



REPUBLIC OF TÜRKİYE  
MINISTRY OF ENVIRONMENT,  
URBANIZATION AND CLIMATE CHANGE



# Enhancing Environmental Performance in the Expanded and Extruded Polystyrene Foam Industries in Türkiye “HBCD Project”

## Mid Term Review

January 2024

# Project



- The Global Environmental Facility (GEF) is providing support for the execution of a project titled "Enhancing Environmental Performance in the Expanded and Extruded Polystyrene Foam Industries in Türkiye" (the Project). The primary objective of the Project is to eliminate the use of a flame retardant (FR) known as Hexabromocyclododecane (HBCD or HBCDD) in the production of expanded polystyrene (EPS) and extruded polystyrene (XPS) foam, replacing it with environmentally sustainable alternatives.
- The project started on July 8th, 2021 and now getting closer to the end of its 36-month implementation period due June 30th, 2024.



---

# Purpose of the MTR

---



- As required by the GEF's Monitoring and Evaluation Policy, MoEUCC has commissioned an independent Midterm Review (MTR) of the project.
- As noted in the guidance document on conducting Midterm Reviews of UNDP-supported, GEF-funded projects (hereinafter referred to as "the MTR guidance document"), the primary purpose of the MTR is to help ensure that the project is on track to achieve maximum results by its completion.
- The MTR has several focus areas.
  - Review of project strategy as defined in the Project Document
  - Assessment of progress towards targeted results
  - Monitoring of implementation and adaptive management to improve outcomes
  - Early identification of challenges and risks to sustainability
  - Emphasis on supportive recommendations, including corrective actions as needed.

# MTR Methodology



Document Review

Stakeholders Survey

Interviews

# Document Review



- Project Document.
- Documents from PPG Phase
- PIF
- CEO endorsement Letter, GEF Focal Area Tracking Tool and Indicators
- Project Results Framework
- Project Inception Report
- Project Inception Workshop Report
- Environmental and social Management Plan Report
- Monthly Progress Reports (From June 2022 to December 2023, total 16 reports)
- Project Implementation Review (PIR) – There is one available PIR reviewing the period between July 2022 and June 2023.
- Back to Office Reports after field visits
- Financial and administrative guidelines used by the Project Team.
- Project Budget and Procurement Plan
- Quarterly Activity Reports prepared by the National Technical Advisor(5 reports are available covering the period between 23 June 2022 and 23 September 2023)
- Quarterly Activity Reports prepared by the International Technical Advisor (3 reports are available covering the period between 8 September 2022 and 8 June 2023)
- Minutes of the Project Steering Committee (PSC) meetings
- UNIDO Gender Compliance and Marker Form
- Verification Reports
- 1st and 2nd Joint Progress Report (April 2023)
- 3rd and 4th Joint Progress Report (October 2023)
- Minutes of project meetings
- Monthly Expenditure Table (last updated in September 2023)
- Payment Tracking Tool
- Protocols with EPSDER, IZODER and TSE
- Compensation agreements with EPS/XPS producers (10 files)
- UNIDO/GEF Project Operating Manual
- Stakeholders List and Contact Information
- UNIDO-MoEUCC agreement of 22 December 2021

# Stakeholders Survey



## Annex C Sample Questionnaire

Questionnaire for Stakeholders Interacting with the "Enhancing Environmental Performance in the Expanded and Extruded Polystyrene Foam Industries in Türkiye" Project  
(hereinafter – "the Project")

Respondent Name: \_\_\_\_\_ Organization: \_\_\_\_\_  
Position in the project: \_\_\_\_\_  
e-mail: \_\_\_\_\_  
Phone: \_\_\_\_\_

No	Question	Answer
1	What is your relationship with the project or how are you involved?  When have you been involved and how frequently do you interact with the project team (regularly, during the month, during seminars, etc.)?	
2	How important has your collaboration/partnership with the Project been to date, and what are your plans for such collaboration in the near future?	
3	What influence has your organization's participation in the Project's activity had on the expected results on Enhancing Environmental Performance in the Expanded and Extruded Polystyrene Foam Industries in Türkiye?	
4	What is, or what could be, the contribution from women to the Project, either on the whole or for any specific component?	
5	How has the project been useful to you or your organization/agency/association/business since its beginning?	
6	What suggestions do you have for further collaboration with the Project and/or with UNIDO/GEF for achievement of the Project targets and beyond?	
7	Do you think that the project strategy is relevant to achieving the desired outcomes? Do you think that the project strategy provides the most effective route towards expected/intended results? Do you think that the project is designed	

A written survey containing 26 questions were distributed to following recipients:

#	Name	Organization	Contacts
Ministry of Environment, Urbanization and Climate Change			
1	Bursev Doğan Artukoğlu	MoEUCC	bursev.artukoglu@csb.gov.tr
2	Gözde Aydoğ	MoEUCC	gozde.aydog@csb.gov.tr
3	Pınar Saylam	MoEUCC	pinar.saylam@csb.gov.tr
4	Ertan Öztürk	MoEUCC	ertan.ozturk@csb.gov.tr
Industry Associations			
5	Murat Kenet	EPSDER	mkenet@epsder.org.tr
		Secretary General	
6	Timur Diz	İZODER)	timur@izoder.org.tr
		Secretary General	
EPS and XPS sector companies			
6	Nur Çakı	BTM	nur.caki@btm.co
7	Remzi Uysal	Ravago	remzi.uysal@ravago.com
8	İsmail Berber	ODE	i.berber@ode.com.tr
9	Onur Eriş	Eryap	Onur.Eris@eryapgrup.com.tr
10	Çenker Çetin	Dioki	cenker.cetin@dioki.com.tr
11	Tolga Özkan	AsChem	tolgao@aschem.com.tr
12	Haldun Destan	CFN	haldun.destan@cfnkimya.com
13	Oktay Kaya	İzocam	kaya@izocam.com.tr
14	Ahmet Doğan	BZ İmşaat (Wallboard)	ahmet.dogan02@hotmail.com
15	Hakkı Tatar	Dinamik	hakki@dinamik-izmir.com

