and efficiency, environmental protection, food safety, trade capacity and internationalization, including south-south cooperation, which are notably all relevant issues in China. Therefore, the Evaluation Team concludes that UNIDO’s project portfolio as a whole is highly relevant to China in terms of China’s national priorities and policies, and real needs.

In terms of *ownership* of UNIDO projects by the Chinese side, the responses to, or levels of, cooperation with UNIDO-supported activities showed some differences. For the activities in the *energy and environmental* field, which are normally accompanied by external financial resources (from UNIDO donors), and cover the major part of the current UNIDO Country Programme in China, the Chinese partners have been very active and a lot of efforts were put into the implementation of the projects. Firstly, for most of the projects, the necessary human resources from different levels of governments and related institutions have been mobilised and combined to set up systematic and adequate working groups/teams for project implementation. Secondly, roles and responsibilities of different stakeholders in the working groups are to most degree clearly defined,

including decision-making, on-the-ground implementation, reporting, etc. Thirdly, financial input from the Chinese side for the projects have also been planned and implemented accordingly. In many cases the financial input from the Chinese side is much larger than the external contribution, such as e.g. the Waste Heat Power Generation Project under the China Climate Change Partnership Framework, and most of the projects assisting China to implement the commitments under international environmental conventions.

In the field of agriculture and food safety, although the UNIDO projects constitute only a very small part of the whole UNIDO portfolio in China, the Chinese side had also been highly active and making substantial efforts during the project implementation, similar with the efforts in the energy and environmental field. The Government is really seeking to improve food safety through the projects, and the agricultural and food producers are also trying to make every use of the projects to improve the quality of their products.

Finally, for the whole UNIDO project portfolio in China, the ET concludes that Chinese ownership is very satisfactory. Although the ownership is low in some cases, it does not affect this overall conclusion, because these cases only constitute a very small part of the UNIDO project portfolio in China. It should be noted, however, that this high level of ownership is restricted to the *project* level and that at the level of the Country Programme as a whole the ownership was found to be rather low.

2.1.3 Relevance in UNIDO context

Worldwide, UNIDO is active in three main areas:

- Energy and environment (EE)
- Trade capacity building (TCB)
- Private sector development (PSD)

The China Country Programme (CP) 2008-2010 continued to be dominated by GEF and Montreal Protocol (MP) projects, which represented approximately 90% of the total budget. Worldwide, UNIDO's activities in the field of energy and environment (EE) represented only approximately 60% of the total. This illustrates the comparatively strong emphasis on the EE area in China, which seems to be in line with the high level of development in the country and the high importance of making China's industrial development more environmentally sustainable.

Within the EE area, China GEF projects in 2010 became more important than MP projects in terms of financial volume of cooperation, which is partly explained by the fact that the main efforts in the MP area in 2010 were put to the preparation of a multi-million programme for the years 2011-2015. The trend of GEF projects increasing is nevertheless in line with an *overall* trend in UNIDO's cooperation. UNIDO in China is currently involved in only one of the seven focal area of the GEF (Persistent Organic Pollutants - POPs). Attempts to strengthen UNIDO's involvement in energy cooperation have so far *not* been successful, despite good pilot experiences in energy efficiency (e.g. TVE (town and village enterprises) projects, see *Section 2.2.2 and Section 3.1*). This is in contrast to the fact that industry is one of the major contributors to greenhouse gas (GHG) emissions in

China.¹² This, combined with the good UNIDO expertise, would make UNIDO assistance in the field of industrial energy efficiency and renewable energy very relevant in principle. Other areas that are of potential relevance for UNIDO cooperation include the GEF focal area of international waters (IW). Since 1993 the GEF has approved 25 projects with a volume of USD 182 million to protect the South China Sea eco-system. UNIDO's experience in preventing land-based industrial pollution (e.g. through the positively evaluated TEST approach¹³) to international waters *could be* of relevance for this important area of international cooperation.

In the period before the 2008-2010 Country Programme, UNIDO was more involved in projects to prevent *local* pollution, which still is a huge problem in China. However, the institutions supported during that phase (e.g. Cleaner Production Centre) are no longer actively used.

Within the Trade Capacity Building (TCB) area UNIDO is present only in the area of food safety. Given the high importance of food safety issues for China's authorities and enterprises, and the strong expertise of UNIDO in implementing food safety projects worldwide, this is a very relevant area for UNIDO intervention. This high relevance is however *not* yet met by a representative programme in the country, and so far only limited pilot projects have been implemented. Here, UNIDO and China have an untapped potential.

Within the Private Sector Development (PSD) area UNIDO has developed a number of small projects, mostly for institutional capacity building (e.g. sub-contracting exchanges, investment and technology promotion). Entrepreneurship development, another area of UNIDO expertise, has been introduced through cooperation with the ITPO Bahrain, but on a rather limited scale. The limited presence of UNIDO in the PSD field corresponds to a rather limited contribution to industrial development in the less developed regions of China (notably the Western provinces).

Outside the three above-listed UNIDO focus areas there are a number of UNIDO activities that can be clustered under the heading "South-South Industrial Cooperation". This is mainly referring to the different international technology centres and the UNIDO Centre for South-South Industrial Cooperation (USSIC). As mentioned earlier, there is a clear untapped potential for China to involve more in south-south cooperation. UNIDO's cooperation is generally well aligned with the priorities of UN cooperation in China as reflected in the last and the current United Nations Development Assistance Frameworks (UNDAF), outcomes 2011-2015:

¹² The Pew Centre on Global Climate Change estimated that, in 2003, electricity and heat made up 42% of China's GHG emissions, industry made up 21%, agriculture 20%, households and services 9%, transportation 5%, and the remaining 3% was waste. Pew Centre on Global Climate Change, "Climate Change Mitigation Measures in the People's Republic of China," p. 1, April 2007

¹³ The TEST approach developed by UNIDO is a need driven systematic approach integrating the preventive win-win strategy into enterprise operation. TEST is building on management of change within different levels of the management pyramid: the operational level; the management system level; and the strategic level.

- Outcome 1: Government and other stakeholders ensure environmental sustainability, address climate change, and promote a green, low carbon economy.
- Outcome 2: The poorest and most vulnerable increasingly participate in and benefit more equitably from China's social and economic development.
- Outcome 3: China's enhanced participation in the global community brings wider mutual benefits.

It is noteworthy that UNIDO's presence is most limited in Outcome 2, which corresponds to the PSD area, described above.

90% of UNIDO's technical cooperation (TC) in China is implemented through subcontracts with government counterparts (notably FECO). As a result, the provision of international expertise has become a minor modality of delivery. This raises the issue of the value added of UNIDO in its cooperation projects, which in some cases has been described as a "platform for visibility" that provides local actors with access to international partners ("door opener").

UNIDO's cooperation depends entirely on the availability of external funding from donors. Although donors' policies differ with each country or each organisation's policy and priorities, some common tendencies seem to be characteristic of the current and future evolution of aid flows to China. Generally speaking, net ODA flows to China were growing fast from 1980 to the early 1990s, when they reached a peak. Since then, they have clearly been decreasing, even though tendencies among individual donors might vary. China's recent economic development and its effectiveness in reaching MDGs are proof to donors that the country no longer needs to be assisted like other poorer developing countries. China has shown its ability to respond to major development challenges more independently. As a consequence, some donors have decided to reduce their aid to China (like Japan and DFID) and the majority of them have actually tended to change the nature of their aid in order to adapt to the country's new status and situation. Germany, for instance, terminated classical financial cooperation and technical cooperation for poverty reduction in 2008, but still increased its contribution as a donor. Instead, Germany shows willingness to re-focus its assistance towards the climate and environment themes.

Similarly, China lost eligibility to the International Development Association (IDA) concessional loans of the World Bank in the early 2000s, when it changed category (from "low-income" to "lower-middle-income" economy)¹⁴. However, it still has access to the International Bank for Reconstruction and Development (IBRD) loans of the World Bank as a middle-income economy¹⁵. As stated above, it is even expected "*that the World Bank Group's overall exposure to China will remain stable or grow slowly*". Being eligible to World Bank loans, China also remains eligible to GEF grants. The World Bank's thresholds are constantly re-

¹⁴ Source: <http://data.worldbank.org/about/country-classifications>

¹⁵ Currently China's Gross National Income (GNI) per capita is around \$3,590 US and the threshold for upper-middle-income economies lies between USD 3,946 and \$12,195. China will therefore soon be part of this category, but it will most certainly remain in it at least for the next decade – even though it is experiencing a high growth rate and one cannot make exact projections. As a higher-middle-income economy, China will still benefit from IBRD loans.

evaluated and one can hardly make estimates regarding when China will become part of the higher-income category¹⁶. However, with current growth rates and China's past record, this might happen sooner than it had earlier been expected. This is why most of the donors have re-oriented their aid policy towards "cooperation" on a more *equal* basis and are shifting development assistance away from the poverty reduction theme towards more environment-focused projects or programmes. A last crucial aspect is the fact that China gradually became a donor itself, especially in Africa. According to a report released in 2009 by the U.S. Congressional Research Service, China's aid to Africa, Latin America and South-east Asia increased from less than one billion dollars in 2002 to an estimated 25 billion dollars in 2007¹⁷. Increased south-south cooperation and helping China to endorse properly this new cooperation role therefore appears clearly as major components of bilateral and multilateral aid nowadays, with a high untapped potential.

In light of the above, it appears that in the near future UNIDO should take advantage of the growing donors' interest towards environment-focused and south-south cooperation programmes, and notably these actually already constitute the most important part of UNIDO's project portfolio in China. "Industrialisation" and "poverty reduction" seem to lose importance, even though some donors still see them as priorities in poorer (Western) Chinese regions. In the long run, UNIDO's assistance to south-south cooperation in China might also prove to be fruitful from another perspective, given that the country will most certainly receive less and less ODA but its importance as a donor will grow further: If UNIDO proves to be a good partner for China on south-south cooperation, it might become a privileged partner also for China-funded development projects/programmes in other (developing) countries in the future.

Overall, the relevance of the China portfolio is high for UNIDO. There is a clear focus on global environmental benefits, which is in line with UNIDO expertise and competence and with donor priorities. Depending on available capacities for supervision and implementation and, of course, the availability of funding, there would be other relevant focus areas, in particular energy efficiency, food safety and entrepreneurship development in poor regions of China. Given the relevance of several of UNIDO's competence areas for China and the pulling-out of bilateral donors, the mobilisation of funding from Chinese authorities through self-financed trust funds may be a promising strategy for the future UNIDO China programme.

2.2 Assessment of the various country programme components

2.2.1 Introduction

In the following sections, the Evaluation Team (ET) assesses the various components of the Country Programme (CP), with reference to the list of projects in Annex 5, and based on the original plans set out in the China Country Programme document. It should be noted that the ET has only visited few

¹⁶ The Bank believes that IBRD lending to China brings clear benefits to the Bank and its other members. In financial terms, IBRD lending to China contributes to the Bank's income and so helps to finance its concessional lending.

¹⁷ China's aid activities in Africa, Latin America, and Southeast Asia, Congressional research service, 2009

projects and studied these in detail during the evaluation, including meetings with the project partners. The assessments of these projects are included in *Annex 6* (*Annex 6.1* covers the projects of Team 1 and *Annex 6.2* of Team 2) and reference is made to this annex for project details and more elaborate rationale for the assessments and ratings of the projects. The ET has rated the DAC criteria (relevance, effectiveness, efficiency, impact and sustainability) of the projects visited according to a six-rating scale were possible and appropriate (relevance: Highly relevant – relevant – moderately relevant – moderately irrelevant – irrelevant – highly irrelevant; and other criteria: Highly satisfactory – satisfactory – marginally satisfactory – marginally unsatisfactory – unsatisfactory – highly unsatisfactory). Below, also the overall assessments of the components are made, to the best ability of the ET. In some cases, the ET only received very little information on the projects, so a fully fledged assessment was not possible. In other cases, as time did not allow the ET to visit all the projects or meet with the project partners, the project information presented based on progress reports or project documents, without having been triangulated by the ET. This has nevertheless not influenced on the overall conclusions of the ET regarding the CP.

It should be noted that many of the projects being implemented under the CP in 2010 were initiated, planned and even started during the Country Service framework (CSF) period 2002-2007 (being the forerunner to the CP 2008-2010). This, because this process takes a rather long time, notably the identifying/formulating programmes, identifying and establishing good relations with Chinese counterparts, and identifying donors to finance the programmes. Such process might take several years, typically GEF projects approval process normally taking 2-3 years. The Montreal Protocol projects dominated UNIDO's activities also during 2002-2007 (first project started in 1998, and the peak of MP activities was in 2002-03), and in spite of having dropped during this period, still constituted 80% of the portfolio in 2007. During 2008-2010 many of these projects were completed. The second largest group of projects during 2002-2007 was the Cleaner Production (came to an end during this period) and Energy Efficiency activities, whereas the POPs and other projects were rather few.

2.2.2 Component 1: Energy and climate

The Country Programme (CP) stated that the objective of UNIDO's energy programme in China (in regard to both industrial energy efficiency and renewable energy) was "to contribute to efforts of the Chinese government to reduce greenhouse gas emissions from the industrial and energy sectors, as well as diversifying sources of power generation through renewable energy technologies". The CP also emphasised that UNIDO would "focus more on supporting capacity building within the various 'UNIDO/Government of China Partnership Centres' that are involved in renewable energy". Finally, the CP stated that UNIDO's climate change (and CDM) activities would focus on "the industrial manufacturing sector, as well as continuing national CDM capacity building efforts".

Only two projects fall within this component: the allotments (projects) with Project Reference Numbers (PRNs) 1.1 and 1.2 are both part of the overall China Climate Change Partnership Framework (CCPF), an umbrella-financing scheme

for 16 projects (24 main activities) financed by the UN-Spain Millennium Development Goal Achievement Fund (MDG-F). The CCPF addresses the United Nations Development Assistance Framework (UNDAF) Outcome No. 3: “*more efficient management of natural resources and development of environmentally friendly behaviour in order to ensure environmental sustainability*”. The strategy of the programme is to support policies needed to achieve climate change goals and to develop and disseminate innovative pilot partnerships and technology models on the ground.

The various projects under the framework are aiming towards the same overall goal but with no *direct* cooperation between the various projects and *no obvious synergy* observed between the projects. Notably, the framework/programme was designed in a very short (too short) time where connecting the projects into a holistic totality was not a priority issue. The framework also lacks geographical concentration (spread to 16 provinces), and it merely seems to be resulting from a “distribution” of the total budget amongst all the partners (everyone has got their share of the total). CCPF, which started in May 2008 and will be ongoing till May 2011, has a total budget of USD 19 million (included co-financing of USD 12 mill. from MDG-F) with nine UN agencies and 10 Chinese ministries and leading institutions involved. It is noted that both projects implemented by UNIDO under the CCPF are relevant to the sector challenges in China and internationally at large. The overall CCPF is also considered relevant, in spite of the lack of holistic planning.

One of the two pilot plants in Project PRN1.1 (in Shanxi Province), falling under Outcome 2.1 of the CCPF – “Promoting the Adoption of Heat Recovery Power Generation in Coal Gangue Brick-Making Sector”, was visited by the Evaluation Team and the Brief Project Assessment is included in *Annex 6.1*. This project, implemented by UNIDO in cooperation with the Ministry of Agriculture (MoA), is the largest of the individual projects under CCPF (see last bullet in *Section 1.4.2*), but the project is seriously delayed due to the long initiation and study period, and partly bad weather conditions hampering the construction of the pilot plant. The (long-term) goal of the project is to lower the GHG emissions of the Chinese coal gangue brick sector, through the wide-scale adoption of waste heat recovery power generation (WHPRG) technology, a technology that, if the pilot is successful, could be replicated in other similar industries in China (around 2,000 such industries exist).

The project is considered *relevant*. The successful pilots might be applied in other developing countries with similar industry, which makes it even more interesting for UNIDO to follow-up and disseminate information and lessons learned. The effectiveness and efficiency are difficult to assess at the time of the ET’s visit, as both the plant and equipment were under construction/installation (around 80% completed), but being significantly delayed so far and thus to date is *not* considered fully satisfactory. There is a significant risk of further delays. It is too early to assess the impact and sustainability of the project. If the pilot plant proves to be successful, the technology supplier (Sichuan Guoli Energy Science & Technology Co. Ltd.) sees a clear possibility of selling similar equipment to other factories, both in China and internationally. The company can simply not afford a failure of its pilots, and it is thus also assumed that the promising results will be disseminated to other similar enterprises. Also the MoA has an interest in

the success of the pilot, so there is thus a high probability that the sustainability of the project will be satisfactory in the end. It is however noted that no financing mechanisms are so far in place for the industries to afford constructing the required infrastructure required, although it was indicated that such discussion would take place amongst relevant institutions. (Reference is made to *Box 1*, where a previous similar project by the same partners (implemented 2001-2007) was analysed post-project and some useful elements for the project success, especially the replication of measures, are listed).

Box 1: GEF Case study: Energy conservation and GHG emissions reduction in Chinese Township and Village Enterprises (TVEs) in China. National Centre for Science and Technology evaluation, China, June 2009

The study (implemented July-Sept 2008) was part of the evaluation of the "GEF catalytic role", and fell within the GEF-4 priority of Energy Efficiency in Industry (OP5) in climate change. The objective of the evaluation was to explore how the GEF conceptualizes and implements its catalytic role to maximize global environmental benefits. Phase 2 consisted of fieldwork case studies in brick and cement industry to test the framework and gather findings and lessons learned on application of the GEF catalytic role and emerging effects.

The project studied was launched in January 2001 and ended in 2007. UNIDO and MoA were the Executing Agencies¹⁸ and UNDP was the International Implementing Agency. The project included amongst other eight pilots. According to the main findings of the Final Evaluation Report (June 2007), the TVE project has been very successfully implemented, has achieved far greater than anticipated GHG reduction and remarkable results in demonstration and replication, and leaves a strong sustainability legacy. Furthermore the project has clearly fostered a considerable number of independent energy efficiency self-replications that have been implemented without direct project funding support. These self-replications were facilitated by the extensive technical training provided by the project, as well as the site visits and training provided by the pilot TVEs. During the implementation of the Chinese TVE project, media campaigns in newspapers, on TV and on the Internet have proven to be useful tools for GEF's catalytic role. Moreover, based on the main findings, the TVE project seems to be very suitable for UNDP/UNIDO and GEF promotion as a world best practice project in the rural industry/SME sector because it has proved sound sustainability and impact.

The evaluation found that re-catalytic activities really have happened in some projects clearly fostering a considerable number of independent energy efficiency self-replications. The central PMO estimated about 500 self-replication projects at the end of the project in the four sectors, which have been implemented without direct GEF project funding support. The Xi'an Wall Material Research and Design Institute provided evidence that nearly 10,000 brick making projects have been replicated nationwide since the completion of the project in 2007, based on technical renovation contracts signed between the institute and the self-replication enterprises.

The evaluation found four „catalysts“ have played dominating roles in accelerating the process of catalytic activities and promoting the effects of catalysis. These key factors include the selection of appropriate technology (cost-effective technology; appropriate and applicable technology); governmental driving force (favourable policy environment and powerful coordination); market demand (price of electricity and coal); and financial leverage (i.e. availability of additional financial sources). A Rolling Capital Fund (RCF) was established and proved very effective, where loans for eight pilots amounted to USD 17.5 mill. (from Agricultural Bank of China) because the enterprises could make big profit from the energy efficiency technology renovations and the money could be safe for the bank (who also made a profit)! The evaluation found that the GEF financing accounted for only 0.4-20% of renovation funding in the eight pilot projects that were implemented. This fact demonstrates the significant leveraging role of GEF funding.

¹⁸ It is not understood why the project is not listed in the UNIDO portfolio in China made available to the ET.

Project PRN 1.2 falls under CCPF Output 1.2—“UN-business partnerships, new ‘green’ financing mechanisms, and ‘green employment’ to mainstream climate change and energy into investment frameworks and business practices”. This project includes demonstration of best practices of “green employment” in three selected companies and through the delivery of training programs, the project ultimately aims to equip private enterprises with the knowledge and skills required to implement practical changes to improve industrial energy efficiency and realise actual reductions in GHG emissions. According to the last progress report (November 2011), successful workshops have been held and one book is produced, and the three pilot industries have developed their own Corporate Social Responsibility (CSR) policies with awareness raising started. However, there are some challenges resulting from the low English language proficiency of the Chinese counterpart, making it necessary for the UNIDO PM to re-write the book from scratch. This additional work and delayed progress means that the efficiency and effectiveness of the project so far are *not* fully satisfactory, although the PM of UNIDO claims that all activities will have been completed until May 2011. This would eventually mean a satisfactory project in the end. The sustainability and impact are too early to assess, as this is depending on the Chinese partners ability and willingness to replicate similar efforts in other industries.

The China Climate Change Partnership Framework (CCPF) was the first joint programme in China and globally to receive approval by the MDG-F, and is one of four joint programmes (windows) funded by MDG-F in China¹⁹. Efforts in reducing climate change, especially by targeting the energy sector in China (increasing energy efficiency and reducing energy needs, instigating alternative energy sources, etc.), will still be very relevant, also for UNIDO to support in the near future. This in spite of the fact that UNIDO’s plan to increase the energy efficiency project portfolio significantly, locating a special officer to the RO (see *Section 2.4* below), did not materialise. The good results in the energy efficiency sector so far and the views of several interviewed partners suggest that the existing institutional barriers can be overcome by UNIDO, getting access to the required GEF funds to extend the portfolio in this sector.

