



## WP4: Promote Efficient Appliances & Develop the Market

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### The Appliances Scrapping Facts and Implementation in Lebanon

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Funded by the  
European Union






# Key Findings from MeetMED-I

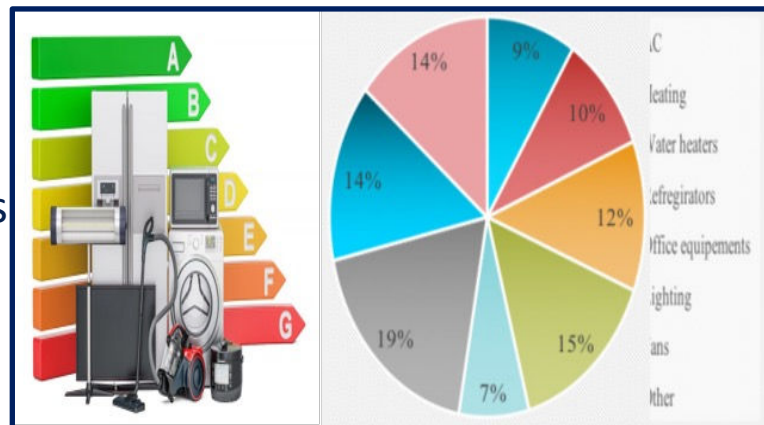
- Electricity consumption trends from the MeetMED-I project shows that **Residential sector consumes ~42%** of the total end electricity use in the SEMCs.
- Appliances contribute to 70% ~ 80%** of the total residential consumption in the ESM region.
- Comparative Labelling** is the predominant in the SEM region while **Mandatory MEPS** are the most applied tool in use by the governments.
- However there is variance in **maturity of implementation** between different countries.
- Key challenges to the promotion of efficient appliances include **need for supporting policies & guidelines**, **Implementation of MVE** and **Public Awareness**

## MeetMED-I Takeaways

Country	Regulation	Lighting	Refrigeration	Air Conditioning	Washing machine	Solar Water Heater	TV	Fan
Algeria	MEPS				-	-	-	-
	Labeling				-	-	-	-
Egypt	MEPS							
	Labeling							
Jordan	MEPS							
	Labeling							
Morocco	MEPS	-			-		-	-
	Labeling	-			-		-	-
Libya	MEPS		-	-	-	-	-	-
	Labeling	-	-	-	-	-	-	-
Lebanon	MEPS							
	Labeling							
Palestine	MEPS	-	-	-	-	-	-	-
	Labeling	-	-	-	-	-	-	-
Tunisia	MEPS							
	Labeling							

Voluntary		Policy type	
Mandatory		Endorsement	
Under development		Comparative	



# MEPS Promotion and Labelling Process for Appliances with a Special Focus on Air-Conditioning

- **Objectives**

This activity aims at informing policy makers and stakeholders involved in energy efficiency field about the national and regional energy labelling schemes and efficiency standard programs. This activity also attempts to address the current challenges facing the enforcement of MEPS and labeling schemes

- **Expected outputs and timeline**

Manual procedure for MEPS  
Implementation

Regional report on MEPS/Label's  
implementation with a focus on  
air conditioning

Two national MEPS program  
reports

- **Targeted Countries**






## Key Objectives

Aims to **enriching experts' and public bodies' officials** knowledge in the energy efficiency of appliances and their implementation & **Increase Visibility of Efficient appliances** in addition to the circular economy to enhance the efficient energy in the relevant countries.

This is through **regional training** , **study visits** and **dedicated tools** for dissemination as "brochures" on topics related to the testing centers, MEPS and labelling promotion for appliances with a special focus on air-conditioning.and the fact sheets for 4 countries