# Interviews



## List of people interviewed:

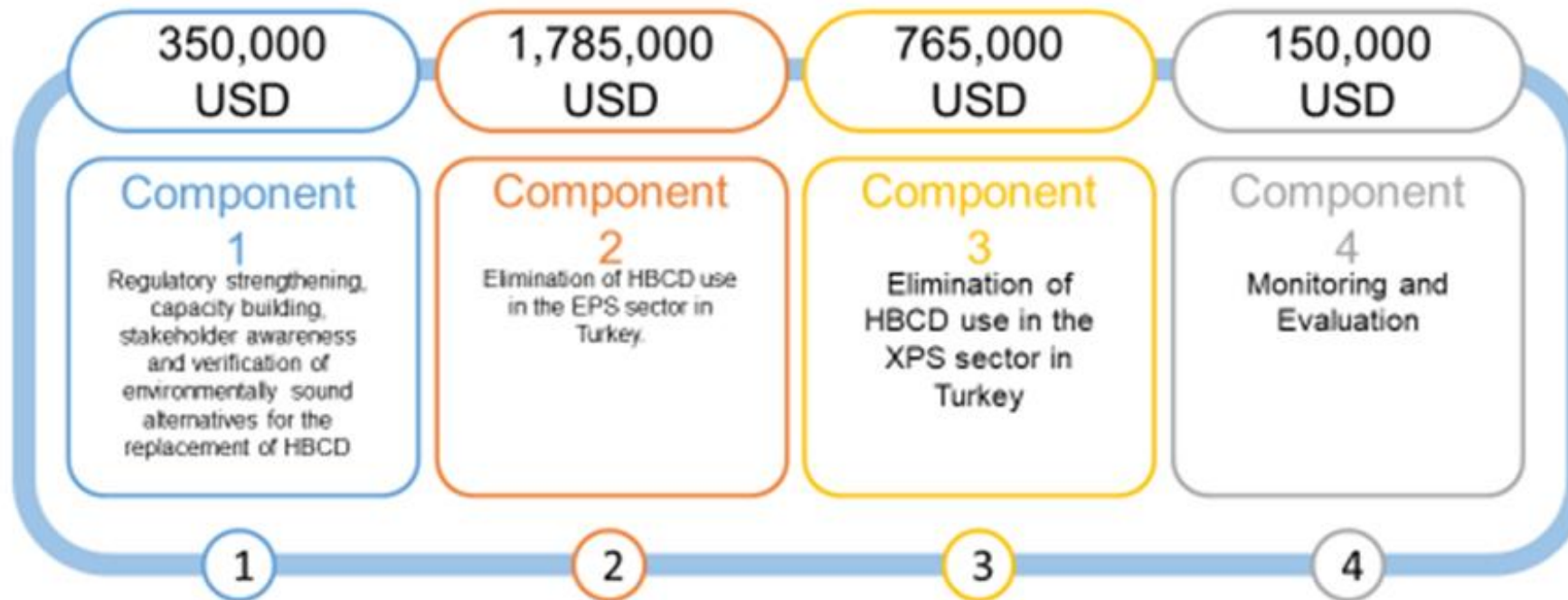
- MoEUCC: Bursev Doğan Artukoğlu, Gözde Aydoğ, Pınar Saylam
- PMU: Burak Erten Şahin (PC), Yasin Güray Hatipoğlu (PA)
- National Technical Consultant: Şerife Erçel
- Gender Mainstreaming Expert: Esra Demirkol Colosio
- EPSDER: Murat Kenet (Secretary General)
- İZODER: Timur Diz (Secretary General)
- BTM: Nur Çakı (Project Manager), Emre Tarım
- ASCHEM Petrokimya: Tolga Özkan (Team Leader)
- İZOCAM A.Ş.: Oktay Kaya (Project Manager)



# Project Structure



## Project Components





# Quantitative Outcome Indicators from the GEF Tracking Tool Targets and MTR Levels Achieved



Quantitative Outcome Indicators				
Indicator number and description	Subcategories of indicator and units	Notes from Tracking Tool	Target at CEO Endorsement	Level achieved at midterm as reported by project
9. Reduction, disposal/destruction, phase out, elimination and avoidance of chemicals of global concern and their waste in the environment and in processes, materials and products (metric tons of toxic chemicals reduced)	9.1 Solid and liquid Persistent Organic Pollutants (POPs) removed or disposed (HBCD)  metric tons	Data supporting these and the methodology associated with their calculation applicable to this core indicator are documented in Table 2 and Paragraph 18 for the EPS sector and Table 3 and Paragraph 21 for the XPS sector, and are further elaborated under Global Environmental Benefits in Paragraph 38 of the CEO Endorsement.	7,436.00	9,310.00  (end of 2023)
	9.6 Quantity of POPs/Mercury containing materials and products directly avoided  metric tons (this unit should have been cubic meter)		2,083,000.00	447,202 tons in EPS 68,558 tons (= 2,636,846 m3) in XPS (end of 2022)
11. Number of direct beneficiaries disaggregated by gender as co-benefit of GEF investment		: Indicator has been calculated based on the baseline numbers provided by the primary stakeholders during the PPG phase that have been supported by the Gender Assessment and it considers men and women participation at the project management/supervision level and men and women participation in the enterprises.	Female 182 Male 1,178 Total 1,360	Updated data not available at MTR  Gender Mainstreaming Report is in progress



---

## MTR Ratings and Achievements Summary

---

# Project Strategy

---



- The project strategy is well designed in accordance with the GEF-7 Chemicals and Wastes focal area and associated strategy and within that under Chemicals and Wastes Industrial Chemicals Program (CW 1-1) which aims at strengthening sound management of industrial chemicals, and their wastes through better control and reduction and/or elimination. It allows Türkiye to eliminate the use of a POPs listed in Annex A of the Stockholm Convention thus supporting the country's compliance with its obligations under this international agreement. This is aimed to be accomplished by introducing the application of internationally competitive technologies, techniques and approaches for eliminating HBCD in processes and products, namely EPS and XPS foam insulation. These sectors are important to the country in ensuring public safety through using fire resistant building materials and achieving increased energy efficiency in buildings and infrastructure generally.

# Objective/Outcome Rating Rubric



## **Highly Satisfactory (HS):**

*The objective / outcome is expected to achieve or exceed all its end-of-project targets, without major shortcomings. The progress towards the objective/outcome can be presented as “good practice”.*

## **Satisfactory (S):**

*The objective / outcome is expected to achieve most of its end-of-project targets, with only minor shortcomings.*

## **Moderately Satisfactory (MS):**

*The objective / outcome is expected to achieve most of its end-of-project targets but with significant shortcomings.*

## **Moderately Unsatisfactory (MU):**

*The objective / outcome is expected to achieve its end-of-project targets with major shortcomings.*

## **Unsatisfactory (U):**

*The objective / outcome is expected not to achieve most of its end-of-project targets.*

## **Highly Unsatisfactory (HU)**

*The objective / outcome has failed to achieve its midterm targets, and is not expected to achieve any of its end-of-project targets.*

# Project Objective

Highly Satisfactory (HS)



To promote the replacement of persistent organic pollutants with environmentally sound alternatives in the EPS and XPS foam industries in Türkiye.

- The project is on track to fulfill or overfulfill its most important target (elimination of the use of HBCD in EPS and XPS sectors).
- According to TVRs, necessary investments have been made by the producers and use of HBCD was terminated in EPS sector (four producers) in 2019 and in XPS sector (six producers) in 2020.

# Project Objective (Indicators)

Highly Satisfactory (HS)



Quantity of HBCD consumed and number of enterprises eliminating the use of HBCD in the production of EPS and XPS in Türkiye by conversion to environmental sound alternatives.



Implemented regulatory framework for enforcement of bans on use and import of HBCD within an overall chemicals management that is harmonized with the EU and international practice.



Tracked and quantified elimination of HBCD use and imports by the EPS and XPS sectors.



Türkiye is in full compliance with its SC Annex A obligations with respect to HBCD and providing support to other developing countries in achieving that status.



1) Majority of women's participation will be provided in activities. 2) Encourage female candidates and pay attention to gender equality in procurement processes of experts. 3) Achievement of human empowerment. 4) Paying attention to usage of gender sensitive language in all documents.



## Outcome 1.1

Satisfactory (S)



Up to date non-proprietary information respecting HBCD alternatives and facilitated access to them provided and broad stakeholder awareness on the issue communicated.

- The achieved result indicates significant progress, with updated information on alternatives being communicated to enterprises during the technical verification process by the National Consultant (NC). This dissemination of information is not only a continuation of activities initiated during the Pre-Project Phase (PPG) but also extends into activities conducted by the Project Management Unit (PMU) as part of Environmental Assessment (EA) endeavors. Notably, the NC has diligently prepared a working document encompassing an international literature review and references. This document is scheduled to be addressed comprehensively during the planned dissemination workshop.
- The achieved result demonstrates a commendable alignment with the targeted objective. The comprehensive documentation of international references, coupled with the proactive dissemination of alternative information to stakeholders during both technical verification and EA activities, underscores a thorough and collaborative approach. The forthcoming dissemination workshop is poised to further enhance the outreach and impact of the information gathered, contributing significantly to the project's overarching goals.



