UNITED NATIONS
INDUSTRIAL DEVELOPMENT ORGANIZATION

SUSTAINABLE DEVELOPMENT GOALS

Project Implementation Report

(1 July 2022 – 30 June 2023)

Project Title:	POPs and Chemical Pollution Solutions through Area-Based- Eco-effective- Management
GEF ID:	4854
UNIDO ID:	150073
GEF Replenishment Cycle:	GEF-5
Country(ies):	China
Region:	EAP - East Asia and Pacific
GEF Focal Area:	Persistent Organic Pollutants (POPs)
Integrated Approach Pilot (IAP) Programs[1]:	N/A
Stand-alone / Child Project:	Stand-Alone
Implementing Department/Division:	AGR / AIS
Co-Implementing Agency:	N/A
Executing Agency(ies):	FECO, MEE
Project Type:	Full-Sized Project (FSP)
Project Duration:	60
Extension(s):	2
GEF Project Financing:	6,000,000
Agency Fee:	570,000
Co-financing Amount:	24,000,000
Date of CEO Endorsement/Approval:	12/1/2015
UNIDO Approval Date:	2/24/2016
Actual Implementation Start:	4/11/2016
Cumulative disbursement as of 30 June 2023:	5,886,457.29
Mid-term Review (MTR) Date:	10/9/2021

[1] Only for **GEF-6 projects**, if applicable

Original Project Completion Date:	4/11/2021
Project Completion Date as reported in FY22:	4/11/2023
Current SAP Completion Date:	4/11/2024
Expected Project Completion Date:	4/11/2024
Expected Terminal Evaluation (TE) Date:	4/11/2024
Expected Financial Closure Date:	4/11/2024
UNIDO Project Manager[2]:	Mr. Zhengyou PENG

I. Brief description of project and status overview

Project Objective
Project Objective: The project will generate and demonstrate an area based chemical management replicable methodology based on an eco-effective management approach to systematically eliminate POPs and SAICM concerned chemical wastes from the total life cycles of products and industrial production systems. At the heart of the eco-effective approach to value chain management is a mindset change that stimulates innovation and rethinking. The approach aims for a massive change in material flows resulting in a 'no waste' society and redesigns the current, one-way industrial systems into a circular system. The application of the eco-effectiveness approach to POPs and SAICM concerned chemicals is guided by operational tools such as the Eco-Effectiveness Life Cycle Analysis Framework. Targeted results: This project demonstrates the decrease and elimination of POPs and SAICM concerned chemicals using an eco-effective management approach in the lead-acid battery (LAB) value chain [Tianjin], and in the petroleum exploitation value chain [Dongying]. The lead-acid battery value chain currently relies on PBDE and toxic chemical inputs to improve the flame-retardant quality. The oil extraction value chain currently relies on chemical additives and a wide spectrum of chemical wastes are generated in the extraction process. This project is about the elimination of POPs and other toxic chemicals from products and production life cycles in Tianjin and Dongying. Therefore, the project addresses the socio-economic impact of exposure to POPs and hazardous chemical pollution and seeks to integrate the concept of eco-effective.

Baseline
Baseline: The current waste and chemical management policy in PR China supports a 'take, make, waste' industrial model and in response the 'Circular Economy' policy in China tries to addresses the unsustainable waste volumes through the promotion of 'reduce, reuse, recycle' measures, developing a 'waste economy' and finding better ways to use and dispose of the waste. The 'take, make, waste' industrial model is globally dominant. Significantly, in China the un-sustainability of this model is being increasingly realized and that the Chinese 'circular economy' response is simply not enough.

[2] Person responsible for report content

Please refer to the explanatory note at the end of the document and select corresponding ratings for the current reporting period, i.e. FY23. Please also provide a short justification for the selected ratings for FY23.

In view of the GEF Secretariat's intent to start following the ability of projects to adopt the concept of adaptive management[3], Agencies are expected to closely monitor changes that occur from year to year and demonstrate that they are not simply implementing plans but modifying them in response to developments and circumstances or understanding. In order to facilitate with this assessment, please introduce the ratings as reported in the previous reporting cycle, i.e. FY22, in the last column.

Overall Ratings[4]	**FY23**	**FY22**
Global Environmental Objectives **(GEOs)** / Development Objectives **(DOs)** Rating	*Highly Satisfactory (HS)*	*Highly Satisfactory (HS)*
The development objective of the project is to generate and demonstrate an area based chemical management replicable methodology based on an eco-effective management approach to systematically eliminate POPs and SAICM concerned chemical wastes from the total life cycles of products and industrial production systems. UNIDO and FECO have joined forces in the collaborative project with the goal of introducing the cradle-to-cradle model to China. This comprehensive approach to sustainable development places a strong emphasis on material health as a starting point, and encompasses material circulation, renewable energy and carbon management, ecological conservation and pollution control, and corporate social responsibility. The project commences with effective chemical management practices and seeks to actively involve stakeholders from various industries, along with national and local governments, academia, and the general public. These stakeholders will actively participate in demonstrations and capacity-building initiatives aimed at encouraging the adoption of the cradle-to-cradle model in two selected pilot municipalities, ultimately extending its implementation across the entirety of China. Throughout the project implementation, there has been a notable increase in the understanding and acceptance of the cradle-to-cradle (C2C) theories among project stakeholders at both national and local levels. This development is significant as it aligns with national mainstream initiatives, including Ecological Civilization, the zero-waste city program, carbon peaking and carbon neutrality program, as well as emergent pollutant control efforts. The project's efforts have not only resonated with these initiatives but have also contributed to their advancement.		
Implementation Progress **(IP)** Rating	*Highly Satisfactory (HS)*	*Highly Satisfactory (HS)*
The project has made consistent and rapid progress, achieving significant results in accordance with the 2022 and 2023 work plan. This success can be largely attributed to the efforts made to instill the concept of eco-effectiveness in the minds of key stakeholders, guiding their planning and implementation processes. Building upon the momentum gained from the previous year, the project implementation has continued to advance with enhanced awareness and capacity among local project management offices and key stakeholders. In Tianjian, all planned activities have been effectively completed, while Dongying is actively driving forward the project activities at the municipality, industrial park, and pilot enterprise levels. To further promote the establishment and adoption of cradle-to-cradle (C2C) standards in China, the national project team at FECO has engaged major research institutions, certification companies, and policy research associations. With the current pace, it is anticipated that the project will be successfully concluded by April 2024, as agreed upon by UNIDO and FECO as the designated closure date.		

[3] Adaptive management in the context of an intentional approach to decision-making and adjustments in response to new available information, evidence gathered from monitoring, evaluation or research, and experience acquired from implementation, to ensure that the goals of the activity are being reached efficiently

[4] Please refer to the explanatory note at the end of the document and assure that the indicated ratings correspond to the narrative of the report

Overall **Risk** Rating	*Low Risk (L)*	*Low Risk (L)*

The key risk initially faced by the Dongying project management office was a lack of familiarity with cradle-to-cradle (C2C) theories and international project management rules. However, this risk has been significantly mitigated as the office successfully navigated a steep learning curve in these areas. Through dedicated efforts, they have gained a solid understanding of C2C principles and are now effectively applying international project management rules. This has considerably reduced the risk associated with the Dongying project and enhanced its overall management capabilities.

