

Independent mid-term review

PEOPLE'S REPUBLIC OF CHINA

**Review and update of the National Implementation for the
Stockholm Convention on Persistent Organic Pollutants**

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Independent Reviewer: Mr. Jiang Feng

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Acronym

APR	Annual Project Review
AWP	Annual Work Plan
BAT/BEP	Best Available Techniques/Best Environmental Practices
COMFAR	Computer Model for Feasibility Analysis and Reporting
CSO	Community Supported Organization
DDT	Dichlorodiphenyltrichloroethane
FAO	Food and Agriculture Organization
FECO	Foreign Economic Cooperation Office
GEB	Global Environmental Benefit
FSP	Full-sized Project
GEF	Global Environmental Facility
HBCD	Hexabromocyclododecane
IPM	Integrated Pest Management
M&E	Monitoring & Evaluation
MEP	Ministry of Environmental Protection
MIIT	Ministry of Industry and Information Technology
MSP	Medium-sized Project
MTR	Mid-term Review
NCG	National Coordination Group
NEA	National Executing Agency
NIP	National Implementation Plan
NPC	National People's Congress
PBDEs	Poly Brominated Diphenyl Ethers
PCBs	Polychlorinated biphenyls
PCDDs/PCDF	polychlorinated dibenzo-p-dioxins/polychlorinated dibenzofurans
PCU	Project Coordination Unit
PFOS	Perfluorooctane sulphonate
PIR	Project Implementation Review
POPs	Persistent Organic Pollutants
R&D	Research and Development
SC	Stockholm Convention
TCG	Technical Coordination Group
TOR	Terms of Reference
UNDP	United Nations Development Programme
UNEP	United Nations Environmental Programme
UNIDO	United Nations Industrial Development Organization
UPPOPs	Unintentional Produced Persistent Organic Pollutants

Executive summary

The Stockholm Convention (SC) on Persistent Organic Pollutants was adopted in May 2001 with the objective of protecting human health and the environment from toxic and hazardous POPs. It entered into force on 17 May 2004 initially listing twelve chemicals as POPs. New POPs chemicals have been continuously added. China requested UNIDO to prepare a medium-sized project to assist the country to review its initial National Implementation Plan (NIP) and update its NIP to include the newly added POPs.

The project starts with the inventory establishment, socio-economic assessment, and formulation of thematic strategies and action plans as the key inputs to the draft NIP. Stakeholder participation and consultation need to be carried out to collect opinions and comments. Capacity building and awareness raising activities are designed to enable qualified and informed stakeholder participation and consultation. The draft NIP will then be subject to iterative consultations with stakeholders to fully collect comments and incorporate them into the final NIP. The Submission to and approval of the final NIP by the Chinese Government is the final objective and outcome of the project, and can be the hallmark of the successful implementation of the project. Pilot provinces demonstrate and extend the planning exercise down to local implementation levels. The final NIP will also be transmitted to the Stockholm Convention Secretariat for archive and distribution.

The **project design** is logically clear, deliverable and supportive between the objective and activities. It appears to be a simple, “soft” project, but actually it is complex and hard, recognizing the multitude of POPs chemicals and stakeholders involved. The project requires more than an updated NIP. It stresses the study of feasibility of investment options and interventions using UNIDO’s COMFAR tool. It also includes awareness raising and capacity building components to enhance ownership and sustainability.

This project is of paramount importance in that it aims to depict the roadmap by delivering a national implementation plan for China to fulfill its commitments and obligations under the Stockholm Convention in the near, mid-term, and far future. By putting in place an updated NIP for POPs, the project is highly **relevant** with and supplemental and supportive to the countries’ policies and programs for environmental protection and sustainable development. However, the project implementation needs to continue to trace the rapid development of new policies and programs after the project inception, and further improve and guarantee the relevance.

The project implementation is highly **efficient** by fully taking advantages of existing resources instead of starting from scratch. The NIP update has followed guidelines issued by the Stockholm Convention’s Secretariat and imparted by international consultants of UNIDO. It has utilized the experience gained from the initial NIP development and results availed through existing studies funded by other sources. The environmental statistic work on unintentionally produced POPs starting from 2007 has provided time-series data for updating the inventory.

At present, inventories and action plans for Endosulfan, PFOS, HBCD, UPPOPs, POPs wastes and contaminated sites, POPs monitoring have been produced to support the formulation of the new NIP. Based on the above and other assessments, the zero version of the new NIP is made available for the mid-term review. The new NIP is well structured and in compliance

with the Stockholm Convention's requirements as well as the supporting guidelines. It has mapped out time-framed quantitative targets for POPs emission reduction and elimination.

In total 91 actions have been proposed for building institutional capacity, improving policies and regulations, reducing or eliminating releases from intentional POPs production and use, reducing Annex A POPs, eliminating and reducing the emission of PCB, eliminating and restricting Annex B POPs, managing specific exemptions, reducing and eliminating releases of unintentionally produced POPs, reducing releases from POPs stockpiles and wastes, promoting information exchange, promoting public awareness and education, conducting effectiveness evaluation, reporting, monitoring, research and development, and technical and financial assistance. The reviewer considers the updated NIP comprehensive and responsive to the Stockholm Convention requirements.

By looking into the draft updated NIP as well as the inventories and actions for each POP contained therein, a series of questions have been found as follows that may merit attention for correction or improvement in the second half stage of the project implementation:

- PFOS inventory data needs to be cross-checked and consistency assured from PFOSF to formulated products downstream: PFOS use in fire-fighting sector for instance
- Some Endosulfan inventory data are missing: Endosulfan formulated products for instance
- Immediate actions have not been put forward to identify POPs wastes and control risks associated with unconscious handling and improper containment
- A project based approach (COMFAR) has not yet been adopted for technical and financial feasibility study
- There is limited information on the application of precautionary principle
- Opportunities for synergistic implementation of this plan with the national action plans for water and air pollution control have not been adequately explored
- Besides the stakeholders involved in consultation, special and wider consultations should be made with women's groups

It is noteworthy that the project is implemented in the context that China has started the process of SC implementation early from year 2000. Since the first NIP approved and implementation kick-started, China has demonstrated the sustainability the first NIP, whose implementation and effectiveness have been reflected in special evaluations. Thus, based on the previous experience, the **sustainability** of the project outcome can be continuously supported by strong political commitment, improving legal and regulatory framework, flexible financial mechanism, improving institutional capacity, and ever increasing public awareness.

The **monitoring and evaluation** system operated by this project has well met the minimum requirements from GEF. The project document does not design and require this independent MTR, but UNIDO commissioning the MTR is an additional measure for strengthened monitoring and evaluation. For the same purpose, the reviewer suggested that the project may include integrated annual work plan (AWP) and annual project review (APR) into the monitoring and evaluation system by in the second half of the project.

That many participants in the project are **women** helps to ensure the NIP contents to take full account of women's health. Women are the carriers of next generation, and it is of paramount importance to keep women from excessive POPs exposure for the common interest of human beings, and this notion has been well understood by almost all project participants. The current version of the updated NIP has cited data about POPs contents detected with Chinese mother milk for preliminary risk assessment.

In **conclusion**, from both technical and financial point of view, the project implementation has achieved results as planned so far, and is on the right track to progress and achieve expected results. The overall highly satisfactory performance of the project implementation is largely attributed to the high political commitment and competent project management. In addition, that China has accumulated and utilized good experience in implementing the Stockholm Convention to support the NIP update is another important supporting pillar.

Project performance ratings

Evaluation criteria	Rating
Project design	Highly satisfactory
Relevance	Highly satisfactory
Efficiency	Highly satisfactory
Effectiveness	Satisfactory
Likelihood of Sustainability of Project Outcomes	Highly Likely
Monitoring and evaluation systems	Satisfactory
Project coordination and management	Highly satisfactory
Gender mainstreaming	Satisfactory

Key **recommendations** to addressees have been proposed as follows:

No.	Recommendation	Addressee
1	The project implementation should continue to follow the rapid development of new policies and programs after the project inception, and further improve the project relevance.	FECO
2	PFOS inventory data needs to be cross-checked and consistency assured from PFOSF to formulated products downstream.	FECO
3	Endosulfan inventory data should include Endosulfan formulated products for the sake of lifecycle management in general and environmentally sound management of Endosulfan waste in particular.	FECO
4	Immediate capacity building actions should be designed to support rapid identification of POPs wastes and risk containment to prevent large quantities of POPs wastes from improper handling or entering into the environment before final disposal.	FECO
5	The spirit of precautionary principle should be further integrated into the final NIP draft.	FECO
6	The UNIDO tool (COMFAR) or similar tools need to be adopted for rapid technical and financial feasibility study of investment actions, ideally on a project basis.	FECO
7	Opportunities for synergistic implementation of this plan with other relevant national action plans such as the national action plans for water and air pollution control should be adequately explored.	FECO
8	Special events should be organized to facilitate participation and consultation with women groups.	FECO
9	The need to deliver further international technical assistance has been identified which should impart international experiences in alternatives identification, POPs risk assessment, priority setting, and action plan formulation.	UNIDO

The reviewer has observed the follows as key **lessons** gained from the project implementation:

- The logically sound project design provides the basis for the successful implementation of

a project. This project design is logically clear, deliverable and supportive between the objective and activities. In order to secure full and qualified stakeholder participation, the project has designed a special component for capacity building and awareness raising.

- Incorporation of POPs issues into the existing legal and regulatory framework for chemicals risk management and environmental pollution control of a country is one of the outstanding hallmarks of the updated draft NIP, and is the precondition for ensuring the high-level political involvement and the widest stakeholder participation. With the project moving on, opportunities for synergistic implementation of this plan with other relevant national action plans such as the national action plans for water and air pollution control can be adequately explored.
- Though China has accumulated good experience from more than a decade of arduous efforts for POPs pollution control and monitoring, it is still difficult to determine the baseline and target levels of POPs risks in planning actions and strategies for POPs control in the updating of the NIP, due to paucity of data and complexities of modeling, which in turn limits the application of precautionary principle. In the future implementation of Stockholm Convention for a country, special attention and effort should be spent to enable risk assessment as a basis to support the development of POPs control actions, and link the actions with their ultimate impacts and inspire participation of all sorts of stakeholders for the shared goal: POPs risk control.

1. Introduction

China requested UNIDO to prepare a medium-sized project (MSP) “Review and update of the National Implementation for the Stockholm Convention on Persistent Organic Pollutants” to assist the country to review its initial NIP and update its NIP to include the newly added POPs. The project implementation started in February 2014 and the project end date is February 2017. In September 2015, UNIDO has commissioned an Independent Reviewer (Mr. Jiang Feng) to carry out a mid-term review (MTR) of the project implementation.

UNIDO has provided a detailed TOR as an indispensable part of the contract for this consultancy, which lays out the project background and overview, scope and purpose of the MTR, approach and methodology, composition, schedule and deliverables, review parameters, and reporting requirements (Annex 1). According to the TOR, the reviewer has completed desk review and prepared and delivered an inception report on December 7, 2015.

Following the work plan laid out in the inception report, the reviewer has carried out the field mission through on-site observation and intensive interviews with major subcontractors and FECO’s project management team. A presentation has been prepared and made to FECO to introduce and collect comments on the preliminary findings, conclusions and recommendations from the field mission on December 12, 2015.

This MTR report is prepared in outline template provided in Annex 1 of the TOR as the final output to give a comprehensive reflection of the MTR process, findings, conclusions and recommendations in the context of the country development and project implementation. Its draft version has been delivered to the UNIDO PM and circulated to main stakeholders for comments, which has been considered and incorporated into the final version of the MTR report.

2. Evaluation objectives, methodology and process

2.1 Scope and objectives

The mid-term review will cover project activities from its starting date in February 2014 to the start of the MTR in September 2015 and assess the likelihood of the project achieving its intended outcomes and impacts, including their sustainability. It will analyze project performance against the key criteria: relevance, effectiveness, efficiency, (likelihood of) sustainability and impact. Moreover, the MTR assessment will provide valuable inputs to the terminal evaluation at the end of the project.

The MTR should provide an analysis of the likelihood of attainment of the project objective(s) and the technical components or outputs. Through its assessments, the review should enable the Government, counterparts, the GEF, UNIDO and other stakeholders and donors to:

- (a) Provide evidence of results to date and of the likelihood of outcomes and impact in the future. The assessment includes re-examination of the relevance of the objectives and other elements of project design according to the project review parameters.
- (b) Identify the challenges and risks to achievement of the project objectives and to derive improving actions needed for the project to achieve maximum impact and sustainability.
- (c) Enhance project relevance, effectiveness, efficiency and sustainability by proposing a set of recommendations and/or corrective actions with a view to ongoing and future

activities until the end of project implementation.

2.2 Information sources and availability of information

Information has been made available to the MTR mainly by two ways: (1) project documentations provided by UNIDO and FECO, and (2) on-site interviews and observations during the MTR.

Project documentations provided include:

- Project Identification Form and Project Document
- The Contract signed between UNIDO and MEP/FECO (No. 3000021487)
- 8 TORs and contracts signed between MEP/FECO and subcontractors
- The presentation and the report for the NIP update project inception workshop
- The materials/presentations and the report of the inception and training workshop
- PIRs for 2014 and 2015
- The work plan for the NIP update project
- The meeting report for stakeholder consultation and output quality enhancement
- The zero version of the NIP

The mission plan has included a series of interviews and focus group meetings with MEP/FECO, consultants, and key stakeholders in line ministries, representative industries and industrial associations to collect information and verify and validate the process and results.

Table 1 Observations and interviews during the mission

Time	Activity	Participant	Place
Nov. 11, 2015 14:00	Participate in the NIP Update Workshop for the 2015 TCG Meeting on the Stockholm Convention Implementation in China	Representatives of related ministries, industry associations, enterprises, international organizations, local governments, foreign countries, technical support institutions of NIP update project	Xiangtan City Hunan Province
Nov. 27, 2015 9:30	Interview with Mr. Hu Jianxin – technical support expert of NIP update project in field of overall coordination and technical assistance	Hu Jianxin Jiang Feng Shi Chuan	Peking University
Nov. 27, 2015 12:00	Interview with Mr. Huang Jun - technical support expert of NIP update project in field of PFOS inventory and strategic plan	Huang Jun Jiang Feng Shi Chuan	FECO
Nov. 30, 2015 12:00	Interview with Mr. Liu Jianguo - technical support expert of NIP update project in field of Endosulfan inventory and strategic plan	Liu Jianguo Jiang Feng Shi Chuan	FECO
Dec. 1, 2015 9:30	Interview with Mr. Yu Gang - technical support expert of	Yu Gang Jiang Feng	Tsinghua University

	NIP update project in field of UPPOPs strategic plan	Shi Chuan	
Dec. 1, 2015 14:00	Introduce the progress of NIP update project to date	Jiang Feng Gao Xinhua Shi Chuan	FECO

2.3 Methodological remarks, limitations encountered and validity of the findings

The TOR has provided guiding principles and approaches for conducting the MTR. The MTR will be conducted in accordance with the UNIDO Evaluation Policy, the UNIDO Guidelines for the Technical Cooperation Programs and Projects, the GEF Monitoring and Evaluation Policy from 2010 and the Recommended Minimum Fiduciary Standards for GEF Implementing and Executing Agencies.

It will be carried out using a participatory approach whereby all key parties associated with the project are kept informed and regularly consulted throughout the review. The MTR reviewer will liaise with the Project Manager on the conduct of the evaluation and methodological issues.

The reviewer will use different methods to ensure that data gathering and analysis deliver evidence-based qualitative and quantitative information, based on diverse sources: desk studies and literature review, statistical analysis, individual interviews, focus group meetings, surveys and direct observation. This approach will not only enable the review to assess causality through quantitative means but also to provide reasons for why certain results were achieved or not and to triangulate information for higher reliability of findings.

The methodology will be based on the following:

- A desk review of project documents including, but not limited to:
 - The original project document, monitoring reports (such as progress and financial reports to UNIDO and GEF annual Project Implementation Review (PIR) reports), output reports (case studies, action plans, sub-regional strategies, etc.) and relevant correspondence.
 - Notes from the meetings of committees involved in the project (e.g. approval and steering committees).
 - Other project-related material produced by the project.
- The reviewer will use available models of (or reconstruct if necessary) theory of change for the different types of intervention (enabling, capacity, investment, demonstration). The validity of the theory of change will be examined through specific questions in interviews and possibly through a survey of stakeholders.
- Counterfactual information: In those cases, where baseline information for relevant indicators is not available, the reviewer will aim at establishing a proxy-baseline through recall and secondary information.
- Interviews with project management and technical support, including staff and management at UNIDO HQ and in the field, and – if necessary - staff associated with the project’s financial administration and procurement.
- Interviews with project partners including Government counterparts, GEF focal points and partners that have been selected for co-financing as shown in the corresponding sections of the project documents.

- Interviews and telephone interviews with intended users for the project outputs and other stakeholders involved with this project. The reviewer shall determine whether to seek additional information and opinions from representatives of any donor agencies or other organizations.
- Interviews with the relevant UNIDO Country Office and the project’s management and Project Steering Committee (PSC) members and the various national and sub-regional authorities dealing with project activities as necessary.
- Other interviews, surveys or document reviews as deemed necessary by the reviewer and/or UNIDO PM.
- Comparative study: The reviewer will use comparative study as a main tool for the MTR. Quantitative and qualitative baselines and targets will be mapped out to assure questions under each criterion illustratively answered.

The TOR has identified questions under 9 criteria: project design, relevance, effectiveness, efficiency, sustainability, monitoring and evaluation, process, project management, and gender to be answered by the MTR. The reviewer has developed an evaluation matrix to identify source of information and apply methodologies for information collection and processing. To save space of this report, questions from the TOR are not repeated here.