## Timeline Plan

- Q2 2022  2023
- Q3 2021  Q3 2022
- Q3 2021  Q4 2023

25 Monthly (~ 2.5yrs)

## List of Activities

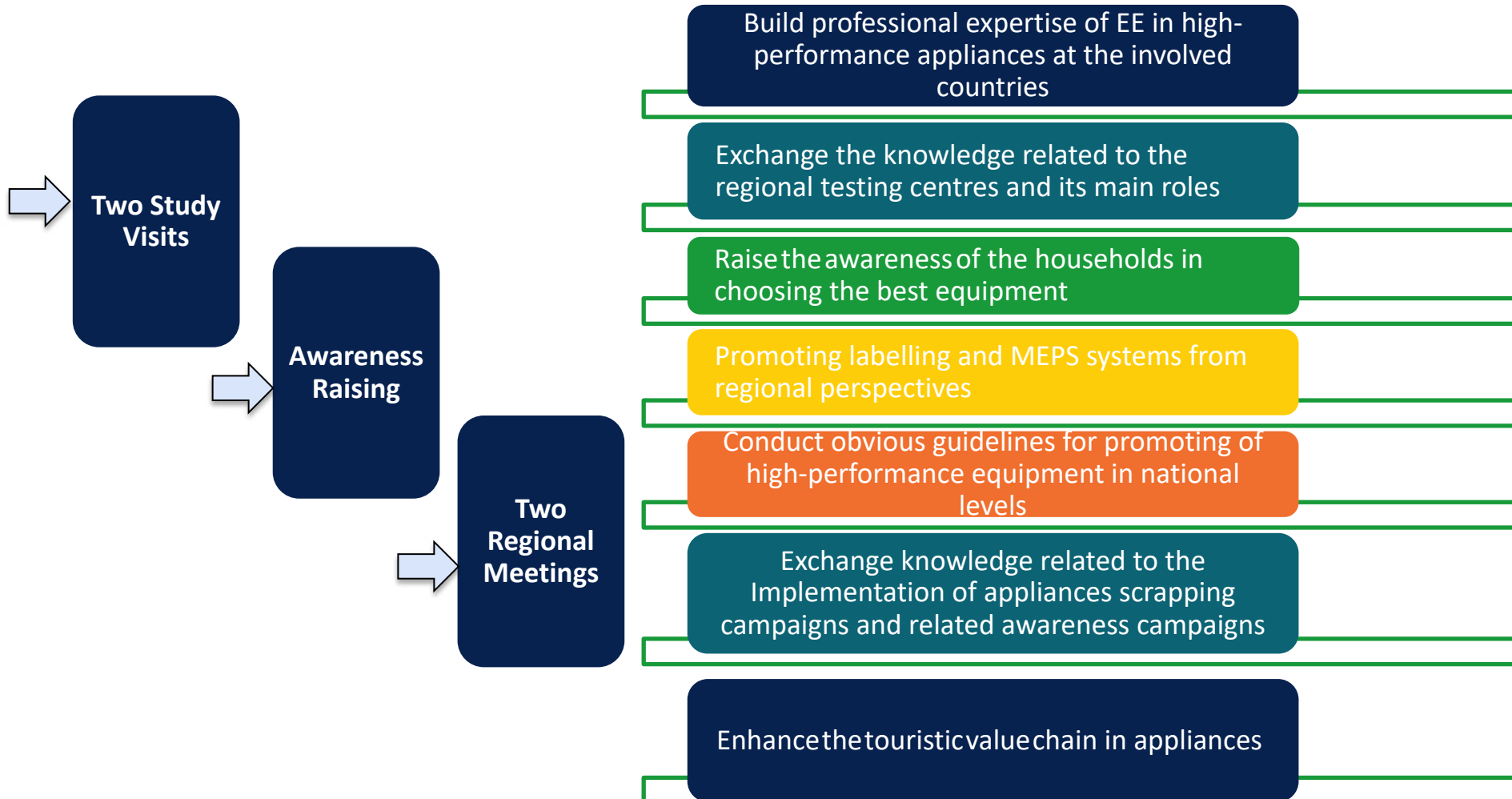
4.2.1. Organize Study visits

4.2.2. Ensure visibility and deployment of several guidelines and tools

4.2.3. Organize dedicated Webinars / trainings in presence

**Targeted Countries:** Algeria, Egypt, Jordan, Lebanon, Libya, Morocco, Palestine and Tunisia

## Key Deliverables & Expected Outputs:



# WP4.1.1 status

- Data collection and analysis regarding polices and legislations regulating appliances collection, dismantling, and safe disposal (8 countries).
- Fact-sheets in the design phase for each country reflecting the status of Appliances scrapping in the concerned countries