As the project moves forward, the primary risk has shifted towards the complexity and coordination of various activities at the municipality, industrial park, and pilot enterprise levels. Achieving optimal synergy and collaboration across these different levels is crucial for successful implementation. This challenge requires careful planning and effective communication to ensure that all stakeholders are aligned in their objectives and working towards a common goal. Mitigating this risk will require close monitoring, regular communication channels, and a proactive approach to address any potential roadblocks or conflicts that may arise.

Similarly, there is a significant risk concerning the national project management team, particularly in their engagement with major research institutions, associations, and certification bodies in the environment and energy field. It is essential to ensure that these entities fully grasp the essence of C2C theories and practices within the project's limited timeline. This task may prove challenging, as it requires conveying complex concepts effectively and fostering a deep understanding among stakeholders. Overcoming this risk will necessitate concerted efforts from the national project management team to provide comprehensive guidance, support, and resources to these entities, ensuring alignment with the project's objectives.

Despite the inherent risks, the project management team at the national level, supported by both international and national project advisors, possesses the knowledge and expertise to effectively manage these challenges. Their experience in overseeing complex projects, combined with their understanding of C2C principles, positions them well to navigate potential hurdles. With careful risk management strategies in place, the team remains confident in their ability to successfully complete the project, delivering favourable outcomes and results. Continuous monitoring, proactive problem-solving, and effective communication will be key in ensuring the project's success.

II. Targeted results and progress to-date

Please describe the progress made in achieving the outputs against key performance indicator's targets in the project's **M&E Plan/Log-Frame at the time of CEO Endorsement/Approval**. Please expand the table as needed.

Please fill in the below table or make a reference to any supporting documents that may be submitted as annexes to this report.

Project Strategy	KPIs/Indicators	Baseline	Target level	Progress in FY23
Component 1 – Introduction and incorporation of area based eco-effectiveness approach as a component of the Yiyang and Tianjin Local Government upcoming 5 Year Economic and Social Development Plan Outcome 1: Incorporation of Eco-effectiveness principles into national and regional government green initiatives and environmental protection plans and programs; and enhancement of environmental management decision				
Outcome 1: Incorporation of Eco-effectiveness principles into national and regional government green initiatives and environmental protection plans and programs; and enhancement of environmental management decision	Number of regulatory instruments and guidelines/ development plans incorporating eco-effectiveness principles	Current set of policies based on the "circular economy" model is not leading to the required mindset change promoted by the eco-effectiveness approach	A set of 3 guidelines developed and setting-up of a new institution framework (5-year plans in demonstration area) taking in account the eco-effectiveness principles	The project supports the China Ecological Civilization Research and Promotion Association (CECRPA) in integrating C2C principles into the national ecological civilization initiative. The project aims to develop a specific standard for enterprises, promoting

				effectiveness in the business community within the context of ecological civilization. In Dongying, the High-Tech Industrial Park has developed a specific document with the aim of identifying eligible projects that align with principles of effectiveness and set criteria. The park is also seeking to establish connections with other prominent initiatives, including the zero waste city program, emergent pollutant control measures, carbon peaking and carbon neutrality efforts, and the promotion of ecological civilization.
	Number of eco-effectiveness trainings conducted, number of qualified trainers and number of training programs developed	Institutional capacity is low and knowledge about the application of Eco-Effectiveness mainstream approaches is insufficient	At least 10 trainings conducted based on the eco-effectiveness principle and implementation of the principle across national plans and programs Development of a training program and availability of three qualified national trainers 500 national and international participants/trainees (male/female)	The Dongying Project Management team has conducted multiple training sessions on C2C (Cradle-to-Cradle) theories and applications, ESG (Environmental, Social, and Governance) principles, and HWSDS (Hazardous Waste Safety Data Sheet) platform application. These sessions have seen participation from over 500 individuals representing various industries and local government bodies.
Output 1.1: Establish an enabling environment to incorporate eco effective management principles into national and local government chemical management policy	Number of knowledge exchange programs, networking initiatives and capacity building programs conducted to mainstream the eco-effectiveness strategic approach into regional plans and programs and to build specific expertise for target industrial value chains.	Due to the prevalence of end pipe solutions in national and regional agenda only few international exchange and networking initiatives exist, expertise, institutional capacity and knowledge for alternative solutions is low	Establishment of a platform which takes advantage of an international network of universities to transfer knowledge and to facilitate interaction among scientists and intellectuals to practically deploy eco-effective diagnosis, discovery and implementation of eco-effective solutions in industrial value chains.	Target met in previous FY
	Creation of a customized eco-effectiveness management guideline	No supporting/ comparable material to implement eco-effectiveness approaches available at present	A methodology developed for national and internal practitioner of eco-effectiveness approaches which provides technical support and enhances management capacity to apply this integrated approach into praxis	Target met in previous FY.
Component 2 –Creation of an institutional model to facilitate knowledge and promote investment relevant to eco-effective management and to ensure related capacity building. Outcome 2: Establishment of institutional framework incorporating local government and local enterprises supported by an Eco Effective Knowledge Centre				

Outcome 2: Establishment of institutional framework incorporating local government and local enterprises supported by an Eco Effective Knowledge Centre	Number of management system trainings conducted on local government level; Establishment of management system database;	Current management systems at local government level lacks of consistency with the eco-effectiveness approach and training capacity	A management system at local government level in place which streamline the eco-effectiveness approach within the entire local organization structure and establishes a traceable documentation system 200 trainees (male/female)	No progress to be reported in FY23.
	Final version of a strategy paper and working plan; Number of initiatives developed for technologies and processes supporting the development of eco-effectiveness solutions	At present no strategy developed on local government level to mainstream, enhance and facilitate the application of eco-effectiveness principles within demonstration areas and the selected value chains	An incentive strategy is in place to promote the research, development and application of eco effective solutions and to select innovative technologies and processes	To encourage enterprises to enhance their technology and management systems in accordance with the five pillars of the C2C (Cradle-to-Cradle) development model, Dongying has established a dedicated fund. This fund aims to leverage greater financial contribution from the government, promoting sustainable development and drive the adoption of C2C principles within the business community in Dongying.
Output 2.1: Strengthen the national and local institutional capacity and promote the research for public private partnerships [PPPs] investment to implement eco-effective management as it applies to POPs and SAICM concerned chemicals	Number of study tours conducted; Number of coordination meetings held and action plans defined; Number of trainees and case studies screened	Lack of coordination, communication and of knowledge (international best practices) on local government level	Establishment of a working group and study tours for local government officials to promote the development of local eco-effective action plans and to enhance the knowledge of case studies reflecting international best practices 200 trainees (male/female)	Following the lifting of COVID-19 restrictions, several on-site visits and meetings have taken place involving the national project management team, two local project management teams, and other key stakeholders of the projects. Over 200 participants have been involved in these interactions, facilitating collaboration and progress in project implementation.
	ISO initiative to establish international standard for Eco Effective Management Certification monitored: dialogue established with ISO initiative leader.	Low experience in developing and applying eco-certification schemes and labels in target industries and among government officials	Feedback from ISO Eco Effective Management Systems and Product Certification development initiative integrated into Eco Effective Knowledge Centre and local institutions	As part of the project's efforts, support has been provided for the development of three standards that outline effectiveness principles and requirements. These standards are designed for implementation at the regional, company, and product levels. Additionally, the project is actively assisting the General Certification, a renowned certification body in the energy and environment sector in China, in the development of a certification system. This system will verify compliance with the aforementioned standards, thereby ensuring the effectiveness and adherence to sustainable practices.
Component 3 –Pilot demonstrations at enterprises in the selected value chains to showcase eco-effective management application to encourage wider investment in eco-effective solutions and access to appropriate technologies.				