With regard to the renewable energy sector it is noted that the Country Programme assumed that UNIDO’s role was mainly in supporting China’s south-south cooperation in this field. The respective activities will be commented under Component 5.

Finally, the planned activities in the area of Clean Development Mechanism (CDM) capacity building did not materialize as planned. According to World Bank estimates, China has implemented 100 times more CDM projects than the whole of Africa (some 2,100 in total). This suggests a strong capacity in the country to plan and implement such projects, and suggests that a similar reasoning as in the case of renewable energy (i.e. that China’s capacities are already so strong that UNIDO assistance would be redundant) could be applied.

¹⁹ The others are: China Culture and Development Partnership Framework (UNESCO); Joint Programme on Youth, Employment and Migration (YEM, by ILO); and Joint Programme on Improving Nutrition, Food Safety and Food Security for China’s Most Vulnerable Women and Children (WHO).

In conclusion, it is recommended to maintain a strong focus on energy efficiency and that efforts are continued to access significant funding from GEF and local sources to introduce innovative approaches in different industrial sectors.

2.2.3 Component 2: Environment

According to the CP the objective of UNIDO's actions is "*to contribute to efforts of the Chinese government to honour their commitments to phase out Ozone Depleting Substances and Persistent Organic Pollutants under the two international conventions*". UNIDO's actions within the Montreal Protocol and Stockholm Convention in China largely comprise technology transfer, training, and policy measures to substitute the ODS/POPs, through establishing a suitable management mechanism. The activities are nationally executed in cooperation with government ministries, as well as with the private sector.

Most of the implementation responsibility is left with FECO under this component, as FECO has established specialists divisions dealing with the matters at stake. As seen in *Figure 1.3* in Annex 7, FECO's Project Management Division III handles the Vienna Convention/Montreal Protocol projects on ozone layer/ODS; Division IV deals with the GEF projects on climate change (in addition to biodiversity, bio-safety, international waters, etc.); and Division V has the responsibility of the POPs projects under the Stockholm Convention. Also the procurement to projects has been delegated to FECO recently, although FECO is supposed to procure in line with UNIDO procurement rules, which does not allow for procurement to be done directly by beneficiaries. As the projects are so well embedded and integrated into FECO operations, the institution's ownership of the projects is strong, also observed by the Evaluation Team during the meetings with the FECO divisions.

This component is by far the largest both in terms of number of projects and total project costs. With reference *to Annex 5*, the project can be divided into three sub-categories: POPs projects, Montreal Protocol projects and other projects, all described separately below.

a) POPs projects

The CP lists UNIDO's objectives for 2010:

1. Close the production, and stop the use, import, and export of pesticide POPs.
2. Control of PCBs use in PCBs-containing equipment.
3. Reduction or elimination of unintentionally produced POPs.
4. Reduction or elimination of POPs releases from stockpiles and wastes.
5. Other objectives such as: develop alternative technologies and promote technology transfer, implement environment monitoring, develop standards, establish financing mechanisms, infrastructure, and capacity building, raise public awareness.

There are seven projects in this category, supporting China's fulfilling the compliance with the "Stockholm Convention on Persistent Organic Pollutants, of

May 2001²⁰ (ratified by China in June 2004). The Convention aims to reduce, eliminate, and prevent POPs pollution with the objective to protect human health and the environment. POPs projects constitute 35% of the total component costs. Four of the projects are completed (PRN 2.1, 2.2, 2.3 and 2.6). PRN 2.3 constituted the first step of a larger project, namely the subsequent ongoing PRN 2.4 - Environmentally Sustainable Management of Medical Waste in China (a 5-year project that started in October 2007) of which a full mid-term evaluation was undertaken by the ET. Full mid-term evaluation was also performed on project PRN 2.5 (institutional strengthening in connection with the National Implementation Plan (NIP)), also a 5-year project that started in October 2007. The last project PRN 2.7 (environmentally disposal of pesticides and POPs waste) started around March 2010 and is still ongoing at the time of the evaluation.

Project PRN 2.1 on Strategies to reduce unintended production of POPs in China: BAT, BEP and incremental costs for selected sectors of industry was started late 2003 and completed in 2004. The project wanted to demonstrate methodologies for reducing unintentional production of POPs in participating industries; estimating likely ranges of incremental costs of implementing BAT/BEP. The project was part of the preparation of the NIP, financed by Italy and GEF. No separate information on performance and results was made available to the ET. The project is however commented upon in the evaluation report of Project PRN 2.2.

Project PRN 2.2 on Building capacity to implement the Stockholm Convention on POPs and develop a National Implementation Plan (NIP) started in September 2004 and was completed April 2007. The outputs of the project were: a comprehensive NIP setting out management strategies, action plans and investment needs for China to meet its obligations; and a Capacity Building Programme. The UNIDO evaluation from December 2008 concluded that the project was highly relevant, effective and a very efficiently implemented project. A high quality NIP was developed involving leading international agencies and key national stakeholders. Ownership of the project was very high. The mixed implementation approach (UNIDO and FECO) contributed significantly to the overall good performance of the project.

However, the evaluation pointed out that the continuation of the Convention's support to funding and technology transfer would continue to be essential for China in the future. Also, the NIP project provided useful experiences for the GEF and other countries. The weaknesses of the project were listed as: Objectives and outcomes of demonstration projects and case study not clearly defined; poor reporting to UNIDO and no reporting to GEF (Project Implementation Report); independent national expert review group not functioning as planned, and no

²⁰ These are substances that: a) have toxic characteristics; b) resist various forms of degradation such as biological, chemical, physical, etc.; c) bio-accumulate in terrestrial and aquatic ecosystems as well as in human and vegetable tissues; d) are transported through air, water, goods and migratory species, and across international boundaries, and as such have the potential to be deposited far from the place of emission. Very low exposure to POPs can cause cancer and serious damage to the central and peripheral nervous system, as well as causing immune system diseases and disruption.

involvement of UNIDO country office in execution or monitoring of project.

The report of the mid-term evaluations of PRN 2.4 and 2.5 is submitted under separate heading, but summaries are enclosed in *Annex 8* to this report. The mid-term evaluations conclude the following on the two projects:

Project PRN 2.4(including2.3) (Environmentally Sustainable Management of Medical Wastes in China): The project is considered *highly relevant*, especially with regard to the National Plan for Hazardous and Medical Waste Management Program (started in 2003) and the large volume of medical wastes generated in China. However, continued relevance will depend on enforcement of corresponding policies and legal framework for BAT/BEP at all levels (central and provincial). The ownership of the project is very good both at central and local level. The overall effectiveness is rated as satisfactory, mainly due to some delays in transfer of UNIDO funds to FECO. High rate of co-financing observed. Once started, the activity implementation was very effective, partly thanks to the involvement of key stakeholders like National Institute for Health Administration (NIHA) or local EPBs from the beginning. The efficiency is characterised as marginally satisfactory, due to delays partly caused by the UNIDO management procedures. It is noted that UNIDO could increase efficiency of its supervisory and management functions by delegating some activities to the regional office in Beijing. The impact is rated satisfactory, as the awareness on the need for sound management of medical waste is good and due to the high level of cash funding for the project. It is noted that the local authorities of Guangzhou have invested in a state-of-the-art dioxin laboratory located at the premises of EPB (not being part of the project). It was also possible to mobilize funds for the construction of Centralized Medical Waste Incineration Facility at Nanchang. All aspects of sustainability are rated highly satisfactory, due to the incorporation of Medical Waste Management (MWM, BAT/BEP) in 12th 5-year Plan, strong central Government commitment to meet Stockholm Convention requirements, and thus high level of local funding likely to be available. Additionally, appropriate infrastructure is in place (FECO/CIO) with 35 permanent staff working for monitoring. The overall rating of the project is satisfactory.

Project PRN 2.5 (Strengthening Institutions, Regulations and Enforcement (SIRE) Capacities for Effective and Efficient Implementation of the National Implementation Plan (NIP) in China): The project is considered highly relevant, especially with reference to the 11thFive-Year Plan (2006-2010), the NIP and the target groups, with high country ownership. Effectiveness is considered satisfactory, although some objectives (e.g. technology transfer and education) have not yet been reached. Efficiency is rated highly satisfactory with high level of co-financing, some few delayed activities, but mixed institutions modality for implementation being successful. Impact is considered satisfactory, due to raised awareness amongst the public, mainstreaming of convention objectives in key national departments, and R&D activities in enterprises. The sustainability is considered highly satisfactory on all elements, and considered higher in China than other developing countries due to high level of co-funding and updating of policy and regulation framework. The overall rating of the project is satisfactory.

Project PRN 2.6 (Environmentally sound disposal of obsolete POPs pesticides, dioxin filters and CFCs contaminating equipment through cost-effective non-

combustion technologies) is a direct follow-up of the preparation of the NIP (PRN 2.2). The main objective, according to available documents, is to “demonstrate” the viability and removal of barriers that impede adoption and successful implementation of available non-combustion technologies to destroy POPs wastes. The project in China built on a similar concept as programmes started in Slovakia and Philippines, and focused on building regulatory and enforcement capacity, and identifying and promoting immediately available and proven technologies for destruction of at least 6,000 tonnes of POPs waste. The project was completed in June 2010, but the ET has not received any information on the results or outcome.

Project PRN 2.7 (Environmentally sound management and disposal of obsolete POPs pesticides and other POPs wastes in China) started in March 2010 after a long preparation period (but the first project concept was seemingly developed already in 2005, and according to the project document expected start-up should have been in November 2008). The project will assist in fulfilling China’s commitments under the Stockholm Convention, related to the existing geographically dispersed stockpiles of obsolete POPs pesticide waste and incinerator fly ash. These substances present a serious risk to pollution of groundwater and surface water resources. The project will directly provide treatment of a minimum of 10,000 tonnes of identified targeted POPs pesticide wastes and 1,000 tonnes of fly ash. The project will also introduce regulatory reforms and strengthen national capacity to identify, assess, manage, and treat other such wastes in an environmentally sustainable manner by use of new analytical and organizational techniques such as qualitative environmental risk assessment and public-private partnerships.

Conclusions on the UNIDO POPs portfolio in China: By judging from the available information, especially the mid-term evaluation of the two above-mentioned projects, the performance of the POPs projects is considered satisfactory. The UNIDO POPs portfolio is addressing the problems identified in the CP document (close the production, and stop the use, import, and export of pesticide POPs; control of PCBs use in PCBs-containing equipment; reduction or elimination of unintentionally produced POPs and reduction or elimination of POPs releases from stockpiles and wastes). Based on the positive evaluation of three POPs projects it can be concluded that a significant contribution is made to the set objectives, i.e. to improved capacities of China in meeting its commitments vis-à-vis the Stockholm Convention. Some of the technology-oriented interventions have not yet fully proven their effectiveness in reaching BAT/BEP level in terms of POPs emissions. This needs to be closely monitored so that corrective action can be taken timely.

The evaluation of the NIP-project recommended a wider use of preventive and cleaner production approaches in POPs projects. This might be reached through establishing linkages between the partners involved in EST and CP projects and those involved in POPs implementation. This should also be monitored closely.

b) Montreal Protocol (MP) Projects

China signed the Vienna Convention for the Protection of the Ozone Layer in September 1989, and ratified the Montreal Protocol on Substances that Deplete

the Ozone Layer in 1991 (also referred to as the “Montreal Protocol” or “MP”), in addition to the London and Copenhagen Amendments, in 1991 and 2003 respectively. In 1992 the Chinese Government established a Group to lead Ozone Layer Protection. In January 1993 the Government approved the Country Programme for phase-out of Ozone Depleting Substances and started to implement ODS phase-out actions with the support of the Multilateral Fund (MLF) for the Implementation of the Montreal Protocol. MEP has established a Project Management Office (PMO) with administrative responsibility for implementing phase-out programmes and projects through the four MLF Implementing Agencies; UNDP, UNEP, UNIDO and the World Bank. UNIDO started the cooperation with China under the MP in 1993.

The ODS phase-out strategy developed by UNIDO in cooperation with MEP/FECO focuses on five areas: Policy, training and public awareness raising, technology transfer, adaptation in SME enterprises through industrial rationalisation and consolidation, and combining ODS phase-out and sustainable development.

The MP is by far the largest group of UNIDO projects in China, counting 25 projects (of which 22 are financed by the Multilateral Fund under the MP) being 63% of the Environment category allocations. It is noted that UNIDO projects under the Montreal Protocol (MP) are subject to specific evaluation procedures defined by the MLF.

The UNIDO MP portfolio in China has focused mainly on the areas of CFC and Methyl Bromide phase-out. The projects can roughly be grouped as follows (% of sector allocations):

Chlorofluorocarbon (CFC) phase-out (61.4%):

- Phase-out of CFC-12 in expanded polyethylene (EPE) foam (3 allotments: PRNs 2.8 - 2.10) – 16.2%
- Sector Plan for ODS final phase-out (Domestic Refrigeration and Domestic Refrigeration Compressors, 1 allotment: PRN 2.11) – 9.4%
- Phase-out of CFC in Refrigeration Servicing Sector (6 allotments: PRN 2.12 – 2.17) – 12.8%
- Phase-out of CFCs in the MDI sector (2 allotments: PRN 2.18, 2.19 – visited by ET) – 23%

Methyl Bromide phase-out (22.6%):

- Phase-out of Methyl Bromide (MB, 5 allotments: PRN 2.20-2.24 – visited by ET) -12.4%
- Sector Plan for Methyl Bromide production (2 allotments: PRN 2.27, 2.28) – 10.2%

Other (16%)²¹:

²¹ According to the comments to the Draft Report by the MP Branch at the UNIDO HQ, two RAC (refrigeration and air-conditioner) projects were missing from the list, totalling USD 5.9 million. The ET however has not received any information on these projects and is thus unable to comment further on them.

- Phase-out management plan for Hydrochloroflourocarbon(HCFC) (in air-conditioning and extruded polystyrene (XPS) foam sector). (2 allotments: PRN 2.25, 2.26) – 1%
- Miscellaneous (demo on ODS waste disposal – PRN 2.29; demo on HC blowing in XPS – PRN 2.30; compressor phase-out in Changshu works – PRN 2.31; and phase-out of CFC-11 in tobacco industry – PRN 2.32) – 15%

The Evaluation Team visited one company in Jinan, Shandong Province²² participating in the phase-out of CFC in the Metered Dose Inhalers(MDI) sector (Project PRN 2.19), and the Brief Project Assessment is enclosed in *Annex 6.1*. MDI is used by people with respiratory diseases, e.g. asthma and bronchitis (estimated 50 million people in China), to inhale medicine through the mouth, and the CFC gas is used as a propellant (driving gas). The Chinese sector plan for phase-out of CFC in MDI sector was completed in November 2008. The total baseline consumption is 322 Ozone Depleting Potential (ODP) tonnes (2007). The sector plan proposes a mix of approaches and investment in the industries, e.g.: change to other types of pharmaceutical products; conversion to non-ODS substitute processes; and closure of production. In addition, the plan includes technical assistance and legislative activities, including policy actions.

In 2007, there were 38 enterprises using CFC in MDI and half of these will gradually phase out their production completely, and the other half will gradually change to the use of other propellant gases in the MDIs (typically the so-called "HCFC 134A"). The visited company falls in the last category. It is expected that the majority of enterprises will be able to phaseout the use of CFC by the end of 2013 (exception might be the producers of traditional Chinese medicines). The phase-out support from the ExCom/MP via UNIDO will be totally completed by end of 2015.

It is noted that the preparation phase for the phase-out has taken a long time, as the issue of phase-out is very "political" (e.g. discussion between MoH and MEP on environment vs human health), with references also to patented alternative solutions and the associated commercial interests of foreign companies. The plan is therefore delayed²³. This delay is interpreted by the ET as being result of the complexity of the plan and subsequent political discussions/disagreements. The National Transition Strategy for the phase-out (January 2010) namely confirms the importance of phase-out CFC in MDIs "as quickly as possible", but a higher priority must be given to the "tens of millions of patients" that rely on the CFC MDIs. It also states "*the rates for reduction of CFC-MDIs production scale and decline of use should match the pace of introducing CFC-free MDIs*". So, the phase-out is totally dependant on the new propellants and MDI design being in place.

The observations and conclusions of the ET based on the field visit is that in spite of the fact that the phase-out has not yet started, the preparations/research for

²² Jinan Weimin Pharmacy Co. Ltd.

²³ The 2010 Progress Report I concludes that "*due to the difficulty of CFCs phase-out in MDI sector which has two characters, one is MDI used CFCs could be exempted because of the essential use, the other is MDI used CFCs phase-out project implemented, and complexity coordination between the ministries and approval procedures*".

the shift of propellant in the sector has commenced, especially the research on mix of alternative gases to be used and the design and materials of the nozzles, and how to find a propellant mix that does not bind the companies to the very expensive international patents. In addition to the project being relevant, it can be expected to be effective once the implementation starts. In the long-term positive impacts on both sides, ODS phase and human health, can be expected. The project is fully backed up by government regulation and enforcement, so that the companies simply have no other choice than phasing-out the use of CFC, and at large China cannot fail in the implementation of this project. The project will assist China in meeting the MP obligations and ultimately lead to reducing depletion of the ozone layer. The efficiency is almost impossible to assess at this point in time. However, the project is already delayed partly due to the political issues connected to the project. Once the industries have changed their production the risk of falling back to use CFC is virtually non-existent, so the *potential* sustainability is considered highly satisfactory.

However, in the **refrigeration services sector** (Project PRNs 2.12-2.17) there are still challenges under the phase-out plan²⁴. These allotments (the first approved by the ExCom of the MP in December 2004) are basically aiming at reducing the use of “virgin” CFC when repairing/servicing domestic and commercial refrigerators, chillers, and mobile air conditioners (MACs) in cars. It involves introduction of better servicing techniques, improved management, more effective recovery, recycling and reclaiming of “old” CFCs in those sectors. (At the time of the evaluation this sector was under review for a revision of the sector strategy²⁵). The concept is to collect as much as possible of the CFC (mostly CFC 12) in the systems being dismantled/repared, store it, and simply reuse it in equipment being serviced/repared. The project aims at avoiding releasing the ODS, and keeping the exiting “old” CFC *within* the equipment so that the need for “new” CFC to fill up the equipment after servicing is gradually phased out. The project comprises training of stakeholders (e.g. MAC servicing stations/workshops), establishment of recovery units²⁶, procurement and distribution of appropriate equipment (refrigerant recovery machines, safety devices, refrigerant identifiers, recovery/storage cylinders, etc.).

According to the last draft Progress Report of January 2011 (covering Sept 2009 – Dec. 2010), the target set for the end of 2009 was 1,786 tonnes total consumption of the sector, whereas the achievements were 814.8 tonnes (including all kinds of CFCs, of which CFC-12 constituted half of the amount), meaning achievements were better than planned for. Other reported achievements: CFC recovery data from hundreds of MAC servicing enterprises and obsolete vehicle disposal stations were collected, integrated and reported to FECO on a quarterly basis (in first quarter of 2010, 6.03 tonnes of CFC-12 was recovered from 410 automobile servicing workshops/vehicle disposal stations in 15 provinces, with 4.74 tonnes reused and 1.29 tonnes not usable); 6,067

²⁴ There are 2 uses of CFCs in refrigerators: It is used as the refrigerant, and it was used during the manufacture of refrigerators to blow the insulating foam in the units; in the latter case it remains trapped in the pores of the foam in gaseous form. A fridge might contain 1kg of CFCs. The CFCs in the foam are released to the environment when the foam is broken up or burnt.

²⁵ Info from the UNIDO advisor Tamas Grof

²⁶ In some Western countries there are specialised companies doing this

technicians have been trained through 335 training workshops (raising awareness of environmental protection and professional level of the technicians); various public awareness activities (info materials produced and distributed, information on CFC recovery, recycling and reclamation on the governmental website, association websites and other academic and industrial newspapers and magazines and local EPB websites); recovery equipment was procured and distributed to the 28 electric home appliances dismantling stations).

Further: milestones set for the 1st, 2nd, and 4th tranches of the CFCs Phase-out Plan will be completed by the end of 2010²⁷. Most of the implementation activities of the 4th and 5th tranches have been started and are expected to be finished on time. The coordination group is undertaking the necessary corrective measures if and when required, and some activities are replaced by other more urgent ones. This flexible, country-driven approach improves the impact of the project that is demonstrated with the phase-out rate faster than planned. All ongoing activities contribute to the reduction of ODS consumption in the country. According to the UNIDO advisor on these projects, the raising of awareness in the workshops is the most effective measure amongst the activities²⁸.

It is noted that most of the other related MP projects (allotments) are completed. MEP/FECO and China Household Electrical Appliances Association (CHEAA) issued a “Notification on banning CFCs” stating that after 1 July 2007 enterprises are banned to manufacture electric household appliances using CFCs as refrigerant and foaming agent, and after 1 September 2007, enterprises are banned to sell and import/export such household appliances. The reported effects in the refrigeration production sector thus seem to be very good (no production anymore). China is one of the very few countries that converted its refrigeration production to hydrocarbons for both the refrigerant and foam components. Hydrocarbons have significantly lower (almost nil) global warming potential compared to other alternatives adopted in most of the countries. (It is likely that the effect should *not* be credited the UNIDO projects alone, but the UNIDO contribution is claimed to have been the dominant one in the sector).