## Outcome 1.1

Satisfactory (S)



**Outcome indicator 1.1:** Increased awareness for stakeholders impacted by the elimination of HBCD in the EPS and XPS sectors including producers, their customers, supply chains, impacted communities, institutional stakeholders and civil society including women.



## Outcome 1.2

Satisfactory (S)



Regulatory capacity support for control and enforcement to sustained HBCD phase out delivered.

- The achieved result indicates active efforts in addressing these issues, with discussions yielding outcomes that are currently under consideration for the enhancement of the existing POPs chemicals management framework. This process is being meticulously executed through the MoEUCC, specifically by the Department of Priority Chemicals. Notably, a comprehensive list delineating specific areas of improvement within the POPs chemicals management framework has been delineated.
- The achieved result aligns effectively with the targeted objective, as evidenced by the ongoing actions undertaken by MoEUCC in collaboration with relevant agencies. The delineation of specific areas for strengthening the regulatory framework demonstrates a conscientious approach to address identified gaps comprehensively. This outcome signifies a proactive and strategic effort toward improving regulatory control measures within the chemicals management framework, particularly in the context of POPs and HBCD.

## Outcome 1.2

Satisfactory (S)



**Outcome indicator 1.2:** : Effective chemicals management regulatory control applied to HBCD and alternatives through its comprehensive within the regulatory framework provided for in regulations governing POPs, chemicals management and registration including import and export, and application of performance standards applicable to EPS and XPS building materials



## Outcome 1.3

Satisfactory (S)



Measures for the control and environmentally sound management of HBCD containing waste implemented.

- The target aimed at initiating the development of a national strategy for the management of waste containing Persistent Organic Pollutants (POPs), including Hexabromocyclododecane (HBCD). The achieved result indicates substantive progress, as the initiation of the national strategy development has commenced. Furthermore, the scope of the strategy study, specifically tailored for the management of POPs waste, including HBCD, has been delineated. Notably, a Terms of Reference (ToR) has been meticulously prepared to engage international experts integral to this study, and the procurement process for their employment has been set into motion. This outcome reflects a robust and systematic approach toward achieving the target, underscoring a comprehensive strategy formulation encompassing both national and international expertise.

## Outcome 1.3

Satisfactory (S)



**Outcome indicator 1.3:** National management strategy for POPs containing wastes including HBCD is implemented.



## Outcome 2.1

Satisfactory (S)



Preblended polystyrene (PS) producers have required technical information and capability to complete selection and production of alternative flame retardant production.

- The target aimed at ensuring that all four pre-blended Polystyrene (PS) producers utilize international and national expertise, technical information, and commercial contacts to successfully phase out HBCD. The achieved result signifies notable progress, as all four pre-blended PS producers have not only demonstrated their capacity and knowledge but have also operated competitively with environmentally sound alternatives. The engagement of these producers extends beyond the initial replacement of HBCD, focusing on the potential evolution of new and even more environmentally sound alternatives. It is noteworthy that, at the enterprise level, the final end-of-project target is effectively complete, showcasing a successful transition toward sustainable alternatives and the continued commitment to environmentally responsible practices within the PS production sector.

## Outcome 2.1

Satisfactory (S)



**Outcome indicator 2.1:** Sufficient knowledge and technical / operational capacity exist within all producers of pre-blend PS on an equitable basis.





## Outcome 2.2

Satisfactory (S)



National EPS association (EPSDER) is technically supported in its programming to provide collective information and supporting laboratory capability for members on the use of alternative flame retardant in all stages of EPS production.

- EPSDER provides the EPS sector with access to common and current technical and operational information on HBCD alternative information to eliminate HBCD usage and maintain the domestic EPS sectors competitive position after completing elimination inclusive of supporting laboratory capability available to members.

## Outcome 2.2

Satisfactory (S)



**Outcome indicator 2.2:** EPSDER provides the EPS sector with access to common and current technical and operational information on HBCD alternative information to eliminate HBCD usage and maintain the domestic EPS sectors competitive position after completing elimination inclusive of supporting laboratory capability available to members.



## Outcome 2.3

Highly Satisfactory (HS)



Complete phase out of HBCD use in domestic production of pre-blended polystyrene production (975 t HBCD/year) used in the EPS sector directed to national markets is achieved.

- All mid-term targets and even the end-of-project targets have already been achieved in terms of elimination of HBCD use in EPS sector.

## Outcome 2.3

Highly Satisfactory (HS)



**Outcome indicator 2.3:** Quantity of HBCD consumed and number of enterprises eliminating the use of HBCD in the production of EPS in Türkiye by conversion to environmental sound alternatives.



## Outcome 3.1

Satisfactory (S)



XPS producers have required technical information and capability to complete selection and production of alternative flame retardant containing production.

- Based on the information from the verification sources, all six (6) participating XPS producers have been offered and as required are utilizing international/ national expertise, technical information and commercial contacts to complete elimination of HBCD.

## Outcome 3.1

Satisfactory (S)



**Outcome indicator 3.1:** Sufficient knowledge and technical/operational capacity exist within all XPS producers on an equitable basis.



## Outcome 3.2

Satisfactory (S)



Association (IZODER) is technically supported in its programming to provide collective information for members on the use of alternative flame retardant in all stages of XPS.

- Based on the information from sources of verification, mid-term targets seem to be achieved.



## Outcome 3.2

Satisfactory (S)



**Outcome indicator 3.2:** İZODER provides the XPS sector with access to common and current technical and operational information on HBCD alternative information to eliminate HBCD usage and maintain the domestic EPS sectors competitive position after completing elimination.



## Outcome 3.3

Highly Satisfactory (HS)



Complete phase out of HBCD use in domestic production of XPS production (705 t HBCD/year) used in the XPS sector is achieved.

- All mid-term targets and even the end-of-project targets have already been achieved in terms of elimination of HBCD use in XPS sector.

## Outcome 3.3

Highly Satisfactory (HS)



**Outcome indicator 3.3:** Quantity of HBCD consumed and number of enterprises eliminating the use of HBCD in the production of XPS in Türkiye by conversion to environmental sound alternatives.



## Outcome 4.1

Satisfactory (S)



Outcomes from project activities assessed and lessons learnt disseminated for sustainable replication

- Various project management and monitoring techniques and reporting mechanisms have been implemented and are being actively used. Some recommendations to further improve those are given in the Recommendations.

## Outcome 4.1

Satisfactory (S)



**Outcome indicator 4.1:** M&E applied to project in response to needs, mid-term evaluation findings with lessons learned extracted.



# Project Implementation and Adaptive Management Rating Rubric



## **Highly Satisfactory (HS):**

*Implementation of all seven components – management arrangements, work planning, finance and co-finance, project-level monitoring and evaluation systems, stakeholder engagement, reporting, and communications – is leading to efficient and effective project implementation and adaptive management. The project can be presented as “good practice”.*

## **Satisfactory (S):**

*Implementation of most of the seven components is leading to efficient and effective project implementation and adaptive management except for only few that are subject to remedial action.*

## **Moderately Satisfactory (MS):**

*Implementation of some of the seven components is leading to efficient and effective project implementation and adaptive management, with some components requiring remedial action.*

## **Moderately Unsatisfactory (MU):**

*Implementation of some of the seven components is not leading to efficient and effective project implementation and adaptive, with most components requiring remedial action.*

## **Unsatisfactory (U):**

*Implementation of most of the seven components is not leading to efficient and effective project implementation and adaptive management.*

## **Highly Unsatisfactory (HU)**

*Implementation of none of the seven components is leading to efficient and effective project implementation and adaptive management.*

---

# Project Implementation and Adaptive Management

---



- **Rating: Satisfactory**

- The project team is well constituted and managed, with a strong core of skills and excellent working relations with all partners.
- The project has been effectively administered, demonstrating improved performance over the past ten months, successfully attaining the majority of its objectives within the designated time frame and budget constraints. Notably, despite significant turnover within the project team, including changes in the project coordinator, project assistant, and procurement expert roles, the project has maintained its momentum. Areas for refinement exist, particularly in optimizing the utilization of project management software tools, elevating the quality of reporting, and implementing more meticulous monitoring of project activities, aligning with widely accepted good practices and conventions.