Table 2 Evaluation matrix

Question	Indicator and target	Source of information	Methodology
Project design (Specific questions can be referred to in the TOR)	No indicator or target defined, but will be mapped out during the review	– Project document – Interviews with UNIDO PM and national counterparts at MEPFECO	– Desktop review – Comparative study – Interviews
Project relevance	Indicators to be mapped out	– National policy for development and environmental protection – Regional and international agreements	– Desktop review – Comparative study – Interviews
Effectiveness	Defined by the project result framework and work plan	– Project result framework – Work plan – Output reports – Stakeholder consultations workshop reports – M&E records, including financial statement	– Comparative study – Interviews – Focus group meetings
Efficiency	– Expenditure within budget – Project delay – Timeliness of delivery – Synergy achieved	– Work plan with budget – Project schedule	– Comparative study
Sustainability	– Sources of funding and co-funding – Institutional	– Updated NIP – Thematic study reports on	– Desktop review – Stakeholder analysis

	<ul style="list-style-type: none"> commitments and capacity – Level of stakeholder ownership 	<ul style="list-style-type: none"> financial mechanisms and institutions – Stakeholder interviews – National guiding policies for 13th Five-Year Programs 	
Monitoring and evaluation	<ul style="list-style-type: none"> – Compliance with UNIDO and GEF's M&E requirements 	<ul style="list-style-type: none"> – Project result framework – Project M&E framework – M&E records and reports 	<ul style="list-style-type: none"> – Comparative study
Process	<ul style="list-style-type: none"> – Project implemented on time, within budget, and with high quality output delivered – Effectiveness and efficiency achieved – Impact and sustainability guaranteed 	<ul style="list-style-type: none"> – Stakeholder Workshop reports – M&E reports – Thematic output reports – Budget and financial expenditures 	<ul style="list-style-type: none"> – Stakeholder interviews – Cost-benefit analysis – Focus group meetings
Project management	<ul style="list-style-type: none"> – Project responsibilities well allocated, supervised and coordinated – Project procurement in compliance with UNIDO rules and the national execution model – Project implemented on time and within budget – Stakeholders well mobilized 	<ul style="list-style-type: none"> – Annual work plan – Project management manual – Project management and coordination structure operation reports 	<ul style="list-style-type: none"> – Desktop review – Interviews – Comparative study
Gender	<ul style="list-style-type: none"> – No indicator or target, but will be mapped out during the review 	<ul style="list-style-type: none"> – Output reports – Stakeholder workshop reports 	<ul style="list-style-type: none"> – Stakeholder analysis

3. Countries and project background

3.1 Brief country context

3.1.1 Geography and resources

The People's Republic of China is located in the eastern part of the Asian continent, on the western Pacific rim. It is a vast land, covering 9.6 million square kilometers. China is approximately seventeen times the size of France, 1 million square kilometers smaller than all of Europe, and 600,000 square kilometers smaller than Oceania (Australia, New Zealand, and the islands of the south and central Pacific). Additional offshore territory, including territorial waters, special economic areas, and the continental shelf, totals over 3 million square kilometers, bringing China's overall territory to almost 13 million square kilometers.

China is rich in mineral resources, and all known minerals in the world can be found here. To date, geologists have confirmed reserves of more than 160 different minerals, putting China third in the world in total reserves. Proven reserves of energy sources include coal, petroleum, natural gas, and oil shale; and radioactive minerals include uranium and thorium. China's coal reserves total 1,006.3 billion tons, mainly distributed in north China, with Shanxi and the Inner Mongolia Autonomous Region taking the lead. Petroleum reserves are mainly in northwest and also in northeast China, north China and the continental shelves in east China. Proven reserves of ferrous metals include iron, manganese, vanadium and titanium. China's about 50 billion tons of iron ore are mainly distributed in northeast, north and southwest China. The Anshan-Benxi Area in Liaoning, east Hebei, and Panzhihua in Sichuan are major iron producers. China has the world's largest reserves of tungsten, tin, antimony, zinc, molybdenum, lead, mercury and other nonferrous metals; its reserves of rare earth metals far exceed the total in the rest of the world.

3.1.2 Legislative system

China is a unified multiethnic country with a unitary political system. To ensure that the legal system remains unified yet at the same time adapts to the uneven economic, political and cultural development or different areas, China practices a unified, multilevel legislative system. The National People's Congress (NPC) and its Standing Committee exercise the state power to make laws. The NPC enacts and amends basic laws pertaining to criminal offences, civil affairs, state organs and other matters. The Standing Committee enacts and amends all laws except for basic laws that should be enacted by the NPC. When the NPC is not in session, its Standing Committee may partially supplement and revise laws enacted by the NPC, provided that the changes do not contravene the laws' basic principles.

The State Council formulates administrative regulations in accordance with the Constitution and other laws and reports them to the NPC for records. In line with the specific conditions and actual needs of their administrative regions and on condition that they do not violate the Constitution or other state laws and administrative regulations, the people's congresses of provinces, autonomous regions and municipalities directly under the Central Government, as well as their standing committees, may work out local statutes and report them to the NPC Standing Committee and the State Council for record. In light of their specific conditions and actual needs and on condition that they do not conflict with the Constitution, other laws and

administrative regulations or local statutes passed by their provinces or autonomous regions, the people's congresses and their standing committees of larger cities may enact local statutes and submit them to the standing committees of the people's congresses of their provinces or autonomous regions for approval before they take effect. In addition, these standing committees shall record the local statutes with the NPC Standing Committee and the State Council.

The people's congresses of national autonomous areas have the power to formulate regulations concerning autonomy and local needs in light of their own local political, economic and cultural conditions. These regulations of autonomous regions take effect after they are approved by the NPC Standing Committee. Such regulations made by autonomous prefectures or counties take effect after they are approved by the standing committees of the people's congresses of the provinces, autonomous regions, and municipalities directly under the Central Government; in addition, these standing committees shall record the regulations with the NPC Standing Committee and the State Council.

In China's multilevel legislative system, laws promulgated at different levels do not have the same effect. The Constitution has the highest legal validity, and no other laws, administrative regulations, local statutes, regulations concerning autonomy and local needs, or other regulations may violate the Constitution. State laws have greater force than administrative regulations, local statutes and regulations. State administrative regulations have greater force than local statutes and regulations, local statutes and regulations. State administrative regulations have greater force than local statutes and regulations.

The NPC has the power to alter or annul any inappropriate laws enacted by its Standing Committee. The NPC Standing Committee has the power to annul administrative regulations that go against the Constitution or laws concerned and revoke local statutes that contravene the Constitution, other laws or administrative regulations.

By March 2008, the NPC and its Standing Committee had promulgated more than 229 laws currently in force, the State Council had issued over 600 administrative regulations currently in force, local people's congresses and their standing committees had enacted over 7,000 local statutes currently in force, and the people's congresses of national autonomous areas had enacted over 600 regulations concerning autonomy and local needs. A socialist legal system having Chinese characteristics and centered on the Constitution has taken initial shape. China now has laws governing the basic, important aspects of its political, economic, cultural and social life.

3.1.3 Administrative Division

According to the Constitution of the People's Republic of China, the country's administrative units are currently based on a three-tier system.

1. The country is divided into provinces, autonomous regions and municipalities directly under the Central Government;
2. Provinces and autonomous regions are divided into autonomous prefectures, counties, autonomous counties and cities; and
3. Counties, autonomous counties and cities are divided into townships, ethnic minority townships, and towns.

At the moment, China has 23 provinces, 5 autonomous regions, 4 municipalities directly under the Central Government and 2 special administrative regions. They are: Hebei province, Shanxi province, Liaoning province, Jilin province, Heilongjiang province, Jiangsu province, Zhejiang province, Anhui province, Fujian province, Jiangxi province, Shandong province, Henan province, Hubei province, Hunan province, Guangdong province, Hainan province, Sichuan province, Guizhou province, Yunnan province, Shaanxi province, Gansu province, Qinghai province, Taiwan province, Inner Mongolia Autonomous Region, Guangxi Zhuang Autonomous Region, Tibet Autonomous Region, Ningxia Hui Autonomous Region, Xinjiang Uygur Autonomous Region, Beijing municipality, Tianjin municipality, Shanghai municipality, Chongqing municipality, Hong Kong Special Administrative Region and Macao Special Administrative Region.

3.1.4 Economy

China's socialist market economy is the world's second largest economy by nominal GDP, and the world's largest economy by purchasing power parity according to the International Monetary Fund (IMF). Until 2015 China was the world's fastest growing major economy, with growth rates averaging 10% over 30 years. Due to historical and political facts of China's developing economy, China's public sector accounts for a bigger share of the national economy than the burgeoning private sector.

China is a global hub for manufacturing, and is the largest manufacturing economy in the world as well as the largest exporter of goods in the world. China is also the world's fastest growing consumer market and second largest importer of goods in the world. China is a net importer of services products.

China is the largest trading nation in the world and plays a vital role in international trade, and has increasingly engaged in trade organizations and treaties in recent years. China became a member of the World Trade Organization in 2001. China also has free trade agreements with several nations, including China–Australia Free Trade Agreement, China–South Korea Free Trade Agreement, ASEAN–China Free Trade Area, Switzerland and Pakistan.

On a per capita income basis, China ranked 77th by nominal GDP and 89th by GDP (PPP) in 2014, according to the IMF. The provinces in the coastal regions of China tend to be more industrialized, while regions in the hinterland are less developed. As China's economic importance has grown, so has attention to the structure and health of the economy.

To avoid the long-term socioeconomic cost of environmental pollution in China, it has been suggested by Nicholas Stern and Fergus Green of the Grantham Research Institute on Climate Change and the Environment that the economy of China be shifted to more advanced industrial development with high-tech, low carbon emissions with better allocation of national resources to innovation and R&D for sustainable economic growth in order to reduce the impact of China's heavy industry. This is in accord with the planning goals of the central government.

Xi Jinping's Chinese Dream is described as achieving the "Two 100s": the material goal of China becoming a "moderately well-off society" by 2021, the 100th anniversary of the Chinese Communist Party, and the modernization goal of China becoming a fully developed nation by 2049, the 100th anniversary of the founding of the People's Republic.

The internationalization of the Chinese economy continues to affect the standardized economic forecast officially launched in China by the Purchasing Managers Index in 2005. At the start of the 2010s, China became the sole Asian nation to have a GDP above the \$10-trillion mark (along with the United States and the European Union). As China's economy grows, so does China's Renminbi, which undergoes the process needed for its internationalization. The economy of China has recently initiated Asian Infrastructure Investment Bank in 2015.

3.1.5 Environmental protection

Since the late 1970s, China's economy has developed rapidly and continuously. During the process, many environmental problems that have haunted developed countries in different phases of their 100-year-long industrialization have occurred in China all at the same time. The conflict between environment and development is becoming ever more prominent. Relative shortage of resources, a fragile ecological environment and insufficient environmental capacity are becoming critical problems hindering China's development.

The Chinese government attaches great importance to environmental protection. It believes that environmental protection will have a direct impact on the overall situation of China's modernization drive and its long-term development, and considers environmental protection an undertaking that will not only benefit the Chinese people of today but also their children and grandchildren. Years ago, the Chinese government established environmental protection as a basic national policy and sustainable development as an important strategy, and has adhered to the road of a new type of industrialization. While promoting economic growth, it has adopted a whole array of measures to strengthen environmental protection. Especially in recent years, the Chinese government has adhered to focusing on preventive measures, comprehensive control and overall progress with breakthroughs at some key points, and worked hard to solve conspicuous environmental problems threatening people's health. At the same time, it has continued its efforts for institutional innovation, relied on scientific and technological advances, strengthened the legal system of environmental protection, and brought into full play the initiative of people of all walks of life.

The Chinese government and the Chinese people have made great efforts to protect the environment. But the Chinese government is fully aware of the grave situation of environmental protection in China, because the country is now at a stage of accelerated industrialization and urbanization when the contradiction between economic growth and environmental protection is particularly prominent. In some regions environmental pollution and ecological deterioration are still very serious. The discharge of major pollutants has surpassed the sustaining capacity of the environment. Water, land and soil pollution is serious, and pollution caused by solid wastes, motor vehicle emission and not easily degradable organic matter is increasing. In the first 20 years of the new century, China's population will keep growing, and its total economic volume will quadruple that of 2000. As the demand on resources from economic and social development is increasing, environmental protection is facing greater pressure than ever before.

3.1.6 International cooperation in environmental protection

China stresses international cooperation in environmental protection, and is active in conducting relevant activities with the United Nations (UN) and other international organizations. Over the years, it has dispatched senior delegates to all the meetings of the UN Commission on Sustainable Development, and the World Summit on Sustainable Development and its successive preparatory activities. China and the United Nations Environment Program (UNEP) have conducted fruitful cooperation in the fields of desertification prevention and control, biodiversity protection, ozone layer protection, clean production, cyclical economy, environmental education and training, flood prevention and control on the upper and middle reaches of the Yangtze River, regional sea action plan, and the global action plan for preventing land-sourced pollution and protecting the oceans. China has also established, with the United Nations Development Program (UNDP), the World Bank, the Asian Development Bank and other international organizations, effective modes of cooperation. China has actively participated in the environmental protection and sustainable development activities under the framework of the Asia-Pacific Economic Cooperation (APEC), and attended all the APEC environment ministerial meetings. China's efforts for environmental protection have been acknowledged and praised by the international community.

So far, China has acceded to more than 50 international conventions on environmental protection, and has been active in performing the obligations stipulated in these conventions, which include the United Nations Framework Convention on Climate Change and its Kyoto Protocol, the Montreal Protocol on Substances That Deplete the Ozone Layer, the Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade, the Stockholm Convention on Persistent Organic Pollutants, the Convention on Biological Diversity, the Cartagena Bio-safety Protocol, and the United Nations Convention on Combating Desertification.

3.2 Sector-specific issues of concern

Basically, there are two major sector-specific issues of concern for the NIP update regarding POPs. The first is about how the POPs, new or old, should be incorporated into and addressed by the existing legal and regulatory framework for chemicals management and pollution control. The second is about the application of precautionary principle for POPs risk management.

Until very recently, regulations concerning the evaluation and registration of existing chemicals and new chemicals for their import/export, production and use have been put in place. Management of existing POPs and new POPs can be automatically brought under these regulations. In the future, the focus will be on the development of detailed supporting guidelines for the enforcement of these regulations.

New POPs are listed as hazardous chemicals subject to special environmental management under the Regulation on Environmental Management Registration of Hazardous Chemicals, which was issued on October 10, 2012 and entered into force from March 1, 2013. Under the Regulation, environmental registration and permit are required on the listed chemicals for their production and consumption, and import and export. Risk assessment is required as a basis for making decision on the granting of permits. Enterprises shall establish and

implement a pollutant release and transfer register of the hazardous chemicals and make it available to the public. The Regulation stipulates the responsibilities of local environmental authorities, enterprises, and third-party institutions for implementing the Regulation. However, intrinsic complexities involved in POPs risk management coupled with the ubiquitously weak capacity of the key stakeholders render the compliance and enforcement of the Regulation a formidable task.

Though wastes containing POPs have not yet been included into the list of hazardous waste, the POPs characteristics will well enable them to meet the criteria for being identified, classified and managed as hazardous wastes. China has created complete legislations supported by technical standards and specifications for the life-cycle environmental management of hazardous wastes. However, POPs wastes may be treated as general industrial wastes without clear delineation of their status as hazardous wastes, leading to uncontrolled release and emission of POPs into the environment.

Pollutant discharge and environmental quality standards for different environmental compartments standards have not included POPs, and thus there is no systematic monitoring and evaluation of POPs and related chemicals from the sources and regarding their occurrence in the impacted environment, except for some spot monitoring carried out for scientific research purpose in China. Content limits of POPs and related chemicals have not been established for products and articles that may contain them.

3.3 Project summary

3.3.1 Fact sheet of the project

Project Title	Review and update of the National Implementation for the Stockholm Convention on Persistent Organic Pollutants
GEF ID	5624
UNIDO project No. (SAP ID)	130176
Country(ies)	People's Republic of China
GEF Focal area(s) and operational program	GEF Operational Program 14 on POPs: the objective of the Program is to provide assistance, on the basis of incremental costs, to developing countries and countries with economies in transition to reduce and eliminate releases of POPs into the environment.
GEF Agencies (implementing agency)	UNIDO
Project executing partners	The Foreign Economic Cooperation Office of the Ministry of Environmental Protection of China
Project size (FSP, MSP, EA)	MSP EA
Project CEO endorsement/Approval	11.11.2013
Project implementation start date	18.02.2014

Expected implementation end date (indicated in CEO endorsement/Approval document)	17.02.2017
Actual implementation end	17.02.2017
GEF Grant (USD)	2,000,000
UNIDO inputs (USD)	190,000
Co-financing (USD) at CEO Endorsement	4,000,000
Total project cost (USD) (GEF Grant + Co-financing at CEO Endorsement)	6,000,000
Mid-term review date	01.09.2015
Planned terminal evaluation	31.10.2016

3.3.2 Project description

3.3.2.1 History and previous cooperation

The Stockholm Convention on Persistent Organic Pollutants was adopted in May 2001 with the objective of protecting human health and the environment from toxic and hazardous POPs. It entered into force on 17 May 2004 initially listing twelve chemicals as POPs.

According to Article 7 of the SC, Parties are required to develop a NIP to demonstrate how the country will implement the obligations under the SC. The Party should transmit the NIP to the COP within two years of the date on which the SC entered into force for the country. China signed the SC on POPs on May 23, 2001 and ratified it on June 23, 2004. Hence, the Convention entered into force for the People's Republic of China on November 11, 2004. With the funding from the Global Environmental Facility (GEF) and the technical assistance from the United Nations Industrial Development Organization (UNIDO), the original NIP of China was developed and transmitted to the COP on April 17, 2007.

China requested UNIDO to prepare a MSP to assist the country to review its initial NIP and update its NIP to include the newly added POPs. As China is one of the largest developing countries in size and an emerging economy, an MSP project is necessary to be able to fulfill the obligations under the SC. The requested amount is less than for the original NIP development. The approval of this project is expected to provide the necessary technical support to and facilitate the approval process of the Amendments. The instrument of ratification will include 9 new POPs plus Endosulfan, therefore Endosulfan will be included in the project. Inventories for HBCD will also be included in this project to achieve cost-effectiveness of GEF funding. The following legal clause should be applied for the project: "The Government of the People's Republic of China agrees to apply to the present project, mutatis mutandis, the provisions of the Standard Basic Assistance Agreement between the United Nations Development Program and the Government, signed on 29 June 1979 and entered into force on 24 June 1985."

Preliminary inventories and assessment reports of NIP update each field were completed according to the schedule of NIP update work. The Inception Workshop & Inventory Training Workshop Reports and Task Teams composition & Work plan had been submitted to UNIDO.

The report including the progress of the implementation of the Convention by China to date, the chemical profile for POPs according to the amendments of the Convention, the overall benefits and costs assessment for control of POPs, especially new POPs in China, the needs of capacity of implementation of the Amendments and management of new POPs is accomplished preliminarily. As well as the action plan of public awareness enhancement, management authority improvement, and standard and legal system improvement for control of new POPs were drafted.