Outcome 3: Selection of at least 3 processes in each demonstration area and the pilot application of eco-effective methodology to design out toxic chemicals from total life cycles of the materials and the production systems employed.				
Outcome 3: Selection of at least 3 processes in each demonstration area and the pilot application of eco-effective methodology to design out toxic chemicals from total life cycles of the materials and the production systems employed.	An Eco-Effective diagnosis in selected value chains to estimate material flows during total product life cycle and conduct environmental risk assessments; Quantity of eliminated POPs (tons); Quantity of materials avoided, recycled or reused.	Integrated diagnostic tools to put eco-effectiveness principles into practice and to reduce residual point emissions are not applied	Eco-effective diagnosis undertaken in selected enterprises of target industrial chains coupled with best international practice undertaken to assess residual point emission sources and elimination/ remediation plans generated. The diagnosis would consist of an Energy and Materials Flow Environmental Risk Assessment targeting on chemicals inputs, usage in products and production processes of totals life cycle assessment; Dongying: AP reduced by means of alternatives: 0.5 ton. Total chemicals replaced by microbial alternatives: 50 tonnes per year while maintaining an EOR improvement of 8% CO2 injection volume: no less than 5000 tons Sequestration rate: more than 80%) EOR improvement: 8% Tianjin: Phase out decabromodiphenyl oxide (PBDE) used in the outer PP container as fire retardant; Replace traditional tank formation with container formation of polar plates for better control of sulfuric acid mist; Replace gravity casting with stretch calendaring for plate grid manufacturing to reduce lead and water consumption; Replace the traditional shaft melting furnace with the closed oxygen-enriched shaft furnace for achieving higher lead recovery up to 99%.	Dongying has made significant progress in its efforts to demonstrate Best Available Techniques (BATs)/Best Environmental Practices (BEPs) in the substitution of Persistent Organic Pollutants (POPs), as well as carbon capture and utilization. Implementation plans have been developed, along with a robust monitoring system to track the progress of these activities. Currently, the ongoing activities are being closely monitored, and the results are expected to be released soon for evaluation against the predefined targets.
Output 3.1: POPs and SAICM chemicals focused eco effective diagnostic and technological management strategies/methodologies applied to target industrial value chains in the demonstration areas.	Number of trainings/ trainees; establishment of an auditing team at participating enterprises;	Lack of local capacity and knowledge on the enterprise level to conduct regular eco-effectiveness audits and training according to international standards	Eco Effective auditing and technical teams established and trained with support from Knowledge Centre and International Network of Expertise 100 trainees (male/female)	The target was met in the previous reporting period.
	Number of processes implementing a new eco-effectiveness management system; number of procedures in	Industrial processes in demonstration areas lack of an integrated eco-	Eco effective management systems put in place in 3 processes [Dongying and Tianjin] to facilitate proposed solutions /	Dongying has selected microbial agent and CO2 to replace AP as the driving agent in the oil extraction process.

	place; target indicators for residual emissions reductions; number of companies adopting BAT/BEP	effective management system focusing on assessment of emission sources	changes to inputs, products and production procedure. At least 4 companies adopting BAT/BEP	
	Number of production systems harmonized with eco-effectiveness assessment results; Number of design innovations conducted; number of new job positions created	The design of products and process is not compliant with the eco-effectiveness principles, lack of knowledge to streamline this methodology into R&D processes	Implement design changes to production systems and to products in targeted value chains in consultation with National Eco Effective Knowledge and international experts New employment opportunities arising from eco-effective management	No progress to be reported in FY23.
Component 4 –Quantitative measurement of results of eco-effective chemical management measures expressed in materials, financial and commercial terms in pilot enterprises within selected value chains including monitoring and assessment of changes in impact on receiving ecosystems. Outcome 4: Documentation of results of the applied eco effective approach to chemical management including case studies of the process with reference to changed procedures, new and alternative materials, technology innovations and energy. Financial and commercial aspects of applied eco-effective management as well as the environmental monitoring and results				
Output 4.1: Eco-Effective monitoring parameters established and local government institutional capacity strengthened to capture and interpret data built	Monitoring of Circular Economy parameters is generally focused on end of pipe waste measurement. Poor capacity to measure and monitor in-process material inputs and material flows as is required by eco-effective management. Number of trainees	Municipal and Research Institution Laboratories in Dongying and Tianjin are generally not equipped to provide monitoring support because of deficiencies in Equipment, Technical Competence and Laboratory Management Systems.	Monitoring platform and technical parameters defined. Relevant laboratory equipment procured and installed in selected laboratories in the Yiyang and Tianjin municipal areas. Technical training programme initiated. 100 trainees (male/female)	Tianjin Demonstration Area relied on the original POPs analysis laboratory and purchased POPs and toxic substances testing and analysis equipment such as polybrominated diphenyl ethers (PBDEs) and dioxins to establish a high standard laboratory, which will provide testing services for the certification of demonstration enterprises at a later stage of the project.
Component 5 –Dissemination Plan Outcome 5: Planning and implementation of a dissemination strategy that will communicate to a wider global audience. Eco-effective approach methodology documented and made available to wider audience				
Output 5.1: Dissemination programme planned, developed and delivered to local and global audience	Number of awareness raising campaigns related to the environmental and human health risk from POPs SAICM chemical exposure	Awareness raising campaigns are typically of a general nature to alert risk and may not be solution or alternative orientated.	Communication and Awareness raising plan established encompassing human health risks associated to the exposure of POPs taking in consideration their gender relevance	China is currently implementing the Action Plan for the Control of New Pollutants, which provides comprehensive guidelines for managing new pollutants. The plan emphasizes the construction of an environmental risk management approach called “screening, assessment, and control” for toxic and hazardous chemical substances. It also establishes a “ban, reduce, and cure” system as a holistic control mechanism.

