



Project Implementation Report

(1 July 2022 – 30 June 2023)

Project Title:	Enhancing Environmental Performance in the Expanded and Extruded Polystyrene Foam Industries in Turkey
GEF ID:	10082
UNIDO ID:	170008
GEF Replenishment Cycle:	GEF-7
Country(ies):	Turkey
Region:	ECA - Europe and Central Asia
GEF Focal Area:	Chemicals and Waste (CW)
Integrated Approach Pilot (IAP) Programs¹:	
Stand-alone / Child Project:	<i>Stand alone</i>
Implementing Department/Division:	Choose an item. TCS/CCM/RMC
Co-Implementing Agency:	<i>N.A.</i>
Executing Agency(ies):	Ministry of Environment Urbanization and Climate Change of Turkey (MoEUCC)
Project Type:	Full-Sized Project (FSP)
Ap	36 months
Extension(s):	<i>N.A.</i>
GEF Project Financing:	\$US 3,195,000
Agency Fee:	\$US 303,525
Co-financing Amount:	\$US 26,259,954
Date of CEO Endorsement/Approval:	6/8/2021
UNIDO Approval Date:	7/9/2021
Actual Implementation Start:	8/10/2021
Cumulative disbursement as of 30 June 2023:	USD 3,170,000

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

Mid-term Review (MTR) Date:	8/1/2023
Original Project Completion Date:	7/9/2024
Project Completion Date as reported in FY22:	Click or tap to enter a date. N.A.
Current SAP Completion Date:	7/31/2025
Expected Project Completion Date:	7/31/2025
Expected Terminal Evaluation (TE) Date:	7/31/2025
Expected Financial Closure Date:	7/31/2025
UNIDO Project Manager ² :	Rodica Ella Ivan

I. Brief description of project and status overview

Project Objective
<p>The main objective of the project is to promote the replacement of persistent organic pollutants with environmentally sound alternatives in the EPS and XPS foam industries in Türkiye</p> <p>The project's intervention has been organized into four components:</p> <ul style="list-style-type: none"> • Component 1. Regulatory Strengthening, capacity building, stakeholder awareness and verification of environmentally sound alternatives for the replacement of HBCD • Component 2. Elimination of HBCD use in the EPS sector in Turkey • Component 3. Elimination of HBCD use in the XPS sector in Turkey • Component 4. Monitoring and evaluation

Baseline
<p>HBCD is a persistent hazardous chemical and especially toxic for aquatic ecosystems. Stockholm Convention³ has determined that HBCD can lead to significant adverse human health and environmental effects and subject to long-range environmental transport. The production of HBCD has decreased in the last few years and there are already available on the market chemical alternatives to replace HBCD in high-impact polystyrene (HIPS) and textile back-coating.</p> <p>After any alternative becomes available in commercial quantities, it will take some time for the industry to seek qualification and re-certification of polystyrene bead and foam products for fire-</p>

² Person responsible for report content

³ Hexabromocyclododecane is listed in Annex A to the Stockholm Convention with specific exemption for production and use a flame retardant

rating⁴. In Turkey, the main use of HBCD is in the expanded (EPS) and extruded (XPS) foam industries, as a flame retardant. To enhance environmental performance, this project is supporting the replacement of HBCD in the EPS and XPS production with environmentally sound alternatives.

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 management⁵, 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 Ratings⁶	FY23	FY22
Global Environmental Objectives (GEOs) / Development Objectives (DOs) Rating	<i>Satisfactory (S)</i>	<i>Unknown</i>
Implementation Progress (IP) Rating	<i>Moderately Satisfactory (MS)</i>	<i>Unknown</i>
Overall Risk Rating	<i>Low Risk (L)</i>	<i>Low Risk (L)</i>

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.

Since the revised project proposal has been endorsed by the de-facto government, an international bidding has been initiated following UNIDO's new grant manual, a grant evaluation committee has been organized internally. UNIDO received some offers and the evaluation will be concluded by September 2023. As a result, a national execution agency will be chosen. An official request to revise the project will be submitted to the GEF.

⁴<http://chm.pops.int/Implementation/Alternatives/AlternativestoPOPs/ChemicalslistedinAnnexA/HBCD/tabid/5861/Default.aspx>

