



## Project Implementation Report

(1 July 2022 – 30 June 2023)

<b>Project Title:</b>	<i>Transforming the Leather Processing Industries towards Low Emissions and Climate Resilient Development Paths in Pakistan</i>
<b>GEF ID:</b>	9585
<b>UNIDO ID:</b>	160069
<b>GEF Replenishment Cycle:</b>	GEF-6
<b>Country(ies):</b>	<i>Pakistan</i>
<b>Region:</b>	<i>EAP - East Asia and Pacific</i>
<b>GEF Focal Area:</b>	<i>Climate Change Mitigation (CCM)</i>
<b>Integrated Approach Pilot (IAP) Programs<sup>1</sup>:</b>	<i>N/A</i>
<b>Stand-alone / Child Project:</b>	<i>Stand-alone</i>
<b>Implementing Department/Division:</b>	<i>AGR / RJH</i>
<b>Co-Implementing Agency:</b>	<i>N/A</i>
<b>Executing Agency(ies):</b>	<i>Ministry of Climate Change &amp; Environmental Coordination (MOCC&amp;EC); Pakistan Tanners Association - Southern Zone PTA (S.Z) Environmental Society</i>
<b>Project Type:</b>	<i>Medium-Sized Project (MSP)</i>
<b>Project Duration:</b>	<i>36 Months</i>
<b>Extension(s):</b>	<i>2</i>
<b>GEF Project Financing:</b>	<i>USD 2,000,000</i>
<b>Agency Fee:</b>	<i>USD 190,000</i>
<b>Co-financing Amount:</b>	<i>USD 12,198,000,</i>
<b>Date of CEO Endorsement/Approval:</b>	<i>10/16/2018</i>
<b>UNIDO Approval Date:</b>	<i>4/28/2017</i>
<b>Actual Implementation Start:</b>	<i>1/23/2019</i>

<sup>1</sup> Only for GEF-6 projects, if applicable

<b>Cumulative disbursement as of 30 June 2023:</b>	USD 1,651,991.12
<b>Mid-term Review (MTR) Date:</b>	1/10/2020
<b>Original Project Completion Date:</b>	1/15/2021
<b>Project Completion Date as reported in FY22:</b>	01/23/2024
<b>Current SAP Completion Date:</b>	1/23/2025
<b>Expected Project Completion Date:</b>	1/23/2025
<b>Expected Terminal Evaluation (TE) Date:</b>	3/23/2025
<b>Expected Financial Closure Date:</b>	7/23/2025
<b>UNIDO Project Manager<sup>2</sup>:</b>	<i>Mr. Ivan Kral</i>

## I. Brief description of project and status overview

<b>Project Objective</b>										
<p>The objective of the project is to transform the Korangi Leather Area (KLA) industrial zone in Sindh province through the widespread adoption of low-carbon technologies. The project will contribute to strengthening the technical and management operations of the KLA cluster in production processes, cleaner production facilities, sector level facilities (such as the CETP for KLA and proper waste management) and technical and professional capacities will be established and/or optimized to improve tannery efficiency and reduce GHG emissions. If identified during project implementation, feasible add-ons will be initiated to further reduce GHG emissions.</p> <p>In line with the GEF-6 Climate Change Mitigation focal area strategy, the project will:</p> <p>I) Contribute to the support of integrated approaches combining policies, technologies, and management practices with significant climate change mitigation potential.</p> <p>II) Promote innovation, technology transfer, and supportive policies and strategies;</p> <p>III) Demonstrate mitigation options with systemic impacts;</p> <p>IV) And foster enabling conditions to mainstream mitigation concerns into sustainable development strategies.</p>										
<table border="1"> <thead> <tr> <th colspan="2">Project Core Indicators</th> <th>Expected at Endorsement/Approval stage</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Indicator 1: Total Lifetime Direct and Indirect GHG Emissions Avoided (Tons CO<sub>2</sub>eq)</td> <td>1,360,000</td> </tr> <tr> <td>2</td> <td>Indicator 2: Lifetime Energy Saved (Million Joules)</td> <td>3,600,000</td> </tr> </tbody> </table>		Project Core Indicators		Expected at Endorsement/Approval stage	1	Indicator 1: Total Lifetime Direct and Indirect GHG Emissions Avoided (Tons CO <sub>2</sub> eq)	1,360,000	2	Indicator 2: Lifetime Energy Saved (Million Joules)	3,600,000
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<b>Baseline</b>
<p>The tanning industry of Karachi is primarily concentrated in Korangi. The leather sector in Karachi comprises of two types of manufacturing activities: wet processing factories (tanneries) and value addition units</p>

<sup>2</sup> Person responsible for report content

(garments making and stitching). Total leather exports are comprised of ~ 48% tanned leather and ~52% value added products. Tanneries are involved in processing the raw material partially or fully to finished leather (from raw hide or skin to finished leather, the tanning unit might process only from raw to wet blue, or from wet blue to finished leather, or from raw to finished). There are about 170 tanneries in Karachi, almost all of them located in one cluster – sector 7/A of Korangi Industrial Area.

The tanning process requires large quantities of water, yet the Karachi Water and Sewerage Board is not able to supply an adequate quantity of water to the tannery areas. Currently, the treated effluent from the CETP (Central Effluent Treatment Plant) is discharged into a storm water drain, which ultimately flows into the Arabian Sea. Recycling of treated effluent will contribute to fulfil the water requirements of the tannery areas. It will also decrease the operational expenses of the CETP as less quantities of dilution water would be required.

Unregulated disposal of solid waste from leather processing activities and illegal landfill sites without any appropriate measures presents a high risk for groundwater pollution. At present, there is practically no recycling and/or reuse of solid wastes in industrial zones. Obsolete and defective waste air purification technology and inappropriate production processes mean that leather industrial units emit significant quantities of harmful substances.

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<sup>3</sup>, 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 <sup>4</sup>	FY23	FY22
Global Environmental Objectives (GEOs) / Development Objectives (DOs) Rating	<i>Satisfactory (S)</i>	<i>Satisfactory (S)</i>
The KLA project has made significant progress in achieving its objectives (GEOs) and development objectives (DOs) during FY23. The project successfully provided technical input to the leather sector focusing on establishing a green policy at the municipality level and facilitating stakeholder consultations. These efforts have contributed to the development of a comprehensive policy framework and alignment with community needs and aspirations. The project's collaboration with the Sindh Solid Waste Management Board (SSWMB) and Sindh Environmental Protection Agency (SEPA) resulted in effective sustainable solid waste management operations. Over 3,500 tons of waste has been collected and disposed of in an environmentally sustainable manner. The project has received an unchanged rating reflecting its satisfactory progress in strengthening the guiding framework for low-emission and climate-resilient industrial processing in Sindh Province.		
Implementation Progress (IP) Rating	<i>Satisfactory (S)</i>	<i>Satisfactory (S)</i>
The progress achieved in the reporting year FY23 highlights the continued advancements of the KLA project in strengthening the guiding framework for low-emission and climate-resilient industrial processing. This collaborative project, implemented in partnership with the SSWMB and SEPA,		

<sup>3</sup> 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

<sup>4</sup> 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

focuses on the reduction of greenhouse gas (GHG) emissions through waste management and discussions regarding the Cleaner Production Policy for Sindh Province.

During this period, all three components of the project demonstrated satisfactory progress. **Component 1** successfully implemented a policy intervention in collaboration with SEPA promoting cleaner production practices. **Component 2** made significant headway by working on strategic policies, trainings, and GHG interventions for tanneries. The project developed a GHG emission reduction dashboard and conducted energy audits, contributing to the formulation of Sindh's Cleaner Production Policy and Leather Strategy.

**Component 3** of the project, which focuses on solid waste management, also made notable advancements towards its objectives. Through close collaboration with the government and regulatory authority, specifically the SSWMB, the project established a Memorandum of Agreement (MoA) in April 2022. Within the framework of this MoA, the project successfully collected and disposed of over 3,500 tons of solid waste from the KLA to a dedicated landfill site. State-of-the-art equipment and operational arrangements were put in place to ensure effective waste management operations.

The project's efforts extended beyond waste collection and disposal. During flooding and subsequent destruction during FY23, the project partners mobilized and carried out emergency operations and organized cleaning campaigns to maintain cleanliness and hygiene in the area. Recycling and other sustainable methods recovered more than 85% of the collected waste setting an example for other sectors and areas to follow.

The collaborative efforts between the project, government bodies, and regulatory authorities have been instrumental in achieving these milestones in FY23. The commitment to sustainable practices and the effective management of solid waste have made a significant impact on the environment and the community. The KLA project continues to be a driving force in promoting low-emission and climate-resilient industrial processing while ensuring proper waste management practices in the region.

Overall Risk Rating	Moderate Risk (M)	Moderate Risk (M)
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During the reporting period 1 July 2022 – 30 June 2023 (hereafter FY23), the KLA Project faced moderate risks associated with climate change, including heavy rains and storms resulting in flooding. These environmental challenges posed a risk to the overall project activities. Post covid economics and inflation rates up to 19.9% during the reporting period created a challenging environment for project implementation most especially local procurement and reality for private sector partners engaged in the leather sector.

## 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 to-date
<b>Component 1 – Strengthening the guiding framework to facilitate the transformations towards low emission and climate resilient industrial processing</b>				
Outcome 1.1: The Government of Pakistan adopts the Corporate Carbon Footprint (CCF) approach for the tannery sector and begins to establish the national CCF framework for leather processing and mechanisms to promote the uptake of waste-reducing technology and practice				
Output 1.1.1: Tools and guidelines for the Leather Environmental Footprint and Carbon Footprint Calculation methodology	# of Product Environmental Footprint (PEF) toolkits produced	0	1	<b>Reporting period: 01</b> Stakeholders continued to enhance the previously completed toolkit with a comprehensive baseline study on GHG emissions associated with solid waste. Initiated in January 2022, the study employed

for the local leather industry reviewed/developed				<p>internationally recognized methodologies to calculate GHG emissions. A real-time GHG dashboard was developed to facilitate continuous monitoring of emissions. The final report incorporating the GHG dashboard was produced in March 2023.</p> <p>The report provides a detailed overview of the baseline GHG emissions from solid waste in the local leather industry. The report also offers valuable insights into the potential for emission reductions through targeted SWM interventions. The GHG dashboard enables stakeholders to visualize and track emissions, identify hotspots, and monitor progress in reducing GHG emissions over time.</p> <p><b>Deliverables:</b></p> <p>Contributing to strengthening the complete toolkit, in FY23 the project completed:</p> <p>A comprehensive baseline study on GHG emissions associated with solid waste has been completed (see Annex A).</p> <p>A real-time GHG dashboard has been developed (Factors for GHG calculations are under discussion).</p> <p>A final report, incorporating the GHG dashboard, has been produced (see annex B).</p> <p><b>Total: 01</b></p>
Output 1.1.2: Guidelines and documentation on improvements and extensions of existing regulations encompassing the application of innovative clean-and-low-carbon waste technologies and practices	# of reports providing international best practice recommendations to enhance the solid waste management act	0	1	<p><b>Reporting period: 01</b></p> <p><b>Progress in Reporting period:</b></p> <p>The project completed an Energy Audit Report in December 2022 covering 25 tanneries that voluntarily participated in the project. Several key deliverables were achieved, including:</p> <p><b>Analysis of Energy Use:</b> A detailed analysis of energy consumption patterns considered fixed and variable energy requirements. This assessment established the relationship between energy consumption and production output or seasonal variations.</p> <p><b>Energy Balance:</b> For tanneries with sufficient data, an energy balance provided an overview of energy flows within the company and highlighting areas for potential improvement.</p> <p><b>Prioritized Investment Plan:</b> Based on the energy audit findings, a prioritized investment plan identified cost-effective alternatives to enhance energy efficiency and reduce waste generation.</p> <p>Annex C. Energy Audit Report</p> <p><b>Deliverable:</b> Energy Audit Report</p> <p><b>Total: 02</b></p>
Output 1.1.3: Responsible regulatory authorities are informed on core elements and benefits of the CCF approach and sound waste management.	# of people from regulatory authorities trained on CCF approach and sound waste management	0	50 (25 females)	<p><b>Reporting period: 200 Participants (63 women)</b></p> <p>During the reporting period, the KLA project actively engaged with regulatory authorities, including SEPA, SSWMB, and KATI, to enhance their understanding of solid waste management and introduce the concept of CCF. A total of 4 training sessions were conducted, focusing on these important topics and their benefits.</p> <p>The project successfully organized dedicated training sessions on the Climate Change Framework (CCF)</p>