				The production and utilization of toxic and hazardous chemical substances are identified as the primary sources of new pollutants. The introduction of these policies provides favorable conditions for implementing our project and reinforces local motivation by enhancing environmental protection efforts. FECO as the implementing agency for the POPs Convention in China has maintained a strong publicity program for raising awareness of POPs pollution in general. Specifically, each project will develop its own publicity program focusing on special chemicals, processes, products and stakeholders. The NPMO and LPMOs have incorporated this component into their work plan.
	Number of targeted awareness raising and dissemination workshops on applied eco effective management of chemicals in the production value chains	Limited access by general public and industries to the possibilities of eco-effective value chain management including environmental, financial and commercial co-benefits	Publicity generated around establishment of Eco-Effective Knowledge Centre Eco Effective website established Project case studies published on website International papers and studies on eco effectiveness published on internet Technical papers relating to solutions implemented by the project published on website Open access on website for technical discussion. Dedicated stakeholder workshops for feedback and refinement of communication material	The national project management team and the two pilot cities have created video materials to showcase their project activities and outcomes. The national project management team is collaborating with the national center of environmental education and communication to condense and present the overall project implementation and results through a series of episode videos. Tianjin has successfully completed the majority of its planned activities and has produced a dedicated video to highlight its significant achievements. This video has been showcased during stakeholder communication sessions and visitor receptions. Additionally, Tianjin has established an exhibition at the Toho Lead Recycling Company for the purpose of public education. Dongying has engaged a media company to film and edit milestone materials, which will be compiled into a video.
Component 6 –Project Monitoring and Evaluation				

Outcome 6: Assessment of the impact of project activities including lessons learned				
Outcome 6: Assessment of the impact of project activities including lessons learned	Assessment and analysis documentation materials addressing both the successes and, even more critically, the failures encountered	The dominant mindset is 'cradle to grave' industrial production and the paradigm of eco-effectiveness is new and challenging	To assure a project assessment process that is intellectually faithful to the principles of eco effectiveness as applied to POPs and SAICM concerned chemical management. As a secondary target the assessment process shall address the wider positive and negative impacts of applied eco effective management of the demonstration value chains.	Completed a mid-term evaluation of the project, obtaining a satisfactory rating.
Output 6.1: Project impact indicators designed, applied and project implementation evaluated	Indicators for applied eco effective management of products and production processes	Eco-effective management spans a wide spectrum of potential impacts from energy and resource flows, to mindset change, to innovative design, to ecological and environmental relationships to the indirect economic, social, financial and commercial benefits.	Framework of indicators to measure impact across impact spectrum designed. Indicatively, technical indicators will include applied eco effective management impact on chemical inputs and emission in industrial value chains and on residual POPs point emission sources, material flows, energy efficiency, product life cycle design, process assessment. Socio economic indicators include such topics as mindset impact, social acceptance and economic factors including financial and commercial implications. The indicators will be informed by the wide range of records and reports generated by the project	The project has completed its audit work and summary report. The technical and socio economic indicators will be finished in the next step.

III. Project Risk Management

1. Please indicate the overall project-level risks and the related risk management measures: (i) as identified in the CEO Endorsement document, and (ii) progress to-date. Please expand the table as needed.

	(i) Risks at CEO stage	(i) Risk level FY 22	(i) Risk level FY 23	(i) Mitigation measures	(ii) Progress to-date	New defined risk[5]
1	Inability to transform accessible information into technical knowledge appropriate for addressing the identified problems on non-point sources in the project demonstration areas	M	M	Human resources to guide transformation of information into area specific and applicable technical knowledge	The project has selected the eco-effective Knowledge Center and Beijing Normal University as the training platform to conduct training for business, society and youth from different perspectives. The NPMO has recruited an experienced technical advisor to facilitate the collaboration among international, national and local project stakeholders.	☐
	Scale and complexity of emission sources versus project resources	L	L	Strict prioritization of actions focused on POPs and other concerned chemicals. Leveraged funding from public and private sectors will be utilized	China is currently implementing the Action Plan for the Control of New Pollutants, which provides comprehensive guidelines for managing new pollutants. The plan emphasizes the construction of an environmental risk management approach called “screening, assessment, and control” for toxic and hazardous chemical substances. It also establishes a “ban, reduce, and cure” system as a holistic control mechanism. The production and utilization of toxic and hazardous chemical substances are identified as the primary sources of new pollutants. The introduction of these policies provides favorable conditions for implementing our project and reinforces local motivation by enhancing environmental protection efforts.	☐
	Accessibility on appropriate and alternative POPs mitigation technologies	L	L	Assistance through UNIDO and other UN agencies clean technology centers, technology transfer and investment promotion centers	UNIDO is actively looking for clean technologies in cooperation with knowledge transfer centers and investment promotion centers.	☐
	Fear and resistance to untried strategic eco-effective policy for the project area	L	L	Build on the stated local governments commitment to create a green economy that exceeds current laws and regulations	The NPMO organized an open and competitive selection process for pilot areas, which have shown their strong commitment to sustainable chemicals management in particular and sustainable development in general. The selected pilot areas have passed the stage when economic development was factually gained by giving way to polluting industries, and are moving toward a balance between economic development and environmental protection. Tianjin has incorporated the concept of whole life cycle management of chemicals into the new Five-Year Plan of Tianjin for environmental	☐

[5] New risk added in reporting period. Check only if applicable.

					protection, which has been released. The Plan will effectively promote the implementation and practice of eco-effective chemicals management in Tianjin. Tianjin has formulated the "Technical Guideline for POPs and Toxic Chemicals Assessment Based on Eco-effective" and three industry technical guidelines (lead battery, aluminum alloy wheel and paint industry). Dongying will do as above.	
	Misunderstanding and fear generated among local population	L	L	Appropriate and clear communication strategy and public education implemented	The NPMO has completed 10 lectures and one semester of 32-class undergraduate elective courses by BNC, which includs business representatives, government officials, the public and students. The LPMOS have also carried out training on the project concept and techniques.	☐
	Inadequate and immature appreciation of the foundations necessary and complexity of a "green" economic structure and for POPs free environment	L	L	Conversion of project inspired incentives to tangible economic benefits in the short-term to ensure sustainability.	NMPO plans to launch an industry incentive program to expand and sustain the program. Tianjin PMO has formulated incentive policies and set up certain incentive funds to encourage enterprises to implement ecological benefit management and green development, and set up expert groups to provide one-to-one guidance to enterprises. Dongying PMO is also actively developing relevant incentive policies to encourage more demonstration companies to join in.	☐
	Rising sea/water levels and emerging water scarcity may potentially interfere with value chains of demonstration areas	L	L	The development of climate resilience strategies in demonstration areas can benefit from the introduction of eco-effectiveness principles (see Annex E) and the application of BAT/BEP in target values chains and their replication	Both pilot areas are in coastal belts vulnerable to climate change impacts. Again, the holistic approach of the project will seek synergies among chemicals management and climate mitigation and adaptation measures. China attaches great importance to the issue of climate change and has formulated a series of policy plans and targets. Dongying is responding positively and has developed climate change related research and demonstration work.	☐

2. If the project received a sub-optimal risk rating (H, S) in the previous reporting period, please state the actions taken since then to mitigate the relevant risks and improve the related risk rating. Please also elaborate on reasons that may have impeded any of the sub-optimal risk ratings from improving in the current reporting cycle; please indicate actions planned for the next reporting cycle to remediate this.

N/A

3. Please indicate any implication of the **COVID-19** pandemic on the progress of the project.

The implementation of the project in China has been significantly affected by the COVID-19 pandemic. The outbreak of the virus has resulted in various challenges, including travel restrictions, lockdowns, and disruptions in the supply chain. These factors have led to delays and difficulties in executing the project as planned. The safety concerns and health risks associated with the virus have also impacted the availability and productivity of the project team and stakeholders.

Despite the challenges posed by the pandemic, the project management team has displayed resilience and resourcefulness in overcoming obstacles. They have proactively sought alternative ways and means to ensure the progress of the project. This may include utilizing remote collaboration tools, implementing virtual meetings and conferences, and exploring innovative solutions to maintain communication and coordination among team members and stakeholders. The team has adapted to the new working environment, finding creative ways to continue project activities and address any issues that may arise.

