INDEPENDENT EVALUATION DIVISION
OFFICE OF EVALUATION AND INTERNAL OVERSIGHT

Independent Terminal Evaluation

CHINA

CHINA'S COMPLIANCE WITH THE STOCKHOLM CONVENTION: REVIEW AND UPDATE OF THE NATIONAL IMPLEMENTATION PLAN FOR THE STOCKHOLM CONVENTION ON PERSISTENT ORGANIC POLLUTANTS – PEOPLE'S REPUBLIC OF CHINA

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List of acronyms and abbreviations

Abbreviation	Meaning
AQSIQ	General Administration of Quality Supervision, Inspection and Quarantine
COMFAR	Computer Model for Feasibility Analysis and Reporting
COP	Conference of the Parties
GEF	Global Environment Facility
MARA	Ministry of Agriculture and Rural Affairs of the People's Republic of China
MEE-FECO	Ministry of Environment and Ecology – Foreign Economic Cooperation Office, People's Republic of China. After a merger with another organization, this entity is known as the Foreign Environmental Cooperation Center
MFA	Ministry of Foreign Affairs of the People's Republic of China
MIIT	Ministry of Industry and Information Technology of the People's Republic of China
MoA	Ministry of Agriculture of the People's Republic of China
MoF	Ministry of Finance of the People's Republic of China
MOFCOM	Ministry of Commerce of the People's Republic of China
MoHURD	Ministry of Housing and Urban-Rural Development of the People's Republic of China
MoST	Ministry of Science and Technology of the People's Republic of China
MoT	Ministry of Transport of the People's Republic of China
MPS	Ministry of Public Security of the People's Republic of China
MSP	Medium Sized Project
NCG	National Coordination Group
NDRC	National Development and Reform Commission of the People's Republic of China
NEA	National Energy Administration of the People's Republic of China
NIP	National Implementation Plan
POP	Persistent Organic Pollutant
P.R. China	People's Republic of China
SAMR	State Administration for Market Regulation
SC	Stockholm Convention on Persistent Organic Pollutants
SERC	State Electricity Regulatory Commission
UNIDO	United Nations Industrial Development Organization

Glossary of new Persistent Organic Pollutants (POPs) referred to in the report

Report reference / Abbreviation	Meaning
Dioxin / PCDD	**Polychlorinated dibenzo-p-dioxins (PCDD)** are produced unintentionally due to incomplete combustion, as well during the manufacture of pesticides and other chlorinated substances. They are emitted mostly from the burning of hospital waste, municipal waste, and hazardous waste, and also from automobile emissions, peat, coal, and wood. There are 75 different dioxins, of which seven are considered to be of concern.
Endosulfan	**Technical endosulfan (and its related isomers)** is an insecticide that has been used since the 1950s to control crop pests, tsetse flies and ectoparasites of cattle and as a wood preservative. As a broad-spectrum insecticide, endosulfan is currently used to control a wide range of pests on a variety of crops including coffee, cotton, rice, sorghum and soy.
HBCD	**Hexabromocyclododecane** is used a flame-retardant additive, providing fire protection during the service life of vehicles, buildings or articles, as well as protection while stored. The main uses of HBCD globally are in expanded and extruded polystyrene foam insulation while the use in textile applications and electric and electronic appliances is smaller. The production of hexabromocyclododecane is a batch-process. Elemental bromine is added to cyclododecatriene at 20 to 70°C in the presence of a solvent in a closed system.
Lindane	**Lindane** has been used as a broad-spectrum insecticide for seed and soil treatment, foliar applications, tree and wood treatment and against ectoparasites in both veterinary and human applications.
PFOS/PFOSF	**Perfluorooctane sulfonic acid (PFOS), its salts and perfluorooctane sulfonyl fluoride (PFOSF)** are both intentionally produced and an unintended degradation product of related anthropogenic chemicals. The current intentional use of PFOS is widespread and includes: electric and electronic parts, fire-fighting foam, photo imaging, hydraulic fluids and textiles. PFOS is still produced in several countries but not P.R. China.
UPOPs	Unintentional Persistent Organic Pollutants

Glossary of evaluation-related terms

Term	Definition
Baseline	The situation, prior to an intervention, against which progress can be assessed.
Effect	Intended or unintended change due directly or indirectly to an intervention.
Effectiveness	The extent to which the development intervention's objectives were achieved, or are expected to be achieved.
Efficiency	A measure of how economically resources/inputs (funds, expertise, time, etc.) are converted to results.
Impact	Positive and negative, intended and non-intended, directly and indirectly, long term effects produced by a development intervention.
Indicator	Quantitative or qualitative factors that provide a means to measure the changes caused by an intervention.
Lessons learned	Generalizations based on evaluation experiences that abstract from the specific circumstances to broader situations.
Logframe (logical framework approach)	Management tool used to facilitate the planning, implementation and evaluation of an intervention. It involves identifying strategic elements (activities, outputs, outcome, impact) and their causal relationships, indicators, and assumptions that may affect success or failure. Based on RBM (results-based management) principles.
Outcome	The likely or achieved (short-term and/or medium-term) effects of an intervention's outputs.
Outputs	The products, capital goods and services which result from an intervention; may also include changes resulting from the intervention which are relevant to the achievement of outcomes.
Relevance	The extent to which the objectives of an intervention are consistent with beneficiaries' requirements, country needs, global priorities and partners' and donor's policies.
Risks	Factors, normally outside the scope of an intervention, which may affect the achievement of an intervention's objectives.
Sustainability	The continuation of benefits from an intervention, after the development assistance has been completed.
Target groups	The specific individuals or organizations for whose benefit an intervention is undertaken.

Executive summary

Project title	Review and update of the National Implementation Plan (NIP) under the Stockholm Convention on Persistent Organic Pollutants in the People's Republic of China
UNIDO Project ID	130176
GEF Project ID	5624
Region	Asia and the Pacific
Country(ies)	People's Republic of China
Project donor(s)	GEF
Project implementation start date	2/1/2014
Expected duration	36 months
Expected implementation end date	30 June, 2018 (actual 30 Nov 2019 – 59 months)
GEF Focal Areas and Operational Project	Persistent Organic Pollutants
Implementing agency(ies)	UNIDO
Executing partners	Foreign Economic Cooperation Office of Ministry of Environment
GEF project grant (excluding PPG, in USD)	2,000,000
Project GEF CEO endorsement / approval date	11/11/2013
UNIDO input (in kind, USD)	99,360 (in kind); 90,640 (Cash)
Co-financing at CEO Endorsement, as applicable	Foreign Economic Cooperation Office of Ministry of Environment: 3,810,000 USD (cash + in-kind)
Total project cost (USD)	6,000,000
Mid-term review date	4/29/2016

Source: Project Document[1]

Evaluation Purpose and Methodology

The purpose of this evaluation was to independently assess the project *"Review and update of the National Implementation Plan (NIP) under the Stockholm Convention on Persistent Organic Pollutants in the People's Republic of China*", and to derive lessons to help UNIDO and P.R. China to improve performance and results of ongoing and future programmes and projects. The evaluation itself, covering the whole duration of the project from its starting date in 2 January 2014 to its estimated completion on 30 November 2019, had two objectives:

1. Assess the project performance in terms of relevance, effectiveness, efficiency, sustainability and progress towards impact; and,
2. Develop a series of findings, lessons learned and recommendations for enhancing the design and implementation of new and ongoing projects by UNIDO.

The evaluation terms of reference state that the overarching **purpose** of the evaluation is **to help UNIDO improve performance and results of future programmes and projects**. To achieve this – and as is standard for many evaluations – the evaluation has an **accountability**

[1] UNIDO. 2013. "Project of the Government of the People's Republic of China: Project Document". UNIDO PROJECT ID: 130176 Review and Update of the National Implementation for the Stockholm Convention on Persistent Organic Pollutants".

objective (assessing project performance and results) and a **learning** objective (improving actions).

The NIP project design involved a detailed logframe that established the project's overall development objective, expected outcomes and outputs, and indicators that were used to track progress against those results. The terminal evaluation validated the programme's internal monitoring data, assessed progress towards the expected results and – where available – identified any unanticipated results.

While understanding progress towards results is essential for accountability purposes, it is important that the assessment of progress is then used as a foundation for **learning** what has worked well (and why) and what hasn't worked so well (and why). To address this objective the evaluation will assessed the broader project **strategy and processes**, exploring elements such as planning and coordination. Such an assessment is essential if the evaluation is to develop an understanding of the project's **overall performance**.

The key evaluation questions answered through the course of this Terminal Evaluation included:

a) What are the key drivers and barriers to achieve the long-term objectives? To what extent has the project helped put in place the conditions likely to address the drivers, overcome barriers and contribute to the long-term objectives?
b) How well has the project performed? Has the project done the right things? Has the project done things right, with good value for money?
c) What have been the project's key results (outputs, outcome)? To what extent have the expected results been achieved or are likely to be achieved? To what extent will the achieved results sustain after the completion of the project?
d) What lessons can be drawn from the successful and unsuccessful practices in designing, implementing and managing the project?

The evaluation utilized a combination of desk review, stakeholder consultation and field visit methods to triangulate findings, validate the logframe, and develop key findings, conclusions, recommendations, and lessons learned through the implementation of the NIP update project.

Key Findings

Number	Findings
1	The NIP was a highly relevant project that addressed immediate and strategic needs for China to update its NIP and to build POPs management capacity. The project was relevant to UNIDO which has an objective to, and experience in, assisting countries to establish and update NIPs to the Stockholm Convention and other relevant international environmental treaties.
2	The project was very efficient, with a grant of only USD 2 million from the Global Environment Facility (GEF) to create huge economic and social value for China. Direct to the project, nearly USD 4 million in co-funding was leveraged to complete the project. As a result of the NIP update, as much as RMB 27.6 billion will be spent on eliminating, cleaning up and managing POPs, and even more will be spent on managing UP-POPs.
3	A huge benefit of the project was making use of existing resources, and bringing together previously-existing resources in China to complete the NIP update. The Coordination Committee, expert groups and even staff within FECO all had experience in designing the first NIP and brought experience and efficiency to the project. A key community of expertise continues to bring benefit in POPs

Number	Findings
	management to China.
4	Inventories of new POPs were effective in bringing together data on new POPs sources and manufacturers as well as in identifying knowledge, methodology, standards and implementation gaps that can be addressed in future project. The inventories also informed local governments on how to manage POPs sources in their jurisdictions.
5	By holding and including NIP update information in over 100 meetings, training over 400 officials (including over 150 women) and driving the cooperation between government ministries, the NIP update was successfully completed, endorsed by government and submitted to the SC COP secretariat on 28 December 2019.
6	While gender balance was a focus in the government engagement aspect of the project, special activities could have been undertaken to better engage women in broader society and ensure that their special interests were included beyond their reproductive roles.
7	The logframe included the COMFAR software package as a specific approach to outputs 2.3 and 3.2, but COMFAR was not examined or utilized for this project. Rather, a Chinese methodology with more local considerations was utilized. While the outcome was good, including COMFAR in the logframe of the project was confusing to the project implementation team.
8	The project voluntarily undertook a mid-term review which was highly effective in this mid-sized project for ensuring the project was on track and that the parties were aware of their progress

Recommendations

No.	Recommendation	Target
1	Maintain a relationship with the current group of NIP experts and managers from China and make use of their expertise at the international level including in international development projects.	UNIDO
2	Establish and maintain a technology information platform for BAT-BEPs that can assist Chinese companies in procuring technologies as POPs regulation evolves.	UNIDO
3	Avoid noting specific software packages and other tools in the logframe of projects so as to ensure flexibility on the part of the local implementer.	UNIDO
4	Work with partners to develop and institutionalize gender mainstreaming, ensuring that gender roles are understood and acted upon not only for women's reproductive roles but also for their inherent biological and social differences from men, and not only in government but at the broader social level.	FECO
5	Cooperate to develop public communication strategies for key pollutants including UP-POPs that can inform the public of their risks and drive the reduction of UP-POP generation, but also avoid social concern where it is not warranted. This could also include improved monitoring networks of ambient pollutants.	UNIDO, FECO

Project Ratings

#	Evaluation criteria	Rating
B	**Project design**	**HS**
1	• Overall design	HS
2	• Logframe	S
C	**Project performance**	**HS**
1	• Relevance	HS
2	• Effectiveness	HS
3	• Efficiency	HS
4	• Sustainability of benefits	HS
D	**Cross-cutting performance criteria**	
1	• Gender mainstreaming	S
2	• M&E: ✓ M&E design ✓ M&E implementation	HS HS HS
3	• Results-based Management (RBM)	HS
E	**Performance of partners**	
1	• UNIDO	HS
2	• National counterparts	HS
3	• Donor	HS
F	**Overall assessment**	HS

1. Introduction

1.1 Evaluation objectives and scope

The purpose of this evaluation was to independently assess the project *"Review and update of the National Implementation Plan (NIP) under the Stockholm Convention on Persistent Organic Pollutants in the People's Republic of China*", and to derive lessons to help UNIDO and P.R. China to improve performance and results of ongoing and future programmes and projects. The evaluation itself, covering the whole duration of the project from its starting date in 2 January 2014 to its estimated completion on 30 November 2019, had two objectives:

1. Assess the project performance in terms of relevance, effectiveness, efficiency, sustainability and progress towards impact; and,
2. Develop a series of findings, lessons learned and recommendations for enhancing the design and implementation of new and ongoing projects by UNIDO.

The evaluation terms of reference state that the overarching **purpose** of the evaluation was **to help UNIDO improve performance and results of future programmes and projects**. To achieve this – and as is standard for many evaluations – the evaluation has an **accountability** objective (assessing project performance and results) and a **learning** objective (improving actions).

1.1.1 Accountability / results objective

Evaluation Objective 1:
Assess the project performance in terms of relevance, effectiveness, efficiency, sustainability and progress to impact.

The NIP was designed around a detailed logframe that established the project's overall development objective, expected outcomes and outputs, and indicators that were used to track progress against those results. The terminal evaluation has validated the programme's internal monitoring data, assessed progress towards the expected results and – where available – identified any unanticipated results.

1.1.2 Learning / improvement objective

Evaluation Objective 2:
Develop a series of findings, lessons and recommendations for enhancing the design of new and implementation of ongoing projects by UNIDO.

While understanding progress towards results is essential for accountability purposes, it is important that the assessment of progress is then used as a foundation for **learning** what has worked well (and why) and what hasn't worked so well (and why). To address this objective the evaluation assessed the broader project **strategy and processes**, exploring elements such as planning and coordination. Such an assessment is essential if the evaluation is to develop an understanding of the project's **overall performance**.

1.1.3 Key evaluation questions

The key evaluation questions to be answered through the course of this Terminal Evaluation include:

a) What are the key drivers and barriers to achieve the long-term objectives? To what extent has the project helped put in place the conditions likely to address the drivers, overcome barriers and contribute to the long-term objectives?
b) How well has the project performed? Has the project done the right things? Has the project done things right, with good value for money?
c) What have been the project's key results (outputs, outcome)? To what extent have the expected results been achieved or are likely to be achieved? To what extent will the achieved results sustain after the completion of the project?
d) What lessons can be drawn from the successful and unsuccessful practices in designing, implementing and managing the project?

1.1.4 Primary target audiences for the evaluation

- **UNIDO management**, particularly those with direct responsibility for the design and implementation of the NIP, for management of the UNIDO China country programme, and for UNIDO teams involved in the design and delivery of other international environmental agreement national planning interventions;
- The GEF, particularly those departments involved in decision-making with regards to project funding for the implementation planning of international environmental agreements in countries;
- The programme's **national partners and beneficiaries**, particularly MEE-FECO which has the responsibility for coordinating and monitoring the implementation of international environmental agreements in P.R. China.

1.2 Overview of the Project Context

The Stockholm Convention (SC) on Persistent Organic Pollutants (POPs) was designed with the objective of protecting human health and the environment from toxic and hazardous POPs. P.R. China signed the Convention 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 contributions of GEF and the technical support of UNIDO, China National Implementation Plan (NIP) for the Stockholm Convention on Persistent Organic Pollutants was formulated and submitted on 17 April 2007. The NIP has since become a program of action for the reduction, elimination, and control of POPs in China.

In order to respond to the Convention, the State Council of China approved establishment of the National Coordination Group for Implementation of the Stockholm Convention (NCG) on May 2005, consisting of 14 ministries and agencies: Ministry of Environment Protection as the leading agency, along with the 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; and, the State Administration of Work Safety. Three working mechanisms were formed under the NCG, including a coordinators' meeting, liaison officers' meeting and expert committee.