				<p>approach and sound waste management for regulatory authorities and industry stakeholders. A total of 40 individuals, including tannery owners, managers, and nominees from SSWMB and SEPA, received comprehensive training on sustainable leather processing techniques, waste management practices, and the implementation of cleaner production approaches</p> <p>In summary, the KLA project made significant progress in capacity building initiatives during the reporting period. A total of <b>200</b> participants, including <b>63</b> females, benefited from training sessions on CCF concepts, cleaner production techniques, and waste management practices.</p> <p><b>Deliverables:</b></p> <p>CETP Training Report (See Annex D) Field Training Report (See Annex E)</p> <p><b>Total: 458 (76 women)</b></p>
Output 1.1.4: Guideline on the enhanced utilization of waste streams for industrial applications developed	# of guidelines for enhanced utilization of waste streams for industrial applications produced by 2022	0	1	<p><b>Reporting period: 0</b></p> <p>Following the outcome of two studies conducted each on GHG calculation and Energy Audits of Tanning units for waste re-utilization, PTA (SZ)-ES agreed to adopt the results of business model presented in guidelines. To date project partners developed <b>03</b> proposals i) Tallow Recovery plant, 2) Waste water Reutilization iii) Incrination plant for KLA.. the consultation is underway and only one proposal have been finalized for Tallow recovery plant have been discussed and initial consultation started in Jul 2022:</p> <ol style="list-style-type: none"> <li>1) Establishment of Tallow recovery plant for sector 7-A-korangi.</li> <li>2) Assessment and feasibility of Waste water re-utilization</li> <li>3) Solar powered operations for combined Effluent Treatment plant to minimize industrial, environmental and carbon footprints built up.</li> </ol> <p>The project developed a comprehensive solution to address the waste stream and improve waste management in the Korangi leather industry.</p> <p>The KLA project has proposed the establishment of a tallow recovery plant. This solution aims to efficiently extract tallow from the tannery waste and process it into useful fats and oils. The plant will incorporate state-of-the-art technology, adhering to environmental regulations and health and safety standards. It will provide a centralized location for tallow collection and processing, ensuring a more streamlined and sustainable approach to waste management. Overall, the establishment of the tallow recovery plant will enhance the environmental sustainability of the leather manufacturing process, promote efficient waste management, and drive economic growth in the KLA.</p> <p>The project team successfully developed detailed Terms of Reference (ToRs) for the tallow recovery plant in the Korangi Leather Area, which is currently being evaluated by the headquarters (HQ). The evaluation process focuses on assessing the technical feasibility, financial viability, and potential environmental and social impacts of the project. This thorough evaluation ensures that the tallow recovery plant aligns with the project's overarching goals and objectives. Execution will be in quarter 4 of 2023.</p>

				See Annex F. <b>Total: 01</b>
<b>Component 2 – CAPACITY BUILDING ON THE CCF APPROACH FOLLOWING THE DETERMINED GUIDELINES AND INFORMATION DISSEMINATION ON PROPER WASTE MANAGEMENT INITIATIVES</b>				
Outcome 2.1: Institutional capacities to integrate the Leather Environmental Footprint, CF and CCF approach into firms is strengthened and key players are able to technically assist leather processors towards complying with standards, improving waste management and reducing GHG emissions				
Output 2.1.1: Capacity building delivered to decision-makers, BMOs' representatives, and other stakeholders on best practices in leather production to minimize industrial, environmental and carbon footprints	# of people trained on best practices in leather production	0	50	<b>Reporting period: 210</b> The project provided trainings and capacity building programmes throughout the year. 5 sessions have been conducted so far in FY2023, in which 103 technical managers, supervisors and tannery owners were trained on GHG calculations, energy conversation implementation, CCF concepts, and solid waste management. <b>Total: 353</b> See training reports and attendance sheets in Annex G
	# of training manuals adapted into curriculum for institutions	0	5	<b>Reporting period: 0</b> After signing the Memorandum of Understanding (MoU) with Bahria University in October 2022, the KLA project has made notable advancements in integrating training manuals into the university's curriculum. The project successfully developed a comprehensive training calendar which encompassed a range of core sessions focusing on the environmental aspects of the leather industry, specifically curriculum focused on internships for the sector and effluent treatment. This initiative aimed to ensure that relevant and up-to-date information on environmental practices is incorporated into the curriculum. By incorporating these training materials, the project strives to enhance the knowledge and skills of students in the field of leather industry sustainability.  Training Module /schedule and report is attached as <b>Annex H</b> <b>Total: 01</b>
Output 2.1.2: Tailored training tools on CF-related guidelines and toolkits are developed and introduced into institutions and the leather industry is informed on environmentally sound management of solid waste and by-products as an alternative to unregulated disposal	# of training tools (curricula and training manual) for on-line and blended training courses on Leather Environmental footprint and Sustainable Leather Manufacturing including solid waste developed	0	5	<b>Reporting period: 03</b> To strengthen institutional capacity, the project developed online and blended training tools specialized on introduction to CETP, GHG leather environmental footprint and sustainable manufacturing focused on calculating and managing GHG emissions. This tool equips workers with the necessary skills to assess and mitigate emissions effectively. Additionally, a comprehensive training calendar was created for students, covering topics such as CETP operations, sustainable leather production, OSH practices, and field trips. These trainings provide students with practical knowledge and industry-relevant skills, preparing them for future roles in the leather sector while emphasizing safety and health practices. <b>Total:03</b>
	# of tannery technicians and managers trained on applying project-developed guidelines and tools related to CF	0	350	<b>Reporting period: 103</b> Training Workshops: The project conducted three workshops to provide capacity building on CCF concepts, cleaner production techniques, and waste management. Participants from SEPA, KATI, PTA (Central), SSWMB, Bahria University, and other

				<p>relevant stakeholders attended these workshops. A total of 103 participants, with 60% female representation, were trained on applying the project-developed guidelines and tools related to carbon footprints.</p> <p>Technical Sessions: In addition to the workshops, technical sessions were organized, which included participation from SSWMB, KATI, and the Leather Research Centre from PCSIR. These sessions specifically focused on solid waste management, enabling tannery technicians and managers to gain insights into effective waste management practices.</p> <p><b>Total: 103</b></p>
	# of people attending awareness workshops on BAT/BEP for leather processing waste management	0	200 (20 Females)	<p><b>Reporting period: 30</b> Training was provided to 30 managers, supervisors, students and Technical personnel on BAT/BEP for solid waste management and sustainable leather processing.</p> <p><b>Total: 30</b></p> <p>Consolidated Training Report is attached as Annex I</p>
	# of project-developed toolkits uploaded to leatherpanel.org for dissemination to platform users (30-40k)	0	2	<p><b>Reporting period: 0</b></p> <p>GHG calculation and GHG dashboard was developed. The factors involved for GHG calculation based on Solid Waste characterization is under discussion. In last quarter of 2023, GHG dashboard shall be operationalized.</p> <p><b>Total: 01</b></p>
Output 2.1.3: Support provided to train associations' representatives on the use of CF-related tools and guidelines and on National Environment Quality Standards (NEQS) and Punjab Environmental Quality Standards (PEQS) compliance to disseminate among associations' members	# of association representatives trained as trainers (ToT) on the use of CF-related tools and PEQS compliance	0	150 (5 females)	<p><b>Reporting period: 83</b></p> <p>The project successfully completed 05 training programs targeting managers, supervisors, and technical staff from tannery units. These programs focused on important areas such as GHG reduction, energy re-utilization, waste re-utilization, and safety. In addition to training the workforce, the project also took a step further by preparing 03 trainers from the industry who are now equipped to provide trainings on these subjects. This multi-faceted approach of training not only ensures that the workforce is skilled and knowledgeable, but also builds institutional capacity within the industry and academia to sustain and expand the impact of the project's training initiatives.</p> <p>The trainings successfully trained a total of <b>80</b> individuals, equipping them with the necessary expertise to ensure compliance with environmental standards and regulations, while also promoting cleaner production in the leather industry. Furthermore, the project actively collaborated with the Sindh Environmental Protection Agency (SEPA) to develop and implement a Cleaner Production Policy, ensuring the alignment of practices with SEPA's guidelines. Three officials from SEPA also participated in GHG training session conducted for the tanning industry.</p> <p><b>Total: 226</b></p>
	# of training curricula for local institutions produced	0	2	<p><b>Reporting period: 0</b> <b>Total: 0</b></p>
<b>Component 3 – PILOT OF CCFS AND SOUND WASTE MANAGEMENT AND PRACTICES WITHIN KLA</b>				



Outcome 3.1: Solid waste is reduced among KLA members through the adoption of the CCF approach and improved waste management systems and technologies; interest from other tannery clusters in reducing solid waste increases.

<p>Output 3.1.1: Carbon Footprint emission reduction options are refined:</p>	<p># of reports outlining possible options for CF reduction and recommendations developed by 2021</p>	<p>0</p>	<p>1</p>	<p><b>Reporting period: 01</b> The project conducted two important studies to outline potential options for CF reduction and concrete recommendations for tanneries within KLA:</p> <p><b>Energy efficiency and waste reutilization:</b> The study assessed energy efficiency and waste management practices in 25 tanneries, identifying significant opportunities for savings and emissions reduction. Recommendations included using energy-efficient equipment, optimizing processes, and adopting renewable energy sources. An implementation plan was developed to guide energy conservation efforts.</p> <p><b>GHG emissions and solid waste management:</b> This study assessed the baseline GHG emissions associated with solid waste in the leather industry. The study found that there is potential for emission reductions through targeted interventions. The study developed a GHG dashboard for real-time monitoring of emissions.</p> <p><b>Deliverable:</b> 25 Energy reports with implementation plans shared with stakeholders. GHG calculation with dashboard developed.</p> <p><b>Total: 03</b></p>
<p>Output 3.1.2: Low-carbon waste technologies and practices selected and demonstrated within tanneries in KLA and training in by-product use is conducted</p>	<p># (types) of tools and equipment for collection, handling, storage and transport of solid waste deployed</p>	<p>0</p>	<p>2</p>	<p><b>Reporting period: 02</b></p> <p>During the reporting period, the project undertook an extensive deployment of tools and equipment to enhance waste management efforts. These tools and equipment were carefully selected to address various aspects of our waste management strategy and were categorized as follows:</p> <p><b>Tools Deployed:</b></p> <ol style="list-style-type: none"> <li><b>Waste Bins:</b> 35 larger waste bins with a capacity of 5m<sup>3</sup> were disseminated during the project reporting period. Overall, the distribution of waste bins covered Sector 7A and reached 92% of registered members. The additional waste bins are not considered additional tools instead refer to 1 overall tool in the results.</li> </ol> <p><b>Equipment Deployed:</b> We further categorized the equipment based on their specific functions:</p> <ol style="list-style-type: none"> <li><b>Equipment for Cleaning:</b> <ul style="list-style-type: none"> <li><b>Jetting/Rodding Machine:</b> Deployed to combat heavy rains and urban flooding, this machine was vital for unblocking channels and ensuring proper drainage during adverse weather conditions.</li> <li><b>Heavy-Duty Tractors:</b> Utilized for road cleaning, these tractors played a significant role in maintaining clean and debris-free streets within our designated area.</li> <li><b>Mechanical Sweepers:</b> These devices were employed for efficient road cleaning, ensuring that our surroundings remained free from litter and debris.</li> </ul> </li> <li><b>Miscellaneous Solid Waste Management Equipment:</b> In addition to the above categories, we deployed various other equipment to enhance our waste management capabilities, including: <ul style="list-style-type: none"> <li><b>Tractor Trolleys with Front-End Loaders:</b> These vehicles were equipped</li> </ul> </li> </ol>

			<p>with loaders to facilitate the collection and transportation of waste materials.</p> <ul style="list-style-type: none"> <li>• <b>Chain Arm Roller:</b> Deployed for effective waste compaction, this equipment contributed to optimizing waste storage and transportation.</li> </ul> <p>The deployment of these tools and equipment underscored the project's commitment to comprehensive waste management.</p> <p><b>Total: 05</b></p>
# of technologies transferred to targeted leather processors	0	2	<p><b>Reporting period: 02</b></p> <p>In FY23 the KLA project implemented innovative approaches to enhance waste management in the Korangi Leather Area. One important step was the approval and installation of a portable compact transfer station (PCTS). The project obtained approval for the installation, and PTA (SZ)-ES allocated the necessary land for the station. As of June 2023, the infrastructure for the PCTS was <b>80%</b> completed, and it is expected to be fully operational in the last quarter of the year.</p> <p>To further improve waste management operations, the project initiated the implementation of RFID (Radio Frequency Identification) and Tracker systems in solid waste machinery. This technology allows for the use of RF ID systems to enter the landfill site and enables automatic calculation of waste.</p> <p>In addition, the project introduced an online/mobile system that enables tanneries to pay fees for waste management online. This convenient system eliminates the need for manual payment processes and provides an efficient way for PTA members to fulfil their waste management obligations. All members of PTA have been briefed on this new system, ensuring its effective adoption across the industry.</p> <p><b>Total: 04</b></p>
# of pilot demonstrations to reduce solid waste completed	0	2	<p><b>Reporting period: 0</b></p> <p>The KLA project has successfully implemented four interventions:</p> <ul style="list-style-type: none"> <li>-The project conducted a comprehensive assessment of waste generation in the leather sector, revealing that the sector generates approximately 5-7 tons of solid waste per day.</li> <li>-The project determined the optimal placement of waste bins and procured special galvanized bins for tanneries.</li> <li>-The project collaborated with PTA (SZ)-ES to establish an MoU with the Sindh Solid Waste Management Board (SSWMB), which provides human resources for waste collection, transport, and disposal.</li> </ul> <p>These interventions have helped to improve solid waste management practices in the leather sector and reduce the environmental impact of waste disposal</p> <p><b>Total: 05</b></p>
# of solid waste management sites introduced in KLA	0	1 collection 1 dumping	<p><b>Reporting period: 0</b></p>

