



**GCF Regional Dialogue with Middle East and North Africa**  
**24-28 June 2024**  
**RABAT, MOROCCO**

**Mitigation Enabling Energy Transition in the  
MEDiterranean region – Phase II**  
**The meetMED II Project**



Funded by the  
European Union

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# From the UfM Energy Ministerial Declaration to the Roadmap for Action 2021 onward



**MEDENER** is an international no-profit organization gathering national Energy Agencies from North and South of the Mediterranean region in charge of implementing public policies on energy efficiency and promotion of renewable energy sources.



**RCREEE** is an intergovernmental organization aiming to enable and increase the adoption of renewable energy and energy efficiency practices in the Arab region.

Jointly contributing to the **UfM Energy Ministerial Declaration of 2021**  
and its **Roadmap for Action's** implementation

notably through the **meetMED project**, participating to the different items of action, implemented by the REN – Regional Experts networks from RCREEE and Energy Agencies, at different levels of intervention:

CARRY strong ambitions for energy transition, integrating SDGs and influence bodies, recommendations on public policies in EE & RE



SHARE & ENHANCE expertise & know-how from partner agencies through technical assistance & implementation of demo actions/pilots to demonstrate RE and EE benefits

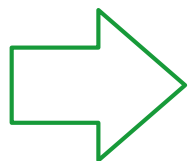


CREATE & DISSEMINATE good practices, raise awareness from local, to national and regional levels, to FOSTER investments

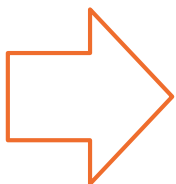


# Objectives of meetMED II

- Building on previous outputs/**sectoral reports** from meetMED I (accessible on <https://meetmed.org/publications/>)
- And on the established meetMED **Regional Expert Network (REN)** of more than **140 experts** from national agencies of 13 Mediterranean countries, and to the benefit of 8 countries from the South-shore of the Med
- The meetMED II project intends to contribute to enhancing energy security of beneficiary countries while fostering their transition to low carbon economy, notably through:



- The massive deployment of **RE and EE measures** in building and appliances' sectors in the Southern Neighborhood region accelerates the clean energy transition.



- **Public awareness** on energy's major stakes and challenges increases, thereby fostering public and private sectors' involvement towards more energy efficient buildings and appliances sectors.



Algeria



Libya



Egypt



Morocco



Jordan



Palestine



Lebanon



Tunisia

# Energy Efficiency in Buildings in the Mediterranean Region

- The MED Region is a Hot Spot for climate change, as the area is warming 20% faster than the rest of the world.
- **Growing energy demand** due to growing population and behavioral patterns (fossil fuel to respond their needs).
- The **building sector** is one of the largest energy consumer sectors of the meetMED target countries, which makes it a main target for NEEAPs.
- **Egypt & Lebanon** have the largest share of energy consumption in the building sector.
- **Most of the meetMED countries** have implemented **NEEAPs**, apart from Libya.
- Implementation is still hard to assess and one main challenge is **enforcement**. Strong **institutional commitment** is needed, along with testing & improvement approach of NEEAPs and EEBCs (from prescriptive, to performance-based, to extension to large renovation, and then evolving to MEPs).
- **Public Buildings** should take the lead in demonstrating this approach.

## ⇒ Benefits of EE:

Energy Efficiency as the “first fuel”

“Energy Efficiency is still, by far, the cheapest form of energy”

**Table 4:** Energy consumption in the building sector in the meetMED partner countries

	Unit	Algeria	Egypt	Jordan	Lebanon	Libya	Morocco	Palestine	Tunisia
Year of data:	Year	2017	2017	2017	2015	2016	2013	2017	2017
Share in total Final energy consumption	%	33.60%	50.5%	28.70%	40.20%	39.00%	33.00%	38.40%	27.00%
Share in total Primary energy consumption	%	-	-	20.10%	29.30%	-	-	34.00%	-