At the 2009 Conference of the Parties (COP) to the convention which adopted the 2009 Amendment, as well as the 2011 COP that adopted the 2011 Amendment, a total of 10 new POPs were added to the list of controlled pollutants. Furthermore, between April and May 2013, the COP adopted another amendment, listing HBCD. According to the decisions of the COPs (SC-1/12, SC-4/10-18), after an amendment on the listing of new POPs is adopted, the parties shall

amend and update the NIPs, incorporate the new listings to the NIPs, and take actions on the amendments and the COP decisions, to make sure the objectives for the implementation of the Convention are met. The P.R. China requested UNIDO to prepare a Medium Size Project (MSP) to assist the country to review its initial NIP and update its NIP to POPs that were newly added to the Convention through amendments communicated to the parties on 26 August 2009. **This project was expected to provide the necessary technical support to and facilitate the approval process of the Amendments**. The instrument of ratification was to include 9 new POPs plus Endosulfan, therefore Endosulfan was to be included in the project. Inventories for HBCD were also included in this project to achieve cost-effectiveness of GEF funding.

The implementation of this project was meant to address the country's need for an updated POPs profile and revising priority action plans for old POPs. It was also meant to build up China's basic technical capacity for conducting inventories for new POPs, with an eye for broader integration of SC obligations into China's national policies and planning on chemicals management. This project would also contribute to creating 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 overall objective of the project was 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.

1.3 Overview of the Project

1.3.1 Anticipated Project Outcomes

Four substantive outcomes have been anticipated to achieve the objectives of the project:

- 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 COP;

Finally, **Outcome 5**, **Monitoring and Evaluation**, includes periodic monitoring reports and mid-term and terminal evaluation report.

1.3.2 Project Administration

In support of this project, a high-level official from the Ministry of Environment and Ecology – Foreign Economic Cooperation Office (MEE-FECO) acts as the National Project Coordinator.

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

elements of the project, is responsible for recruitment and supervision of national expert subcontractors for inventory development, action plan development, NIP draft and finalization. It provides services and performs the work as agreed in the sub-contract as is detailed in the ToR with UNIDO, which were prepared following project approval. Subcontracts are signed by an authorized official of the counterpart and UNIDO.

UNIDO responsibilities in the project are as follows:

- UNIDO acts as the GEF Implementing Agency assisting the national executing agency MEE-FECO in coordinating with other IAs to take advantage of the findings and lessons learned from associated projects and programs;
- 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 experts and for other international expenditures;
- UNIDO supervise and backstop the implementation of the project through an assigned UNIDO project manager.

A National Project Manager was recruited by the national executing organization under the subcontract to perform the administration of the project at the national level.

1.3.3 Project Funding and Timeline

The project was initiated on 2 January 2014 and was expected to conclude on 30 June 2018, 36 months later. In fact, the project was extended to November 2019 in order to accommodate the reorganization of China's Ministry of Environmental Protection to the Ministry of Ecology and Environment. The project's budget was USD 6 million, comprised of a USD 2 million grant from the Global Environment Facility (GEF) and USD 4 million equivalent in co-funding from UNIDO and Government of China.

Table 1. Project budget and co-financing

Project outcomes	Donor (GEF/other) (USD)	Co-Financing (USD)	Total (USD)
1. Coordination mechanism in place with national regulatory framework and capacities assessed and stakeholders aware of new POPs	280,000	560,000	840,000.00
2. Validation of inventories of new POPs (and updating of initial 12POPs) by identification of new POPs alternatives and technologies	1,000,000	2,050,000	3,050,000.00
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	1,400,000.00
4. Government endorsement and submission of updated NIP to the SC Conference of Parties	70,000	100,000	170,000.00
5. Periodic monitoring and terminal evaluation of project implementation	110,000	90,000	200,000.00
Project management	140,000	200,000	340,000.00
Total (USD)	**2,000,000.00**	**4,000,000.00**	**6,000,000.00**

1.4 Evaluation Methodology

The Terminal Evaluation was conducted in accordance with the UNIDO Evaluation Policy[2] and the UNIDO Guidelines for the Technical Cooperation Project and Project Cycle[3]. In addition, the GEF Guidelines for GEF Agencies in Conducting Terminal Evaluations, the GEF Monitoring and Evaluation Policy and the GEF Minimum Fiduciary Standards for GEF Implementing and Executing Agencies were applied. The evaluation was carried out as an independent in-depth evaluation using a participatory approach whereby all key parties associated with the project were informed and consulted throughout the evaluation. The evaluation team leader liaised with the UNIDO Independent Evaluation Division (ODG/EIO/EID) on the conduct of the evaluation and methodological issues. During the inception phase, it was decided that it was not necessary to reconstruct a theory of change for projects aiming at building enabling environment like this project.

1.4.1 Evaluation framework

The evaluation purpose and objectives, and other requirements in the TOR all provided the basis for the **evaluation framework**, which in turn underpinned and guided the whole approach. The framework was structured against the standard **OECD-DAC criteria** of **relevance**, **efficiency**, **effectiveness**, **sustainability**. The framework identified **key evaluation questions**, supported by guiding **sub-questions**. The framework was also informed by a set of indicative questions presented within the evaluation TOR. All those indicative questions have been incorporated accordingly.

Table 2. Evaluation Framework

Key evaluation questions	Guiding sub-questions
RELEVANCE	
1. What are the key drivers and barriers to achieve the long-term objectives?	**1.1** To what extent was the project relevant to P.R. China's national priorities and strategies?
	1.2 To what extent was the programme relevant to UNIDO's mandate? GEF's mandate?
	1.3 What were the barriers in place to achieving the long-term objectives of the project?
	1.4 How well did the project align with related international POPs management objectives?
EFFICIENCY	
2. How well has the project performed? Has the project done the right things, and were things done right with good value for money?	**2.1** Was the project plan clear, appropriate and realistic? Were environmental and social safeguards put in place in the design and implementation of the project?
	2.2 Were project roles, responsibilities and accountabilities sufficiently clear?
	2.3 How effective were the project's monitoring processes?

[2] UNIDO. (2015). Director General's Bulletin: Evaluation Policy (UNIDO/DGB/(M).98/Rev.1)
[3] UNIDO. (2006). Director-General's Administrative Instruction No. 17/Rev.1: Guidelines for the Technical Cooperation Programme and Project Cycle (DGAI.17/Rev.1, 24 August 2006)

Key evaluation questions	Guiding sub-questions
	2.4 To what extent was the project delivered effectively, given the controllable elements?
	2.5 How cost- and time-efficient was the project? Were funds used appropriately and procurement and contracting of goods and services of high quality?
EFFECTIVENESS	
3. What have been the project's key results (outputs, outcomes)? To what extent have the expected results been achieved or are likely to be achieved?	**3.1** Is a coordination mechanism in place with national regulatory framework and capacities assessed? Are stakeholders aware of new POPs?
	3.2 Were the inventories of new POPs (and updating of initial 12 POPs) by relevant stakeholders validated? Were new POPs alternatives and technologies identified? **3.3** To what extent was China's Basic technical capacity for conducting inventories of new POPs built up? **3.4** To what extent is information provided on environmentally sound and economically feasible alternatives and technologies? Have opportunities for public and private investment been assessed?
	3.5 Have priorities been set and capacity strengthened for new POPs management based on identification of alternative investment solutions in pilot provinces?
	3.6 Has government endorsed and submitted an updated NIP to the SC conference of parties?
SUSTAINABILITY	
4. To what extent will the achieved results sustain after the completion of the project?	**4.1** What are the key risks in terms of financial, socio-political, institutional and environmental risks that may affect the continuation of results after the project ends?
	4.2 What lessons can be drawn from the successful and unsuccessful practices in designing, implementing and managing the project?
	4.3 How were gender dimensions incorporated within project design and delivery?

1.4.2 Tools

To address the framework questions the evaluation drew upon a series of tools:

- **Desk review:** A comprehensive desk/literature review analyzed all relevant documentation such as NIP-produced material (including project plans and progress reports, Mid-term Review report, stakeholder meeting reports, draft final report, outcome and pilot project reports, management meeting minutes and financial data), and any relevant external documentation (e.g. related national policies, evaluations/reviews of other POP interventions). Documentation in Chinese language was the focus of the National Consultant while the International Consultant focused on English-language documentation.

- **Stakeholder consultations:** Stakeholders participated in structured and semi-structured individual and focus group interviews during the evaluation. These were primarily conducted face-to-face during meetings in P.R. China, especially in Beijing, Jiangxi, and Shandong, (16-23 September 2019), as well as in Vienna, Austria.
- **Field visit** to project sites in the P.R. China including Jiangxi and Shandong, scheduled for 16-23 September 2019.

Other tools for assessment included:

- **Logframe validation:** The NIP logframe was a central tool for day-to-day project monitoring and was an integral part of the project's internal progress reports. The evaluation validated data and progress as reported through the logframe, and thus evaluated the extent to which the project achieved its originally envisaged results.
- **UNIDO ratings:** All UNIDO project evaluations are required to rate a series of evaluation and project criteria against a six-point scale, ranging from 'highly unsatisfactory' to 'highly satisfactory'[4]. The NIP's ratings are presented in section 3.3 of this report.
- **MTR:** An independent mid-term review (MTR) of the NIP was undertaken in 2016. In advance of the terminal evaluation's main data gathering phase, a light-touch document review was used to identify the extent to which MTR findings and recommendations were addressed during the latter half of the project. This analysis subsequently informed lines of enquiry during stakeholder interviews.

1.4.2 Key stakeholders

The following groups and/or representatives of these groups have been identified as key evaluation stakeholders (a more detailed list is provided in **Annex 1**). The exact interviewees will be determined in consultation with UNIDO:

- **UNIDO:** Including the Project Management Unit responsible for the day-to-day delivery of the project, and senior management that oversaw the NIP implementation.
- **Government Ministries, Departments and Bureaus:** Government entities involved in the policy-making process of NIP as well as the local governments handling pilot projects
- **Implementation Partners:** Including research institutes and key government liaison individuals and organizations
- **Participants/Key Sectors:** Primarily trade sectors that have been engaged that will be primarily affected by new policy on POPs in China
- **Others:** Other institutions that have engaged directly with the project, or that are key to the overall infrastructure of managing POPs in China.

1.4.3 Analysis and reporting

Data analysis, development of emerging findings, UNIDO criteria rating and evaluation report preparation were undertaken collectively by the evaluation team. The bulk of the joint analytical work – including identification of emerging findings – were undertaken during the period that evaluation interviews were held in P.R. China, as the evaluation team was physically working together during that time. As far as possible, emerging findings were derived through triangulation of data from multiple sources and tools, helping to ensure the robustness and internal validity of the assessment. Emerging findings will then be discussed and validated with NIP stakeholders in P.R. China (Project Management Unit, implementation partners) and with UNIDO Headquarters stakeholders (project management, Evaluation Division).

[4] See page 24, UNIDO Evaluation Manual, 2018.

Report preparation was undertaken collectively, but with the initial report drafting led by the evaluation team leader. The draft report was submitted to UNIDO's Independent Evaluation Division, and circulated to key stakeholders. The Independent Evaluation Division also managed the commenting process. The evaluation team then considered stakeholder comments, adjusting the draft report where appropriate, then submitted the final version to the UNIDO Independent Evaluation Division. The Independent Evaluation Division undertook quality assurance on the final report and solicited UNIDO's management response for inclusion in the final product.

1.4.4 Evaluation team

The evaluation team is comprised of two independent consultants, as follows:

Table 3 Evaluation team composition

Name	Role	Core responsibilities
Robert Earley	Evaluation Team Leader	• Leading design and delivery of evaluation • Lead author for main evaluation report • Primary point of contact for UNIDO and other evaluation stakeholders
LI Yufeng	National Evaluation Expert	• Contextual and policy advice and analysis throughout evaluation • Leading analysis of Chinese-language documentation • Leading MTR stocktaking and logframe validation

1.5 Limitations of the Evaluation

The evaluation team collected and analyzed quantitative and qualitative data. As with many evaluations, a considerable amount of this (particularly qualitative data) was based on **individual perceptions and opinions**. To mitigate any subjective bias, findings were - as far as possible - **triangulated** across sources, and across tools. Where a potentially important findings were identified but it has *not* been possible to triangulate (e.g. data/finding provided by a single source) this is explicitly noted within the evaluation report. It is noted for the purposes of this evaluation that this project is an *enabling* meant to set the stage for future projects that have more strategic or development objectives. As a result, the concept of long-term **impact *or* foundations for impact** are not considered in this evaluation, with more focus on the implementation of the enabling project itself.

2. Findings

2.1 Relevance

EVALUATION QUESTION 1:
How relevant was the project to the needs and priorities of P.R. China and the participating institutions?

SUMMARY OF FINDINGS
The evaluation found that NIP Update was highly relevant to institutional, national and regional priorities, addressing a well-acknowledged obligation of the P.R. China to develop, endorse and submit to the COP of the SC an updated NIP. The project is directly aligned with and relevant to the work of UNIDO and the GEF, and is well-aligned with SDGs 3, 5, 9, 12, 14, 15, and 17.

2.1.1 Highly relevant to P.R. China's national and institutional needs

First and foremost, the project is highly relevant to P.R. China's obligation to update its NIP and submit it to the COP of the SC in order to address newly identified POPs such as those which must be eliminated, such as Endosulfan, Lindane, HBCDs; those which should be restricted such as PFOS, and those that are unintentionally produced but should be reduced such as PCDD (dioxins). The P.R. China has recognized that those POPs identified need to be dealt with according to the SC and the updated NIP allows China to set out the institutional pathway to do so.

In addition to the core objective of updating the NIP, the project also focused on other outcomes such as establishing a coordination mechanism, regulatory assessments, stakeholder awareness raising, inventory update, identification of new technologies and POP alternatives, updating of inventories at the national and provincial levels, etc. These outcomes while serving the purpose of supporting the development and endorsement of the NIP nationally, have also served to help provinces where new POPs are manufactured to understand their exposure to new POPs, develop specific plans for eliminating or managing them, and ensuring that industry is compliant with laws and regulations.

Highly relevant to the work of UNIDO, the GEF, and to the SDGs

2.1.2 The Global Environment Facility (GEF) was appointed the financial mechanism for the Convention implementation. UNIDO was appointed a GEF agency in the late 1990s on account of its comparative advantage and technical expertise in chemicals management. UNIDO has been a key supporter of countries in the development of their SC NIPs since the SC was originally signed. UNIDO supported P.R. China in the development of the country's first NIP. The development of P.R. China's NIP allows UNIDO to understand and improve its support to other countries' NIPs as well. UNIDO has supported over 48 countries in SC NIP updated projects.5 The Global Environment Facility (GEF) was appointed the financial mechanism for the Convention implementation. UNIDO was appointed a GEF agency in the late 1990s on account of its comparative advantage and technical expertise in chemicals management. This project clearly fits into the scope of GEF's area of expertise.

[5] UNIDO, no date. *Policies for POPs Management*. Website: https://www.unido.org/our-focus/safeguarding-environment/implementation-multilateral-environmental-agreements/stockholm-convention/policies-pops-management

2.1.3 The work was also relevant to and well aligned with the Sustainable Development Goals (SDGs). In the long-term – and assuming NIP's results can be sustained – the work has the potential to contribute most directly to SDG 3 (Good health and well-being), SDG 9 (industry, innovation and infrastructure) and SDG 12 (responsible consumption and production), with secondary benefits for SDG 5 (Gender Equality), SDG 14 (Life below water), SDG 15 (Life on land) and SDG 17 (Partnerships for the Goals).

2.2 Efficiency

EVALUATION QUESTION 2:
How efficient was project delivery?

SUMMARY OF FINDINGS

As an MSP of a total of USD 6 million, including a USD 2 million grant from GEF, the project was seen as highly efficient. The five-year process of updating, endorsing and submitting the NIP to the COP of the SC covered the entire value chain of new POPs, from production to consumption in P.R. China, saw up to 100 consultations undertaken both directly for this project and in conjunction with other POP reduction projects. "Old POP" inventories were verified and "New POP" inventories were created and verified – along with training and piloting in pilot provinces, and ultimately the NIP was successfully updated and submitted as required under the SC. The project was negatively affected by one major inefficiency that was out of the project management's control – the reorganization of the Ministry of Environmental Protection into the Ministry of Ecology and Environment, as well as a merger that changed the Project Management Unit from MEP-FECO into MEE-FECO. The reorganization significantly affected staffing and the ability to conduct meetings and attain approvals during the transition phase, resulting in at least one year of delay for the project.