			<p>-In pursuit of the Mid-Term Review findings, the KLA project successfully secured a dedicated landfill site for the disposal of tannery solid waste.</p> <p>-PTA (SZ)-ES signed an agreement with Sindh Solid Waste Management Board (SSWMB) to ensure systematic waste collection, transport, and disposal at the designated landfill site near Korangi sector 7-A.</p> <p>-The project's infrastructure is nearly 80% complete, including the development of a Portable Compact Transfer Station (PCTS) on PTA (SZ)-ES's own land, which will serve as a garbage transfer station with an aesthetic value and prevent interference from scavengers and birds.</p> <p>-The establishment of the dedicated landfill site and PCTS demonstrates the project's commitment to sustainable waste management and compliance with national and international waste handling regulations.</p> <p>During the reporting period (12 months) the project successfully lifted 2800 tons of waste, with a high recovery ratio of 90% in dues paid by the members. In total, the project has collected around 3000 tons of waste over the course of the 14-month contract with SSWMB. -The project has been successfully collecting approximately 5-7 tons of solid waste per day and disposing of it at a government-designated landfill site.</p> <p>-The project's progress in waste management sets an example for other industrial estates</p> <p><b>Total: 02</b></p>
<p># of employees in the leather production process and sector-level facilities including the CETP trained on possible techniques to minimize solid waste</p>	<p>0</p>	<p>350</p>	<p><b>Reporting period: 180</b></p> <p>-The project's <b>18</b> in-house consultation sessions successfully engaged <b>5</b> direct stakeholders and provided valuable insights on solid waste management techniques.</p> <p>-Through <b>11</b> dialogue sessions, the project fostered coordination and information exchange between SSWMB, SEPA, and other stakeholders, strengthening the collaborative approach to solid waste management.</p> <p>-The exposure visit to the Kasur treatment plant emerged as a significant learning opportunity, aligning with our baseline goals to enhance solid waste management in KLA. The insights gained from this visit, particularly in relation to the tallow plant, were invaluable in the context of our aim to minimize solid waste.</p> <p>Furthermore, this experience directly aligns with our compliance efforts against the established baseline:</p> <p><b>Number of Solid Waste Management Sites Introduced in KLA:</b>  The exposure visit directly contributed to the introduction of practical knowledge and techniques related to solid waste management. As a result, the project's efforts to establish solid waste management sites in KLA were informed by the lessons learned from this exposure visit, enhancing our approach to waste minimization.  The project ensured that employees involved in the leather production process and sector-level facilities, including the CETP, received training on possible</p>

				<p>techniques to minimize solid waste. This training directly contributes to the project's objective of promoting sustainable practices in the leather industry. .</p> <p>The project actively engaged with the Ministry of Climate Change (MoCC&amp;EC) and successfully organized the Project Steering Committee (PSC) meeting in 2023. These interactions and meetings facilitated the training of employees in the leather production process and sector-level facilities on techniques to minimize solid waste. Through these efforts, the project contributed to building capacity and promoting sustainable waste management practices in the leather industry.</p> <p><b>Total: 303</b></p>
Output 3.1.3: Feasibility plans for clean and low-carbon waste technology for possible access to financing prepared	# of feasibility studies with investment options for solid waste utilization including CF comparison produced	0	1	<p><b>Reporting period: 0</b></p> <p>The KLA project aims to propose feasible business proposal for clean and low carbon waste technology.</p> <p>KLA project has proposed the establishment of a tallow recovery plant to efficiently extract tallow from the tannery waste and process it into useful fats and oils. The feasibility study is in progress and so far The lessons learned from KASUR treatment plant and the comprehensive analysis conducted for the KLA context have contributed to the development of robust ToRs that encompass innovative and sustainable waste management practices.</p> <p><b>Total: 1</b></p>
	# of solid waste management plans produced	0	2	<p><b>Reporting period: 01</b></p> <p><b>Total: 02</b></p> <p>UNIDO-GEF project technically facilitated PTA (SZ)-ES in developing comprehensive Solid waste Management plan to be compliant with all regulations.</p> <p><b>Total: 2</b></p>
<b>COMPONENT 4: PROJECT MONITORING AND EVALUATION (M&amp;E)</b>				
Output 4.1.1: Quality control and effective monitoring of project activities, impacts and results implemented	# of PSC meetings held	0	4	<p><b>Reporting period: 01</b></p> <p><b>Total: 03</b></p> <p>03 project Steering Meetings (PSC) have been conducted so far, first Project Steering Committee Meeting held in <b>Feb 2019</b> and Second Project steering meeting conducted on <b>Sep 2020</b> and third PSC conducted on <b>30<sup>th</sup> Jan 2023</b>.</p>
	# of site visits carried out by UNIDO Project Manager	0	5	<p><b>Reporting period: 0</b></p> <p>On-site visit did not materialize due to COVID and travel restrictions.</p> <p><b>Total: 02</b></p>
Output 4.1.2: Mid-term and terminal evaluations conducted	Mid-term review, project terminal report and final independent evaluation completed on time	N/A	N/A	<p>Reporting period: 0</p> <p>Total: MTR completed on time. A mid-term review (MTR) was conducted in 2020-21</p> <p><b>Total: 01</b></p>

### 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.

*Describe in tabular form the risks observed and priority mitigation activities undertaken during the reporting period in line with the project document. Note that risks, risk level and mitigations measures should be consistent with the ones identified in the CEO Endorsement/Approval document. Please also consider the project's ability to adopt the adaptive management approach in remediating any of the risks that had been sub-optimally rated (H, S) in the previous reporting cycle.*

	(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 <sup>5</sup>
1	Lack of incentive of industrial owners to shift to climate resilient development as this brings thoughts of additional costs to be added to their investments	Low-Medium	Low-Medium	<p>The project aims to drive a paradigm shift in the private sector's mindset by highlighting the benefits and incentives of transitioning towards greener and cleaner production practices. Through its comprehensive awareness raising and capacity building initiatives, the project will empower businesses to embrace sustainable approaches. Their active involvement will ensure widespread engagement and maximize the impact of the project's initiatives.</p> <p>Furthermore, the project's financial contributions will alleviate the burden on landowners by reducing the costs associated with establishing waste management facilities. This will create a conducive environment for businesses to adopt sustainable practices without incurring exorbitant development expenses</p>	<p>The project effectively mitigated the identified risk by continuously engaging stakeholders, raising awareness, and building capacity to create a conducive environment for sustainable waste management practices. This was achieved through a comprehensive approach that included the distribution of waste bins to <b>98%</b> of tanning units, ensuring easy and accessible waste disposal.</p> <p>The project's efforts drastically reduced barriers identified during consultation sessions, making it both easy and financially viable for project members to adopt sustainable waste management behaviors. By providing access to more profitable markets, the project incentivized tanneries to actively participate in waste management efforts, resulting in an impressive <b>85%</b> recovery rate of charges associated with waste management.</p> <p>The establishment of a robust complaints redressal system further facilitated engagement and provided project members with a platform to provide valuable feedback, contributing to continuous improvement and the creation of a sustainable waste management ecosystem in the leather industry.</p>	<input type="checkbox"/>
2	Risks related to climate changes	High	High	<p>The project implementation will incorporate the valuable experience gained from the GEF project in Sialkot, which addressed Climate Change Adaptation. Given the potential impact of climate change on Karachi, such as severe Monsoon Rains, urban flooding. By integrating these experiences, the project in Karachi aims to enhance</p>	<p>Karachi has experienced the adverse effects of climate change, including heavy rainfall, urban flooding, and the influence of monsoon winds. In recent years, Karachi has faced urban flooding and significant damage to industries due to intense rainfall. Korangi Leather Area always suffers a lot due to the absence of multiple services to mitigate it. In response to these challenges, the</p>	<input type="checkbox"/>

<sup>5</sup> New risk added in reporting period. Check only if applicable.

(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 <sup>5</sup>
			<p>its capacity to proactively respond to the challenges posed by climate change and minimize the impact of flooding on the city.</p>	<p>project implemented the following measures to mitigate the effects of climate change in KLA Karachi:</p> <ol style="list-style-type: none"> <li>1-Established an Emergency Response Centre, equipped with specialized machines to efficiently remove rainwater and waste.</li> <li>2-Played a crucial role in responding to the <b>BIPORJOY</b> Storm that severely affected the leather community in sector 7-A of Korangi district.</li> <li>3-Ensured that the streets were promptly cleared, and water was efficiently removed, receiving appreciation from the community.</li> <li>4-The project's efforts have been instrumental in alleviating the impacts of climate change in Karachi. By establishing an Emergency Response Centre and effectively utilizing specialized machinery, the project has demonstrated its commitment to safeguarding the city from the adverse effects of climate-related events.</li> </ol> <p>Starting from April 2022, before the monsoon season, the project has been actively engaged in the collection of solid waste and cleaning of conveyance channels to prevent blockages that could exacerbate urban flooding.</p> <p>By working closely with the SSWMB, the project has effectively managed the removal of solid waste and ensured the cleanliness of storm drains and garbage collection points. The waste collected has been properly disposed of in designated bins. This action reduced the likelihood of blockages and minimizing the impact of urban flooding. Because of these concerted efforts, the impact of urban flooding in the area has been comparatively low when compared to previous years. The project's collaboration with the SSWMB and its proactive approach in waste collection and conveyance channel cleaning have significantly contributed to mitigating the adverse effects of urban flooding and promoting a cleaner and more resilient environment.</p>	
<p><b>3</b> There could be a risk of limited availability of female population within the engineering sector, and low participation rate of female candidates.</p>	<p>Medium-High</p>	<p>Medium-High</p>	<p>The project will pursue thorough and gender responsive communication and ensure stakeholder involvement at all levels, with special regard to involving women and men, as well as CSOs and NGOs promoting gender equality and mainstreaming, and a gender expert. This shall mitigate social and gender related risks, promote gender equality,</p>	<p>The KLA project has proactively adopted measures to create an environment conducive to engaging with female stakeholder involvement at all levels. As part of these efforts, the project has introduced UNIDO's online learning platform, which has proven to be a valuable tool for capacity building and knowledge sharing. In line with the project's commitment to gender</p>	<p><input type="checkbox"/></p>

	(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 <sup>5</sup>
				create a culture of mutual acceptance, and maximize the potential contribution of the project to improving gender equality in the productive sectors.	equality, more than <b>60</b> female research students have been enrolled in an online course focused on the treatment of tannery effluent. This initiative not only provides valuable skills and knowledge to the participants but also contributes to the overall improvement of gender equality in the productive sectors. Through these proactive measures and collaborations, the KLA project is making significant strides toward promoting gender equality, empowering women, and creating a more inclusive and equitable environment for all stakeholders involved.	
<b>4</b>	Investment and operational costs for common facilities (e.g. Central effluent Treatment Plant, Solid Waste Conversion) higher than expected.	Low-Medium	Low-Medium	The project partners will work on an appropriate business model to cover necessary operational costs for common facilities. Experience gained from similar project and facilities will be used to find an appropriate model for this.	The project facilitated PTA (SZ)-ES on developing an appropriate business model to cover the necessary operational costs for common facilities, the aim is to identify a sustainable model that ensures the efficient management of waste in the leather sector at Korangi. Since April 2022, the project has been working closely with the MSMWB to facilitate waste collection and management. Through these efforts, the project has successfully collected approximately 3000 tons of waste, charging minimum service fees to cover operational costs. Additionally, the project has played a key role in supporting the drafting of Terms of Reference (ToRs) for a tallow recovery plant in the 7-A sector. This initiative is considered a business-as-usual approach, aiming to cover the necessary operational costs through the recovery and utilization of tallow. The knowledge and experience gained from the UNIDO-GEF supported project in Sialkot have been leveraged to ensure the successful implementation of this model. In parallel, the project has also supported the development of two new initiatives as potential business models for the Korangi Leather Association (KLA). These initiatives aim to explore innovative approaches to waste management and find viable solutions that address both environmental concerns and operational costs.	<input type="checkbox"/>
<b>5</b>	Challenging project coordination: establishment of leather industries' cluster is a challenging project and requires a lot of coordination and involvement of many	Low-Medium	Low-Medium	All project stakeholders are committed and understand the project objective. UNIDO has broad experience in implementing similar projects and leather industry clusters and this may help to overcome possible problems with the project planning and implementation. In order to coordinate and execute the	To address these challenges, the project has taken proactive measures in FY23. The project conducted 05 sessions with the Sindh Solid Waste Management Board (SSWMB) to discuss and develop a complaint referral mechanism, as well as to ensure the timely recharging and recovery of dues. As a result, dues	<input type="checkbox"/>

(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 <sup>5</sup>
stakeholders. Slow response of some key actors may hinder the project implementation.			project smoothly, a project steering committee will be created as early as possible to coordinate all stakeholders and take into account the needs of all groups (industry, agriculture, communities, women, NGOs etc.). Also, Green Productivity Teams will be established for each industrial cluster.	collection has reached an impressive 90%. Furthermore, the project established a Memorandum of Understanding (MoU) with Bhaia University on October 4th, 2022, to strengthen the academia-industry relationship. An additional effort further enhanced the collective effort towards effective waste management. A workshop on the Implementation Roadmap for Solid Waste Management in the Leather Sector of Korangi on July 5 <sup>th</sup> collaborated with four government institutions. To ensure capacity building and knowledge dissemination, project facilitated field training on the Combined Effluent Treatment Plant for Batch 1 & 2 of Bahria University under the MoU with PTA (SZ)-Environmental Society on January 5th, 2023. This initiative aimed to equip participants with the necessary skills and knowledge to tackle waste management challenges. The project team also conducted a training workshop on GHG emission reduction for sustainable waste management on March 8th, 2023. This workshop provided valuable insights and strategies for minimizing greenhouse gas emissions while promoting sustainable waste management practices. Lastly, the project conducted a Project Steering Committee (PSC) meeting on January 30th, 2023, to ensure effective project oversight and stakeholder engagement.	
6 Delays due to challenges with production and transport of the equipment/technology required for the project activities (Covid pandemic).	Medium-high	Medium-high	The project will seek to localise production of equipment, and plan ahead where possible to account for delays due to COVID-19 e.g. design, tenders, etc.	The project has gradually seen an ease in Covid-19 restrictions and supply chain disruptions and has been able to expedite procurement processes. In the last quarter of 2022, the project successfully completed 90% of planned procurement. 100% of the procurement of waste bins was completed in FY23. To date, 92% of the members have received their allocated bins. Furthermore, the specialized machines required for waste collection, transportation and disposal arrived and are operational. Under a Memorandum of Understanding (MoU) with the Sindh Solid Waste Management Board (SSWMB), the project has efficiently handled the collection and transportation of 7 tons of waste per day to the designated government landfill site.	☒



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.