The ET also visited some farmers and a County Agricultural Bureau that participated in the Phase-out of Methyl Bromide (MB) use in Agriculture²⁹ (Project PRNs 2.20-2.24), with the Brief Project Assessment of the field visits in Shandong Province enclosed in *Annex 6.1*.

The highly toxic ODS Methyl bromide (CH₃Br) is used to kill, and prevent the spreading of plant pest and soil pathogens in the: Commodity sector (grain in

²⁷ It is noted that regarding ship disposal and recycling enterprises, a study on CFCs recovery and recycling in the sector concludes that there are about 50 ship dismantling stations in China, which are distributed in the east and south of China, and most of them do not have the ability for ODS recycling.

²⁸ It is noted that some years ago the idea of this kind of projects was that the recovered CFCs could be a valuable *source* of cooling agents as CFCs production had stopped. But nowadays there are plenty of alternatives.

²⁹ One cucumber and two tomato farmers and Shouguang County Agricultural Bureau, Weifang City, Shandong Province.

storage); tobacco growing/production industry; agricultural uses (the project visited); feedstock (input for other chemical industrial products; and QPS (Quarantine and Pre-Shipment), being treatment of packaging material to prevent spreading of diseases across borders. (As there is no similarly effective treatment method available internationally at present, this last sector is *exempted* from the MP). The three producers, agents/traders and buyers/users of MB need a license to deal with the substance. (Notably the *production* of MB is covered by another project with PRNs 2.27 and 2.28).

The project deals with the *consumption* of MB for various uses, with ongoing Phase II covering complete phase-out of all “controlled” MB use within 2014 (remaining MB consumption in tobacco sector and the agriculture sector), and the aim is to phase-out 1,087.8 ODP tonnes of MB³⁰. The MB phase-out activities in the agriculture sector under the UNIDO project started with the growing season in 2008. MB alternatives have been tested and applied in Hebei and Shandong Provinces. Alternative pest control chemicals are introduced, being more selective in the response to various products than the MB. (Notably, some of the chemicals are very toxic and require specialised companies to undertake the application in fields. This is a typical example of one substance being harmful to global environment, but the phase-out does not benefit the *local* environment as an even more problematic substance is introduced). Alternatively, other seeds/species of plants, more resistant to pest, are introduced in exchange for the traditional species/seeds used, and grafting is also used. The project comprises awareness raising and training of farmers and warehouse operators; provision of subsidised and partly free seeds and alternative chemicals; identification of companies to assist the farmers in the disinfections; procurement and supply of equipment to farmers; and study tours abroad (Phase I).

Based on the visits to the farmers and the County Agricultural Bureau, the ET observed that the Shandong Province had started planning the MB phase-out *before* the UNIDO project came onboard (the Province being important for food supply to the Beijing area). The project is however managed by a PMO in the Ministry of Agriculture (MoA) under an agreement with MEP/FECO, with local Agricultural Bureaus being implementing agencies in the provinces and counties. Some Model Farms have been identified disseminating the lessons learned (“to see is to learn”). The MB phase-out is decided at governmental level so the farmers do not have any choice rather than complying. There had been an active awareness campaign in the areas visited by the ET, and the farmers visited gave “suspiciously” similar answers to how much their production increased (30%) following the phase-out of MB and introduction of new methods, and the reasons for why they participated in the project. However, the risk of some farmers not readily adapting to the new conditions was clearly noted by the county Government, who in the meeting told the ET that they were paying them RMB 2,000 each to “cooperate” and to have a positive attitude to the project from the beginning.³¹

³⁰ 389 ODP tonnes already phased out in Phase I, representing the total MB consumption in the commodities sector and partly in the tobacco sectors.

³¹ Seemingly, this payment was not known to the FECO staff in Beijing before the ET told about it. The MP Branch of the UNIDO HQ informed in their comments to the Draft Report that the “*project did not pay cash money to farmers. Instead, FECO and MoA payed incentives in the form*

The ET concludes that the project objectives are highly relevant. The effectiveness is considered satisfactory (although the ET has no solid basis for verifying the effect of the measures yet. However, it was claimed that “all” the farmers in the area had stopped using MB and started using other chemicals or other pest-resistant species). The RMB 2,000 incentive/payment to every farmer obviously boosts the effectiveness. Also the fact that production of MB will be reduced (soon only the QPS sector as buyer of MB) will make the availability of MB less and less, and the control with who is selling and who is buying will be stricter.

Efficiency is more difficult to assess at this point in time, also due to lack of information as basis for such assessment. The impact is eventually expected to be satisfactory, assisting in honouring China’s obligations to the international ODS treaties and retarding the depletion of the ozone layer. Another positive impact is that the amount of crops has increased (although figures might be exaggerated), meaning more use of vegetables for food in the families and/or more income to the families through selling crops. The sustainability is assumed to be satisfactory, as once the farmers have changed their chemicals and cropping methods/species (2014 latest), there is little risk they will go back to use MB (limited availability, only produced for the QPS application). Nevertheless, there might always be a theoretical risk of some farmers buying MB on the black market in the future, initially produced for the quarantine purposes. However, the ET did not hear about any examples of this during the evaluation, probably being too early in the phase-out process anyway.

The implementation of the HCFC phase-out management plan for room air-conditioner (RAC) manufacturing sector (Project PRN 2.25) has not yet started, because the request was re-submitted 22 December 2010 (initial submission was 23 August 2010) and has not yet been approved by the ExCom of the MP (will be in July or November 2011). The project aims at total phase-out of HCFC-22 (R22³²) within 2030 and is considered relevant both nationally and globally, since R22 is the main refrigerant gas in the Chinese RAC and China produces 70% of all RAC worldwide³³. Preparation of the HCFC phase-out management plan for XPS foam sector (Project PRN 2.26) started in August 2008 and was completed early August 2010, and is also awaiting the agreement between ExCom and China regarding the funding level. .

Regarding the miscellaneous projects related to the MP, there is not much information revealed and none of the projects were visited by the ET:

- Project PRN 2.29 (demo on ODS waste disposal) – start December 2009/end May 2011, no info on progress.

of goods (alternatives), i.e. Chloropicrin, dazomet, metam sodium, plastic mulching, grafted seedlings, etc. These were never paid as total cost of the goods required for a given areas, but as a percentage, as to bring the cost of the alternative as close as possible to the cost of methyl bromide. Furthermore, these incentives were paid only to a small fraction of all farmers that phased-out as pilots or demonstrations as to convince others to follow”.

³² Being a greenhouse gas in addition to an ODS.

³³ The production of RAC peaked in 2007 by 76,800,000 units, with an increase of 28% compared to 2006. Notably, North America has banned the import of equipment using HCFC-22 as of 2010, and this will have inevitably an impact on R22 consumption in China.

- Project PRN 2.30 (demo on HC blowing in XPS) – start 2009/end April 2010. A demo project partly financed by Japan, to help in the selection of appropriate alternative technology for the phase-out of HCFCs in the building sector, namely extruded polystyrene (XPS) boards used as insulation in buildings. The said project is aimed to demonstrate the application of hydrocarbon or hydrocarbon mixture as substitutes of HCFCs blowing agents. Only Concept paper from Sept 2009 (by Shanghai Xinzhao Co.Ltd) available to the ET, no progress or final reports³⁴.
- Project PRN 2.31 (compressor phase-out in Changshu works) – start ??/ end Aug. 2005. No info on project.
- Project PRN 2.3 (phase-out of CFC-11 in tobacco industry) – start ??/ end Febr, 2007. No Info on project.

To summarise the review of the MP projects: They are all relevant (otherwise they would not have received ExCom funding in the first place!), and the effectiveness is considered overall satisfactory, with still some clear challenges in the refrigeration servicing sector, where obviously a lot of the gas is already “gone” when the fridges are received by the workshops for repair. The efficiency is difficult to assess (lack of relevant information), but a few projects are experiencing delays partly due to political discussions outside the control of UNIDO, and thus the efficiency might also vary between the projects. The unbroken close cooperation with China and the ExCom’s positive opinion on UNIDO’s performance however indicates that there were no major efficiency problems in the projects. The impact and sustainability are considered satisfactory, as once the ODS is phased out, there is little risk that it will be re-appearing on stage. The UNIDO contribution in the projects has largely been awareness raising and training activities; project management support, and to a varying degree professional input from international experts.

Conclusion on the MP portfolio of UNIDO in China: The overall review of the UNIDO MP project in July 2010 (“Independent Review of the Montreal Protocol Projects”, covering selected projects in several countries) highlighted that the projects had been successful in achieving the targeted ODS phase-out, and the ET in China in 2011 clearly has the same conclusion: the MP projects are both relevant and rather effective in phase-out of ODS. The 2010 review also concluded that the direct UNIDO TA in the enterprises had proved effective. It should however be noted that the approach in China has been different from other countries, with the Chinese implementing agency FECO playing this hands-on role, as this institution has been specifically set-up and staffed to handle such projects. Thus, the role of UNIDO in China has included less hands-on and more strategic management than in other countries. The ET concludes that this approach in China has clearly been successful.

On the other hand, it is also observed that UNIDO in China, as concluded in the 2010 review, has not fully exploited the potential for MP projects cooperating with *other* initiatives and stakeholders (“...only limited collaboration with other UNIDO programmes and branches, including field offices, or with other

³⁴ Latest information from the MP Branch of UNIDO HQ: “The Project Document was prepared and submitted for approval by ExCom, however, all Chinese proposals are now treated as a package and all approvals are expected at the same time”.

agencies/institutions have taken place”). This conclusion is also valid today for lack of directly linking the MP efforts to other approaches in the project beneficiary industries where UNIDO traditionally has a comparative advantage and long experience, e.g. cleaner production, sustainable industrial development at large and other preventive approaches. On the other hand however, it is also realised that e.g. the Multilateral Fund MLF is only supporting project *directly related* to ODS phase-out, so other initiatives would have to be financed from other sources.

Related to this issue, it should be mentioned that in the 2010 review, Conclusion 5 states: *”UNIDO has not sought to target non-ODS effects in MP projects. As some phased-out ODS are very potent greenhouse gases, the MP projects have as a side effect unintentionally provided a significant reduction of the global warming impact of industries covered by the projects. Modest non-ODS effects have been achieved on some enterprises, unintentionally or due to individual UNIDO project managers’ specific efforts. Acknowledging the above, UNIDO has not sought systematically to target non-ODS effects in the projects, nor have indicators for non-ODS effects been systematically monitored”*.

In the China MP portfolio of UNIDO, the phase-out of HCFC (which contributes to the greenhouse effect) is becoming a more and more important part. Hence the unintended side effect with regard to climate change is being addressed pro-actively. However, the ET alters to the possibility of other unintended side effects as, for example, some MP projects introduce non-ODS chemicals (the MB projects in particular) to the local environment. The effects of these chemicals on the environment and human health should indeed be monitored more closely and properly reported on by the local stakeholders and FECO.

c) Other Projects

This category comprises four allotments/three projects (constituting only 2% of the Environment component costs) not belonging in the other above-mentioned groups. The two first projects (PRN 2.33 and 2.34) relate to a technology centre in Beijing, and Project PRN 2.35 dealt with Environmentally Sound Technologies (EST), and they were visited by the ET. Formally and logically speaking, the centre support should have been accounted for under “Component 5: Other cooperative projects”, where the other centres are listed, and the reason for including it under “Other Projects” is not known to the ET. It will be commented upon under *Section 2.2.6* below. The last project (PRN 2.36) deals with environmentally sound handling of hospital waste following the May 2008 earthquake in Sichuan (funded by Norway through UNDP).

Implementation of Project PRN 2.35 (EST Programme in China) physically started in 2004 and ended in 2010. The ET visited the local implementing agency Shandong EPB and one participating industry (Yuyue Home Textile Co. Ltd., Binzhou City), and Brief Project Assessments are enclosed in Annex 6.1.

Implementation partners were UNIDO, the International Reference Centre (IRC) in Switzerland (with technical assistance), FECO, Provincial EPB and the selected industrial enterprises. The purpose of the programme was to identify demands for environmentally sound technologies (EST) in small and medium-

size companies of specific industrial sectors in Shandong Province, i.e. increasing the potential for environmentally sound technologies and the market for the penetration of environmental sound technologies. A wanted impact would be matching the Chinese enterprises with Swiss and/or OECD suppliers. Services included: assessment and implementation of EST; CDM and POPs-related interventions; and social accountability projects, including capacity building, information dissemination, awareness raising, policy advice, and study tours to technology providers and users of the proposed technologies.

The Shandong Environmental Sound Technology Promotion Centre (SESTPC) was established in April 2004 as an affiliation of the Provincial EPB, with activities largely similar to the ones mandated to the CP Centre (not being capable of taking on the project). The programme had too high ambitions and started out with several industrial sectors and a resident Chief Technical Advisor from UNIDO (Phase 1). Due to unclear roles and responsibilities, and inappropriate technical assistance, the approach did not prove very successful, and following an evaluation of the programme in 2005, the programme was suspended for two years and the concept reconsidered (Phase 2), thereafter concentrating on textile industry only (Phase 3).

The study tour was considered the most useful activity for the participating enterprises to learn experience from advanced technology and improve their knowledge about the European companies. Some participating enterprises took measures on energy saving and cleaner production (or plan to take such actions), but the European equipment was in general found to be too expensive, as similar equipment (“good enough”) could be procured in China. The total effect of the measures is not known, as they have not yet been fully reported upon. Notably, the SESTPC established under the project is not using the UNIDO logo anymore³⁵, and the EPB staff met with claimed that it was useful to be affiliated with UNIDO to start with, but thereafter it has been necessary to base the activities on national “professionals” undertaking the job³⁶.

The programme is considered relevant although the approach was not realistic to start with (including the explicit impact of European industry to penetrate the Chinese market). The effectiveness, efficiency and impact of the programme seem to balance in the area satisfactory/unsatisfactory due to e.g. delays, lack of report on tangible results from industries, lack of procurement from Europe, and lack of financing mechanisms to go beyond the “low-hanging fruits”. Successes seem to be the establishment of the EST centre and the study tour. The rating might improve over time. Sustainability of the project itself is considered slightly on the unsatisfactory side, as it will not be continued by EPB in Shandong (meaning not bringing more companies onboard in future similar programmes). This is however not considered so necessary, as some industries hopefully will continue their efforts as long as they can be afforded and are considered profitable. The EST Centre continues similar activities largely on self-earned resources, although vulnerable, so that partly it seems to be fairly sustainable.

³⁵ However, the car from EPB had the UNIDO logo still on the door, as it is not formally and officially handed over to the EPB from UNIDO.

³⁶ This expression might be coloured of the fact that the cooperation with the resident Chief Technical Advisors was a bit “strained”.

Shandong EPB would like more study tour arranged by UNIDO to Europe (even paid by participants), but there is a question whether UNIDO should be a “tour operator” with a good name just to “open doors”.

The textile industry visited, in fact being the “flag ship” of the industries participating in EST has individually experienced satisfactory effectiveness, efficiency and impact, as the company identified 47 improvement measures, of which 37 were low-cost, and many are already implemented benefiting both company economy (short payback time) and the environment (water reduction: 1,670,000 tonnes/year; steam reduction: 83,000 t/yr; wastewater reduction: 650,000 t/yr, COD reduction: 169 t/yr with total benefits: 59,679,000 RMB/yr). Also sustainability is considered satisfactory as the company is cost-conscious and is gradually planning improvements beyond the “low-hanging fruits”, although financing for such measures in private industries is virtually non-existent in China.

Project PRN 2.36 (Capacity building and technical assistance on environmental assessment and environmentally sound management of hazardous healthcare waste (HHCW) and contaminated debris and soils in earthquake hit areas of Sichuan Province³⁷), which aim was to prevent disease epidemics caused by the improper disposal of the increased amounts of medical waste and environmental pollution following the earthquake 12 May 2008. This should be obtained through supporting the establishment of medical waste emergency response strategy in Jiuzhaigou County of Sichuan Province, the demonstration of medical waste non-incineration disposal (steam-based autoclave) and management, and the improvement of supervision and monitor policies on medical waste disposal facilities. The project started in March 2009 with a study tour to medical waste disposal centres in Linyi City, Shandong Province and Luzhou City, Sichuan Province. In December 2009, the construction of the facilities started, and the total project was completed in May 2010, following commissioning and pilot tests. Training of operation staff was an integral part of the project, and some policy documents have been prepared and approved by the County and Province in the project. Amongst the challenges in the project were: Cooperation and distribution of responsibilities was difficult due to too many administrative parties involved in the implementation; land location of the plant changed twice during design period delaying the schedule. Amongst the lessons learned was the importance of taking more actively onboard requirements and suggestions of the facility owner during planning, design and procurement. The project was highly relevant, with satisfactory effectiveness and impact. No information has been submitted to judge the sustainability of the project, but there is no reason why it should *not* be operating today. (Reference is also made to *Annex 8* presenting the summary of the mid-term evaluation of the GEF funded project “*Environmentally Sustainable Management of Medical Wastes in China*”).

Overall conclusion for Component 2 – Environment: Besides the fact that all projects under this component are relevant, the component represents a variety of projects where not many easily overall detectable *common and joint* conclusions could be made. *One* could however be that this component largely focuses on *chemicals* related to *global* environmental issues related to reduction

³⁷ Being part of the Sino-Norway Emergency Response for Environmentally Sound Management of Medical Waste in Sichuan Earthquake Hit Disaster Areas, funded by the Norwegian Government

of emission that harm the ozone layer and contribute to climate change. This is also in line with UNIDO's competence and also relevant to China's commitments under different multilateral environmental agreements. However, some of the most pressing needs of China in terms of *local* environmental problems (e.g. improvement of local water sources and air quality for the inhabitants), also being areas of UNIDO competence and an important part of UNIDO's portfolio in the past, have obviously decreased in importance. No project, except for the Environmentally Sound Technology (EST) project in Shandong Province, deals with the concept of cleaner production (CP), which traditionally has been one of the strongest sectors covered by UNIDO. In general, all project have a satisfactory effectiveness, as the project are strongly supported and enforced by the Chinese central Government. The ownership of the projects is strong as FECO is the implementing agency for most of the projects in this component, and they are especially set-up and staffed to handle MP and POPs projects. UNIDO has also delegated procurement responsibility to FECO, which has worked well during the past years. There is a good potential for future continued UNIDO support in this field in China, and several of the started activities are by far completed, e.g. the CFC phase-out in refrigerators and compressors and in the refrigeration servicing sector.

2.2.4 Component 3: Agro-Industries and food safety

The area of food safety is new to UNIDO's operations in China. No food safety component was included in the previous Country Strategic Framework. However, the importance of food safety issues has now been properly recognised by the Chinese Government as well as international cooperation partners, and several international agencies are active in this field, including the World Bank, WHO, FAO, UNESCAP and UNDP.³⁸

The main food safety issues in China cover both the domestic and the international trade-related dimensions. However, studies indicate that the domestic problem is more severe as levels of rejected food exports have already reached minimum levels. It should also be noted that most of the food safety challenges in China are related to the small and medium sized enterprises (SMEs), which dominate the sector. It is estimated that out of 450,000 food producers in China, 350,000 have less than 10 employees and are subject to very limited Government control and poor access to technical assistance and capacity building³⁹.

The rationale of Component 3 is based on a problem analysis (see Country Programme document) that refers mainly to the public health and economic (export) issues related to food-borne illnesses and chemical contamination. Consequently, the objective of the component is "*to contribute to efforts of the Chinese government to improve safety throughout the overall food-processing sector, i.e. farm/factory to point of sale*"⁴⁰.

To achieve this objective, two types of initiatives were planned:

³⁸ "Advancing food safety in China", United Nations in China, March 2008

³⁹ *ibid*

⁴⁰ Country Programme document 2008-2010

- a) Strengthening competitiveness of agro-industries, food safety and product quality management.
- b) Reduce chemical use in the production and use of pesticides, and promote non-DDT alternatives through promoting Capsule Suspension (CS) technology in bio-pesticide water-based formulation⁴¹.

Both initiatives were funded, are currently under implementation and were visited by the Evaluation Team. The food safety project (PRN 3.5) has not yet moved beyond the relatively small pilot phase (USD 250,000), funded by China. The local implementation partner provided co-funding (approximately 1:1), but the original expectations of a larger programme with funding in the magnitude of USD 5.5 million have not materialised. The pesticides project (PRNs 3.3 and 3.4) has a relatively small budget of USD 400,000 coming partly from the Chinese contribution to the Industrial Development Fund (IDF) and partly from a self-financed trust fund.

A third project was initiated in 2010 with funding from the Spanish MDG Fund (MDG-F). The project "Improving nutrition, food safety and security for China's most vulnerable women and children" (Project PRNs 3.1 and 3.2) is a joint project of several UN agencies (FAO, UNDP, UNESCO, UNICEF, WHO, WFP, ILO and UNIDO). The UNIDO component is funded with USD 581,000 out of a total budget of USD 7 million and is implemented in cooperation with the China National Institute of Standardisation. This project was not visited during the Evaluation and is not assessed in detail. The following remarks on the UNIDO food safety initiatives in China are thus mainly based on the two projects that were originally planned (see a) and b) above).

Project PRN 3.5 (Assistance for the implementation of ISO standard on food safety management systems (ISO 22000) and traceability in the feed and food chain (ISO 22005) in Fujian, PR China) has several project outputs addressing the awareness outcome. The project has reached about 200 food companies in the province and public relation (PR) activities were organised for the project, such as the high-level press conferences, newspapers articles and TV reports on training workshops organised by the project.