The PFOS inventory and strategic plan, including the information of use, stockpiles and wastes of PFOS in China; the inventory of PFOS for the sectors of electroplating, pesticide, firefighting, including the information of export and import; the alternatives and alternative technologies, comparing with EU and other advance standards, and especially test whether the alternatives or alternative technology is environment-friendly; the assessment of the environmental risks and the implementation of the Convention for control of PFOS in social-economic consideration; priority actions for the purpose of controlling PFOS; the evaluation of the capacity of implementation and supervision of relevant authorities and other stakeholders for control of PFOS; the preliminary strategic action plan, is drafted.

The Endosulfan inventory and strategic plan, including the investigating information of the information of use, stockpiles and wastes of Endosulfan in China; the evaluation of the alternatives and alternative technologies in the technical and economic aspect; the assessment of the environmental risks and the implementation of the Convention for control of Endosulfan in social-economic consideration; the evaluation of the capacity of implementation and supervision of relevant authorities and other stakeholders for control of Endosulfan, is drafted.

The HBCD inventory and management and control report, including the information of history production, production scale, manufacturers, production capacity, products flow of HBCD and HBCD contained EPS and XPS in buildings; the information of waste and contaminated sites of HBCD chemicals and HBCD contained building materials on their production, storage, circulation and use; compiling inventories of HBCD chemicals, HBCD contained materials, HBCD wastes and contaminated sites, and inventories of HBCD production, use, import and export. The Evaluation of the alternatives and alternative technologies in the technical and environment-friendly aspect; the assessment of the environmental risks on ecology and health; the analysis of the current situation of HBCD pollution emission, production technology, pollution control technology, and the capacity of the contaminated sites disposal, administration, policies and regulations, financial guarantee of the Convention implementation, public environmental awareness; the suggestion of the need of management and control policies and the improvement of them, is drafted.

The PCDDs/PCDFs inventory report, including the consolidating of the data and information of PCDDs/PCDFs release, and identification of the priority sectors and enterprises; investigation of the typical releasing spots and formulation of the methodology of inventory for typical sectors; the evaluation of the emission intensity of different release resources, is drafted.

The UPPOPs strategic plan, including the formulation of the inventory of PCBs, PeCP, PCPs and other UPPOPs (except for PCDDs/PCDFs), and the inventory methodology for these UPPOPs; the analysis of the inventory of PCDDs/PCDFs, and the priority of the actions for control of PCDDs/PCDFs; the model of synergy effects between the measurement of improving air quality and the control of PCDDs/PCDFs, and identification of the possibility of synergies between the air quality policy and PCDDs/PCDFs, control policy; the analysis of the technology and the evaluation of the costs of control of UPPOPs, is drafted.

The Waste and Contaminated sites report, including the investigating information of contaminated sites of POPs; consolidating the information of wastes of POPs; the formulating of the inventory of ash of PCDDs/PCDFs in the sectors of waste incineration, steel production, iron ore sintering, regeneration of non-ferrous metals; the identifying of the stockpile and contaminated sites of pesticides; the formulating of the waste inventory and investigating potential contaminated land of HCH, PFOS/PFOA, and Endosulfan; the assessing of the gaps of current management, and the identifying of the needs of implementation of the Convention regarding the sound management of wastes and contaminated land, is drafted.

The Monitoring strategic plan, including the needs of implementation according to the requirement of the Convention were introduced; the current status of monitoring and management of POPs; suggestions on the sampling sites selection for POPs monitoring, and recommendation of the staff training, methodology development, and long-term monitoring plan; identification of the priorities for the regular monitoring scheme on the provincial level; advice on the plan of establishment of monitoring lab for country wide monitoring, especially for the PCDDs/PCDFs monitoring; suggestion on the coordinating mechanism for inter-ministries monitoring, including health, environment, agriculture, water, and quality control; and the preliminary strategic actions plan for monitoring of POPs, was drafted.

The implementation of this project will address the country's need for an updated POPs profile and revising priority action plans for old POPs. It will also build China's basic technical capacity for conducting inventories for new POPs, with an eye for broader integration of Stockholm Convention obligations into China's national policies and planning on chemicals management. This project will also create an enabling environment for priority private sector investment on alternatives/alternative technologies. At the government level, it is expected that the project outcomes will provide technical support for China's 13th Five-Year Plan for Environment Protection in relevance to POPs management. At the private sector level, the project intends to make available information on environmentally sound and economically feasible alternatives/alternative technologies and build a platform for public and private financing for priority sectors.

The implementation of this NIP update project will not only benefit China's overall management of new POPs, it will also provide initial support to industrial sectors, mobilize technical and financial resources, and pave the way for large scale demonstration and later scaling up at national level. This will significantly contribute to the global efforts to reduce new POPs production, application and eventually emission into the environment. The revised and updated NIP will be the starting point for the environmentally sound management and reduction of POPs amount in the environment in the long run.

The NIP review and update will provide a living document as basis for the future SC implementation in China. Special attention will be drawn to gathering up-to-date national inventories of the new POPs. This inventory will be the basis for priority setting and action

plan development for the foreseen SC implementation in China. Stakeholders participating in this NIP review and update as well as the PCU team will be able to manage the POPs technically and will use the updated NIP as a basis for environmentally sound management of POPs in China.

3.3.2.2 Project objectives and structure

To review and update the National Implementation Plan (NIP), have it endorsed and submitted by the government to the Conference of the Parties to the Stockholm Convention (COP); and to build China's national capacity for new POPs management.

The project consists of 5 technical components, in addition to project management, as follows:

Project Component 1 (PC-1): Coordination mechanism, regulatory framework and national capacity assessment and awareness raising for new POPs management

Project Component 2 (PC-2): National inventories of new POPs and identification of new POPs alternatives and technologies

Project Component 3 (PC-3): POPs priority setting and capacity strengthening for new POPs management in pilot provinces

Project component 4 (PC-4): NIP formulation, endorsement and submission

Project Component 5 (PC-5): Monitoring and Evaluation

Following are, in brief, some of the expected results of the project:

- National inventories of new and original POPs validated by relevant stakeholders
- NIP formulated, endorsed by the Government and submitted to the SC Conference of the Parties
- Coordination mechanism in place, and national regulatory framework and capacities assessed and awareness for new POPs raised
- Priorities for new POPs decided upon, and capacities for new POPs management in pilot provinces strengthened
- Periodic monitoring and terminal evaluation of project implementation conducted

3.3.2.3 Project implementation

UNIDO will act as the GEF Implementing Agency assisting the national executing agency FECO in coordinating with other IAs to take advantage of the findings and lessons learned from associated projects and program. UNIDO will assist FECO in the execution of the project by drafting TORs for international expert positions and disbursing funding necessary for the recruitment of international expert and for other international expenditure. UNIDO will oversee the implementation of the project through an assigned UNIDO project manager.

FECO administers projects towards the implementation of the Stockholm Convention in China and will continue to coordinate the NIP Update project. It will manage all national and local

elements of the project, be responsible for recruitment and supervision of national expert subcontractors for inventory development, action plan development, NIP draft and finalization. It will provide services and perform the work as agreed in the sub-contract and detailed in the ToR with UNIDO. Subcontracts will be signed by an authorized official of the counterpart and UNIDO. A high-level official from FECO will work as the National Project Coordinator. A National Project Manager shall be recruited by the national executing organization under the subcontract to perform the administration of the project on the national level.

3.3.2.4 Positioning of the UNIDO project

This NIP review and update project can build on existing POPs experiences in the country. Currently, China has a record of 14 GEF approved projects. For example, the project will build on previous capacity building activities such as the UNIDO-GEF projects "Strengthening institutions, regulations and enforcement capacities for effective and efficient implementation of the National Implementation Plan in China" or the development of the original NIP with support of the UNIDO-GEF project "Building the capacity of the People's Republic of China to Implement the Stockholm Convention on POPs and Develop a National Implementation Plan". For the update of the original POPs inventory data and information, the following project, wherever possible, will be used as input: for original POPs pesticides among others the UNIDO-GEF FSP "Environmentally Sound Management and Disposal of Obsolete POPs Pesticides and Other POPs Wastes", the UNDP-GEF FSP "Improvement of DDT-based production of Dicofol and introduction of alternative technologies including IPM for leaf mites control in China", and the IBRD-GEF FSP "Demonstration of Alternatives to Chlordane and Mirex in Termite Control. For the update of the inventory, action plans and strategies, the IBRD-GEF FSP "PCB Management and Disposal Demonstration", the IBRD-GEF project "Demonstration of Alternatives to Chlordane and Mirex in Termite Control", the UNIDO-GEF FSP "Environmentally Sustainable Management of Medical Waste in China" and the UNDP-GEF FSP "Reduction of POPs and PTS Release by Environmentally Sound Management throughout the Life Cycle of Electrical and Electronic Equipment and Associated Wastes in China" will provide a basis for a strategic design of the NIP inventory and action plans. Experiences gained from these projects, including stakeholder consultations will also be beneficial for the NIP review and update.

The GEF's promotion of enhanced global synergies is envisaged within the context of the proposed outcomes for the NIP update project. While efforts will be placed to address the specific country needs, the global coherence of activities will be considered. UNIDO will disseminate lessons learned from various NIP update projects, especially practical experiences gained from conducting new POPs inventories, and recommendations on inventory procedures.

3.3.2.5 Project budget

The project is funded through a GEF grant, amounting to USD 2,000,000 a UNIDO contribution of USD 90,640 (Cash) and 99,360 (In-kind); and the counterparts' co-financing of USD 3,810,000 (cash and in kind), which amount to total project budget of USD 6,000,000.

Table 3 Project budget by component

Project outcomes	GEF (\$)	Co-Financing (\$)	Total (\$)
1. Coordination mechanism in place with national regulatory framework and capacities assessed and stakeholders aware of new POPs	280,000	560,000	840,000
2. Validation of inventories of new POPs (and updating of initial 12 POPs) by identification of new POPs alternatives and technologies	1,000,000	2,050,000	3,050,000
3. POPs priority setting and capacity strengthened for new POPs management based on identification of alternative investment solutions in pilot	400,000	1,000,000	1,400,000
4. Government endorsement and submission of updated NIP to the SC Conference of Parties	70,000	100,000	170,000
5. Periodic monitoring and terminal evaluation of project implementation	110,000	90,000	200,000
Project management	140,000	200,000	340,000
Total (\$)	2,000,000	4,000,000	6,000,000

Co-financing Source Breakdown is as follows:

Table 4 Source, type, and amount of co-financing

Name of Co-financer	Sources of Co-financing	Type	Total Amount (\$)
UNIDO	GEF Agency	In-kind	99,360
UNIDO	GEF Agency	Cash	90,640
Government of China	National Government	In-kind	3,310,000
Government of China	National Government	Cash	500,000

3.3.2.6 Counterpart organizations

The Foreign Economic Cooperation Office of the Ministry of Environment Protection was appointed as the National Executing Agency (NEA) for projects regarding the reduction or elimination of production, usage and releases of POPs. FECO will also serve as the NEA for the proposed NIP update project.

The State Council of China approved establishment of the National Coordination Group for Implementation of the Stockholm Convention (NCG) in 2005. The NCG consists of 14 ministries: Ministry of Environment Protection as the leading agency, Ministry of Foreign Affairs, National Development and Reform Commission (NDRC), Ministry of Science and Technology (MoST), Ministry of Industry and Information Technology (MIIT), Ministry of Finance, Ministry of Housing and Construction, Ministry of Commerce, Ministry of Agriculture, Ministry of Health, General Administration of Customs, State Electricity Regulatory Commission, General Administration of Quality Supervision, Inspection, and Quarantine, State Administration of Work Safety, and the building industry.

FECO in close coordination with UNIDO's project manager will be responsible for mobilizing the support, cooperation and consultation of all relevant stakeholders working in the field of POPs management as required in paragraph 2 of Article 7 of the SC. The Amendments to the SC almost double the number of POPs to be addressed and might require the involvement of additional stakeholders in the inventory and action plan development process. To this end, the first step of the project is to re-evaluate and, if needed, identify new stakeholders. This activity will culminate in a stakeholders meeting, where the key partners for NIP update will be selected. Feedback suggestions and comments received from stakeholders will be reviewed, considered and answered by the project management team.

In particular, the implementation of the proposed NIP update project will involve key stakeholders including the relevant ministries, local provinces, industrial associations, producers, CSOs, women associations, and local communities. Special attention will be given to importers, producers, distributors and exporters of new POP and/or articles containing new POPs and their involvement in inventory activities, priority setting and action plan development. Targeted technical capacity building activities will ensure that relevant industrial sectors have access to information on alternatives/alternative technologies for new POPs and potential cost and benefit of phasing-out activities.

For new POPs, especially POP-PBDEs and PFOS, relevant stakeholders from e-waste recyclers, customs, waste management authorities, potential PFOS producers, fire fighters, carpets manufacturers, industries dealing with PFOS articles such as the photographic industry. Public involvement will be involved in information dissemination and consultation activities such as press media releases, workshops, newspaper articles as well as inventory activities (e.g. household surveys). The stakeholders will participate in different phases of implementation from developing action plans and national strategies to raising awareness and to enhance the countries ownership and accountability of project outcomes. Continuous stakeholder consultation, e.g. through trainings, workshops, meetings, will also be beneficial for building partnerships among the project executing agencies and all relevant stakeholders.

Industrial sector and agricultural sector will be engaged in the process of updating the NIP and understanding BAT/BEP for new POPs reduction. This collaboration will potentially create opportunities to integrate POPs reduction into industrial reform and upgrading. Moreover, local CSOs will be encouraged to share new POPs information with local community to mobilize local resources and promote social attitude and consumer behavioral change.

The SC strongly promotes the involvement of the public in the preparation and implementation of NIP related activities as a major driving force for initiating environmental health improvements. The project seeks public participation by consulting those potentially affected by the production, use and management of new POPs. Relevant community groups, agricultural groups and children groups will be involved in new POPs inventory activities and at the same time informed about human and environmental risks associated with POPs. The information will be assessed to provide a basis for human and environmental risks associated with POPs (potential action plans for detailed environmental and human health risks might be a result).

The communication strategy will include activities for informing the general public on planned activities and achieved results. Special information releases will be prepared and distributed

to different public organizations, especially to women's groups and press media. During the initiation phase of the project, a detailed communication strategy will be discussed and agreed upon UNIDO and the project coordination unit. The UNEP guidance "Developing a communication strategy for National Implementation Plans (NIPs) under the Stockholm Convention on POPs" may be referred to.

The POPs website will be continuously updated on project activities. Feedback, suggestions and comments received by public organization will be reviewed, considered and answered by the project management team

Gender dimensions are also a critical component to be considered during the NIP review and update process. Recognizing that the level of exposure to POPs chemicals and its related impacts on human health are determined by social and biological factors, women, children and men might be exposed to different kinds, levels and frequency of new POPs chemicals (e.g. in the household, agriculture, industry, school, etc.); therefore, gender mainstreaming will be an integral part of this project. The concepts of gender mainstreaming, which is a globally agreed strategy for achieving gender equality and women empowerment, defined by the United Nations.

In practical, especially women's groups and groups involved in the health of children will be involved (as follows) in the activities of this NIP review and update, especially for collecting new POPs data and awareness raising activities. This will be addressed by involving women and vulnerable groups at the sector level (e.g. Ministry of Health, Ministry of Agriculture, etc.), in the project coordination unit (PCU) and national steering committee (NSC), at the stakeholder level (e.g. by involving relevant women's group in the workshops, at the informational level (e.g. gathering POPs inventory data on current POPs management practices, on occupational health data, and consultation about potential and practical post-NIP interventions) and public awareness activities). The national expert on socio-economic assessment will also emphasize his/her assessment on the benefits of new POPs reduction and use on human health, especially women and children, and the environment, as well as the use of new POPs in an environmentally sound manner. These involvements and results will be summarized in the inventory reports to provide a basis for prioritization, development of action plans and drafting of post-NIP projects.

4. Project assessment

4.1 Project design

The Project Document follows the standard format of GEF. It has laid out the project objectives and the project components and outputs clearly with budget, duly justified by the following descriptions regarding issue identification, barrier analysis, incremental reasoning, GEB analysis, risk analysis, policy consistency, cost-effectiveness, innovativeness, sustainability, institutional arrangement and M&E. The project document is annexed with a project result framework, which has set up indicators and their baselines and targets for easy monitoring and evaluation.

Figure 1 below depicts the theory model of the project. It can be seen that the project starts with the inventory establishment, socio-economic assessment, and formulation of thematic strategies and action plans as the key inputs to the draft NIP. Stakeholder participation and

consultation need to be carried out to collect opinions and comments. Capacity building and awareness raising activities are designed to enable qualified and informed stakeholder participation and consultation. The draft NIP will then be subject to iterative consultations with stakeholders to fully collect comments and incorporate them into the final NIP. The Submission to and approval of the final NIP by the Chinese Government is the final objective and outcome of the project, and can be the hallmark of the successful implementation of the project. Pilot provinces demonstrate and extend the planning exercise down to local implementation levels. The final NIP will also be transmitted to the Stockholm Convention Secretariat for archive and distribution.