T The commencement of this fiscal year, the COVID-19 restrictions began to gradually ease, although the effects of the pandemic had already left a significant impact on the Karachi leather industry. The sector had been substantially affected by the pandemic, leading to various challenges and disruptions. The COVID-19 pandemic significantly impacted the operational landscape of our project within the Karachi leather industry. The pandemic-induced challenges resulted in business closures, delayed procurement processes, and strict restrictions that hindered access to workplaces. As a consequence, work orders were reduced, leading to increased unemployment and a severe impact on leather orders.

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

During the third Project Steering Committee (PSC) meeting on January 30, 2023, a one-year no-cost extension was granted to the project. This extension was necessitated by the disruptions caused by the COVID-19 pandemic, which had initially led to delays in project implementation. The pandemic's challenges had impacted the project's progress until early 2022, with restrictions and limitations hindering smooth operations.

In light of the pandemic-induced delays and the potential benefits of the extension, the decision to request a one-year no-cost extension was substantiated. The PSC carefully deliberated on the challenges posed by the pandemic and acknowledged the necessity of extra time to surmount these hurdles effectively.

With the extension granted, the project team is committed to maximizing this additional time. Clear strategic planning is in motion to address pending activities, ensuring the achievement of the intended outcomes. Despite the challenges posed by COVID-19, the project is now well-positioned to make substantial progress, bolstered by renewed momentum and a steadfast commitment to realizing its objectives within the revised timeline.

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

**Main findings of MTR from executive summary:**

A detailed review of the project document revealed that the Project Design was Moderately Unsatisfactory. A review of the project objective revealed that it is highly ambitious compared to the resources available to the project. In particular, the project geographic scope being restricted only to the KLA in Karachi for the leather processing industry doesn't reflect the project objective to "transform industrial processing zones in Sindh Province through the widespread adoption of low-carbon technologies". Moreover, stakeholder and Gender assessments were missing during both the PPG phase and inception phase which undermines the project's effectiveness. An analysis of the project's logical framework also revealed considerable overlap between project outputs, between and across project outcomes especially with regards to capacity building. Finally, the project outcomes, outputs, or activities do not hint at Gender Mainstreaming and the indicators and targets are not gender disaggregated.

The MTR team found the project Relevance to be Satisfactory to the development context of the tannery industry in Karachi as well as the priorities of the federal and provincial governments, the UN, and GEF.

The project's Effectiveness and Progress towards Results was assessed and found to be Moderately Satisfactory. For its Outcome 1, the project initiated dialogue with relevant stakeholders and capitalized on

the opportunity of incorporating CCF in the under development provincial policy on Cleaner Production. However, other important activities including the review of existing regulations and tools addressing CCF, development of the Leather PEF Toolkit and CCF training delivery mechanism have not been initiated yet. For the capacity building activities comprising Outcome 2, the project has undertaken several trainings, workshops and also launched an awareness campaign. However, the lack of having undertaken a formal Training Need Assessment, a documented training and capacity building strategy, and a lack of systemic follow up on benefits of and challenges with adoption has hampered the effectiveness of the project outcome. With regards to Outcome 3, the MTR found that the project has already identified a solid waste management strategy and initiated the process of setting up a system; but it was observed that the strategy lacks stipulations for the safe disposal of solid waste generated by the tanneries as well as the missed opportunity of incorporating the results of the recycling study into the planning of the SWM system. The MTR found the Financial Performance of the GEF fund to be Satisfactory. However, the co-financing from UNIDO and GOP has significantly lagged behind, with total expenditure amounting to 23.6% and 0.72% of the committed funds.

The project's management of GEF fund was seen to be efficient in terms of timeliness and selection of activities, etc. In terms of project management, all key project staff have been associated with the project either since the time of design or inception. Based on this assessment, the MTR team assessed the project's Efficiency as Moderately Satisfactory.

Overall the Project Management was found to be Moderately Satisfactory. Due to the past experience of PTA-SZ with CETP operations, it is anticipated that the organization will be effective in implementing the SWM system in the KLA. Moreover, as most of the members of the 'UNIDO Coordination Committee at PTA-SZ' comprise of large tanneries, an element of elite capture was observed in activities such as on-site demonstration of CP practices.

The MTR team determined that the Sustainability of key project interventions after project end is Moderately Satisfactory with the operation and management of the solid waste management system being supported by the project the most likely outcome to continue beyond the project duration. Conversely, the project has yet to initiate an assessment of the gaps and tools in policy and tools for LEF/CCF concepts. The capacity of training institutions upon which the project was to rely for continuing training and awareness raising activities regarding CCF and CP technologies and practices is very weak and building this capacity is beyond the project programmatic scope.

While the project has been making efforts for mainstreaming CCF/LEF in relevant policy documents, raising awareness about cleaner production practices in the tannery sector, and working to reduce emissions through the implementation of a solid waste management system in the KLA, the lack of a strategy for safe disposal of waste at the landfill is likely to reduce the planned environmental and social benefits to be derived from the project. Accordingly, the MTR team found that the Environmental and Social Safeguards incorporated in the activities conducted by the project thus far have been Moderately Satisfactory.

**Recommendations are as follows:**

*Recommendation for PTA-SZ:*

1. Outsourcing Waste Management: PTA-SZ conduct a thorough review of other successful waste management models in the country such as the Sundar Industrial Estate in Lahore and adapt them to the context of the KLA before starting the solicitation process for contracting the SWM to a private contract. In addition it is recommended that the selected contractor and its staff are also trained in order to ensure their compliance with the established plan for waste management developed for the KLA. This is particularly important as most waste collection and management operations in the city are currently operated without following proper guidelines.

*Recommendation for PTA-SZ:*

1. Activity Prioritization: The MTR team recommends prioritizing certain activities such as the review of existing regulations and tools addressing CCF, development of the Leather PEF Toolkit, and CCF training delivery mechanism as they have not been initiated yet. The project must also prioritize the LEF Toolkit development as it will serve as the basis of capacity building and awareness activities on the subject matter.

2. Training of Tanneries on SWM System: To ensure operations start smoothly, trainings on the utilization of the SWM system to tanneries are delivered immediately upon finalization of the plan and selection of contractor to mitigate the risk of inadvertent misuse of the system.
3. Safe Disposal of Solid Waste: The MTR team recommends that the project, at the very least, should conduct a feasibility study of establishing a cell at the GTS dump site with technical support from UNIDO while PTA-SZ seeks financing from other sources to implement a solution for the ultimate safe disposal of the solid waste.
4. Monitoring and Reporting: It is recommended the logical framework is reviewed to rectify the gaps identified including resolution of duplications in outputs and inclusion of gender indicators. Additionally, in accordance with the revised logical framework, a monitoring framework be developed comprising of a monitoring matrix, risk assessment and impact assessment methods, outlining who, what, when, where and how data is collected and analyzed.
5. Capacity Building: To further enhance the effectiveness and sustainability of capacity building initiatives, the following measures are recommended:

a) For the remaining duration of the project, a Capacity Building Strategy or Framework is developed and future capacity building activities are undertaken in accordance with the goals, objectives, workplan, and targets outlined in the document.

b) Develop a sustainable exit strategy for the capacity building component as there is a high risk of discontinuation due to the lack of organizational setup and financial resources. Such an exit strategy could include measures such as the delivery of a TOT and/or development of a certification program linked to LWG.

c) It is recommended that attendance or adoption of capacity building activities and trainings is linked to some sort of incentive such as industry awards, subsidized participation in a trade fair since almost 80 percent of the tanneries in Karachi are MSME's for whom it is difficult to spare productive workforce or invest time.

6. Gender: It is recommended that the project develops a Gender Engagement Strategy based on a thorough Gender Assessment. It is also recommended that in order to mainstream women's role in the waste management sector, the project set up a business idea competition challenge and supports ideas that promote women's engagement in the waste sector.
7. Stakeholder Engagement: The current project and the UNIDO-implemented project in Sialkot have had informal and unofficial coordination. It is recommended that the two projects develop a regular coordination mechanism to exchange observations and lessons learned.
8. Future Capacity Building of Institutions: It is therefore recommended that PTA-SZ partners with a relevant agency with experience in industrial/vocational capacity building, such as UNIDO, GIZ, or JICA, to enhance the capacity of these institutions as well as develop their practical linkages with the industry.

### ***Recommendations of GEF and UNIDO***

1. Recommendations for Future Projects: Going forward the MTR team recommends that for similar future projects: a) A monitoring framework providing details of how progress is to be tracked, when and by whom is developed which also includes development of guidelines such as capacity building strategy and a gender mainstreaming strategy; and b) The project's M&E framework make a stipulation for a review of the logical framework at the end of the first year of implementation.

*Main recommendations and actions taken towards implementing the recommendations included in the report*

### ***Follow-up actions during the reporting period 2022-23:***

During FY23, with the assistance and consultation of the project, PTA (SZ)-ES successfully entered into a contract with the government authority responsible for waste management, Sindh Solid Waste Management Board (SSWMB). This contract marked a significant milestone not only for the project but also for other industrial states in the region.

To ensure the smooth implementation of the waste management plan, PTA (SZ)-ES actively engaged with its members, which included over 120 tanneries. The project conducted waste characterization and assessed the total waste generation from the tanneries. One of the key achievements during this period was the establishment of a charging and recovery mechanism. Tanneries were categorized into two classes: small tanneries, charged at a rate of 3000/month, and large tanneries, charged at a rate of 5000/month. The billing and collection process was entrusted to SSWMB.

To facilitate the implementation of the waste management plan, a dedicated facilitation center was established and made operational. The procurement process for necessary machinery and equipment was also completed to a significant extent, reaching 85% completion. Additionally, the recruitment of staff to support the facilitation center was successfully carried out.

As per the contract with SSWMB, the provision of human resources was the responsibility of SSWMB, while the project was responsible for providing the necessary machines and equipment. It is important to note that the ownership of all equipment lies with PTA (SZ)-ES.

### **Main Recommendations and Follow-Up Actions:**

#### **Continued Collaboration:**

The MTR recommended sustaining collaboration between PTA (SZ)-ES and Sindh Solid Waste Management Board (SSWMB) for effective waste management.

Follow-Up Action: The project maintained regular communication channels and addressed challenges promptly with the collaborative efforts of both entities.

#### **Billing System Optimization:**

The MTR advised assessing the efficiency of the charging and recovery mechanism, monitoring billing and collection processes, and evaluating financial sustainability for tanneries.

Follow-Up Action: The billing system was continuously monitored, resulting in improved accuracy and consistency. The financial sustainability of tanneries was evaluated to ensure long-term viability.

#### **Capacity Building:**

The MTR recommended providing training for facilitation center staff to handle waste management operations efficiently and address technical challenges.

Follow-Up Action: Necessary training and capacity-building sessions were conducted for staff, equipping them with skills to manage waste operations effectively and handle technical issues.

#### **Awareness and Education:**

The MTR suggested implementing awareness campaigns to educate tanneries about waste management importance and proper disposal practices.

Follow-Up Action: The project initiated awareness campaigns across industries, educating about waste management's positive impact. Tanneries were actively encouraged to participate and comply.

#### **Stakeholder Engagement:**

The MTR recommended fostering engagement with tanneries, SSWMB, and other stakeholders to improve waste management processes.

Follow-Up Action: Strong stakeholder engagement was established, gathering regular feedback for process improvement and addressing emerging concerns.

Follow-Up Actions during Reporting Period 2022-23:

#### **Training for Tanneries on SWM System:**

Training sessions were conducted for tanneries on the Solid Waste Management (SWM) system to ensure effective utilization.

Result: Tanneries were equipped to use the SWM system efficiently, minimizing the risk of misuse and facilitating proper waste management practices.

**Safe Disposal of Solid Waste:** *The MTR team recommends that the project, at the very least, should conduct a feasibility study of establishing a cell at the GTS dump site with technical support from UNIDO while PTA-SZ seeks financing from other sources to implement a solution for the ultimate safe disposal of the solid waste.*

**Follow-up actions during the reporting period 2022-23:**

**Recommendation:** The MTR team recommended conducting a feasibility study for establishing a cell at the GTS dump site with technical support from UNIDO while seeking financing from other sources for the safe disposal of solid waste.

**Follow-Up Actions during Reporting Period 2022-23:** In response to the MTR's emphasis on safe disposal of solid waste, the project undertook significant steps to address this concern and ensure proper waste management within the Korangi Leather Area (KLA).

**Solid Waste Management Component Progress:**

- The project provided waste bins to all tanneries and strategically placed larger bins in the streets, as highlighted in the MTR.
- The project established a Memorandum of Understanding (MoU) with the Sindh Solid Waste Management Board (SSWMB) and procured machines for waste collection and transportation.

**Identification of Landfill Site:**

- Recognizing the need for proper waste disposal, the project took immediate action to identify a dedicated landfill site.
- Through consultations, the SSWMB allocated a specific landfill site at Jam Chakro, situated around 21 km away from the Korangi Leather Area.
- This allocation addressed the MTR's recommendation, ensuring systematic waste collection, transportation, and regulated disposal.

**Compliance with International Standards:**

- The project implemented an incentive-based approach to encourage tanneries' compliance with international standards such as the Leather Working Group (LWG) certification.
- As part of the MoU with SSWMB, tanneries participating in the solid waste management component of PTA (SZ)-ES were required to attain certification from the government authority.
- Certification affirmed that waste disposal practices followed regulated standards and contributed to a more environmentally friendly approach.

Result: By aligning its actions with the recommendations from the MTR, the project made remarkable progress in establishing an effective waste management system. The allocation of a dedicated landfill site, coupled with the implementation of certification standards, ensures that solid waste is managed, collected, and disposed of in a controlled and sustainable manner. These achievements underscore the project's commitment to responsible waste management practices and contribute to the broader goal of environmental sustainability within the Korangi Leather Area.