The actual introduction of food safety standards (ISO 22000) was observed in a company visited⁴². A new food safe management system was introduced in September 2010 as a consequence of the project cooperation. Substantial changes were reported about the company after introduction of the system internally, but in particular the extension of the food safety requirements to suppliers, e.g. application of pesticides and additives of primary production, safety control of packaging (additives) and the safety control of containers (cleaning agents). Products from the company are now 100% certified (the main product is fried eel), and there have been no complaints about food safety from clients. The company also reported that their capacities in production and market expansion have been increased in 2010. It should be noted that the company visited by the ET is probably not a very representative example for project

⁴¹ Capsule suspension is a stable suspension of capsules in a fluid, normally intended for dilution with water before use.

⁴² Fujian Allied Frozen Foodstuff Co., Ltd.

achievements. Firstly, the company had introduced very high food safety standards even *before* the UNIDO project. Secondly, the production unit of the company visited was built in 2009, at a new site and well equipped installations. Thirdly, the company exports most of its products to *developed* countries, so they have a strong interest and motivation in complying with international standards. Other companies, which maybe export to *developing* countries or sell in the local market, may be much less interested in investing money for food safety.

Besides the outcomes observed at enterprise level the project contributed to strengthening capacities of the project counterpart agency (Department of Foreign Trade and Economic Cooperation- DOFTEC).

Project PRNs 3.3 and 3.4 (Reduction of chemical pesticides production and promotion of non-DDT formulations based on bio-pesticide and water-based formulations using capsule suspension technology) has as main implementing partner the Nantong Pesticides Formulation Centre (NPFC). NPFC has succeeded in having eight environment friendly pesticide formulation registration codes from Institute for Control of Agrochemicals of the Ministry of Agriculture (ICAMA) of the Chinese Ministry of Agriculture, and also manufacturing license from Ministry of Industry and Information. Furthermore, NPFC applied for 11 patents to the State Intellectual Property and Patents Office and four patents have been granted so far. These new formulations are claimed to have high biological efficiency and the cost is about equal or slightly higher than traditional pesticides.

One example illustrates the impacts of the project on food safety: A new encapsulated formulation developed by NPFC is already produced by the Centre's affiliated company and sold to peanuts farmers in Shandong province, which produces 50% of China's peanuts production. Previously, the peanuts were exported to Europe and consequently received complaints about old pesticides residue. Now the peanuts meet international specifications by using the new encapsulated technology.

There are also some public health effects as institutions use this product for dipping of mosquito nets. The longer activity period of the active ingredient (AI) makes the bio-pesticides competitive and products have been exported to the African market.

NPFC has also been investigating replacement of ODS like MB and POPs (e.g. Chlordane and Mirex). This makes the NPFC's work very relevant for UNIDO technical cooperation activities in these fields.

Both projects covered by the evaluation are considered highly relevant to the overall objectives of China and UNIDO. The technical cooperation at the enterprise level combines well with the efforts of other agencies, e.g. the World Bank, to improve legislation and establish a facilitating environment for food safety. Both projects have been assessed as effectively contributing to the overall component objective of increased food safety in general⁴³. However, in both

⁴³ The ET however observed that the project *activities* planned in the project document not necessarily align well with the project objectives.

projects the Evaluation Team noted a focus on the export sector. While this is in line with the fact that UNIDO's food safety programme is part of the overall "Trade Capacity Building" area of the organisation, it does not reflect the more pressing needs of China in improving quality of food consumed *locally*. The two project documents also referred to these domestic problems as main objectives, indicating that the implementation of the projects deviated from the original plans.

The original strategy described in the Country Programme document recognises the need for different models for food safety promotion in each region: Eastern, North eastern and Western provinces of China. So far the UNIDO initiatives have focused almost exclusively on the Eastern region, which can be explained by the above mentioned focus on exports, which coincide with the interest and funding possibilities of local authorities to strengthen export capacities.

Overall, both initiatives have strong counterparts with a high level of ownership, providing a solid basis for sustainable results. However, the likelihood of these projects to have a wider impact on food safety, especially in the poorer regions of China and within the large number of SMEs, is at present rather limited. This is mainly due to the fact that the focus has been on financially potent export industries in Eastern provinces. However, the third project (re. food safety for vulnerable groups) might make contributions that are more relevant to the objective of improved public health.

The Evaluation Team also met with several donors and other international agencies in Beijing. There was a common belief that UNIDO work in food safety is relevant and that, while cooperation in traditional areas is decreasing and some donors are beginning to withdraw from China, this area has a good potential for expansion of technical cooperation. However, so far the food safety projects have been funded mostly by Chinese sources (either IDF or through trust funds).

The ET recommends UNIDO to further build upon the good results achieved so far in the area of food safety. Efforts should be made to mobilize additional resources from national and international sources. For future activities it is recommended to reconsider the strong focus on exporting enterprises and target smaller companies and local consumers/markets. With regard to the regional focus it is recommended to also target Western and North eastern regions of China.

2.2.5 Component 4: Productivity, technology and competitiveness enhancement

This component aligns with the central objective of UNIDO's private sector development strategy in China to contribute to poverty alleviation by increasing SME competitiveness through productivity and technology enhancement. According to China's national statistics, private enterprises have reached to a total of around 41 million, comprising 10 million SMEs and 31 million individual businesses respectively as of 2010. The UNIDO initiatives under this component are devoted to the promotion of business investment for industrialization, entrepreneurship, and simultaneously encouraging accumulation of knowledge, technology upgrading and technical changes. The Component covers

four projects as follows:

1. Sustaining Competitive and Responsible Enterprises (SCORE): two phases in Chinese industrial sectors (ILO funded, PRNs 4.1 and 4.2));
2. The China Culture and Development Partnership Framework (Joint UN programme by Spanish MDG-F funded, PRNs 4.3 and 4.4);
3. Protecting and promoting the rights of China's vulnerable migrants (Joint UN programme by Spanish MDG-F funded, PRN 4.5)
4. Advisory assistance to the Ministry of Commerce (MOFCOM) on the design of support policy guidelines to enhance software outsourcing through a network of six ICT Chinese Parks (China IDF funded, PRN 4.6)

This rather small portfolio corresponds largely to the planning as per the Country Programme document. One of the planned MDG-F funded initiatives in the area of water and sanitation, however, did not materialise. Given that this component is composed of few relatively small activities, no field visits were carried out by the Evaluation Team. However, the ET did get some insight from the UNIDO project managers and country officers and the project consultants, in particular regarding the relevance of these initiatives and lessons learnt or possible problems.

The project PRN 4.2 “Sustainability through competitive and responsible enterprises” (SCORE) has two phases, implemented jointly by UNIDO with ILO. The project focuses on five core modules: workplace cooperation; quality management; productivity and cleaner production; and occupational health, safety and HR management. In Phase I, the project activities concentrated on China’s textile industry only (reference to the EST project described above). The first phase focused on support to the supply chains in the private sector. The second phase is building directly on lessons learnt in Phase I, and provides SMEs in manufacturing sectors (machinery and automotive sectors mainly) with access to sustainable business training and also support the capacity building of local trainers.

The training modules were divided between UNIDO and ILO according to their respective expertise and competence. UNIDO mainly implements the Productivity and Cleaner Production module in Phase II and ILO supported the other four areas. The UNIDO training partner is the National Cleaner Production Centre (NCPC). 20 trainings of trainers (TOTs) and 20 trainings of enterprises (TOEs) were provided by UNIDO in the two mentioned sectors in Dalian and Shijiazhuang municipalities. The quality of the service provider, NCPC, was considered satisfactory by the trainees and UNIDO, as was the technical inputs from UNIDO HQ.

The coordination between ILO, UNIDO and project partners was sometimes inefficient due to the centralised UNIDO programme management modality (the PM based in Vienna). The Chinese side claimed that UNIDO HQ had a potential of better understanding the local project situation and should be able to deliver more timely responses in decision-making; as compared to the ILO China country office that could take management decisions locally. Although the deliverables so far are of good quality, there is currently no follow-up on the actual quality of trainings. UNIDO has already recognised the importance of an ex-post evaluation and is now coordinating with ILO to undertake case studies for M&E purposes

and assess the potentials to engage trainers to help enterprises in implementation of activities. The project has so far achieved about 80% of the expected results before the completion in June 2011.

The MDG-funded “Culture and Development Project” (PRNs 4.3 and 4.4) aims to protect and promote ethnic minority culture and identity, while at the same time ensuring ethnic minorities benefiting from, and being engaged in, national development processes and outcomes. The 3-year project with a budget of USD 7 million started in November 2008, with participation of eight UN agencies (i.e. UNDP, UNIDO, UNESCO, ILO, UNICEF, FAO, WHO and UNFPA). The State Ethnic Affairs Commission (SEAC) is the lead institution for the Government and UNESCO is the lead UN agency. The project has four pilot sites (Yunnan, Guizhou, Qinghai and Tibet) with significant ethnic minority populations.

UNIDO, with a sub-project budget of USD 450,000, is responsible for programme activities related to the industrial development of handicrafts and artisan associations by supporting rural entrepreneurship in Leishan, Guizhou Province. UNIDO, has supported three main activities: a study on enabling policy environment; a market analysis; and a training on handicraft industrial methodologies. The Chinese partners are satisfied with the first two outputs, but marginally satisfied with the third, as the consultant who provided the services actually had demonstrated relevant methodology and good training skills, but lacked understanding of the Chinese context. The UNIDO HQ Project Manager has played a critical role in mobilising both the international and national expertise. While, on the managerial side, according to the UN Mid-term Evaluation in August 2010, UNIDO was behind in disbursement because the development of training materials was delayed.

For the MDG-F programme, the Secretariat in New York has followed a three-tranche disbursement policy meaning that the following tranche will be paid based on a 70% delivery of the previous tranche outputs. UNIDO's delay has caused the postponement of the UN joint mission. UNIDO therefore re-scheduled its activities and lowered its disbursement. A revised schedule was in place later to catch up with activities of other UN agencies and financial commitments/expenditures. So far, UNIDO has achieved a delivery of 65% with remaining 10 months to end the project.

Overall, the project seems too ambitious to achieve all project objectives. Given the current institutional arrangement, coordination between UN agencies for joint missions and activities is problematic. It was also noted that the centralised management modality of UNIDO has made it difficult to participate in such a multi-agency programme. Also, the State Ethnic Affairs Commission (SEAC) considers the UNIDO implementation at the pilot site not to be fully satisfactory. There are three reasons for this: i) the project is struggling with the local SEAC for deploying international experts with full understanding of local context; ii) the local Bureau of Ethnic Minority Affairs has less interest in the project than that of the SEAC at central Government level; and iii) the local counterparts are too busy with coordination and receiving inputs and visits from all UN and government agencies on the same time, which could be a lessons learnt in future project design.

The MDG-F funded project of “Protecting and Promoting the Rights of China’s Migrants”(PRN 4.5) aims at improving the policy framework and policy implementation, better access to decent work and protection of rights of vulnerable young migrants. The project is implemented jointly by UNIDO and ILO. UNIDO’s component, with a total budget of about USD 347,000, concentrates in two areas: skill upgrading and young entrepreneurship through training activities. The component has a 3-year duration from March 2010 to February 2012.

The coordinating agency is the Ministry of Human Resource and Social Services (MHRSS) and the executing partners are MHRSS and All China Youth Federation (ACYF). The component has two project sites: Tianjin Municipality, as a receiving place of migrants; and Changsha Municipality (Hunan Province), as the sourcing and returning location of the migrants.

Overall, the “migrant issue” is addressed by the Chinese Government as a top priority. Chinese institutions (MHRSS, Ministry of Civil Affairs, All China’s Women Federation, etc.) have focused on interventions at the central level and for laid-off workers to mitigate potential social conflicts. Less attention has been given so far to mitigate migration problems at the local level. The UNIDO project is therefore considered relevant, in particular in terms of technical inputs and capacity building for local institutions.

UNIDO has focused on the *demand* side in terms of good understanding and analysis of the enterprises’ needs, and ILO has focused more on the *supply* side in terms of the skills of the migrants. ILO provides training materials developed under its Start and Improve Your Business (SIYB) initiative, and UNIDO focuses on training to stimulate the demand for migrant labour, being a good division of tasks between UN agencies.

The UNIDO component had however a significant delay, as the local counterpart, Tianjin Labour Bureau (TJLB), delivered low quality training materials, which subsequently influenced training activities later on. This was partly due to insufficient understanding of TJLB’s capabilities and inappropriate capacity support by UNIDO during the initial stage. Consequently, the overall schedule of the project activities had to be revised. Nevertheless, the services of the UNIDO recruited international consultant were considered to be of high quality.

MHRSS is very much concerned about this delay since the project has so far struggled to reach a delivery of about 30% of the expected outputs as of February 2011. Remaining trainings are largely the responsibility for the local associations such as the Youth Leagues and Youth Federations.

The project “Advisory assistance to the Ministry of Commerce (MOFCOM) on the design of support policy guidelines to enhance software outsourcing through a network of six ICT Chinese Parks”(PRN 4.6) was funded by China and implemented in cooperation with UNIDO’s main counterpart, CICETE. The total budget was USD 185,841, implementation started in 2008 and the budget had been spent completely by the time of the country evaluation. The objective of this project was “*to increase the national production of software outsourcing production in China*”. The project progress report did not provide any substantive information on outcomes and results. Project funds were mainly used for trainings and international and national software outsourcing expertise. While the project

was not assessed in detail, the relevance of it to any of the objectives of the UNIDO Country Programme is not evident.

Overall, Component 4 has a very relevant objective, being better exploiting the private sector's potential to contribute to poverty alleviation, and most of the projects under this component contribute to this objective. The social issues related to migrant workers and labour conditions are recognised by the Government, and consequently several UN agencies work in this field. The only exception is the project on ICT parks, which does not have a focus on vulnerable groups or poverty alleviation. The sector of software outsourcing also does not seem to offer much potential for poverty alleviation and a more equitable industrial development. The effectiveness of Component 4 cannot be assessed as none of the projects have been analysed in detail. However, in terms of efficiency there are clear indications that the joint projects have caused difficulties for UNIDO to match implementation with other partners. This is partly due to the centralised HQ-based implementation modality usually applied by UNIDO. In principle UNIDO's efforts to promote pro-poor industrial development are highly relevant to UNIDO and China. However, the chances for future funding for such activities seem rather limited given the trend of traditional UNIDO donors to focus on other issues, mostly the environment.

2.2.6 Component 5: Other cooperation projects (UNIDO Centres)

a) Introduction

The objective of Component 5 is *"to couple the extensive knowledge of local economic and social stakeholders with the multinational experience of UNIDO"*. This vague definition does not provide a good basis for the assessment of results. The initiatives planned under this component, which comprises a total of 30 allotments as seen in the table in *Annex 5*, can roughly be grouped as follows (with % of sector allocations):

- Support to International Technology Centres (ITCs) (22.1%):
 - Support to the Small Hydropower Centre in Hangzhou (PRN 5.1, 5.2 & 5.3) (6.9%).
 - Support to the International Centre for Promotion and Transfer of Solar Energy Technology (ISEC) in Lanzhou (PRN 5.15 & 5.16) (9.0%).
 - Support to the IT cooperation partnerships in the Asia-Pacific region (PRN 5.29 & 5.30) (6.2%).
- Support to the Industrial Subcontracting and Partnership Exchange Centres (SPXs) in Beijing, Xi'an and Shanghai (PRN 5.4, 5.5 & 5.6) (3.4%).
- Support to UNIDO Investment and Technology Promotion Offices (ITPOs) (28.3%):
 - Support to Shanghai Investment Promotion Centre (SIPC) in Shanghai (PRN 5.7 & 5.8) (14.6%).
 - Support to Investment & Technology Promotion Office (ITPO) in Beijing (PRN 5.13 & 5.14) (11.6%).
 - Investment Promotion and Business Matchmaking support for small and medium-sized enterprises (SMEs) of Southwest China and Neighbouring Asian Countries (PRN 5.11) (2.1%)
- Support to south-south cooperation (26.2%):

- Support to Economic Cooperation among Developing Countries/Technical Cooperation among Developing Countries (ECDC/TCDC) information network (PRN 5.9 & 5.10) (1.1%).
- Support to the China South-South Cooperation Promotion Centre (CSSCPC) (PRN 5.18) (1.7%)
- Support to UNIDO Centre for South-South Industrial Cooperation, Beijing (PRN 5.18, 5.19, 5.20 & 5.21) (19%).
- Investments and technology compacts and partnerships South Africa-China related to climate change in industrial activities (PRN 5.22, 5.23, 5.24, & 5.34) (4.4%).
- Other projects (23.3%)
 - Support to the UNIDO week on EXPO 2010 (PRN 5.26, 5.27 & 5.28) (4.3%).
 - Various projects (PRN 5.12, 5.17 & 5.21) (19.5%).

This distribution of projects is largely in line with the plans described in the Country Programme document. There are, however, a few important deviations from these plans:

- Additional SPX centres were planned in Harbin and Guangzhou. These have not materialised.
- The UNIDO-Shenzhen International Technology Promotion and Innovation Centre, established under the previous Country Programme, was planned to enter a second phase with significant funding from the Chinese counterpart. This has not materialised.
- The establishment of the planned International Renewable Energy Centre (IREC) did not materialise.

Given the large list of small projects, the Evaluation had to focus the assessment of this component on the main issues. The most important feature is the establishment and support of the different centres. The “centre issue” was thus chosen as the main focus of analysis in Component 5.

b) Conclusions and Recommendations regarding the centres in previous evaluations

Below are listed some conclusions and recommendations from previous evaluations:

- i. “Evaluation of Country Service Framework (CSF). UNIDO contribution to environmentally sustainable industrial development in China” (February 2005):
 - Strong features are combination of demonstrations in pilot companies with feedback for policy advice and subsequent broader replication; strong capacity building elements; and extensive use of national expertise.
 - Modest results in south-south cooperation and projects for the Western regions.
 - Re. International Technology Centres (ITCs): over-optimistic funding expectations do not meet donor priorities nor centres’ capacities. (ITCs depend a lot on continuous support of the host organisations and the

Government in pursuing the objectives of south-south cooperation. Demonstrations of technologies in energy conservation have good prospects for replication).

ii. “Independent Evaluation of International Centre for Materials Technology Promotion (ICM), Beijing (January 2010)”:

- It has supported the green industry agenda (training programmes on cleaner production and energy efficiency), but the actual/potential effects on policies, practices or the environment are not known.
- There is a need for a closer collaboration between UNIDO offices/centres/projects in China.
- The strategic orientation of UNIDO’s programmes in China, in the field of technology promotion, should be stronger.
- There should be a more substantial role of the Investment and Technology Promotion Branch and of relevant technical branches in capacity building (technology transfer to developing countries) and in quality control.
- The Regional Office should increase its management and monitoring function.
- The mandate of the South-South Centre should be expanded.
- The centres enjoy a high level of credibility (access to UNIDO’s network of partner organizations/offices and Governments).
- Good prospects for sustainability.

iii. “Independent Evaluation of Shanghai International Informatization Technology Promotion Centre (SITPC) (February 2010)”:

- The financial support from UNIDO became much less than anticipated in the beginning.
- UNIDO should ensure that SITPC establishes a meaningful relationship with the UNIDO RO.
- UNIDO should ascertain areas of possible common interest between SITPC and ITPO Shanghai.
- UNIDO should clearly define its project management role and should establish a system of structured, regular reporting of the project’s activities.
- The lack of screening of the technologies promoted by SITPC, exposes UNIDO to some risk.
- The UNIDO logo and name provide SITPC with its own high-valued UN identity.
- It is likely that the project would survive without UNIDO.
- UNIDO should re-review the inputs in Phase II to determine which are achievable.
- UNIDO should make clear its own role and functions.

iv. Evaluations of the ITPOs in Beijing and Shanghai:

- More attention should be paid to outward investment, in particular with regard to the Shanghai office.
- Strengthen the UNIDO support to the Shanghai office as ITPOs in emerging economies require more capacity building support than those in industrialized countries.
- Cooperation with other UNIDO initiatives such as south-south cooperation centres should be enhanced.
- Make a clear distinction between UNIDO ITPO and UNIDO itself. Avoid the use of UNIDO name and logo by non-UNIDO experts involved in the ITPOs.
- Review the cooperation agreements between UNIDO and the Chinese Government, as these have been prepared a long time ago and do not necessarily reflect the current focus and operations of the ITPOs.

c) Summary of the current assessment of the UNIDO centres

(It is noted that the ToR regard the south-south centres under “crosscutting issues”. However, the ET has chosen to present these with the other centres under the same heading).

Table 2.1 in Annex 7 contains a list of all the centres established by UNIDO, counting in total 14 centres as per January 2011. The table shows that there are two Investment and Technology Promotion Offices (ITPOs), four Subcontracting and Partnership Exchange Centres (SPXs) and seven other centres of various categories. It is noted that five centres are located in Beijing, three in Shanghai, and the rest spread in different cities (Lanzhou, Chongqing, Xi’an, Nanning, Fujian and Hangzhou). During the evaluation the following centres were visited by the ET:

- UNIDO Centre for South-South Industrial Cooperation in China (UCSSIC), Beijing
- UNIDO International Solar Energy Centre for Technology Promotional Transfer (ISEC), Lanzhou City.
- UNIDO International Centre for Small Hydro Power (ICSHP), Hangzhou City
- International Institute for Monitoring and Management of Environment and Resources (IMR), Beijing
- UNIDO Subcontracting and Partnership Exchange (SPX) of Chongqing

Below follows a summary of the assessment of the various centres visited. More elaborate assessments are included in *Annex 6*.

i. UNIDO Centre for South-South Industrial Cooperation in China (UCSSIS), Beijing.