## Fact sheet on the appliances scrapping management situation in Egypt

### I. Background information 2023

Population	104.5 million
Municipal Solid Waste (MSW) Generation:	27 million tons/year
Per Capita MSW Generation:	
- Urban areas	0.25:0.4 kg/day/capita
- Rural areas	0.55:1,2 kg/day/capita
Agricultural waste	32 million tons/year
Construction and Demolition Waste	6 million tons/year
Medical waste generation	0.045 million tons/year
Industrial waste	7 million tons/year
Hazardous waste	0.6 million tons/year
Electronic waste	0.585 million tons/year <sup>1</sup>

### II. TECHNICAL PERFORMANCE

Electronic waste	0.585 million tons/year
<b>ICT and Telecommunications Equipment</b> CPUs, screens, monitors, mice, printers, keyboards, networking equipment, laptops, audio amplifiers, CDs, DVDs, and video cameras.	..... %
<b>Large Household Appliances</b> Fridges, Freezers, cookers, air conditioners, TVs, monitors, screens and fans	..... %
<b>Small Household Appliances</b> Hair dryers, fryers, and swing weaving	..... %
<b>Consumer Equipment</b> Items used for consumer use will also be included in the <b>electronic waste</b> sector. This category for consumers is	..... %

<sup>1</sup> Abdelbasir et al. (2018)

all forms of activity that will be important to serve consumers. Many activities fall into this category.	
<b>Medical Equipment</b> And there are still many who are not aware that this waste is also included in medical matters. If this is added up, it can be calculated how much the amount of waste is. So, electronic equipment is involved in injury, treatment, prevention, and detection activities.	..... %
<b>Office Electronics</b> calculators, photocopying equipment, electrical, typewriters, telephones, fax machines	..... %
Recycled	..... %
Final Destination	..... %
Open dumb site	..... %
Open dumb site	..... %
Sanitary Landfills	1 <sup>2</sup>
Sanitary Landfills	..... %
- Operational	..... %
- Planned	..... %
- Under construction	..... %
- Constructed	..... %

### III. Policy and planning environment

A national policy and planning, which defines the basic framework of the electronic waste sector

### IV. Legal framework

The Hazardous materials and waste procedures were made clear in Articles 53 to 64 of waste management regulation law no. 202 for 2020. The formation of a technical committee under the Waste Management Regulatory Agency to be charged with issuing unified lists of hazardous materials and waste was also stipulated in Article No. 53. The duties of the committee are defined in Article 48 of the executive regulation of the law no 722 for 2022.

<sup>2</sup> Elmasara landfill, Alexandria Governorate

# Consultation missions

## Morocco

- The mission objective was to meet the relevant stakeholders and key players at the Moroccan market to fill the gaps related to the scrapping. During the mission we focused on collecting the data related to the main points below:
- Existing programs for appliances scrapping
- Types and amounts of appliances.
- Existing market for appliances scrapping and recycling.
- Existing facilities dealing with appliances.
- Types of materials recycled and the potentiality of exporting.



# Consultation missions

## Egypt

- the mission was conducted in 2023 at one of the key players of the scrapping factors in Egypt.
- 15 companies have been identified dealing with E-waste scrapping.
- Consultation mission will be arranged Identified the main challenges in barriers to enter the market and the main legislation needs to enhance the process.

قائمة المصانع والشركات الرسمية وغير رسمية العاملة في مجال تدوير المخلفات الإلكترونية والكهربائية وتدوير بطاريات الرصاص