2.2.1 Resource management and allocation

Project delivery was generally cost efficient. The five-year process that went through the outcomes of the project to deliver the updated NIP to the national government for endorsement and eventual delivery required intensive research into new POPs inventories in P.R. China supported by academic sub-contractors and industry, awareness-building with relevant national and provincial authorities, and consensus-building between 14 ministries of China's national government as well as numerous provincial governments and industry associations required over 100 meetings, approximately 50 of which were directly related to this project, and 50+ of which were done in conjunction with other POPs reduction meetings. That resources were shared between projects with common goals should be seen as a sign of coordination and efficiency at the Project Management Unit and is commendable.

The in-kind contributions of UNIDO and MEE-FECO were significant through the course of the project. While the GEF grant was dedicated to the production of technical reports in support of the NIP update including the drafting of the NIP itself, meetings and technical input by foreign experts was funded in-kind by MEE-FECO to a significant degree, exceeding the expectations of the GEF agreement, and UNIDO funded the project in-kind within the expectations of the agreement.

According to the external financial audit at the end of the project (30 September, 2019), MEE-FECO received USD 1,804,150.00 of 2,000,000.00 budgeted for the project from UNIDO. Of the funds received, USD 250,000 was allocated as "reserved funds" for GEF-UNIDO, USD 1,662,353.37 was allocated to project implementation (including USD 24,048 for monitoring and evaluation and USD 140,000.00 project management fees), and USD 87,646.63 in balance was allocated to project conclusion meeting, expert consultation and translation, and the expenses of the design and printing of publicity materials.[6]

Table 4. Co-financing at design and at completion point

Name of Co-financier (source)	At design (USD)	At completion (USD)
UNIDO	99,360	104,500
UNIDO	90,640	70,000
Government of China	3,310,000	3,428,571
Government of China	500,000	4,738,571
Total	**4,000,000**	**8,341,642**

2.2.2 Monitoring systems supported project delivery, and appropriately designed for a project focused on implementation

The logframe's detailed focus on project delivery and day-to-day progress monitoring was effective considering the implementation focus of the project. Some activity-level progress was reported through a publicly-accessible web-based platform established to communicate POPs information to the public, as well as through other online platforms such as "Wechat". Other outputs such the inventory of PCDDs (dioxins) will be released to the public in the future after they have been officially approved by MEE. Unfortunately, the expected date and conditions of approval were not known at the time of the evaluation.

The logframe was also very effective for organizing information for the project evaluation. With clearly defined outcomes and tasks in place, the PMO was able to efficiently able to organize all relevant reports and data into discreet folders that made project evaluation very efficient.

2.3 Effectiveness

EVALUATION QUESTION 3:
Did the NIP achieve its planned outputs and outcomes?

SUMMARY OF FINDINGS

The evaluation found that the NIP update project attained nearly all of its outcomes and outputs in an effective manner according to the outcomes and outputs identified in the logframe of the project. Significantly, a coordination mechanism was formed by the PMU between main government stakeholders to ensure the eventual endorsement of the NIP. This

[6] Zhongchengxin Anrui Certified Public Accountants Co., Ltd. October 2019, "GEF-Review and update of the National Implementation under the Stockholm Convention in the People's Republic of China Auditors' Report on Financial Accounting". Report Number ZCXAR (2019)510. Beijing.

coordination mechanism was the same as that from the development of the initial NIP meaning that communication was relatively efficient. National inventories of new POPs and new POPs alternatives and technologies was undertaken by internationally respected Chinese researchers in the area of POPs – who were also involved in the initial NIP and therefore were able to efficiently pull together resources to complete their tasks. Priority chemicals and provinces were identified for new POPs, and detailed work was undertaken in Jiangxi, Shangong and Shanghai to quantify POPs and develop plans. Finally, the NIP was updated, endorsed by 14 ministries of the central government, and submitted to the COP of the SC. The shortfall in achievement of outputs was around the use of COMFAR software to help identify and prioritize risk reduction options. The benefits and uses of COMFAR were not communicated or received by the relevant parties in P.R. China, and therefore the software did not receive significant attention.

To assess effectiveness, the evaluation considered each of the four implementation components (the outcomes identified in the project's logframe). The following section presents findings against each outcome in turn.

OUTCOME 1	OUTCOME 2	OUTCOME 3	OUTCOME 4	OUTCOME 5
Coordination mechanism in place with national regulatory framework and capacities assessed and stakeholders aware of new POPs	**National inventories of new POPs and identification of new POPs alternatives and technologies**	**Priority setting and capacity strengthening for new POPs management based on identification of alternative investment solutions in pilot provinces**	**Government endorsement and submission of updated NIP to the SC Conference of Parties**	**Periodic monitoring and terminal evaluation of project implementation**

Coordination mechanism in place with national regulatory framework and capacities assessed and stakeholders aware of new POPs

2.3.1 The first key step in the update of the NIP was the development of a coordination mechanism that included the ministries and departments involved in the management of POPs across the national government in P.R. China. Based on the initial Chinese endorsement of the Stockholm Convention in 2005, the following ministries were identified and described in a paper (FECO, n.d.). Central and local departments were identified including:

- Ministry of Environmental Protection (MEP, Now Ministry of Ecology and Environment / MEE)
- Ministry of Foreign Affairs (MFA)
- National Development and Reform Commission (NDRC)
- Ministry of Science and Technology (MoST)
- Ministry of Industry and Information Technology (MIIT)
- Ministry of Finance (MoF)
- Ministry of Housing and Urban-Rural Development (MoHURD)
- Ministry of Commerce (MOFCOM)
- Ministry of Agriculture (MoA, Now Ministry of Agriculture and Rural Affairs, MARA)
- Health and Family Planning Commission (Now the National Health Commission)
- General Administration of Customs
- State Electricity Regulatory Commission (SERC, Now National Energy Administration, NEA)
- General Administration of Quality Supervision, Inspection and Quarantine (AQSIQ, Now the State Administration for Market Regulation, SAMR)
- State Administration of Work Safety (Now the Ministry of Emergency Management)
- Ministry of Transport (MoT)
- Ministry of Public Security (MPS)
- State Administration for Industry and Commerce (Now part of the State Administration for Market Regulation)
- Ministry of Civil Affairs

Of these 18 administrative bodies, 14 of them were consolidated under the Ministry of Environmental Protection (MEP) to become the National Coordination Group for Stockholm Convention Implementation in China, which included a Steering Group for NIP Updating, and an Advisory Group made up of experts. FECO was identified as the implementing agency

responsible for projects on the reduction or elimination of the manufacture, use and release of POPs, including this project. In the implementation of this project, the services of Peking University, Tsinghua University, Chinese Academy of Sciences, Chinese Research Academy of Environmental Sciences, Beijing Normal University and other institutions were procured to ensure the smooth and successful implementation of the project from a technical perspective. It should be noted that the experts procured by FECO were all involved in the first NIP project, therefore ensuring the continuity from the previous phase with the current phase.

Table 4 Advisory Panel to the NIP Update National Coordination Committee

Institution	Lead Expert	Role
Peking University	HU Jianxin	NIP drafting and expert coordination
	LIU Jianguo	Endosulfan Inventory and Strategic Planning
Tsinghua University	HUANG Jun	PFOS inventory and strategic planning
Chinese Academy of Sciences	Zheng Minghui	PCDD/Fs inventory and UPPOPs strategic planning
	Zheng Minghui	Monitoring and strategic planning on BAT/BEP
Chinese Research Academy of Environmental Sciences	Huang Qifei, Tian Shulei	Waste and Contaminated sites inventory and strategic planning
Beijing Normal University	LIU Xinhui	HBCD Inventory management and control

2.3.2 The appointment of the advisory group was key to achieving the objectives of the project in that these experts represent a deep level of experience and international expertise in the areas in which they were working. Most of the advisory group members had been advisors on the original NIP development and took the work on the NIP update as an opportunity to express the advance in their understanding of POPs science, regulation and management.

Multiple projects created synergies for awareness raising

2.3.3 Awareness-raising about new POPs and the updates to the Stockholm Convention were facilitated not just through the present project on the NIP update, but also through the multiple projects and efforts of the MEE-FECO which has a team dedicated to the management of projects related to POPs. Projects such as UNIDO project, "Environmentally sound management and disposal of obsolete POPs pesticides and other POPs in China"[7], and projects which included UNDP, World Bank and other major funders included support to awareness raising and public engagement that were key to making efficient use of funds to develop websites – including one focused on the implementation of the SC in China[8], a video for children and a number of other key documents and pamphlets.

2.3.4 Training programmes for POPs awareness were held across the country in various provinces and involved hundreds of officials and other stakeholders. The first training session

[7] UNIDO project, "Environmentally sound management and disposal of obsolete POPs pesticides and other POPs in China" Project No. GF/CPR/09/006 – 104147, GEF Project ID 2926.
[8] www.china-pops.org

was held in March 2014 to introduce the general requirements for a NIP update, and for key experts to align the work on POPs. Training programmes in 2015 and 2016 offered information on risks and policy implications of new POPs and the SC update to over 300 delegates from Beijing, Tianjin, Hebei, Shanxi, Inner Mongolia, Heilongjiang, Shanghai, Jiangsu, Zhejiang, Anhui, Shandong, Henan, Jiangxi, Liaoning, Jilin, Hubei, Hunan, Fujian, Guangdong, Guangxi, Hainan, Chongqing, Sichuan, Guizhou, Yunnan, Shaanxi, Ningxia, Gansu, Qinghai, Tibet and Xinjiang, covering most of the major regions of China where POPs might be present. Attendance sheets from the trainings indicate that approximately 1/3 of participants were female. During the field visit by the evaluation team, it was clear that teams working on POPs in target provinces and regions were aware of the risks of POPs and on monitoring and management strategies.

2.3.5 The policy outcomes of the project are clear and considerable. The work undertaken by Peking University and the Chinese Academy of Sciences to understand gaps in the national regulatory framework as well as in the technical capacity and monitoring were key to the develop recommendations China's international obligations under the SC, China's existing management systems and policies for POPs, and needs for legislative amendments, supplements and enhancements. The research led to at least 13 new or updated regulations or standards related to new POPs management.

2.3.6 The major deliverables for Output 1 were generally achieved. Given the relatively centralized character of environmental authorities in China, coordination and awareness was achieved relatively easily between levels of government and even between government departments, especially given that the SC is an international agreement. Output was achieved easily even more so as the major stakeholders and officials that played a part in the NIP update were responsible for the development of the original NIP and had deep knowledge and motivation to see through the success of the NIP update.

OUTCOME 1	**OUTCOME 2**	OUTCOME 3	OUTCOME 4	OUTCOME 5
Coordination mechanism in place with national regulatory framework and capacities assessed and stakeholders aware of new POPs	**National inventories of new POPs and identification of new POPs alternatives and technologies**	**Priority setting and capacity strengthening for new POPs management based on identification of alternative investment solutions in pilot provinces**	**Government endorsement and submission of updated NIP to the SC Conference of Parties**	**Periodic monitoring and terminal evaluation of project implementation**

2.3.7 Introduction of new POPs in the China's environmental policy necessitated the development of national inventories for the new POPs along with means of adapting the economy to their eventual management or elimination through alternatives and management technologies. Inventories were first confirmed for the old POPs by the project team, including updates on the production, use, import, export, replacement, release, disposal, contaminated sites and pollution monitoring of pesticide POPs, PCBs and dioxins. These data were updated at the 10th meeting of the National Coordination Group for SC Implementation.

2.3.8 Inventories of new POPs and training programs were undertaken for PFOS/PFOSF, HBCDs, UPPOPs and updating contaminated sites and wastes inventories for the countries as well as an action plan on disposal of pesticide POPs, investigation of POPs waste storage sites, on-site investigations for key industries to estimate UPOP wastes including dioxins, development of a new POPs waste inventory, and development of strategies for investigating, identifying, and mitigating POP contaminated sites.

2.3.9 Inventories of the various new POPs, in particular HBCD and PFOS/PFOSF have been very effective in identifying which provinces and localities have seen the most production and use of these POPs and have been used to identify pilot projects for Outcome 3 of the project, which will be discussed below. Furthermore, inventories have been released especially through to policy and scientific communities in order to ensure that monitoring and management can be properly undertaken.

2.3.10 Only the inventory for PCDDs (dioxins) remained confidential as of the completion of the project. Some informants suspected this was due to concerns about how to communicate PCDD (dioxin) information to the public and that communication methods needed to be finalized, but this was not substantiated by any official source. While a report had been completed for internal government use, the report had not been released. The PCDDs (dioxins) inventory will be released to the public in the future after it has been officially approved by MEE. The conditions and date of the approval or release of the report were not made known to the evaluation team.

2.3.11 Discussion with interviewees revealed that production of POPs in China has not occurred for as long a time as it has in countries that industrialized earlier. Because of POPs were identified as highly toxic and persistent in the environment decades ago by developed countries, many chemicals simply were never produced in China. New POPs that are used as fire retardants or in electroplating enjoyed a market in China for a limited period of time before they were also identified and targeted for management or elimination. As a result, in the development of inventories especially for HBCD, PFOS/ PFOSF, Endosulfan and other new POPs, it was typically through communication between researchers and industry associations that inventories were identified and built up. In China, the industry associations do have key industrial management responsibilities and in some cases manufacturers are required to join industry associations. As a result, the evaluation team agrees that this source of data for conducting inventory construction is useful but should still be triangulated in the long-term with periodic monitoring data, especially in regions of the country where industries exist where these chemicals are transported and used.

2.3.12 In addition to undertaking an inventory of manufacturers of new POPs and emitters of UP-POPs, the project also developed an inventory and strategy for dealing with POPs waste and contaminated sites, noting that most contaminated sites require a high budget of at least RMB 50 – 100 million (USD 7 – 14 million) to remediate. The information clearly indicates the importance and relevance of quickly eliminating the manufacture and use of POPs in China due to the high costs to society of dealing with their wastes and contaminations.

Logframe items specifying COMFAR as a tool did not bring significant benefit to the project

2.3.13 The logframe noted that new POPs alternatives and BAT/BEP technologies for new POPs waste management should be identified using the COMFAR software package provided by UNIDO. During the evaluation it was found that COMFAR was not utilized by the project implementors and it was not clear to some of the key research partners why COMFAR was

specified in the logframe. Interviews with UNIDO and other stakeholders indicate that COMFAR is a product promoted by UNIDO but is not the only software package or approach to solving the problem of benefit or feasibility analysis, and that during the project, Chinese researchers utilized an existing Chinese program. The mention of COMFAR in outputs 2.3 and 3.2 were confusing because it was unclear if the software was important for any of the stakeholders or for helping UNIDO to demonstrate COMFAR for future use in China or in other countries. After discussion with all the relevant stakeholders, it was determined that COMFAR itself was not important to the project, and that it was simply to indicate that a software or other tool should be used to consider and calculate feasibility of various technologies. The project would have been better served by stating "software package" or "tool" in the general case rather than mentioning COMFAR so as to ensure that stakeholders and external parties can clearly understand the objective of the outputs mentioned.

Inventory development has informed future project development

2.3.14 During the final wrap-up meeting of the project on 6 December 2019, it became evident that policy gap analysis inventory development for all the new POPs had important impact on future policy and technical research for the POPs management team at the PMU and its expert team. During the wrap-up meeting it was clearly communicated the areas where more work was needed on refining inventories of UP-POPs, where standards and methods for monitoring UP-POPs were lacking, and furthermore clearly indicated projects for rehabilitation of polluted sites. It is viewed by the evaluation team as a strong indicator of sustainability that these issues were not considered to be "solved" through the course of the project, but rather that questions and problems were identified that will frame projects to help China achieve its National Implementation Plan.