Relevance: The objectives of the UCSSIC are relevant to China, UNIDO and the UN (UNDAF). However, the same objectives are shared with other UNIDO

Centres (e.g. SITPC, ICM, ICSHP, ISEC, ITPO) and many Chinese and multilateral south-south initiatives. The UCSSIC is a relatively small player and it is not clear what the value added of an additional centre is. Consequently, while south-south cooperation is very relevant per se, the relevance of the establishment of the UCSSIC is rather limited.

Effectiveness: The work of the Centre during its first 2.5 years of operations has led to a very limited number of south-south cooperation initiatives. The only concrete example is the cooperation with Bahrain. However, several other initiatives have been developed and are currently in the pipeline. The lack of results so far is partly explained by problems that need to be addressed on an urgent basis. Another reason for limited effectiveness might be due to the supply-driven operation of the UCSSIC.

Efficiency: The under-utilization of project funds is partly due to an inefficient management arrangement of the UCSSIC. The UCSSIC is currently neither a “real project” nor a “real centre”. If it were a project, it would base its activities on a project document that clearly sets out all activities, outputs and expected outcomes. However, the UCSSIC project document does not provide such guidance and reflects rather the nature of a centre, which should have some flexibility to develop a portfolio of activities under the leadership of the Director. The leadership of the Centre however, is currently split between the Director and the Project Manager at UNIDO HQ. This establishes a barrier to efficient operation and utilisation of the centre’s resources.

Impact: Under current operating conditions there is little likelihood that the UCSSIC will contribute significantly to China’s south-south cooperation.

Sustainability: If the current funding arrangement of using China IDF funds is maintained (there are no indications of discontinuing the current arrangement), plus more inputs from national and local cost sharing, there are good prospects for sustainability of the Centre. (If the IDF contributions are not used for the Centre anymore, the whole thing is over, as no other sources of income are available at present. According to the project document, there are no plans to make this Centre self-sustainable, e.g. through income from services or member contributions. The Centre was planned to be a UNIDO centre with long-term Chinese funding.)

Recommendations:

- Address the relevance issue: The UCSSIC needs a clear focus for its activities. The current overlap with other UNIDO activities and centres should be reduced by positioning the Centre more clearly within the UNIDO portfolio in China.
- Address the effectiveness and efficiency issue: The UCSSIC allotment should be transferred from UNIDO HQ to the UNIDO Regional Office in Beijing as soon as possible. Clear coordination arrangements should be established between the UNIDO Office and the UCSSIC. Ideally, if not too costly, the Centre should be transferred to UNIDO premises (in order to obtain close control and interaction).

- The UCSSIC's work should become more demand-based. The Centre should be used as a hub for other developing countries to tap Chinese experience. In order to do this the Centre needs to manage an effective network of partner offices and institutions in developing countries.
 - UNIDO should encourage its field offices in developing countries and partner organisations (e.g. NCPCs, counterpart ministries, industrial associations, etc.) to utilise the UCSSIC and to promote it in their respective countries. In this way the UCSSIC can be seen as a service provider to other UNIDO centres and projects, linking them up with demand in developing countries.
 - The UCSSIC's work should become more focused on facilitating developing countries' access to joint experiences of China and UNIDO, i.e. mainly the projects (e.g. POPs research, MP technology) and centres (ICM, ISEC, ICSPH) that are implemented by China and UNIDO together. The role of the UCSSIC would be to ensure that such experiences are also contributing to the benefit of other developing countries.
 - The UCSSIC should also aim at providing access of China to experiences that UNIDO has in other developing countries, especially those in other middle-income countries like Brazil, India, Mexico and South Africa, all of which have UNIDO offices to provide information on ongoing activities.
 - Development specialists with sufficient international expertise should strengthen the capacity of the Centre.
- ii. UNIDO International Solar Energy Centre for Technology Promotional Transfer (ISEC), Lanzhou City.

Relevance: The project is considered relevant. It is noted that in Phase II (2010-2012) the rural electrification and poverty reduction elements are also listed in the project objectives. Support to development and awareness raising on the adoption and use of alternative renewable energy sources is becoming more and more imminent internationally, especially in the developing countries. The Chinese Government (like most governments in the world) is encouraging and enhancing the increased use of solar energy where feasible and ISEC and Gansu Natural Energy Research Institute (GNERI) in Lanzhou are in the forefront in China on such research and demonstrations. With the UNIDO logo on the Centre, GNERI got the needed window to go more actively internationally, as clearly the logo "opens doors". UNIDO support to the centre activities is also relevant to the UN activities, with a large potential for transferring affordable, appropriate technology from China to the third world, especially Africa. (The project is supporting ISEC in executing its mandated daily activities in a more effective and efficient way, as an integral part of the operations).

Effectiveness: Regardless of the project being relevant, the effectiveness is considered to be marginally satisfactory only, with a clear potential for improvements. The tangible results so far, especially in developing countries, have been meagre. Notwithstanding the fact that several students, including some from other developing countries (although decreasing number over time) have received introductory training in the use of solar technology in China or in the country itself, only one pilot for PV lighting of a village has been set up (in Zambia). The solar demonstration plot outside Lanzhou City was established in

the 80s (amongst others with assistance from UNDP) and is still marketed as the most prominent showcase. No other pilots have been set up in developing countries, only “talking” and dissemination of written brochures have taken place, in addition to preparation of some training material (in English and Chinese). Hopefully, the effectiveness will improve with ISEC setting up an office in Kenya, starting to produce solar heaters locally. Hopefully also, a close cooperation with the mother organisation GNERI on applied research and dissemination of results might boost the effectiveness of the Centre. It is also noted that some funds from the previous phase are unspent.

Efficiency: The efficiency is difficult for the ET to assess, due to the lack of relevant information provided regarding the operation of the Centre, and especially the cooperation and interaction with the mother institution GNERI. The presentation material of the Centre is filled with listing of prominent visitors, speeches from seminars and photos of seminar participants, but with virtually nothing on the development/technology challenges faced and the problems to be solved, with no reference to the work undertaken by GNERI (being the technical arm of the set-up). This lack of connection between the two institutions (although 1/3 of the staff work both places), not tapping the potential which obviously is prevalent, is most likely pulling the efficiency down to the unsatisfactory side. A lot can be done to improve this, presumably with simple means, good will, delegation of management and revised operation approach.

Impact: Impact is closely connected to the effectiveness in this case, also considered unsatisfactory. The impact of increased awareness raising and training of students in/from developing countries should ideally have increased application of solar technology. This has seemingly not materialised, at least not in Africa. This can be due to the wrong approach being applied in the training, or simply because the technology is not affordable to the poor, which is even more serious. A wanted impact would in the long run be to produce the technical equipment locally in developing countries, from local material, and sold to an affordable price locally. It has not reached this point yet, although ISEC is planning to set up an office in Kenya and draw up an agreement with a local company for local production. It is not known how far these plans have come, but the ET definitely endorses this initiative that will increase the impact rating in the future.

Sustainability: The sustainability of the project is considered satisfactory. The Chinese has allocated USD 300,000 through UNIDO for a continued cooperation the next three years, and for the right to use the logo. As long as the logo is so valuable for ISEC (confirmed by the ISEC management), and the Chinese Government is willing to provide funds for the operations of the Centre (also under a UNIDO umbrella), the centre operations will definitely continue. However, as UNIDO will lend its name to the Centre, it should also actively guide the operations in a more appropriate direction. In securing a continued satisfactory operation of the Centre, UNIDO should especially be more proactive in influencing the information dissemination approach of the Centre, with more highlighting of the technology challenges and research results, than listing of celebrities. Also, UNIDO must use the centre services actively in other developing countries, especially in Africa, to promote the use of appropriate solar

technology. This will mean more active lobbying and awareness raising of the services offered by ISEC in UNIDO Vienna HQ and the country offices.

Recommendations:

- The responsibility of following up the Solar Centre project should be delegated to the UNIDO Beijing office (along with all other UNIDO centres in China), to smoothen cooperation and make decision-making more effective/efficient. (The mere fact that funds remain from the previous phase indicates that the decision-making road is too long).
- As ISEC is a UNIDO centre, UNIDO should have a much tighter hands-on “control” of how the Centre appears to the outside world, giving more advice on making useful presentation material (more problem-solving oriented articles, focused on appropriate technology with lessons learned from research work and pilot testing).
- UNIDO staff must get detailed knowledge of what the Centre really can offer to other countries, in order for UNIDO to be able to utilise the services of the Centre in south-south cooperation, meaning awareness raising in the UNIDO HQ and especially in the UNIDO country offices. This should include distribution of presentation material to the UNIDO COs for handing out to interested stakeholders in these countries.
- The UNIDO funding to the Centre should be concentrated to such activities, in addition to covering promotion tours for the centre staff to selected countries and potential UNIDO-supported projects in Africa, especially with a view to establish local production capacity of appropriate technical solutions.
- UNIDO must make sure that capacity is built in the whole institution, and that focus is not only concentrated around one person.

iii. UNIDO International Centre for Small Hydro Power (ICSHP), Hangzhou City.

Relevance: The demonstrated expertise of China in SHP development and the focus on south-south cooperation makes the ICSHP relevant in principle to all partners involved (China, UNIDO and developing countries). However, for all three partners the relevance has not translated into firm (financial) commitments to continuously support the Centre as a non-profit operation. The relevance of UNIDO support to the ICSHP can be regarded as high, as UNIDO during the past few years has developed a large portfolio of SHP technical cooperation projects and linkages to external technological expertise is necessary. The value added of UNIDO lies primarily in facilitating access to project opportunities in developing countries, especially in Africa.

Effectiveness and efficiency: The effectiveness of the UNIDO support is difficult to assess as there is no clear distinction between the ICSHP’s own resources and those contributed by UNIDO. However, it has been observed that the cooperation with UNIDO has contributed to a wider outreach of the ICSHP to the developing world. The planned outputs were identification of SHP sites in developing countries, feasibility studies for pre-selected sites and training for the ICSHP. These outputs have been mostly delivered, and no major problems were observed during implementation and operations. However, it is not clear in how far these outputs have contributed to the expected outcome of a sustainably

strengthened ICSHP as there is no information about the baseline situation (ICSHP capacity before and after the project).

Impact: The development impact of the ICSHP's activities so far has not been demonstrated. Reported problems of quality of delivery (e.g. poor quality feasibility studies) and, more importantly, a limited focus on capacity building and social impacts of SHP applications, makes future impact rather unlikely.

Sustainability: The sustainability of ICSHP currently depends mainly on the continued support from the Chinese Government (Ministry of Water Resources - MWR). While there is no sign that the MWR financing would stop in the near future, the future of the ICSHP will probably depend on the Centre's success on the international arena. So far the ICSHP has not managed to broaden its ownership basis as originally envisaged. It appears that the potential of the network (International Network for Small Hydro Power - INSHP) of SHP-related organisations and companies has not been fully exploited to promote the ICSHP and its services. Also the relationship between the ICSHP and the sub-regional SHP centres (India, Nigeria, Colombia), which in principle could add to the sustainability of the ICSHP, is not clearly defined.

Recommendations:

- As the old trust fund agreement between UNIDO and the Government of China expired after the first phase project, there is a need for a new agreement. The new agreement should define the relationship between UNIDO and the ICSHP more clearly (roles and responsibilities).
- Whenever the ICSHP is acting as a UN-sponsored centre, commercial linkages to a limited set of companies should be avoided and ICSHP initiated projects should use public biddings to source equipment. The involvement of various companies in training and other technical assistance activities of the ICSHP should be based on service contracts with the companies, rather than on allowing the one company to use the UNIDO name and logo.
- The UNIDO Guidelines for Industrial Project Feasibility Study and COMFAR (Computer Model for Feasibility Analysis and Reporting), or a similar tool for feasibility studies should be introduced and used to do a more comprehensive assessment of projects feasibility, now being too limited to technical issues. COMFAR training for ICSHP is recommended.
- The Centre's role should be more on capacity building in developing countries and on policy advice. This should be emphasised in Phase III and corresponding capacity building should be included in the project.
- There needs to be a better system for monitoring and documenting success and failures of projects initiated in Africa. Also some monitoring of the performance of the manufacturing base is required.
- There should be more international staff with experience in development work in the Centre. Ideally this should be permanent international staff. But if this is not possible, agreements with institutions should be negotiated to establish fellowship positions at ICSHP. UNIDO should monitor very closely the performance of the ICSHP in the execution of the first SHP subcontract in

Zambia. Lessons from the implementation of that subcontract should be drawn and feed into future involvements of the ICSHP and UNIDO in joint projects.

iv. International Institute for Monitoring and Management of Environment and Resources (IMR), Beijing.

Relevance: The GRRFA (Global Resource Regenerate Fund Association) represents a large number of enterprises and organisations, mainly in China, which are involved in recycling and resource recovery technologies. A cooperation of UNIDO with such an entity should in principle be very relevant as it fits well into the “green industry” strategy of the organisation. The present project however, does not establish clear objectives for what the main partners (GRRFA and UNIDO) want to achieve through the establishment of the IMR. Throughout the first three years of the IMR no major joint activities of UNIDO and IMR have materialised and the IMR has not been involved in any UNIDO technical cooperation activities inside or outside China. Given this situation, the relevance of the UNIDO involvement in the IMR today must be considered low for both China and UNIDO.

Effectiveness: The effects of the capacity building of IMR can be assessed only if the outcomes of work are known. The complete absence of reporting on IMR activities and achievements therefore does not allow for such an assessment.

Efficiency: Resources channelled through UNIDO (after a deduction of 13% UNIDO support cost) have been used mainly to recruit local administrative support (40%) and local consultants (40%). The guidance that UNIDO has exercised for the IMR to develop its activities has been minimal. As a result, it is questionable why these resources need to pass through UNIDO at all, increasing the cost for the IMR substantially as compared to hiring local staff directly.

Impact: The development objective of the project, which in principle should be identical with the ultimate goal of the IMR itself, is not clearly described in the project document. Hence it is difficult to assess the impact. However, given the lack of focus of the project so far it can be said that it is highly unlikely that any tangible impact will be achieved through the project.

Sustainability: The sustainability of the IMR is in principle guaranteed by the financial contributions from GRRFA, which has expressed its willingness to continue funding of the Centre.

It should be noted that this assessment is about the cooperation between UNIDO and the IMR, not about the IMR as such. The work of the IMR has not been evaluated and the ET understands that it has made significant contributions to the development of environmental technology. However, all evidence suggests that the UNIDO cooperation has not played an important role in these achievements

Recommendations:

- Currently, the linkages of IMR to UNIDO are too thin to justify classifying it as a “UNIDO Centre”. Unless additional resources can be mobilised to guarantee effective participation of UNIDO in the daily operations and management of the IMR, the UNIDO logo and name should not be used by the IMR. Instead the IMR could mention in its information material and on the website that it “cooperates” with UNIDO on certain issues.
 - The current cooperation between UNIDO and IMR should be considered a *regular* technical cooperation project, which does not entail the use of the UNIDO name and logo by the counterpart organisation (IMR/GRRFA).
 - Consideration should be given to involving the South-South Cooperation Centre in establishing the link between UNIDO and the IMR. At a later stage and provided that closer ties can be established with the IMR, it could be re-profiled as a “UNIDO Partner Centre” only.
 - The implementation of the IMR support project should be either shared by UNIDO HQ and the UNIDO Beijing office, or completely passed to the Beijing office. The latter option is considered the most effective and viable by the Evaluation Team (like with other centre projects), as this would allow closer involvement of UNIDO in the daily operations of IMR.
- v. UNIDO Subcontracting and Partnership Exchanges (SPX) (Chongqing and Beijing).

Relevance: The Subcontracting and Partnership Exchange (SPX) was a relatively new trade tool, and a new technical information and promotion mechanism in China to engage small and medium industrial manufactures. As the auto-manufacturing industry gradually moves from the Eastern to Western part of China (especially Chongqing (CQ) has become a leading vehicle industry base in China), the SPX concept is highly relevant and a good concept to be introduced to Chongqing. The supply of auto components is largely manufactured by SMEs in the region. The selection of auto-industry as SPX-CQ’s major entry business portfolio is also highly relevant. However, the relevance of industrial SPX is low to Beijing. As Beijing is not a typical industry base due to high labour cost and thus more subject to the concept of industrial services, particularly R&D and software subcontracting. The relevance of the SPX for the achievement of UNIDO objectives, such as poverty reduction through SME promotion in poor regions of China (as expressed in the objective of Component 4 of the China Country Programme) is limited, as so far the SPXs have not been utilised as SME promotion tools but rather as services to big contracting firms.

Effectiveness: All four SPX projects are already completed. So far, SPX-CQ and SPX Xi’an (SPX-X’A) are still active, while no further activity was reported from SPX-BJ (Beijing) and SPX-SH (Shanghai). The major results achieved through the SPX projects are that awareness and knowledge about the SPX mechanism having been well established in China, especially in the hosting cities, largely through trade fairs, SPX forums/seminars, and the UNIDO’s training activities through its internal and external experts. It is observed however that no powerful campaign tools and regular newsletters were developed by the SPXs.

Furthermore, there were significant value of contracts but no mechanism and tools to well track and monitor results of these matchmaking/transactions. Therefore, it was not possible to assess the full outcome achievements of the SPXs.

Efficiency: The SPX projects in China all had very limited funding, each having a UNIDO budget under trust fund scheme in a range from USD 50,000 to 100,000, and therefore the outputs delivered were relatively low. In theory the SPXs' income should mainly come from membership fees, consulting service fees, exhibition revenues and/or government funding etc. In the case of China, membership and consulting fees proved infeasible, as companies are not willing to pay for the information provided. The SPX-CQ experience however, showed that introducing exhibition fees worked well, and local government funding was made available for trade fairs. The Municipal Government of Chongqing had provided subsidies for the Centre to take the suppliers abroad and invite foreign companies to participate in local exhibitions.

Impact: Given the relatively low performance in capacity building and the very limited funds, a successful SPX model has not been established in any of these four pilot centres. The expected impact on poverty reduction through SME growth and resulting increased incomes of the poor people cannot be assessed but seems to be unlikely.

Sustainability: Ownership is a major factor to determine the potential sustainability of the SPXs. The SPX-CQ showed a strong local ownership of the three key stakeholders. The SPX-CQ will likely sustain operations based on the hosting company's exhibition business, but not on SPX matchmaking itself. SPX-BJ had a good setting within a publicly funded SME promotion centre, but the SPX services could not be sustained for lack of industrial subcontractors/suppliers. The lessons from an early UNIDO self-evaluation of SPX-SH, that UNIDO should not implement any SPX with a budget less than USD 250,000, has not been learned.

Recommendations:

- The "UNIDO SPX Centre in CQ" is an affiliate of a company. The use of the UNIDO name in connection with this business/commercial purpose thus becomes an issue that should be resolved.
- For the future set-up of SPXs non-profit associations with corporate mandate for subcontracting should be the preferred hosts/counterparts, e.g. national and local Chambers for Promotion of Investment and Trade (CPIT) or industrial parks, could be considered.
- Beijing and Shanghai could be more relevant as base of main contractors and buyers networking with other SPXs that specialise more on the suppliers. The SPXs have focused on international potential buyers but ignored the potential of domestic subcontracting and partnership development through networking of Chinese SPXs.
- Future SPX should have sufficient funding for a period that allows positioning the matchmaking services in the market.

- Chongqing could be a local UNIDO subcontractor to help UNIDO setting up new SPXs.

The overall aggregated observations of the ET regarding the UNIDO centres, can be summarised as follows:

- In most cases the funding for support of centres was extremely limited when compared to similar initiatives of other agencies (e.g. Poverty Centre by UNDP).
- Many UNIDO centres in China are meant to be institutions but are managed as “projects”. This results in a lack of continuity and long-term perspectives. The exception from this rule is the ITPO in Beijing, which has established a high degree of autonomy.
- The support projects of UNIDO add little value in terms of capacity building to the centres. In some cases the funds are used for the recruitment of local administrative staff.
- There is a need for bringing the centres closer to UNIDO. The recent placement of a Senior Technical Advisor at UNIDO Beijing office for the purpose of centre coordination is a step in the right direction. However, coordination meetings are good but not enough; some centres are still living “their own life” without significant UNIDO input, quality control and proper reporting to UNIDO.
- The recent thematic evaluation of UNIDO ITCs has produced relevant findings and conclusions for the China centres. If a distinction between “UNIDO Centres” and “UNIDO Partner Centres” was to be made (as suggested in that evaluation), the Evaluation Team would see the China centres as follows:
 - UNIDO Centres: significant UNIDO control and strong thematic link –ITPOs and S-S Centre
 - UNIDO Partner Centres: strong thematic link but limited institutional linkage: ICSHP and ISEC, in these two cases better agreements are needed.