⁵ 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

⁶ 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

PROJECT COMPONENTS AND ACTIVITIES				Indicator (Progress to 30 June 2003)	Current on-going activities						
					2022		2023			2024	
					Overall	Q1	Q2	Q3	Q4	Q1	Q2
Component 1: Regulatory strengthening, capacity building, stakeholder awareness and verification of environmentally sound alternatives for the replacement of HBCD	TA	Outcome 1.1- Up to date non-proprietary information respecting HBCD alternatives and facilitated access to them provided and broad stakeholder awareness on the issue communicated	Output 1.1.1. International references and expert contacts documented for dissemination industries stakeholders in the EPS and XPS sectors	1) Report on alternative flame retardants and disseminate the report to the sector.			Desk review; Review of country examples on shifting alternative flame retardants, contact with technical focal point for information sharing	*Completion of guidelines.	*Updating the guidelines, if needed.		
			Output 1.1.2. Workshops and information dissemination on alternatives and access to them featuring international and national experts organized and delivered to a broad range of industrial, institutional, and NGO stakeholders impacted by HBCD phaseout	1) Inception WS report 2) Workshop will be held within two days in different regions (possible location: Istanbul, Izmir, Adana) 3) Final WS (closing) 4) Needs gap analysis report and solution map			*Participation in EPSDER and IZODER assemblies to inform public on the project and alternative flame retardants. *Preparation of agenda items for participation to the assembly. Determine experts.	*Finalization of technical specialists ToR *Identification of gaps and needs	*Conduct training series		
		Outcome 1.2- Regulatory capacity support for control and enforcement to sustained HBCD phase out delivered	Output 1.2.1: Gaps in the regulatory control measures addressed in support of sustained phase out of use and import of HBCD developed and implemented with including strengthening of customs controls on HBCD imports consistent with international practice 240t of HBCD in imported production inputs are eliminated Outcome 1.2.2. Capacity building and support studies for MoEU regulatory enforcement of sustained HBCD phase out provided	Recommendation report on legal regulatory analysis			*Information sharing and capacity building activities with related ministries on HBCD elimination.	*Identify the stakeholders. * Within the scope of the building materials regulation, alternatives of hbcd will be examined. *Within the scope of the current regulation, the building materials regulation will be evaluated. *Legislation review *Gap analysis *Preparation of *Recommendation report *Customhouse legislation Review	*Active participation to annual CEVKAK summit and provide a technical contribution to it.		

		Outcome 1.3- Measures for the control and environmentally sound management of HBCD containing waste implemented	Output 1.3.1 – Support provided for development of a strategy for environmentally sound management of HBCD containing waste including definition of facility destruction requirements and options undertaken	1) Institutional and Regulatory Capacity Strengthening for Sound Chemicals Management and Contaminated Sites; 2) Identification of national capacities on HBCD containing waste Chemical waste managements 3) Training on sound chemical management to institutions and industry 4) guide documents			*Define general framework *Preparing a disposal guide for POPs waste *Technical Assessment of Waste management regulations *Waste specialist hiring process	*The content of the guideline will be detailed and discussed with the related ministry units.	*Finalize the Guideline and strategy document.		
Component 2: Elimination of HBCD use in the EPS sector in Turkey	TA	Outcome 2.1- Pre-blended polystyrene (PS) producers have required technical information and capability to complete selection and production of alternative flame retardant containing production.	Output 2.1.1: Individual pre-blended PS producers receive needed technical support on an individual proprietary basis to make optimum competitive decisions on alternative selection, finalize required investment to complete phase out and support producers of final EPS products in the production of HBCD free product				*needs and gap analysis for technical support on a proprietary basis to make optimum competitive decisions on alternative selection		*Submission of technical reports		
		Outcome 2.2 – National EPS association (EPSDER) is technically supported in its programming to provide collective information and supporting	Output 2.2.1: Technical information dissemination on alternatives for the EPS sector is delivered through EPSDER through support of provision of technical references in Turkish and sponsorship of workshop events utilizing recognized international and national experts	1) regional WS and/or webinar 2) final declaration				*Provide technical support on production and performance improvements *Laboratory measurement equipment support and needs analysis *Providing technical support for the development of EPS reactor design			

		laboratory capability for members on the use of alternative flame retardant in all stages of EPS production.	Output 2.2.2: Technical support and laboratory capacity exists in the EPSDER CEVKAK laboratories to support sector product testing and certification requirements for qualification of non-HBCD containing flame retarded EPS	1) TSE contract 2) establishment of laboratory infrastructure 3) analytical verification (sampling/analyse)			*Signing process of required Protocols with companies or specialists.	*ensuring the enhancing of laboratory technical equipment or standardization *Initiated the collecting 300 samples from the field. *Analyzing the samples with TSI or CEVKAK			
IN V.	Outcome 2.3 – Complete phase out of HBCD use in domestic production of preblended polystyrene production (975 t HBCD/year) used in the EPS sector directed to national markets is achieved	Output 2.3.1:Phase out of HBCD based production and replacement with suitable alternatives completed such that baseline HBCD consumption of 975 t/year is eliminated	1) site visits (10 enterprises) 2) TVRs 3) Final summary report 4) ESIA reports 4) Analytical verification 5) final reports 6) enterprises contracts7) Verification report	*Preparation of Technical Verification Report *Environmental Expert Hiring Process *determine the scope *Collection of necessary environmental performance data *Signing process of required Protocols with companies or specialists	*Completion of Grant Agreement Process		*Preparation of Analytical and Environmental Report	*Prepare a Final Report			
Component 3: Elimination of HBCD use in the XPS sector in Turkey	TA	Outcome 3.1- XPS producers have required technical information and capability to complete selection and	Output 3.1.1: Individual XPS producers receive needed technical support on an individual on a proprietary basis to make optimum competitive decisions on alternative selection, and finalize required					*needs and gap analysis for technical support on a proprietary basis to make optimum competitive decisions on alternative selection			