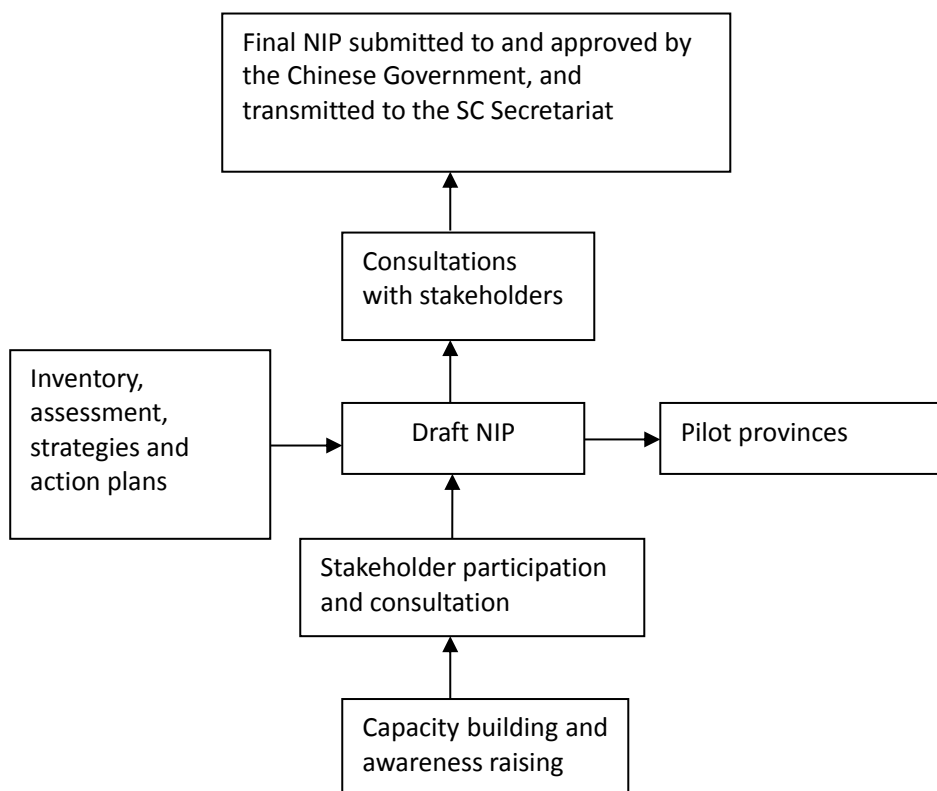


Figure 1 Project theory model

The project design is logically clear, deliverable and supportive between the objective and activities. It appears to be a simple, “soft” project, but actually it is complex and hard, recognizing the multitude of POPs chemicals and stakeholders involved. The project requires more than an updated NIP. It stresses the study of feasibility of options and interventions using UNIDO’s COMFAR tool. It also includes awareness raising and capacity building components to enhance ownership and sustainability.

4.2 Relevance

So far, China has acceded to more than 50 international conventions on environmental protection, and has been highly committed to and active in performing the obligations stipulated in these conventions, which, inter alia, include the Stockholm Convention on Persistent Organic Pollutants, the Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade, and The Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal.

The Constitution of the People's Republic of China (PRC) stipulates, "The State protects and improves the environment in which people live and the ecological environment. It prevents and controls pollution and other public hazards." Since the PRC was founded in 1949, the National People's Congress (NPC) and its Standing Committee have formulated nine laws on environmental protection and 15 laws on the protection of natural resources. Since 1996, the State has formulated or revised laws on environmental protection, such as those on prevention and control of water pollution, marine environment protection, prevention and control of air pollution, prevention and control of solid waste pollution, evaluation of environmental impact, and prevention and control of radioactive pollution, as well as laws closely related to environmental protection, such as those on water, clean production, renewable energy, agriculture, grassland and animal husbandry. POPs are chemicals that have potential hazards to the environment and risk to human health if not properly managed. The State Council has formulated or revised over 50 administrative regulations, such as the Regulations on Environmental Protection Management of Construction Projects, Rules for the Implementation of the Law on the Prevention and Control of Water Pollution, Regulations on the Safety Management of Dangerous Chemicals, Regulations on the Management of Collection and Use of Waste Discharge Fees, Regulations on Pesticide Management, and Measures on the Management of Dangerous Waste Operation Licenses. It has promulgated documents with similar power to laws and regulations, such as the Decision on Implementing the Idea of Taking the Scientific Outlook on Development and Strengthening Environmental Protection, Opinions for Quickening the Development of a Cyclical Economy, and Circular on the Recent Work of Effectively Building a Resource-efficient Society. Relevant departments of the State Council, local people's congresses and local people's governments have, within the limit of their powers, formulated and promulgated over 660 central and local rules and regulations in order to implement the national laws and administrative regulations on environmental protection.

Though China has not passed special laws and regulations on POPs, POPs issues are addressed by these existing laws and regulations, and the legal system continues to be updated and consolidated giving comprehensive consideration of POPs risk control in their life cycle.

China has established a system of environmental protection standards at both the national and local levels. National-level environmental protection standards include environmental quality standards, pollutant discharge (control) standards, and standards for environmental samples. Local environmental protection standards include environmental quality and pollutant discharge standards. By the end of 2005, the State had promulgated over 800 national environmental protection standards. The municipalities of Beijing and Shanghai, and the provinces of Shandong and Henan had promulgated over 30 local environmental protection standards. Some, though not all POPs are included into these standards subject to control, monitoring and evaluation, and POPs are always taken into consideration as appropriate in the course of their updating.

Chinese Government has attached greater importance than before on environmental protection in the recent past years, especially after the new leadership assuming office. For instance, the State Council has recently issued a decree that requires the local environmental monitoring, surveillance, and enforcement staff previously appointed and funded by the local county and municipal governments shall be appointed and funded by the provincial government in order to increase and guarantee the credibility of environmental monitoring data and ensure strong punishment and corrective measures to take effect. MEP has clearly

stated the use of environmental quality as the first indicator to evaluate the effectiveness of all courses of actions for pollution control, partially in response to the escalated awareness and fierce outcry for better environmental quality among the public.

The recently issued action plans to combat air and water pollution make quantitative and measureable improvement of environmental quality as the ultimate goal, and designed measures including closure of outdated processes, upgrading of technologies and operation, promotion of cleaner production, and strengthening end-of-pipe treatment of pollution. POPs may exist in solid and gaseous phases with the small-sized particulate matters in the air, or in the water segment of the environmental media as endocrine disrupter chemicals, and are thus addressed by these action plans too.

By putting in place an updated NIP for POPs, the project is highly relevant with and supplemental and supportive to the countries' policies and programs for environmental protection and sustainable development. The project implementation needs to continue to trace the rapid development of new policies and programs after the project inception, and further improve and guarantee the relevance.

4.3 Efficiency

4.3.1 Preparatory work

MEP/FECO developed a work plan that breakdowns all the work with budget trusted by UNIDO shown as Table 2 and Table 3. The work plan has put full emphasis on the thorough survey of the existing and new POPs in the inventory establishment and prioritization exercise. Due attention has been paid to the stakeholder mobilization and consultation in the formulation and update of the new NIP. International experience should be drawn to enlighten decision making on issues such as risk assessment, for which China does not have sufficient capacity.

Table 5 shows the majority of the work regarding inventory survey and establishment, priority setting, and NIP formulation has been completed before September 2015 when the MRT should start. The remained work falls on the long-term institutional capacity at the national and provincial levels, and on the consultation, consolidation, finalization, countersignature, approval, and submission of the NIP.

The inception workshop report showed that the workshop was held on March 26th, 2014 (the date of the entering into force of the Amendments to the Stockholm Convention). The workshop was hosted by the MEP, and attended to by more than 70 representatives, including representatives from member ministries of the National Coordination Group for Stockholm Convention Implementation and relevant departments of MEP, international organizations such as United Nations Environment Program (UNEP), United Nations Development Program (UNDP), the World Bank etc., several provinces, research institutes, industrial associations and journalists from more than 10 news agencies.

Mr. Zhai Qing, leader of the National Coordination Group for the Stockholm Convention Implementation and Vice Minister of MEP, made a keynote speech, requiring the updated NIP being practical, feasible, and measurable. Mr. Yang Tiesheng, Deputy Director-General of the Department of Energy-Saving and Comprehensive Utilization of MIIT, and Mr. Edward

Clarence-Smith, UNIDO Representative and Head, Regional Office made speeches. Taking this occasion, China made the announcement of China's entering into force of "the Amendments to the Stockholm Convention on POPs". The Project Document the NIP update project was signed at the workshop. In addition, knowledge about new POPs and the Amendments was disseminated.

Immediately following the inception workshop, FECO organized the training workshop on March 27th, 2014. There were more than 30 people attending to the workshop, who were experts and representatives from UNIDO, UNDP, sub-contractors such as Peking University, Tsinghua University, Chinese Academy of Sciences, Chinese Research Academy of Environmental Sciences, Beijing Normal University, industrial associations, and selected provinces where there are substantial production, use and emission of new POPs.

At the workshop, the representative of UNIDO put forward general requirements for NIP update and the consultant from Peking University introduced the NIP update work plan. Invited by UNIDO, Mr. Arndt, a senior expert of the POPs Review Committee of the Stockholm Convention, offered training on the new POPs and the establishment of inventories thereof, and had full exchanges and interactions with the audience crowd.

4.3.2 Strengthening management regime and capacity

Peking University is commissioned to carry out study on the gaps of regulatory regime, monitoring, and enforcement on new POPs. Preliminary report with recommendations for institutional capacity strengthening for coordination and management of the SC implementation actions has been produced to support the updating of the NIP. A smart-phone game and a song have been designed and issued to the general public to enable easy understanding of POPs and their hazards.

4.3.3 Surveys for inventory establishment and NIP update

Table 6 TORs for recruiting consultancies and subcontractors

No.	TOR	Sub-Contractor
1	Overall technical coordination and NIP formulation	Peking University
2	Inventory establishment and strategy formulation for Endosulfan	Peking University
3	Inventory establishment and strategy formulation for PFOS	Tsinghua University
4	Strategy update and formulation for UPPOPs	Tsinghua University
5	PCDDs/PCDFs inventory update	Chinese Academy of Sciences
6	POPs monitoring strategy development	Chinese Academy of Sciences
7	Inventory establishment and strategy formulation for POPs waste and contaminated sites	Chinese Research Academy of Environmental Science
8	Inventory establishment and strategy formulation for HBCD	Beijing Normal University

MEP/FECO has developed 8 pieces of TORs for recruiting the significant amount of consultancy needed for inventory establishment, action prioritization, NIP formulation, and pilot selection. Prestigious higher education and research institutions such as Peking University, Tsinghua University, Chinese Academy of Sciences, and Chinese Research Academy of Environmental Science have been selected directly to provide the needed consultancy, taking into account their special and recognized technical advantages established from the first NIP formulation exercise and the long-term engagement in the research of POPs issues. As an exception, the sub-contractor for inventory establishment and strategy formulation for HBCD was selected through an open bidding process, for this subcontract is funded by the government's co-financing. Each of the 8 institutions has nominated a team leader for each theme they are responsible for, and established a special working team. Experts coming from industrial associations nominated by line ministries are also members of these working teams, providing basic information and supporting communication and coordination with the industries. For the sake of easy description, the team leaders may also be called major consultants exchangeably in this report.

Intensive studies have been carried out to establish inventories, evaluate policies and institutions, and assess technologies. Based on these studies, action plans and strategies for pesticide POPs, PCBs, POPs wastes, UPPOPs, R&D, and policies and institutions have been developed in couple with priority setting and socio-economic analysis to support the formulation of the zero version of the NIP. The NIP update has followed guidelines from the SC Secretariat, which have been imparted by international consultants. It has utilized the experience gained from the initial NIP development and results availed through existing studies funded by other sources. The environmental statistics on UPPOPs starting from 2007 has provided time-series data for updating the inventory. The project implementation is thus highly efficient by fully taking advantages of existing resources instead of starting from scratch.

In total, 91 actions have been proposed for building institutional capacity, improving policies and regulations, reducing or eliminating releases from intentional POPs production and use, reducing Annex A POPs, eliminating and reducing the emission of PCB, eliminating and restricting Annex B POPs, managing specific exemptions, reducing and eliminating releases of unintentionally produced POPs, reducing releases from POPs stockpiles and wastes, promoting information exchange, promoting public awareness and education, conducting effectiveness evaluation, reporting, monitoring, research and development, and technical and financial assistance.

The zero version of the NIP will be circulated for comments from key stakeholders such as line ministries, industries and industrial associations, local governments, international organizations, civil societies and the public in the second half of the project implementation period.

4.3.4 Pilot activities at selected provinces

The pilot activities at selected provinces are meant to develop detailed new POPs inventory with the identification of priority sectors of pilot provinces, based on which,, the study of feasibility for introducing alternatives and adopting BAT/BEP in priority areas, and advices on exploring public and private financial sources to fund POPs control actions will be emphasized. This project component has not yet been formally started, but FECO has developed the criteria and process for selecting pilot provinces, and prepared a rough TOR outlining the activities to be undertaken at the provincial level. The selection of pilot provinces will be started soon after the MTR.

4.3.5 Reporting, monitoring and evaluation

The technical evaluation of this part will be made in Part 4.6, and the financial evaluation will be made in Part 4.3.7.

4.3.6 Project management

The technical evaluation of this part will be made in Part 4.8, and the financial evaluation will be made in Part 4.3.7.

4.3.7 Project budget and expenditures

Table 7 Project budget and actual expenditure of GEF funding

Project component	UNIDO		FECO	
	Budget	Actual	Budget	Actual
1. Preparatory work and capacity building	118,000	90,000	260,000	168,078
2. Surveys for inventory establishment and NIP update	26,000	7,000	920,000	675,973
3. Pilot provinces	0	0	360,000	
4. NIP approval and submission	0	0	40,000	
5. M&E	66,000	8,000	30,000	24,000
6. Project Management	40,000	0	140,000	132,000
Total	250,000	105,000	1,750,000	1,000,051

UNIDO has allocated 1,750,000 USD GEF funding to FECO through a direct subcontract with FECO, and kept the rest 250,000 USD for providing technical assistance to FECO. By the MTR, FECO has realized actual expenditure of 1,000,051 USD, and UNIDO 105,000 USD, making the total expenditure 1,105,051 USD, about 55.25% of the total budget. It can be seen from Table 7 that the expenditures has taken place mainly with preparatory work, capacity building, inventory and NIP formulation, and project management. The financial expenditures are commensurate with the overall technical progress of the project.

FECO has provided co-financing 2,195,025 USD. The ratio between GEF co-financing and funding is over 2:1, a ratio promised in the project document. The inventory survey and action plan formulation for HBCD is completely supported by FECO in cash. By the MRT, FECO has realized 57% promised co-financing. UNIDO has promised co-financing 190,000 USD, of which 90,640 USD is in cash and 99,360 USD in kind. By the MTR, over 50% has been realized to support the delivery of technical assistance to FECO.

4.4 Effectiveness

It can be seen, from both technical and financial point of view, that the project implementation has achieved results as planned so far, and is on the right track to progress and achieve expected results. Inventories and action plans for Endosulfan, PFOS, HBCD, UPPOPs, POPs wastes and contaminated sites, POPs monitoring have been produced to support the formulation of the new NIP. Based on the above and other assessments, the zero version of the new NIP is made available for the MTR. The new NIP is well structured and in compliance with the Stockholm Convention’s requirements as well as the supporting guidelines. It has mapped out time-framed quantitative targets for POPs emission reduction and elimination. FECO has developed the work plan for the second half of the project implementation.

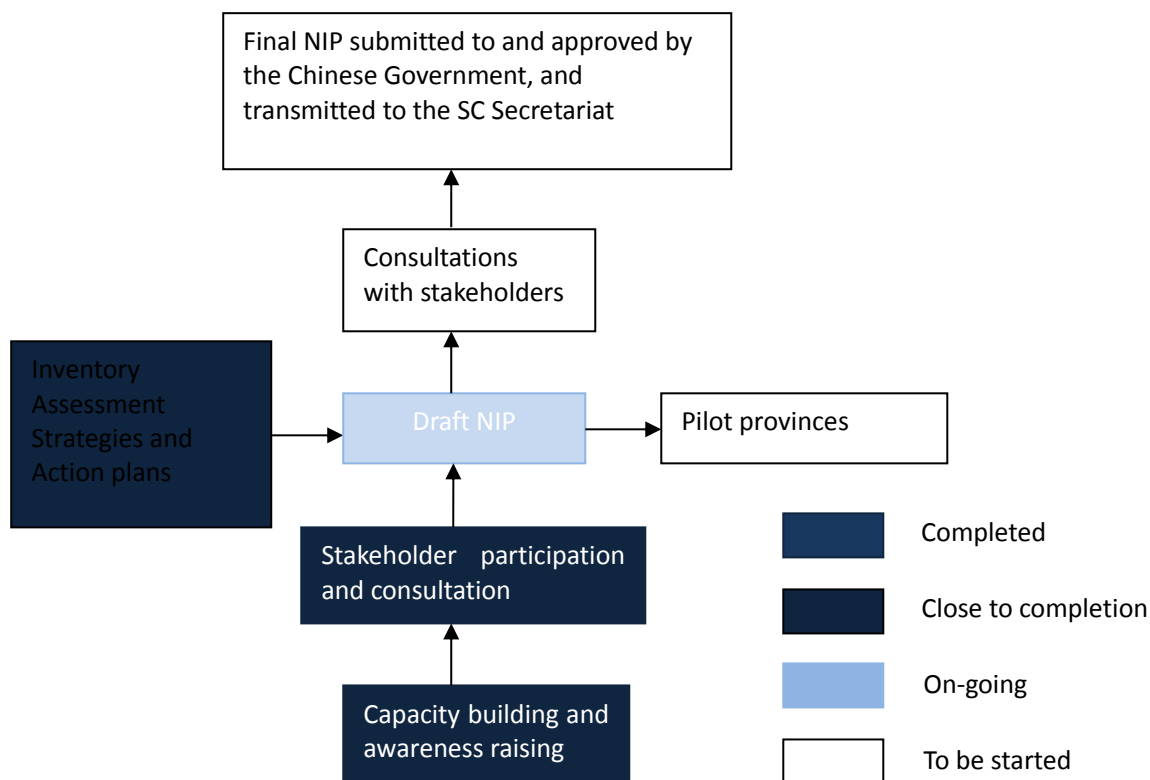


Figure 2 Diagram of the project implementation progress

To ensure the full participation and consultation with stakeholders including line ministries, local governments, industrial associations, research institutions, and typical enterprises, FECO has organized 28 formal meetings to train participants, coordinate with stakeholders, raise awareness, and collect information and comments. Internal meetings with major consultants have also been frequently held to debrief progress, enhance the quality of the draft NIP and ensure the effectiveness of the NIP updating process. Table 9 provides a summary of these meetings by debriefing methodologies and progress and providing recommendations for next steps.