Recommendations:

- Full responsibility of projects supporting centres’ operations should be with the China RO, and “UNIDO Partner Centres” need to be backed up by substantive technical assistance from UNIDO HQ (e.g. renewable energy) and cooperate closely with relevant UNIDO worldwide programmes.
- There should be a clear strategy to “market” such “UNIDO Partner Centres” in Vienna and other UNIDO COs, for services to be utilised in other developing countries, and appropriate information material should be prepared.
- Minimum requirements for capacity and quality, procedures for quality control and mutually binding agreements between UNIDO and Partner Centres, should be introduced as soon as possible.
- The UNIDO Partner Centres (e.g. ISEC, SHP) should receive a more “hands-on” guidance from UNIDO RO on operational focus.

- The ITCs, where this “quality assurance” does not apply (e.g. ICM, SITPC, IMR), should be removed from the list of UNIDO ITCs (and must stop using UNIDO name and logo).
- Such centres could (voluntarily) join a UNIDO network maintained by the South-South Cooperation Centre and maybe graduate to “UNIDO Partner Centres” later.
- When defining the future relationship between UNIDO and centres in China the recommendations of the “Thematic Evaluation of UNIDO International Technology Centres” should be taken into account.

2.3 Performance in cross-cutting issues

2.3.1 Environmental issues

Environmental issues constitute the core of UNIDO’s portfolio in China, and as such “environment” is not a cross-cutting issue per se but merely the key issue of the CP. It is assumed listed in the ToR of the Evaluation as a generic issue that would be included as an integral part in *all* evaluations of development projects/programmes. As such, the ET believes that in the China UNIDO evaluation it would be a bit artificial to look at environment as a cross-cutting issue.

Components 1 (Energy and climate) and 2 (Environment) of the CP are all about environmental issues at various levels. Component 3 (Agro-industries and food safety) deals with environmental and health-related issue at local levels, and Component 4 (Productivity, technology and competitiveness enhancement) is partly touching upon the environmental issue (e.g. social responsibilities in industry covering local working environment). Component 5 (Other cooperative projects), mostly comprising the centres, contains projects that to varying degrees encompasses environmental topics (e.g. strengthening of renewable energy use (hydropower and solar energy)). An overall conclusion is therefore that the environmental issues have been properly mainstreamed in the UNIDO activities in China.

2.3.2 Gender issues

It is noted that amongst the 21 objectives of the UNDAF, No. 4 states: “*Gender awareness is promoted among policy makers, programme partners, and service providers (through an enhanced use of gender-disaggregated statistics)*”, thus being a cross-cutting issue to be addressed by the joint UN working groups. The UNIDOCP as such does however not target gender issues in specific. The project portfolio of UNIDO under the CP addresses global environmental issues or local challenges of other nature (e.g. centre developments), which clearly are gender neutral (with one exception, see below). Nevertheless, the ToR for the Evaluation ask the Team to look into possible achievements in relation to various cross-cutting issues, “contribution to gender equality” being one.

Amongst the responsibilities of the UNIDO field offices are i.e. listed⁴⁴ “*Contribute to gender mainstreaming of TC activities at all stages*”, with the following question to be answered as part of effectiveness of the operations: “*How were gender equality issues taken into account by the field office in these activities?*”. In spite of these statements, it is noted that the RBM Work Plan does *not* contain any items/indicators covering gender issues, thus this issue is not directly reported on.

The ET knows only one concrete project where gender (including women's participation) has been part of the focus: PRN 3.1 (and 3.2) - *Improving nutrition, food safety and security for China's most vulnerable women and children*. This project is financed by the Spanish MDG-Donor the “Children, Food Security and Nutrition Window”. The overall objective of this programme (where UNIDO is one of totally eight UN agencies) is “*to reduce the number of undernourished children and women in China by generating evidence of policy development, improving dietary intake and food safety*”. The programme will target six of the poorest counties representing 1.8 million children and women, and UNIDO focused on the food safety aspects of the programme. The objectives of the UNIDO component were to: train 4-6 enterprises in HACCP⁴⁵; train laboratories in standardised system leading to ISO 17025 accreditation; train 30 food safety inspectors; and develop management plans and policies. The programme has two allotments, and is ongoing (2009-2012) at the time of the Evaluation. A progress report per August 2010 shows that the project started in 2010 and that the participating industries in the programme had been identified, but the training activities had not yet started (only 10% of project implemented).

Additionally, the UNIDO RO, as part of being lead in the One-UN Theme Group on Climate Change and Environment, held one Core Group meeting with Gender Theme Group, and suggested to initiate a meeting dealing with “Gender issues in climate change”. However, the UN partners, in addition to the Chinese counterparts, did not see this as “a priority topic to focus on *at the time*” (according to the UR), so it never materialised.

It is also noted that the YEM project and the cultural project have dimensions in gender, this being welcomed by the Chinese counterparts, knowing that China has long tradition on gender issues since its revolutionary period. The gender focus in China was further boosted by the World Women Conference (1995) in Beijing. Left-behind women, children and elders are key concerns of the current migration in rural China, and gender sensitivity is a new debate area also related to climate change. Possibly the UNIDO training activities do not reflect well the gender focus, but could find its niche for intervention, although it is appreciated that UNIDO is focusing on “technical aspects” in industry. Nevertheless, in theory, being a UN agency, UNIDO should prioritise the beneficiaries, e.g. women in industries.

⁴⁴ According to amongst others: UNIDO/DGB/(0).95/Add 7. dated 26 February 2010, IDB. 37/6/Add. I, dated 20 April, 2010, UNIDO's TC Guidelines of 2006, and other documents describing the responsibilities of UNIDO's field representation.

⁴⁵ Hazard Analysis and Critical Control Points

2.3.3 Contributions to UNIDO's global forum function

Apart from technical cooperation (TC), UNIDO aims at contributing, through its activities, to the global body of knowledge with regard to industrial development. Lessons and experiences from UNIDO projects, but also from conferences, research, expert group meetings, etc. can have a potential impact on policies and decision making if properly communicated and disseminated.

The present evaluation encompassed a wide range of technical cooperation initiatives. Many of them contain global forum aspects. Furthermore, the field office has participated in several conferences and events, promoting UNIDO approaches and priorities. Most notably, the RO took a lead in organising a UNIDO stand at the World EXPO in Shanghai in 2010. However, it was not possible to carry out a dedicated assessment of these aspects, as there are no reports available on Global Forum activities and the related results.

2.4 Processes and performance at country level

2.4.1 Previous UNIDO country office evaluations

The "Evaluation of the Country Service Framework (CSF)" (with fieldwork undertaken in November 2004 and the report submitted in February 2005), being the most relevant of the previous evaluations, touches upon several aspects related to the country level processes and performance. Most of the comments relate to the lack of coordination between the HQ in Vienna and the UNIDO RO (also termed UNIDO Country office – CO, or UNIDO Beijing Office –UBO in the report), like:

- *"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 ... when issues have to be primarily handled at HQs".*
- *"There are, ..., 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. ... some project ideas and proposals had to be stopped by UBO, promising opportunities to realize synergies with other projects of the CSF are missed from the outset or not even developed In so far, this is also a problem of project monitoring". (Example given regarding the "Establishment of a Climate-Friendly Technology Financing Facility", where the funding agency asked whether the project could be managed by UBO)".*
- *"..., 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 ... 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 ... may strengthen the management role of UBO towards CSF programme monitoring,".*
- *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 UNIDO has become a partner recognized ...”

- *“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”.*
- *“UNIDO does not participate in the regular informal donor group meetings, where the UN system is represented by the UNRC”.*

With reference to *Section 1.4.2* above, the following recommendations related to the office management, coordination and overall performance should be highlighted, where the points are supplemented by the ET’s observations during the January 2011 evaluation field visit relevant to the issues:

- *“If ... the UBO cannot be upgraded to a regional centre, 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 ...”.* ET: In 2008 the UNIDO Beijing Country Office (CO) was upgraded to a Regional Office (RO, also covering DPRK, Mongolia and ROK). No deputy UBO has been assigned and the office in general suffers under lack of staffing. The visits of the UR to the project sites are taken on an ad hoc basis, responding to needs for “fire-fighting” or needs to accompany HQ visiting staff, rather than targeting the most important and strategic issues.
- *“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”.* ET: Reference to the previous observation. Visits to project by UNIDO staff must be covered by the project funds, and such visits are limited by the Chinese counterparts if considered “unnecessary”. A pre-agreed annual plan for such visits is not agreed to in advance.
- *“All HQs official missions to China should be endorsed by the CSF team leader (UR) or, in his/her absence, by the CSF alternate team leader ...”.* ET: Such formal endorsement is not made by the UR, as it is up to the Project Managers (sitting in the HQ) to decide on such visits. Although most HQ visits are coordinated with the RO, there have been a couple of cases where such visits have not even been *communicated* with the RO in advance, resulting in no RO staff participating in the field visit. Coordination of visits are not formalised, and is only based on the “good will” and “positive cooperation spirit” of the PM and the UR.
- *“The Programme Development Committee (PDC) should meet regularly”.* ET: The partners are still not meeting in the PDC as intended, as there is no PDC any more. Now, such group is referred to as “Management Team (Chapter 4.1 in the Country Programme).
- *“The “research group” should be maintained”.* ET: The term “research group” is not explained in the evaluation report, but the UNIDO RO staff confirm that it relates to the programme of regularly using interns (post graduates or candidates) to do policy studies and research from well-reputed universities in

North America and Europe (e.g., Harvard University, Massachusetts Institute of Technology - MIT, Bocconi in Italy, etc.). The number of interns has varied, amongst other depending on the availability of the available RO workspace. All the expenses for the internship are covered by the universities, but UNIDO is providing a computer and a desk, and covers domestic travel expenses in case participation in UNIDO meetings or activities are found useful. Before their coming, UR and the responsible persons of these universities have detailed communications regarding the intern's professional background, duration and research subject (often related to UNIDO's mandates and future work for UNIDO's operation in this region). During the intern's stay in the office, the UR provides guidance and instructions on the preparation of the research papers (mostly forward-looking, and in some cases the work has become the basis for concrete UNIDO project proposals). This arrangement has continued since the 2005 evaluation, although with a lower intensity (last year with one MIT intern and one from Bocconi in Milan, Italy). An MIT intern will come summer 2011 to do a study on the control framework in place on industrial use and pollution of water. In most cases, the experience with such interns has been good.

- *“Field missions and technical backstopping of ITCs should be coordinated with the relevant substantive branches at HQs”*. ET: With a person specifically dedicated to the follow-up of the ITC in the RO, directly reporting to the HQ, the situation seems to have improved. The horizontal communication between branches and PMs in the HQ however, does not seem to function optimally, as the synergy of utilising the centres both in the China and in third world countries has not been fully exploited. With respect to the energy-related centres (ICSHP and ISEC) the responsible branch at UNIDO HQ is currently developing proposals for an improved and closer cooperation between centres and UNIDO.

2.4.2 Self-assessment of the UNIDO regional office

a) UNIDO Field office assessments, overall aspects

The China UR was asked by the ET to make a critical self-assessment of his office's achievements based on the work plan for 2010, related to the outcomes listed in the RBMs⁴⁶. The standard RBM work plan framework for all UNIDO field offices comprises the following five main outcomes:

1. UNIDO visibility enhanced at global, regional/sub-regional and country levels.
2. Responsiveness of UNIDO to national/regional priorities: TC programme and project development; and Fund raising
3. Effective participation in UN initiatives at country level, including UNDAF, PRSP, UNDG, One UN, etc.
4. Promoting Global Forum activities with direct link to UNIDO priorities and to the potential increase of UNIDO portfolio in the region and worldwide.
5. Effective management of technical cooperation activities and the UNIDO office.

⁴⁶ Notably, the results-based management (RBM) is a generic tool within UNIDO, with the same Outcomes formulated for all the country offices around the world. It is up to the URs to fill some sensible contents into the various outcomes, being specific for the country in question and the adjacent operations. The project activities planned will thus vary from country to country depending on the prevalent situation, the office staffing, etc.

For each main *outcome* there are generic performance indicators suggested, followed by generic *outputs* with indicators. The planned activities to achieve the outputs will be formulated by each UR, with specified target for the next year and an indication of in which quarter of the year it should be implemented. The reporting will focus on activities reported undertaken and outputs delivered, and on the observed outcomes, in addition to challenges and recommendations/comments to be taken onboard in the continued operations.

b) Self-assessment of the China RO

The self-assessment of the China UR reported on the five main outcomes and the outputs and activities planned by the RO as part of the 2010 work plan for the office. This self-assessment was very useful to the ET and served as a starting point and guiding document for the discussions with the UR on the country operations at large, and the activities in the RO in specific. Mostly, the comments of the UR in the table are self-explanatory, but some comments are noted by the ET below with reference to some of the most important points in the RBM form, following some general remarks on this reporting.

Firstly, the *usefulness* of the RBM at large was considered meagre, partly because the outcomes reported on were very generic, but mostly because it is believed that very few (if any) persons at the HQ read the report. The reason for the latter point was that the UR never gets any feedback from the HQ to any points in the RBM reports, not even questions for clarification or elaboration. The ET fully appreciates this "frustration", because when the UR makes his commitments (to his best knowledge and ability), such reporting should be taken seriously and treated accordingly. Without any feedback, the HQ clearly shows that the report in fact has no significance and a question could be posed as to the purpose of the reporting. One reason for the lack of importance paid by the HQ to the RBM reporting might be the fact that the management power for the projects has not been delegated to the RO. There is a chance that the future involvement of the URs in the planning process of technical cooperation (termed "compact") might improve this situation, avoiding possible double and party overlapping reporting from PMs and URs alike.

The core of the UNIDO activities comprises the projects, and as the PMs are based in Vienna the reporting of the URs is probably considered "less important" than the direct reporting from the projects themselves and the PMs. As such, the RBM work plans from the RO are in fact only dealing with administrative and operational issues of the office per se, with no references to any projects (with a few exceptions, e.g. field visits). In case the reporting however should be maintained, the HQ should show some interest in the topics at stake and give some sort of feedback, for example through an annual video conference where the report is discussed.

Secondly, it is noted that the *progress reporting* on the Country Programme (CP) started by the previous UR (the last report was submitted in March 2010), has been discontinued by the present UR. Obviously, the reasons were that no one in the HQ really *required* such reporting and nobody seemed to *read* the reports in

any case. During the UR-meeting in Vienna in December 2009 it was revealed that some regional offices were requiring the preparation of such reports⁴⁷ and others were not. A request was made for “equal treatment”, and the Branch Head at the HQ decided to stop requesting these reports from all UNIDO offices, although offices could continue preparing such reports if they so wished on a voluntary basis. The UR in Beijing thus decided *not* to continue reporting as no feedback was ever given from the HQ. The reporting on progress is not done periodically anymore, but is at present merely ad hoc telephone conversations with the PMs on specific issues related to the implementation of individual projects at operational level.

The present UR does not consider the CP to be a “live” document, but merely an umbrella nomination for many individual projects. The China RO has no core funds for “programme implementation and management” per se, as the individual projects are managed by many PMs and no holistic management approach can be applied by the RO. The only financial possibility to trigger off new initiatives is the Seed Fund from UNIDO, but this is only available in an early planning phase of new initiatives, and is at present merely used by the Director General (DG) for “fire fighting”. The Industrial Development Fund (IDF) together with targeted use of the Seed Funds could however make a difference. Predictability regarding funding is important, and this is a general challenge as no donor is willing to commit “funds in advance”. The ET agrees with the UR that “programming” could have been useful if MOFCOM participated actively in the implementation of a strategy for targeted use of IDF funds.

Thirdly, as the UR believes that the RBM reporting has *no real impact or importance* on the UNIDO operations in China, and as there is no system that would ensure that good results are rewarded (e.g. by additional resources) or else used for planning of future activities, the focus and priority has mainly been on the development of new projects and supporting the implementation of some key existing programmes (notably the China Climate Partnership Framework where many other UN organisations are involved), and partly on fund raising. The ET fully understands this prioritisation of the UR.

The ET has noted the following comments to the main activities of the China RO, with reference to the self-assessment:

Outcome 1: UNIDO visibility enhanced at global, regional/sub-regional and country levels.

- Around 50-70 people participated in each seminar arranged by UNIDO on EXPO 2010. The Chinese UNIDO partners asked UNIDO to participate on the EXPO and paid the direct costs involved. (As commented upon elsewhere in this report, this shows the importance and value of the brand name “UNIDO”. The UNIDO participation is seen more as a way to avoid any negative publicity by *not* being there, than any usefulness of *being* present.).
- The participation in CCICED is a personal membership of the UNIDO DG.
- The study on “Border Carbon Adjustments” (referred to as “China's

⁴⁷ The Asia and Pacific Regional Office being one.

vulnerability to Carbon Standards/Carbon Taxes” in the RBM plan) was prepared by an intern from MIT, but was not well received by MOFCOM. (It is noted that UNIDO in Thailand and Philippines also showed some interest in the topic and the offices communicated on it).

- All the speeches held by the UR does not “fit” into the RBM table format, which might indicate that the format is not optimal.
- The Theme Group meeting on ender issues related to climate changes was no big success, basically because this issue is not a “felt need” in China. In future Theme Group Meetings on Climate Change, Chinese key stakeholders could be invited to e.g. present the climate change dimension in the new 5-Year Plan.
- Overall ET comment: UNIDO obviously enjoys a relatively high degree of visibility among the stakeholders involved in the areas of cooperation relevant to UNIDO. Several representatives of donors and other agencies in the meetings with the ET confirmed the active presence of UNIDO in several meetings and discussions.

Outcome 2: Responsiveness of UNIDO to national/regional priorities: TC programme and project development; and fund raising.

- (Reference to the comment above on the usefulness of the Country Programme). The new zero-draft CP of the RO has been discussed with MOFCOM already, but still no input from that side has been received, although they have been encouraged to share it with a larger stakeholder group. (The UNDAF document already describes the focus areas where UNIDO can support their Chinese partners). The UR hopes to get the RO staff and counterparts more involved in the preparation of project concepts (Service Summary Sheet – SSS) and later project documents, to be intensified under GEF 5. The office has not been very successful here (especially related to MP projects), and the RO needs someone in the HQ to “buy in” and lobby for the project ideas initiated locally. The ET believes this is “food for thought”. It may not be a very practical approach, but rather calling for decentralisation of decision-making in UNIDO (still with technical expertise coming from HQ).
- The Chinese Government provides USD 600,000 per year to the UNIDO IDF in China. No plan on the use of IDF funds for 2011 has been developed. Does this mean that the IDF is not a very practical funding mechanism?
- The self-financed Trust Fund (MOFCOM) is not developed. This is obviously a funding opportunity not exploited. It might partly have to do with the funds being in local currency and e.g. cannot be used for work outside China (without internal UNIDO swapping between accounts, notably as part of the south-south cooperation). The ET observed one challenge on teaching the Chinese side to develop project proposals, to be screened by the RO, being a “professional skill” in itself.
- Overall ET comment: While the Country Programme above all responds to national Chinese priorities, more could be done to respond to the needs and opportunities of local governments and other actors locally. There are several

positive experiences of cooperation with local partners that suggest that this potential has not yet been fully exploited.

Outcome 3: Effective participation in UN initiatives at country level, including UNDAF, PRSP, UNDG, One UN, etc.

- The Theme Group meetings are seen as “think tanks” only, meaning an arena where ideas and information are exchanged – a “talking forum”, which might give input to the Chinese Government on certain issues. The ET appreciates the importance of such groups, especially to enhance transparency on what the different UN institutions are doing, but the importance of the group meetings are clearly not as significant as the “status” of such groups given in the RBM work plan.
- When the formal cooperation under the China Climate Change Partnership Framework ends (in May 2011) there are no formal UN cooperation projects left. One idea for a joint One-UN initiative could be support to the Chinese initiative on “Low Carbon Cities”, where none of the UN organisations have enough competence to cover all the aspects at stake.
- Overall ET comment: The new UNDAF includes several of the UNIDO cooperation areas. UNIDO has participated proactively in several Theme Groups (has the lead in the Climate Change Group), participates in several joint programmes and plays an active role in the UN Group at the country level.

Box 2: Low Carbon Cities

According to WWF, a low-carbon city means, in the context of a city's rapid economic development, energy consumption and carbon dioxide emissions kept at low levels. Under the joint efforts of governments and enterprises, China is speeding up the construction of low-carbon cities, of which examples are Zhuhai, Shenzhen, Hangzhou, Guiyang, Jilin, Nanchang, Guangyuan, Ganzhou, Wuxi. Low-carbon cities shows that the new integrated concept of urban development has been widely accepted, and it also shows it is the inevitable choice for future sustainable development in urban areas. Low-carbon cities are coordinating environmental and economical development.

With the goal of setting up low-carbon cities, and through establishment and implementation of policies promoting low-carbon economy, governments are guiding enterprises to develop green industries, improve resource and energy efficiency to achieve win-win situation of environmental protection and economic growth, while reducing resource consumption and pollutant emissions.

"Urban Blue Book: China's Urban Development Report (No.2)", published by Chinese Academy of Social Sciences, also suggested that construction of low-carbon cities is an important carrier for energy emissions and developing low-carbon economy. It will lead the future of the new trend of urban construction. It also pointed out that low-carbon development is the inevitable choice during the process of urbanization in China for controlling greenhouse gas emissions, and effective use of low-carbon energy is the core of urban construction. Obviously, low-carbon city is not easy, and it needs a long-term, continuous process of change. Low-carbon industry, low-carbon technology and low-carbon consumption are the three pillars needed to build low-carbon cities. In China, construction of low-carbon cities faces huge challenges in the three areas.