		production of alternative flame retardant containing production	investment to complete phase out.								
	TA	Outcome 3.2 – National XPS association (ISODER) is technically supported in its programming to provide collective information for members on the use of alternative flame retardant in all stages of XPS	Output 3.2.1: Technical information dissemination on alternatives for the XPS sector is delivered through ISODER through support of provision of technical reference in Turkish and sponsorship of workshop events utilizing recognized international and national experts	1) regional WS and/or webinar 2) final declaration				*Information sharing with HBCD Project in China *Increase the synergies with other related projects	*Review best Waste Management examples and practices		
	IN V.	Outcome 3.3 – Complete phase out of HBCD use in domestic production of XPS production (705 t HBCD/year) used in the XPS sector is achieved	Output 3.3.1: Elimination of HBCD based production and replacement with suitable alternatives completed such that baseline HBCD consumption of 635 t/year is eliminated	1) site visits (10 enterprises) 2) TVRs 3) Final summary report 4) ESIA reports 4) Analytical verification 5) final reports 6) enterprises contracts			*Completion of Grant Agreement Process	*Preparation of Analytical and Environmental Report	*Prepare a Final Report	Finalization of grant	
Component 4. Monitoring and evaluation	TA	Outcome 4.1 - Outcomes from project activities assessed and lessons learnt disseminated for sustainable		Management/monitoring: 1) WP 2) internal meeting 3) overall meeting 4) management support (PMU) Reporting: 1) Inception report 2) Project Implementation Report (PIR) 3) Annual reports 4) Periodic thematic reports 5)	Inception Report			Progress Report	MTR Progress Report	Progress Report	Final Report

		replicati on		Technical reports 6) Project Terminal Report Evaluation: two independent external evaluations, a mid-term evaluation and a final evaluation							
--	--	-----------------	--	---	--	--	--	--	--	--	--

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.

Risks at CEO Stage	Level		Mitigation measures	(ii) Progress to-date	New defined risk ⁷
	FY2023	Impact			
Inability to access all the necessary information related to the recent and current use of HBCD in the country.	Low	Low	The collection of comprehensive information on recent and current consumption of HBCD and on action being taken on its replacement accomplished during the PPG stage have substantially mitigated this risk both with respect to occurrence and impact at this stage of project development. With the proactive advance intervention by MoEU in engaging the private sector in both the EPS and XPS sectors and the transparent efforts of the two industry associations, a high confidence level exist in the identification of substantially all users of HBCD in these sectors and, with one expectation, obtaining their participation up to and including documented materials and official commitments to substantial investment mobilization. The one exception is an enterprise where technical information remains controlled by a multi-national company that declined project participation but who is undertaking replacement of HBCD using its own means and a preferred alternative technology that it holds patents on.	UNIDO is permanently liaising with the executing partner, MoEUCC to ensure comprehensive and accurate information collection	<input type="checkbox"/>
Absence of accessibility to technically acceptable and cost-effective alternatives to HBCD in these sectors and lack of availability of information on such alternatives necessary to support the technical capacity support the project will be provided collectively and individually	Low	Medium	Research undertaken as referenced in the baseline material and documentation disseminated during the PPG stage indicates that there are now commercially available HBCD alternatives in adequate quantities from a number of competing international suppliers represented in Turkey. These are now widely applied in OECD countries that formally were largest consumers of HBCD globally and whose enterprises continue to participate competitively in global markets for EPS and XPS products. This supply base involving large multi-national chemical suppliers has a critical commercial mass that would support continued growth as HBCD consumption is phased out globally. This is anticipated to further develop both in capacity and increased cost effectiveness with continued development work by global suppliers, not the least of which is the expectation of significant participation by China in the alternative market, something that is supported by the parallel GEF/UNIDO project in China that focuses on having such capacity in place by 2021. Turkey as major industrial chemicals market	Capacity building activities and technical consultations are being implemented by the executing partner	<input type="checkbox"/>

⁷ New risk added in reporting period. Check only if applicable.

			has a robust private sector chemical import and distribution commercial sector that can be anticipated to respond competitively where enterprises are not able to access alternatives directly. While the likelihood of this risk is considered low based on the above a medium risk is assigned recognizing that one or more of smaller enterprises, particularly in the XPS sector might lack the inherent technical capacity and means to adapt to HBCD alternatives even if available, notwithstanding technical support provided.		
Low replication of lessons learnt from project conversion activities at both the national and the international level.	Low	Low	The national replication risks originally identified have been effectively eliminated by the re-design of the project to encompass elimination of all identified HBCD consumption in the EPS and XPS sectors. In the event that other smaller consumers should appear during the project's implementation these will be included in the TA Outcomes and MoEU is committed to enforce the ultimate ban on use. Internationally, the lessons learned from the project will be publicized in relevant websites (Stockholm Convention site, GEF agencies, etc.) and forums, involving the beneficiaries and the Turkish government for effective dissemination.	Public awareness programme is addressing the replication	<input type="checkbox"/>
Insufficient number of companies showing interest in the TA activities provided under Outcomes 1.1, 2.1, 2.2, 3.1 and 3.2.	Low	Low	The comprehensive collective and individual consultations with all major participants during the PPG stage has provided a strong interest and demand for the kind of technical support offered by the project including an emphasis on such support being provided individually at an operational level, particularly by small enterprises. Continued direct consultation during implementation, particularly during the inception stage will serve to maintain this interest and commitment.	Technical consultations with SMEs sector	<input type="checkbox"/>
Reluctance by companies to undertake a conversion to HBCD alternatives	Low	Low	The level of consultation particularly related to the project's significance and the regulatory drivers that are now in place that has occurred to this point have effectively addressed any initial reluctance by enterprises in undertaking the required conversions. The timely approval and initiation of implementation activities, particular the TA components will serve to sustain this and further minimize the risk. During implementation the project will regularly monitor conversion work plans to ensure it is sustained. At this point any reluctance by companies is limited to smaller companies, particularly in the XPS sector largely due to limited technical capacity which is being addressed by the project. In any event the failure of such companies to eliminate HBCD would have minimal impact on actual project outcomes given their limited consumption and the probable outcome in that case of leaving the business.	Cooperation with private sector and mobilization of the co-financing is ensuring the conversion success	<input type="checkbox"/>
Failure of regulatory controls in place and to be implemented to effectively control illegal	Low	Medium	The proactive approach to date of putting in place the regulatory framework under the POPs regulation banning the use and import of HBCD and HBCD containing products	Regulatory measures are being assessed as a result of	<input type="checkbox"/>