Table 9 A summary of stakeholder participation and consultation meetings

No.	Date	Subject	Participant	Remark
1.	March 26, 2014	Project inception	<ul style="list-style-type: none"> - TCG members - MEP departments - International organizations such as UNIDO, UNEP, UNEP, World Bank - Industrial associations - Research institutions - Local governments 	<ul style="list-style-type: none"> - Sign the project agreement - Review progress and challenges of SC implementation - Present strategies for the future SC implementation - Publicize knowledge about new POPs
2.	March 27, 2014	NIP formulation training	<ul style="list-style-type: none"> - UNIDO representative - International experts and national consultants - Industrial associations 	<ul style="list-style-type: none"> - Present the work plan for NIP update - Impart guidelines issued by the SC Secretariat for NIP formulation and update - Training on newly listed POPs, PBDE and Dioxin/Furan toolkit.
3.	April 3, 2014	Project coordination	<ul style="list-style-type: none"> - FECO - Major consultants for each theme 	<ul style="list-style-type: none"> - Make stocks-takings of existing resources for each sector and theme - Further identify the needs - Discuss the organizational model and arrangements
4.	June 26, 2014	Project coordination	<ul style="list-style-type: none"> - FECO - Major consultants - Experts nominated by line ministries 	<ul style="list-style-type: none"> - Debrief the implementation plan on each theme, the progress, and next steps - Provide comments and suggestions for next steps
5.	October 11, 2014	Project coordination	<ul style="list-style-type: none"> - FECO - The consultant for the overall technical guidance and NIP formulation - The consultant for POPs waste and contaminated site 	<ul style="list-style-type: none"> - Review the progress and identify next steps for the theme on POPs waste and contaminated site
6.	October 22, 2014	Project coordination	<ul style="list-style-type: none"> - FECO - The consultant for the overall technical guidance and NIP formulation - The consultant for UPOPs inventory updating, POPs monitoring, and UPOPs 	<ul style="list-style-type: none"> - Review the progress and identify next steps for the themes on UPOPs, POPs monitoring, and UPOPs control strategy formulation

			control strategy formulation	
7.	November 18-20, 2014	Global meeting on South-South Cooperation in the context of NIP updates and their evaluation	<ul style="list-style-type: none"> - Representatives of 45 countries - UNIDO - Mr. Jianxin HU (Executive Director, Peking University) 	<ul style="list-style-type: none"> - Guidance presentation on NIP review and update, including action plans - Evaluation of the NIP review and update projects - Enhancing cooperation among NIP update and Review countries
8.	December 6-7, 2014	PFOS inventory and strategy discussion	<ul style="list-style-type: none"> - FECO - The consultant for the overall technical guidance and NIP formulation - The consultant for PFOS - World Bank - Industrial associations 	<ul style="list-style-type: none"> - Review PFOS inventory and strategy
9.	December 17, 2014	POPs wastes and contaminated sites	<ul style="list-style-type: none"> - FECO - The consultant for the overall technical guidance and NIP formulation - Industrial associations for fluorinated silicon, pesticide, and fire retardants - The consultant for POPs waste and contaminated site 	<ul style="list-style-type: none"> - Debrief the methodology for inventory establishment, challenges, and next steps
10.	December 22-23, 2014	Discussion with local governments	<ul style="list-style-type: none"> - FECO - 13 provinces - Major consultants 	<ul style="list-style-type: none"> - Present overall progress of NIP update and UPOPs strategy formulation - Collect comments from local governments
11.	December 26, 2014	HBCD inventory establishment and strategy formulation	<ul style="list-style-type: none"> - FECO - The consultant for the overall technical guidance and NIP formulation - The consultant for HBCD 	<ul style="list-style-type: none"> - Debrief progress with the HBCD inventory establishment and strategy formulation - Provide recommendations for next steps
12.	January 1, 2015	POPs wastes and contaminated sites	<ul style="list-style-type: none"> - FECO - The consultant for the overall technical guidance and NIP formulation - The consultant for POPs wastes and contaminated sites 	<ul style="list-style-type: none"> - Debrief progress with the inventory establishment and strategy formulation for POPs wastes and contaminated sites - Provide recommendations for next steps
13.	January 12, 2015	HBCD inventory establishment and strategy formulation	<ul style="list-style-type: none"> - FECO - The consultant for the overall technical guidance and NIP formulation - The consultant for HBCD 	<ul style="list-style-type: none"> - Debrief progress with the HBCD inventory establishment and strategy formulation - Provide recommendations for next steps
14.	January 22, 2015	Dioxins inventory establishment and POPs monitoring	<ul style="list-style-type: none"> - FECO - The consultant for the overall technical guidance - The consultants for dioxins inventory establishment, POPs monitoring, and UPOPs 	<ul style="list-style-type: none"> - Debrief progress with dioxins inventory establishment and POPs monitoring - Provide recommendations for next steps

			control strategy formulation	
15.	January 22, 2015	Endosulfan inventory establishment and strategy formulation	<ul style="list-style-type: none"> - FECO - The consultant for the overall technical guidance - The consultants for Endosulfan inventory establishment and strategy formulation 	<ul style="list-style-type: none"> - Debrief progress with Endosulfan inventory establishment and strategy formulation - Provide recommendations for next steps
16.	January 27, 2015	Dioxins inventory establishment and UPOPs control strategy formulation	<ul style="list-style-type: none"> - FECO - The consultant for the overall technical guidance - The consultants for dioxins inventory establishment, POPs monitoring, and UPOPs control strategy formulation - Experts in priority sources 	<ul style="list-style-type: none"> - Discussion on key issues with dioxins inventory establishment and UPOPs control strategy formulation
17.	February 4, 2015	Inter-ministerial coordination	<ul style="list-style-type: none"> - TCG members 	<ul style="list-style-type: none"> - Provide guidance and coordination over key issues with NIP update
18.	February 10, 2015	Tripartite review	<ul style="list-style-type: none"> - UNIDO - FECO - Major consultants 	<ul style="list-style-type: none"> - Debrief progresses of each theme and the overall NIP update process
19.	March 26, 2015	PFOS inventory, strategy, and alternatives	<ul style="list-style-type: none"> - The consultant for PFOS - Concerned ministries, industrial associations, research institutions, and enterprises in organic fluorine chemistry industry 	<ul style="list-style-type: none"> - Debrief PFOS inventory establishment and strategy formulation - Evaluate alternatives
20.	April 9-10, 2015	Consultation with local governments	<ul style="list-style-type: none"> - FECO - Representatives from governments of Beijing, Tianjin, Hebei, Shanxi, Inner Mongolia, Heilongjiang, Shanghai, Jiangsu, Zhejiang, Anhui, Shandong, Henan, Jiangxi, Liaoning, Jilin, and Hubei 	<ul style="list-style-type: none"> - Present NIP update progress - Collect comments from local governments
21.	April 14-15, 2015	Consultation with local governments	<ul style="list-style-type: none"> - FECO - Representatives from governments of Hunan, Fujian, Guangdong, Guangxi, Hainan, Chongqing, Sichuan, Guizhou, Yunan, Shanxi, Ningxia, Guansu, Qinghai, Tibet, and Xinjiang 	<ul style="list-style-type: none"> - Present NIP update progress - Collect comments from local governments
22.	April 17, 2015	POPs wastes and contaminated sites	<ul style="list-style-type: none"> - FECO - The consultant for POPs wastes and contaminates sites - Center of solid wastes and chemicals management of MEP - Concerned research institutions 	<ul style="list-style-type: none"> - Debrief progress with the inventory establishment and strategy formulation - Collect comments from meeting attendants

			<ul style="list-style-type: none"> - Representative enterprise for contaminated site remediation 	
23.	May 17, 2015	Review of progress with each theme of NIP update	<ul style="list-style-type: none"> - FECO - Major consultants for each theme - Overseas and domestic higher institutions - Research institutions - Competent authorities - Representative enterprises 	<ul style="list-style-type: none"> - Present and discuss results of each theme
24.	May 22, 2015	Inter-ministerial coordination	TCG members	<ul style="list-style-type: none"> - Provide guidance and coordination over key issues with NIP update
25.	June 10, 2015	Strategy and action plan for HBCD	<ul style="list-style-type: none"> - FECO - The consultant for HBCD - Ministry of Industry and Information Technology - Ministry of Housing, Urban and Rural Development - Professional Society of Fire Retardants - EPS Committee and XPS Committee of Chinese Plastics Associations 	<ul style="list-style-type: none"> - Debrief results of HBCD strategy and action plan - Collect comments and recommendations
26.	June 12, 2015	Strategy and action plan for PFOS	<ul style="list-style-type: none"> - FECO - The consultant for the overall technical guidance - The consultant for PFOS - Ministry of Industry and Information Technology - Ministry of Public Security - Industrial Association for Fluorinated Silicone Organic Materials 	<ul style="list-style-type: none"> - Debrief results of PFOS strategy and action plan - Collect comments and recommendations
27.	June 23, 2015	Strategy and action plan for PFOS	<ul style="list-style-type: none"> - FECO - The consultant for PFOS - PetroChina - CNPC 	<ul style="list-style-type: none"> - Introduce SC and PFOS production and consumption - Present draft PFOS strategy and action plan - Exchange information on key issues
28. c	June 24, 2015	Draft updated NIP	<ul style="list-style-type: none"> - FECO - Department of Pollution Control, MEP - Major consultants 	<ul style="list-style-type: none"> - Discuss key issues with the draft updated NIP
29.	July 30, 2015	UPOPs inventory and strategy	<ul style="list-style-type: none"> - FECO - The consultant for overall technical guidance - The consultants for UPOPs inventory and strategy - Research Institute of Standards and Norms, MHURD - China Nonferrous Metals Industry Association 	<ul style="list-style-type: none"> - Debrief progress with the inventory establishment and strategy formulation - Collect comments from meeting attendants

				Recycling Metal Branch (CMRA)	
				– China Chlor-Alkali Industry Association	
				– China Paper Association	
				– No. 101 Research Institute of Ministry of Civil Affairs	
30.	November 9, 2015	Monitoring and UNIDO Safeguards	– UNIDO – FECO		– UNIDO's Environmental and Social Safeguards Policies and Procedures – Annual Monitoring and Project Implementation Reporting according to UNIDO / GEF requirements

By looking into the draft updated NIP as well as the inventories and actions for each POP contained therein, a series of questions have been found as follows that may merit attention for correction or improvement in the second half stage of the project implementation:

- PFOS inventory data needs to be cross-checked and consistency assured from PFOSF to formulated products downstream: PFOS use in fire-fighting sector for instance
- Some Endosulfan inventory data are missing: Endosulfan formulated products
- Immediate actions have not been put forward to identify POPs wastes and control risks associated with unconscious handling and improper containment
- A project based approach (COMFAR) has not yet been adopted for technical and financial feasibility study
- Opportunities for synergistic implementation of this plan with the national action plans for water and air pollution control have not been adequately explored
- Besides the stakeholders involved in consultation as shown by Table 9, special and wider consultations should be made with women's groups,

4.5 Likelihood of Sustainability of Project Outcomes

The major project outcome is the NIP updated and approved by Chinese Government. It is noteworthy that the project is implemented in the context that China has started the process of SC implementation early from year 2000. Since the first NIP approved and implementation kick-started, China has demonstrated the sustainability the first NIP, whose implementation and effectiveness have been reflected in special evaluations. Thus, based on the previous experience, the sustainability of the project outcome can be judged from the following aspects:

- Political commitment: It can be seen from Table 9 that high-level political involvement has been realized through a dedicated project team which has involved and consulted stakeholders and relevant authorities on all relevant project matters, including participation in workshops, training, inventory activities, identification of alternatives/alternative technologies, priorities and action plans. The national director from FECO has supported the communication and consultation of POPs issues and especially about this NIP review and update project with relevant stakeholders and public authorities in the first half of the project. According to the project design, the project will ensure that the updated NIP will be a "living" document, practical including post-NIP project proposal and action plans, tailored to the country needs and governmental and private sector commitment for the endorsement of the NIP and follow-up SC

implementation in China.

- **Legal and regulatory framework:** Overall legal and regulatory regime for POPs chemicals management has been put in place in China. All new POPs are listed as hazardous chemicals subject to special environmental management under Regulation on Environmental Management Registration of Hazardous Chemicals in China, which was issued on October 10, 2012 and entered into force from March 1, 2013. Though wastes containing new POPs and related chemicals have not yet been included into the list of hazardous waste, the POPs characteristics and related chemicals contained within will well enable them to meet the criteria for being identified, classified and managed as hazardous wastes. China has created complete legislations supported by technical standards and specifications for the life-cycle environmental management of hazardous wastes. Pollutant discharge Environmental quality standards for different environmental compartments standards have included some thought not all new POPs. Content limits of POPs and related chemicals have been established for some, again not all products and articles that may contain them. The updated NIP is aimed at incorporating POPs into the overall legal and regulatory framework for chemicals registration, product quality inspection, hazardous waste management, and pollutant control.
- **Financial mechanism:** As proven by the first NIP's implementation, various financing instruments (governmental sources, bank loans, capital markets) have their special applicability to financing POPs control projects (UPPOPs reduction, POPs waste disposal, alternatives to POPs, contaminated site remediation, capacity building). The updated NIP has special input from thematic studies regarding financial mechanism, and has provided practical recommendations for governments, investors and project proponents to choose financially viable models for different POPs control projects.
- **Institutional capacity:** China's implementation of Stockholm Convention has inherited a strong coordination structure at the national level that was first established and operated during the first NIP preparation. From 2007, a cross-ministerial coordination team involving 13 ministries and administrations has been established. It calls 2-3 meetings a year to update on progress in carrying out the national implementation plan. Under the coordination team, a dedicated office has been set and strengthened to work as the secretariat mandated to information collection and reporting, pilot project development and execution, and communication and liaison with international and national stakeholders. A multi-disciplinary expert panel has been established to provide technical support in policy enactment, technology development, and periodic or thematic evaluations. Most provinces/municipalities have carried out capacity building activities that suit their own needs, including provincial-level coordination structure building, POPs baseline surveys, POPs control program development, information management, policies and regulations enactment, technology introduction, awareness raising, and public education. Besides, all provinces have been guided by the project to develop, approve and implement their provincial POPs programs for the 12th Five-Year period (2011-2015). The updated NIP has put a special emphasis to the design of actions to further strengthen institutional capacity.
- **Public awareness:** Besides special activities for public awareness designed and implemented under this project, a wide range of awareness raising campaigns have been undertaken by other projects for certain specific POPs or POPs in general. The awareness raising materials targeting industrial workers, farmers, teachers, and managerial staff have been developed, published and distributed through flyers, newspapers, TV, and public service advertisements. FAQs have been continuously updated by catching up with the latest developmental trends of technologies and regulations worldwide, and disseminated by through modern media such as Weibo, Wechat, and website. With these

efforts, it is shown by a survey that over 57% general public have initial understanding of the environmental risk of POPs and its health hazard.

4.6 Monitoring and evaluation systems

FECO has submitted to UNIDO the work plan with budget for the parts subcontracted to it by UNIDO. The project follows a national executive mode for implementation. FECO takes a dominant part. The Project Implementation Reviews have been first prepared by FECO covering the project parts under its responsibility. The PIRs have then been transferred to UNIDO for review and addition of information covering the whole project components. The PIRs have been prepared in accordance with the format provided by GEF in 2014 and 2015, gauging indicators provided by the project result framework. There is the mechanism for tripartite review on an annual basis involving UNIDO, FECO, and major contractors to review project progress, including discussion of the work plan for next year.

The monitoring and evaluation system operated by this project well has well met the minimum requirements from GEF. The project document does not design and require this independent MTR, but UNIDO commissioning the MTR is an additional measure for strengthened monitoring and evaluation. For the same purpose, the reviewer found that the project may impose even a stronger monitoring and evaluation system by including integrated annual work plan (AWP) and annual project review (APR) in the second half of the project.

4.7 Project coordination and management

UNIDO acts as the GEF Implementing Agency assisting the national executing agency FECO in coordinating with other IAs to take advantage of the findings and lessons learned from associated projects and program. UNIDO assists FECO in the execution of the project by drafting TORs for international expert positions and disbursing funding necessary for the recruitment of international expert and for other international expenditure. UNIDO also oversees the implementation of the project through an assigned UNIDO project manager. Besides, the need to deliver further international technical assistance has been identified which should impart international experiences in alternatives identification, POPs risk assessment, priority setting, and action plan formulation.

The project follows a national executive mode for implementation. FECO, the national executing agency, takes a dominant part. The Contract (No. 3000021487) was signed for UNIDO to trust MEP/FECO to carry out the majority of the project work. The terms of reference has specified the work and budget division between UNIDO and MEP/FECO under the project framework. The contract provides for, inter alia, the deliverables from FECO and a progress based payment schedule. The total contract value is 1,804,150 USD, to be disbursed in 4 payments upon unconditional acceptance of milestone deliverables. An output based payment model has been used to manage the contracts and control the quality of outputs.

Inter-ministerial coordination mechanism has been inherited and strengthened to provide high-level coordination and guidance. A special task force of 4 full-time persons with strong background and experience in implementing GEF's POPs projects has been established in charge of daily operation of the project. It is noteworthy that 3 out of the 4 are women.

FECO has established a procurement system, integrating the requirements and rules of UNIDO and the national procurement laws for processing the procurement of services, products, and works under all UNIDO supported projects with FECO. FECO's infrastructure and experience have been utilized to support the project procurement, contract management, and financial transactions. Tripartite meetings involving UNIDO, FECO, and subcontractors have been held to review the project progress on an annual basis.

Prestigious higher education and research institutions such as Peking University, Tsinghua University, Chinese Academy of Sciences, and Chinese Research Academy of Environmental Science have been selected directly to provide the needed consultancy, taking into account their special and recognized technical advantages established from the first NIP formulation exercise and the long-term engagement in the research of POPs issues. As an exception, the sub-contractor for inventory establishment and strategy formulation for HBCD was selected through an open bidding process, for this subcontract is funded by the government's co-financing.

FECO has organized 28 formal workshops for stakeholder consultation with line ministries, typical enterprises, industrial associations, and local governments to identify their needs for complying with the Stockholm Convention. Meetings have also been held with international communities such as UNIDO, UNDP, UNEP, FAO, GEF, World Bank, Italy, Canada, US, Japan, Germany, and Norway to seek their professional comments and recommendations. These meetings have been held with the key consultants to facilitate the data collection for the inventory establishment, priority setting, and NIP formulation. Meanwhile, these meetings have well served the project management in terms of progress updating and output quality enhancement.

4.8 Gender mainstreaming

Since 1980 the Chinese government has successively signed, ratified and acceded to seven UN human rights conventions, namely the Convention on the Prevention and Punishment of the Crime of Genocide, the International Convention on the Suppression and Punishment of the Crimes of Apartheid, the Convention on the Elimination of All Forms of Discrimination against Women, the International Convention on the Elimination of All Forms of Racial Discrimination, the Convention Relating to the Status of Refugees, the Protocol Relating to the Status of Refugees, and the Convention against Torture and Other Cruel, Inhuman or Degrading Treatment or Punishment. The Chinese government has always submitted reports on the implementation of the related conventions, and seriously and earnestly performed the obligations it has undertaken.