م	اسم الشركة	نوع النشاط	بيانات التواصل	التفويض/البريد الإلكتروني	الموقع الإلكتروني
الشركات العاملة في مجال البطاريات وإعادة تدويرها					
١	مصنع صهر وتكرير وتصنيع الرصاص	تدوير بطاريات الرصاص	القطاع رقم ٧ - حوض الزهر رقم ٨ - عرب الطيقات المنطقة الصناعية - مركز الخاكة - محافظة القليوبية	التلفون: 01155810007 0224241091 - 0224241092 0224241093-0224241090 إيميل: info@awadallah-leadmetal.com	<a href="http://www.awadallah-leadmetal.com/En/Default.aspx">http://www.awadallah-leadmetal.com/En/Default.aspx</a>
٢	الشركة المصرية لصهر وتكرير وتصنيع الرصاص	تدوير بطاريات الرصاص	القطاع رقم (٢/٣٢) - المنطقة الصناعية A1 - مدينة العاشر من رمضان	إيميل: info@awadallah-leadmetal.com	
٣	شركة المتحدة للبطاريات	تصنيع بطاريات سائلة - بطاريات موبوسكلات - بطاريات سيارات - بطاريات صناعية - إعادة تدوير بطاريات خردة - إعادة إنتاج بطاريات طاقة شمسية	تصنيع بطاريات سائلة - بطاريات موبوسكلات - بطاريات سيارات - بطاريات صناعية - إعادة تدوير بطاريات خردة - إعادة إنتاج بطاريات طاقة شمسية	الاسم: م/ أحمد رقم الهاتف: 01222331357	<a href="https://www.eegyptianindustry.com">https://www.eegyptianindustry.com</a>
٤	شركة كلوريد ايجيبت	تدوير بطاريات الرصاص	قطعة M11 - التوسعات الشمالية المنطقة الصناعية - جهاز مدينة أكتوبر	الاسم: م/ أحمد التلفون: 01155810007 الإيميل: info@chloride-batteries.com	<a href="http://www.chloride-batteries.com">http://www.chloride-batteries.com</a>
٥	شركة صناعات البلاستيك والكورياء المصرية (السر الامانيه)	تدوير بطاريات الرصاص	القطاع رقم (٧/٢١) - المنطقة الصناعية السابعة - جهاز مدينة السادات	الاسم: م/ أحمد التلفون: 01155810007 الإيميل: info@chloride-batteries.com	<a href="http://einisr.net/ar/index.html">http://einisr.net/ar/index.html</a>
الشركات العاملة في مجال المخلفات الإلكترونية وإعادة تدويرها					
٦	شركة إنترناشيونال تكنولوجي جروب ITG	تدوير المخلفات الإلكترونية والكهربائية	القطاع رقم ١٩ - المنطقة الصناعية السادسة - الساس من أكتوبر الجيزة	الاسم: م/ شادي عبد العليم التلفون: 01001333721 - 01002392243 - 01027101009 الإيميل: shady_abdelaleem@hotmail.com	
٧	الشركة المصرية لتدوير المخلفات الإلكترونية EERC	تدوير المخلفات الإلكترونية للحصول على المعادن الثمينة داخل مكائنات مثقفة عن طريق المعالجة الكيميائية فقط	مصنع الشباب - الساس من أكتوبر - المنطقة الصناعية السادسة - جهاز مدينة الساس من أكتوبر	الاسم: م/ أحمد سالم التلفون: 01116604833 الإيميل: info@eerc-group.com	<a href="http://www.eerc-group.com/">http://www.eerc-group.com/</a>





# Consultation missions

## Jordan

- Consultation conducted in Q1 2023
- Meeting with RSS, JREEF, UNDP, FES, the Ministry of Environment and E- tafkeed which is a private company concerning with the appliances
- Existing programs for appliances scrapping
- Types and amounts of appliances
- Existing market for appliances scrapping and recycling
- Existing facilities dealing with appliances
- Types of materials recycled and the potentiality of exporting
- Main barriers and challenges facing appliances scrapping




## WP4.2 Status

Survey on appliances scrapping distributed, receiving 10 responses, those responses have been analyzed to conclude the main topics of the upcoming capacity building activities within WP4


After the analysis and identifications of the gaps we started a data collection process internally covering the needs assessment for the 8 relevant countries in the appliances, scrapping and the awareness related to them

### “Awareness and Capacity Building” Questionnaire



Funded by the  
European Union

Together We Switch to Clean Energy



RCREEE  
Regional Center for Renewable Energy and Energy Efficiency  
المركز الإقليمي للطاقة المتجددة وكفاءة الطاقة

Activity A4.2 Aims to enriching experts' and public bodies' officials' knowledge in the energy efficiency of appliances and their implementation & Increase Visibility of Efficient appliances. This will be done through regional training , study visits and dedicated tools for dissemination as "brochures" on topics related to the testing centers, MEPS and labelling promotion for appliances with a special focus on air-conditioning.

This Questionnaire is one of the main tools to identify the needs and gaps among the relevant countries to be able to conduct the trainings and raise the awarness in the needed areas and we are relying on your support as local experts to fulfill the data needed.