<p>imports of HBCD and competing products containing HBCD thus undermining the viability of domestic enterprises using environmentally sound alternatives and potentially stimulating reversion to HBCD use.</p>			<p>provides the legal foundation for strong enforcement that addresses this. The significant policy and financial commitment across the main responsible institutions for chemicals management and its harmonization with international chemicals management and trade practice serves to support realization of effective regulatory controls required to sustain the elimination of HBCD. This is further enhanced by capacity building and focusing the regulatory inspection mandate of the General Directorate for Construction and General Directorate of Customs on the HBCD issue at import and application stages through updating HS Codes and market surveillance.</p>	<p>the legislative survey</p>	
<p>The transition and ultimate elimination of HBCD will have adverse environmental impacts at a local level.</p>	<p>Low</p>	<p>Low</p>	<p>Albeit low, the principal direct environmental risks currently identified with the use of HBCD, both in terms of likelihood and impact are workplace exposure to it, its releases of the chemical to air, water and soil during the production process, and potential for release HBCD from waste at end of life for products containing it. The replacement of HBCD with alternatives having less environmental or workplace, health risk is essentially positive in terms of risk reduction. However, the project Environmental and Social Management Plan (ESMP) developed during the PPG process (Annex I) makes provision for the evaluation and upgrading as required of enterprise operational practices to minimize any such releases consistent with national regulations. In the case of waste issues, the project itself in Component 1 supports national strategy development to address HBCD containing wastes as part of a broader national program to address priority chemicals containing waste. Specific environmental risks and their mitigation are addressed in the ESMP contained in Annex I.</p>	<p>Site environment impact assessment reports have been developed for each project site, as an integral part of the conversion process</p>	<p><input type="checkbox"/></p>
<p>Adverse socio-economic impacts could result from the aggressive elimination of HBCD in the EPS and XPS</p>	<p>Low</p>	<p>Medium</p>	<p>Potential socio-economic impacts could result in the event that enterprises were forced out of these particular sectors with resultant negative local employment and economic impacts. At a national level this could result in either a shortage of critical products, particularly for the construction sector and/or market shifts to imported products with resultant impacts on the national balance of payments. The demonstrated economic and business strength of both sectors generally serves to minimize this risk, qualified by there being some higher risk to smaller, less technically capable enterprises. Additionally, these potential impacts will be monitored both by the government stakeholders and project implementation team and the project implementation strategy will retain the flexibility to respond as required. The ESMP in Annex I further elaborates this risk area. Gender related issues are addressed separately in the gender Assessment Study (in line with the</p>	<p>ESMP monitoring is ensured by executing partner, MoEU</p>	<p><input type="checkbox"/></p>

			Annex H of the CEO project document).		
Climate Change Risk	Low	Low	There are no direct climate change risks such as storms, floods and drought that are currently identified as applying to activities or facilities associated to the project. The STAP guidance on climate risk screening has been considered.	The STAP guidance on climate risk screening has been considered	<input type="checkbox"/>

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.

COVID-19 Related Risks and Potential Opportunities
There are certain risks related to the current pandemic that could have an impact in the implementation of the project. These have been grouped in three main categories:

- Project delivery modality: If the restrictions related to the current pandemic continue in the coming months, there will be a constrain impact regarding the actual project delivery modality which is planned around face-to-face interaction and international experts that would need to travel, particularly in the early implementation stage. A certain number of meetings have been planned under the main outcomes and outputs between enterprises, institutional/civil society and other stakeholders. If the situation arises, the scope will be shifted towards web-based conferencing and interactive virtual visit technical and platforms, particularly in the case of resource people (i.e. international experts) is restricted and whenever COVID-19 protection and mitigation measures are not feasible (masks, social distancing, etc.).
- Supply chain and enterprise financial viability: Some potential risks related to the supply chain and enterprise financial viability could arise in light of the pandemic.
These risks have been identified and if necessary they will be addressed and mitigated. There are low risks associated with the supply chain disruptions on the required replacement chemical supplies and consumables (since imported capital equipment requirements with technical support are minimal). However, these risks are mitigated by the relatively advanced state of conversion in place as well as the maintenance of commercial supply chains, particularly with the European Union during the pandemic. Overall, this is manageable at the enterprise level and it is not likely to affect the project in a significant manner.
The possible slowdown on the economic activity should be considered as a risk that could impact enterprises and their financial viability. At the inception stage, the country project executing entity (Ministry/PMU) assessed the current situation regarding production and sales of the sector as well as the financial status before the final commitments to individual enterprises was made. Currently, manufacturers in Turkey have been producing for both the domestic and the foreign market. In the internal market, the construction industry has been heavily affected by the COVID-19 pandemic and it has decreased in general terms. However, European countries have shifted to manufacturers from Turkey instead of manufacturers in the East due to transportation problems. The fall in petroleum has also have an impact on the increase of market demand. All these circumstances have led to a growth on the production of EPS pre-blended enterprises. On another side, the demand for single-use plastics have increased. Since flame retardants are not generally used in this type of materials, this has resulted in an overall increase in the EPS sector that produces GPPS.
- Potential cluster infection outbreaks in the manufacturing workplaces: One risk that could have the most significant implication is the impact of potential cluster infection outbreaks in the enterprise manufacturing workplaces and it is important to consider how the project can support mitigation and respond to the impacts on the implementation if this situation occurs. At the project inception phase, an assessment has been made regarding the potential for cluster outbreaks in the individual industrial settings at each beneficiary enterprise inclusive of providing and assessing COVID-19 mitigation plans that are consistent with the national and WHO public health guidance.