According to the Constitution, women share equal rights with men in political, economic, cultural, social and family life. Like men, they have the right to elect and to be elected. A considerable percentage of people's deputies and officials at various levels are women. The number of women serving in government offices has increased from 366,000 in 1951 to 8.7 million; this accounts for 28.8 percent of the total number of civil servants. This percentage is relatively higher in the environmental protection departments in China.

That many participants in the project are women helps to ensure the NIP contents to take full account of women's health. Specifically, out of the special task force of 4 full-time persons established in charge of daily operation of the project are women. The reviewer also found

that more than half of the team members for each thematic study are women, though the team leaders are dominantly taken by men. Women are the carriers of next generation, and it is of paramount importance to keep women from excessive POPs exposure for the common interest of human beings, and this notion has been well understood by almost all project participants. The current version of the updated NIP has cited data about POPs contents detected with Chinese mother milk for preliminary risk assessment.

However, the reviewer also found that there is not a special consultation meeting or interaction event for women among the multitude of project activities, though the project document reiterates the importance of women consultation and participation during the NIP update. The FECO project team realizes this defect, and intends to create and take opportunities for organizing women-oriented participation and consultation events.

5. Conclusions, recommendations and lessons learned

5.1 Conclusions

This project is of paramount importance in that it aims to depict the roadmap by delivering a national implementation plan for China to fulfill its commitments and obligations under the Stockholm Convention in the near, mid-term, and far future. The project is complex and hard, recognizing the multitude of POPs chemicals and stakeholders involved.

However, from both technical and financial point of view, that the project implementation has achieved results as planned so far, and is on the right track to progress and achieve expected results. The overall highly satisfactory performance of the project implementation is largely attributed to several major reasons:

- Instead of starting from scratch, China can draw experience and utilize advantages gained from the preparation and implementation of the first NIP covering the 12 initial POPs since 2005.
- The project design is logically clear, deliverable and supportive between the objective and activities. It puts the stakeholder participation and consultation in the center, stresses awareness raising and capacity building components to enhance understanding, ownership and sustainability of the updated NIP.
- There is a high level of political involvement and commitment that will guarantee the integration of the POPs issues into the national actions for pollution control and risk management.
- FECO has appointed a project management team with outstanding competency and arts for mobilizing and organizing the various stakeholders in providing valuable inputs to the NIP updating process.

Table 10 Project performance ratings

Evaluation criteria	Rating
Project design	Highly satisfactory
Relevance	Highly satisfactory
Efficiency	Highly satisfactory
Effectiveness	Satisfactory
Likelihood of Sustainability of Project Outcomes	Highly Likely

Monitoring and evaluation systems	Satisfactory
Project coordination and management	Highly satisfactory
Gender mainstreaming	Satisfactory

5.2 Recommendations

No.	Recommendation	Addressee
1	The project implementation should continue to follow the rapid development of new policies and programs after the project inception, and further improve the project relevance.	FECO
2	PFOS inventory data needs to be cross-checked and consistency assured from PFOSF to formulated products downstream.	FECO
3	Endosulfan inventory data should include Endosulfan formulated products for the sake of lifecycle management in general and environmentally sound management of Endosulfan waste in particular.	FECO
4	Immediate capacity building actions should be designed to support rapid identification of POPs wastes and risk containment to prevent large quantities of POPs wastes from improper handling or entering into the environment before final disposal.	FECO
5	The spirit of precautionary principle should be further integrated into the final NIP draft.	FECO
6	The UNIDO tool (COMFAR) or similar tools need to be adopted for rapid technical and financial feasibility study of investment actions, ideally on a project basis.	FECO
7	Opportunities for synergistic implementation of this plan with other relevant national action plans such as the national action plans for water and air pollution control should be adequately explored.	FECO
8	Special events should be organized to facilitate participation and consultation with women groups.	FECO
9	The need to deliver further international technical assistance has been identified which should impart international experiences in alternatives identification, POPs risk assessment, priority setting, and action plan formulation.	UNIDO

5.3 Lessons learned

Lesson 1: The logically sound project design provides the basis for the successful implementation of a project. This project design is logically clear, deliverable and supportive between the objective and activities. In order to secure full and qualified stakeholder participation, the project design has designed a special component for capacity building and awareness raising.

Lesson 2: Incorporation of POPs issues into the existing legal and regulatory framework for chemicals risk management and environmental pollution control of a country is one of the outstanding hallmarks of the updated draft NIP, and is the precondition for ensuring the high-level political involvement and the widest stakeholder participation. With the project moving on, opportunities for synergistic implementation of this plan with other relevant national action plans such as the national action plans for water and air pollution control can be adequately explored.

Lesson 3: Though China has accumulated good experience from more than a decade of arduous efforts for POPs pollution control and monitoring, it is still difficult to determine the baseline and target levels of POPs risks in planning actions and strategies for POPs control in the updating of the NIP, due to paucity of data and complexities of modeling, which in turn limits the adoption of precautionary principle. In the future implementation of Stockholm Convention for a country, special attention and effort should be spent to enable risk assessment as a basis to support the development of POPs control actions, and link the

actions with their ultimate impacts and inspire participation of all sorts of stakeholders for the shared goal: POPs risk control.

Annex 1 Terms of reference



UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION

TERMS OF REFERENCE

Mid-term Review of UNIDO project:

Review and update of the National Implementation for the Stockholm Convention on Persistent Organic Pollutants

**UNIDO SAP ID: 130176
GEF Project number: 5624**

MAY 2015

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I. Project background and overview

1. Project factsheet

Project Title	Review and update of the National Implementation for the Stockholm Convention on Persistent Organic Pollutants
GEF ID	5624
UNIDO project No. (SAP ID)	130176
Country(ies)	People's Republic of China
GEF Focal area(s) and operational programme	GEF Operational Programme 14 on POPs: the objective of the Programme is to provide assistance, on the basis of incremental costs, to developing countries and countries with economies in transition to reduce and eliminate releases of POPs into the environment.
GEF Agencies (implementing agency)	UNIDO
Project executing partners	The Foreign Economic Cooperation Office of the Ministry of Environmental Protection of China
Project size (FSP, MSP, EA)	MSP EA
Project CEO endorsement/Approval date	11.11.2013
Project implementation start date (PAD issuance date)	18.02.2014
Expected implementation end date (indicated in CEO endorsement/Approval document)	17.02.2017
Actual implementation end date	17.02.2017
GEF Grant (USD)	2,000,000
UNIDO inputs (USD)	190,000
Co-financing (USD) at CEO Endorsement	4,000,000
Total project cost (USD) (GEF Grant + Co-financing at CEO Endorsement)	6,000,000
Mid-term review date	01.09.2015
Planned terminal evaluation date	31.10.2016

(Source: Project document)

2. Project summary

The Stockholm Convention (SC) on Persistent Organic Pollutants (POPs) was adopted in May 2001 with the objective of protecting human health and the environment from toxic and hazardous POPs. It entered into force on 17 May 2004 initially listing twelve chemicals as POPs.

According to Article 7 of the SC, Parties are required to develop a NIP to demonstrate how the country will implement the obligations under the SC. The Party should transmit the NIP to the COP within two years of the date on which the SC entered into force for the country. China signed the SC on POPs on May 23, 2001 and ratified it on June 23, 2004. Hence, the Convention entered into force for the People's Republic of China on November 11, 2004. With the funding from the Global Environmental Facility (GEF) and the technical assistance from the United Nations Industrial Development Organization (UNIDO), the original NIP of China was developed and transmitted to the COP on April 17, 2007.

China requested UNIDO to prepare a MSP to assist the country to review its initial NIP and update its NIP to include the newly added POPs. As China is one of the largest developing countries in size and an emerging economy, an MSP project is necessary to be able to fulfil the obligations under the SC. The requested amount is less than for the original NIP development. The approval of this project is expected to provide the necessary technical support to and facilitate the approval process of the Amendments. The instrument of ratification will include 9 new POPs plus endosulfan, therefore endosulfan will be included in the project. Inventories for HBCD will also be included in this project to achieve cost-effectiveness of GEF funding. The following legal clause should be applied for the project: *"The Government of the People's Republic of China agrees to apply to the present project, mutatis mutandis, the provisions of the Standard Basic Assistance Agreement between the United Nations Development Programme and the Government, signed on 29 June 1979 and entered into force on 24 June 1985."*

The implementation of this project will address the country's need for an updated POPs profile and revising priority action plans for old POPs. It will also build China's basic technical capacity for conducting inventories for new POPs, with an eye for broader integration of Stockholm Convention obligations into China's national policies and planning on chemicals management. This project will also create an enabling environment for priority private sector investment on alternatives/alternative technologies. At the government level, it is expected that the project outcomes will provide technical support for China's 13th Five-Year Plan for Environment Protection in relevance to POPs management. At the private sector level, the project intends to make available informations on environmentally sound and economically feasible alternatives/alternative technologies and build a platform for public and private financing for priority sectors.

The outcomes of this MSP are:

Outcome 1: Coordination mechanism in place with national regulatory framework and capacities assessed and stakeholder aware of new POPs

Outcome 2: Validation of inventories of new POPs (and updating of initial 12 POPs) by relevant stakeholders and identification of new POPs alternatives and technologies

Outcome 3: Priority setting and capacity strengthening for new POPs management based on identification of alternative investment solutions in pilot provinces

Outcome 4: Government endorsement and submission of updated NIP to the SC Conference of Parties

Outcome 5: Monitoring and Evaluation

The implementation of this NIP update project will not only benefit China's overall management of new POPs, it will also provide initial support to industrial sectors, mobilize technical and financial resources, and pave the way for large scale demonstration and later scaling up at national level. This will significantly contribute to the global efforts to reduce new POPs production, application and eventually emission into the environment. The revised and updated NIP will be the starting point for the environmentally sound management and reduction of POPs amount in the environment in the long run.

The NIP review and update will provide a living document as basis for the future SC implementation in China. Special attention will be drawn to gathering an up-to-date national inventories of the new POPs. This inventory will be the basis for priority setting and action plan development for the foreseen SC implementation in China. Stakeholders participating in this NIP review and update as well as the PCU team will be able to manage the POPs technically and will use the updated NIP as a basis for environmentally sound management of POPs in China.

Project implementation started in February 2014 and the project end date is February 2017. Project monitoring and evaluation (M&E) is foreseen in the project document, with the purpose of conducting a systematic and impartial assessment of the project in line with UNIDO and GEF Evaluation policies. The mid-term review (MTR) is planned to take place between 01.09.2015 – 31.10.2015.

3. Project objective

To review and update the National Implementation Plan (NIP), have it endorsed and submitted by the government to the Conference of the Parties to the Stockholm Convention (COP); and to build China's national capacity for new POPs management.

The project consists of 5 technical components, in addition to project management, as follows:

Project Component 1 (PC-1): Coordination mechanism, regulatory framework and national capacity assessment and awareness raising for new POPs management

Project Component 2 (PC-2): National inventories of new POPs and identification of new POPs alternatives and technologies

Project Component 3 (PC-3): POPs priority setting and capacity strengthening for new POPs management in pilot provinces

Project component 4 (PC-4): NIP formulation, endorsement and submission

Project Component 5 (PC-5): Monitoring and Evaluation

Following are, in brief, some of the expected results of the project:

- National inventories of new and original POPs validated by relevant stakeholders
- NIP formulated, endorsed by the Government and submitted to the SC Conference of the Parties
- Coordination mechanism in place, and national regulatory framework and capacities assessed and awareness for new POPs raised

- Priorities for new POPs decided upon, and capacities for new POPs management in pilot provinces strengthened
- Periodic monitoring and terminal evaluation of project implementation conducted

4. Relevant project reports/documents and progress description

Preliminary inventories and assessment reports of NIP update each field were completed according to the schedule of NIP update work. The Inception Workshop & Inventory Training Workshop Reports and Task Teams composition & Work plan had been submitted to UNIDO.

The report including the progress of the implementation of the Convention by China to date, the chemical profile for POPs according to the amendments of the Convention, the overall benefits and costs assessment for control of POPs, especially new POPs in China, the needs of capacity of implementation of the Amendments and management of new POPs is accomplished preliminarily. As well as the action plan of public awareness enhancement, management authority improvement, and standard and legal system improvement for control of new POPs were drafted.

The PFOS inventory and strategic plan, including the information of use, stockpiles and wastes of PFOS in China; the inventory of PFOS for the sectors of electroplating, pesticide, firefighting, including the information of export and import; the alternatives and alternative technologies, comparing with EU and other advance standards, and especially test whether the alternatives or alternative technology is environment-friendly; the assessment of the environmental risks and the implementation of the Convention for control of PFOS in social-economic consideration; priority actions for the purpose of controlling PFOS; the evaluation of the capacity of implementation and supervision of relevant authorities and other stakeholders for control of PFOS; the preliminary strategic action plan, is drafted.

The Endosulfan inventory and strategic plan, including the investigating information of the information of use, stockpiles and wastes of Endosulfan in China; the evaluation of the alternatives and alternative technologies in the technical and economic aspect; the assessment of the environmental risks and the implementation of the Convention for control of Endosulfan in social-economic consideration; the evaluation of the capacity of implementation and supervision of relevant authorities and other stakeholders for control of Endosulfan, is drafted.

The HBCD inventory and management and control report, including the information of history production, production scale, manufacturers, production capacity, products flow of HBCD and HBCD contained EPS and XPS in buildings; the information of waste and contaminated sites of HBCD chemicals and HBCD contained building materials on their production, storage, circulation and use; compiling inventories of HBCD chemicals, HBCD contained materials, HBCD wastes and contaminated sites, and inventories of HBCD production, use, import and export. The Evaluation of the alternatives and alternative technologies in the technical and environment-friendly aspect; the assessment of the environmental risks on ecology and health; the analysis of the current situation of HBCD pollution emission, production technology, pollution control technology, and the capacity of the contaminated sites disposal, administration, policies and regulations, financial guarantee of the Convention implementation, public environmental awareness; the suggestion of the need of management and control policies and the improvement of them, is drafted.

The PCDDs/PCDFs inventory report, including the consolidating of the data and information of PCDDs/PCDFs release, and identification of the priority sectors and enterprises; investigation

of the typical releasing spots and formulation of the methodology of inventory for typical sectors; the evaluation of the emission intensity of different release resources, is drafted.

The UPPOPs strategic plan, including the formulation of the inventory of PCBs, PeCP, PCPs and other UPPOPs (except for PCDDs/PCDFs), and the inventory methodology for these UPPOPs; the analysis of the inventory of PCDDs/PCDFs, and the priority of the actions for control of PCDDs/PCDFs; the model of synergy effects between the measurement of improving air quality and the control of PCDDs/PCDFs, and identification of the possibility of synergies between the air quality policy and PCDDs/PCDFs, control policy; the analysis of the technology and the evaluation of the costs of control of UPPOPs, is drafted.

The Waste and Contaminated sites report, including the investigating information of contaminated sites of POPs; consolidating the information of wastes of POPs; the formulating of the inventory of ash of PCDDs/PCDFs in the sectors of waste incineration, steel production, iron ore sintering, regeneration of non-ferrous metals; the identifying of the stockpile and contaminated sites of pesticides; the formulating of the waste inventory and investigating potential contaminated land of HCH, PFOS/PFOA, and Endosulfan; the assessing of the gaps of current management, and the identifying of the needs of implementation of the Convention regarding the sound management of wastes and contaminated land, is drafted.

The Monitoring strategic plan, including the needs of implementation according to the requirement of the Convention were introduced; the current status of monitoring and management of POPs; suggestions on the sampling sites selection for POPs monitoring, and recommendation of the staff training, methodology development, and long-term monitoring plan; identification of the priorities for the regular monitoring scheme on the provincial level; advice on the plan of establishment of monitoring lab for country wide monitoring, especially for the PCDDs/PCDFs monitoring; suggestion on the coordinating mechanism for inter-ministries monitoring, including health, environment, agriculture, water, and quality control; and the preliminary strategic actions plan for monitoring of POPs, was drafted.

5. Project implementation arrangements

UNIDO will act as the GEF Implementing Agency assisting the national executing agency FECO in coordinating with other IAs to take advantage of the findings and lessons learned from associated projects and programmes. UNIDO will assist FECO in the execution of the project by drafting TORs for international expert positions and disbursing funding necessary for the recruitment of international expert and for other international expenditure. UNIDO will oversee the implementation of the project through an assigned UNIDO project manager.

FECO administers projects towards the implementation of the Stockholm Convention in China and will continue to coordinate the NIP Update project. It will manage all national and local elements of the project, be responsible for recruitment and supervision of national expert subcontractors for inventory development, action plan development, NIP draft and finalization. It will provide services and perform the work as agreed in the sub-contract and detailed in the ToR with UNIDO, which will be prepared following the project approval. Subcontracts will be signed by an authorized official of the counterpart and UNIDO. A high-level official from FECO will work as the National Project Coordinator. A National Project Manager shall be recruited by the national executing organization under the subcontract to perform the administration of the project on the national level.

6. Budget information

The project is funded through a GEF grant, amounting to USD 2,000,000 a UNIDO contribution of USD 90,640 (Cash) and 99,360 (In-kind); and the counterparts' co-financing of USD 3,810,000 (cash and in kind), which amount to total project budget of USD 6,000,000.

Project outcomes	GEF (\$)	Co-Financing (\$)	Total (\$)
1. Coordination mechanism in place with national regulatory framework and capacities assessed and stakeholders aware of new POPs	280,000	560,000	840,000
2. Validation of inventories of new POPs (and updating of initial 12 POPs) by identification of new POPs alternatives and technologies	1,000,000	2,050,000	3,050,000
3. POPs priority setting and capacity strengthened for new POPs management based on identification of alternative investment solutions in pilot provinces	400,000	1,000,000	1,400,000
4. Government endorsement and submission of updated NIP to the SC Conference of Parties	70,000	100,000	170,000
5. Periodic monitoring and terminal evaluation of project implementation	110,000	90,000	200,000
Project management	140,000	200,000	340,000
Total (\$)	2,000,000	4,000,000	6,000,000

Source: Request for MSP approval, October 2013.