As COVID-19 measures are completely lifted, the project management team is now in a position to expedite the implementation of the project. With the resumption of regular operations, the team can work towards catching up on any lost time and accelerating the project schedule. They will utilize the lessons learned during the pandemic to optimize project management strategies and streamline processes. The team is committed to delivering substantial outputs within the planned schedule, ensuring that the project's objectives are met. They will closely monitor the progress, implement effective risk management measures, and maintain open communication channels to ensure a successful and timely completion of the project. The team recognizes the importance of making up for the delays caused by the pandemic and is determined to make every effort to meet the project's goals and objectives.

4. Please clarify if the project is facing delays and is expected to request an **extension**.

During the early stage of the project execution, the Yiyang demonstration area decided to exit from the project. This unexpected development caused a delay in the implementation of the project. Furthermore, in the midst of the project, the global outbreak of COVID-19 had a significant impact, further hindering progress.

To address these challenges and ensure the successful completion of the project, a special online meeting was conducted on November 3, 2022, between FECO and UNIDO. The purpose of the meeting was to provide an update on the project’s progress and discuss the possibility of extending its timeline. Both parties acknowledged that a further one-year extension would be reasonable, given the circumstances. This extension would allow for a smooth implementation of the project, with the new completion date set for April 2024 as discussed and agreed with UNIDO.

5. Please provide the **main findings and recommendations of completed MTR**, and elaborate on any actions taken towards the recommendations included in the report.

MTR Findings: From both technical and financial points of view, the project implementation has achieved results as planned so far, and is on the right track to progress and achieve expected results. The overall satisfactory performance of the project implementation is largely attributed to the high political commitment and competent project management.

About the comments from MTR, FECO has strengthened the policy guidance to the demonstrations areas and enterprises through continuous exchange and communication meetings.
FECO has been through communication with standard setters, industry associations, etc., to promote the in-depth integration of Eco-effective standardization with relevant domestic and international standards. It is hoped that the effects of the certification standard system can be expanded and made known and applied by more companies and localities.

By learning from MTR's recommendations and taking stock of the experience already gained, the project revised and refined the advice in FY22 to better continue implementation. No further actions were taken in FY23 as the recommendations were already implemented.

IV. Environmental and Social Safeguards (ESS)

1. As part of the requirements for **projects from GEF-6 onwards**, and based on the screening as per the UNIDO Environmental and Social Safeguards Policies and Procedures (ESSPP), which category is the project?

N/A

V. Stakeholder Engagement

1. Using the previous reporting period as a basis, please provide information on **progress, challenges and outcomes** regarding engagement of stakeholders in the project (based on the Stakeholder Engagement Plan or equivalent document submitted at CEO Endorsement/Approval).

Tianjin: Tianjin has successfully accomplished the majority of the planned activities within the project. Specifically, they have developed an adapted version of the Cradle-to-Cradle (C2C) model so called EECM and implemented it in the manufacturing of lead-acid batteries and the recycling of waste lead in the local industry. Given Tianjin's status as a prominent hub for heavy industry in northern China, the adoption of a simplified C2C model holds great promise for facilitating a transition from a resource and energy-intensive state to a more sustainable and circular model. Tianjin is building its capacity to introduce EECM concept and practices to other provinces and municipalities of the country.

Dongying: In Dongying, a comprehensive 3-tiered approach has been devised to implement project activities at the municipal, industrial park, and enterprise levels. The principles of the Cradle-to-Cradle (C2C) model have been integrated into the mainstream planning and operations of entities within both the public and private sectors. UNIDO has consistently highlighted the significance of having sufficient financial resources to support C2C-oriented development. Recognizing this importance, Dongying plans to organize a fund-raising workshop towards the end of the project. This workshop aims to invite financial institutions, both international and national, to explore avenues for funding C2C initiatives in Dongying. Currently, the majority of the planned project activities in Dongying are underway, and mid-term outputs are being delivered and reviewed to evaluate their effectiveness and impact.

The national stakeholders involved in the project are committed to ensuring the sustainability and replicability of the project outcomes. To achieve this, the national project team has engaged several reputable national research and promotional organizations. These organizations include the China Environmental United Certification Center (CEC), Center for Environmental Education and Communications, and Beijing Normal University. Their role is to promote the concepts and theories of the Cradle-to-Cradle (C2C) model and encourage its practical application throughout the country. During this reporting period, additional entities have been enlisted to further enhance the research and promotional efforts. These new stakeholders include the China Ecological Civilization Research and Promotion Association (CECRPA), China General Certification Center (CGC), and the Policy Research Center for Environment and Economy. By collaborating with these organizations alongside the existing partners, the project aims to amplify the impact of its research and promotional activities at the national level.

International stakeholders: UNIDO (United Nations Industrial Development Organization) has enlisted the expertise of Professor Micheal Braungart, a co-founder of Cradle-to-Cradle (C2C) theories and the founder of the Environment Protection Encouragement Agency (EPEA). Professor Braungart, along with his core team members, is providing technical guidance and oversight to ensure the successful implementation of the project. With the lifting of COVID-19 restrictions, UNIDO has organized a special mission led by Mr. Peng Zhengyou, the project manager at UNIDO, and Professor Micheal Braungart. The purpose of this mission is to visit key project stakeholders and engage in crucial dialogues in the field. This visit has proven to be invaluable in addressing various questions and misunderstandings surrounding C2C. Through open

discussions and clarification provided by Professor Braungart and the project team, stakeholders have gained a deeper understanding and are now able to progress with a renewed sense of awareness.

2. Please provide any feedback submitted by national counterparts, GEF OFP, co-financiers, and other partners/stakeholders of the project (e.g. private sector, CSOs, NGOs, etc.).

During the training and publicity phase, the project attracted significant interest from various industry associations, business representatives, local governments, and individual experts and academics. These stakeholders acknowledged the comprehensive and innovative nature of the C2C model in promoting sustainability. They recognized that C2C aligns well with domestic initiatives such as zero waste cities, carbon peaking, carbon neutrality, and the concept of ecological civilization. Based on this shared understanding, there is a high degree of agreement among the stakeholders that C2C can be integrated effectively with national programs and policies. This integration would lead to substantial synergy and further enhance the impact of both the C2C model and the existing domestic sustainability initiatives.

3. Please provide any **relevant stakeholder consultation** documents.

- 4854_Meeting Agenda_2022.07-2023.06

VI. Gender Mainstreaming

1. Using the previous reporting period as a basis, please report on the **progress** achieved **on implementing gender-responsive measures** and **using gender-sensitive indicators,** as documented at CEO Endorsement/Approval (in the project results framework, gender action plan or equivalent),.

Dongying PMO is collaborating with the local association of women entrepreneurs to organize project trainings. These trainings have focused on important topics like chemicals management and corporate social responsibility. This collaboration between Dongying PMO and the local association of women entrepreneurs shows a proactive approach to promoting sustainability and empowering women in business. It serves as an example for other organizations and encourages further engagement in driving sustainable development.

The majority of participants are female executive level members within their enterprises. Their significant roles within their organizations allow them to play a key role in promoting and implementing advanced development concepts such as C2C, chemicals management, and sustainable development. This is a positive step towards creating a more sustainable business environment. During this reporting period, over 100 women entrepreneurs and their team members have taken part in these trainings. This participation demonstrates a strong interest in learning and integrating sustainable practices into their businesses. .