## Aim:

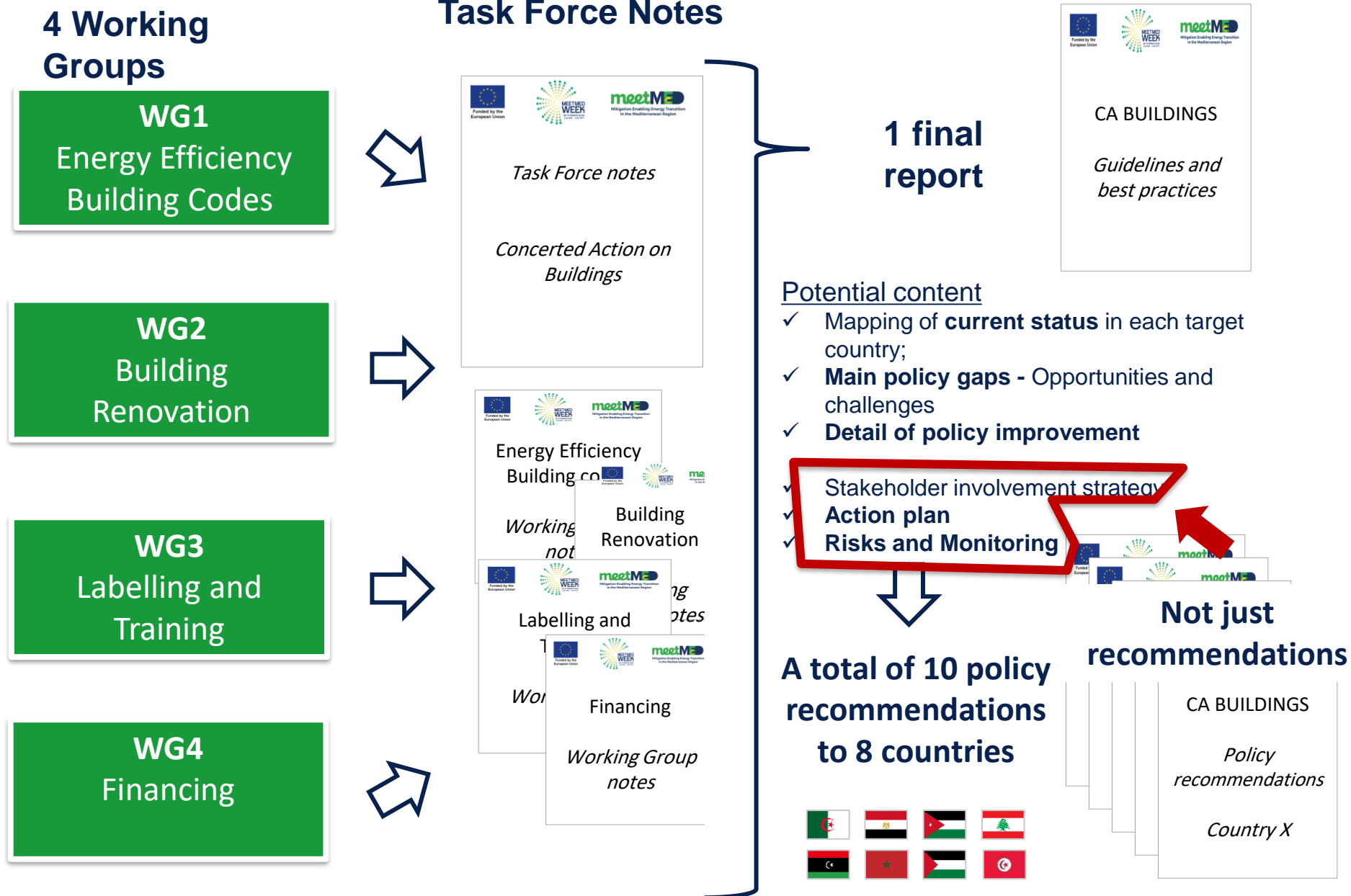
Define and implement “**Concerted Actions**” with the help of the Regional Network of Experts (meetMED REN) on energy efficiency in buildings



## Objectives:

- ✓ **Support policy/decision makers on the harmonisation of legislation, regulations, and standards in the buildings sector** including technical building systems and aiming at the national integration of policies and legal frameworks
- ✓ Enhance and structure the **sharing of information and experience and promote the exchange of best practices**, including through national stakeholders' networks
- ✓ Create favourable conditions to **fasten the convergence of national procedures** on EE in buildings related matters.