**Since the identification of the landfill site, the project has been successfully collecting approximately 7 tons of waste per day. The deployment of the GHG dashboard has also indicated a reduction of approximately 15% in GHG emissions. These achievements signify the project's commitment to effective waste management and GHG reduction goals.**

The project team recognizes the importance of safe disposal and continues to work closely with the SSWMB and other stakeholders to ensure the ongoing success of the solid waste management component. By addressing the MTR finding and establishing a dedicated landfill site, the project has taken a significant step towards achieving its objectives in waste management and promoting compliance with international standards.

**Monitoring and Reporting:** It is recommended the logical framework is reviewed to rectify the gaps identified including resolution of duplications in outputs and inclusion of gender indicators. Additionally, in accordance with the revised logical framework, a monitoring framework be developed comprising of a monitoring matrix,

risk assessment and impact assessment methods, outlining who, what, when, where and how data is collected and analyzed.

**Follow-up actions during the reporting period 2022-23:** During the reporting period of FY23, significant progress has been made in line with the recommendations provided. The Logical Framework (Logframe) was revised, taking into account the MTR recommendations, and it was officially endorsed during the third Project Steering Committee (PSC) meeting held on 30th January 2023.

A key focus area of the project has been to enhance the capacity of the Sindh Environmental Protection Agency (SEPA) as the regulatory authority in terms of GHG reduction and understanding the concepts of Climate Change Financing (CCF). In response to this, the PSC chair emphasized the importance of increasing the number of trainings provided to SEPA. These trainings aim to enhance their capacity on GHG reduction strategies and the implementation of CCF concepts.

In addition to capacity building efforts, the project has also prioritized monitoring and evaluation (M&E) activities. A comprehensive monitoring matrix has been prepared to systematically track the progress of project activities and measure the achievement of set targets. The project team is actively engaged in following up on identified risks, ensuring that risk mitigation measures are implemented effectively.

To strengthen the project's M&E system, ongoing efforts are being made to enhance the capacity of project staff in M&E practices. This includes providing training on M&E methodologies and the development of data collection tools. By building the skills and knowledge of project staff in M&E, the project aims to improve data collection, analysis, and reporting, ultimately enhancing the project's ability to monitor and evaluate its progress effectively.

The commitment to continuous improvement and adherence to the recommendations put forth by the MTR is evident in the project's actions. Through the revision of the Logframe, the establishment of a monitoring matrix, and the focus on capacity building in M&E and stakeholder engagement, the project is on track to achieve its objectives and deliver meaningful results in the field of GHG reduction and CCF implementation.

**Capacity Building:** To further enhance the effectiveness and sustainability of capacity building initiatives, the following measures are recommended:

a) For the remaining duration of the project, a Capacity Building Strategy or Framework is developed and future capacity building activities are undertaken in accordance with the goals, objectives, workplan, and targets outlined in the document.

b) Develop a sustainable exit strategy for the capacity building component as there is a high risk of discontinuation due to the lack of organizational setup and financial resources. Such an exit strategy could include measures such as the delivery of a TOT and/or development of a certification program linked to LWG.

c) It is recommended that attendance or adoption of capacity building activities and trainings is linked to some sort of incentive such as industry awards, subsidized participation in a trade fair since almost 80 percent of the tanneries in Karachi are MSME's for whom it is difficult to spare productive workforce or invest time.

**Follow-up actions during the reporting period 2022-23:**

In the year FY23, the project continued its efforts to enhance the capacity of the leather community through a more inclusive approach. The project recognized the importance of engaging academia and fostering collaboration between academia and the leather sector. As part of this approach, the project initiated an internship program in collaboration with academia, which was successfully completed in October 2021. This provided students with valuable hands-on experience in the field of solid waste management (SWM) and energy audits, contributing to their knowledge and skill development.

To ensure effective implementation of SWM practices, the project conducted a series of six trainings for the staff of tanneries. These trainings focused on various aspects of SWM, equipping the participants with the necessary knowledge and skills to manage waste effectively. Additionally, the project conducted a detailed assessment of 25 tanneries, which included the calculation of greenhouse gas (GHG) emissions based on the assessment findings.

In order to enable the leather community to better understand and monitor their GHG emissions, the project provided trainings on the use of the GHG dashboard. This tool allowed the tanneries to track their emissions and identify areas for improvement.

A significant milestone achieved during the reporting period was the Training of Trainers (ToT) conducted in May 2022. This training aimed to build the capacity of selected individuals within the leather community to serve as trainers themselves. By empowering these individuals with the necessary knowledge and skills, the project ensures a sustainable approach to capacity building. Once the project is completed, the trained

staff will be in a position to continue implementing the project interventions and supporting the leather community in adopting good practices.

The project has emphasized the importance of compliance with standards and good practices learned through the training sessions. It has made it clear to trainees that implementation of these practices will increase their likelihood of complying with international standards, enabling them to access different markets. This incentive serves as a motivation for the leather community to actively participate in the trainings and implement the acquired knowledge, fostering sustainable growth and market competitiveness.

Overall, the project's capacity building activities in FY23 have focused on SWM, GHG calculations, and the use of the GHG dashboard. By engaging the leather community through training programs and internship opportunities, the project is ensuring the transfer of knowledge and skills that will have a lasting impact even after the project's completion.

**Recommendation: The MTR recommended integrating gender considerations into the project by:**

- **Developing a Gender Engagement Strategy based on a comprehensive Gender Assessment.**
- **Encouraging women's participation in the waste management sector through a business idea competition challenge.**

**Follow-Up Actions during Reporting Period 2022-23:**

1. Gender Analysis and Strategy Development:
  - PTA (SZ)-ES conducted a gender analysis to understand gender-related issues in sector 7-A of the leather industry.
  - The findings guided the development of a Gender Engagement Strategy to address gender disparities more effectively.
2. Promoting Women's Engagement:
  - An innovative approach was taken to encourage women's involvement in waste management.
  - A business idea competition challenge was initiated to support ideas that promote women's engagement in the sector.
3. Engagement with Academic Institutions:
  - The project collaborated with academic institutes to foster gender inclusion within the leather industry.
  - Bahria University-Karachi was involved, aiming to incorporate gender considerations into leather technology, Cleaner Production, and Solid Waste Management.

**Results:** During FY23, the project's gender-inclusive efforts yielded tangible results:

- A gender analysis informed the strategy, guiding targeted interventions for gender equality and women's empowerment.
- A group of 16 female researchers participated in an internship program based on gender analysis findings, receiving training in key areas of the leather sector.
- Field visit trainings, including online courses on effluent treatment plants, were provided to 70 students from Bahria University.
- Over 65 female students were certified in the field, showcasing the project's collaboration with academia and its commitment to gender inclusion.

*Unavailability of a Communication officer in KLA project:*

During the Mid-Term Review (MTR) of the KLA project, it was noted that there was a lack of dedicated communication staff to effectively promote project activities and achievements. The MTR report highlighted the importance of having a dedicated communication officer to enhance the visibility of the project and its outcomes. In response to this recommendation, the project took proactive measures in FY23 to address this gap.

**Follow-Up Actions during Reporting Period 2022-23:**

To bridge the communication gap, the project undertook the following actions:

- Engaged a full-time communication officer from the UNIDO country office staff.
- Developed and executed a comprehensive communication strategy.
- Created awareness materials, organized events, and built partnerships.
- Highlighted project activities and successes in the leather industry.

**Results:**

- The dedicated communication officer significantly boosted project visibility.

- The officer engaged stakeholders and disseminated project information effectively.
- Partnerships with government agencies, industry associations, and local communities were strengthened.

#### 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?

Category A project

Category B project

Category C project

(By selecting Category C, I confirm that the E&S risks of the project have not escalated to Category A or B).

Please expand the table as needed.

	E&S risk	Mitigation measures undertaken during the reporting period	Monitoring methods and procedures used in the reporting period
(i) Risks identified in ESMP at time of CEO Endorsement	Main environmental risk is that the situation with solid waste and solid waste management will not improve and will remain same	<p>Since the signing of the Memorandum of Understanding (MoU) with the Sindh Solid Waste Management Board (SSWMB) and the active participation of all tanning units, significant progress has been made in solid waste management. The project has successfully managed to collect an average of 7 tons of waste per day, resulting in a total collection of 2800 tons during the reporting period. This remarkable achievement has transformed the situation over the past 11 months, as acknowledged by the community.</p> <p>Key measures implemented include the sweeping of roads, provision of bins to each tannery, and the effective removal of rainwater. These actions have contributed to improving solid waste management practices and have had a positive impact on the overall cleanliness and environmental conditions of the area.</p>	<p>Over the course of the reporting period, project maintained regular monthly meetings with the SSWMB to discuss various aspects of solid waste management. These meetings allowed a forum for addressing fleet management, complaint redressed, and the development of recovery and recharging mechanisms. The collaboration with SEPA and SSWMB has been instrumental in ensuring proper monitoring and implementation of the solid waste management component of our project.</p> <p>Project implemented a regular weighing system for the waste collected by our vehicles. This process ensures accurate measurement and recording of the waste quantities in our GHG dashboard. By monitoring and tracking the waste collection data, the project can effectively assess the environmental impact of our solid waste management efforts and make informed decisions for further improvement.</p>
	Improper implementation of solid waste management (collection; utilization; treatment)	<p>The KLA project has been proactive in ensuring the proper management of solid waste through a series of strategic actions. Conducted numerous meetings with the Sindh Solid Waste Management Board (SSWMB) to secure the allocation of a designated landfill site specifically for tannery waste. As a result, the SSWMB has allocated a Garbage Transfer Station (GTS) for Sector 7-A, where all collected waste from the tanneries is deposited and subsequently transported to the Jam Chakro landfill site, located 28 km away from the project site.</p>	<p>The Memorandum of Agreement (MoA) with Sindh Solid Waste Management testifies the implementation of solid waste component in which, tanneries are supplied UNIDO-GEF funded waste Bins, operational machinery is used and operated through solid waste facilitation centre. Daily logbook of machinery and waste bins supplies are updated, the response of members (tanning units) is overwhelming.</p>



	E&S risk	Mitigation measures undertaken during the reporting period	Monitoring methods and procedures used in the reporting period
		<p>In addition to these measures, project has embraced innovative solutions to enhance solid waste management. Following consultations with the Sindh Environmental Protection Agency (SEPA) and the SSWMB, PTA (SZ)-ES offered a piece of land for the construction of a Portable Compact Transfer Station (PCTS). During reporting period, construction of the PCTS is currently 70% completed. This innovative solution will significantly streamline the waste management process and contribute to improved efficiency and effectiveness.</p> <p>By adopting mechanized solutions and actively collaborating with relevant authorities, project has taken significant steps to address potential risks and improve the implementation of solid waste management practices. These efforts align with the findings of the mid-term evaluation too for achieving the project's goals and objectives.</p>	
	Infrastructure developed is vulnerable to climate change risks	<p>The project has been actively involved in mitigating urban flooding and handling rain emergency operations. It has gone beyond the utilization of machines and daily waste collection to sweeping roads and implementing measures to address urban flooding challenges during heavy rains.</p> <p>During the monsoon season in 2022, the project played a crucial role in actively participating and supporting the community in draining water and managing urban flooding. The project team worked tirelessly to ensure the smooth operation of drainage systems and effectively handle the emergency situation caused by heavy rainfall. Through timely interventions and coordination with relevant stakeholders, the project successfully mitigated the impact of urban flooding and provided essential support to the affected communities.</p>	PTA (SZ) has constituted a coordination committee to oversee and monitor the operations of the infrastructure. This coordination committee meets on a weekly basis to ensure that the facility is operating in line with established standards and protocols. The committee plays a crucial role in overseeing all aspects of the infrastructure's day-to-day operations, including waste management, maintenance, and adherence to quality standards. By regularly convening and discussing the progress and challenges related to the facility, the coordination committee ensures effective coordination among the project team, support staff, and relevant stakeholders. This proactive approach allows for timely decision-making, prompt resolution of any issues, and continuous improvement of the infrastructure's performance.
	Low participation rates of females in project implementation	<p>During FY23, the project made significant progress in integrating a gender perspective, as guided by the findings of the Mid-Term Review (MTR) and outcomes of the 3<sup>rd</sup> Project Steering Committee (PSC) meetings. As part of these efforts, a Memorandum of Understanding (MoU) was signed with Bahria University on October 4th, 2022, which paved the way for the inclusion of female research students in leather-related topics.</p> <p>To enhance gender-sensitive climate awareness and sustainable environmental practices in leather production, the project approached three reputable institutes in Karachi. Bahria University of Karachi agreed to partner with PTA (SZ)-ES to create opportunities for female researchers in academia and the leather industry.</p>	<p>During FY23, the project continued to prioritize gender-intensive activities, focusing on paid internships, skill development, and women's economic empowerment opportunities, such as finishing jobs in tanneries. To effectively monitor and assess the progress of these gender-related activities, the project implemented various tools, including internship reports and visit reports.</p> <p>Paid internships provided valuable hands-on experience for female participants, allowing them to apply their knowledge and skills in real-world settings. These internships were designed to empower women by equipping them with practical industry-specific skills and fostering their professional growth. Internship reports served as a means to evaluate the interns' performance, track their progress, and identify areas for further improvement</p>

	E&S risk	Mitigation measures undertaken during the reporting period	Monitoring methods and procedures used in the reporting period
		<p>The involvement of academia and industry in this partnership aims to bridge the gender gap in the leather business while promoting development through improved processes, concepts of greenhouse gas (GHG) reduction, and employment opportunities.</p> <p>The project introduced UNIDO's online learning platform, which provided opportunities for female students to learn about Combined Effluent treatment plant (CETP) treatment, occupational safety and health (OSH), and cleaner production. Field visits were arranged for female students to observe CETP operations, further enhancing their understanding of practical applications.</p>	
	Project developments involve alteration, damage or removal of any critical physical or cultural heritage	Not applicable at the moment	
	Property ownership	<p>In FY23 the project established a dedicated facilitation center for solid waste management and procured specialized machines and equipment. As per the agreement between PTA (SZ)-ES and SSWMB, it was decided that all the equipment shall be the property of PTA (SZ)-ES. The project partners successfully entered into an MoU with SSWMB, outlining the conditions for the ownership and management of the equipment.</p> <p>Under the terms of the MoU, PTA (SZ)-ES will be responsible for the distribution, maintenance, and repair of the available stock of bins, which will be funded through the project supported by GEF and implemented by UNIDO. The bins will be distributed to the relevant stakeholders as per the project's waste management plan. PTA (SZ)-ES will ensure that the bins are well-maintained and repaired whenever necessary.</p>	Agreement with SSWMB, daily logbook, Bins distributions list updated and reviewed.