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

The project had a 3 months delay that was caused by local administrative procedures in conducting interviews and appointing the project team (necessary lead time for identifying and contracting local expertise). However, at current date project is back on track.

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

The Mid Term review has been initiated in August 2023 and it is currently on-going. The results will be available with the PIR 2024

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

X 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).

Notes on new risks:

- *If new risks have been identified during implementation due to changes in, i.e. project design or context, these should also be listed in (ii) below.*
- *If these new/additional risks are related to Operational Safeguards # 2, 3, 5, 6, or 8, please consult with UNIDO GEF Coordination to discuss next steps.*
- *Please refer to the UNIDO [Environmental and Social Safeguards Policies and Procedures \(ESSPP\)](#) on how to report on E&S issues.*

Please expand the table as needed.

E&S Risks	Parameters to be measured	Monitoring methods and procedures used (e.g. sampling)	Timing/Frequency of measurement	Sampling/monitoring location	Responsibility
Human exposure risks to brominated flame retardants in the workplace	WPHS procedures and practices Worker health records	Inspection	Annually	EPS and EXPS enterprises	PMU Labor authorities
Environmental release risks from production: As in any operation utilizing chemical inputs a potential risk of unintended release of the chemical via an available environmental path exist in	Plant and ambient particulate Waste water quality (as applicable) Waste generation	Regulatory inspection and prescribed sampling	Annually and key process change milestones	EPS and EXPS enterprises	Enterprises PMU

E&S Risks	Parameters to be measured	Monitoring methods and procedures used (e.g. sampling)	Timing/Frequency of measurement	Sampling/monitoring location	Responsibility
these production operations					
General environmental and health impact risk of alternative flame retardants:	Characteristics of alternative flame retardants	Technical literature Manufacturers specifications	Upon selection for trials	EPS and EXPS enterprises	Enterprises PMU Technical experts
Risk of mixing of HBCD chemical from recycled finished material products	Product sampling	Sampling Sector or TSI laboratory	Routine regular regulatory product surveys	Retail and wholesale outlets XPS enterprises	Enterprises Department of Building Materials TSI
Improper waste management risks applicable to disposal of scrap material as a result of trials, residual stockpiles of HBCD, and HBCD containing product generated from demolition waste	Waste type and disposal methods assessment	Sampling and tracking of waste generation disposal records	Regular regulatory site visits (at least annually)	EPS and XPS enterprises	PMU
Risk of Import and export of EPS and XPS products containing HBCD	Chemical codes	Inspection Records Sampling	Upon import	Ports of entry or enterprise sites	PMU Customs authorities
Failure of small-scale manufacturers as a result of competitive issues created by mandatory elimination of HBCD	Financial health indicators (as volunteered)	Financial information review	As required	At subject enterprise.	PMU
Public safety risks created by use of building materials without flame retardants	Presence or absence of product with or without flame retardant	Sampling Inspection of labels	Routine regular regulatory product surveys	Retail and wholesale outlets Construction sites XPS enterprises	Enterprises Department of Building Materials TSI
(ii) New risks identified during project implementation (if not applicable, please insert 'NA' in each box)	NA	NA	NA	NA	NA

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).

The initial stakeholder project consultation workshop was held on 29.11.2021. Experts representing the MoEUCC, stakeholders operating in the EPS and XPS sectors, and two stakeholder associations attended the workshop. The meeting held to inform the stakeholders about the progress of the project implementation.

- ✓ Regarding Project Information Dissemination program, a web site has been designed.
<https://kalicikirleticiler.com/>

A web site has been designed to achieve awareness and dissemination targets.

Summary of Beneficiary Enterprise Technical Verification Results, Conclusions, and Recommendations Report has been prepared and submitted by National Technical Consultant (NTC) and International Technical Advisor

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

The Project Steering Committee is working closely with key project stakeholders such as the 10 participating enterprises across the selected regions, the two lead industrial associations, technical/operational experts or plant operators involved in training and technical assistance activities The Project is working closely with relevant local authorities, civil society stakeholder groups, and NGOs on project issues.