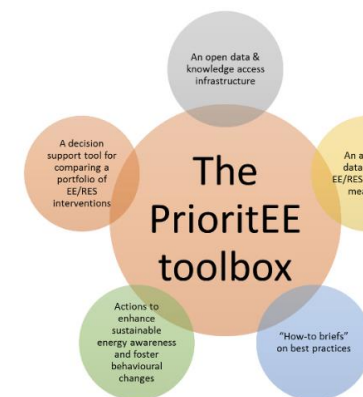
## Harmonizing, peer learning and country/policy grouping

Group of policies to be improved/implemented	Possible countries involved – peer learning - harmonization
<b>Revise, improve and implement energy efficiency building codes framework</b> with a special focus on enforcement procedures and links to licensing procedures and current fiscal/subsidies policies.	<b>Libya, Algeria, Egypt, Tunisia, Lebanon</b>
<b>Set-up of voluntary EPC</b> using synergies with EPB standards, and setting up an energy performance rating system for <b>public buildings</b>	<b>Morocco, Palestine, Algeria</b>
<b>Reviewing, integrating, and improving the National Energy Efficiency Action Plans and other Strategies</b> such as National Energy and Climate Plans to include specific actions that boost building related solutions/technologies.	<b>Jordan, Lebanon, Morocco</b>
<b>Efficiency Funds</b> and relation to financial sector, <b>linking EPC systems to financing and Energy Performance Contracting</b>	<b>Jordan, Morocco, Egypt</b>

Country	WG	Priority topics	Policy to be improved 1
Jordan	WG1 - Energy efficiency building codes	cooling technologies and policies	National Energy Efficiency Action Plan /National Cooling Action Strategy
Jordan	WG1 - Energy efficiency building codes	<u>energy storage solutions</u>	National Energy Efficiency Action Plan
<u>Lebanon</u>	WG1 - Energy efficiency building codes	Electric energy production - Decentralized PV	Policy developments in PV production at local scale
Lebanon	WG1 - Energy efficiency building codes + WG3 – Labelling and Training	Setting up and mapping building codes	EEBC implementation schema and training
Morocco	WG1 - Energy efficiency building codes	Interconnection between Building Codes and Energy Performance Certification System	National Building Code revision - RCTM -> EPC
Morocco	WG3 – <u>Labelling and Training</u>	Setting up buildings Energy Performance Certifications schemes	voluntary EPC set-up using synergies with EPB standards
Morocco	WG3 – Labelling and Training + WG4 – Financing	Current sources of financing also for sustainable energy systems	Link EPC voluntary system ot access to financing
Palestine	WG1 - Energy efficiency building codes + WG3 – Labelling and Training	MEPS for buildings and components - public buildings	Setup of an Energy Rating system for public buildings
Libya	WG1 - Energy efficiency building codes	Setting up and mapping building codes	Regulation/building codes, enforcement strategies and licensing procedures
Algeria	WG1 - Energy efficiency building codes	Setting up and mapping building codes	Improvement of the building codes framework and especially the enforcement procedures
<u>Algeria</u>	WG3 – <u>Labelling and Training</u>	N/A	Develop schemes on labelling for appliances - explore synergies with buildings systems/policies
<u>Algeria</u>	WG4 – <u>Financing</u>	Current sources of financing for infrastructures and real estate investments in general, in particular for sustainable energy systems	Existing (heavy) subsidies for buildings: action plan to include EE and ER and part of these schemes
Egypt	WG4 – <u>Financing</u>		cooling efficiency fund to be developed taking into account financial institutions
Egypt	WG1 - Energy efficiency building codes	Setting up and mapping building codes	Improve existing building codes: enforcement procedures
Tunisia	WG1 - Energy efficiency building codes	Setting up and mapping building codes	Expansion of <u>exisiting</u> EEBC (RTNB) for Health institution and Hotels