Co-financing Source Breakdown is as follows:

Name of Co-financer	Sources of Cofinancing	Type	Total Amount (\$)
UNIDO	GEF Agency	In-kind	99,360
UNIDO	GEF Agency	Cash	90,640
Government of China	National Government	In-kind	3,310,000
Government of China	National Government	Cash	500,000

Total Co-Financing (\$)

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Source: Request for MSP approval October 2013

UNIDO budget (GEF funding excluding agency support cost):

Item	EXECUTED BUDGET in 2014	EXECUTED BUDGET in 2015	Total Expenditure (\$) (2014-current date)
11-00 Staff & Intern Consultants	21,717.86	46,253.40	67,971.26
15-00 Local travel	0	708.00	708.00
21-00 Contractual Services	1,748,750.00	0	1,748,750.00
30-00 Train/Fellowship/Study	0	0	0
35-00 International Meetings	4,179.62	0	4,179.62
51-00 Other Direct Costs	39.72	0	39.72
Total (\$)	1,774,687.20	46,961.40	1,821,648.60

Source: SAP database, 13 May 2015.

II. Scope and purpose of the mid-term review

The **mid-term review (MTR)** will cover project activities from its starting date in February 2014 to the start of the MTR in September 2015 and assess the likelihood of the project achieving its intended outcomes and impacts, including their sustainability. It will analyse project performance against the criteria: relevance, effectiveness, efficiency, (likelihood of) sustainability and impact. Moreover, the MTR assessment will provide valuable inputs to the terminal evaluation at the end of the project.

The MTR should provide an analysis of the likelihood of attainment of the project objective(s) and the technical components or outputs. Through its assessments, the review should enable the Government, counterparts, the GEF, UNIDO and other stakeholders and donors to:

- (a) Provide evidence of **results to date** and of the likelihood of outcomes and impact in the future. The assessment includes re-examination of the relevance of the objectives and other elements of project design according to the project review parameters defined in chapter V.
- (b) Identify the challenges and risks to achievement of the project objectives and to derive improving actions needed for the project to achieve maximum impact and sustainability.
- (c) Enhance project relevance, effectiveness, efficiency and sustainability by proposing a set of recommendations and/or corrective actions with a view to ongoing and future activities until the end of project implementation.

III. Mid-term review approach and methodology

The MTR will be conducted in accordance with the UNIDO Evaluation Policy, the UNIDO Guidelines for the Technical Cooperation Programmes and Projects, the GEF Monitoring and Evaluation Policy from 2010 and the Recommended Minimum Fiduciary Standards for GEF Implementing and Executing Agencies.

It will be carried out using a participatory approach whereby all key parties associated with the project are kept informed and regularly consulted throughout the review. The MTR reviewer will liaise with the Project Manager on the conduct of the evaluation and methodological issues.

The reviewer will be required to use different methods to ensure that data gathering and analysis deliver evidence-based qualitative and quantitative information, based on diverse sources: desk studies and literature review, statistical analysis, individual interviews, focus group meetings, surveys and direct observation. This approach will not only enable the review to assess causality through quantitative means but also to provide reasons for why certain results were achieved or not and to triangulate information for higher reliability of findings. The specific mixed methodological approach will be described in the inception report as needed.

The reviewer will develop interview guidelines. Field interviews can take place either in the form of focus-group discussions or one-to-one consultations.

The methodology will be based on the following:

1. A desk review of project documents including, but not limited to:
 - (a) The original project document, monitoring reports (such as progress and financial reports to UNIDO and GEF annual Project Implementation Review (PIR) reports), output reports (case studies, action plans, sub-regional strategies, etc.) and relevant correspondence.
 - (b) Notes from the meetings of committees involved in the project (e.g. approval and steering committees).
 - (c) Other project-related material produced by the project.
2. The reviewer will use available models of (or reconstruct if necessary) theory of change for the different types of intervention (enabling, capacity, investment, demonstration). The validity of the theory of change will be examined through specific questions in interviews and possibly through a survey of stakeholders.
3. Counterfactual information: In those cases, where baseline information for relevant indicators is not available, the reviewer will aim at establishing a proxy-baseline through recall and secondary information.
4. Interviews with project management and technical support, including staff and management at UNIDO HQ and in the field, and – if necessary - staff associated with the project's financial administration and procurement.
5. Interviews with project partners including Government counterparts, GEF focal points and partners that have been selected for co-financing as shown in the corresponding sections of the project documents.
6. On-site observation of results achieved in demonstration projects, including interviews of actual and potential beneficiaries of improved technologies.
7. Interviews and telephone interviews with intended users for the project outputs and other stakeholders involved with this project. The reviewer shall determine whether to seek additional information and opinions from representatives of any donor agencies or other organisations.
8. Interviews with the relevant UNIDO Country Office and the project's management and Project Steering Committee (PSC) members and the various national and sub-regional authorities dealing with project activities as necessary. If deemed necessary, the reviewer shall also gain broader perspectives from discussions with relevant GEF Secretariat staff.
9. Other interviews, surveys or document reviews as deemed necessary by the reviewer and/or UNIDO PM.

10. The inception report will provide details on the methodology used by the reviewer and include an evaluation matrix.

IV. Mid-term review composition

The MTR reviewer will be composed of one national consultant.

The reviewer should be able to provide information relevant for follow-up studies, including review verification on request to the GEF partnership up to two years after completion of the review.

The evaluation expert will be contracted by UNIDO. The tasks of expert are specified in the job descriptions attached to these terms of reference. It is recommended that candidates for the mid-term reviewer should not have been directly involved in the design and/or implementation of the projects.

The Project Manager (PM) at UNIDO and the Project Team in China will support the reviewer. The UNIDO GEF Coordinator will be briefed on the MTR and equally provide support to its conduct.

V. Time schedule and deliverables

The MTR is scheduled to take place in the period from **01 September 2015** to **31 October 2015**. The field mission is planned for **12-16 October 2015**. At the end of the field mission, there will be a presentation of the preliminary findings for all stakeholders involved in this project in China. The draft MTR report will be submitted 2-4 weeks after the end of the mission.

VI. Project review parameters

The reviewer will use the following evaluation criteria:

A. Project design

The MTR will examine the extent to which:

- the project's design is adequate to address the problems at hand;
- a participatory project identification process was instrumental in selecting problem areas and national counterparts;
- the project has a clear thematically focused development objective, the attainment of which can be determined by a set of verifiable indicators;
- the project was formulated based on the logical framework (project results framework) approach;
- the project was formulated with the participation of national counterpart and/or target beneficiaries; and
- relevant country representatives (from government, industries and civil society) have been appropriately involved and were participating in the identification of critical problem areas and the development of technical cooperation strategies;
- all GEF-4 and GEF-5 projects have incorporated relevant environmental and social considerations into the project design / all GEF-6 projects are following the provisions specified in UNIDO/DGAI.23: UNIDO Environmental and Social Safeguards Policies and Procedures (ESSPP).

B. Project relevance

The MTR will examine the extent to which the project is relevant to the:

- National development and environmental priorities and strategies of the Government and population of China and regional and international agreements. See possible review questions below under “Country ownership/drivenness”.
- Target groups: relevance of the project’s objectives, outcomes and outputs to the different target groups of the interventions (e.g. companies, civil society, beneficiaries of capacity building and training, etc.).
- GEF’s focal areas/operational programme strategies: Are the planned project outcomes consistent with the focal areas/operational program strategies of GEF? Ascertain the likely nature and significance of the contribution of the project outcomes to the wider portfolio of GEF’s Focal area and Operational Program of Climate Change (CC-4).
- UNIDO’s thematic priorities: Are the envisaged outcomes (and achieved) outputs in line with UNIDO’s mandate, objectives and outcomes defined in the Programme & Budget and core competencies?
- Does the project remain relevant taking into account the changing environment? Is there a need to reformulate the project design and the project results framework given changes in the country and operational context?

C. Effectiveness: objectives and planned results at the current stage of implementation

- The MTR will assess to what extent, at the current stage of implementation, results/outputs (and outcomes, if any) at various levels have been achieved. In detail, the following issues will be assessed: To what extent have the expected outputs and outcomes (if any already achieved) been achieved or are likely to be achieved? Has the project generated any results or is likely to generate results that could lead to changes of the assisted institutions? Have there been any unplanned effects?
- Are the project outputs, achieved so far, commensurate with the original or modified project objectives?
- How do the stakeholders perceive the quality of outputs so far achieved? Were the targeted beneficiary groups actually reached or are likely to be achieved?
- Indicate the steps taken to assess long-term impacts (see also below “monitoring of long term changes”). Wherever possible, reviewer(s) should indicate how findings on impacts will be reported in future.

D. Efficiency at the current stage of implementation

The extent to which:

- The project cost has been effective so far? Is the project using the most efficient cost options?
- Is the project producing results (outputs and outcomes, if any so far) within the expected time frame? Has project implementation so far been delayed, and, if yes, how will that affect cost effectiveness or results? Wherever possible, the reviewer(s) should also compare the costs incurred and the time taken to achieve outputs with that for similar projects. Are the project’s activities in line with the schedule of activities as defined by the project team and annual work plans? Are the disbursements and project expenditures in line with budgets and planned time frame?
- Have the inputs from the donor, UNIDO and Government/counterpart been provided as planned, and were they adequate to meet requirements? Was the quality of UNIDO inputs and services as planned and timely?
- Is there coordination with other UNIDO and other donors’ projects, and are possible synergy effects being made use of?

E. Assessment of likelihood of sustainability of project outcomes

Sustainability is understood as the likelihood of continued benefits after the GEF project ends. Assessment of the likelihood of sustainability of outcomes will be given special attention, but also technical, financial and organization sustainability will be reviewed. This assessment should explain how the risks to project outcomes will affect continuation of benefits after the GEF project ends. It will include both exogenous and endogenous risks. The following four dimensions or aspects of risks to sustainability will be addressed:

- **Financial risks:** Are there any financial risks that may jeopardize sustainability of project outcomes? What is the likelihood of financial and economic resources not being available once GEF assistance ends? (Such resources can be from multiple sources, such as the public and private sectors or income-generating activities; these can also include trends that indicate the likelihood that, in future, there will be adequate financial resources for sustaining project outcomes.) Has the project been successful in identifying and leveraging co-financing?
- **Sociopolitical risks:** Are there any social or political risks that may jeopardize sustainability of project outcomes? What is the risk that the level of stakeholder ownership (including ownership by governments and other key stakeholders) will be insufficient to allow for the project outcomes/benefits to be sustained? Do the various key stakeholders see that it is in their interest that project benefits continue to flow? Is there sufficient public/stakeholder awareness in support of the project's long-term objectives?
- **Institutional framework and governance risks:** Do the legal frameworks, policies, and governance structures and processes within which the project operates pose risks that may jeopardize sustainability of project benefits? Are requisite systems for accountability and transparency, and required technical know-how, in place?
- **Environmental risks:** Are there any environmental risks that may jeopardize sustainability of project outcomes? Are there any environmental factors, positive or negative, that can influence the future flow of project benefits? Are there any project outputs or higher level results that are likely to affect the environment, which, in turn, might affect sustainability of project benefits? The review should assess whether certain activities will pose a threat to the sustainability of the project outcomes.

F. Assessment of monitoring and evaluation (M&E) systems

- **M&E design:** Does the project have a M&E plan to monitor results and track progress towards achieving project objectives? The MTR will assess whether the project met the minimum requirements for the application of the Project M&E plan (see Annex 3).
- **M&E plan implementation:** The MTR should verify that a M&E system is in place and facilitates timely tracking of progress towards project objectives by collecting information on chosen indicators continually throughout the project implementation; annual project reports have been prepared so far, and are complete and accurate; the information provided by the M&E system is being used during the project to improve performance and to adapt to changing needs; and the project has a M&E system in place with proper training for parties responsible for M&E activities to ensure that data will continue to be collected and used after project closure. Is monitoring being carried out effectively, based on indicators for outputs, outcomes and impacts? Are there any annual work plans? Has any steering or advisory mechanism been put in place? Do reporting and performance reviews take place regularly?
- **Budgeting and Funding for M&E activities:** In addition to incorporating information on funding for M&E while assessing M&E design, the reviewer(s) will determine whether M&E has been sufficiently budgeted for at the project planning stage and whether M&E is being adequately funded and in a timely manner during implementation.

G. Assessment of processes affecting achievement of project results

Among other factors, when relevant, the review will consider a number of issues affecting project implementation and attainment of project results. The assessment of these issues can be integrated into the analyses of project design, relevance, effectiveness, efficiency, sustainability and management as the reviewer(s) deem them appropriate (it is not necessary, however it is possible to have a separate chapter on these aspects in the review report). The review will consider, but need not be limited to, the following issues that may have affected/affect project implementation and achievement of project results:

- a. **Preparation and readiness / Quality at entry:** Are project objectives and components clear, practicable, and feasible within the given time frame? Are counterpart resources (funding, staff, and facilities), and adequate project management arrangements in place at project entry? Were the capacities of executing institution and counterparts properly considered when the project was designed? Were lessons from other relevant projects properly incorporated in the project design? Were the partnership arrangements properly identified and the roles and responsibilities negotiated prior to project approval?
- b. **Country ownership/drivenness:** Is the project concept in line with the sectoral and development priorities and plans of the country? Will the envisaged project outcomes contribute to national development priorities and plans? Are the relevant country representatives from government and civil society involved in the project? Is the recipient government maintaining its financial commitment to the project? Has the government prepared and approved policies or regulatory frameworks in line with the project's objectives?
- c. **Stakeholder involvement:** Does the project involve the relevant stakeholders through information sharing and consultation? Which stakeholders are involved in the project (i.e. NGOs, private sector, other UN Agencies, etc.) and what are their immediate tasks? Is the project implementing appropriate outreach and public awareness campaigns? Are the relevant vulnerable groups and powerful supporters and opponents of the processes properly involved? Did the project consult with and make use of the skills, experience, and knowledge of the appropriate government entities, NGOs, community groups, private-sector entities, local governments, and academic institutions in the design, implementation, and monitoring of project activities? Are perspectives of those who would be affected by project decisions, those who could affect the outcomes, and those who could contribute information or other resources to the process being taken into account while taking decisions?
- d. **Financial planning:** Does the project have appropriate financial controls, including reporting and planning, that allows management to make informed decisions regarding the budget and allow for timely flow of funds? Is there due diligence in the management of funds and financial audits? Did/Is promised co-financing materialize/- ing?
- e. **UNIDO's supervision and backstopping:** Does UNIDO staff identify problems in a timely fashion and accurately estimate their seriousness? Does UNIDO staff provide quality support and advice to the project, approve modifications in time, and restructure the project when needed? Does UNIDO provide the right staffing levels, continuity, skill mix, and frequency of field visits for the project?
- f. **Co-financing and project outcomes and likelihood of sustainability:** If there is a difference in the level of expected co-financing and the co-financing actually realized, what are the reasons for the variance? Would the extent of materialization of co- financing affect project outcomes and/or sustainability, and, if so, in what ways and through what causal linkages?
- g. **Delays and project outcomes and sustainability:** If there are delays in project implementation, what are the reasons? Would the delay affect project outcomes and/or sustainability, and, if so, in what ways and through what causal linkages?

- h. **Implementation approach:** Is the implementation approach chosen different from other implementation approaches applied by UNIDO and other agencies? Does the approach comply with the principles of the Paris Declaration? Does the approach promote local ownership and capacity building? Does the approach involve significant risks?

H. Project coordination and management

The extent to which:

- The national management and overall coordination mechanisms are efficient and effective? Does each partner have assigned roles and responsibilities from the beginning? Does each partner fulfil its role and responsibilities (e.g. providing strategic support, monitoring and reviewing performance, allocating funds, providing technical support, following up agreed/corrective actions...)?
- The UNIDO HQ-based management, coordination, monitoring, quality control and technical inputs are efficient, timely and effective (problems identified timely and accurately; quality support provided timely and effectively; right staffing levels, continuity, skill mix and frequency of field visits...)?
- The national management and overall coordination mechanisms are efficient and effective? Does each partner have specific roles and responsibilities from the beginning till the end? Does each partner fulfill its role and responsibilities (e.g. providing strategic support, monitoring and reviewing performance, allocating funds, providing technical support, following up agreed/corrective actions...)?

I. Assessment of gender mainstreaming

The review will consider, but need not be limited to, the following issues that may have affected gender mainstreaming in the project:

- To which extent are socioeconomic benefits likely to be delivered by the project at the national and local levels, including consideration of gender dimensions?

VII. Reporting

Inception report

This Terms of Reference (ToR) provides some information on the review methodology but this should not be regarded as exhaustive. After reviewing the project documentation and initial interviews with the project manager, the national consultant will operationalize the ToR relating to the review questions and provide information on what type of and how the evidence will be collected (methodology). It will be discussed with and approved by the responsible UNIDO PM. The Inception Report will focus on the following elements: preliminary project theory model(s); elaboration of review methodology including quantitative and qualitative approaches through a review framework ("evaluation matrix"); mission plan, including places to be visited, people to be interviewed and possible surveys to be conducted and a debriefing and reporting timetable¹.

MTR report format and review procedures

The reviewer will present its preliminary findings to the local stakeholders at the end of the field visit and take into account their feed-back in preparing the review report. The preliminary findings will present after the field mission.

¹ The reviewer will be provided with a Guide on how to prepare an inception report prepared by the UNIDO Office for Independent Evaluation.

The draft report will be delivered to the UNIDO PM and circulated to UNIDO staff and national stakeholders associated with the project for factual validation and comments. Taking into consideration any comments or responses, or feedback on any errors of fact to the draft report provided by the stakeholders, the reviewer will prepare the final version of the MTR report.

The MTR report should be brief, to the point and easy to understand. It must explain the purpose of the MTR, exactly what was reviewed, and the methods used. The report must highlight any methodological limitations, identify key concerns and present evidence-based findings, consequent conclusions, recommendations and lessons. The report should provide information on when the review took place, the places visited, who was involved and be presented in a way that makes the information accessible and comprehensible. The report should include an executive summary that encapsulates the essence of the information contained in the report to facilitate dissemination and distillation of lessons.

Findings, conclusions and recommendations should be presented in a complete, logical and balanced manner. The MTR report shall be written in English and follow the outline given in Annex 1.

MTR work plan

The “MTR Work Plan” includes the following main products:

1. Desk review, briefing by project manager and development of methodology: Following the receipt of all relevant documents, and consultation with the PM about the documentation, including reaching an agreement on the Methodology, the desk review is to be completed.
2. Inception report: At the time for departure to the field mission, the complete gamete of received materials have been reviewed and consolidated into the Inception report.
3. Field mission: The principal responsibility for managing this review lies with UNIDO PM. He/She will be responsible for liaising with the project team to set up the stakeholder interviews, arrange the field missions, coordinate with the Government. At the end of the field mission, there will be a presentation of preliminary findings to the key stakeholders in the country where the project was implemented.
4. Preliminary findings from the field mission: Following the field mission, the main findings, conclusions and recommendations would be prepared and presented.
5. A draft MTR report will be delivered to the UNIDO PM and circulated to main stakeholders, including the GEF focal points.
6. Final MTR report will incorporate the received comments.