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

[10082_2023_PIR_UNIDO_Turkey_HBCD_Up-dated Work Plan of Executing Agency](#)

[10082_2023_UNIDO_InceptionWS_Turkey_HBCD](#)

[10082_2023_UNIDO_Turkey_HBCD_1st_PSC_Meeting Minutes](#)

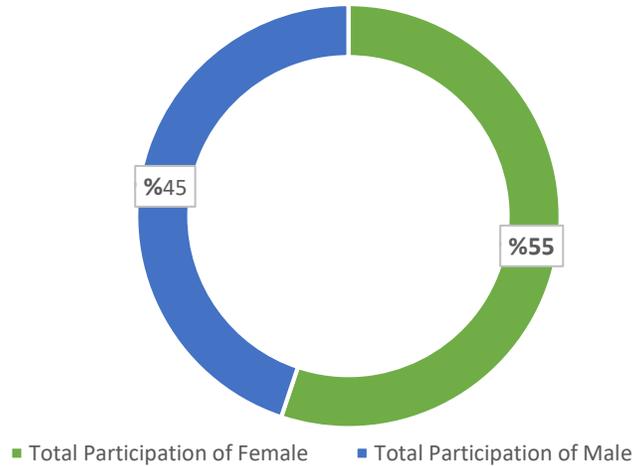
VI. Gender Mainstreaming

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),.

Integrating gender considerations and analysis into these reporting mechanisms ensures they provide a holistic picture of socio-economic and environmental elements related to eliminating the HCBD. We faced many challenges during the creation phase of this map as lack of sex-disaggregated data/indicators and not fully integrating the gender responsive information to HBCD inception report. This study will help us in the tracking progress over time in subsequent reports, which requires identification of gender-linked and/or sex-disaggregated indicators.

Additionally, PMU also ensured the number of male and female participants was **almost equal** during project related meetings. Also, The study on HBCD gender disaggregated data of enterprises EPS&XPS has been prepared during PPG Phase.

Gender Disaggregated Data



Title of the Event	Date	Type	Number of Participants		
			Total	Female	Male
Initial Stakeholder Project Status Workshop	29.11.2021	Workshop	20	11	9
1st Coordination Meeting	23.06.2022	Coordination Meeting	10	6	4
PSC 1st Meeting	20.07.2022	Project Steering Committee Meeting	16	10	6
2nd Coordination Meeting	26.08.2022	Coordination Meeting	9	6	3
Project Working Group Meeting	12.09.2022	Working Group Meeting	8	6	2
Field Visit-Ravago	13.09.2022	Field Visit	13	6	7
Field Visit-BTM	14.09.2022	Field Visit	9	4	5
Field Visit-Dinamik Isı	15.09.2022	Field Visit	9	2	7
Field Visit-CFN Kimya	20.09.2022	Field Visit	10	5	5
Field Visit-İzocam	21.09.2022	Field Visit	6	4	2
Field Visit-Eryap	22.09.2022	Field Visit	6	5	1
Field Visit-ODE	23.09.2022	Field Visit	6	5	1
3rd Coordination Meeting	26.09.2022	Coordination Meeting	9	6	3
Field Visit-Wallboard	27.09.2022	Field Visit	7	2	5
Field Visit-Aschem	29.09.2022	Field Visit	9	3	6
Field Visit-Dioki	29.09.2022	Field Visit	6	2	4
Project Evaluation Meeting	17.10.2022	Evaluation meeting	10	6	4
Coordination Meeting	7.11.2022	Coordination Meeting	10	6	4
2nd Project Evaluation Meeting	15.12.2022	Evaluation meeting	12	7	5

Note: The gender disaggregated data are assessed on annual basis for each calendar year; for the year 2023 such data will be available in December 2023

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 Project Information Dissemination program has been initiated.
Project web site has been designed.

<https://kalicikirleticiler.com/>

The web site has been designed to achieve awareness and target the project stakeholders.

- ✓ Summary of Beneficiary Enterprise Technical Verification Results, Conclusions, and Recommendations Report has been prepared and submitted by National Technical Consultant (NTC) and International Technical Advisor (ITA).
- ✓ Quarterly Activity reports are delivered on time by NTC and ITA.

Öncelikli
Kimyasallar

Ana Sayfa Projeler Belgeler KİM/EM İletişim



Screenshot: <https://kalicikirleticiler.com/turkiyede-genlestirilmis-ve-sikistirilmis-polistiren-kopuk-endustrilerinde-cevresel-performansin-arttirilmesi-projesi/>

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

Please list the relevant knowledge management mechanisms/tools and any documents that will be submitted in addition to the report, e.g.:

- *online information exchange/sharing platforms*
- *relevant technical reports*
- *Link to project websites, videos, publications*
- *flyers, etc.*

All attachments are to be named as per the GEF required format, i.e.: "GEFID_Document Title", e.g. 9714_Flyer.

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.

Component 1: Regulatory strengthening, capacity building, stakeholder awareness and verification of environmentally sound alternatives for the replacement of HBCD

- ✓ A meeting conducted with Turkish Standards Institute (TSI) officials to discuss detecting HBCD in the EPS and XPS products. In this regard, TSI requested a financial and technical assistance for their laboratory to complete the product testing.
- ✓ Inception workshop was completed. All aspects of HBCD project introduced and discussed with all participants.
- ✓ The website of HBCD project developed due to disseminate the project information and updates.
- ✓ The brochures that includes the project information has been created and published.