VII. Knowledge Management

1. Using the previous reporting period as a basis, please elaborate on any **knowledge management activities / products**, as documented at CEO Endorsement / Approval.

The national stakeholders have benefitted a lot from international transfer of knowledge regarding C2C ideology and successful applications in Europe, where Environmental Protection Encouragement Agency (EPEA) is based and is the pioneer in this field. Traditional waste-to-resource recycling concept has been upgraded to upcycle rather than downcycle, recognizing downcycle will eventually lead to massive waste, while upcycle can create ever increasing abundance. To facilitate the upcycle, a series of product design changes should be introduced, such as reducing or avoiding use of POPs or chemicals alike, using dismantlable parts, and installing self-sufficient energy systems.

UNIDO and FECO are encouraging EPEA to further collaborate with the national and local stakeholders and establish long-term partnership for delivering C2C solutions in China. Initial discussions regarding establishment of joint knowledge center with the existing C2C Knowledge Center have started. The project will continue to facilitate the process and catalyse sustainable operation of such important knowledge generator and disseminator.

The project has supported the establishment of a national center for eco-effectiveness research and training within a university that offers courses on environmental studies. By now, a series of 10 lectures and 32 classes have been held on-line targeting university students as well as interested individuals from research institutions and businesses by BNU. Ten thousand of pamphlets introducing the eco-effectiveness concept and theories have been printed and distributed by CEEC.

2. Please list any **relevant knowledge management mechanisms / tools** that the project has generated.

The C2C Knowledge Center has maintained a WeChat website and regularly published high-quality articles and newsletters introducing international experience and local actions. The website has successfully attracted attentions of industrial and academic communities as manifested by the visitor statistics. As per the contractual TOR of the Center under the project, it will continue to work as an important knowledge generator and disseminator in the future.

- 4854_link to the Wechat Public Account: “Eco-effective Management”

Publicity video for the project was developed by combining with the project files, collecting project concept, videos, photos and other materials regarding important meetings, activities and project stakeholders. The project team has completed the theme planning for No.6 of 2021 version using the story of C2C for the cover of the magazine “World Environment”. All of these are available on the world Environment website. With the project approaching to the end, a series of videos will be completed and made available through Internet.

- 4854_Video of the cloud live broadcasting activities；
- 4854_ Publications “World Environment”；

VIII. Implementation progress

1. Using the previous reporting period as a basis, please provide information on **progress, challenges and outcomes achieved/observed** with regards to project implementation.

Despite the challenges posed by the COVID-19 pandemic, the project implementation in Tianjin and Dongying has made significant progress. Tianjin has successfully completed all planned activities and met the required outputs. It is now prepared to collaborate with Dongying and the national project management team to finalize the project and undergo a comprehensive review.

Dongying has effectively engaged stakeholders at the municipal, industrial park, and enterprise levels to carry out the project activities. Mid-term outputs have been delivered and are currently under review. Feedback and recommendations provided during the review process will contribute to further enhancing the project in the subsequent phases.

At the national level, the project management team has successfully engaged major national entities to integrate Cradle to Cradle (C2C) principles into national sustainability initiatives such as ecological civilization, carbon management, and zero-waste city. The development of a national standard and certification system that incorporates C2C principles is underway. This system will be piloted before the project’s completion and is expected to continue operating beyond the project timeline.

Overall, the project is progressing well according to the updated work plan, and it is anticipated that the expected results and outcomes will be achieved. Despite the setbacks caused by the pandemic, the

commitment and efforts of the PMOs at the national and local levels have ensured the project's continued advancement.

2. Please briefly elaborate on any **minor amendments**[6] to the approved project that may have been introduced during the implementation period or indicate as not applicable (NA).
Please tick each category for which a change has occurred and provide a description of the change in the related textbox. You may attach supporting documentation, as appropriate.

☐	Results Framework	NA
☐	Components and Cost	NA
☐	Institutional and Implementation Arrangements	NA
☐	Financial Management	NA
☒	Implementation Schedule	UNIDO has agreed the request from FECO that the project period is extended to April 2024.
☐	Executing Entity	NA
☐	Executing Entity Category	NA
☐	Minor Project Objective Change	NA
☐	Safeguards	NA
☐	Risk Analysis	NA
☐	Increase of GEF Project Financing Up to 5%	NA
☐	Co-Financing	NA
☐	Location of Project Activities	NA
☐	Others	NA

3. Please provide progress related to the **financial implementation** of the project.

[6] As described in Annex 9 of the *GEF Project and Program Cycle Policy Guidelines*, **minor amendments** are changes to the project design or implementation that do not have significant impact on the project objectives or scope, or an increase of the GEF project financing up to 5%.