Edited from People's Daily Online

Outcome 4: Promoting Global Forum activities with direct link to UNIDO priorities and to the potential increase of UNIDO portfolio in the region and worldwide.

- This outcome is partly overlapping with Outcome 1, and the Global Forum activities are not directly reported on, only referring to Outcome 1.
- There is obviously a lack of information exchange between the different UNIDO centres in China, with reference to UNIDO's south-south activities. The ET however questions whether this is really a "felt need" amongst the centres and thus at all required? There might be a need to raise awareness in the centres, especially on UNIDO's policies and preferred approach to "development assistance" in developing countries in general. This because it is realised that the official Chinese development assistance has a different approach than the mainstream of Western countries (UNIDO's included), and that the country is both a donor and a developing country at the same time. This also might include awareness raising (e.g. preparation of written presentation material) to other UNIDO country offices around the world on the services that can be offered by the Chinese centres.
- The participation of UNIDO in the China-Africa Business Council has not materialised, as it has not been clear *who* in the RO should take responsibility (the UR or the one delegated this task, namely the Senior Technical Advisor on Investment and Technology Promotion). The ET observes that in this case, the fact that the two involved officers are at the same formal employment level in the UNIDO system, and that the Sr. Technical Advisor reports directly to the HQ, has been a factor hampering progress.

Outcome 5: Effective management of technical cooperation activities and the UNIDO office.

- The video conferences have not started. Obviously, there has not been a felt need with the UR to hold these conferences as it is unclear how the UR can be held responsible for implementation of the projects.
- There are hardly any Steering Committees, established in projects any more, so meetings are neither held.
- The indicator of 30% visits to project sites is not very practical, especially as a projects might have many locations in the country.
- The idea was to prepare Country Briefs for the HQ, containing useful background analysis to the Regional Strategies and Field Operations Division (RSF).
- The roster of national consultants was not considered very useful (has to be frequently updated, not giving more info than can be readily obtained from updated office staff). The ET agrees with this point.
- The UR is commended for holding regular staff meetings, updating staff on Beijing air quality every day and being conscience about reducing the climate footprint of the office.
- Monitoring the office operation budget is any office head's obligation and goes without saying.

- Overall ET comment: The UNIDO Beijing office has played a relatively important role in implementation of TC projects as three Project Managers were placed in the office during the CP period. However, it should be noted that the capacity of the office is not sufficient to manage all of the TC activities at present, and neither has this been the obligation of the RO or the expectation of the HQ up to now. Several projects and centres remain without a significant management input from the RO at present, as such input is given from the HQ.

The following observation of the ET can be summarised following the self-assessment of the UR:

- The work plan for 2010 was far too ambitious, with too many activities as compared to the staffing and role of the UNIDO RO in the projects.
- The RBM reporting should concentrate on what is “need to know” and not what is “nice to know”, based on realistic assumptions of what can be achieved.
- There is no *real* cooperation, coordination and joint programme/project development between the various UN institutions, merely information exchange in a non-commitment atmosphere. The One-UN concept has not yet gained proper momentum in China.
- With the highly competent Chinese partners, may be UNIDO should leave more funds to the Chinese institutions to manage, for example CICETE in the case of the south-south centre. This would however require a close monitoring by UNIDO to secure the standard of services and the achievement of agreed outputs and outcomes.
- There should be clear lines of command and reporting in the RO (see later section), with the UR solely in charge of the all activities in the office.

2.4.3 The UNIDO country office setup

Some of the challenges raised in the previous sections are rooted in the organisational structure of the UNIDO Regional Office in Beijing. This structure is attempted captured in *Figure 2.1* in *Annex 7*, and shows the following main characterises:

- UNIDO Representative (UR) and five of his colleagues are institutionally “allocated” to the office (shown in dark beige colour, being posted for in the RO budget), answering and reporting directly to the UR. One of these positions, the Industrial Development Officer, is vacant per January 2011, as the former officer through four years has recently left for another UNIDO position in another country. That officer was responsible for the large MP portfolio and reported both to the UR and to the Montreal Protocol Branch in the HQ. At the time of writing this report, it is uncertain if he will be replaced. This officer was the only *resident* international Project Manager (so-called “allotment holder”) during a long period.
- The National Programme Coordinator is the only Chinese national that is a Project Manger (one project, PRN 5.12 - Development Partnership and Addressing Key Emerging Issues).The other positions are administrative support officers.

- A Senior Technical Advisor on Investment and Technology has been assigned to the RO by the HQ and the main reporting goes to the HQ, but with presumably good communication with the UR (the two officers are at the same level, D1, in the UNIDO system). This Technical Advisor has the ITCs and south-south centres as the main follow-up area, but the ET did not get a clear picture on the actual division of responsibilities with the UR.
- The Industrial Development Officer has been assigned to China by the HQ, in the hope that UNIDO would significantly increase the portfolio of energy efficiency projects, which eventually did not materialise (little success in accessing the GEF funds). He is reporting both to the HQ (Energy and Climate Change Branch) and to the UR, and will leave for another UNIDO position in RSA during first quarter 2011 (replacement is unknown at present).
- The National Programme Officer is seconded from FECO (who is paying her salary to UNIDO, who then pays her directly), and now reports mainly to the UR, whereas previously she worked closely with the Industrial Development Officer (who left). The link with FECO is maintained through annual reporting only.
- The RO is sharing offices (and some common support services, e.g. entrance and security) with the UNIDO International Technology Promotion Office (ITPO), but the two are totally separated administratively.
- Two International Project Consultants sit in the RO, one is assigned by and report directly to the HQs and the other (working with the MDG-F) is paid (employed) by UNDP, but report directly to the UNIDO UR.
- An intern employed and paid by the Australian Government also reports to the UR, and this position is expected to continue also in 2011.
- Various national project staff, not located in the office, are spread around on various projects, reporting directly to the PMs sitting in Vienna.

It is noted that from mid-December 2010, a reorganisation took place in the UNIDO HQ, where the Regional and Field Operations Branch was placed under the Programme Development and Technical Cooperation Division (PTC), which makes the integration of technical and regional aspects easier. However, today the staff in the RO are assigned by (budgeted for in) three branches and formally report to the same ones, although communication also necessarily is ongoing directly with the UR in Beijing.

The organisational set-up in the China RO is not easily understood by outsiders and seems a bit “disorderly” to the ET, although it is clearly understood *why* it has reached its present structure, namely based on historic development and somehow “overtaken by events”. Nevertheless, the ET believes that the structure seriously hamper an effective, and not the least efficient, development and implementation of projects in China, and believe that time has come for some significant changes, elaborated in the next section.

2.4.4 Assessment of the performance and processes

a) Framework structure and conditions. The reorganized UNIDO

The Head of the PTC Division at the UNIDO HQ had a presentation 10 January 2011 on the new principles for the operation of the restructured organisation, with better integration of field operations and offices in the PTC (“*same pocket and same jacket*”). His conclusion is that still the PMs will retain the following main responsibilities:

- Programme and project formulation and development.
- Design, formulate and implement UNIDO programme and projects.
- Monitor the UNIDO Technical Cooperation (TC) activities.

It was further stated that there will be shared responsibility with the UR on “Worldwide information network and provide technical advice and services”; and the Field Office (FO) should “support “ the PM in “administrative, logistical and technical support in TC implementation”. This is captured in *Figure 2.2* in *Annex 7*, taken from the said presentation, showing “HQ & Field as “One”.

Additionally, the importance of “*dialogue with FOs on country portfolio work plan and division of work between HQ & Field*” was highlighted, and that the future FO under the Enterprise Resource Planning (ERP) system should have (underlined by ET):

- “*sufficient system and network support to interact with HQ staff;*
- *sufficient HR capacity to deal with technical themes; and administrative functions;*
- *be responsible and accountable for project implementation and results/impact;*
- *clear reporting lines be established”.*

Lastly, the “Job Description for Field Offices”⁴⁸ states, amongst others, the following tasks (underlined by ET):

- “*Contribute ... programme & project formulation and development by identifying and assessing local needs;*
- *Design, formulate and implement UNIDO programmes and projects ...*
- *Act as a node of UNIDO’s worldwide information net work and, in selected cases, provide technical advice and services to the countries in the sub-region;*
- *Provide all necessary administrative, logistical and technical support to project managers at HQ and UNIDO experts in implementation of TC programs and projects;*
- *Continuously monitor the UNIDO TC activities ... and ensure that these are in line with the defined regional and/or country strategies, work plans”*

⁴⁸ DG’s Bulletin, UNIDO Secretariat Structure 2010 UNIDO/DGB/(O)95/Add.7

The clear notion is to achieve a better integration of the FO and HQ operations, encourage a more proactive FO, but at the same time the project responsibilities will be retained with the PMs located in the HQ.

The main question of the ET is: How can the FO, lead by the UR, be “*responsible and accountable for project implementation and results/impact*” and “*design, formulate and implement UNIDO programme and projects*” when the PM is based at HQs? Clearly there is a major contradiction here (or the UNIDO management has a different interpretation of prevalent terms/terminology than the ET), as the only way to be *accountable* is to be *responsible*. An important issue is also to whom the PMs are reporting, to the HQ or to the UR.

A widely accepted international principle is that the control and management and the sole responsibility of funds and activities must rest with the ones that eventually will answer for the results (and other impacts) of a project, and subsequently the success or failure. With the revised UNIDO approach, the responsibility seems to be divided, and this will hardly work satisfactorily in the long run. The ET interprets the UNIDO management’s suggestions as a way of more actively involving the FOs and delegates some tasks, which indeed is commendable. At the same time it is obvious that the PMs’ power at HQ should not be reduced. This compromise will probably not improve today’s situation.

b) The UNIDO operations in China, and what other donors do

All the Chinese stakeholders interviewed by the ET during their evaluation field visit, with no exception unanimously claimed that it would be a great advantage if the project decision-makers in UNIDO (read: the PMs) were located closer to their Chinese counterparts, meaning located in Beijing. The ones that have had their UNIDO allotment holders in Beijing (notably the two Industrial Development Officers, where one left before Christmas and the other is due to leave during first quarter of 2011) praise the cooperation with their Chinese counterparts and underline that the cooperation was significantly facilitated through the project partners being able to meet face-to-face regularly (even weekly e.g. in the CCPF), or quickly ad hoc when emerging situations so required. The ET clearly appreciates that solving problems and discussing challenges across the table frequently is much more effective than using the phone and email over long distances.

Also, the project partners that had their counterpart (PMs) in Vienna in some cases experienced serious delays in their requests and sometimes no response to e.g. email requests at all (as one project implementer stated: “*we got the answer that the PM was so busy flying to other projects, so he had no time to answer*”). Some partners interviewed also stated that the UNIDO procedures are “*complicated*”, and that problems could be better solved if the partners worked closely together. This also was a point mentioned by several partners related to the procurement of services and equipment in the projects, where the UNIDO HQ undertook the procurement and had the final saying, and where resources and time were spent on translating documents into English and waiting for decisions. (There is even one example from the Solar Centre – ISEC in Lanzhou, where the Chinese partner rather than requesting the use of available UNIDO funds, asked

the Chinese Government to supply funds, due to the “*cumbersome UNIDO procedures*”, leaving the project with unspent funds by the end of Phase I).

One exception to the above is procurement in the MP projects. Here, UNIDO has delegated the procurement to FECO (Division III), but the procurement must still be done in accordance with UNIDO procurement rules, requiring more time and resources. Due to the heavy workload involved in these bidding procedures, FECO hires procurement agents to undertake the work. FECO thus suggested to the ET that more procurement, under a certain threshold, could be delegated to the project partners/companies, under close supervision and monitoring by FECO. Also it was suggested that the decision on shortlists and tender docs in Chinese could be entrusted FECO, to avoid translation into English and time lost. It is noted that related to the latter point, UNIDO RO could still maintain “control” of the procurement through maintaining staff being able to read Chinese docs.

The ET realises that there are always two sides of the coin, and that there might be rational reasons for the PM in the HQ not being able to respond promptly to queries, as expected by the Chinese side. However, that closeness to the projects always facilitates a more effective and efficient implementation, is a fact beyond doubt. It should also give reasons for re-thinking the present UNIDO strategy when many stakeholders make references to the decision-making system of UNDP or other donors being simpler, direct and thus more expedient.

The ET wants to highlight the fact that other bilateral and multilateral donors have (some even “long time ago”) decentralised their project management to their respective Beijing offices (UNDP, ILO, World Bank, EU, GiZ, Norad, Sida, etc.). Such decentralisation principles are based on the well-accepted knowledge that closeness to the market is more appropriate and effective, for all parties. It is also noted that DFID already have closed down their development assistance operations in China (which is the inevitable “next step” following decentralisation). When also realising that the Chinese partner institutions (many are working with several international donors) are staffed with well-educated and competent staff and are contributing in the projects with significant sums of money, the Chinese concerns of decentralisation should be taken seriously. As such China, being both a donor and a developing country, is different from other countries and should also be treated differently, as an equal partner in development. The Chinese can choose their cooperation partners and will inevitably select the ones that are easiest and smoothest to cooperate with in the longer run.

In this picture, the UNIDO operations are a bit “old fashion” seen from a donor perspective, and a decentralisation of decision-making is in fact long overdue!

c) Recommendations for UNIDO RO set-up and performance modality in China

The ET therefore strongly recommends that the decision-making of *all* UNIDO operations in China are decentralised to the Regional Office in Beijing without delay. If this is not done soon, the worst-case scenario is that the Chinese partners would choose other international partners and gradually UNIDO would be out of business in the country in the foreseeable future.

The ET has not been asked to design a restructured RO as part of the Evaluation, but feels free to present some principles that could prevail:

- The UR should have the *overall* responsibility of all the UNIDO projects in the country, and is as such accountable for the results.
- The Project Managers (PMs) should be based in the RO, under the leadership of the UR, provided they each have a critical mass of projects and tasks to justify this.
- Both international/national staff should generally have a broad environmental project management background, experienced in formulating, planning and implementing/monitoring various kinds of project. A few of the Project Managers *might* be specialists in their fields depending on the magnitude of the project portfolio in the various focus areas (priority and key areas for UNIDO, e.g. climate change, energy efficiency). In case the PMs are more generalists with project management expertise in the overall environmental field, the specific technical expertise needed in the projects will be drawn from the HQ as required and requested by the PM/UR.
- The PMs and the UR would, in consultation with the various technical branches in the HQ, and in close cooperation with the Chinese partners, decide on project design and implementation, use of financial resources, etc. in the projects.
- The PMs will have the main responsibility of the project monitoring and follow-up, assisted by special technical assistance from the HQ according to needs.
- All the staff at the RO, including the resident international and national project consultants not being physically located in the RO (and as agreed beforehand in case of special needs), must be responsible to and report to the UR alone. Only secondary lines of reporting should go to the HQ. The UR, having the full overview of the project implementation, will in turn *report jointly* on the projects to the HQ on a regular basis.
- Some procurement responsibility should be delegated to the RO, and some should be considered delegated to the Chinese beneficiaries (under certain practical thresholds), to expedite the processes. The RO should maintain national project officers, preferably in-house or even through service outsourcing, who can review the Chinese tender documents directly, working in close cooperation with the PMs.

Such restructuring should be possible without employing more staff at the RO, but merely filling the positions with staff according to the main portfolio of projects, also with a holistic view of implementing a “programme”. The Head of PTC Division in his January 2011 presentation listed some question that implies obstacles to the “full involvement” of the field offices:

- “Are field offices equipped with sufficient resources?”
- Do URs have sufficient skills to cover a wide range of UNIDO technical services?

- *Are roles of field office fully recognized and accepted?*
- *Are URs' performance evaluated against their job descriptions and are they accountable for results?*
- *Is there sufficient system support that can enable communication & processes between HQs and Fields?*
- *Are reporting lines clear?"*

These questions would have to be addressed as part of the restructuring and delegation of responsibilities, and new office routines, staff job descriptions and reporting routines would have to be developed. The decentralisation process will inevitably be "painful", like in any institution that has gone through similar processes (notably all the other donors in China!). There will be (is already) a lot of internal resistance in the HQ, especially amongst the present PMs that do not want to move into the "field", and there are "so many good reasons" why this should not be implemented. The challenges that individuals face with regards to schooling for their children, job opportunities for their spouses, etc. are prevalent and real. In the process inevitably some staff will have to be transferred to China RO, some have to change responsibilities at the HQ and again some might have to look for other jobs.

2.5 Other relevant topics

2.5.1 The UNIDO logo issue

The ET has, during the visits to individual projects and UNIDO centres, observed that the UNIDO logo is surely seen as a very useful marketing symbol for many Chinese project partners. The logo is used in information material, posters, business cards, name signs etc., which indeed *could* be a commendable and useful highlighting also to UNIDO as an organisation.

Annex 9 shows examples of regular and irregular uses of the UNIDO logo with various Chinese partners:

- The normal legitimate logo is correctly used on the car purchased under the EST project in Shandong Province. The car shown was used by the resident International Technical Advisor that left in 2006, but the logo is still on the car being used by the Provincial EPB the last four years. (According to recent information from the PM (March 2011), the logo is still on the car since it has not yet been formally transferred to EPB, which it would be "soon").
- Signboards outside the greenhouses in Shandong participating in the MB phase-out programme quite correctly display the logos/names of the participating partners UNIDO (the correct logo), EPB and Ministry of Agriculture.
- An interesting observation: the certificates issued to the industries participating in the EST programme in Shandong Province does *not* include the UNIDO logo, although it surely *could* have been inserted without violating the correct UNIDO use. (This must mean that the Chinese project partner does not consider the logo so important in this case, but only the highlighting of the local Shandong Environmental Sound Technology Promotion Centre having been established under the project. This approach is appreciated by

the ET, but also shows that as the project, and the project centre activities, are geared at national activities only, the UNIDO reference is not so important⁴⁹.

- International Solar Energy Centre (ISEC) in Lanzhou is using the framed globe of UN, inserting the name “ISEC-UNIDO” or “UNIDO-ISEC” on the signboard at the entrance of the centre and on some presentation material. This is a clear tampering with the logo, although not even “consistent” tampering. The reference to UNIDO and the UN system at large is a very important marketing strategy for the Centre, clearly seen as a door opener internationally (notably, the large conference hall of the Centre also displays all the national flags of the UN).
- The International Centre for Small Hydropower (ICSHP) in Hangzhou also uses the UN globe, but has inserted its own name (“ICSHP”) instead of “UNIDO” in the logo.
- The company Zhejiang Jinlun Electromechanically Co. Ltd, closely located with ICSHP and with operations partly integrated with the Centre, has displayed the certificate issued by UNIDO to the Centre in their premises, easily making the impression that UNIDO is backing the services and equipment also from the company. This might give this fully commercial company an unwarranted competitive edge in the market.
- The International Institute for Monitoring and Management of Environment and Resources (IMR) in Beijing has kept the original UNIDO logo and name but has surrounded it by a double circle with own name in it.
- The UNIDO Investment Promotion Programme Office (IPPO) for Southern China in Nanning (not visited by the ET), has on its website, along with the normal UNIDO logo, also a symbol where the UNIDO name is displayed on a coloured background together with the website address of the Centre.
- The Subcontracting and Partnership Exchange (SPX) in Chongqing is still using the name and logo of UNIDO, although there is no longer a valid agreement and no technical cooperation projects relating UNIDO to the SPX host.

The above examples show that in some cases UNIDO and its Chinese partners do not direct sufficient attention towards the use of a trademark like UNIDO’s logo. This might partly have to do with socio-cultural habits, and is assumed, to some extent, to be the result of ignorance on the formal regulations on the use of the logo. Nevertheless, the uses represent infringements against UNIDO rules, which clearly forbid the modification of the UNIDO logo in any way. UNIDO has to take grips to enlighten the partners on the use of the logo and make sure that illegal uses are coming to an end.

⁴⁹ In this case also another point should be mentioned: the certificates is an official certificate, which are issued under certain governmental rules, including the design, the text, etc. To use the UNIDO logo on the certificate, they would need official rules on how to use it, which at present do not exist. Therefore, normally official certificate issued by the Government would not include a logo of an international organization. (Nevertheless, had the logo been important, as with some centres, it would have been displayed in some other format (not official), which it is not).

2.5.2 Procurement procedures

UNIDO is normally undertaking the procurement for the projects from the HQ in Vienna, through the central Procurement Unit. This has been a pragmatic solution up to present as the organisation is too small, and it is too costly, to have procurement experts in each Country Office (CO)/Regional Office (RO). As also the Project Managers are located in Vienna, this set-up has facilitated a quick communication between the decision-makers in the project within UNIDO. The COs/ROs, as well as the PMs, have however been authorised (after receiving training) to carry out decentralised procurement (i.e. without involvement of the central procurement unit) for value less than 20,000.

Several of the Chinese project partners met by the ET, had comments to the present UNIDO procurement set-up. Some claim that the procedures are very rigid and many do not fully understand how they work⁵⁰. They claim the procedures take too long time, with extensive communication with the UNIDO HQ on all small issues related to procurement. An example is ISEC in Lanzhou (the Solar Centre), where allocated project funds were not used for procurement due to the claimed cumbersome and time-consuming procedures, and instead additional Chinese funds were applied for, received and claimed to be much quicker.