MTR phases	Deliverables
Desk review, briefing with project managers and other key stakeholder at HQ, preliminary data analysis	MTR Inception Report, including: - Approach, methodology and review tools - Interview notes, detailed review schedule and list of stakeholders to interview during field mission
Field mission	Presentation of preliminary findings and recommendations to key stakeholders in the field
Debriefing, additional interviews and analysis.	Presentation of preliminary findings and recommendations to key stakeholders, including GEF focal points

Draft MTR report	Draft MTR Report for circulation to stakeholders and factual validation
Final MTR report	Final MTR Report

Annex 1 - Outline of an in-depth project MTR report

Executive summary

- Must provide a synopsis of the storyline which includes the main review findings and recommendations
- Must present strengths and weaknesses of the project
- Must be self-explanatory and should be maximum 3-4 pages in length

I. Evaluation objectives, methodology and process

- Information on the MTR: why, when, by whom, etc.
- Scope and objectives of the review, main questions to be addressed
- Information sources and availability of information
- Methodological remarks, limitations encountered and validity of the findings

II. Countries and project background

- Brief countries context: an overview of the economy, the environment, institutional development, demographic and other data of relevance to the project
- Sector-specific issues of concern to the project² and important developments during the project implementation period
- Project summary:
 - Fact sheet of the project: including project objectives and structure, donors and counterparts, project timing and duration, project costs and co-financing
 - Brief description including history and previous cooperation
 - Project implementation arrangements and implementation modalities, institutions involved, major changes to project implementation
 - Positioning of the UNIDO project (other initiatives of government, other donors, private sector, etc.)
 - Counterpart organization(s)

III. Project assessment

This is the key chapter of the report and should address all review criteria and questions outlined in the TOR (see section V Project Review Parameters). Assessment must be based on factual evidence collected and analyzed from different sources. The reviewer(s) assessment can be broken into the following sections:

- A. Design
- B. Relevance (Report on the relevance of project towards countries and beneficiaries)
- C. Effectiveness at the current stage of implementation (The extent to which the development intervention's objectives and deliverables have been achieved, or are expected to be achieved, taking into account their relative importance)
- D. Efficiency at the current stage of implementation (Report on the ongoing efficiency of the project and partner countries' contribution to the achievement of project objectives)
- E. Likelihood of Sustainability of Project Outcomes (Report on the risks and vulnerability of the project, considering the likely effects of sociopolitical and institutional changes in partner countries, and its impact on continuation of benefits after the GEF project ends, specifically the financial, sociopolitical, institutional framework and governance, and environmental risks)
- F. Assessment of monitoring and evaluation systems (Report on M&E design, M&E plan implementation, and budgeting and funding for M&E activities)
- G. Assessment of processes affecting achievement of project results (Report on preparation and readiness / quality at entry, country ownership, stakeholder

² Explicit and implicit assumptions in the logical framework of the project can provide insights into key-issues of concern (e.g. relevant legislation, enforcement capacities, government initiatives, etc.)

- approach)
- H. Project coordination and management (Report project management conditions and achievements, and partner countries commitment)
- I. Gender mainstreaming

IV. Conclusions, recommendations and lessons learned

This chapter can be divided into three sections:

A. Conclusions

This section should include a storyline of the main review conclusions related to the project's achievements at the current stage of implementation and shortfalls. It is important to avoid providing a summary based on each and every review criterion. The main conclusions should be cross-referenced to relevant sections of the review report.

B. Recommendations

This section should be succinct and contain few key recommendations. They should:

- be based on review findings
- realistic and feasible within a project context, and for further implementation of project
- indicate institution(s) responsible for implementation (addressed to a specific officer, group or entity who can act on it) and have a proposed timeline for implementation if possible
- be commensurate with the available capacities of project team and partners
- take resource requirements into account.

Recommendations should be structured by addressees:

- UNIDO
- Government and/or Counterpart Organizations
- Donor

C. Lessons learned

- Lessons learned must be of wider applicability beyond the reviewed project but must be based on findings and conclusions of the review
- For each lesson the context from which they are derived should be briefly stated

Annexes should include the review TOR, list of interviewees, documents reviewed, a summary of project identification and financial data (including an updated table of expenditure to date), and other detailed quantitative information. Dissident views to the review findings may later be appended in an annex.

Annex 2 - GEF Minimum requirements for M&E³

Minimum Requirement 1: Project Design of M&E

All projects will include a concrete and fully budgeted M&E plan by the time of work program entry for full-sized projects and CEO approval for medium-sized projects. This M&E plan will contain as a minimum:

- SMART indicators for project implementation, or, if no indicators are identified, an alternative plan for monitoring that will deliver reliable and valid information to management;
- SMART indicators for results (outcomes and, if applicable, impacts), and, where appropriate, indicators identified at the corporate level;
- Baseline for the project, with a description of the problem to be addressed, with indicator data, or, if major baseline indicators are not identified, an alternative plan for addressing this within one year of implementation;
- Identification of reviews and evaluations that will be undertaken, such as mid-term reviews or evaluations of activities; and
- Organizational set-up and budgets for monitoring and evaluation.

Minimum requirement 2: Application of Project M&E

Project monitoring and supervision will include implementation of the M&E plan, comprising:

- SMART indicators for implementation are actively used, or if not, a reasonable explanation is provided;
- SMART indicators for results are actively used, or if not, a reasonable explanation is provided;
- The baseline for the project is fully established and data compiled to review progress reviews, and evaluations are undertaken as planned; and
- The organizational set-up for M&E is operational and budgets are spent as planned.

³ http://www.thegef.org/gef/sites/thegef.org/files/documents/ME_Policy_2010.pdf

Annex 3 – Required project identification and financial data

The review report should provide information on project identification, time frame, actual expenditures, and co-financing in the following format, which is modeled after the project identification form (PIF).

I. Dates

Milestone	Expected Date	Actual Date
Project CEO endorsement/approval date		
Project implementation start date (PAD issuance date)		
Original expected implementation end date (indicated in CEO endorsement/approval document)		
Revised expected implementation end date (if any)		

II. Project Framework

Project component	Activity type	GEF Financing (in USD)		Co-financing (in USD)	
		Approved	Actual	Promised	Actual
1.					
2.					
3.					
4.					
5.					
6. Project management					
Total					

Activity types are:

- a) Experts, researches hired
- b) technical assistance, Workshop, Meetings or experts consultation scientific and technical analysis, experts researches hired
- c) Promised co-financing refers to the amount indicated on endorsement/approval.

III. Co-financing

Source of co-financing	Type	Project preparation		Project implementation		Total	
		Expected	Actual	Expected	Actual	Expected	Actual
Host gov't contribution							
GEF Agency(-ies)							
Bilateral aid agency(-ies)							
Multilateral agency(-ies)							

Private sector							
NGO							
Other							
Total co-financing							

Expected amounts are those submitted by the GEF Agencies in the original project appraisal document. Co-financing types are grant, soft loan, hard loan, guarantee, in kind, or cash.

Annex 4 – Job descriptions



UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION TERMS OF

REFERENCE FOR PERSONNEL UNDER INDIVIDUAL SERVICE AGREEMENT (ISA)

Title:	National Evaluation Consultant
Main Duty Station and Location:	Home-based
Mission/s to:	Travel to potential sites within China; TR will be authorized separately;
Start of Contract (EOD):	1 September 2015
End of Contract (COB):	31 October 2015
Number of Working Days:	21 days spread over 2 months

ORGANIZATIONAL CONTEXT

The United Nations Industrial Development Organization (UNIDO) is the specialized agency of the United Nations that promotes industrial development for poverty reduction, inclusive globalization and environmental sustainability. The mandate of UNIDO is to promote and accelerate inclusive and sustainable industrial development in developing countries and economies in transition.

UNIDO plays a leading role in the implementation of the Stockholm Convention on POPs. Since the Convention opened for signature in 2001, UNIDO became one of the principal agencies assisting developing and economies in transition countries to meet their obligations under the Convention.

PROJECT CONTEXT

The People's Republic of China signed the Stockholm Convention on POPs on May 23, 2002, and ratified it on June 23, 2004. Hence, the Convention entered into force for China on November 11, 2004. With the funding from the Global Environmental Facility (GEF) and the technical assistance from the United Nations Industrial Development Organization (UNIDO), the original NIP of China was developed and transmitted to the COP on April 17, 2007.

The ratification of the amendments for 9 POPs will enter into force on March 26, 2014. Thus, China will review and update its original NIP.

The National Evaluation Consultant will review the project according to the Terms of Reference. She/he will perform the following tasks:

MAIN DUTIES	Concrete/measurable outputs to be achieved	Expected duration	Location
<p>Review and analyse project documentation and relevant country background information (national policies and strategies, UN strategies and general economic data); determine key data to collect in the field and prepare key instruments in both English and local language (questionnaires, logic models) to collect these data through interviews and/or surveys during and prior to the field missions;</p> <p>Coordinate and lead interviews/surveys in local language and assist the reviewer with translation where necessary;</p> <p>Analyze and assess the adequacy of legislative and regulatory framework, specifically in the context of the project's objectives and targets; provide analysis and advice to the reviewer on existing and appropriate policies for input to the MTR.</p>	<ul style="list-style-type: none"> List of detailed review questions to be clarified; questionnaires/interview guide; logic models; list of key data to collect, draft list of stakeholders to interview during the field missions Drafting and presentation of brief assessment of the adequacy of the country's legislative and regulatory framework in the context of the project. 	5 days	Home-based
<p>Review all project outputs/publications/feedback;</p> <p>Briefing with the UNIDO project managers and other key stakeholders.</p> <p>Coordinate the MTR mission agenda, ensuring and setting up the required meetings with project partners and government counterparts, and organize and lead site visits, in close cooperation with the Project Management Unit.</p> <p>Assist and provide detailed analysis and inputs in the Preparation of the Inception Report.</p>	<ul style="list-style-type: none"> Interview notes, detailed MTR schedule and list of stakeholders to interview during the field missions. Inception Report. 	4 days	Home-based (telephone interviews)
<p>Coordinate and conduct the field mission in cooperation with the Project Management Unit, where required;</p> <p>Consult with UNIDO on the structure and content of the MTR report and the distribution of writing tasks.</p>	<ul style="list-style-type: none"> Presentations of the review's initial findings, draft conclusions and recommendations to stakeholders, including GEF FP, in the country at the end of the mission. Agreement UNIDO on the structure and content of the MTR report and the distribution of writing tasks. 	7 days (including travel days)	China
Prepare inputs and analysis to the	Draft MTR report prepared.	3 days	Home-

MAIN DUTIES	Concrete/measurable outputs to be achieved	Expected duration	Location
MTR report according to TOR and as agreed with UNIDO.			based
Revise the draft project MTR report based on comments from all stakeholders and edit the language and form of the final version according to UNIDO standards.	Final MTR report prepared.	2 days	Home-based
TOTAL		21 days	

REQUIRED COMPETENCIES

Core values:

1. Integrity
2. Professionalism
3. Respect for diversity

Core competencies:

1. Results orientation and accountability
2. Planning and organizing
3. Communication and trust
4. Team orientation
5. Client orientation
6. Organizational development and innovation

Managerial competencies (as applicable):

1. Strategy and direction
2. Managing people and performance
3. Judgement and decision making
4. Conflict resolution

MINIMUM ORGANIZATIONAL REQUIREMENTS

Education: Advanced university degree in environmental science, engineering or other relevant discipline like developmental studies with a specialization in industrial energy efficiency and/or climate change.

Technical and functional experience:

- A minimum of five years practical experience in the field of environment and energy, including evaluation experience at the international level involving technical cooperation in developing countries.
- Exposure to the needs, conditions and problems in developing countries.
- Familiarity with the institutional context of the project is desirable.

Languages: Fluency in written and spoken English is required.

Reporting and deliverables

- 1) The country assignment will have the following deliverables:
 - Presentation of initial findings of the mission;
 - Draft report;

- Final report, comprising of executive summary, findings regarding design, implementation and results, conclusions and recommendations, as described in the MTR TOR.

2) Debriefing:

- Presentation and discussion of findings;
- Concise summary and comparative analysis of the main results of the MTR report. All

reports and related documents must be in English and presented in electronic format. **Absence**

of Conflict of Interest:

According to UNIDO rules, the consultant must not have been involved in the design and/or implementation, supervision and coordination of and/or have benefited from the programme/project (or theme) under evaluation. The consultant will be requested to sign a declaration that none of the above situations exists and that the consultants will not seek assignments with the manager/s in charge of the project before the completion of her/his contract.

Annex 5 – Project results framework

HIERARCHY OF OBJECTIVES	Indicators	Baseline	Target	Sources of verification	Assumptions
<u>Project Development Objective:</u> China's national capacity build and awareness raised for the management of new POPs, through the review and update of the National Implementation Plan (NIP)					
<u>Outcome 1.</u> The updated and review National Implementation Plan (NIP) endorsed by the Government and submitted to the Stockholm Convention					
Indicators: Approval date of the updated NIP by the Government; Submission date of the updated NIP to the Stockholm Convention on POPs					
<u>Output 1.1</u> National inventories of new and original POPs validated by relevant stakeholders and new POPs alternatives and technologies identified	<ul style="list-style-type: none"> - Date of national inventory training workshop; - Nr. of people trained; - Date of submitted inventory reports on new and old POPs; - Date of submitted socio-economic assessment report; - Date of national validation workshop; - Nr. of POPs alternatives and technologies identified 	<ul style="list-style-type: none"> - Stakeholders have not been trained; - No reports of new and old POPs as well as socio-economic assessment is available; - New POPs alternatives and technologies have not been identified 	<ul style="list-style-type: none"> - At least 20 stakeholders trained; - Three inventory reports (pesticides; industrial, U-POPs) and one socio-economic assessment report available; - List of feasible new POPs alternatives and technologies available 	<ul style="list-style-type: none"> - Communication records of PM; - Steering Committee meeting minutes; - Project progress reports (see M&E) 	The Foreign Economic Cooperation Office of Ministry of Environment Protection will promote all the working group's activities; NIP reviewing and drafting committee will be comprised of members from various sectors; Private sector and civil society will contribute to the inventory activities.
<u>Output 1.2</u> NIP formulated,	- Date of action plans	- New POPs	- All action plans	-Communication	The Foreign

HIERARCHY OF OBJECTIVES	Indicators	Baseline	Target	Sources of verification	Assumptions
endorsed by the Government and submitted to the SC Conference of Parties	<p>submission to the steering committee for review;</p> <ul style="list-style-type: none"> - Nr. of stakeholders commented on NIP draft; - Date of national consultation meeting on draft NIP; - Date of national endorsement of NIP draft; 	<p>action plans and draft NIP is not available;</p> <ul style="list-style-type: none"> - National consultation workshop on the review and update of the NIP has not been conducted 	<p>from the initial NIP updated; 2 action plans on industrial POPs added;</p> <ul style="list-style-type: none"> - At least 10 stakeholders commented on the draft NIP; - One national consultation workshop held; - One endorsement workshop held. 	<p>records of PM;</p> <ul style="list-style-type: none"> - Steering Committee meeting minutes; - Project progress reports (see M&E) 	<p>Economic Cooperation Office of Ministry of Environment Protection will promote all the working group's activities; NIP reviewing and drafting committee will be comprised of members from various sectors; Private sector and civil society will contribute to the inventory activities.</p>
Outcome 2. China's national capacity build for new POPs management					
Indicators: increased awareness of the participating stakeholders (before/after the project); Nr. of of people trained in inventory of new POP chemicals; Nr.of trained national and municipal governmental officers in the new POPs management particularly in the Ministry in charge of the project; Nr. of at least 10 experts in POPs management from private & public institutions					
Output 2.1 Coordination mechanism in place, and national regulatory framework and capacities assessed and awareness for new POPs raised	<ul style="list-style-type: none"> - Nr. of project coordination unit meetings; - Date of inception workshop; - Nr. of public people 	<ul style="list-style-type: none"> - PCU meetings not held; - Inception workshop not held; 	<ul style="list-style-type: none"> - At least 6 PCU meetings (every 6 months); - Inception workshop held; 	<ul style="list-style-type: none"> - Communication records of PM; - Steering Committee meeting minutes; - Project progress 	<p>The Foreign Economic Cooperation Office of Ministry of Environment Protection will promote all the</p>

HIERARCHY OF OBJECTIVES	Indicators	Baseline	Target	Sources of verification	Assumptions
	reached through awareness raising activities; - Nr. of women reached through awareness raising activities; - Date of assessment reports on (i) legislative and regulatory framework; (ii) capacity report	- Awareness raising activities on new POPs not done; - Awareness raising activities addressing women not done; - Assessment reports are not available	- At least two awareness raising compaigns, including women, conducted; - Assessment report on (i) legislative and regulatory and (ii) capacity available	reports (see M&E)	working group's activities; NIP reviewing and drafting committee will be comprised of members from various sectors; Private sector and civil society will contribute to the inventory activities.

<p>Output 2.2 Priorities for new POPs decided upon, and capacities for new POPs management in pilot provinces strengthened</p>	<ul style="list-style-type: none"> - Date of detailed inventory report for selected provinces submitted; - Date of prioritization workshop; - Date of feasibility study for selected province submitted to PCU and UNIDO 	<ul style="list-style-type: none"> - detailed inventory report is not available; - Feasibility study is not available 	<ul style="list-style-type: none"> - Priority setting report available and submitted to PCU and UNIDO; - Prioritization workshop held; - Feasibility study for selected province submitted to PCU and UNIDO 		<p>The Foreign Economic Cooperation Office of Ministry of Environment Protection will promote all the working group's activities; NIP reviewing and drafting committee will be comprised of members from various sectors; Private sector and civil society will</p>
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HIERARCHY OF OBJECTIVES	Indicators	Baseline	Target	Sources of verification	Assumptions
					contribute to the inventory activities
Outcome 3. Monitoring and Evaluation					
Indicators: All reports under M&E submitted to PCU and UNIDO					
Output Periodic monitoring and terminal evaluation of project implementation done	3.1. - Date of progress reports as indicated in the M&E send to UNIDO; - Date of mid-term review and feedback	- No progress reports are available	- All reports according to the M&E send to PCU and UNIDO	- Project progress reports (see M&E)	PCU and UNIDO will regularly monitor the implementation progress.