OUTCOME 1	OUTCOME 2	**OUTCOME 3**	OUTCOME 4	OUTCOME 5
Coordination mechanism in place with national regulatory framework and capacities assessed and stakeholders aware of new POPs	**National inventories of new POPs and identification of new POPs alternatives and technologies**	**Priority setting and capacity strengthening for new POPs management based on identification of alternative investment solutions in pilot provinces**	**Government endorsement and submission of updated NIP to the SC Conference of Parties**	**Periodic monitoring and terminal evaluation of project implementation**

2.3.15 As a logical extension of Outcome 2, to create national inventories of new POPs and identify new POPs alternatives and technologies, bringing POPs management to the local level is key to implementation of management plans and strategies for POPs. Inventory development helped to identify the provinces and companies where new POPs were being manufactured or generated and the scale of those projects. This allowed local governments in Shanghai, Shandong Province to take closer looks at the industries producing POPs and to undertake detailed inventory and monitoring work. Pilot provinces or province-level cities were selected based on willingness and ability to carry out projects, particularly on their abilities to form steering committees of various government departments within their province, but also based on the number of POPs manufacturers and users in the province, or if there are seriously

contaminated areas in the province to manage. The project specifically identified the management of PFOS/F in Shanghai and HBCD management in Shandong province. A reporting system was developed that allows the provincial-level officials to collect data about the manufacture of those projects within their jurisdictions and report back to the national government for final statistical inclusion in national inventories. The reporting system was also being used in Jiangxi province, where the evaluation team had the opportunity to visit a copper recovery facility as well as the local Bureau of Ecology and Environment which was addressing the emission UP-POPs from industries such as copper recovery.

2.3.16 The visit to an HBCD manufacturing facility in Shandong province (Xurui Shandong Moris Tech Co., Ltd.) was particularly informative for understanding how the efforts of FECO and other partners were having a positive impact on HBCD management in Shandong, but also how government and industry interact to see through the upgrading of industry and implementation of POPs management on the ground. The company had participated in another UNIDO project on the elimination and replacement of POPs in which a foreign expert had helped to identify BAT/BEP strategies for the company as well as identify alternative products for the company to manufacture. However, it also became clear that once the company became clearly aware of its responsibilities under the Stockholm Convention, it undertook its own research and development on alternatives to HBCD. The company recognized that its current technology was inherited not only from US companies but also from experience from the former USSR, giving it capacity to innovate its own alternatives to HBCD rather than merely licensing the latest product from a foreign patent holder. The company was aware that it could manufacture HBCD until 2021 at which time it would need to change to its new product line, but it also found that its customers were ordering the new product already. When asked how the government was helping the company to adapt to the new POPs control reality, the company responded that POPs management is the law, and if we don't change our product line, we will be shut down. The Shandong and Weifang environmental protection officials confirmed this view. As a result, the evaluation team could observe that companies were being made aware of limitations on POPs production, being given a timeline to conform to new policy, and then being faced with the outcome of punishment if they did not conform to the law.

2.3.17 The pilot projects have demonstrated that the capacity of local environmental protection to monitor and manage POPs in China has been effectively increased. Data was presented during the visit to both the Jiangxi and Shandong Environment and Ecology departments indicating that each province had good understanding of both the producers of POPs in their provinces, but also techniques for quantification, and a recognition of some of the challenges still faced in quantifying and monitoring UP-POPS such as dioxin. These government departments had effectively communicated policy to relevant companies in their provinces and created a need for companies to upgrade their processes and innovate new products.

2.3.18 Finally, based on the experience from the pilot projects, a budgetary estimate was generated and included in the final updated NIP to achieve:

- Strengthening of the institutional, policy and legal system
- Eliminating production and use of Annex A new POPs
- Limiting the production and use of Annex B new POPs
- Reducing release of wastes into the environment
- Public information and exchange
- Implementation effectiveness evaluation and national reporting
- Strengthening research, development and monitoring
- Improving the financial guarantee mechanism.

2.3.19 The final budget of 27.584 billion RMB did not include a budget for the unintentional release of new POPs (annex C), but were incorporated into a separate plan on dioxin pollution reduction. The plan recognized that the funding needed was significant and that the government would not be able to supply all the funding, and a co-financing strategy including international funds, domestic government funds and private sector investment and finance was proposed. Given the requirement for private companies to comply with SC-related laws in China, the private sector would be a major contributor of investment and finance to achieve compliance.

OUTCOME 1	OUTCOME 2	OUTCOME 3	**OUTCOME 4**	OUTCOME 5
Coordination mechanism in place with national regulatory framework and capacities assessed and stakeholders aware of new POPs	**National inventories of new POPs and identification of new POPs alternatives and technologies**	**Priority setting and capacity strengthening for new POPs management based on identification of alternative investment solutions in pilot provinces**	**Government endorsement and submission of updated NIP to the SC Conference of Parties**	**Periodic monitoring and terminal evaluation of project implementation**

2.3.20 The development of the NIP was a major governmental effort facilitated by FECO. The update was led on the government side by the Department of Soil Environment Management of the Ministry of Ecology and Environment, with FECO responsible for the actual drafting of the plan. The project was driven by the National Coordination group of ministry representatives, a Steering Group and an expert panel. Additionally, the local ecology and environment departments of all 31 Chinese provinces and province-level cities were engaged in the drafting process, as well as major POPs-related industry associations including the China Petroleum and Chemical Industry Federation, China Non-Ferrous Metals Industry Association, China Iron and Steel Industry Association, China Paper Association, China Flame Retardant Society, Chain Surface Engineering Association, China Association of Fluorine and Silicone Industry, China Chlor-Alkali Industry Association and China plastics Processing Industry Association. Additionally, opinions were gathered from foreign and domestic companies and NGOs, as well as representatives from UNIDO, UNDP, UNEP, GEF, World Bank and Sweden, New Zealand, Brazil, South Africa and Nigeria through various forums. While over 50 meetings were convened for the purposes of collecting input on the draft NIP update, FECO estimated that over 100 meetings would have included information about the NIP update and could have been utilized for collecting more opinions and spreading information about the plan update.

2.3.21 The key meetings for deciding on the plan occurred between March 2014 when the inception meeting occurred, until 11 September 2018 when at the 26th liaison meeting of the National Coordination Group for Stockholm Convention Implementation, the final plan was agreed upon by over 20 representatives from MEE, MFA, NDRC, MoST, MIIT, MoHURD, MARA, MOFCOM, NHC, MEM, SAMR and NEA, indicating a huge amount of buy-in by China's most powerful government ministries.

Government Reorganization Caused a Brief Delay in Project Implementation

2.3.22 It is noted that there was a gap between the January 2017 25th Liaison Meeting of the National Coordination Group and the meeting in September 2018 which caused a delay in the final approval of the NIP Update. This was due to a large-scale reorganization of government ministries in China that affected both the responsibilities of various ministries including MEE, and also caused staff to be reorganized and repurposed meaning that progress could not be made to immediately approve the NIP Update at the time. It was by September 2018 that the plan could be approved. This time gap, while unfortunate, was not a major impediment to the implementation of the project.

The Mainland China NIP Update was merged with NIP updates from Hong Kong SAR and Macao SAR and submitted to the SC COP Secretariat

2.3.23 The finalized NIP plan was approved by MEE alongside the regional NIP implementation plans by Hong Kong SAR and Macao SAR on 19 December 2018 and submitted to the Convention Secretariat. Although the plan was submitted later than anticipated in the initial project planning, China was still one of the first countries to submit its NIP update, an indication of a high level of commitment and efficiency to the NIP update process and POPs management overall.

2.3.24 The Hong Kong SAR (HKSAR) and Macao SAR implementation plan updates were significant in content and provided a large amount of data and transparency into the planning and monitoring being undertaken in those regions. The HKSAR update was completed in February of 2016, and offered a comprehensive update on the inventories of convention POPs including UP-POPs such as PCDD/Fs (dioxins) and others. The report also noted that HKSAR had updated its legal framework to ensure that all relevant POPs were included in regulatory and permitting systems, and that the framework would be updated in the future to ensure inclusion of all relevant substances, along with a commitment to continue public awareness activities about POPs, noting that for many years, most POPs have already been banned from entering HKSAR other than a small inventory of PFOS-related substances for firefighting, PCBs in electronic equipment, and UP-POPs such as dioxin which are produced as a result of combustion activities within the region.

2.3.25 Macao SAR completed its Revised Implementation Plan (RIP) on 27 March 2018. Like the revised implementation plan of the HKSAR, Macau's RIP is a comprehensive analysis and plan of POPs in the region. As a region with little manufacturing capacity, there were no POPs found to be produced in the region, and in a desk study, it was found that no POPs insecticides controlled by the original Convention were found. The report highlighted new studies continuing through 2014 to 2018 noting the trade and use of new POPs, and UP-POPs noting a decrease in UP-POPs emission between 2009 and 2014 due to reduced power consumption in the region, but also that in ambient air, the presence of a number of new POPs had increased slightly over the same period. Studies were also carried out on marine water and sediment, aquatic biota, and soil with conclusions to be made on the impact of POPs on human health. Based on the findings of research, Macao SAR has developed an action plan to address new POPs and UP-POPs based on their priority in the region – a scientific, rational approach to POPs management.

OUTCOME 1	OUTCOME 2	OUTCOME 3	OUTCOME 4	**OUTCOME 5**
Coordination mechanism in place with national regulatory framework and capacities assessed and stakeholders aware of new POPs	**National inventories of new POPs and identification of new POPs alternatives and technologies**	**Priority setting and capacity strengthening for new POPs management based on identification of alternative investment solutions in pilot provinces**	**Government endorsement and submission of updated NIP to the SC Conference of Parties**	**Periodic monitoring and terminal evaluation of project implementation**

Simple project structure and detailed logframe led to effective monitoring and evaluation for the project

2.3.26 The logframe for the NIP update project was the core driver for monitoring and evaluation of the project. The logframe was built in a logical manner, with establishment of a coordination mechanism and raising awareness, to improving technical capacity and establishing baseline inventories for new POPs, to assessing priorities and piloting in pilot provinces to ensure local knowledge was being established, and finally to drafting an updated NIP and submitting it to government for endorsement. The linear construction of the logframe made project management easy to undertake, with the final report for the project being submitted in the structure and order of the logframe to demonstrate completion of all aspects of the project (FECO-MEE, 2019).

Voluntary Mid-term Review effective for ensuring the project

2.3.27 The mid-term review, submitted in April 2016, concluded that from both technical and financial points of view, the project implementation ranged from satisfactory to highly satisfactory and was on the right track to achieve expected results in spite of the project's recognized complexity. The overall highly satisfactory performance of the project implementation was largely attributed to the high level of political commitment focused on the project, as well as competent project management. Additionally, the fact that the project was able to take advantage of existing resources and experience from the first round of implementing the Stockholm Convention meant that instead of starting from scratch, the project could efficiently undertake work.

2.3.28 Eight recommendations from the MTR were offered to FECO, and one to UNIDO. The recommendations included:

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

No.	Recommendation	Addressee
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 impact international experiences in alternatives identification, POPs risk assessment, priority setting, and action plan formulation	UNIDO

2.3.29 The report also identified three key lessons:

1. The high quality of project design was a basis for success;
2. The 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. 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;
3. In the future implementation of the Stockholm Convention of 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 of POPs risk control.

2.3.30 The project benefitted greatly from the mid-term review in that aside from recommendation 6 on implementation of COMFAR and recommendation 8 on better integration of women in the project (as addressed in previous sections), the recommendations have generally been addressed through the project. Of particular mention is that during the final evaluation, participants discussed the importance of co-control of POPs in conjunction with other conventional pollution control plans including China's air quality control plan, and monitoring how achievement of air pollution in general would control emissions of UP-POPs such as dioxin.

2.4 Sustainability

2.4.1 While the project has an enabling nature and was not meant to reach "impacts", there are certain areas where sustainability can be estimated to ensure that the project continues to bring benefits to society beyond its completion date.

2.4.2 First, sustainability is brought about by the enormous buy-in achieved by the project partners from across the national government in various ministries and throughout the 31 provinces and provincial-level cities in China. It is clear that POPs management is a priority for the country alongside other pollutant emissions. It was encouraged in the latter parts of the project to undertake an assessment and monitor the co-benefits of reducing other air pollutants that have resulted from China's "War on Air Pollution" and the reduction of PM, NOx and ozone pollution across the country. Furthermore, a budget has been included in the NIP update that indicates the government and broader societal responsibility and commitment to financing the reduction, elimination and management of POPs.

2.4.3 Second, the project has established a community of expertise around POPs monitoring, management and reduction. The technical experts procured by FECO lead the country in creating inventories, management strategies and monitoring planning of POPs. Through their work on inventory development, gaps in policies, standards systems and monitoring methods have been identified and projects can be undertaken to ensure that those systems continue to be upgraded and perfected over time. Monitoring of ambient UP-POPs is especially an opportunity for future projects.

2.4.4 As a result of the project, manufacturers have been identified and made aware of their responsibilities to replace their products with non-POP products, and to manage their UP-POPs. Because they are now regulated, and local officials are clear on how to regulate those companies, they are committed to undertaking self-monitoring and research and development on new products, and financing their future development.

2.5 Gender mainstreaming

Gender aspects of NIP's design and delivery were strong but require broader societal outreach

2.5.1 The project made efforts to include female participants in all aspects of the project. The Project Management Unit (MEE-FECO) has a high proportion of female staff including in leadership positions. In addition to having a high proportion of female staff on the implementation team, a survey of women was undertaken to gain understanding of gender and POPs management. However, the survey did not reach out further into society to ensure that plans and policies embodied in the NIP might embody greater interests of women.

2.5.2 It is important to note that the project was initiated after the requirement for gender mainstreaming was brought into UNIDO projects, and for that reason the project logframe and other aspects of the project design may not have taken into consideration such requirements.

3. UNIDO Project Evaluation Ratings

In addition to the main assessment against the evaluation criteria (relevance, efficiency, effectiveness, progress to impact, sustainability), evaluations of UNIDO-supported projects routinely assess specific aspects of an intervention's delivery. The following section summarizes (and restates, where appropriate) the evaluation's findings on **performance of partners**, and on **factors facilitating or limiting the achievement of results**, particularly with regards to M&E and results-based management.

3.1 Performance of partners

UNIDO

3.1.1 UNIDO's role in the NIP Update project was primarily in the design, supervision and backstopping of the project and in conducting annual reports to the GEF. Additionally, UNIDO identified and sent international experts to the project where it was necessary, although interviews indicated that such interventions were not frequently necessary, especially as international expertise was supplied through other POPs projects additionally such as the management and disposal of obsolete POPs pesticides and other POPs project.[9] UNIDO was praised by stakeholders throughout the evaluation for being supportive while not dominating over the project, allowing the national counterparts / PMU to implement the project according to national needs. UNIDO was effective for acting as a catalyst and convener when called upon to do so.

National Counterparts

3.1.2 MEE-FECO (PMU) is a very effective organization for interacting with international partners such as UNIDO as well as convening and coordinating national stakeholders within the MEP/MEE, and beyond with other ministries and agencies, both through the central government as well as vertically through provincial departments and to the private sector. The PMU managed the project skillfully, making use of its specialized experience in implementing international environmental agreements, as well as in managing POPs agreements themselves, including the original NIP of the SC. In addition to managing the project effectively, the PMU brought key knowledge about research institutes and officials responsible for research and development needed to both complete the NIP updated as well as to increase China's capacity to manage POPs.

3.1.3 All participants in the project that the evaluation team met with were highly supportive of FECO in its ability to create political momentum to ensure project solution at a high level, as well as to drive research and policy development beneath in order to support the project objectives. FECO holds a high level of experience in the area of POPs management policy, having driven the development of the first NIP, and officials within FECO have been advanced within MEE to positions of authority that have ensured multiple levels of government.

Donor

3.1.4 The Global Environment Facility as a funding partner was of course key to the success of the project, but at the same time was notable in its hands-off approach and allowing the implementers to undertake its work independently.

[9] UNIDO project, "Environmentally sound management and disposal of obsolete POPs pesticides and other POPs in China" Project No. GF/CPR/09/006 – 104147, GEF Project ID 2926.

3.2 Factors facilitating or limiting the achievement of results

3.2.1 The project was found to be highly satisfactory, given that it has achieved all of its overall objectives as well as its major outcomes. There are several major factors for this overall success. First, the major objectives of the project were relatively straight forward, indicating an appropriate and correctly-designed project. Completing the NIP update and having it endorsed by government and submitted to the COP is a clear objective with a discreet point of completion. Likewise, building national capacity for new POPs management is a development objective with a number of concrete outcomes such as awareness raising about a specific topic through training and development of inventories, which is also a very concrete outcome.

3.2.2 Second, FECO has a centralized department for working on international environmental agreement compliance, which has a high degree of experience and connections within the Chinese government to drive policy change, and an excellent network of advisors to provide professional and high-quality research and advice. In addition to the Stockholm Convention, the department also works on the implementation of the Montreal Protocol on Ozone-Depleting Substances and the Minamata Convention on Mercury amongst others, making it a one-stop shop for promoting international environmental agreements throughout relevant Chinese counterparties. As a result of the department's long-term view on these agreements, effective communities of expertise have been developed in the governance and policy communities to continue to pursue implementation.