Component 2: Elimination of HBCD use in the EPS sector in Turkey

- ✓ Field visits provided to four EPS beneficiaries. During those visits, their needs identified and verification of the Beneficiaries investment on phase-out of HBCD was completed. The main outcome of the field visits, technical verification reports (TVR) prepared by the national technical expert (NTE) for each beneficiary individually
- ✓ According to the TVRs, grant agreements were finalized to allocate sixty percent (%60) of the total payment initially to four EPS beneficiaries. Finalized agreements were signed by both Parties. After completion of verification stage and all related process, remaining balance (%40) of grant will be actualized. All beneficiary companies namely mentioned in "Revised submission deadline of Interim Reports and Planned Payment Schedule" section.
- ✓ Environmental and Social Assessment expert contracted. A format of the report and its content was specified, and a roadmap was driven. EPS Beneficiaries environmental compliance certificates and amount of hazardous waste declarations were received as an initial step.
- ✓ To verify the EPS Beneficiaries compliance on the national environmental and occupational health and safety regulations, their relevant certificates, emissions data, and inspection records requested from provincial directorates of beneficiaries.
- ✓ Progress Reports including technical recommendations and verification data has been prepared and submitted by National Technical Expert and International Technical Adviser.

Component 3: Elimination of HBCD use in the XPS sector in Turkey

- ✓ Field visits provided to six XPS beneficiaries. During those visits, their needs identified and verification of the Beneficiaries investment to phase-out of HBCD was completed. The main outcome of the field visits, technical verification reports prepared by the national technical expert for each beneficiary individually.
- ✓ According to the TVRs, grant agreements finalized to allocate sixty percent of the total payment initially to six XPS beneficiaries. Except one beneficiary (Wallboard), finalized agreements were signed by both Parties. (Annex IV- Correspondences- Wallboard) After completion of verification stage and all related process, remaining balance (%40) of grant will be actualized. All beneficiary companies namely mentioned in "Revised submission deadline of Interim Reports and Planned Payment Schedule" section.
- ✓ Environmental and Social Assessment expert contracted. A format of the report and its content was specified, and a roadmap was driven. XPS Beneficiaries environmental compliance certificates, type, and amount of hazardous waste declarations were taken as an initial step.
- ✓ To verify the XPS Beneficiaries compliance on the national environmental and occupational health and safety regulations, their relevant certificates, emissions data, and inspection records requested from provincial directorates of beneficiaries.
- ✓ Progress Reports including technical recommendations and verification data has been prepared and submitted by National Technical Expert and International Technical Adviser.
- ✓

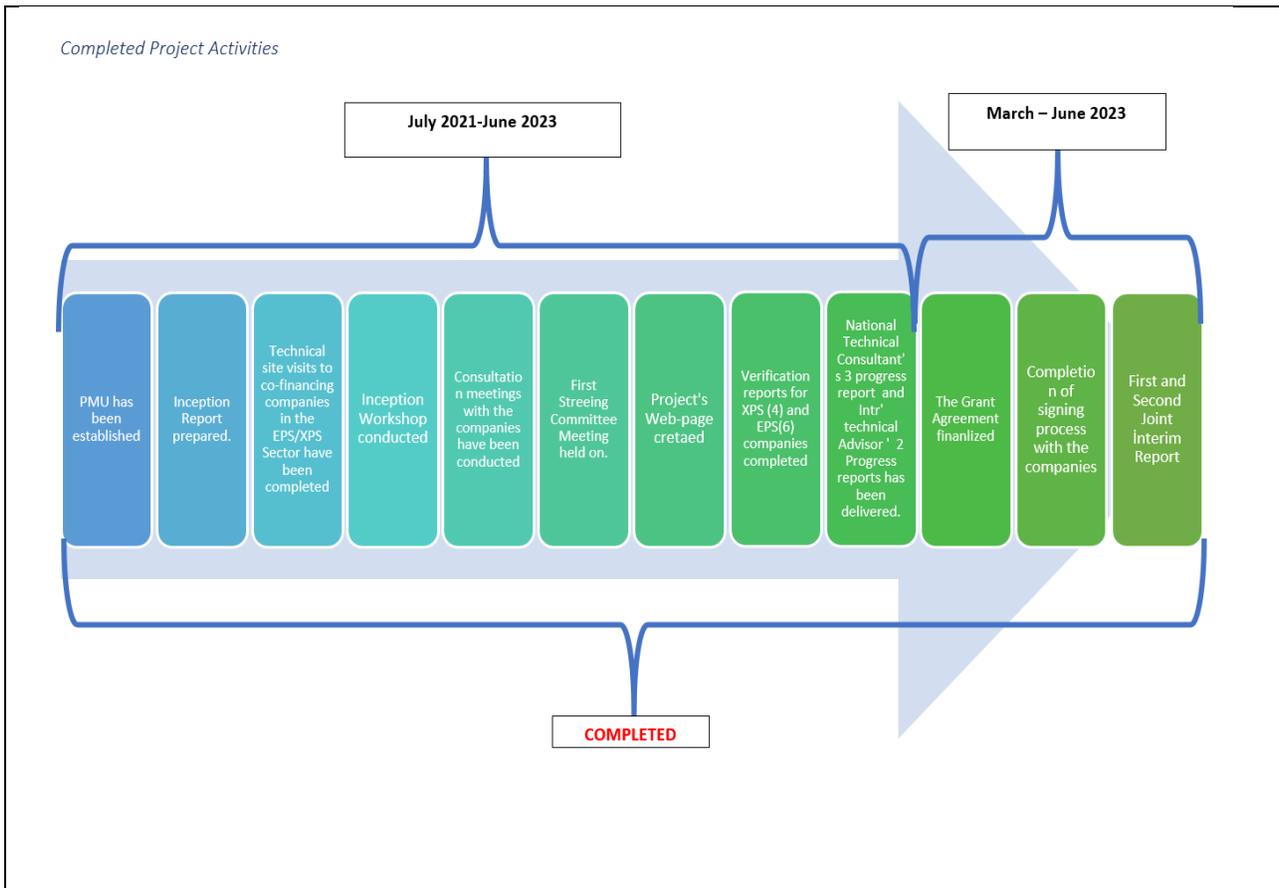
Component 4: Monitoring and evaluation

The project monitoring and evaluation is carried out according to UNIDO and GEF programming policies and procedures.