	Description	Released Budget Current Year (a)	Obligations Current Year (b)	Disbursements Current Year (c)	Expenditures Current Year (d=b+c)	Total Agreement Budget (e)	Released Budget (f)	Obligations + Disbursements (g)	Funds Available* (h=f-g)	Support Cost (i)	Total Expenditures (j=g+i)
2000003299											
150073-1-01-01	**Component 1**	USD	USD	USD	USD	USD	USD	USD	USD	USD	USD
1100	Staff & Intern Consultants	0.00	0.00	0.00	0.00	3,916.68	3,916.68	3,916.68	0.00	0.00	3,916.68
1500	Local Travel	5,702.34	0.00	0.00	0.00	36,330.00	36,330.00	30,627.66	5,702.34	0.00	30,627.66
1700	Nat.Consult./Staff	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2100	Contractual Services	0.00	0.00	0.00	0.00	923,670.00	923,670.00	923,670.00	0.00	0.00	923,670.00
3000	Train/Fellowship/Study	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3500	International Meetings	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5100	Other Direct Costs	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9300	Support Cost IDC	21,161.00	0.00	21,367.51	0.00	21,161.00	21,161.00	0.00	21,161.00	112,397.79	112,397.79
150073-1-01-01	**Total**	**26,863.34**	**0.00**	**21,367.51**	**0.00**	**985,077.68**	**985,077.68**	**958,214.34**	**26,863.34**	**112,397.79**	**1,070,612.13**
150073-1-01-02	**Component 2**	USD	USD	USD	USD	USD	USD	USD	USD	USD	USD
1100	Staff & Intern Consultants	23,381.84	0.00	54.16	54.16	61,263.35	61,263.35	37,935.67	23,327.68	0.00	37,935.67
1500	Local Travel	13,010.38	0.00	7,051.20	7,051.20	32,090.70	32,090.70	26,131.52	5,959.18	0.00	26,131.52
1700	Nat.Consult./Staff	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2100	Contractual Services	0.00	(176,962.50)	176,971.44	8.94	911,618.16	911,618.16	911,627.10	(8.94)	0.00	911,627.10
3000	Train/Fellowship/Study	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3500	International Meetings	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5100	Other Direct Costs	1,351.83	(167.50)	198.26	30.76	2,000.00	2,000.00	678.93	1,321.07	0.00	678.93
9300	Support Cost IDC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	92,751.28	92,751.28
150073-1-01-02	**Total**	**37,744.05**	**(177,130.00)**	**184,275.06**	**7,145.06**	**1,006,972.21**	**1,006,972.21**	**976,373.22**	**30,598.99**	**92,751.28**	**1,069,124.50**
150073-1-01-03	**Component 3**	USD	USD	USD	USD	USD	USD	USD	USD	USD	USD
1100	Staff & Intern Consultants	38,216.38	21,648.80	20,600.06	42,248.86	244,980.97	244,980.97	249,013.45	(4,032.48)	0.00	249,013.45
1500	Local Travel	7,015.88	0.00	0.00	0.00	8,273.16	8,273.16	1,257.28	7,015.88	0.00	1,257.28
1700	Nat.Consult./Staff	2,850.56	0.00	0.00	0.00	2,856.84	2,856.84	6.28	2,850.56	0.00	6.28
2100	Contractual Services	0.00	0.00	0.00	0.00	2,414,084.52	2,414,084.52	2,414,084.52	0.00	0.00	2,414,084.52
3000	Train/Fellowship/Study	20,000.00	0.00	0.00	0.00	20,000.00	20,000.00	0.00	20,000.00	0.00	0.00
3500	International Meetings	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4500	Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5100	Other Direct Costs	132.67	0.00	2,196.63	2,196.63	7,000.00	7,000.00	9,063.96	(2,063.96)	0.00	9,063.96
9300	Support Cost IDC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	253,859.37	253,859.37
150073-1-01-03	**Total**	**68,215.49**	**21,648.80**	**22,796.69**	**44,445.49**	**2,697,195.49**	**2,697,195.49**	**2,673,425.49**	**23,770.00**	**253,859.37**	**2,927,284.86**
150073-1-01-04	**Component 4**	USD	USD	USD	USD	USD	USD	USD	USD	USD	USD
1500	Local Travel	0.00	0.00	0.00	0.00	1,654.84	1,654.84	1,654.84	0.00	0.00	1,654.84
1700	Nat.Consult./Staff	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2100	Contractual Services	0.00	(348,975.00)	348,975.00	0.00	581,625.00	581,625.00	581,625.00	0.00	0.00	581,625.00
4500	Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5100	Other Direct Costs	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9300	Support Cost IDC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	55,411.61	55,411.61
150073-1-01-04	**Total**	**0.00**	**(348,975.00)**	**348,975.00**	**0.00**	**583,279.84**	**583,279.84**	**583,279.84**	**0.00**	**55,411.61**	**638,691.45**
150073-1-01-05	**Component 5**	USD	USD	USD	USD	USD	USD	USD	USD	USD	USD
1100	Staff & Intern Consultants	32,604.28	0.00	0.00	0.00	32,604.28	32,604.28	0.00	32,604.28	0.00	0.00
2100	Contractual Services	0.00	(68,310.00)	68,071.44	(238.56)	167,395.72	167,395.72	167,157.16	238.56	0.00	167,157.16
3000	Train/Fellowship/Study	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9300	Support Cost IDC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	15,879.93	15,879.93
150073-1-01-05	**Total**	**32,604.28**	**(68,310.00)**	**68,071.44**	**(238.56)**	**200,000.00**	**200,000.00**	**167,157.16**	**32,842.84**	**15,879.93**	**183,037.09**
150073-1-51-01	**Project management and Monitoring**	USD	USD	USD	USD	USD	USD	USD	USD	USD	USD
1100	Staff & Intern Consultants	9,338.18	0.00	0.00	0.00	202,627.67	202,627.67	193,289.49	9,338.18	0.00	193,289.49
1500	Local Travel	0.00	0.00	0.00	0.00	9,771.21	9,771.21	9,771.21	0.00	0.00	9,771.21
1700	Nat.Consult./Staff	0.00	0.00	0.00	0.00	34.49	34.49	34.49	0.00	0.00	34.49
5100	Other Direct Costs	0.00	0.00	0.00	0.00	11,599.24	11,599.24	11,599.24	0.00	0.00	11,599.24
9300	Support Cost IDC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	20,395.96	20,395.96
150073-1-51-01	**Total**	**9,338.18**	**0.00**	**0.00**	**0.00**	**224,032.61**	**224,032.61**	**214,694.43**	**9,338.18**	**20,395.96**	**235,090.39**
150073-1-53-01	**Evaluation**	USD	USD	USD	USD	USD	USD	USD	USD	USD	USD
1100	Staff & Intern Consultants	11,856.92	8,195.00	2,539.55	10,734.55	11,856.92	11,856.92	10,734.55	1,122.37	0.00	10,734.55
1500	Local Travel	9,000.00	0.00	3,871.54	3,871.54	9,000.00	9,000.00	3,871.54	5,128.46	0.00	3,871.54
1700	Nat.Consult./Staff	3,456.34	0.00	0.00	0.00	11,182.21	11,182.21	7,725.87	3,456.34	0.00	7,725.87
2100	Contractual Services	0.00	(148,500.00)	148,505.95	5.95	271,260.00	271,260.00	271,265.95	(5.95)	0.00	271,265.95
3000	Train/Fellowship/Study	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5100	Other Direct Costs	56.46	0.00	4.72	4.72	143.04	143.04	91.30	51.74	0.00	91.30
9300	Support Cost IDC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	27,855.40	27,855.40
150073-1-53-01	**Total**	**24,369.72**	**(140,305.00)**	**154,921.76**	**14,616.76**	**303,442.17**	**303,442.17**	**293,689.21**	**9,752.96**	**27,855.40**	**321,544.61**
2000003299	**Total**	**199,135.06**	**(713,071.20)**	**800,407.46**	**65,968.75**	**6,000,000.00**	**6,000,000.00**	**5,866,833.69**	**133,166.31**	**578,551.34**	**6,445,385.03**
150073	**USD Total**	**199,135.06**	**(713,071.20)**	**800,407.46**	**65,968.75**	**6,000,000.00**	**6,000,000.00**	**5,866,833.69**	**133,166.31**	**578,551.34**	**6,445,385.03**

*** Does not include Unapproved Obligations**

IX. Work Plan and Budget

1. Please provide **an updated project work plan and budget** for the remaining duration of the project, as per last approved project extension. Please expand/modify the table as needed.

Outputs by Project Component	Year 1				Year 2				GEF Grant Budget Available (US$)
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	
Component 1 –Introduction and incorporation of area based eco-effectiveness approach as a component of the Dongying and Tianjin Local Government upcoming 5 Year Economic and Social Development Plan									

Outcome 1: Incorporation of Eco-effectiveness principles into national and regional government green initiatives and environmental protection plans and programs; and enhancement of environmental management decision									
Output 1.1:									540,000
Component 2 –Creation of an institutional model to facilitate knowledge and promote investment relevant to eco-effective management and to ensure related capacity building									
Outcome 2: Establishment of institutional framework incorporating local government and local enterprises supported by an Eco Effective Knowledge Centre									
Output 2.1:									600,000
Component 3 –Pilot demonstrations at enterprises in the selected value chains to showcase eco-effective management application to encourage wider investment in eco-effective solutions and access to appropriate technologies									
Outcome 3: Selection of at least 3 processes in each demonstration area and the pilot application of eco-effective methodology to design out toxic chemicals from total life cycles of the materials and the production systems employed.									
Output 3.1:									1,629,000
Component 4 –Quantitative measurement of results of eco-effective chemical management measures expressed in materials, financial and commercial terms in pilot enterprises within selected value chains including monitoring and assessment of changes in impact on receiving ecosystems									
Outcome 4: Documentation of results of the applied eco effective approach to chemical management including case studies of the process with reference to changed procedures, new and alternative materials, technology innovations and energy. Financial and commercial aspects of applied eco-effective management as well as the environmental monitoring and results									
Output 4.1:									360,000
Component 5 –Dissemination Plan									
Outcome 5: Planning and implementation of a dissemination strategy that will communicate to a wider global audience. Eco-effective approach methodology documented and made available to wider audience									
Output 5.1:									200,000
Component 6 –Project Monitoring and Evaluation									
Outcome 6: Assessment of the impact of project activities including lessons learned									
Output 6.1:									180,000

X. Synergies

1. **Synergies** achieved:

The project focuses on a holistic approach for POPs chemicals management and sustainability enhancement. To facilitate upcycling, a series of product design changes have be introduced, such as reducing or avoiding the usage of POPs or chemicals alike, using dismountable parts, and installing self-sufficient energy systems.