## 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).

### Progress and Outcomes:

#### 1. Collaboration with WWF-Pakistan:

- The partnership with WWF-Pakistan yielded purposeful training programs and enlightening workshops for leather businesses.
- Expertise exchange empowered businesses with the latest sustainable practices, improving environmental performance.

#### 2. Alignment with Sindh Environmental Protection Agency (SEPA):

- Engagement with SEPA shaped the Cleaner Production policy for Sindh.
  - Targeted strategies were developed to reduce the environmental footprint of the leather industry, fostering a harmonious relationship with the environment.
3. **Partnership with Korangi Association of Trade and Industries (KATI):**
    - Collaboration with KATI enabled precise technical support and training for leather businesses.
    - Practical guidance led to sustainable transformations within the sector, enhancing overall sustainability.
  4. **Support from Ministry of Climate Change:**
    - Ministry of Climate Change support backed policy advocacy efforts.
    - Collaboration promoted policies prioritizing leather sustainability, making the sector more environmentally accountable.
  5. **Engagement with Leather Associated Businesses and Organizations:**
    - Involvement of Leather Associated Businesses and Organizations identified unique challenges and requirements.
    - Feedback tailored programs to align with sector needs, ensuring effective initiatives.

**Challenges Overcome:**

Through stakeholder engagement, PTA (SZ)-ES overcame challenges that hindered progress:

- **Duplication in Activities:** Different organizations pursuing cleaner production and related sectors caused duplication in efforts. This challenge was addressed through strategic coordination and streamlined collaboration to avoid redundancy.

**Impact of Collaborative Endeavors:**

- Synergy with organizations acted as a catalyst for innovative solutions.
- Effective policies and practical implementations emerged, enhancing environmental practices.
- Tangible outcomes contributed to a more sustainable and environmentally conscious leather industry.

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.).

Feedback and Decisions from the 3rd PSC Meeting: Enhancing Project Effectiveness and Sustainability  
 During the 3rd Project Steering Committee (PSC) meeting held on January 30, 2023, valuable feedback and decisions were shared to further improve the project's impact. The following key feedback and decisions were discussed:

1. Approval of the Annual Progress Report: The committee reviewed the report and expressed their satisfaction with the progress made during the year 2021-22.
2. Approval of the Work Plan: The proposed budget and activities for the Work Plan FY23 received consent from UNIDO, ensuring strategic steps and targets for the upcoming year.
3. Extension of Project Duration: Recognizing the need for project sustainability, the partners agreed to seek a 1-year extension, allowing for effective implementation of project outcomes.
4. Business Plan Development: A business plan for a tallow recovery plant was facilitated by the project. Terms of Reference (ToRs) were developed, outlining the scope, objectives, and deliverables, ensuring systematic implementation.
5. Assessment for Waste Water Re-utilization: Responding to the importance of sustainable practices, an assessment and feasibility study for waste water re-utilization were proposed to maximize the efficient use of wastewater.
6. Incineration Plant for Sludge Disposal: Discussions focused on the establishment of an incineration plant to address proper sludge disposal, providing a sustainable solution for sludge management within the sector.

In addition to these decisions, various committees were formed to oversee waste management, charging and recovery, and project implementation, ensuring effective coordination and compliance. These feedback and decisions reflect the project's commitment to continuous improvement and sustainable waste management practices in the tannery sector

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

1. 9585\_3<sup>rd</sup> Project Steering Committee Meeting Approved Minutes
2. 9585\_Report on Energy Efficiency of 25 Tanning Units of KLA
3. 9585\_Report on GHG Calculation study conducted for KLA
4. 9585\_Memorandum of Understanding with Bahria University
5. 9585\_Solid Waste Machinery Handover Contract
6. 9585\_GHG Training workshop Report
7. 9585\_Energy Audit Reports for 25 Tanneries
8. 9585\_Solid Waste Management Meeting Reports
9. 9585\_Workshop Report on Energy Efficiency for Leather sector
10. 9585\_Field Training Report
11. 9585\_Agreement with Tanning units for solid waste management
12. 9585\_Project Success Stories

## 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),.

In FY23, the project partners took proactive measures to address the feedback received from the Project Steering Committee (PSC) and the UNIDO Coordination committee on gender mainstreaming in the leather value chain. Building upon the previous year's progress, several key actions were undertaken.

PTA (SZ)-ES conducted a comprehensive gender analysis aimed to understand gender issues and develop a strategy to enhance gender inclusivity within the project. One result was the signing of a Memorandum of Understanding (MoU) with Bahria University on October 4th, 2022. This collaboration allowed for the inclusion of female research students in leather-related topics, creating new opportunities for their engagement.

To further support gender inclusion, the project partnered with UNIDO's online learning platform. This collaboration enabled 68 female students to receive training in various courses related to the leather sector. The participants also benefited from field trainings, providing them with hands-on experience in sustainable practices. The project facilitated visits to the UNIDO country office, showcasing interventions for sustainable industrial development, which enhanced the participants' understanding of sustainable practices in the leather industry.

The efforts made in gender mainstreaming led to positive outcomes. One final year student, who underwent training and internship, was offered a job in the finishing unit of a tanning unit called Pelle Classic. This achievement exemplifies the project's commitment to gender mainstreaming in the Korangi leather sector, creating job opportunities and empowering women in the field.

The introduction of the MoU with Bahria University, the collaboration with UNIDO for online learning, and the provision of field trainings and country office visits have contributed to strengthening the project's gender perspective and creating new opportunities for female participants in the leather sector. These actions align with the project's goal of promoting gender mainstreaming and fostering sustainable and inclusive development in the leather industry.

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## 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 UNIDO-GEF project continued its efforts to provide learning, training, and knowledge-sharing services to the leather community during FY23. The project successfully trained and reached out to a significant number of tannery owners, managers, supervisors, and technicians, contributing to the enhancement of their skills and knowledge in various areas in leather processing, waste re-utilization.

The increase in the number of participants can be attributed to the continuous delivery of capacity-building and awareness campaigns, focusing on Cleaner Production practices and Solid Waste Management for all tanneries. Additionally, the introduction of an e-Learning course on Safety From Hydrogen Sulphide, administered in collaboration with UNIDO Headquarters, contributed significantly to the rise in participant enrolment. It is worth noting that the proportion of participants from broader knowledge-sharing and other events such as conferences, public lectures, and meetings remained consistent throughout FY23. During FY23, the project prioritized the training and capacity building of the leather community. Some notable training initiatives included:

**GHG Calculation and Dashboard Training:** Approximately **54** members from the Pakistan Tanners Association (PTA) received training on greenhouse gas (GHG) calculation and dashboard usage. This training aimed to enhance their understanding of GHG emissions and enable them to monitor and manage their environmental performance effectively.

**Energy Audits and Implementation Plan:** Energy audits were conducted for 25 tanning units, providing them with valuable insights into energy consumption patterns and potential areas for improvement. Based on the audit findings, an implementation plan was developed to guide the tanneries in implementing energy-efficient practices.

**Solid Waste Management Training:** A comprehensive training program on solid waste management was conducted for 95 percent of tanning units. The training focused on waste segregation, proper disposal methods, and the importance of adopting environmentally friendly practices.

**Gender-Based Training:** As part of the project's commitment to promoting gender inclusivity, specialized training sessions were organized for female students from Bahria University. These training sessions aimed to empower women by providing them with knowledge and skills in finishing, designing, and environmental compliance aspects of the leather industry.

**Occupational Safety Module:** Two large tannery units received training on the occupational safety module shared by UNIDO Headquarters. This module emphasized the importance of safety measures, particularly related to leather operations. The training aimed to equip participants with the necessary skills to respond effectively and swiftly in real-life rescue operations, especially in high-risk situations. At the conclusion of the training, participants were expected to obtain certification for the online H2S safety course, qualifying them as trained rescuers for enhanced operational safety. .

The project also developed a training table to provide an overview of the various training initiatives conducted during the year. The table includes details such as the type of training, target audience, and the number of participants trained. (Total registered members of PTA (SZ)-ES are 120+)

<b>Training Initiative</b>	<b>Target Audience</b>	<b>Number of Participants</b>
GHG Calculation and Dashboard Training	PTA Members	45% of PTA Members
Energy Audits and Implementation Plan	Tanning Units	25 Units
Solid Waste Management Training	Tanning Units	95% of Tanning Units
Gender-Based Training	Female Students	73 Students
Occupational Safety Module	Large Tannery Units	2 Units
Effluent Treatment Training	Female Students	73 Students

Field Trainings on Leather Initiatives	Students	3 Batches (50 Students each)
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These training initiatives aimed to enhance the skills and knowledge of participants in various aspects related to the leather industry, including environmental management, cleaner production practices, occupational safety, effluent treatment, and field trainings on leather-related initiatives. The project's commitment to providing comprehensive and diverse training opportunities reflects its dedication to promoting sustainable practices and capacity building within the leather community.

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

The UNIDO-GEF project has implemented various knowledge management activities and developed resources to support capacity building and knowledge sharing within the leather community. These initiatives have been instrumental in promoting best practices, lessons learned, and innovative solutions.

**Knowledge Sharing Platforms:** The project has established an online platform or forum to facilitate knowledge exchange among stakeholders in the leather community. This platform, accessible through [learning.unido.org](http://learning.unido.org), offers a range of features and benefits. It provides a centralized hub where stakeholders can access training materials, guidelines, manuals, and other resources related to cleaner production, solid waste management, and occupational safety. The platform also includes discussion forums and interactive modules that encourage peer-to-peer learning and collaboration. Through this platform, stakeholders can share experiences, ask questions, and access up-to-date information on industry trends and practices.

**Knowledge Management Tools:** The project has developed specific tools and resources to capture, organize, and disseminate knowledge. These tools include guidelines, manuals, and databases that provide step-by-step instructions and practical guidance on implementing cleaner production practices, conducting energy audits, and managing solid waste. The project has also created training materials in various formats, such as e-Learning modules and videos, to support capacity building and knowledge transfer within the leather industry. These resources are designed to be user-friendly, accessible, and adaptable to different learning needs.

1. **Case Studies and Success Stories:** The project has documented and shared notable achievements and success stories as case studies. These serve as valuable knowledge products, showcasing successful interventions in cleaner production, solid waste management, and occupational safety. They provide practical insights for stakeholders and promote replication.
2. **Lessons Learned and Best Practices:** Key lessons learned from implementing interventions have been identified and documented. The project has promoted best practices that have emerged from successful initiatives. These lessons and practices are shared with relevant stakeholders through project reports, workshops, and an online knowledge-sharing platform.
3. **Monitoring and Evaluation Reports:** The project has a robust monitoring and evaluation framework in place. Regular reports are produced to assess the effectiveness of training activities and measure project progress. These reports inform decision-making, refine training strategies, and improve knowledge management efforts.
4. **Environmental and Sustainability Report:** The project is developing a comprehensive report that will cover all project interventions in the leather sector. This report will highlight outcomes, impacts, and lessons learned, promoting knowledge dissemination and accountability.
5. **Project Documentary:** The project is creating a documentary focusing on solid waste management and other key areas. This visual tool will showcase project accomplishments and share knowledge with a broader audience.
6. **Community Services:** The project has implemented various community services, such as clean-up campaigns, skill development workshops, environmental awareness programs, livelihood support initiatives, and health and safety awareness campaigns. These initiatives engage the community, raise awareness, provide training, and improve socio-economic well-being.
7. **Awareness Raising Campaigns:** The project has conducted awareness campaigns targeting different stakeholders, including the local community, students, and tannery workers. These campaigns raise awareness about environmental protection, waste management, and sustainable practices.

Through these mechanisms and tools, the project ensures effective knowledge management, shares best practices, and fosters sustainable development in the leather community. The documentation of case studies, lessons learned, and success stories facilitates knowledge dissemination, while monitoring and evaluation reports inform continuous improvement. The community services and awareness-raising campaigns create a conducive environment for behavior change and the adoption of sustainable practices.

Project Flyer developed.

## 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.

### **KLA Project Implementation Progress**

*The following analysis draws on the activities performed in reported period with information from all components performed.*

In FY23 the project made significant implementation progress. Overall, 75% of the activities have been completed and the remaining 25% are on track for completion.

Notably, in the Solid Waste Management component, substantial achievements have been made. A total of 3,500 tons of solid waste were collected and properly disposed of in a dedicated landfill site allocated to PTA (SZ) in mid-August 2022. The procurement of machines for waste management has been completed up to 90%, demonstrating the project's commitment and coordination with SSWMB, which provided technical guidance and recommended machinery for sector 7-A.

During the heavy monsoon season, the project actively participated in emergency rain operations and provided essential services to the community. The project's infrastructure, such as the shed and CCTV, were damaged by the rain, and efforts are underway to renovate and restore them. This exemplifies the strong coordination and trust established between PTA and SSWMB. Furthermore, the project has established a complaints redressal mechanism to address concerns and ensure efficient resolution. This mechanism has contributed to maintaining a high recovery rate of 85% and ensuring accountability.

Overall, the progress made in the reporting period demonstrates the project's dedication to effective solid waste management, coordination with relevant authorities, and the establishment of mechanisms for community engagement and complaints resolution.