- Discussed the roles and responsibilities of the project team, including reporting and communication lines and conflict resolution mechanisms.
- Reviewed the results framework and finalize the indicators, means of verification and monitoring plan.
- Discussed reporting, monitoring and evaluation roles and responsibilities and finalize the M&E budget.
- Identified the national/regional institutes to be involved in project-level M&E.

Concrete Deliverables

- ✓ Kick-off meeting has been conducted
- ✓ Inception Workshop has been conducted and its report has been prepared.
- ✓ Gender Mainstreaming Expert is contracted on annual basis



2. Please briefly elaborate on any **minor amendments**⁸ 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	
<input type="checkbox"/>	Components and Cost	
<input type="checkbox"/>	Institutional and Implementation Arrangements	
<input type="checkbox"/>	Financial Management	
<input checked="" type="checkbox"/>	Implementation Schedule	<i>Revised work plan and field execution schedule</i>
<input type="checkbox"/>	Executing Entity	
<input type="checkbox"/>	Executing Entity Category	
<input type="checkbox"/>	Minor Project Objective Change	
<input type="checkbox"/>	Safeguards	
<input type="checkbox"/>	Risk Analysis	
<input type="checkbox"/>	Increase of GEF Project Financing Up to 5%	

⁸ 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"/>	Co-Financing	
<input type="checkbox"/>	Location of Project Activities	
<input type="checkbox"/>	Others	

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

*Financial report is presented as relevant Annex:
10082_2023_UNIDO_Financial_Report_Turkey_HBCD*

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.

*Please fill in the below table or make a reference to a file, in case it is submitted as an annex to the report.
Up-dated work plan is available as Annex*

X. Synergies

1. **Synergies** achieved:

Synergy between Turkey HBCD Project and China HBCD Project is envisaged. During current reporting period, PMU and main technical expert participated in the results dissemination virtual event organized jointly with PMU China, on the available conversion technologies and on the results of the MTR Report of China project. Farther consultative technical meeting are planned in 2024.

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

- **Key project successes and factors which supported these successes.**
 - Stakeholder engagement with NGOs, related companies and institutions has been improved and collaboration established within the context of HBCD Project.
 - The project activities have been implemented considering gender balance and kept the record of disaggregated data.
- **Lessons Learnt**
 - Communication and cooperation among different expertise areas, sectors and institutions are essential. The active involvement of Project Stakeholders as well as all relevant private sector, institutions and academia representatives should be incentivised. To ensure national ownership and stakeholder engagement, frequent exchange of information and knowledge is an effective tool.
 - Under “Enhancing environmental performance in the expanded and extruded polystyrene foam industries in Türkiye” project, the map of gender considerations has been created for identification of needs and gaps on gender mainstreaming.
 - The new ways for adapting to Covid-19 setting and the measures such as virtual evaluation consultations, online meeting, digital verification strategy and digital approval process (if needed) have been agreed by project partners.

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](https://openstreetmap.org/) or [GeoNames](https://www.geoNames.org/) 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](#)



Project Activity, Beneficiary and Partner locations

Note: there is no change in project site locations, these remain in line with the CEO approved project document

EXPLANATORY NOTE

1. **Timing & duration:** Each report covers a twelve-month period, i.e. 1 July 2022 – 30 June 2023.
2. **Responsibility:** The responsibility for preparing the report lies with the project manager in consultation with the Division Chief and Director.
3. **Evaluation:** For the report to be used effectively as a tool for annual self-evaluation, project counterparts need to be fully involved. The (main) counterpart can provide any additional information considered essential, including a simple rating of project progress.
4. **Results-based management:** The annual project/programme progress reports are required by the RBM programme component focal points to obtain information on outcomes observed.

Global Environmental Objectives (GEOs) / Development Objectives (DOs) ratings	
Highly Satisfactory (HS)	Project is expected to achieve or exceed <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".
Satisfactory (S)	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.
Moderately Satisfactory (MS)	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.
Moderately Unsatisfactory (MU)	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.
Unsatisfactory (U)	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.
Highly Unsatisfactory (HU)	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.

Implementation Progress (IP)	
Highly Satisfactory (HS)	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".
Satisfactory (S)	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.
Moderately Satisfactory (MS)	Implementation of <u>some</u> components is in substantial compliance with the original/formally revised plan with some components requiring remedial action.
Moderately Unsatisfactory (MU)	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.
Unsatisfactory (U)	Implementation of <u>most</u> components is <u>not</u> in substantial compliance with the original/formally revised plan.
Highly Unsatisfactory (HU)	Implementation of <u>none</u> of the components is in substantial compliance with the original/formally revised plan.

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