3.2.3 An additional benefit of having a centralized department with expertise on international agreements is that projects can benefit from one another. UNIDO, World Bank, UNEP and other projects on POPs management combined to engage all relevant stakeholders to develop and implement policy along with technical experience and industrial improvements.

3.3 Performance ratings table

3.3.1 Evaluations of UNIDO-supported interventions routinely provide performance ratings for each component of a project's design, delivery and management. Performance is assessed against UNIDO's six-point rating scale, which ranges from 'highly unsatisfactory' (score 1) to 'highly satisfactory' (score 6).

3.3.2 Based on the foregoing findings and analysis, the following presents ratings and summary assessments for each of the UNIDO performance components.

Performance ratings table

Project element		Summary assessment	Rating
A	**PROJECT DESIGN (OVERALL)**		Highly Satisfactory (6)
1	Overall design	NIP was designed with a specific objective in mind, to update the SC NIP for China using science as a basis and ensuring that awareness was raised of new POPs and the NIP update. The project was logical and effective.	Highly Satisfactory (6)
2	Logframe	The logframe was operationally focused and supported day-to-day project delivery. The project was driven to successful completion through adherence to the lograme. The weakness came from specification of the COMFAR software use in the project which was not deemed relevant for the China case.	Satisfactory (5)
B	**PROJECT PERFORMANCE (OVERALL)**		Highly Satisfactory (6)
1	Relevance	Highly relevant to China's need to update its NIP, as well as to UNIDO which assists countries around the world with NIP updating to the SC and other international agreements.	Highly satisfactory (6)
2	Effectiveness	With minor exceptions, the objectives of the project were achieved including the most critical one, to update the NIP, have it accepted by government and submitted to the COP	Highly Satisfactory (6)
3	Efficiency	The 5-year project undertook significant scientific and policy work to achieve the outcomes. Co-funding was leveraged to help the project succeed and other projects contributed synergistically to its success.	Highly Satisfactory (6)
4	Sustainability of benefits	Having a NIP Update in place is key for China's approach to eliminating or managing POPs. Companies and local officials are now more aware about POPs making their future identification and management more likely. However, a monitoring system for ambient POPs remains a challenge.	Highly Satisfactory (6)

Project element		Summary assessment	Rating
C	**CROSS-CUTTING PERFORMANCE**		
1	Gender mainstreaming	Although the implementation team has strong representation by females and training was delivered to a high proportion of females through the project, more work could have been done to address issues in the broader public for gender and POPs.	Satisfactory (5)
2	M&E	In addition to logframe monitoring and detailed annual reports, NIP also commissioned a mid-term evaluation voluntarily which raised good questions and assisted the project in maintaining focus and momentum	Highly Satisfactory (6)
3	Results-based management	The logframe identified appropriate tasks and indicators that drove the project to successful completion. A weakness was in the identification of a specific COMFAR software which was not found to be relevant for the project, yet included as an output.	Satisfactory (5)
D	**PARTNER PERFORMANCE**		
1	UNIDO	UNIDO contributed appropriately, and was key to project development and monitoring	Highly Satisfactory (6)
2	National Counterparts	MEP-FECO is highly effective at assembling and managing stakeholders to the successful completion of the project	Highly Satisfactory (6)
3	Donor	GEF was hands-off and allowed project being implemented by FECO and UNIDO independently.	NA
E	**OVERALL ASSESSMENT**		Highly Satisfactory (6)

4. Conclusions and recommendations and lessons learned

4.1 Conclusions

The NIP update project was a highly relevant intervention that addressed a direct need within P.R. China for an updated National Implementation Plan for the Stockholm Convention and building up of capacity for management of POPs. The project delivered a series of well-defined outputs that logically built up a community of policy makers and technical experts, technical capacity and awareness, and eventually completed the NIP update plan which was endorsed by government and submitted to the COP. Additionally, contaminated sites and manufacturers at the local level have been identified and the capacities of local governments have been enhanced to better identify and manage POP pollution. China was one of the earliest countries to submit its updated NIP, indicating a committed and efficient process for updating and technical capacity upgrading.

4.2 Recommendations

One of the key enablers of efficiency in the P.R. China NIP update project was that the team of managers and experts engaged on the NIP update were involved in the development of the original NIP for the Stockholm Convention, submitted in 2007. The expertise in management from the side of MEE-FECO from managing international agreements in general, and POPs management for the SC in particular were put to good use to improve efficiency significantly.

Recommendation 1
As the science and technology around POPs evolves, UNIDO should maintain a relationship with the current group of NIP experts and managers in P.R. China, even if informal. Given the high level of expertise built through the development of the original NIP and the NIP update, it is recommended to: • Where possible, engage Chinese experts for relevant international work in the area of POP management and policy • Utilize the same team if possible for future NIP updates

Although this project identified manufacturers of chemicals currently identified as POPs under the SC, the field is constantly evolving and therefore industry needs constant policy awareness regarding the identification of POPs, as well as technologies for replacing their current product lines and management of UP-POPs through BAT/BEP.

Recommendation 2
UNIDO and China should cooperate to continuously update industry on which chemicals are newly identified as POPs and work to ensure that BAT/BEP technologies and practices are flowing into China from abroad to ensure fast and effective detection and avoidance of those POPs, whether they are intentionally produced or unintentionally. Companies require a pipeline of best technologies in order to ensure that UP-POPs are either avoided or not spread into the environment if they are produced.

The logframe, reflecting the original project design, specifically identified a software packaged called COMFAR to be utilized in the project for project appraisal and feasibility analysis. During the project, COMFAR was not used, but Chinese researchers used alternative methods and

software to undertake feasibility analysis. The presence of the software name in the logframe was confusing for project stakeholders.

Recommendation 3
Although UNIDO has tools that may be useful for national implementing organizations to use in the implementation of their projects, the identification of specific tools in the outcomes or outputs of project logframes should be avoided so as to avoid confusion if other equally effective measures are identified by the project implementer as more locally appropriate.

Gender was clearly recognized as something to be paid attention in the logframe and the mid-term review. While females played key management roles in the project as staff at FECO, and a survey of female officials who were trained on new POPs and the NIP update through the project was completed, a broader societal understanding of new and old POPs may be needed to fully identify exposure pathways, health impacts and other issues regarding the interaction of POPs and women.

Recommendation 4
UNIDO can work with partners to continuously shift the understanding of gender mainstreaming in development and ensure the inclusion of women not just as government decision makers and employees but also as participants in all levels of society that may not have had their exposure to pollutants researched or described in-depth in the past. Gender mainstreaming should recognize the gap that exists in the technical and medical sciences with regards to how women's bodies are different from men's not just for reproductive purposes but also for their own inherent health and well-being, and how their daily lives and gender roles expose them in different ways to pollution.

An inventory of UP-POPs, particularly of PCDD/Fs (dioxins), was undertaken for the purposes of the project, but by the completion of the project was not communicated to the public. There may be legitimate reasons for not doing so. For example, it may be that releasing information about a sensitive pollutant such as PCDD/F may create undue concern amongst the public if there is inadequate public understanding about the impact of the pollutant.

Recommendation 5
UNIDO should work with partners where possible to establish high-quality monitoring systems for the ambient levels of UP-POPs and develop communications strategies and methodologies to raise the awareness in the general public about those monitoring systems so as to avoid improper levels of public concern. Increased awareness and understanding in the general public should allow communities to make informed decisions and avoid unnecessary exposure to pollutants where possible.

4.3 Lesson Learned

Although this project was identified as a mid-sized project which would not normally require a mid-term review, this project voluntarily undertook a third-party mid-term review that made important findings that guided the rest of the project. The mid-term review was also important for reminding the project implementers to include women's input into the NIP update, to ensure the NIP update was in-step with other key national plans and policies and that ensured that the project was on-track to successful completion. Future projects may consider a voluntary mid-term review, particularly if they have been delayed or are evolving in a complex policy environment.

Annex 1: Terms of Reference

UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION

TERMS OF REFERENCE

Independent terminal evaluation of
Review and update of the National Implementation Plan under the Stockholm Convention on Persistent Organic Pollutants in the People's Republic of China

UNIDO ID: 130176
GEF Project ID: 5624

May 2019

Contents

I. Project background and context

1. Project factsheet[10]

Project title	Review and update of the National Implementation Plan under the Stockholm Convention on Persistent Organic Pollutants in the People's Republic of China
UNIDO ID	130176
GEF Project ID	5624
Region	Asia and the Pacific
Country(ies)	People's Republic of China
Project donor(s)	GEF
Project implementation start date	6/30/2018
Expected duration	36 months
Expected implementation end date	30 June, 2018
GEF Focal Areas and Operational Project	Persistent Organic Pollutants
Implementing agency(ies)	UNIDO
Executing partners	Foreign Economic Cooperation Office of Ministry of Environment
UNIDO RBM code	EC 31 (GB 20
GEF project grant (excluding PPG, in USD)	2,000,000
Project GEF CEO endorsement / approval date	11/11/2013
UNIDO input (in kind, USD)	99,360 (in kind); 90,640 (Cash)
Co-financing at CEO Endorsement, as applicable	Foreign Economic Cooperation Office of Ministry of Environment: 3,810,000 USD (cash + in-kind)
Total project cost (USD)	6,000,000
Mid-term review date	4/29/2016
Planned terminal evaluation date	July-Nov 2019

(Source: Project document)

2. Project context

China signed the Stockholm Convention 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 Medium Size Project (MSP) to assist the country to review its initial NIP and update its NIP to include the newly added POPs. This project is expected to provide the necessary technical support to and facilitate the approval process of the Amendments. The instrument of ratification was to include 9 new POPs plus Endosulfan, therefore Endosulfan was to be included in the project. Inventories for HBCD were also included in this project to achieve cost-effectiveness of GEF funding.

The implementation of this project was meant to address the country's need for an updated POPs profile and revising priority action plans for old POPs. It was also meant to 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 would also contribute to creating an enabling environment for priority private sector investment on alternatives/alternative technologies. At the

[10] Data to be validated by the Consultant

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.

3. Project objective

The overall objective is 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.

Four substantive outcomes have been anticipated to achieve the objectives of the project:

- 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

Finally, Outcome 5, Monitoring and Evaluation, includes periodic monitoring reports and mid-term and terminal evaluation report.

The Project is further structured into a total of 17 substantive outputs. The full logical framework is included as annex 1.

4. Project implementation arrangements

The State Council of China approved establishment of the National Coordination Group for Implementation of the Stockholm Convention (NCG) on May 2005, consisting of 14 ministries including: 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, and State Administration of Work Safety.

Three working mechanisms (including coordinators' meeting, liaison officers' meeting and expert committee) were formed under NCG.

A high-level official from FECO acts as the National Project Coordinator.

FECO administers the projects towards the implementation of the Stockholm Convention in China and will continue to coordinate the NIP Update project. It manages all national and local elements of the project, is responsible for recruitment and supervision of national expert subcontractors for inventory development, action plan development, NIP draft and finalization. It provides services and performs the work as agreed in the sub-contract and is detailed in the ToR with UNIDO, which were prepared following the project approval. Subcontracts are signed by an authorized official of the counterpart and UNIDO.

UNIDO responsibilities are as follows:

- 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 programmes.

- 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 oversees the implementation of the project through an assigned UNIDO project manager.

A National Project Manager is to be recruited by the national executing organization under the subcontract to perform the administration of the project on the national level.

5. Main findings of the Mid-term review (MTR)

The mid-term review concluded that, from both technical and financial points of view, the project implementation ranged from satisfactory to highly satisfactory and was on the right track to achieve expected results. The overall highly satisfactory performance of the project implementation was largely attributed to the high political commitment and competent project management. In addition, the fact that China had accumulated and utilized good experience in implementing the Stockholm Convention to support the NIP update was considered another important supporting pillar.

Seven recommendations were offered to FECO and one to UNIDO.

In addition, the report identified three key lessons, e.g.:

- The high quality of project design was a basis for success;
- The 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: 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;
- 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.

6. Budget information

Table 1. Financing plan summary

USD	***Project***	***Total (USD)***
Financing (GEF / others)	2,000,000	2,000,000.00
Co-financing (Cash and In-kind)	4,000,000	4,000,000.00
Total (USD)	**6,000,000.00**	**6,000,000.00**

Source: Project document

Table 2. Financing plan summary - Outcome breakdown[11]

Project outcomes	Donor (GEF/other) (USD)	Co-Financing (USD)	Total (USD)
1. : Coordination mechanism in place with national regulatory framework and capacities assessed and stakeholders aware of new POPs	280,000	560,000	**840,000.00**
2. Validation of inventories of new POPs (and updating of initial 12POPs) by identification of new POPs alternatives and technologies	1,000,000	2,050,000	**3,050,000.00**
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	**1,400,000.00**
4. Government endorsement and submission of updated NIP to the SC Conference of Parties	70,000	100,000	**170,000.00**
5. Periodic monitoring and terminal evaluation of project implementation	110,000	90,000	**200,000.00**
Project management	140,000	200,000	**340,000.00**
Total (USD)	**2,000,000.00**	**4,000,000.00**	**6,000,000.00**

Table 3. Co-Financing source breakdown

Name of Co-financier (source)	Classification	Type	Total Amount (USD)
UNIDO	Implementing Agency	In kind	99,360
UNIDO	Implementing 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 (USD)			**4,000,000.00**

Source : Project document

[11] Source: Project document.

Table 4. UNIDO budget execution (Grant 2000002499)

Item	2014	2015	2016	2017	2018	2019	Total Expenditure
Contractual Services	1,748,750	-2,500					1,746,250
International Meetings	4,180	-84					4,096
Local travel		882	1,251	0			2,133
Nat. Consult./Staff		3,548		-212			3,336
Other Direct Costs	40	141	0	0			181
Staff & Intern Consultants	21,718	43,516	38,225	68,225	2,315	11,852	185,851
Train/Fellowship/Study							
Grand Total	1,774,687	45,503	39,476	68,013	2,315	11,852	1,941,847

Source: UNIDO Project Management database as of 9 May 2019

II. Scope and purpose of the evaluation

The purpose of the evaluation is to independently assess the project to help UNIDO improve performance and results of ongoing and future programmes and projects. The terminal evaluation (TE) will cover the whole duration of the project from its starting date in 6/30/2018 to the estimated completion date in 30 November 2019.

The evaluation has two specific objectives:

(i) Assess the project performance in terms of relevance, effectiveness, efficiency, sustainability and progress to impact; and

(ii) Develop a series of findings, lessons and recommendations for enhancing the design of new and implementation of ongoing projects by UNIDO.

III. Evaluation approach and methodology

The TE will be conducted in accordance with the UNIDO Evaluation Policy[12] and the UNIDO Guidelines for the Technical Cooperation Project and Project Cycle[13]. In addition, the GEF Guidelines for GEF Agencies in Conducting Terminal Evaluations, the GEF Monitoring and Evaluation Policy and the GEF Minimum Fiduciary Standards for GEF Implementing and Executing Agencies will be applied.

The evaluation will be carried out as an independent in-depth evaluation using a participatory approach whereby all key parties associated with the project will be informed and consulted throughout the evaluation. The evaluation team leader will liaise with the UNIDO Independent Evaluation Division (ODG/EIO/EID) on the conduct of the evaluation and methodological issues.

The evaluation will use a theory of change approach and mixed methods to collect data and information from a range of sources and informants. It will pay attention to triangulating the

[12] UNIDO. (2015). Director General's Bulletin: Evaluation Policy (UNIDO/DGB/(M).98/Rev.1)

[13] UNIDO. (2006). Director-General's Administrative Instruction No. 17/Rev.1: Guidelines for the Technical Cooperation Programme and Project Cycle (DGAI.17/Rev.1, 24 August 2006)

data and information collected before forming its assessment. This is essential to ensure an evidence-based and credible evaluation, with robust analytical underpinning.

The theory of change will identify causal and transformational pathways from the project outputs to outcomes and longer-term impacts, and drivers as well as barriers to achieve them. The learning from this analysis will be useful to feed into the design of the future projects so that the management team can effectively manage them based on results.

1. Data collection methods

Following are the main instruments for data collection:

(a) **Desk and literature review** of documents related to the project, including but not limited to:
- The original project document, monitoring reports (such as progress and financial reports, mid-term review report, output reports, back-to-office mission report(s), end-of-contract report(s) and relevant correspondence.
- Notes from the meetings of committees involved in the project.