During FY23, significant progress was made in the waste bins placement planning for the Korangi Leather Area under the UNIDO-GEF project. A comprehensive assessment and technical review were conducted to determine the specific waste bin requirements for tannery solid waste. Customized waste bins, designed to address issues such as rusting, corrosion, and coating, were recommended and procured from the selected firm, M/S Strongman.

As of September 2022, waste bins have been distributed to 95% of the registered members, covering a majority of the tanneries in the area. To extend the coverage to the entire community, 25 large bins with a capacity of 5m<sup>3</sup> were strategically placed in small streets. These larger bins are lifted on a weekly basis using a specialized machine called a chain arm roller.

In FY23, progress was made in the studies on energy efficiency and waste reutilization under the UNIDO-GEF project. The study on energy efficiency was conducted with the participation of 25 voluntary tanneries in the Korangi Leather Area.

Another major achievement in FY23 was the completion of the study on greenhouse gas (GHG) emissions. The study involved the development of a GHG dashboard, evaluation of the landfill site, and the identification of factors for GHG reduction calculations. Two members from the PTA (SZ) were constituted to ensure the suitability of the GHG dashboard, with the objective of obtaining a suitable value by September 2023.

The outcomes of both studies have been shared with the Korangi Leather Area stakeholders. Furthermore, training sessions were conducted for 65 members of the leather community to enhance their understanding and usage of the GHG dashboard. The project has also provided training to supervisors and managers on

the implementation of energy efficiency measures and waste reutilization techniques, further promoting sustainable practices in the leather industry.

These studies and training initiatives have contributed to improving the environmental performance and sustainability of the tannery sector in the Korangi Leather Area. They have provided valuable knowledge and tools for the industry to enhance energy conservation, reduce GHG emissions, and optimize waste management practices, leading to a more environmentally friendly and economically viable leather processing industry.

## **OVERVIEW OF COMPONENTS WISE IMPLEMENTATION**

The reporting period FY23 demonstrated continued advancements in the KLA Project's efforts to strengthen the integration of GHG emission reduction, Cleaner Production, and environmental climate objectives into policies, plans, and regulations. The project made significant progress during this period, building upon the work done in previous years and advancing towards achieving its intended outcomes.

### **COMPONENT 1 - STRENGTHENING THE GUIDING FRAMEWORK TO FACILITATE THE TRANSFORMATIONS TOWARDS LOW EMISSION AND CLIMATE RESILIENT INDUSTRIAL PROCESSING**

During the reporting period of FY23, the KLA project achieved significant progress in various activities under the component of policy dialogues, consultations, and coordination with relevant authorities. These activities aimed to enhance coordination and introduce low-emission concepts and innovative technologies within the leather sector.

Activities:

1. SEPA Advisory Committee Meeting: UNIDO-GEF project, along with PTA (SZ) EMS, attended the SEPA Advisory Committee Meetings from Aug 2022 to Nov 2022 to discuss revising environmental standards and cleaner production policy for Sindh. The project's presence and participation were appreciated, highlighting the continued collaboration between line ministries and PTA (SZ) EMS.
2. Consultation on CCF Policy Dialogues: 02 Consultations were conducted with SEPA authorities to discuss and promote the Corporate Carbon Footprint (CCF) approach.
3. Consultations with SEPA: Six consultation meetings were organized with SEPA from September to October 2022, focusing on extending support for environmental footprints in the leather industry. The project also had a meeting with the Director General of the Ministry of Climate Change, highlighting the introduction of CCF and innovative technologies in the leather business.
4. Consultations with Sindh Solid Waste Management Board: So far 18 meetings were arranged with the Sindh Solid Waste Management Board to discuss potential solid waste management plans for the Korangi Leather Industry. Existing tools, guidelines, and recommendations were assessed to improve and expand solid and effluent waste management practices. Guidelines for the utilization of solid waste were also discussed.
5. Consultative Session on Resource Efficiency and Smart Environmental Management Practices: 05 consultative session was conducted to support the upgradation of the existing CETP administered by PTA (SZ). Technical support was provided to design the process methodology and consultant requirements.
6. Consultative Session on Upgradation of CETP and Solid Waste System: A consultative session was held with the goal of upgrading the Korangi CETP and solid waste system for the Korangi Leather Area.

These achievements demonstrate the project's commitment to advancing environmental practices, promoting coordination with relevant authorities, and introducing innovative technologies in the leather sector. The progress made in FY23 signifies significant strides towards achieving the project's objectives.

### **COMPONENT 2 - CAPACITY BUILDING ON THE CCF APPROACH FOLLOWING THE DETERMINED GUIDELINES AND INFORMATION DISSEMINATION ON PROPER WASTE MANAGEMENT INITIATIVES**

During the fiscal year FY23, the KLA project made significant progress in capacity building activities, focusing on enhancing knowledge and skills related to sustainable leather production, carbon footprints, cleaner production, and waste management. The project actively engaged with various stakeholders and



delivered several training programs and workshops. Here are the key achievements:

1. **UNIDO Online Learning Platform:** A total of 73 female students from Bahria University received training on the newly introduced course by UNIDO's online learning platform. The course specifically focused on CETP in the leather sector. The students gained valuable insights and knowledge on CETP operations and management.
2. **On-Site Training of CETP:** Three batches of on-site training on CETP were conducted during September 2023. This training provided practical hands-on experience to tannery workers and supervisors, equipping them with the necessary skills to effectively manage and operate CETP facilities.
3. **Safety Training:** Training sessions on safety from H2S gas and workplace safety were delivered to representatives from public and private sector leather institutions. The focus was on creating a safe and healthy working environment for tannery workers.
4. **Occupational Safety and Health (OSH) Module:** An OSH module was introduced specifically for large tanneries. This module aimed to enhance the understanding and adoption of safety measures and practices in tannery operations.
5. **GHG Dashboard Training:** Managers and supervisors of tanning units received training on the GHG dashboard. This training provided them with insights into greenhouse gas emissions and management, enabling them to make informed decisions and implement measures to reduce their environmental impact.

These capacity building activities in FY23 played a crucial role in enhancing the knowledge and skills of stakeholders in the leather sector. By equipping them with the necessary tools and expertise, the project aims to promote sustainable practices, reduce carbon footprints, and improve overall environmental performance within the industry

### **COMPONENT 3 - PILOT OF CCFS AND SOUND WASTE MANAGEMENT AND PRACTICES WITHIN KLA PROCESSING SECTORS OF SINDH PROVINCE DEMONSTRATED**

During the reporting period FY23, the KLA project continued its efforts in knowledge transfer and capacity building activities to promote cleaner production and solid waste management practices within the leather community. The following activities were conducted:

Table 1: Knowledge Transfer and Awareness Sessions

<b>Activity</b>	<b>Date</b>
Knowledge transfer session on CCF and cleaner production concept	Nov 19, 2019
Awareness session on solid waste management and product design	Nov 2021
Consultation on policy guidelines for CCF and life cycle assessment	Aug 2021
Awareness session on cleaner production and waste management	Aug 29, 2021
On-site training program on solid waste management and cleaner production	Dec 2021
Awareness session on cleaner production and waste management	Feb 16, 2022

Table 2: Solid Waste Management Component

<b>Activity</b>	<b>Date</b>
In-house consultations on solid waste management	Ongoing
Initial assessment of solid waste generated and collection system	Ongoing
Feasibility discussions on waste utilization investment options	Ongoing

Table 3: Recovery Status

Achievement	Recovery Status
Recovery Rate	89%

Table 4: Charging Mechanism

Achievement	Status
Implementation of Charging Mechanism	Aug 2022
Categorized Tanneries	
- Large Tanneries	PKR 5000
- Small Tanneries	PKR 3000

Table 5: Complaints and Redressal Mechanism

Achievement	Status
Establishment of Complaints and Redressal Mechanism	Sep 2022

Table 6: Procurement Discussions with SSWMB

Achievement	Status
Procurement Discussions with SSWMB	92% completed

Table 7: Waste Bins Distribution

Achievement	Status
Waste Bins Distribution to Registered Members	95%

These achievements reflect the progress made during the period FY23 in conducting knowledge transfer sessions, raising awareness on cleaner production and solid waste management, and initiating discussions and assessments related to solid waste management in the leather community.

#### Challenges Faced in Project Implementation:

1. **Climate Change:** Climate change poses a significant challenge to the implementation of the project. The changing weather patterns and extreme events, such as heavy rainfall and flooding, have disrupted project activities and caused delays. Adapting to the impacts of climate change and ensuring the resilience of infrastructure and interventions have been ongoing challenges.
2. **Coordination and Stakeholder Engagement:** Ensuring effective coordination and engagement with multiple stakeholders, including government agencies, tannery owners, and the local community, has been a complex task. Balancing diverse interests, aligning objectives, and maintaining active participation from all stakeholders have required continuous efforts and effective communication.

#### Outcomes Achieved/Observed in Project Implementation:

1. **Increased Awareness and Adoption of Cleaner Production Practices:** Through knowledge transfer sessions, training programs, and awareness campaigns, the project has successfully increased awareness and adoption of cleaner production practices within the leather community. Tanneries have implemented measures to reduce their environmental footprint and enhance resource efficiency.
2. **Improved Solid Waste Management:** The project's efforts in solid waste management have led to notable outcomes. The establishment of a complaints and redressal mechanism, the distribution of waste bins, and the implementation of charging mechanisms have contributed to improved waste

management practices. The recovery rate of solid waste has reached 89%, indicating progress in waste reduction and proper disposal.

3. **Strengthened Stakeholder Coordination:** The project has fostered stronger coordination and collaboration among stakeholders. By engaging government agencies, tannery owners, and the local community, the project has created a platform for dialogue and cooperation. This has facilitated the implementation of interventions and the exchange of best practices.
4. **Enhanced Capacity and Knowledge:** The project's capacity-building initiatives, including training programs and the utilization of online learning platforms, have enhanced the capacity and knowledge of project partners and the leather community. Participants have gained skills in cleaner production, waste management, and carbon footprint calculation, contributing to a more sustainable leather industry.
5. **Improved Resilience to Climate Change:** Despite the challenges posed by climate change, the project has made strides in enhancing resilience. The consideration of climate change in infrastructure design, the assessment of climate risks, and the incorporation of climate-smart practices have contributed to increased resilience and adaptive capacity within the leather community.

The project has achieved significant outcomes in addressing the challenges of climate change and promoting sustainable practices in the leather industry. Through stakeholder engagement, capacity building, and the implementation of interventions, the project has laid the foundation for a more sustainable and climate-resilient leather sector in the project area.

**2.** Please briefly elaborate on any **minor amendments**<sup>6</sup> 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.

<input type="checkbox"/>	Results Framework	N/A
<input type="checkbox"/>	Components and Cost	N/A
<input type="checkbox"/>	Institutional and Implementation Arrangements	N/A
<input type="checkbox"/>	Financial Management	N/A
<input type="checkbox"/>	Implementation Schedule	<i>Revised as per extension based on third PSC decisions</i>
<input type="checkbox"/>	Executing Entity	N/A
<input type="checkbox"/>	Executing Entity Category	N/A
<input type="checkbox"/>	Minor Project Objective Change	N/A
<input type="checkbox"/>	Safeguards	N/A
<input type="checkbox"/>	Risk Analysis	N/A
<input type="checkbox"/>	Increase of GEF Project Financing Up to 5%	N/A
<input type="checkbox"/>	Co-Financing	N/A
<input type="checkbox"/>	Location of Project Activities	N/A

<sup>6</sup> 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%.

<input type="checkbox"/>	Others	N/A
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**3. Please provide progress related to the financial implementation of the project.**

Total project implementation (without support costs) as of end of FY23 is \$1,655,593.18. Project funds remaining totals \$344,406.82.

The following summary reflects the main expenses incurred in FY23:

1. **Workshop and Meeting Expenses:** The Executing Partner organized various workshops, seminars, and meetings during the year, incurring expenses related to venue bookings, registration fees, travel arrangements, accommodation, meals, and other logistical requirements. These expenses were crucial for knowledge sharing, professional development, and networking opportunities.
2. **Salary Expenses:** The Executing Partner allocated funds for employee salaries, compensating individuals in different roles and positions. This includes the Project Director, Admin Officer, Sweeper, Cleaner, Driver, Supervisor, and Helper. The salaries were essential for attracting and retaining talented individuals who contributed to the smooth functioning of the organization.
3. **Consulting and Services:** Payments were made to external consultants and service providers who offered specialized expertise and assistance. These professionals included consultants from Hino Pak Motors Ltd., GG Consult, GHG Consultant, and other entities. Their services were sought to enhance operational efficiency, provide technical guidance, and fulfill specific project requirements.
4. **Taxes and Deductions:** Income tax deductions were made as per applicable regulations. Deductions were made from salaries, payments to consultants, and advertising expenses. Complying with tax obligations is essential for maintaining legal and financial integrity.
5. **Miscellaneous Expenses:** Various miscellaneous expenses arose throughout the year, which were not explicitly categorized. These expenses encompassed statement printing, waste bin delivery, cash payments, and other ad hoc expenses that contribute to the overall operations of the Executing Partner.
6. **Procurement and Payments:** Procurement expenses were incurred for the acquisition of vehicles, replacement parts, and other necessary items. Kissan Engg. Pvt. was engaged for the procurement of vehicles and related components. Timely procurement ensures the availability of resources for project implementation.
7. **Advertising and Media:** Advertising expenses were incurred with MCM Advertising for promotional campaigns, brand visibility, and communication initiatives. Effective advertising helps create awareness, reach target audiences, and establish a positive brand image.
8. **Rent and Utilities:** Rent expenses were incurred for the office space occupied by the Executing Partner, particularly for the PTA office. These expenses covered the use of facilities, utilities, and related services required for smooth day-to-day operations.