- **PRIORITEE** (implemented in **Algeria, Jordan, Palestine**) = Decision-support tool/web-based application to calculate energy and financial savings in individual public buildings and the whole building stock, by applying different EE measures.
- Standardized **Energy Performance Contracts** to promote and disseminate energy services in the Region. Countries participating are **Tunisia and Palestine** (public pilot buildings selected (Cliniques and Medical Centers), preliminary energy audits and support to preparing and tendering EPC). Onsite trainings conducted in Tunis and Ramallah. Development of available online training material on EPCs: <https://meetmed.org/training-packages/>
- **Water-Energy nexus** promotion in Algeria, Jordan, Morocco: roadmaps for implementing WE improvement solutions in pilot buildings (both public and residential), training for auditors, eventual co-financing of improvement solutions, Monitoring Plan. In Morocco, the pilot public building is AMEE offices in Marrakech.

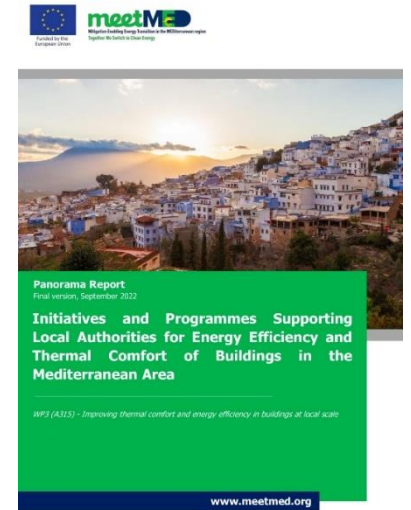


Technical Assistance for the Implementation of Demonstration Projects of Standardized and Easily Replicable Energy Services with Energy Performance Contracts

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Water energy nexus		Evaluation criteria	Questions	Answers
		Which alternative water source systems use a pump connected to the energy supply network?	1) Rainwater harvesting 2) Greywater reuse 3) Reclaimed water 4) Surface or groundwater 5) There is no alternative water source system 6) It was not possible to determine	
		Which alternative water source systems use a pump a renewable energy source?	1) Rainwater harvesting 2) Greywater reuse 3) Reclaimed water 4) Surface or groundwater 5) All pumps consume fossil fuel or are connected to the electricity supply network 6) There is no renewable water source system 7) It was not possible to determine	
		Which alternative water destinations are supplied by alternative systems?	1) Irrigation 2) Pavement washing 3) Toilet flushing 4) Washing machines 5) Water fountains, etc. 6) There is no destination for alternative water sources 7) It was not possible to determine	
		Which alternative water source systems are supplied by alternative systems?	1) Rainwater harvesting 2) Greywater reuse 3) Reclaimed water 4) Surface or groundwater	

- Tools for **Schools** in Algeria, Jordan, and Palestine: selection of schools that will undergo energy audits and use of a tool to evaluate EE improvement. Training on the tool and audit in Bologna in Dec. 2023
- **Tools for Local authorities** managing public buildings: Publication of Report “**Panorama of tools for local authorities**”, organization of webinars (on Urban Cooling, Energy Information Services, Financing, SEACAPs, etc.). **Trophées “Mediterranean Climate Change Adaptation Awards”** (JREEEF, Palestine Green Building Council, Agua de Sol)
- Promote **green building labelling** through the **GRASSMED** platform
- Potential of **District Cooling**: publication on the Potential of DC in the Mediterranean region, organization of DC Study Tours (New Administrative Capital of Cairo, Paris Cooling systems, Madrid).
- **Capacity-building activities and trainings**: developement of an online training catalogue, organization of training based on needs assessment, developement of a MOOC on EE in Buildings in the MED (with AFD).
- **Municipalities Twinning**: share tools and good practices at city level.