Questions						
Do you have any regional or international programs related to EE in your country?	Yes	No				
If yes, please give us more information about the program?						
are there any local/regional programs you know that focus on EE in appliances in your country?						
Who is conducting this program? Is it possible to share the contacts?	Stakeholder	Email	Phone Number	Position	Organization	Program link
Do you have any awareness campaign related to EE in the residential sector?	Yes	No				
If yes, please explain what kind of the campaigns?						
Who is conducting this awareness campaign? Is it possible to share the contacts of the involved?	Stakeholder Name	Email	Phone Number	Position	Organization	

# WP4.2 Status

Stakeholders mapping have been developed to all the countries including all the public, private and international organization

The stakeholders have been identified to primary, secondary and others

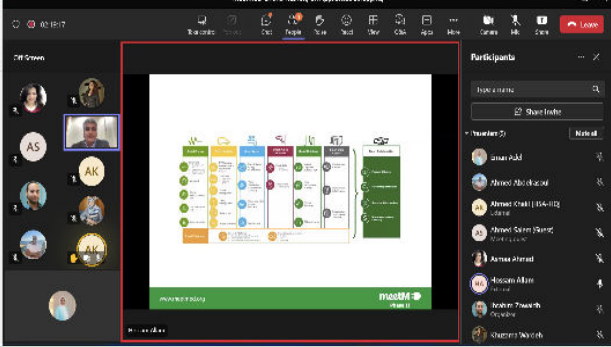
key players and stakeholders in				
		Policy Making and Public Agencies	Private Sector	Regional and International Co-
Algeria	Primary Players	APRUE MEM IANOR		RCREEE
	Secondary Players		APOCE PROMI	UNDP WB
	Other Players	ONS CDER CREDEG		IEA
Egypt	Primary Players	EE Unit -SG for CoM MoERE EOS		RCREEE
	Secondary Players	Federation of Egyptian I	CESCP	UNDP WB GIZ
	Other Players	EgyptERA GOEIC MFTI NREA NRC	EAG	EEIGGR GEFF AFREC IEA

takeholders Mapping for Activity 4.2

#	Abbreviation	Stakeholders Name	Type of stakeholder	Website			
<b>Algeria</b>							
1	APRUE	National Agency for the Promotion and Rationalization of Energy Use	Governmental Institutions	<a href="http://www.aprue.org.dz">http://www.aprue.org.dz</a>			
2	MEM	Ministry of Energy and Mines	Governmental Institutions	<a href="http://www.mem-algeria.org">http://www.mem-algeria.org</a>			
3	ONS	National Statistics Office	Governmental Institutions	<a href="http://www.ons.dz">http://www.ons.dz</a>			
4	CDER	Renewable Energy Development Center	Research and Academia	<a href="http://www.cder.dz">http://www.cder.dz</a>			
5	CREDEG	Centre for Research and Development of the Electricity and Gas	Research and Academia	<a href="http://www.credeg.dz">http://www.credeg.dz</a>			
6	IANOR	Algerian Institute of Standardization					
7	SONELGAZ	National Society for Electricity and Gas (SONELGAZ)	Utilities	<a href="http://www.sonelgaz.dz">http://www.sonelgaz.dz</a>			
8	CREG	Electricity and Gas Regulation Commission (CREG)	Governmental Institutions	<a href="http://www.creg.gov.dz">http://www.creg.gov.dz</a>			
9	MDIPI	Ministry of Industry and Mines (MDIPI)	Governmental Institutions	<a href="http://www.mdipi.gov.dz">http://www.mdipi.gov.dz</a>			
10	MESRS	Ministry of Higher Education and Scientific Research (MESRS)	Governmental Institutions	<a href="https://www.mesrs.dz">https://www.mesrs.dz</a>			
11	CRTSE	Research Center in Semi-Conductor Technology for Energy (CRTSE)	Research and Academia	<a href="https://crtse.dz/">https://crtse.dz/</a>	EA		
<b>Egypt</b>							
1	EE Unit -SG for CoM	Energy Efficiency Unit – Secretary General for Cabinet of Ministers	Governmental Institutions				
2	MoERE	The Ministry of Electricity and Renewable Energy	Governmental Institutions	<a href="http://www.moee.gov.eg">http://www.moee.gov.eg</a>			
3	EOS	Egyptian Organization for Standardization and Quality	Governmental Institutions	<a href="http://www.eos.org.eg">http://www.eos.org.eg</a>			
4	TA	Tourism Authority (TA)	Governmental Institutions	<a href="http://www.egypt.travel">http://www.egypt.travel</a>			
5	EgyptERA	Egyptian Electric Utility and Consumer Protection Regulatory Agency	Utilities	<a href="http://www.egyptera.org">http://www.egyptera.org</a>			
6	CAPMAS	Central Agency for Public Mobilization and Statistics	Governmental Institutions	<a href="http://www.capmas.gov.eg">http://www.capmas.gov.eg</a>			
7	MFTI	Ministry of Trade and Industry	Governmental Institutions	<a href="http://www.mfti.gov.eg">http://www.mfti.gov.eg</a>			
8	NREA	New and Renewable Energy Authority	Governmental Institutions	<a href="http://www.nrea.gov.eg">http://www.nrea.gov.eg</a>			
9	NRC	National Research Center	Governmental Institutions	<a href="http://www.nrc.sci.eg/nrc">http://www.nrc.sci.eg/nrc</a>			