# Project Implementation and Adaptive Management



## Satisfactory (S)

### Aspects evaluated:

1. management arrangements,
2. work planning,
3. finance and co-finance,
4. project-level monitoring and evaluation systems,
5. stakeholder engagement,
6. reporting, and
7. communications.

- The project team is well constituted and managed, with a strong core of skills and excellent working relations with all partners.
- The project has been effectively administered, demonstrating improved performance over the past ten months, successfully attaining the majority of its objectives within the designated time frame and budget constraints. Notably, despite significant turnover within the project team, including changes in the project coordinator, project assistant, and procurement expert roles, the project has maintained its momentum. Areas for refinement exist, particularly in optimizing the utilization of project management software tools, elevating the quality of reporting, and implementing more meticulous monitoring of project activities, aligning with widely accepted good practices and conventions.

# Project Budget



	Year 1	Year 2	Year 3	Total
<b>Component 1</b>				
Output 1.1	65,000	65,000	20,000	150,000
Output 1.2	7,000	88,000	80,000	175,000
Output 1.3	0	25,000	0	25,000
<b>Total Component 1</b>	<b>72,000</b>	<b>178,000</b>	<b>100,000</b>	<b>350,000</b>
<b>Component 2</b>				
Output 2.1	0	50,000	80,000	130,000
Output 2.2	0	100,000	20,000	120,000
Output 2.3	1,535,000	0	0	1,535,000
<b>Total Component 2</b>	<b>1,535,000</b>	<b>150,000</b>	<b>100,000</b>	<b>1,785,000</b>
<b>Component 3</b>				
Output 3.1	0	60,000	40,000	100,000
Output 3.2	34,000	33,000	33,000	100,000
Output 3.3	565,000	0	0	565,000
<b>Total Component 3</b>	<b>599,000</b>	<b>93,000</b>	<b>73,000</b>	<b>765,000</b>
<b>Component 4 (M&amp;E)</b>	<b>0</b>	<b>45,000</b>	<b>105,000</b>	<b>150,000</b>
<b>Project Management Cost</b>	<b>50,000</b>	<b>50,000</b>	<b>45,000</b>	<b>145,000</b>
<b>Project Total</b>	<b>2,256,000</b>	<b>516,000</b>	<b>423,000</b>	<b>3,195,000</b>

- Table shows the project budget as approved in CEO Endorsement.
- Total budget is \$3,195,000.

# Disbursements to Date



Component	Output	2022			2023			2024		
		Planned (Procurement Plan)	Contracted (Obligated)	Spent (Disbursed)	Planned (Procurement Plan)	Contracted (Obligated)	Spent (Disbursed)	Planned (Procurement Plan)	Contracted (Obligated)	Spent (Disbursed)
Component 1 (Outcome 1)- Regulatory strengthening, capacity building, stakeholder awareness and verification of environmentally sound alternatives for the replacement of HBCD	1.1	17,150.00	2,500.35	2,500.35	94,650.00	33,259.90	30,234.69	38,200.00		
	1.2	5,000.00			130,000.00	4,708.30	3,888.17	40,000.00		
	1.3	1,050.00	1,050.00	1,050.00	17,750.00	6,500.00	8,310.66	6,200.00		
Component 2 (Outcome 2)- Conversion from HBCD-based flame retardants promoted among EPS producers, by demonstrating economic and technical feasibility of alternative substances.	2.1	2,000.00	2,000.00	2,000.00	84,850.00	15,600.00	9,402.57	32,900.00		
	2.2	2,000.00	2,000.00	2,000.00	107,650.00	9,550.00	8,887.11	20,600.00		
	2.3				1,535,000.00	1,535,000.00	828,921.06			
Component 3 (Outcome 1)- Pilot conversion of production lines in the XPS sector in Turkey to showcase feasibility of alternatives.	3.1	2,000.00	2,000.00	2,000.00	59,250.00	17,450.00	9,402.57	24,750.00		
	3.2	2,000.00	2,000.00	2,000.00	82,850.00	8,550.00	8,887.11	29,150.00		
	3.3				565,000.00	565,000.00	300,079.99			
ME (Monitoring and Evaluation)		4,800.00	4,009.64	4,009.64	107,850.00	36,600.00	9,402.57	37,350.00		
PMC (Project Management Cost)		24,673.03	23,609.87	23,609.87	61,939.00	43,678.23	41,750.16	58,387.97		
	Total	60,673.03	39,169.86	39,169.86	2,846,789.00	2,275,891.43	1,259,166.66	287,537.97		

- Spent or contracted as of 31/12/2023: \$2,315,061.29
- To be spent in 2024: \$287,537.97
- Total budget usage (by end of project): \$2,602,599.26

Project will be completed under budget!

# Co-finance



Sources of Co-financing	Name of Co-financier	Type of Co-financing	Investment Mobilized	Committed Amount(€)	Realized amount (\$) on November 20th, 202	Realized Ratio (%)	Balance (USD)
Recipient Country Government	Ministry of Industry and Technology of Turkey (MoIT)	In-kind	Recurrent expenditures	2,104,419.00	1,753,539.00	83.33	350,880.00
Recipient Country Government	Turkish Standards Institute (TSE)	In-kind	Recurrent expenditures	1,049,800.00	892,330.00	85.00	157,470.00
GEF Agency	UNIDO	Grant	Investment mobilized	80,000.00	80,000.00	100.00	0.00
GEF Agency	UNIDO	In-kind	Recurrent expenditures	100,000.00	1,000,000.00	1000.00	-900,000.00
Private Sector	Industry Association - EPSDER	Equity	Investment mobilized	66,200.00	66,200.00	100.00	0.00
Private Sector	Industry Association - EPSDER	In-kind	Recurrent expenditures	100,000.00	100,000.00	100.00	0.00
Private Sector	Industry Association - IZODER	In-kind	Recurrent expenditures	100,000.00	100,000.00	100.00	0.00
Private Sector	Aschem	Equity	Investment mobilized	863,626.00	863,626.00	100.00	0.00
Private Sector	Aschem	In-kind	Recurrent expenditures	10,000.00	460,347.00	4603.47	-450,347.00
Private Sector	BTM	Equity	Investment mobilized	2,554,947.00	1,873,943.97	73.35	681,003.03
Private Sector	BTM	In-kind	Recurrent expenditures	10,000.00	32,360.42	323.60	-22,360.42
Private Sector	CFN	Equity	Investment mobilized	3,708,500.00	3,166,249.00	85.38	542,251.00
Private Sector	CFN	In-kind	Recurrent expenditures	10,000.00	152,950.00	1529.50	-142,950.00
Private Sector	Dinamik	Equity	Investment mobilized	140,960.00	167,152.80	118.58	-26,192.80
Private Sector	Dinamik	In-kind	Recurrent expenditures	10,000.00	25,965.03	259.65	-15,965.03
Private Sector	Dioki	Equity	Investment mobilized	1,631,758.00	1,307,911.00	80.15	323,847.00
Private Sector	Dioki	In-kind	Recurrent expenditures	10,000.00	46,977.00	469.77	-36,977.00
Private Sector	Eryap	Equity	Investment mobilized	110,000.00	2,411,976.46	2192.71	-2,301,976.46
Private Sector	Eryap	In-kind	Recurrent expenditures	10,000.00	7,649.35	76.49	2,350.65
Private Sector	Izocam	Equity	Investment mobilized	333,034.00	188,096.03	56.48	144,937.97
Private Sector	Izocam	In-kind	Recurrent expenditures	10,000.00	14,361.00	143.61	-4,361.00
Private Sector	ODE	Equity	Investment mobilized	23,050.00	343,382.23	1489.73	-320,332.23
Private Sector	ODE	In-kind	Recurrent expenditures	10,000.00	3,324.08	33.24	6,675.92
Private Sector	Ravago	Equity	Investment mobilized	5,050,757.00	5,619,702.00	111.26	-568,945.00
Private Sector	Ravago	In-kind	Recurrent expenditures	10,000.00	91,248.00	912.48	-81,248.00
Private Sector	Wallboard	Equity	Investment mobilized	158,423.00	263,730.21	166.47	-105,307.21
Private Sector	Wallboard	In-kind	Recurrent expenditures	10,000.00	1,596.39	15.96	8,403.61
Recipient Country Government	Ministry of Environment and Urbanization of Turkey (MoEU)	Grant	Investment mobilized	5,807,200.00	3,000,000.00	51.66	2,807,200.00
Recipient Country Government	Ministry of Environment and Urbanization of Turkey (MoEU)	Grant	Investment mobilized	1,024,800.00	750,000.00	73.19	274,800.00
Recipient Country Government	Ministry of Environment and Urbanization of Turkey (MoEU)	In-kind	Recurrent expenditures	1,152,480.00	1,152,480.00	100.00	0.00
Total Co-Financing(\$)				26,259,954.00	25,937,096.97	98.77	322,857.03