(b) **Stakeholder consultations** will be conducted through structured and semi-structured interviews and focus group discussion. Key stakeholders to be interviewed include:
- UNIDO Management and staff involved in the project; and
- Representatives of donors and counterparts.

(c) **Field visit** to project sites in the People's Republic of China.

2. Evaluation key questions and criteria

The key evaluation questions are the following:

(a) What are the key drivers and barriers to achieve the long term objectives? To what extent has the project helped put in place the conditions likely to address the drivers, overcome barriers and contribute to the long term objectives?

(b) How well has the project performed? Has the project done the right things? Has the project done things right, with good value for money?

(c) What have been the project's key results (outputs, outcome and impact)? To what extent have the expected results been achieved or are likely to be achieved? To what extent the achieved results will sustain after the completion of the project?

(d) What lessons can be drawn from the successful and unsuccessful practices in designing, implementing and managing the project?

The evaluation will assess the likelihood of sustainability of the project results after the project completion. The assessment will identify key risks (e.g. in terms of financial, socio-political, institutional and environmental risks) and explain how these risks may affect the continuation of results after the project ends. Table below provides the key evaluation criteria to be assessed by the evaluation. The details questions to assess each evaluation criterion are in annex 2 of UNIDO Evaluation Manual.

Table 5. Project evaluation criteria

#	Evaluation criteria	Mandatory rating
A	**Impact**	**Yes**
B	**Project design**	**Yes**
1	• Overall design	Yes
2	• Logframe	Yes
C	**Project performance**	**Yes**

#	Evaluation criteria	Mandatory rating
1	• Relevance	Yes
2	• Effectiveness	Yes
3	• Efficiency	Yes
4	• Sustainability of benefits	Yes
D	**Cross-cutting performance criteria**	
1	• Gender mainstreaming	Yes
2	• M&E: ✓ M&E design ✓ M&E implementation	Yes
3	• Results-based Management (RBM)	Yes
E	**Performance of partners**	
1	• UNIDO	Yes
2	• National counterparts	Yes
3	• Donor	Yes
F	**Overall assessment**	Yes

Performance of partners

The assessment of performance of partners will ***include*** the quality of implementation and execution of the GEF Agencies and project executing entities (EAs) in discharging their expected roles and responsibilities. The assessment will take into account the following:

- Quality of Implementation, e.g. the extent to which the agency delivered effectively, with focus on elements that were controllable from the given GEF Agency's perspective and how well risks were identified and managed.
- Quality of Execution, e.g. the appropriate use of funds, procurement and contracting of goods and services.

Other Assessments required by the GEF for GEF-funded projects:

The terminal evaluation will assess the following topics, for which ***ratings are not required***:

a. **Need for follow-up**: e.g. in instances financial mismanagement, unintended negative impacts or risks.
b. **Materialization of co-financing**: e.g. the extent to which the expected co-financing materialized, whether co-financing was administered by the project management or by some other organization; whether and how shortfall or excess in co-financing affected project results.
c. **Environmental and Social Safeguards**[14]: appropriate environmental and social safeguards were addressed in the project's design and implementation, e.g. preventive or mitigation measures for any foreseeable adverse effects and/or harm to environment or to any stakeholder.

[14] Refer to GEF/C.41/10/Rev.1 available at: http://www.thegef.org/sites/default/files/council-meetingdocuments/ C.41.10.Rev_1.Policy_on_Environmental_and_Social_Safeguards.Final%20of%20Nov%2018.pdf

3. Rating system

In line with the practice adopted by many development agencies, the UNIDO Independent Evaluation Division uses a six-point rating system, where 6 is the highest score (highly satisfactory) and 1 is the lowest (highly unsatisfactory) as per Table 6.

Table 6. Project rating criteria

Score		Definition	Category
6	Highly satisfactory	Level of achievement clearly exceeds expectations and there is no shortcoming.	SATISFACTORY
5	Satisfactory	Level of achievement meets expectations (indicatively, over 80-95 per cent) and there is no or minor shortcoming.	
4	Moderately satisfactory	Level of achievement more or less meets expectations (indicatively, 60 to 80 per cent) and there are some shortcomings.	
3	Moderately unsatisfactory	Level of achievement is somewhat lower than expected (indicatively, less than 60 per cent) and there are significant shortcomings.	UNSATISFACTORY
2	Unsatisfactory	Level of achievement is substantially lower than expected and there are major shortcomings.	
1	Highly unsatisfactory	Level of achievement is negligible and there are severe shortcomings.	

IV. Evaluation process

The evaluation will be conducted from July to November 2019. The evaluation will be implemented in five phases which are not strictly sequential, but in many cases iterative, conducted in parallel and partly overlapping:

i. Inception phase: The evaluation team will prepare the inception report providing details on the methodology for the evaluation and include an evaluation matrix with specific issues for the evaluation; the specific site visits will be determined during the inception phase, taking into consideration the findings and recommendations of the mid-term review, if there is any.
ii. Desk review and data analysis;
iii. Interviews, survey and literature review;
iv. Country visits;
v. Data analysis and report writing.

V. Time schedule and deliverables

The evaluation is scheduled to take place from to July to November 2019. The evaluation field mission is tentatively planned for 9 – 14 September. At the end of the field mission, there will be a presentation of the preliminary findings for all stakeholders involved in this project in the People's Republic of China. The tentative timeline for the evaluation is provided in Table.

After the evaluation field mission, the evaluation team leader will visit UNIDO HQ for debriefing and presentation of the preliminary findings of the terminal evaluation. The draft TE report will be submitted 4 to 6 weeks after the end of the mission. The draft TE report is to be shared with the UNIDO PM, UNIDO Independent Evaluation Division, the UNIDO GEF Coordinator and GEF OFP and other stakeholders for receipt of comments. The ET leader is expected to revise the

draft TE report based on the comments received, edit the language and form and submit the final version of the TE report in accordance with UNIDO ODG/EIO/EID standards.

Table 7. Major timelines

Timelines	Tasks
1 July 2019	Desk review and writing of inception report
August 2019	Briefing with project management in Vienna, through skype
8-14 September 2019	Field visit
Week 14 Oct 2019	Debriefing in Vienna Preparation of first draft evaluation report
4 November 2019	Internal peer review of the report by the Independent Evaluation Division / stakeholder comments to draft evaluation report
15 December 2019	Submittal of final evaluation report

VI. Evaluation team composition

The evaluation team will be composed of one international evaluation consultant acting as the team leader and one national consultant. The evaluation team members will possess relevant strong experience and skills on evaluation management and conduct together with expertise and experience in POPs chemicals and technical and regulatory issues related to Stockholm Convention implementation. Both consultants will be contracted by UNIDO.

The tasks of each team member are specified in the job descriptions in annex 3 to these terms of reference. The ET is required to provide information relevant for follow-up studies, including terminal evaluation verification on request to the GEF partnership up to three years after completion of the terminal evaluation.

According to UNIDO Evaluation Policy, members of the evaluation team must not have been directly involved in the design and/or implementation of the project under evaluation.

The UNIDO Project Manager and the project team in the People's Republic of China will support the evaluation team. The UNIDO GEF Coordinator and GEF OFP(s) will be briefed on the evaluation and provide support to its conduct. GEF OFP(s) will, where applicable and feasible, also be briefed and debriefed at the start and end of the evaluation mission.

An evaluation manager from UNIDO Independent Evaluation Division will provide technical backstopping to the evaluation team and ensure the quality of the evaluation. The UNIDO Project Manager and national project teams will act as resourced persons and provide support to the evaluation team and the evaluation manager.

VII. Reporting

Inception report

This Terms of Reference (ToR) provides some information on the evaluation methodology, but this should not be regarded as exhaustive. After reviewing the project documentation and initial interviews with the project manager, the International Evaluation Consultant will prepare, in collaboration with the national consultant, a short inception report that will operationalize the ToR relating to the evaluation 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 Evaluation Manager.

The Inception Report will focus on the following elements: preliminary project theory model(s); elaboration of evaluation methodology including quantitative and qualitative approaches through an evaluation framework ("evaluation matrix"); division of work between the International Evaluation Consultant and the national consultant; mission plan, including places to be visited, people to be interviewed and possible surveys to be conducted and a debriefing and reporting timetable[15].

Evaluation report format and review procedures

The draft report will be delivered to UNIDO Independent Evaluation Division (the suggested report outline is in Annex 4) and circulated to UNIDO staff and national stakeholders associated with the project for factual validation and comments. Any comments or responses, or feedback on any errors of fact to the draft report provided by the stakeholders will be sent to UNIDO Independent Evaluation Division for collation and onward transmission to the project evaluation team who will be advised of any necessary revisions. On the basis of this feedback, and taking into consideration the comments received, the evaluation team will prepare the final version of the terminal evaluation report.

The ET 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 evaluation report. A presentation of preliminary findings will take place at UNIDO HQ after the field mission.

The TE report should be brief, to the point and easy to understand. It must explain the purpose of the evaluation, exactly what was evaluated, 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 evaluation 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 evaluation report shall be written in English and follow the outline given in Annex 4- Outline of an in-depth project evaluation report.

VIII. Quality assurance

All UNIDO evaluations are subject to quality assessments by UNIDO Independent Evaluation Division. Quality assurance and control is exercised in different ways throughout the evaluation process (briefing of consultants on methodology and process of UNIDO Independent Evaluation Division, providing inputs regarding findings, lessons learned and recommendations from other UNIDO evaluations, review of inception report and evaluation report).

The quality of the evaluation report will be assessed and rated against the criteria set forth in the Checklist on evaluation report quality, attached as Annex 5. The applied evaluation quality assessment criteria are used as a tool to provide structured feedback. UNIDO's Independent Evaluation Division should ensure that the evaluation report is useful for UNIDO in terms of organizational learning (recommendations and lessons learned) and is compliant with UNIDO's evaluation policy and these terms of reference. The draft and final evaluation report are reviewed by UNIDO Independent Evaluation Division, which will submit the final report to the GEF Evaluation Office and circulate it within UNIDO together with a management response sheet.

[15] The evaluator will be provided with a Guide on how to prepare an evaluation inception report prepared by the UNIDO Office for Independent Evaluation.

Annex 1: Project Results Framework

HIERARCHY OF OBJECTIVES	Indicators	Baseline	Target	Sources of Verification	Assumption
Project Development Objective: 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), have it endorsed and submitted by the government to the Conference of the Parties to the Stockholm Convention (COP)					
Outcome 1: Coordination mechanism in place with national regulatory framework and capacities assessed and stakeholder aware of new POPs	- Nr. of coordination meetings, people awareness raised; - policy assessment and recommendation report	- No coordination mechanism in place, - Stakeholders are not trained and awareness raised - No Assessment reports and policy recommendations available	- Coordination meetings conducted - Awareness raising meetings organized - Assessment and recommendation reports	- Communication records of PM - Reports submitted	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.
Output 1.1: Effective project coordination mechanism involving relevant stakeholders on new POPs re-established and working groups formed and contracted (to be covered by co-financing and PMC);	- Nr. of project coordination unit meetings;	- PCU meetings no held;	- At least 6 PCU meetings (every 6 months)	- Communication records of PM - Steering Committee meeting minutes;	
Output 1.2. Awareness raising	- Nr. of people reached	- Awareness raising activities on new			

HIERARCHY OF OBJECTIVES	Indicators	Baseline	Target	Sources of Verification	Assumption
and SC new POPs compliance training about new POPs risks and policy implications among targeted groups and stakeholders, including gender issues, at national and provincial level done;	through awareness raising activities - Nr. of public people reached through airiness raising activities	POPs not done - Awareness raising activities addressing women not done	- At least two awareness raising campaigns, including women conducted,	- Communication records of PM; - Project progress reports (see M&E)	
Output 1.3 Inception workshop held (to be covered by co-financing)	- Date of inception workshop	- Inception workshop held	- Inception workshop held	- Inception workshop report - Project progress report (see M&E)	
Output 1.4 Gap analysis conducted to assess national regulatory and policy framework and institutional capacities and monitoring needs to manage new POPs;	- assessment reports on (i) legislative and regulatory framework; (ii) capacity report	- Assessment reports are not available	- Assessment report on (i) legislative and regulatory and (ii) capacity available	- Assessment report - Project progress report (see M&E)	
Output 1.5 Policy recommendations for national new POPs chemical management	- assessment and policy recommendation report	- Assessment and recommendation reports are not available	- Assessment and recommendation report on new POPs chemical management	- Assessment and recommendation report - Project progress report (see M&E)	

HIERARCHY OF OBJECTIVES	Indicators	Baseline	Target	Sources of Verification	Assumption
developed			available		
Outcome 2. National inventories of new POPs and identification of new POPs alternatives and technologies	- updated inventories, - Nr. of training, alternative technologies identified	- Inventories have not been updated, - no trainings conducted and alternative technologies identified	- Updated inventories, people trained and technologies identified	- Inventory, training and assessment reports submitted	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.
Output 2.1 Inventories of initial 12 POPs updated and validated by stakeholders;	- submitted inventory reports of initial 12 POPs - national validation workshop	- No updated inventory reports available - Validation workshop to be organized	- Three inventory reports (pesticides; industrial, U-POPs) available - One validation workshop held	- Steering Committee meeting minutes; Inventory reports - Validation workshop report	
Output 2.2. National inventories, including national training workshop, of new POPs conducted and validated by stakeholders;	- submitted inventory reports of new POPs - national inventory training workshop	- No updated inventory reports available - Stakeholders have not been trained	- Inventory reports available - At least 20	- Inventory reports - Steering Committee meeting minutes; - Training reports	

HIERARCHY OF OBJECTIVES	Indicators	Baseline	Target	Sources of Verification	Assumption
	- Nr. of people training - national validation workshop	- Validation workshop to be organized	stakeholders trained - One validation workshop held	- Validation workshop report	
Output 2.3.New POPs alternatives and BAT/BEP, technologies for new POPs waste management (including transportation, recycling and final disposal) using COMFAR (Computer Model for Feasibility Analysis and Reporting) identified;	- POPs alternatives and technologies identified	- New POPs alternatives and technologies have not been identified	- List of feasible new POPs alternatives and technologies available	- List and progress report provided	
Output 2.4. Socio-economic impact assessment, including gender, for all POPs management completed.	- submitted socio-economic assessment report	- No reports of new and old POPs as well as socio-economic assessment available	- Socio-economic assessment report available	- Socio-economic assessment report	

HIERARCHY OF OBJECTIVES	Indicators	Baseline	Target	Sources of Verification	Assumption
Outcome 3. Priority setting and capacity strengthening for new POPs management based on identification of alternative investment solutions in pilot provinces	- inventory, feasibility study and priority setting	- No inventory for pilot provinces available - No feasibility study BAT/BEP conducted and No prioritization of POPs risks	- Inventory assessment report completed - Feasibility study prepared and assessed - Risks prioritized	- Communication records of PM; - Project progress reports (see M&E) - Reports submitted	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.
Output 3.1.Detailed new POPs inventory for selected pilot provinces conducted;	- detailed inventory report for selected provinces submitted;	- Detailed inventory report is not available	- Inventory report available and submitted	- Inventory report for pilot provinces	
Output 3.2 Prioritization of new and old POPs risk reduction options and future POPs intervention (based on inventory results, alternative solutions, COMFAR and priority setting workshop) completed;	- prioritization workshop;	- Prioritization workshop has not been conducted	- Priority setting report available and submitted to PCU and - Prioritization workshop held	- Communication records of PM; - Project progress reports (see M&E - Priority setting and workshop report	
Output 3.3. Feasibility study on the application of	- feasibility study for selected	- Feasibility study is not available	- Feasibility Study for selected province	- Communication records of PM; - Project progress	

HIERARCHY OF OBJECTIVES	Indicators	Baseline	Target	Sources of Verification	Assumption
identified alternative technologies and BAT/BEP in priority sectors done;	province submitted to PCU and UNIDO		submitted to PCU and UNIDO	reports (see M&E - Study report	
Output 3.4. Analysis of potential private and public financing options for new POPs phase-out in key sectors done and mobilized.	- analysis on public-private financing options	- Analysis has not been conducted	- Analysis prepared	- Communication records of PM; - Project progress reports (see M&E) - Analysis report	
Outcome 4. Government endorsement and submission of updated NIP to the SC Conference of Parties	- Approval of the updated NIP by the Government; - Submission e of the updated NIP to the Stockholm Convention on POPs	- New POPs action plans and draft NIP is not available	- Draft NIP updated, endorsed and action plans updated	- Final NIP update document, plans and reports documented	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;
Output 4.1. Draft NIP, including action plans, through national consultation workshop consolidated;	- actions plans submission to the steering committee for review - national	- New POPs action plans and draft NIP is not available - National	- All action plans from the initial NIP updated; 2 actions plans on industrial POPs added - One national	- Action plans and draft NIP update and Review document available;	