Tata (MO)-Palmela (PT) –Malaga (SP)  
Sfax (TN) –Grenoble (FR) –Bizerte (TN)  
San Lucido (IT) -Moukhtara (LBN)  
Lisbon (PT) – Sahab (JO) – Al-Karak (JO)  
Gozo (MLT) – El Kef Lahmar (AL)

## Projects per country & next steps

### • Elaboration of roadmaps for each country

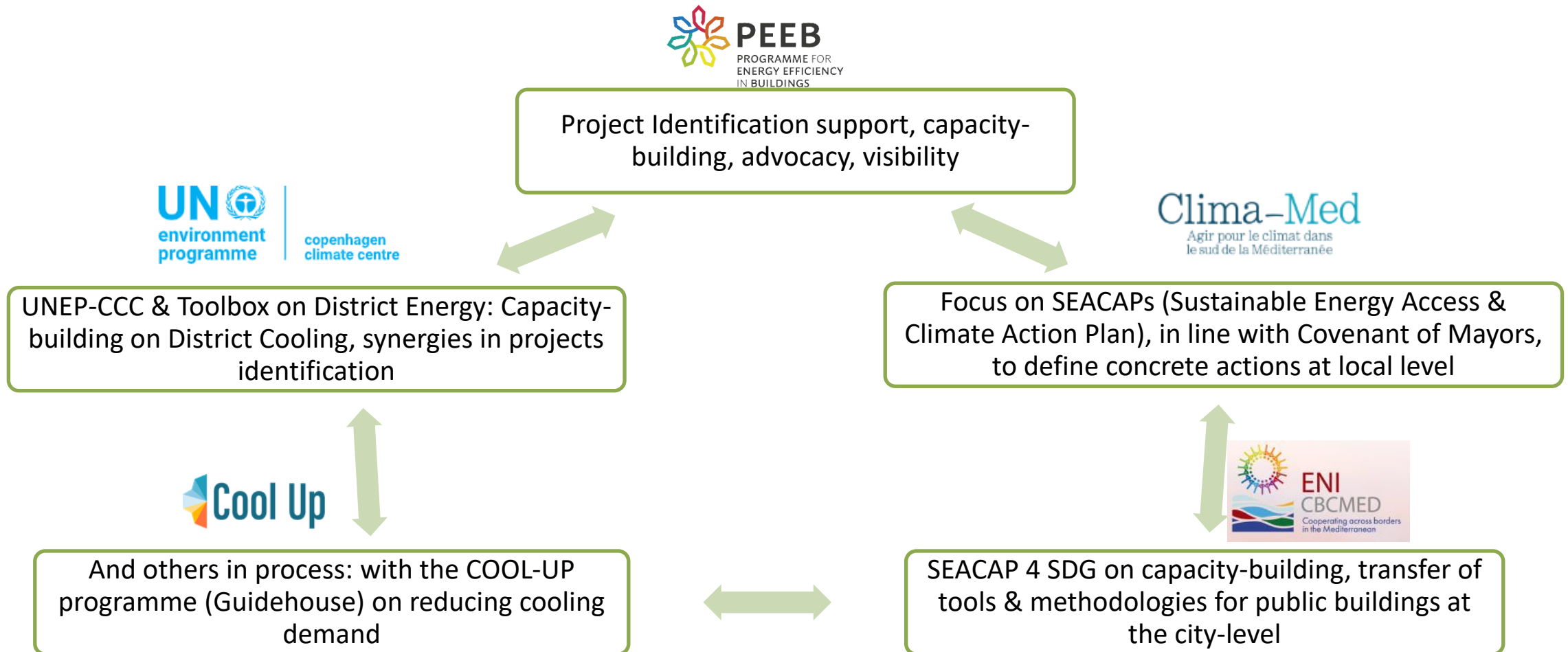
- MOR – updating MEA label for cities
- TUN – follow-up on ACTE program
- DZ - launching of a study on needs
- JOR - launching of a study on passive measures
- LEB – guidebook on EE in buildings released
- PS – Reactivate a national green building labelling
- EG – finalization of district cooling report