98.77% of the co-financing commitments were realized as of MTR date. This is very good and healthy signal that all partners fulfilled their financing commitments in the project.



- **Rating: Likely**
  - *Means: Negligible risks to sustainability, with key outcomes on track to be achieved by the project's closure and expected to continue into the foreseeable future*
- The project has already achieved high-impact outcomes, and the outstanding tasks within the remaining areas of work can be successfully concluded by the project's conclusion.



- **Project Management A1**
- Enhance the Work Plan by providing a more detailed account of the remaining activities within the project. The existing Work Plan in Excel is characterized by a lack of specificity, as it primarily offers a generalized overview with detailed information limited solely to the output level. It is imperative that the work packages, tasks, and subtasks essential for generating these outputs be delineated in a hierarchical structure, incorporating pertinent details such as duration, deadlines, budgetary considerations, and the respective individuals responsible for their execution.



---

## Recommendations A1 (cont'd)

---



- Current Work Plan approach used in the project gives a general overview of project activities but lacks necessary details about the breakdown of those activities into tasks and subtasks, hierarchical, precise timing and inter-dependency relationship between activities.

# Recommendations A1 (cont'd)



Component	Outcome	Activity	WORKPLAN																			
			2022	2023												2024						
			Overall	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5		
Component 1: Regulatory Strengthening, capacity building, stakeholder awareness and verification of environmentally sound alternatives for the replacement of HBCD	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 to industrial stakeholders in the EPS and XPS sectors.																				
		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.																				
	Outcome 1.2. – Regulatory capacity support for control and enforcement to sustained HBCD phase out delivered.	Output 1.2.1 – Gaps in 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 340 t of HBCD in imported production inputs are eliminated.																				
		Output 1.2.2 – Capacity building and support studies for MoEU regulatory enforcement of sustained HBCD phase out provided.																				
	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																				
Component 2: Elimination of HBCD use in the EPS sector in Turkey	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.																				
	Outcome 2.2 – National EPS association (EPSDER) is technically supported in its programing to provide collective information and supporting laboratory capability for members on the use of alternative flame retardant in all stages of EPS production.	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.																				
		Output 2.2.2 – Technical support and laboratory capacity exists in the EPSDER CEVAK laboratories to support sector product testing and certification requirements for qualification of non-HBCD containing flame retarded EPS																				
		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 – Phaseout of HBCD based production and replacement with suitable alternatives completed such that baseline HBCD consumption of 975 t/year is eliminated																			
Component 3: Elimination of HBCD use in the XPS sector in Turkey	Outcome 3.1. XPS producers have required technical information and capability to complete selection and production of alternative flame retardant containing production.	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 investment to complete phase out.																				
	Outcome 3.2 – National XPS association (ISODER) is technically supported in its programing 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.																				
		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 – Phaseout of HBCD based production and replacement with suitable alternatives completed such that baseline HBCD consumption of 705 t/year is eliminated.																			
		Outcome 4.1 – Outcomes from project activities assessed and lessons learnt disseminated for sustainable replication	Output 4.1.1 Project impact indicators designed, applied and project mid-term and terminal evaluation conducted.																			
Component 4. Monitoring and Evaluation																						
Component 5. Project Management																						

Current Work Plan



# Recommendation A1 (cont'd)



- Having a **more detailed** project work plan and monitoring system is crucial for several reasons:

Clarity and Direction

Resource Management

Risk Identification and Mitigation

Communication and Coordination

Progress Tracking

Stakeholder Engagement

Quality Assurance

Learning and Improvement

Compliance

Cost Control

# Recommendation A1 (cont'd)



Structuring activities, tasks, and subtasks in a detailed project work plan involves organizing them in a logical and sequential manner to ensure clarity, efficiency, and successful execution. Here's a suggested approach for structuring activities and their underlying tasks and subtasks:

Hierarchy of Activities

Dependencies

Timeline and Milestones

Resource Allocation

Responsibilities

Quality Standards

Risk Identification and Mitigation

Monitoring and Evaluation

Communication Plan

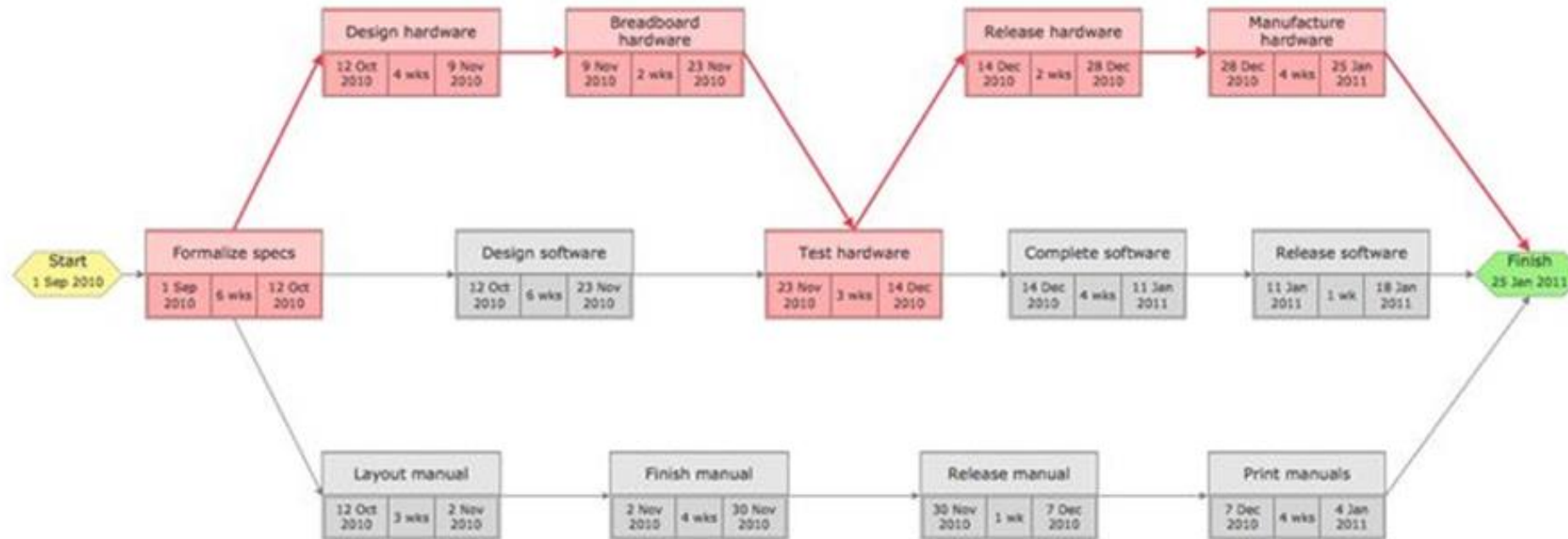
Documentation

# Recommendations A1 (cont'd)



CS ODESSA

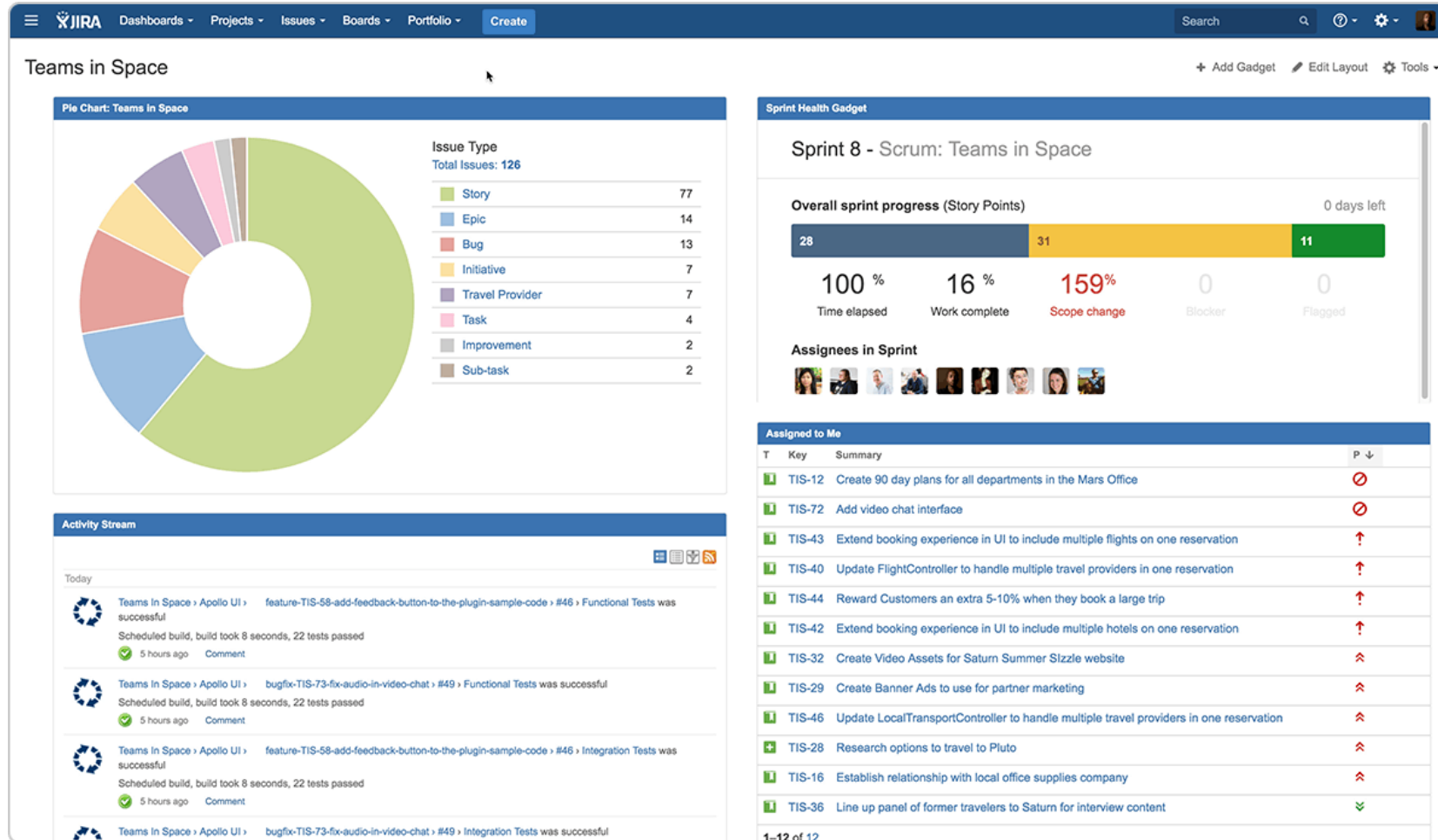
## PERT Chart Example





- **Project Management A2**
- Consider using project management software tools like Jira, Microsoft Project, or Basecamp. These platforms provide interactive dashboards for quickly monitoring both overall project and individual progress statuses. They also offer Gantt timeline views that help identify upcoming due dates, potential roadblocks, or project progression. Additionally, these tools allow for effective budget tracking, ensuring control over expenditures and adherence to project timelines. Currently, project-related information, including the Work Plan, is stored in Excel, a platform not specifically designed for comprehensive project management purposes..

# Recommendations A2 (cont'd)



Jira



# Recommendations A2 (cont'd)



## My Work

Task Status

All

Resource

Elva Hebert

Projects

13

Tasks

43

Completed Tasks

10

Future Tasks

29

On Track Tasks

(Blank)

Late Tasks

(Blank)

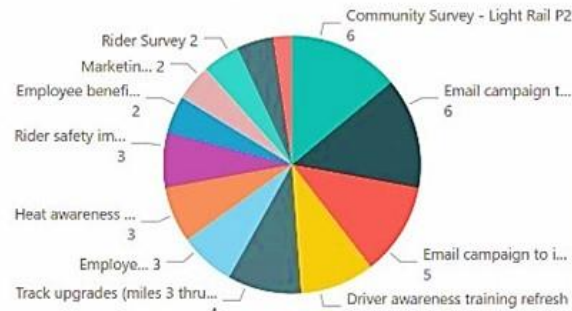
Overdue Tasks

4

Tasks by Status



Tasks by Project > Bucket



Effort by Project > Bucket



Effort

2,813

Effort Completed

805

Effort Remaining

2,009

Microsoft Project

KPI	Task	Category	Project	Link	Start	Finish	Progress	Effort	Effort Completed	Effort Remaining
Overdue	Target audience profile	Email prepara...	Email campaign to increase rider's awaren...		07-Oct-19	14-Oct-19	0%	48	0	48
Overdue	Final approval of email message	To-do	Email campaign to increase rider's awaren...		15-Oct-19	17-Oct-19	0%	24	0	24
Overdue	Review prior survey results	To-do	Rider Survey		03-Sep-19	05-Sep-19	47%	17	0	17
Overdue	Create survey questionss	Survey conte...	Rider Survey		13-Sep-19	19-Sep-19	0%	40	0	40
On Track	Determine LRT requirements	Survey Focus	Community Survey - Light Rail P2		07-Nov-19	08-Nov-19	0%	16	0	16
On Track	Determine safety requirements	Survey Focus	Community Survey - Light Rail P2		11-Nov-19	13-Nov-19	0%	24	0	24
On Track	Determine delivery method	Survey Prepar...	Community Survey - Light Rail P2		19-Nov-19	20-Nov-19	0%	16	0	16
On Track	Update survey	Run Survey	Community Survey - Light Rail P2		05-Dec-19	05-Dec-19	0%	8	0	8
On Track	Run numerical analysis	Analyze results	Community Survey - Light Rail P2		16-Dec-19	17-Dec-19	0%	16	0	16
On Track	Prepare survey briefing deck	Analyze results	Community Survey - Light Rail P2		19-Dec-19	20-Dec-19	0%	16	0	16
Total								2,813	805	2,009