## 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 3		Year 4				GEF Grant Budget Available (US\$)
	Q3	Q4	Q1	Q2	Q3	Q4	
<b>Component 1 – Component 1 - Strengthening the guiding framework to facilitate the transformations towards low emission and climate resilient industrial processing</b>							
Outcome 1: Outcome 1 - Guidelines and recommendations fine-tuned to enable the scale-up of the Leather Environmental Footprint and/or Corporate Carbon Footprint (CCF) approach and increased access to clean-and-low carbon technology financing							
Output 1.1 Tools and guidelines for the Leather Environmental Footprint and Carbon Footprint Calculation methodology for the local leather industry reviewed/developed.		x	x	x			\$ 9,100
Output 1.2 Guidelines and documentation on improvements and extensions of existing regulations encompassing the application of innovative clean-and-low- carbon waste technologies and practices, environmental management and regulatory responsibilities prepared.		x	x	x	x		\$ 14,000
Output 1.3 Disseminated and informed responsible regulatory authorities on core elements and benefits of the CCF approach and sound waste management.			x	x	x		\$ 1,500
Output 1.4 Guideline elaborated on the enhanced utilization of waste streams for industrial applications			x	x	x	x	\$ 210,500
<b>Component 2 – Capacity building on the CCF approach following the determined guidelines and information dissemination on proper waste management initiatives</b>							
Outcome 2: Capacities of key players on the Leather Environmental Footprint, CF and CCF approach for reduced GHG emissions strengthened and information made available to market enablers and major stakeholders on BAT/BEP for waste management within the leather processing sectors							
Output 2.1 Capacity building for decision-makers, BMOs' representatives, and other stakeholders, on best practices in leather production to minimize industrial, environmental and carbon footprints built up (KPI: at least 50 participants trained)		x		x	x		0
Output 2.2 Information disseminated on environmentally sound management of solid waste and by-products for the leather sector as an alternative to unregulated disposal. Technical trainings for industries on using and applying the guidelines and tools developed (KPI at least 350 technicians, managers)			x	x	x		0
<b>Component 3 –Pilot of CCFs and sound waste management and practices within KLA processing sectors of Sindh Province demonstrated</b>							
Outcome 3:Low emissions and climate resilient development path is demonstrated and scaled up through the CCF approach and sound waste management procedures for the leather processing industries							
Output 3.1:Carbon Footprint - Accounting, evaluating and monitoring inputs, production and processing efficiencies for leather processing transparency and reduced carbon footprint emissions		x	x	x			\$ 5000
<b>Component 4 – Project Monitoring and Evaluation (M&amp;E)</b>							
Outcome 4 - Progress towards project objectives are continuously monitored and evaluated							
Output 4.1 - Quality control and effective monitoring of project activities, impacts and results achieved			x	x		x	0
Output 4.2 - Mid-term and terminal evaluations conducted				x	x	x	20,000
<b>Total</b>							<b>\$ 260,100</b>

## X. Synergies

### 1. Synergies achieved:

During FY23 the UNIDO-GEF funded Korangi Leather Area (KLA) project in Karachi, Sindh, successfully established synergies with different partners, including WWF. The project engaged in various initiatives such as wetland conservation and implementing cleaner production practices, including compliance with the Leather Working Group (LWG) standards. To ensure effective collaboration, the KLA project actively sought input from government institutions like SEPA (Sindh Environmental Protection Agency) and SSWMB (Sindh Solid Waste Management Board). The selection of solid waste management (SWM) machinery involved consultations with SSWMB to identify the most crucial equipment for Sector 7-A. The KLA project also developed strong synergies with SEPA and actively participated in the cleaner production policy initiated by WWF. Additionally, the project collaborated with UN-ITC (United Nations International Trade Centre) in the development of the Leather Strategy for Sindh. This collaboration aimed to promote sustainable leather production, international compliance, and the reduction of greenhouse gas (GHG) emissions from the leather sector. Throughout these activities, the project consistently sought input and consultation from tanneries and associated businesses to ensure their active involvement and participation.

The KLA project actively learned from experiences in other tannery zones, such as the tallow/fat extraction practices observed at the Kasur treatment plant. These insights were used to develop Terms of Reference (ToRs) for the establishment of a tallow unit in the Korangi Leather Area. Similarly, lessons and practices from the Sialkot Tannery Zone and the Quaid-e-Azam Industrial Zone were translated and implemented in the KLA project.

### 3. Stories to be shared (Optional)

#### **Story # 1: UNIDO-GEF funded Solid Waste Operational Machinery responded during heavy Monsoon season 2022 in Korangi-Karachi.**

##### Background

The project handed over state-of-the-art waste management machinery worth US\$200,000 to project partners, Pakistan Tanners Association-Southern Zone and Environmental Society. Partners identified PTA (SZ)-ES as responsible to cater solid waste of more than 120 Tanneries of Korangi Leather Area, the industrial hub of Metropolitan City Karachi. The project also established a dedicated facilitation center for its operations of waste collection, transport and disposal under agreement with Government Authority, Sindh Solid Waste Management Board-Govt. of Sindh, in support of leather industry's capacity in operations as well as crisis management and coordination.

##### Challenge

Karachi city's fragile municipal and civic infrastructure has been deteriorating for many years as a result of monsoon rains. Local administration apprehended that the situation could worsen if rains continued to be heavier compounding the situation of higher volume of waste generated by Eidul Azha. Korangi Industrial Area is always targeted for more waste generation and improper handling of solid waste. The Korangi local administration lacks requisite equipment and machinery to drain rain accumulated water from streets. One of the biggest challenges for PTA (SZ)-ES, as representative body for Sector 7-A for leather sector, always received regular complains from its members for rains as the ponds and puddles of stagnant rainwater flooded all streets of area, especially in the low-lying area, which has affected the leather production and community's commute.

##### Solution

Keeping in view of available operational machinery received from UNIDO-GEF project for KLA, PTA (SZ)-ES revisited its operations and after consultation with sister organizations like KATI (Korangi Association of Trade and Industries) and SSWMB, stepped forward to initiated Rain emergency operation from 9th Aug 2022. When the project beneficiaries realized that on-call machinery and resources are available to use and streets are drained all rain water, Progress and satisfaction was a natural choice. The approach and usage suction machines in all streets of Sector 7-A resonated with in terms of both the project ultimate support

and solution and the on-call service from Solid Waste facility center's utility accepted by all parties. PTA (SZ)-ES has dedicated teams to respond calls from its members and assigned specific emergency numbers to call machines.

### Result

The PTA (SZ)-ES's response towards Rain Emergency has resulted in a change to its previous Monsoon condition when rain water stayed for long a month and aesthetic as well as business activities suffered a lot. The processes from planning to action, improved the impact of UNIDO-GEF project and putting new efficiencies in place. For business activities, commuting has dramatically improved within a short span of time after heavy rains.

### **Story # 2: Clean streets for a cleaner environment and reduced health risks**

There are more than 70,000 businesses and families associated with Karachi's Korangi Leather Area (KLA) Sector 7-A. Litter from domestic waste to construction material to industrial debris is dumped on the streets of Korangi Leather Area (KLA)-Karachi on daily basis. The smell and unsightly streets not only make their daily commute unpleasant but also significantly increases the risk of developing physical and mental health problems. The sector 7-A Korangi Leather Area Karachi exhibited a similar picture.

UNIDO with funding from the Global Environment Facility (GEF) under the project strengthened the system with a sustainable and yet resilient solution for cleaning the area.

The project provided Mechanical Street Sweepers to PTA (SZ) for the efficient cleaning of roads. These mechanical street sweepers allow multiple cleaning controls such as water pressure, the speed of broom rotation, and broom height enabling the operator to effectively clean any hard surface. The PTA (SZ) provided sanitation workers with appropriate skills to carry out sanitation work and personal protective equipment (PPE) including, jackets, boots, headgear, gloves, and masks to ensure compliance with the laws concerning sanitation.

The efforts transported Sector 7A which once had unsightly streets into a more environmentally clean area with reduced health and safety risks. The support from the UNIDO and the GEF has changed the aesthetics of the KLA which has not just improved the access to the area but also decreased the health risk of communities in the area.

### **Story # 3: Sustainably Reducing Carbon Footprint and Waste Output with Solid Waste Management in Korangi Leather Area- Karachi**

One of the most critical environmental challenges globally is industrial waste management. Leather waste includes solid organic wastes in the form of un-tanned (trimmings, fleshings, splits) and tanned (trimmings, splits, and shavings) waste from raw hides and skins, semi-processed leather, as well as sludge as a result of wastewater treatment that contributes to environmental damage to soil and groundwater as well as emissions of odor and poisonous greenhouse gases into the atmosphere.

The project "Transforming the leather processing industries towards low emissions and climate-resilient development paths in Pakistan (Korangi-Karachi)" set out to achieve sustainable waste management of Industrial waste in the Korangi Leather Area (KLA) Karachi.

According to the validated waste quantification study conducted in the KLA, the tanneries in KLA generate 140 tons of waste per day causing major environmental havoc by polluting the water, air, and soil. Under this project, one component is the demonstration of waste management and practices within KLA processing sectors of Sindh Province. The project followed a structured approach for the collection, transportation, and disposal of waste in the leather area sector 7-A Korangi Karachi. The waste management teams were given waste handling equipment, including waste containers, a garbage compactor, a sewer sludge suction machine, a tractor front-end loader, an excavator, and tractors with hydraulic tipping trollies, along with personal protective equipment (PPE) and also build their capacity on techniques and practices for efficient waste management.

The project has successfully reduced the carbon footprint and waste output by properly managing 1,000 tonnes of solid waste properly in KLA amounting to reducing 624KH of CO<sub>2</sub>. Please see project advocacy video showcasing these results with the following link: <https://www.youtube.com/watch?v=ux0ICoHTkxw>

## **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.

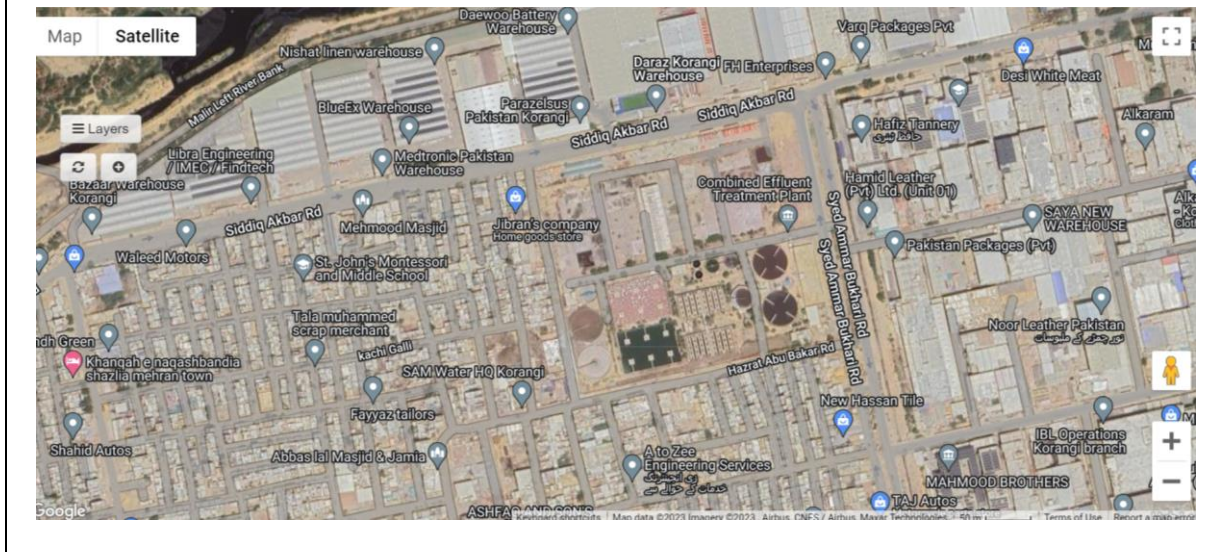
Web mapping applications such as [OpenStreetMap](#) or [GeoNames](#) use this format. Consider using a conversion tool as needed, such as: <https://coordinates-converter.com>

Please see the Geocoding User Guide by clicking [here](#)

Location Name	Latitude	Longitude	Geo Name ID	Location and Activity Description
Korangi Industrial Area	N 24° 50' 9"	E 67° 6' 57"	1346842	Industrial Area

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

Korangi Industrial Area (KIA) is a sprawling industrial zone located in the southeastern part of Karachi, Pakistan. Spanning an extensive area of approximately 8,000 acres, KIA stands as one of the largest and most significant industrial areas in the city. Within this industrial hub, a wide array of sectors thrive, including manufacturing, leather, textiles, chemicals, pharmaceuticals, and food processing. Notably, KIA boasts the presence of Korangi Leather Area (KLA), housing 120 tanneries, making it the second largest leather cluster in Pakistan. These tanneries play a vital role in processing raw animal hides and transforming them into various leather products like shoes, bags, and belts. The leather industry within KIA holds great economic importance, making substantial contributions to the overall economy of Karachi and Pakistan.





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**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.

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

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

<b>Risk ratings</b>	
Risk ratings will assess 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:	
<b>High Risk (H)</b>	There is a probability of greater than <b>75%</b> that assumptions may fail to hold or materialize, and/or the project may face high risks.
<b>Substantial Risk (S)</b>	There is a probability of between <b>51%</b> and <b>75%</b> that assumptions may fail to hold or materialize, and/or the project may face substantial risks.
<b>Moderate Risk (M)</b>	There is a probability of between <b>26%</b> and <b>50%</b> that assumptions may fail to hold or materialize, and/or the project may face only moderate risk.
<b>Low Risk (L)</b>	There is a probability of up to <b>25%</b> that assumptions may fail to hold or materialize, and/or the project may face only low risks.