Coming next: City networking in Algeria (TBD), City network in Lebanon (May 2024), National WS on DC in Egypt (TBD), publication of the Fact Sheets (Eng & FR)

Capacity building	City network	Awareness raising	Local regulation enforcement	City labelling	Building labelling
<ul style="list-style-type: none"> <li>• <b>MOR</b> - Structurer une offre de service nationale d'accompagnement de l'AMEE pour les communes désireuses de s'engager en faveur de la maîtrise de l'énergie.</li> <li>• <b>JOR</b> - Adaptation of the <u>PrioritéEE</u> toolkit to the Jordanian context and experimentation at the scale of 3 pilot cities / project identification. Audits &amp; simulation of passive measures.</li> </ul>	<ul style="list-style-type: none"> <li>• <b>TN</b> - Renforcer le réseau de villes <u>ReV'ACTE</u> dans ses missions de capitalisation et dissémination d'initiatives pilotes, le transfert de compétences et l'échange d'expériences et d'outils entre dirigeants locaux.</li> </ul>	<ul style="list-style-type: none"> <li>• <b>LB</b> - Accès au financement et renforcement des capacités de sensibilisation, mobilisation et appui en matière de maîtrise de l'énergie. / Outillage des unités environnementales sur la sensibilisation</li> <li>• <b>EG</b> – District cooling as an opportunity for local authorities for cooling their buildings</li> </ul>	<ul style="list-style-type: none"> <li>• <b>TN</b> - Renforcer l'application effective de la RT pour les bâtiments neufs par la formation des professionnels au niveau local.</li> <li>• <b>PS</b> - Develop and experiment a system of incentives and obligations at the local level to foster the construction of EE buildings complying with the national ambitions.</li> </ul>	<ul style="list-style-type: none"> <li>• <b>DZ</b> - Guider les communes algériennes vers l'amélioration continue de la gestion de l'énergie de leur patrimoine tout en reconnaissant les efforts des communes les plus engagées.</li> </ul>	<ul style="list-style-type: none"> <li>• <b>PS</b> - Update and reactivate a national green building label adapted to the Palestinian context and support pilot cities to adopt it for their new buildings.</li> </ul>

# Working in synergy with other projects/programmes

meetMED II acts as a catalyser for action and aims at working in synergies with other partner projects/programmes to optimize and scale-up actions, among others:



# meetMED: Challenges & Actions Taken for EE in Buildings

## Energy Transition in MED

### Identify and remove the bottlenecks



#### Governmental

Non-mandatory measures, low enforcement, lack of institutional coordination, lack of monitoring procedures, lack of financing solutions.



#### Technical

Low capacity in manufacturing efficient equipment, low capacity to implement efficient solutions.



#### Information

Low awareness (of population and investors), low dissemination of EE benefits, lack of data.



#### Access to Finance

Need for facilitating dialogue between financial partners, improving the visibility of existing funds, creating innovative mechanisms for funding, and assisting project holders.



## EE & Resilient Buildings

- **Support to policy/decision-makers** on the harmonization of legislation, regulations and standards in the Building sector.
- **Support to Measurement & Monitoring:** implementation of a common regional energy observatory on EE indicators (Med'ObservEEER) to ensure the monitoring of NEEAPs.

- **Demo Actions** to demonstrate the EE benefits to promote better solutions for scaling-up such as: tools for energy measurement & management in public buildings, EPCs, Water-Energy nexus projects, District Cooling projects. And Municipalities Twinning to share tools & good practices.

- **Capacity-building activities:** conduct trainings in beneficiary countries based on needs assessment, development on an online Self-Certification & training platform (GRASSMED), training modules for project owners, for banks, development of a MOOC on EE in Buildings in the Mediterranean.

- **Awareness-raising & Access to Finance:** organization of 4 National SEI Roundtables (Jordan, Morocco, Egypt, Algeria) to put together the relevant stakeholders (IFIs, banks, authorities, private sector) and creation of networks to activate investments and replicate best practices. More roundtables to come (Tunisia, and 2<sup>nd</sup> rounds).