# Recommendations A2 (cont'd)



**Message Board**

**iOS Product Strategy**  
The upcoming updates mean that we

4

**Resourcing for share feature**  
Given the team's revised plan for the

12

**New designer starting**  
This onboarding doc should be inside

7

**Priority Bug Issues**  
Now that we've migrated away from

5

**Dev planning session**  
We're nearing the end of our current

**Meet-up Poll**

**To-dos**

**Implementation**

☐ Add change control

☐ Go live comms to leadership

☐ Update browser versions

**Production**

☐ Completed testing

☐ Transition to support plan

☐ Training

**Docs & Files**

**Budget and Actuals**

**Marker Sketches**

Ad min

Eve nt

**Video**

Logo design - 2014...

Logo design - 2014...

Logo design - 2014...

**Vendor Deck**

Vendor Deck

Vendor Deck

**Case Study**

Case Study

**Analytics**

Analytics



**Schedule**

**FRI, JAN 13**  
Post-launch regroup 11:00am - 11:30am

**TUE, JAN 17**  
Iteration kickoff

**WED, JAN 18**  
Victor OUT

**THU, JAN 19**

**Group Chat**

...

**Kurt Holloway** 11:01am  
Do you think we'll be ready?

**Tamir Aviv** 11:04am  
I think so!

**Kurt Holloway** 11:06am  
Basecamp is making this easy.

**Kimberly Rhodes** 9:15am  
Great! Let's plan on Monday...

**Progress**

**TRIAGE (4)**

(3)  
NEXT UP

(4)  
FIGURING IT OUT

(2)  
IN PROGRESS

(4)  
QA

(2)  
DONE

## Recommendations A2 (cont'd)



The recommendation to consider using project management software tools such as Jira, Microsoft Project, or Basecamp is grounded in the need for a more robust and specialized approach to project management. The existing practice of storing project-related information, including the Work Plan, in Excel, while versatile, lacks the comprehensive features necessary for efficient project oversight. The justification for this recommendation is outlined below:

Interactive Dashboards

Gantt Timeline Views

Budget Tracking

Centralized Information Hub

Collaboration and Communication

Customization and Scalability

Automation of Repetitive Tasks

Security and Data Integrity

Integration Capabilities

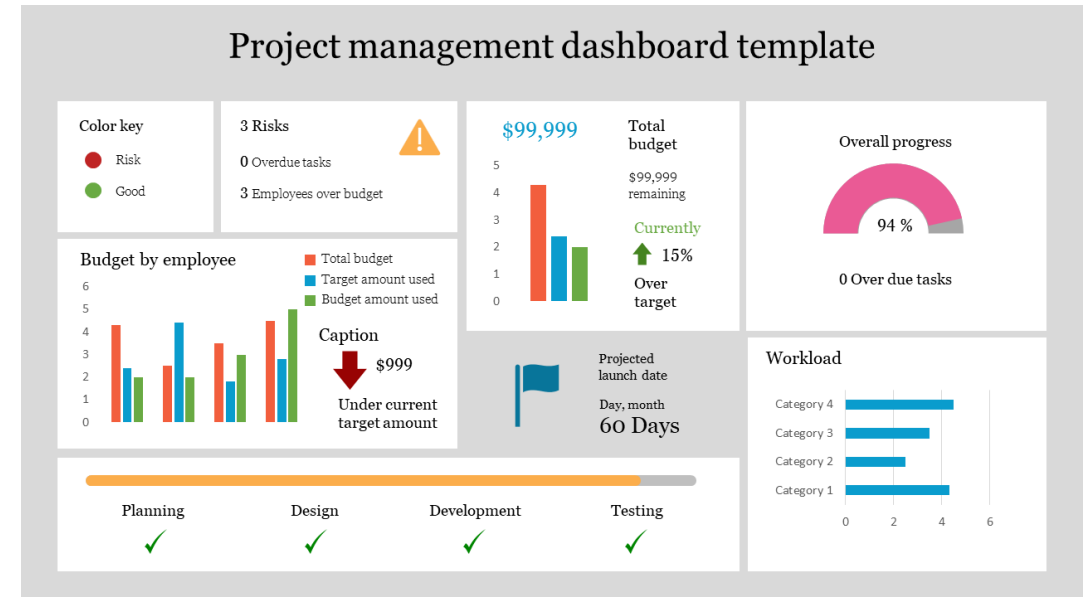
Comprehensive Reporting



# Recommendations



- **Project Management A3**
- In monthly progress reports, create a dashboard to closely monitor the progress in the fulfillment of incomplete indicators as identified in the MTR report.
- The recommendation to include a dashboard in monthly progress reports, specifically concentrating on the fulfillment of incomplete indicators identified in the Mid-Term Review (MTR) report, is substantiated by several compelling reasons. This proposed dashboard allows for a concentrated and efficient monitoring of indicators highlighted as incomplete during the Mid-Term Review, directing resources and attention to critical areas in need of improvement.



# Recommendations



- **Project Management A4**

- In monthly progress reports, use widely accepted color codes to identify planned, on-going and completed tasks. Current color code used in the monthly progress reports does not comply with widely accepted project management conventions.
- In monthly progress reports prepared by the project staff in Excel, some color codes are used to identify the status of any specific task. There are three color codes used: green, blue and red as shown in the following figure.

ONGOING	GREEN – [ONGOING]
DONE	RED – [DONE]
PLANNED	BLUE – [PLANNED]

---

## Recommendations A4 (cont'd)

---



- This color coding is not compliant with the widely accepted project management conventions. In project management, color codes are often used to visually represent and convey information about various aspects of a project, such as task status, priority, and resource allocation. While there isn't a universally standardized set of color codes, here are some common color conventions and their typical meanings:
- **Red**: Red is often used to highlight critical or overdue tasks at risk of project delays.
- **Yellow** or **Amber**: Yellow or amber may represent high-priority tasks that require attention but are not yet critical.
- **Green**: On Track: Green typically represents tasks that are on schedule. It indicates that things are going well.
- **Blue**: Represents completed tasks.
- **Gray**: Represents unallocated tasks.

---

# Recommendations

---



- **Project Management A5**
- Identify the root causes of occasional slow decision-making challenges and approval procedures which caused delays in engagement of experts, recruitment of project staff and preparation and finalization of contracts and implement a targeted strategy aimed at expediting the decision-making and approval process.
- During the Mid-Term Review (MTR) and stakeholder interviews, notable delays were observed in the finalization of various recruitment and cooperation agreement processes. For instance, while the contract between UNIDO and MoEUCC was signed in December 2021, the core project team was not hired and commenced work until July 2022. Similarly protracted was the hiring process for the Gender Mainstreaming Expert, which extended beyond six months. The initiation of the MTR process itself took approximately six months from the commencement of preparation work. Additionally, delays were evident in concluding collaboration agreements with TSE, EPSDER, and İZODER, finalized at a later stage of the project in October/November 2023, leaving limited time for anticipated deliveries from these institutions within the project timeframe.