Stakeholders Colour Coding	
<span style="background-color: yellow; border: 1px solid black; display: inline-block; width: 15px; height: 10px;"></span>	Essential and Key Stakeholder
<span style="background-color: orange; border: 1px solid black; display: inline-block; width: 15px; height: 10px;"></span>	High Potential Stakeholder
<span style="background-color: lightgreen; border: 1px solid black; display: inline-block; width: 15px; height: 10px;"></span>	Relevant Stakeholder
<span style="background-color: lightblue; border: 1px solid black; display: inline-block; width: 15px; height: 10px;"></span>	International Stakeholder

## WP4.2 Status

Action	Description	Status
<ul style="list-style-type: none"> <li>Conducting the first online training on Equipment Scrapping to be held on the <b>29<sup>th</sup> of Feb 2023</b></li> </ul> 	<ul style="list-style-type: none"> <li>✓ Regional initiatives for scrapping and it's technicalities</li> <li>✓ The regulatory frameworks and main pillars for enhancing it</li> <li>✓ Analyzing the countries current situation</li> </ul>	<p><b>2023</b></p>
<ul style="list-style-type: none"> <li>Preparing for the visualization tool on appliances</li> </ul>	<ul style="list-style-type: none"> <li>✓ Videos have been created based on the surveys on the below topics</li> <li>✓ Human behavior, labelling system for home appliances and the AC technologies including inverter</li> </ul>	<p><b>2022</b></p>

## WP4.2 Status

Action	Description	Status
<ul style="list-style-type: none"><li>Preparing the study tours on both Scrapping and appliances in Madrid in cooperation with CEIS and UNE</li></ul>	✓ To exchanging in formation and enhance the capabilities among the relevant countries and the existing technologies in Spain/ Europe	2023



# Next Steps & Collaboration with stakeholders

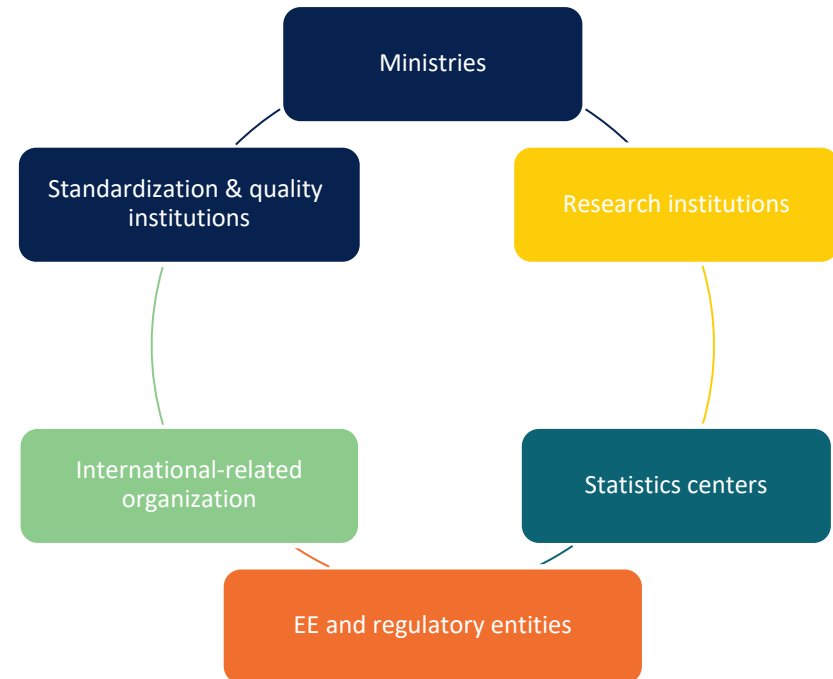
## Next Steps:

Stakeholders engagement  
in consultation, validation  
and participation

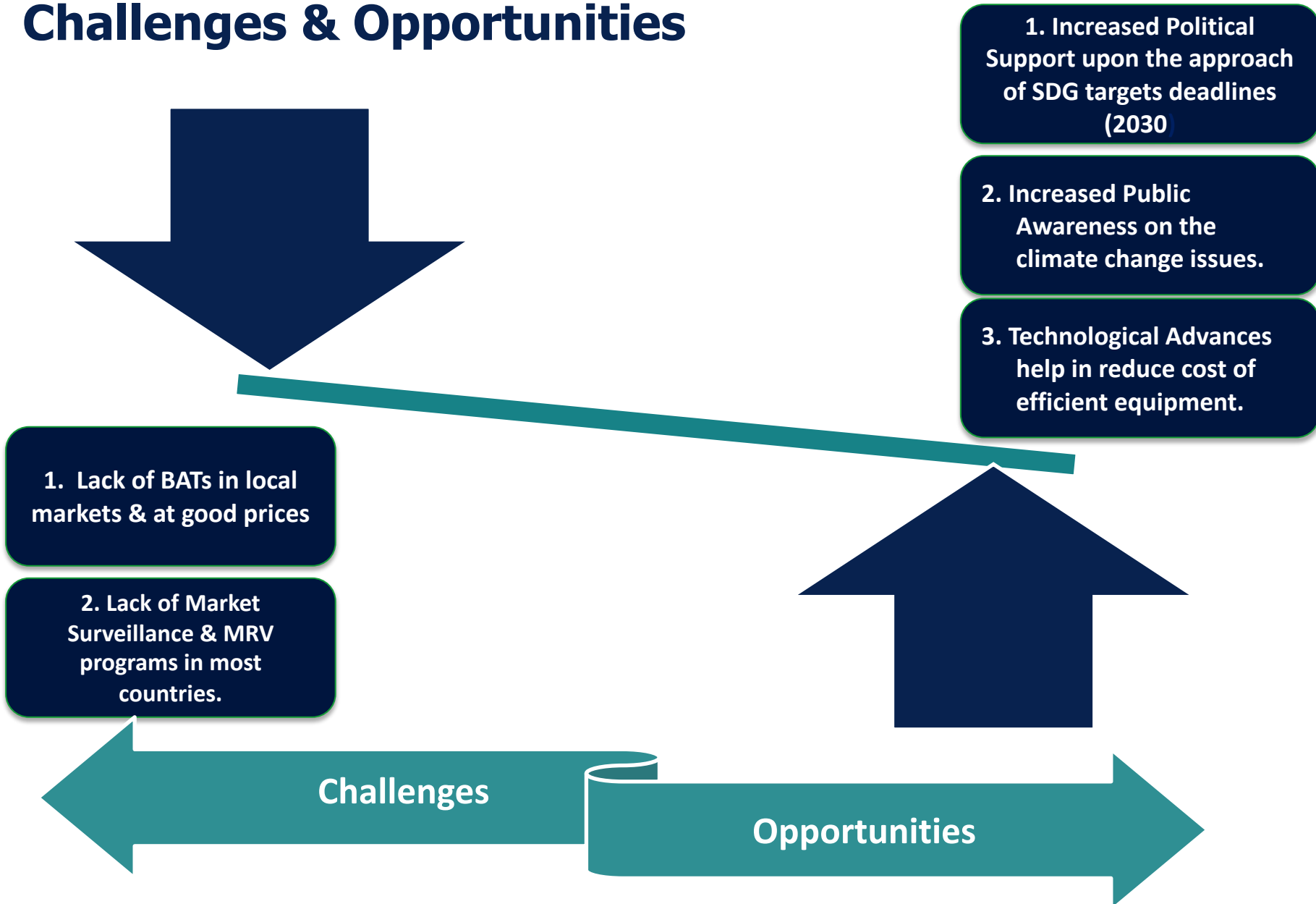
Dissemination of the fact  
sheets, videos and the  
technical reports

Participate in the  
meetMED week in Tunisia

## Key Stakeholders:



# Challenges & Opportunities





**Eng. Eman Adel  
RCREEE**



**Thank You**