The Action Plan for the Control of New Pollutants, currently being implemented in China, makes comprehensive arrangements for the control of new pollutants, clarifies the general idea of the control of new pollutants in China, and proposes the construction of a "screening, assessment and control" system for the environmental risk management of toxic and hazardous chemical substances, as well as a "ban, reduce and cure" system. The system of "ban, reduce and cure" is a whole process control system. The production and use of toxic and hazardous chemical substances is the main source of new pollutants. The release of these policies provides good "oxygen" for our project implementation and strengthens local motivation.

The cross-sectoral coordination mechanism at national and local level works as a necessary hub to ensure the achievement of synergies. NPMO supports this mechanism, and encourages LPMO to develop the coordination role with different departments, such as the Development and Reform Commission, the Taxation Bureau, and the Industrial and Commercial Bureau, etc., which can establish a good project management promotion mechanism.

During the implementation period, the project will continue to strengthen and deepen the chemical management of regional and demonstration enterprises based on the current domestic work on the management of new pollutants, so as to promote the sustainable development of the project.

3. Stories to be shared (Optional)

Eco-effective approach promotes a holistic strategy toward planning and realization of sustainable development at the product, enterprise, and regional levels. Chinese Government is launching national and local programs for carbon peaking and neutralization by regions and by sectors. In this process, it is important to avoid the carbon emission reduction achieved by generating new chemical pollution, limiting development, or lowering living standard. The pilot programs under implementation in Dongying and Tianjin are giving answers to all these questions and leading the pilot cities to sustainable development with the philosophy of health, circularity, abundance, and fairness.

XI. GEO LOCATION INFORMATION

The Location Name, Latitude and Longitude are required fields insofar as an Agency chooses to enter a project location under the set format. The Geo Name ID is required in instances where the location is not exact, such as in the case of a city, as opposed to the exact site of a physical infrastructure. The Location & Activity Description fields are optional. Project longitude and latitude must follow the Decimal Degrees WGS84 format and Agencies are encouraged to use at least four decimal points for greater accuracy. Users may add as many locations as appropriate.

Web mapping applications such as OpenStreetMap or GeoNames use this format. Consider using a conversion tool as needed, such as: https://coordinates-converter.com Please see the Geocoding User Guide by clicking here

Location Name	Latitude	Longitude	Geo Name ID	Location and Activity Description
China-Tianjin	39.0848020	117.1959904		Pilot demonstration city
China-Dongying	37.487263	118.50156		Pilot demonstration city

Please provide any further geo-referenced information and map where the project interventions is taking place as appropriate.

Tianjin is located along the west coast of the Bohai Gulf, looking out to the provinces Shandong and Liaoning across those waters, bordered by Beijing 120 kilometers to the northwest, and is surrounded on all sides by Hebei, with the exception of its eastern border, the Bohai Sea. With a latitude ranging from 38° 34' to 40° 15' N, and longitude ranging from 116° 43' to 118° 04' E.

Dongying is located on the banks of the Yellow River Delta of Northern Shandong Province. The city is located at 36° 55'–38° 10' N latitude and 118° 07′–119° 10' E longitude. The city's 350 km coastline borders Laizhou Bay and Bohai Bay to the east and north respectively.

EXPLANATORY NOTE

1. **Timing & duration:** Each report covers a twelve-month period, i.e. 1 July 2022 – 30 June 2023.

2. **Responsibility:** The responsibility for preparing the report lies with the project manager in consultation with the Division Chief and Director.

3. **Evaluation:** For the report to be used effectively as a tool for annual self-evaluation, project counterparts need to be fully involved. The (main) counterpart can provide any additional information considered essential, including a simple rating of project progress.

4. **Results-based management**: The annual project/programme progress reports are required by the RBM programme component focal points to obtain information on outcomes observed.

Global Environmental Objectives (GEOs) / Development Objectives (DOs) ratings	
Highly Satisfactory (HS)	Project is expected to achieve or exceed all its major global environmental objectives, and yield substantial global environmental benefits, without major shortcomings. The project can be presented as "good practice".
Satisfactory (S)	Project is expected to achieve most of its major global environmental objectives, and yields satisfactory global environmental benefits, with only minor shortcomings.
Moderately Satisfactory (MS)	Project is expected to achieve most of its major relevant objectives but with either significant shortcomings or modes overall relevance. Project is expected not to achieve some of its major global environmental objectives or yield some of the expected global environmental benefits.
Moderately Unsatisfactory (MU)	Project is expected to achieve some of its major global environmental objectives with major shortcomings or is expected to achieve only some of its major global environmental objectives.
Unsatisfactory (U)	Project is expected not to achieve most of its major global environmental objectives or to yield any satisfactory global environmental benefits.
Highly Unsatisfactory (HU)	The project has failed to achieve, and is not expected to achieve, any of its major global environmental objectives with no worthwhile benefits.

Implementation Progress (IP)	
Highly Satisfactory (HS)	Implementation of all components is in substantial compliance with the original/formally revised implementation plan for the project. The project can be presented as "good practice".
Satisfactory (S)	Implementation of most components is in substantial compliance with the original/formally revised plan except for only few that are subject to remedial action.
Moderately Satisfactory (MS)	Implementation of some components is in substantial compliance with the original/formally revised plan with some components requiring remedial action.
Moderately Unsatisfactory (MU)	Implementation of some components is not in substantial compliance with the original/formally revised plan with most components requiring remedial action.
Unsatisfactory (U)	Implementation of most components in not in substantial compliance with the original/formally revised plan.
Highly Unsatisfactory (HU)	Implementation of none of the components is in substantial compliance with the original/formally revised plan.

Risk ratings	
Risk ratings will access the overall risk of factors internal or external to the project which may affect implementation or prospects for achieving project objectives. Risk of projects should be rated on the following scale:	
High Risk (H)	There is a probability of greater than **75%** that assumptions may fail to hold or materialize, and/or the project may face high risks.
Substantial Risk (S)	There is a probability of between **51%** and **75%** that assumptions may fail to hold or materialize, and/or the project may face substantial risks.
Moderate Risk (M)	There is a probability of between **26%** and **50%** that assumptions may fail to hold or materialize, and/or the project may face only moderate risk.
Low Risk (L)	There is a probability of up to **25%** that assumptions may fail to hold or materialize, and/or the project may face only low risks.