---

## Recommendations A5 (cont'd)

---



- The recommendation to identify the root causes of occasional slow decision-making challenges and approval procedures, leading to delays in engaging experts, recruiting project staff, and finalizing contracts, is essential for optimizing project efficiency. A targeted strategy should be implemented to expedite the decision-making and approval process. This recommendation is justified by the need to address specific bottlenecks that hinder the project's progress. By identifying the root causes, the project team can pinpoint areas where the decision-making process is prone to delays, whether due to procedural complexities, organizational structures, or other factors. Once these root causes are understood, a tailored strategy can be developed to streamline decision-making and approval procedures, reducing the time taken for crucial activities such as engaging experts, hiring staff, and finalizing contracts. This targeted approach ensures that the project operates with greater agility, minimizes delays, and maximizes its overall effectiveness.

---

# Recommendations

---



- **Component 1 - B1**
- Facilitate the expeditious advancement of training of 450 MoEUCC / customs inspection staff and 320 product standards inspectors on HBCD detection and addition of analytical capacity in TSE in place and 300 product analysis undertaken, which currently lag behind the mid-term and end-of-project targets, over the remaining six months of the project's duration. Employ meticulous planning, prompt execution, and rigorous monitoring to ensure the attainment of the specified targets by the conclusion of the project.



---

# Recommendations

---



- **Component 1 – B2**
- To enhance the effectiveness and broader reach of information dissemination pertaining to the project, it is recommended to implement the following measures: Firstly, update the project webpage regularly at <https://kalicikirleticiler.com>, incorporating recent developments and news related to the project. Additionally, ensure the inclusion of the HBCD project among the ongoing projects in the English version of the webpage. Secondly, augment awareness by expanding the project's presence on social media platforms, including but not limited to Youtube, LinkedIn, Facebook, Twitter, and Instagram. Presently, there are only two subscribers to the @kalicikirleticiler Youtube channel, suggesting the potential for growth and increased visibility across diverse social media channels.

---

# Recommendations

---



- **Component 1 – B3**
- Facilitate the expeditious advancement of dissemination and training activities (workshops) for the EPS and XPS sectors, which currently lag behind the mid-term and end-of-project targets, over the remaining six months of the project's duration. Employ meticulous planning, prompt execution, and rigorous monitoring to ensure the attainment of the specified targets by the conclusion of the project.



---

# Recommendations

---



- **Component 2 – C1**
- Make sure that at least three training events and information dissemination activities have been completed by the end of the project to meet the Component 2 targets in this respect.

---

# Recommendations

---



- **Component 3 – D1**
- Ensure the timely execution of the second and third technical workshops in February, as well as the fourth technical workshop in March, with the participation of all İZODER members.

---

# Recommendations

---



- **Component 4 – E1**
- Facilitate the prompt recruitment of the International **POPs/Hazardous Waste Consultant** to ensure sufficient time for the development of the environmentally sound management roadmap of wastes containing or contaminated with persistent organic pollutants including HBCD finalized within the constrained timeframe leading to the conclusion of the project.

---

# Recommendations

---



- **Component 4 – E2**

- Conduct a risk analysis with regard to the possibility of not being able to reach the Gender Mainstreaming targets set forth for the end of the project and develop a mitigation plan.

GEF Focal Area Tracking Tool puts the following targets:

Indicator 11: Number of direct beneficiaries disaggregated by gender as co-benefit of GEF investment

- Female 182
- Male 1,178
- Total 1,360

Targets at CEO Endorsement:

- By MTR, increase women's employment in EPS and XPS sectors by 25
- By the end of the project, increase women's employment in EPS and XPS sectors by 99.

---

# Conclusion

---



- In conclusion, the evaluation of the project reveals a meticulously designed strategy in alignment with the GEF-7 Chemicals and Wastes focal area, particularly under the Chemicals and Wastes Industrial Chemicals Program (CW 1-1). This initiative, aimed at strengthening the sound management of industrial chemicals and their wastes, demonstrates a comprehensive approach to comply with Türkiye's international obligations, specifically in eliminating the use of Persistent Organic Pollutants (POPs) listed in Annex A of the Stockholm Convention. The project focuses on introducing internationally competitive technologies, techniques, and approaches for eliminating Hexabromocyclododecane (HBCD) in EPS and XPS foam insulation, crucial sectors for public safety and increased energy efficiency in Türkiye's buildings and infrastructure.

---

## Conclusion (cont'd)

---



- The progress toward the project's objective of promoting the replacement of HBCD with environmentally sound alternatives in the EPS and XPS foam industries is highly satisfactory. The TVRs indicate that necessary investments have been made, leading to the termination of HBCD use in the EPS sector by four producers in 2019 and in the XPS sector by six producers in 2020. This achievement reflects the effectiveness of the project in fulfilling its most important target.
- Outcome 1.1 highlights significant progress in providing up-to-date non-proprietary information on HBCD alternatives, with a commendable alignment with the targeted objective. The dissemination of information, including an international literature review and references, during technical verification and Environmental Assessment activities, underscores a thorough and collaborative approach, setting the stage for a comprehensive dissemination workshop.

---

## Conclusion (cont'd)

---



- Outcome 1.2 showcases active efforts in regulatory capacity support, with ongoing discussions and outcomes under consideration for enhancing the POPs chemicals management framework. The meticulous execution through the MoEUCC reflects a conscientious approach to address identified gaps comprehensively, signifying proactive and strategic efforts toward improving regulatory control measures.
- Outcome 1.3 indicates substantive progress in initiating the development of a national strategy for the management of waste containing POPs, including HBCD. The comprehensive strategy formulation, engaging both national and international expertise, reflects a robust and systematic approach, demonstrating the project's commitment to achieving its targets.

---

## Conclusion (cont'd)

---



- Outcomes in the EPS and XPS sectors (Outcome 2.1 to Outcome 3.3) demonstrate notable progress, with achievements surpassing mid-term and end-of-project targets. Producers and associations have effectively transitioned toward sustainable alternatives, showcasing a commitment to environmentally responsible practices within the PS production sector.
- Outcome 4.1 emphasizes the assessment of project activities and dissemination of lessons learned for sustainable replication. Various project management and monitoring techniques have been implemented, with recommendations for further improvement.



---

## Conclusion (cont'd)

---



- The project's implementation and adaptive management have been efficient and effective, despite turnover within the project team. Areas for refinement exist, particularly in optimizing project management tools and reporting quality.
- Sustainability risks are deemed negligible, with key outcomes expected to be achieved by the project's closure and likely to continue into the foreseeable future.
- **The project has already achieved high-impact outcomes, and the remaining tasks within the project can be successfully concluded by its conclusion. Overall, the project serves as a model for similar initiatives, contributing significantly to Türkiye's compliance with international agreements and promoting environmentally responsible practices in the chemicals and wastes sector.**
- Areas for further improvement were discussed along with associated recommendations in Recommendations section of this presentation.



REPUBLIC OF TÜRKİYE  
MINISTRY OF ENVIRONMENT,  
URBANIZATION AND CLIMATE CHANGE



# Thank you!



Dr. Tülay Çağlayan ÖZLÜ

[tulay.ozlu@ekodenge.com](mailto:tulay.ozlu@ekodenge.com), [ozlutulay@gmail.com](mailto:ozlutulay@gmail.com)

+90 (505) 777 4895