Due to the high level of competence and capacity of the national project partners, the country has however over time obtained a special status amongst the UNIDO cooperation countries as many projects in China are executed nationally. FECO is the responsible Chinese partner for the portfolio of MP and POPs projects; and due to the competence and staffing of the institution; UNIDO has delegated much of the responsibility regarding procurement to them. FECO is using its own procurement rules, being similar to those of, and thus acceptable to, UNIDO, and use their own procurement department to source the purchased equipment to the participating companies/institutions.

Nevertheless, the FECO division responsible for MP project raised the issue of procurement with the ET. They claim that doing procurement according to UNIDO rules requires additional resources and does not allow to delegate procurement to beneficiary companies. Due to this, FECO suggests that more of the procurement could be left with the project partner companies themselves to undertake, in line with the trend amongst other donors, who to a much larger degree delegates responsibilities.

The ET appreciates the views of FECO in this respect, and notes that e.g. UNDP has delegated procurement responsibilities to their main cooperating partner, CICETE and FECO (the latter for MP projects, like UNIDO). UNDP also in some cases does the procurement themselves (notably for international consultants), as they have the competence in the Beijing office. UNDP and FECO are at present exploring the possibilities of delegating some procurement responsibility

⁵⁰ The ET did not have the time and mandate to go into detail on the procurement rules and how they are practiced in China. However, the information collected seemed to warrant the analysis of procurement issues in China, which might lead to a separate and more in-depth assessment later on.

to the companies/institutions (provided the operations are in line with MP rules), as part of the so-called “performance-based implementation” modality. Such delegation will however be done on a case-by-case basis where the companies might be delegated procurement of hardware equipment (easy to monitor by FECO), whereas more software-like and TA procurement will be done by FECO in consultation with UNDP Beijing office. It should however be noted that international bidding procedures are a requirement of the multilateral donors (MLF, GEF) and restricting *all* procurement to local companies is thus not an option for UNIDO.

In principle, the procurement should have a flexible modality on a case-by-case basis, which takes into consideration the nature of the individual project, type and size of procurement and the ability and performance of the companies, which will have to be properly assessed beforehand. Also, as UNIDO clearly needs to have control on how the funds are spent, UNIDO and FECO must prepare and agree to procurement rules and common monitoring and control routines in advance to be used in such cases. Similar procedures as used by the UNDP could be considered also for use in joint UNIDO/FECO projects.

This principle goes both for the delegation to companies by FECO, and for FECO procurement itself. UNIDO RO in Beijing should also have the required procurement expertise and Chinese language capabilities in-house to be able to monitor and make decisions in the process, without involving UNIDO HQ. This will save time and efforts for all parties. Also in this context, the RO should be delegated the power to decide on larger procurements than today’s threshold, and the ET suggests that the limit of USD 50,000 is also instigated here, as this is the threshold used by UNDP today.

However, it should be noted that the modality of decentralised procurement (i.e. procurement that is not done by the central Procurement Unit but either by PMs or URs) implies a risk as the persons deciding on the award of contracts are also those who are in charge of the project. The ET understands that other agencies (national and international) maintain a more strict separation of these functions to avoid the risk of abuse. Consequently, the question of *who* should carry out decentralised procurement needs to be dealt with in connection with the issue of responsibility for project management.

2.5.3 Project Reporting

The ET will just briefly touch upon this issue, as it has been raised by e.g. the FECO staff, claiming that there are “too many reports” required by UNIDO (as compared to e.g. the World Bank). The reporting modality is following the normal procedures used in UNIDO for all countries: There are four quarterly progress reports every year related to each tranche/allotment, The report follows a standardised format and also contains a request of payment for the next quarter based on the progress reported in the previous quarter. Similar procedures are also found in other UN agencies, notably in UNDP, and the ET believes that this system is appropriate.

For multi-year projects however, new tranches are often allocated (new project phases) by UNIDO to continue the efforts, at the same time as previous tranches

are not yet spent, but carried over to the next project phase/year. However, the quarterly reports follow the financial tranches and not the project activities, meaning that each tranche still requires a report although they are financing the same activities, meaning running in parallel. This means double reporting on the same activities but on different money! To the ET this system seem to be unnecessarily bureaucratic, and it should be possible to modify the reporting format so that only one report is issued, but still with the funding spent in the period split on various tranches.



Main conclusions and recommendations

The following sections briefly summarise the conclusions and recommendations in the previous sections and partly in the annexes to the report. For conclusions and recommendations on the individual projects visited, reference is made to *Annex 6* (not repeated here).

3.1 Main conclusions

The following overall and main conclusions from the previous chapters are summarised below:

The Country Programme - overall:

- UNIDO has during the last decade built up and maintained a considerable and commendable portfolio of technical assistance projects in China.
- The thematic priorities of the UNIDO Country Programme are considered highly relevant to Chinese priorities, policies and programmes, The CP is also fully in line with the UNIDO fields of competence and policies, and complies and blends well with the strategies of UN in general in the country. UNIDO's efforts in the country are clearly contributing to MDG 8 – environmental sustainability. Several other MDGs are either not a priority for China anymore (MDG 8 – global partnership), or UNIDO is not contributing because of its mandate (e.g. education, health). Potential for increased contributions exist for MDG 1 – eradicate extreme poverty and hunger and MDG 3 – improved gender equality and empower women.
- It is however noted that, given the high relevance and importance of the sectors “Agro and Food Safety” and “Climate Change” (especially related to energy efficiency) in China at large, and in the UNDAF in particular, the potential for UNIDO support is not fully utilised.
- There is little ownership to the UNIDO CP as such (as opposed to generally high ownership at the project level) both in UNIDO HQ, UNIDO RO and with the Chinese partners. The CP seems only to be a collection of individual projects grouped under certain components, and has no strategic value or use as a unified “programme”. It is mainly used for practical communication of UNIDO's portfolio in the country.
- No easily observable synergies between projects have been detected. However, it is also noted that there is no requirement in the project document format to identify and develop such synergies.

- While UNIDO's portfolio in China has a clear focus on global environmental issues (ODS, POPs mainly), activities outside the environmental field seem to be spread too wide thematically and geographically. As a result, the China portfolio appears too fragmented as compared to UNIDO's implementation and follow-up capacity in the country (and in the HQ).

Component 1 - Energy and Climate Change (CC):

- Despite the well-proven UNIDO expertise in energy efficiency measures (e.g. in Town and Village Enterprises (TVEs)) and CC partnership at large, it has not been possible to meet the expectations of a stronger UNIDO portfolio in this sector. Notably, one Industrial Development Officer was allocated to the RO late 2007 from the UNIDO Energy and Climate Change Branch in hope of gaining access to more GEF project funding in this field, which unfortunately did not materialise.
- UNIDO has clearly met some institutional barriers with tough competition amongst agencies applying for GEF support (e.g. UNDP and the World Bank), and UNIDO did not succeed here. The ET has no clear answer to *why* this is so⁵¹, but the good results in the energy efficiency sector so far and the views of several interview partners suggest that the existing institutional barriers *can* be overcome by UNIDO to get access to the required GEF funds.

Component 2 - Environment:

- This component mostly include MLF funded MP projects and POPs projects financed by the GEF. The projects are targeting global environmental challenges and support China to fulfil the country's obligations in relation to the international conventions.
- For the MP and POPs projects the main responsibility for implementation is left with MEP/FECO, also having taken over some of the procurement lately. This delegation of project implementation (national execution) has worked well, as FECO has appropriate professional capacities and systems in place to ensure quality of implementation.
- In both areas, MP and POPs, the projects are contributing effectively to the overall objectives of phasing out harmful chemicals.
- However, some of the most pressing needs of China in terms of *local* environmental problems (e.g. water and air pollution), also areas of UNIDO competence and important areas of the UNIDO portfolio in the past, have decreased in importance.
- The UNIDO preventive approach to environmental management (Resource Efficient and Cleaner Production – RECP) has not played a prominent role in implementation of environmental projects in recent years.

⁵¹ UNIDO's problems to access energy and climate change related GEF funding can be partly explained by a comparative advantage of the World Bank to provide co-funding, meeting the relatively high GEF expectations in this regard. Solving the co-funding issue would probably require dedicated strategies to mobilize co-funding from private sector and local governments. The latter face severe challenges as the central Government has imposed ambitious carbon reduction targets on provinces, leading to the shut-down of coal fired power plants in some cases when these targets are not met.

Component 3 - Agro and Food:

- Both projects covered by the evaluation are considered highly relevant to the overall objectives of China and UNIDO and effectively contribute to the overall objectives of food safety. The technical cooperation at the enterprise level combines well with the efforts of other agencies, e.g. the World Bank, to improve legislation and establish a facilitating environment for food safety.
- In both projects the Evaluation Team noted a focus on the export sector, which does not reflect the more pressing needs of China in improving quality of food consumed locally.
- So far, the UNIDO initiatives have focused almost exclusively on the Eastern regions, which can be explained by the above mentioned focus on exports, and which coincides with the interest and funding possibilities of local authorities to strengthen export capacities.
- The food safety area has a good potential for expansion of technical cooperation.

Component 4 - Productivity, Technology and Competitiveness:

- Overall, Component 4 has a very relevant objective, being “better exploiting the private sector’s potential to contribute to poverty alleviation”, and most of the projects under the component contribute to this objective. The only exception is the project on ICT parks, which does not have a focus on vulnerable groups or poverty alleviation. The sector of software outsourcing also does not seem to offer much potential for poverty alleviation and a more equitable industrial development.
- The effectiveness of Component 4 cannot be assessed as none of the projects have been analysed in detail. However, in terms of efficiency there are clear indications that the joint projects have caused difficulties for UNIDO to match implementation with other partners. This is partly due to the HQ-based implementation modality usually applied by UNIDO.
- UNIDO has not used a common approach for the projects under this component. Four projects were implemented by different project managers, three of which based at the HQ; while originally a “cluster approach” was considered, but not implemented.
- In principle, UNIDO’s efforts to promote pro-poor industrial development are highly relevant to UNIDO and China. However, the chances for future funding for such activities seem rather limited given the trend of traditional UNIDO donors to focus on other issues, mostly the environment.

Component 5 – Other cooperative projects:

- Most of the projects under this component provide support to different types of centres. However, several of the UNIDO centres clearly violate the rules for using the UNIDO name and logo, through modifying the design/appearance.

- Funding for support of centres was extremely limited (when compared to similar initiatives of other agencies), and adds little value in terms of capacity building to the centres.
- Many UNIDO centres in China are meant to be *institutions* but are managed as *projects*, thus lacking continuity and long-term perspective (exception are ITPO, Beijing and ISEC, Lanzhou that have established high degree of autonomy).
- The recent placement of a Senior Technical Advisor at UNIDO Beijing office for the purpose of centre coordination is a right step to bring the centres “closer” to UNIDO, with more focus on quality control and proper reporting to UNIDO.
- The recent thematic evaluation of UNIDO ITCs has produced relevant findings and conclusions for the China centres. There is a need to differentiate between types of centres according to importance for UNIDO operations, thematic linkage with UNIDO focal areas and type of institutional linkages established between UNIDO and such centres.

UNIDO China operations and performance:

- The UNIDO Regional Office in Beijing has a relatively complicated organisational structure, characterized by many lines of command and reporting. This is a result of gradual development and historic reasons, where the office has largely been overtaken by events, to some degree steered by ambitions in the UNIDO HQ.
- The UNIDO Representative lacks the formal control of a couple of the senior officers, as they are placed in the office by the HQ branches, with no clear lines of command and reporting. Notably however, the UR gets some reports from these officers.
- The RO has a limited authority to take decisions at project level, sometimes requiring quick feedback, as the PMs are sitting in the HQ (with a couple of exceptions). Most Chinese stakeholders interviewed during the Evaluation also made a comment on this. The ET questions if this managerial set-up also creates some unnecessary transaction costs (e.g. international travels).
- Most Chinese stakeholders however claim that the UNIDO RO gives valuable contribution to industrial development in China.
- Clearly, all other bilateral and multilateral organisations/agencies visited (and heard of) have a more decentralised decision-making already, including UN agencies. The Chinese partners interviewed all made a point of highlighting this “potential for improvement” within the UNIDO system.
- China is “special” by both being a developed and developing country, where development is fast and the frame conditions change quickly. Thus, the country cannot be treated on equal terms with other UNIDO cooperating developing countries. UNIDO decision-making needs to be close to the Chinese market in order to be able to respond expediently to the changing needs.

- The Results-Based Management (RBM) Work Plan with the five outcomes has not been a very useful tool for proper RO performance reporting. The main reason is that obviously nobody is reading the reports at HQ, as there are no follow-up actions on the reports.
- The RO play an important role in project identification at present, adapting the local ideas and initiatives to fit UNIDO requirements, both in terms of format and alignment to objectives.
- The Chinese IDF funds seem to be utilised on an ad hoc basis, and there are no clear co-funding requirements identified by UNIDO. Possible potential for leverage is not fully exploited.

UNIDO and the UN in China:

- UNIDO cooperates and contributes well in several joint UN projects, e.g. in the MDG-F funded Climate Change Partnership and through participation in several UN Theme Groups, including the theme-leadership in the UN Theme Group on Climate Change.
- The ET noted that UNIDO enjoys a good reputation among UN sister agencies, and that the new UNDAF takes on board and includes UNIDO competence areas.
- There are however no trends towards increased UN cooperation (“One-UN” processes) in China.
- Other UN agencies have decentralised authority to the field offices more than UNIDO. By also decentralising decision-making UNIDO would make cooperation with other agencies more efficient.

3.2 Main recommendations

The following are the main recommendations given by the ET on the country programme at large and the operations and performance of UNIDO in China. For recommendations to the individual projects visited during the evaluation, reference is made to *Annex 6* to this report (not repeated here).

Administration and management:

- UNIDO should as soon as possible decentralize project decision-making to the Regional Office in Beijing. This would imply that the project management authorities should be (at least partly) based in Beijing to ensure a closer and more direct hands-on cooperation with the Chinese counterparts and more expedient handling of prevalent issues.
- When the Project Managers sit in Beijing RO, “Focal Point Officers”(or “Deputy Project Managers”), should be appointed in HQ Vienna, to be the main communication link with the PM and ensure that the required backstopping services to the projects are given by UNIDO HQ.

- In such set-up, the UNIDO HQ will still play an important role as centre of excellence and would provide the technical expertise to the projects on request from the RO/PMs in Beijing.
- The staffing of the RO in Beijing must reflect this new hands-on management mandate of the office. Both international/national staff should generally have a broad environmental project management background, being experienced in formulating, planning and implementing/monitoring various kinds of projects. There would be a need to have a couple of staff with specialised sector knowledge, depending on the focus areas decided to be pursued by the office. Also skilled staff with Chinese language skills would be needed to ensure proper monitoring of national execution processes, e.g. Chinese tendering processes.
- The international staff that have left (e.g. two Industrial Development Officers), or who will be leaving, should be replaced (e.g. covering the theme of climate change/energy efficiency).
- UNIDO should consider using the national implementation modality applied under Component 5 also for other projects in China (i.e. leaving more responsibility to the Chinese partners), thus identifying other institutional partners with similar capacities as MEP/FECO.

Procurement:

- Consideration should be given to delegating more procurement responsibility to the RO, including setting a higher threshold for such local procurement. UNIDO should benchmark with other similar agencies here, notably UNDP that has set the limit to USD 50,000 (around 34,000 equivalent), whereas UNIDO today uses 20,000. This would require that procurement expertise is maintained at the RO. The concrete modality should minimise the risks associated with decentralised procurement and separate project implementation responsibility from procurement decisions.
- UNIDO and FECO should together explore the possibilities if instigating a more flexible procurement modality (especially on MP and POPs projects) by e.g. involving institutions/companies more in the procurement process.. Decisions on procurement delegation to counterparts could be taken on a case-to-case basis, depending on the nature of the project, the performance and record of the local partners, etc. Proper monitoring and control mechanisms must be prepared and implemented, avoiding UNIDO staff wasting time on small procurements, but at the same time following closer the larger contracts. With relevant procurement expertise in the UNIDO RO, such flexibility would also reduce the time and cost of procurement.

Reporting:

- A “one-line” reporting from the RO China to the HQ should be instigated. The UR, who would have the total overview of all the UNIDO operations in the country, will be responsible for the reporting. Routines for internal reporting by the various officers/PMs in the RO to the UR and standardised reporting formats would thus have to be prepared. Likewise, feedback from the HQ to the China operations should go to the UR, and project specific

information/correspondence would go directly to the PM, copied to the UR as required.

The Country Programme:

- The UNIDO project activities in the non-environmental fields should gradually be concentrated on fewer thematic areas than today, and also clearly be limited to fewer provinces, both in order to initiate possible synergies between projects and to ease monitoring. UNIDO projects should also target areas where they can be “pilots” or “models” to other projects, being replicated at a larger scale by Chinese partners. Such “sharpening” of the UNIDO scope in China must clearly be based on the felt needs of the Chinese partners and must be developed based on a participatory approach. The area of food safety seems to be a promising candidate for future thematic focus in the non-environmental field.
- The Country Programme should in the future be used as a strategic tool also to plan the use of IDF funds and UNIDO Seed Funds in a more “targeted” way to support project development in the geographic and thematic focal areas chosen.
- UNIDO should further build upon the good results achieved so far in the area of food safety. Efforts should be made to mobilise additional funding from national and international sources. For future activities it is recommended to reconsider the strong focus on exporting enterprises and target smaller companies and local consumers/markets. With regard to the regional focus it is recommended to also target Western and North-eastern regions of China.
- As poverty alleviation is the overarching objective of UNIDO activities, the focus on poverty should be sharpened and more profoundly addressed. To achieve this, strong key Chinese governmental funding and implementing partners should be identified and standardised UNIDO methodologies and approaches, such as Cluster Development or Value Chains, should be promoted and applied.
- The RO’s role in project identification could be strengthened. This will hopefully automatically be a positive impact from relocating dedicated PMs to Beijing and decentralise decision-making, but it could also be improved by developing “call for proposals” to access IDF funding in targeted thematic/geographical focal UNIDO areas. At the same time minimum co-funding ratios for IDF funded projects could be defined.

The UNIDO centres:

- Full responsibility of projects supporting centres’ operations should be with the China RO. Some UNIDO centres need to be backed up by substantial technical assistance from UNIDO HQ (e.g. renewable energy) and cooperate closely with relevant UNIDO worldwide programmes.
- A distinction should be made between “UNIDO Centres” (e.g. ITPOs) and “UNIDO Partner Centres” (e.g. ICSHP and ISEC). The former should have a strong thematic link to UNIDO key areas and be under UNIDO control. The latter could have a thematic link to UNIDO, receiving some “hands-on”

guidance from UNIDO on the operations, but without the close formal institutional link and UNIDO control.

- Minimum requirements for capacity and quality, procedures for quality control and mutually binding agreements between UNIDO and “partner” centres, should be introduced as soon as possible.
- The ITCs, where such “quality assurance” does not apply (e.g. ICM, SITPC, IMR), should be removed from the list of UNIDO ITCs (and must stop using UNIDO name and logo, as they are not affiliated with UNIDO anymore).
- Such centres could however (voluntarily) participate in a UNIDO network maintained by the South-South Cooperation Centre and maybe graduate to “UNIDO Partner Centres” later.
- There should be a clear strategy to “market” both the “UNIDO Centres” and the “UNIDO Partner Centres” in Vienna and in other UNIDO COs, for services to be utilised in other developing countries, and appropriate information material should be prepared.
- The use of the UNIDO/UN logo in the centres should be closely monitored and “creative” new designs of the UNIDO logo should not be allowed.
- When defining the future relationship between UNIDO and centres in China, the recommendations of the “Thematic Evaluation of UNIDO International Technology Centres” should be taken into account.
- The RO, through the UNIDO South-South Centre, should in general concentrate more efforts in facilitating south-south cooperation with focus on Africa, especially in encouraging local production capacities on appropriate affordable technologies. An important part of this would be producing marketing material (on paper and web) and raise awareness in the HQ and especially in the UNIDO COs on the possibilities of cooperation with Chinese (UNIDO) centres.

IV

Lessons learned

About UNIDO centres:

When a new UNIDO centre is established and consequently the UNIDO name (and logo) is used by a new and rather weak organisation, there is a tendency for the name and logo to be used indiscriminately and without a clear “firewall” between the UNIDO-related activities and those under counterpart control. There is also a considerable risk that the existing rules for the use of the UN name, in particular the use for commercial purposes that has been prohibited by the UN General Assembly, are not adhered to. As a result there are risks to the reputation of UNIDO. Consequently, a strong and continuous involvement of UNIDO in the management and activities of such UNIDO-related centres are required during the initial years of establishment.

About decentralisation:

Posting project managers in the field office does not necessarily lead to increased project portfolios in the relevant area. When such professionals are located in a field office this should be a coordinated effort, based on identified funding possibilities, interest of counterparts and a match of the project manager’s competences and experiences with the requirements of the position combined with proper management from the head of the field operations. However, decision-making in projects should be as close as possible to the market and beneficiaries, as a general rule.

About UNIDO value added:

UNIDO has offered capacity building support to a wide range of institutions in China (“the centres” in particular). In several cases UNIDO did not possess the necessary capacities, be in terms of sectoral competence (e.g. ITC, materials, recycling) and/or in terms of staff availability (e.g. renewable energy). As a result, the ambitious objectives of such projects are often not achieved and half-functioning entities remain operating without clear guidance and an uncertain future. More rigorous planning is required when partnerships are established, including firm commitments with regard to UNIDO inputs and longer-term scenarios that go beyond the project planning horizon.



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