HIERARCHY OF OBJECTIVES	Indicators	Baseline	Target	Sources of Verification	Assumption
	consultation meeting on the draft NIP	consultation workshop on the review and update of the NIP has not been conducted	consultation workshop held	- Consultation workshop report	
Output 4.2 NIP nationally endorsed and submitted to the Conference of Parties to the SC;	- national endorsement of NIP draft	- No endorsement of the draft NIP available	- Draft NIP updated and endorsed - One endorsement workshop held	- Communication records	
Output 4.3 Findings to national and regional stakeholders disseminated;	- stakeholders commented on the draft NIP	- Stakeholders to be informed on the NIP update and review process	- At least 10 stakeholders commented on the draft NIP	- Minutes of meeting and communication records	
Output 4.4. Government support and private sector investment for SC implementation of key sectors mobilized	- Nr. of meetings	- Public and private stakeholders to be consulted	- Partnership model implemented to facilitate investment climate	- Minutes of meetings	
Outcome 5. Periodic monitoring and terminal evaluation of project implementation	- all reports under M&E submitted to PCU and UNIDO	- no progress and evaluation reports are available	- All reports according to the M&E send to PCU and UNIDO	- Reports submitted according to M&E requirements	PCU and UNIDO will regularly monitor the implementation progress

HIERARCHY OF OBJECTIVES	Indicators	Baseline	Target	Sources of Verification	Assumption
Output 5.1. Periodic monitoring reports;	- progress reports as indicated in the M&E sent to UNIDO - Date of Mid-Term Review and Feedback	- no progress reports available	- All reports according to the M&E send to PCU and UNIDO	- Reports submitted according to M&E requirements	
Output 5.2. Terminal evaluation report;	- Terminal Evaluation and Feedback	- no evaluation reports are available	- All reports according to the M&E send to PCU and UNIDO	- Reports submitted according to M&E requirements	

Annex 3: Job descriptions

UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION

TERMS OF REFERENCE FOR PERSONNEL UNDER INDIVIDUAL SERVICE AGREEMENT (ISA)

Title:	International evaluation consultant, team leader
Main Duty Station and Location:	Home-based
Missions:	Missions to Vienna, Austria and the People's Republic of China
Start of Contract (EOD):	1 July 2019
End of Contract (COB):	30 November 2019
Number of Working Days:	24 working days spread over the above-mentioned period

1. ORGANIZATIONAL CONTEXT

The UNIDO Independent Evaluation Division (ODG/EIO/IED) is responsible for the independent evaluation function of UNIDO. It supports learning, continuous improvement and accountability, and provides factual information about result and practices that feed into the programmatic and strategic decision-making processes. Independent evaluations provide evidence-based information that is credible, reliable and useful, enabling the timely incorporation of findings, recommendations and lessons learned into the decision-making processes at organization-wide, programme and project level. ODG/EIO/IED is guided by the UNIDO Evaluation Policy, which is aligned to the norms and standards for evaluation in the UN system.

2. PROJECT CONTEXT

Detailed background information of the project can be found the terms of reference (TOR) for the terminal evaluation.

MAIN DUTIES	Concrete/ Measurable Outputs to be achieved	Working Days	Location
1. Review 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 adjust the key data collection instrument if needed.	• Adjusted table of evaluation questions, depending on country specific context; • Draft list of stakeholders to interview during the field missions.	4 days	Home-based
2. Prepare an inception report which streamlines the specific questions to address the key issues in the TOR, specific methods that will be used and data to collect in the field visits, detailed evaluation methodology confirmed, draft theory of change, and tentative agenda for field work.	• Draft theory of change and Evaluation framework to submit to the Evaluation Manager for clearance.	2 days	Home based
3. Briefing with the UNIDO Independent Evaluation Division, project managers and other key stakeholders at UNIDO HQ.	• Detailed evaluation schedule with tentative mission agenda (incl. list of stakeholders to	1 day	Through skype

MAIN DUTIES	Concrete/ Measurable Outputs to be achieved	Working Days	Location
Conduct skype interviews with key selected stakeholders participating in the project.	interview and site visits); mission planning; • Division of evaluation tasks with the National Consultant. • Key feedback from beneficiaries and stakeholders	2 days	
4. Conduct field mission to the People's Republic of China in 2018[16].	• Conduct meetings with relevant project stakeholders, beneficiaries, the GEF Operational Focal Point (OFP), etc. for the collection of data and clarifications; • Agreement with the National Consultant on the structure and content of the evaluation report and the distribution of writing tasks; • Evaluation presentation of the evaluation's preliminary findings, conclusions and recommendations to stakeholders in the country, including the GEF OFP, at the end of the mission.	7 days	People's Republic of China (specific project site to be identified at inception phase)
5. Present overall findings and recommendations to the stakeholders at UNIDO HQ	• After field mission(s): Presentation slides, feedback from stakeholders obtained and discussed.	1 day	Vienna, Austria
6. Prepare the evaluation report, with inputs from the National Consultant, according to the TOR; Coordinate the inputs from the National Consultant and combine with her/his own inputs into the draft evaluation report. Share the evaluation report with UNIDO HQ and national stakeholders for feedback and comments.	• Draft evaluation report.	6 day	Home-based
7. Revise the draft project evaluation report based on comments from UNIDO	• Final evaluation report.	1 day	Home-based

[16] The exact mission dates will be decided in agreement with the Consultant, UNIDO HQ, and the country counterparts.

MAIN DUTIES	Concrete/ Measurable Outputs to be achieved	Working Days	Location
Independent Evaluation Division and stakeholders and edit the language and form of the final version according to UNIDO standards.			
	TOTAL	24 days	

REQUIRED COMPETENCIES

Core values:

1. Integrity
2. Professionalism
3. Respect for diversity

Managerial competencies (as applicable):

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

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

MINIMUM ORGANIZATIONAL REQUIREMENTS

Education:

Advanced degree in environment, energy, engineering, development studies or related areas.

Technical and functional experience:

- Minimum of 15 years' experience in environmental/energy project management and/or evaluation (of development projects)
- Knowledge about GEF operational programs and strategies and about relevant GEF policies such as those on project life cycle, M&E, incremental costs, and fiduciary standards
- Experience in the evaluation of GEF projects and knowledge of UNIDO activities an asset
- Knowledge about multilateral technical cooperation and the UN, international development priorities and frameworks
- Working experience in developing countries

Languages:

Fluency in written and spoken English is required.

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 with the UNIDO Independent Evaluation Division.

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 the People's Republic of China
Start of Contract:	5 February 2018
End of Contract:	30 March 2018
Number of Working Days:	15 days spread over the above-mentioned period

ORGANIZATIONAL CONTEXT

The UNIDO Independent Evaluation Division (ODG/EIO/IED) is responsible for the independent evaluation function of UNIDO. It supports learning, continuous improvement and accountability, and provides factual information about result and practices that feed into the programmatic and strategic decision-making processes. Independent evaluations provide evidence-based information that is credible, reliable and useful, enabling the timely incorporation of findings, recommendations and lessons learned into the decision-making processes at organization-wide, programme and project level. ODG/EIO/IED is guided by the UNIDO Evaluation Policy, which is aligned to the norms and standards for evaluation in the UN system.

PROJECT CONTEXT

The national evaluation consultant will evaluate the projects according to the terms of reference (TOR) under the leadership of the team leader (international evaluation consultant). S/he will perform the following tasks:

MAIN DUTIES	**Concrete/measurable outputs to be achieved**	**Expected duration**	**Location**
Desk review Review and analyze project documentation and relevant country background information; in cooperation with the team leader, determine key data to collect in the field and prepare key instruments in English (questionnaires, logic models); If need be, recommend adjustments to the evaluation framework and Theory of Change in order to ensure their understanding in the local context.	Evaluation questions, questionnaires/interview guide, logic models adjusted to ensure understanding in the national context; A stakeholder mapping, in coordination with the project team.	**3 days**	Home-based
Coordinate the evaluation 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 project staff in the field.	• Detailed evaluation schedule. • List of stakeholders to interview during the field missions.	**1 days**	Home-based
Coordinate and conduct the field mission with the team leader in cooperation with the Project Management Unit, where	• Presentations of the evaluation's initial findings, draft conclusions and	6 days (including travel days)	In People's Republic of China

MAIN DUTIES	Concrete/measurable outputs to be achieved	Expected duration	Location
required; Consult with the Team Leader on the structure and content of the evaluation report and the distribution of writing tasks. Conduct the translation for the Team Leader, when needed.	recommendations to stakeholders in the country at the end of the mission. • Agreement with the Team Leader on the structure and content of the evaluation report and the distribution of writing tasks.		
Prepare inputs and analysis to the evaluation report according to TOR and as agreed with the Team Leader. Revise the draft project evaluation report based on comments from UNIDO Independent Evaluation Division and stakeholders and proof read the final version.	Draft evaluation report prepared.	5 days	Home-based
TOTAL		**15 days**	

REQUIRED COMPETENCIES

Core values:

1. Integrity
2. Professionalism
3. Respect for diversity

Managerial competencies (as applicable):

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

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

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:

- Exposure to the needs, conditions and problems in developing countries.
- Familiarity with the institutional context of the project is desirable.
- Experience in the field of environment and energy, including evaluation of development cooperation in developing countries is an asset

Languages: Fluency in written and spoken English and Chinese is required.

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 with the UNIDO Independent Evaluation Division.

Annex 4- Outline of an in-depth project evaluation report

Executive summary (maximum 5 pages)

Evaluation purpose and methodology
Key findings
Conclusions and recommendations
Project ratings
Tabular overview of key findings – conclusions – recommendations

1. Introduction
- 1.1. Evaluation objectives and scope
- 1.2. Overview of the Project Context
- 1.3. Overview of the Project
- 1.4. Theory of Change
- 1.5. Evaluation Methodology
- 1.6. Limitations of the Evaluation

2. Project's contribution to Development Results - Effectiveness and Impact
- 2.1. Project's achieved results and overall effectiveness
- 2.2. Progress towards impact
  - 2.2.1. Behavioral change
    - 2.2.1.1. Economically competitive - Advancing economic competitiveness
    - 2.2.1.2. Environmentally sound – Safeguarding environment
    - 2.2.1.3. Socially inclusive – Creating shared prosperity
  - 2.2.2. Broader adoption
    - 2.2.2.1. Mainstreaming
    - 2.2.2.2. Replication
    - 2.2.2.3. Scaling-up

3. Project's quality and performance
- 3.1. Design
- 3.2. Relevance
- 3.3. Efficiency
- 3.4. Sustainability
- 3.5. Gender mainstreaming

4. Performance of Partners
- 4.1. UNIDO
- 4.2. National counterparts
- 4.3. Donor

5. Factors facilitating or limiting the achievement of results
- 5.1. Monitoring & evaluation
- 5.2. Results-Based Management
- 5.3. Other factors
- 5.4. Overarching assessment and rating table

6. **Conclusions, recommendations and lessons learned**
- 6.1. Conclusions
- 6.2. Recommendations
- 6.3. Lessons learned
- 6.4. Good practices

Annexes (to be put online separately later)
- Evaluation Terms of Reference
- Evaluation framework
- List of documentation reviewed
- List of stakeholders consulted
- Project logframe/Theory of Change
- Primary data collection instruments: evaluation survey/questionnaire
- Statistical data from evaluation survey/questionnaire analysis

Annex 5: Checklist on evaluation report quality

Project Title:

UNIDO ID:

Evaluation team:

Quality review done by: Date:

Report quality criteria	UNIDO Independent Evaluation Division assessment notes	Rating
a. Was the report well-structured and properly written? (Clear language, correct grammar, clear and logical structure)		
b. Was the evaluation objective clearly stated and the methodology appropriately defined?		
c. Did the report present an assessment of relevant outcomes and achievement of project objectives?		
d. Was the report consistent with the ToR and was the evidence complete and convincing?		
e. Did the report present a sound assessment of sustainability of outcomes or did it explain why this is not (yet) possible? (Including assessment of assumptions, risks and impact drivers)		
f. Did the evidence presented support the lessons and recommendations? Are these directly based on findings?		
g. Did the report include the actual project costs (total, per activity, per source)?		
h. Did the report include an assessment of the quality of both the M&E plan at entry and the system used during the implementation? Was the M&E sufficiently budgeted for during preparation and properly funded during implementation?		
i. Quality of the lessons: were lessons readily applicable in other contexts? Did they suggest prescriptive action?		
j. Quality of the recommendations: did recommendations specify the actions necessary to correct existing conditions or improve operations ('who?' 'what?' 'where?' 'when?'). Can these be immediately implemented with current resources?		
k. Are the main cross-cutting issues, such as gender, human rights and environment, appropriately covered?		
l. Was the report delivered in a timely manner? (Observance of deadlines)		

Rating system for quality of evaluation reports

A rating scale of 1-6 is used for each criterion: Highly satisfactory = 6, Satisfactory = 5, Moderately satisfactory = 4, Moderately unsatisfactory = 3, Unsatisfactory = 2, Highly unsatisfactory = 1, and unable to assess = 0.

Annex 6: Guidance on integrating gender in evaluations of UNIDO projects and Projects

A. Introduction

Gender equality is internationally recognized as a goal of development and is fundamental to sustainable growth and poverty reduction. The UNIDO Policy on gender equality and the empowerment of women and its addendum, issued respectively in April 2009 and May 2010 (UNIDO/DGB(M).110 and UNIDO/DGB(M).110/Add.1), provides the overall guidelines for establishing a gender mainstreaming strategy and action plans to guide the process of addressing gender issues in the Organization's industrial development interventions.

According to the UNIDO Policy on gender equality and the empowerment of women:

Gender equality refers to the equal rights, responsibilities and opportunities of women and men and girls and boys. Equality does not suggest that women and men become 'the same' but that women's and men's rights, responsibilities and opportunities do not depend on whether they are born male or female. Gender equality implies that the interests, needs and priorities of both women and men are taken into consideration, recognizing the diversity of different groups of women and men. It is therefore not a 'women's issues'. On the contrary, it concerns and should fully engage both men and women and is a precondition for, and an indicator of sustainable people-centered development.

Empowerment of women signifies women gaining power and control over their own lives. It involves awareness-raising, building of self-confidence, expansion of choices, increased access to and control over resources and actions to transform the structures and institutions which reinforce and perpetuate gender discriminations and inequality.

Gender parity signifies equal numbers of men and women at all levels of an institution or organization, particularly at senior and decision-making levels.

The UNIDO projects/projects can be divided into two categories: 1) those where promotion of gender equality is one of the key aspects of the project/project; and 2) those where there is limited or no attempted integration of gender. Evaluation managers/evaluators should select relevant questions depending on the type of interventions.

B. Gender responsive evaluation questions

The questions below will help evaluation managers/evaluators to mainstream gender issues in their evaluations.

B.1. Design

- Is the project/project in line with the UNIDO and national policies on gender equality and the empowerment of women?
- Were gender issues identified at the design stage?
- Did the project/project design adequately consider the gender dimensions in its interventions? If so, how?
- Were adequate resources (e.g., funds, staff time, methodology, experts) allocated to address gender concerns?
- To what extent were the needs and priorities of women, girls, boys and men reflected in the design?
- Was a gender analysis included in a baseline study or needs assessment (if any)?
- If the project/project is people-centered, were target beneficiaries clearly identified and disaggregated by sex, age, race, ethnicity and socio-economic group?
- If the project/project promotes gender equality and/or women's empowerment, was gender equality reflected in its objective/s? To what extent are output/outcome indicators gender disaggregated?

B.2. Implementation management

- Did project monitoring and self-evaluation collect and analyze gender disaggregated data?
- Were decisions and recommendations based on the analyses? If so, how?
- Were gender concerns reflected in the criteria to select beneficiaries? If so, how?
- How gender-balanced was the composition of the project management team, the Steering Committee, experts and consultants and the beneficiaries?
- If the project/project promotes gender equality and/or women's empowerment, did the project/project monitor, assess and report on its gender related objective/s?

B.3. Results

- Have women and men benefited equally from the project's interventions? Do the results affect women and men differently? If so, why and how? How are the results likely to affect gender relations (e.g., division of labour, decision making authority)?
- In the case of a project/project with gender related objective/s, to what extent has the project/project achieved the objective/s? To what extent has the project/project reduced gender disparities and enhanced women's empowerment?

Annex 2: Evaluation framework

The evaluation purpose and objectives, theory of change, and UNIDO's evaluative requirements all provided the basis for the **evaluation framework**, which in turn underpinned and guided the whole approach. The framework is structured against the standard **OECD-DAC criteria** agreed for the evaluation (**relevance**, **efficiency**, **effectiveness**, **sustainability**). In line with UNIDO policy and acknowledging the early, foundational nature of the NIP's potential contributions to long-term impact, the OECD-DAC 'impact' criterion was simplified to instead measure '**progress to impact**'.

The framework identified **key evaluation questions**, supported by guiding **sub-questions**. The framework was also informed by a set of indicative questions presented within the evaluation TOR: all those indicative questions were incorporated accordingly.

Key evaluation questions	Guiding sub-questions
RELEVANCE	
5.What are the key drivers and barriers to achieve the long-term objectives?	**5.1** To what extent was the project relevant to P.R. China's national priorities and strategies?
	5.2 To what extent was the programme relevant to UNIDO's mandate? GEF's mandate?
	5.3 What were the barriers in place to achieving the long-term objectives of the project?
	5.4 How well did the project align with related international POPs management objectives?
EFFICIENCY	
6. How well has the project performed? Has the project done the right things, and were things done right with good value for money?	**6.1** Was the project plan clear, appropriate and realistic? Were environmental and social safeguards put in place in the design and implementation of the project?
	6.2 Were project roles, responsibilities and accountabilities sufficiently clear?
	6.3 How effective were the project's monitoring processes?
	6.4 To what extent was the project delivered effectively, given the controllable elements?
	6.5 How cost- and time-efficient was the project? Were funds used appropriately and procurement and contracting of goods and services of high quality?
EFFECTIVENESS	
7.What have been the project's key results (outputs, outcomes)? To what extent have the expected results been achieved or are likely to be achieved?	**7.1** Is a coordination mechanism in place with national regulatory framework and capacities assessed? Are stakeholders aware of new POPs?
	7.2 Were the inventories of new POPs (and updating of initial 12 POPs) by relevant stakeholders validated? Were new POPs alternatives and technologies identified? **7.3** To what extent was China's Basic technical capacity for conducting inventories of new POPs built up? **7.4** To what extent is information provided on environmentally sound and economically feasible alternatives and technologies? Have opportunities for public and private investment been assessed?
	7.5 Have priorities been set and capacity strengthened for new POPs management based on identification of alternative investment solutions in pilot provinces?
	7.6 Has government endorsed and submitted an updated NIP to the SC conference of parties?
SUSTAINABILITY	
8. To what extent will the achieved	**8.1** What are the key risks in terms of financial, socio-political, institutional and

Key evaluation questions	Guiding sub-questions
results sustain after the completion of the project?	environmental risks that may affect the continuation of results after the project ends?
	8.2 What lessons can be drawn from the successful and unsuccessful practices in designing, implementing and managing the project?
	8.3 How were gender dimensions incorporated within project design and delivery?

Annex 3: List of Documents Reviewed

China's Compliance with the Stockholm Convention on Persistent Organic Pollutants (POPs) – National Implementation Review and Update Tasks Teams (2014), MEP-FECO

China's Compliance with the Stockholm Convention, UNIDO Project document, (2013), UNIDO

FECO, no date. 涉及 POPs 管理的政府机构职责 *Government Agencies Responsible for POPs Management*.

FECO-MEE, 2019. Final Report of the GEF Project on Updating China's National Implementation Plan for the Stockholm Convention (Draft)

Huang, Jun, 2019. Update of Strategic Action Plan for Reduction and Control of UPPOPs like PCDD/Fs. Powerpoint Presentation: School of Environment, Tsinghua University

Huang, Jun, 2019. 中国 PFOS 淘汰控制战略与行动计划研究 *Planning and Research on China's Strategy and Initiative for the Elimination and Control of PFOS*. Powerpoint Presentation: School of Environment, Tsinghua University

Independent Evaluation of the National Quality Infrastructure Project for Nigeria – Inception Report (2019), Ronnie MacPherson, et. al.

Independent Mid-Term Review of the Review and update of the National Implementation for the Stockholm Convention on Persistent Organic Pollutants, (2016), UNIDO

Independent Terminal Evaluation of the Project: Environmentally Sound Management and Disposal of Obsolete POPs Pesticides and Other POPs in China – Inception Report (2018), Aaron E. Zazueta

Progress Report for Expedited Enabling Activities to Facilitate Early Action on the Implementation of the Stockholm Convention on Persistent Organic Pollutants (NIP Update Project) (2017), MEP FECO

Progress Report for Expedited Enabling Activities to Facilitate Early Action on the Implementation of the Stockholm Convention on Persistent Organic Pollutants (NIP Update Project) (2018), MEP FECO

Project Information Document to GEF: *Review and update of the National Implementation for the Stockholm Convention on Persistent Organic Pollutants* (2013), UNIDO

Request for MSP Approval – Review and Update of the National Implementation Plan under the Stockholm Convention on Persistent Organic Pollutants in the People's Republic of China (2013), MEP-FECO, UNIDO

Terms of Reference: China's Compliance with the Stockholm Convention on Persistent Organic Pollutants in the People's Republic of China (National Implementation Plan Review and Update) (2014), UNIDO

Terms of Reference: Independent terminal evaluation of UNIDO project: Review and update of the National Implementation for the Stockholm Convention on Persistent Organic Pollutants, (2019), UNIDO

Terms of Reference: Mid-term Review of UNIDO project: Review and update of the National Implementation for the Stockholm Convention on Persistent Organic Pollutants, (2015), UNIDO

UNIDO Director General's Bulletin: Evaluation Policy, DGB/2018/08, (2018), UNIDO

UNIDO Director General's Bulletin: Evaluation Policy, DGB/2018/08, (2018), UNIDO

UNIDO GEF Annual Monitoring Report FY2017 (2017), MEP FECO

UNIDO GEF Annual Monitoring Report FY2018 (2018), MEP-FECO

UNIDO Independent Evaluation Division Evaluation Manual, (2018), UNIDO

UNIDO Independent Evaluation Division Evaluation Manual, (2018), UNIDO

Annex 4: Agenda of Evaluation Field Visit

日期/Date		活动内容/Activity			参与人员/Participants	地点/location	交通/Transport	时间/Scheduled Time	住宿/Accommodation
		活动类别/Subjects	主要内容/Main Contents	负责人/Responsible Person					
Day 1 9 月 16 日 Sep.16	上午 Morning	NIP 更新项目终期评估欢迎会暨项目成果报告会 Reception for terminal evaluation of the NIP update project and workshop on the final achievements	欢迎致辞 Welcome address	生态环境部 MEE	评估专家、UNIDO 北办代表、生态环境部、对外合作与交流中心、子项目承担单位专家 National and international evaluator, MEE, FECO, sub-contract experts	北京 Beijing	租车 Car Rental	9:00-11:30	北京 Beijing
			NIP 更新项目总结报告 Summary report of the NIP update Project	对外合作与交流中心 施川 FECO Shi Chuan					
			硫丹清单战略行动计划介绍 Report on Endosulfan inventory and strategic plan	北京大学 刘建国 Peking University Liu Jianguo					
			HBCD 清单战略行动计划介绍 Report on HBCD inventory and management and control	北京师范大学 刘新会 Beijing Normal University Liu Xinhui					
			提问、讨论 Q&A, discussion	评估专家 Evaluators					

日期/Date		活动内容/Activity			参与人员/Participants	地点/location	交通/Transport	时间/Scheduled Time	住宿/Accommodation
		活动类别/Subjects	主要内容/Main Contents	负责人/Responsible Person					
	下午 Afternoon	项目成果报告会 Workshop on sub-contract achievements	POPs 废物和污染场地清单战略行动计划介绍 Report on Waste and Contaminated sites inventory and strategic plan	中国环境科学研究院 黄启飞、田书磊 Chinese Research Academy of Environmental Science Hang Qifei, Tian Shulei				14:00-17:00	
			提问、讨论 Q&A, discussion	评估专家 Evaluators					
Day 2 9 月 17 日 Sep.17	上午 Morning	访问清华大学 Visit Tsinghua University	PFOS 清单战略行动计划介绍、二噁英清单和无意排放的 POPs（UPOPs）削减战略行动计划介绍 Workshop on PFOS inventory and strategic plan，PCDDs/PCDFs inventory and UPPOPs strategic plan	清华大学 黄俊 Tsinghua University Huang Jun 中科院生态中心 刘文彬 Chinese Academy of Sciences Liu Wenbin	评估专家、对外合作与交流中心、子项目承担单位专家 National and international evaluator, FECO, sub-contract experts	北京 Beijing	租车 Car Rental	9:30-11:30	北京 Beijing
			提问、讨论 Q&A, discussion						

日期/Date		活动内容/Activity			参与人员/Participants	地点/location	交通/Transport	时间/Scheduled Time	住宿/Accommodation
		活动类别/Subjects	主要内容/Main Contents	负责人/Responsible Person					
	下午 Afternoon	访问中国科学院生态环境研究中心 Visit Chinese Academy of Sciences	监测战略行动计划介绍和 UPOPs 的 BAT/BEP 技术评估汇报 Introduction on Monitoring strategic plan and Report on BAT/BEP Technical Evaluation of Unintentionally Produced POPs such as Dioxin 参观二噁英分析实验室 Visit PCDDs/PCDFs Analysis Lab	中科院生态中心刘文彬、高丽荣 Chinese Academy of SciencesLiu Wenbin, Gao Lirong				14:00-17:30	
Day 3 9 月 18 日 Sep.18	上午 Morning	前往江西南昌访问江西省生态环境厅 Leave for Nanchang Visit Department of Ecology and Environment of Jiangxi Province	北京-南昌（CA1573，07:25 首都国际机场 T3 - 09:55 昌北国际机场 T2） 江西省履约情况介绍 Beijing - Nanchang（CA1573，07:25 Beijing Capital International Airport T3 - 09:55 Nanchang Changbei International Airport T2）	江西省生态环境厅 Department of Ecology Environment of Jiangxi Province	评估专家、对外合作与交流中心、江西省生态环境厅 National and international evaluator, FECO, Department of Ecology and Environment of Jiangxi Province	北京、江西 Beijing/ Jiangxi	飞机 Plane 租车 Car Rental	8:30-17:30	江西 Jiangxi

日期/Date		活动内容/Activity			参与人员/Participants	地点/location	交通/Transport	时间/Scheduled Time	住宿/Accommodation
		活动类别/Subjects	主要内容/Main Contents	负责人/Responsible Person					
			Report on POPs Convention Implementation Jiangxi Province						
	下午 Afternoon	访问再生铜企业 Visit secondary copper enterprise	再生铜生产企业现场交流 On-site communication on secondary copper production						
Day 4 Sep.19	上午 Morning	前往济南 Leave for Jinan	南昌-济南（MU9978，11:00 昌北国际机场 T2 - 12:50 遥墙国际机场） Nanchang - Jinan（MU9978，11:00 Nanchang Changbei International Airport T2 - 12:50 Jinan Yaoqiang International Airport）	山东省生态环境厅 Department of Ecology Environment of Shandong Province	评估专家、对外合作与交流中心、山东省生态环境厅 National and international evaluator, FECO, Department of Ecology and Environment of Shandong Province	北京、山东 Beijing/ Shandong	飞机 Plane 租车 Car Rental	8:30-17:30	山东 Shandong

日期/Date		活动内容/Activity			参与人员/Participants	地点/location	交通/Transport	时间/Scheduled Time	住宿/Accommodation
		活动类别/Subjects	主要内容/Main Contents	负责人/Responsible Person					
	下午 Afternoon	访问山东省生态环境厅 Visit Department of Ecology and Environment of Shandong Province	示范省工作报告介绍 Report on New POPs in Pilot Province Beijing - Shandong						
Day 5 Sep.20	上午 Morning	访问 HBCD 生产、使用企业 Visit HBCD production and usage enterprise	HBCD 生产、使用企业现场交流 On-site communication on HBCD production and usage	山东省生态环境厅 Department of Ecology and Environment of Shandong Province	评估专家、对外合作与交流中心、山东省生态环境厅 National and international evaluator, FECO, Department of Ecology and Environment of Shandong Province	山东 Shandong	高铁 Train 租车 Car Rental	8:30-17:30	北京 Beijing
		前往北京 Leave for Beijing	潍坊-北京（高铁 G476，11:49-15:18） Shandong - Beijing (High Speed Train G476，11:49-15:18)		评估专家、对外合作与交流中心 National and international evaluator, FECO	山东、北京 Shandong /Beijing			

日期/Date		活动内容/Activity			参与人员/Participants	地点/location	交通/Transport	时间/Scheduled Time	住宿/Accommodation
		活动类别/Subjects	主要内容/Main Contents	负责人/Responsible Person					
	下午 Afternoon	访问北京大学 Visit Peking University	更新的履约国家实施计划介绍 Introduction of the updated National Implementation Plan on Implementing the Stockholm Convention on persistent organic pollutions (POPs)	北京大学 胡建信 Peking University Hu Jianxin	评估专家、对外合作与交流中心、子项目承担单位专家 National and international evaluator, FECO, sub-contract expert	北京 Beijing			
The next week	全天 All day	研讨会和总结 Workshop and wrap-up meeting	访问利益相关方 Interview stakeholders		评估专家、对外合作与交流中心 National and international evaluator, FECO	北京 Beijing		9:00-17:00	北京 Beijing

Annex 5: Master Questionnaire Used for Interviews

Name of Institution 机构名称

Location of institution 地址

Name and position of person interviewed 受访人的姓名和职务

1) Can you tell us briefly what are the functions (or businesses) of your organization (or firm)?
   请说明贵机构（或公司）的职能（或业务）。

2) What has been your Organization's (firm) role in the project? How long have you been engaged with the project?
   本项目中贵机构（或公司）的任务是什么？已参与本项目多久？

3) Are you aware of the old NIP of the Stockholm Convention and the need to update it?

4) What was the contribution of your organization to the update of the NIP?

5) What were the most important obstacles or challenges related to the creation of POPs inventories or policies that your organization/department/firm faced prior to the project?
   本项目开始前，贵机构（或部门或公司）在建立 POPs 的清单/政策工作有哪些主要的困难和挑战？

6) In what ways has the project helped your organization/department to address the these challenges?
   该项目如何促进这些问题的解决？

7) What were the most important lessons your organization/department/firm have learned through the development and promotion of POPs inventories and the updated NIP?

8) Has your organization/ department applied any approaches or lessons that came from the project to other aspects of your operations? If so what has been applied?
   贵机构（或部门）是否将此项目中的方法/经验等应用于其它业务？应用了哪些方法？

9) Will your organization continue to use or expand the project practices, approaches or technologies once the project ends? If so, what actions have you undertaken or what are your plans on this regard?

贵机构（或部门）是否将继续运用或拓展**此**项目的经验、方法或技术？如果是，有哪些具体的行动或计划？

10) What would be the status or condition of China's NIP or POP inventories had the NIP Project **not** taken place?
如果没有该项目，你认为贵机构（或公司）关于 POPs 管理能力的状况将会如何？

11) What challenges or obstacles does your organization still face related to the update and implementation of the NIP or creation or update of POP inventories?
贵机构（或公司）现阶段仍面临哪些 NIP 更新或 POP 清单建立方面的困难或挑战？

12) What have been the most important accomplishments of the NIP project in general?
UNIDO NIP 项目最重要的成就是什么？

13) What would you take out, add to, or do differently in the NIP project?
你认为 NIP 项目应该增减或修改哪些内容？

Annex 6: List of Stakeholders Consulted

UNIDO Staff (Vienna)
PENG Zhengyou
Marcus Hoffman

FECO Staff
SHI Chuan
SUN Yangzhou

Members of the NIP Update Advisory Group
Peking University: HU Jianxin, LIU Jianguo
Tsinghua University: HUANG Jun
Chinese Academy of Sciences: LIU Wenbin, GAO Lirong
Chinese Research Academy of Environmental Sciences: TIAN Shulei
Beijing Normal University: LIU Xinhui

Companies Visited
Xinrui Shandong Moris Tech Co., Ltd.
Jiangxi Zili Environmental Protection Technology Co. Ltd.

Local Environmental Bureaus Visited
Weifang Environmental Protection Bureau
Shandong Ecology and Environment Department
Jiangxi Ecology and Environment Department