Regional level



National level



City & local level



# Key Deliverables related to “3. Roadmaps and Targets for Energy Efficiency”

## Roadmap for Action UfM

- **Updated Guidelines on Strategies & Policies for the Building sector**
- **Bilateral meetings & Task Force Notes** led by the Technical Working Groups to identify policies & strategies for enforcement
- **Updated MED’ObservEER database for 5 countries** (common regional energy observatory on EE indicators to ensure the monitoring of NEEAPs)
- In presence **trainings and preliminary energy audits on EPCs in Palestine and Tunisia**
- **1<sup>st</sup> District Cooling Report**
- **Technical workshops** on Monitoring & Evaluation (EE indicators, Energy Demand Modelling, NEEAPs)
- Development of **training materials on EPCs** and **energy audits** held in Palestine (<https://meetmed.org/training-packages/>)
- Three editions of the **meetMED Week** in Cairo, Egypt, March 2022 Marrakech, Morocco, May 2023, and Hammamet, Tunisia, April 2024
- **Proceedings and Streaming Video of the 1<sup>st</sup> Edition of meetMED Week (Hybrid)** in Cairo in March 2022, >100 pax
- **Proceedings and Streaming Video of the 2<sup>nd</sup> Edition of meetMED Week** in Marrakesh in May 2023, 250 pax
- **Trophées “Mediterranean Climate Change Adaptation Awards”** (JREEEF, Palestine Green Building Council, Agua de Sol)



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## Key Deliverables related to 4. Business Environment and Investment Climate and 5. Public and Private Funding

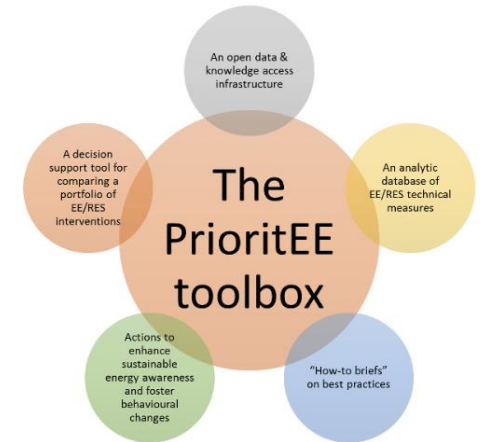
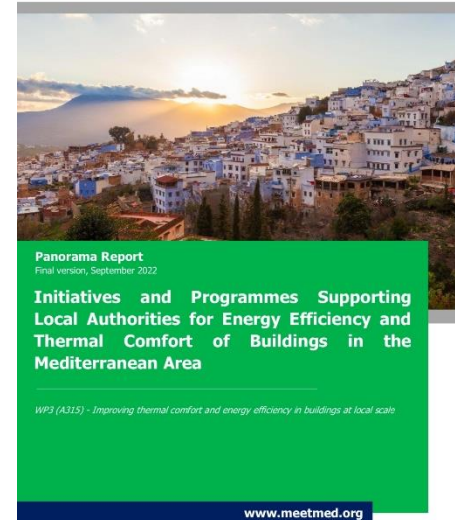
- **1<sup>st</sup> Financing Capability Guidebook**
- **3 Regional MED Sustainable Energy Investment Forums** and **5 National Roundtables MED SEI Forums** (Jordan/June 2022, Morocco/October 2022, Egypt/February 2023, Algeria/October 2023 and Tunisia/February 2024) - to put together the relevant stakeholders (IFIs, banks, public authorities, private sector, energy agencies) and creation of permanent networks to activate investments and replicate best practices.



# Key Deliverables related to 6. Stakeholders Involvement

- **PRIORITEE tool implemented in Jordan and Algeria**
  - a Decision Support Tool to help local authorities to calculate energy and financial savings in individual public buildings and the whole building stock, by applying different energy efficiency measures.
- Report “**Panorama of tools for local authorities**” & a **Joint Euro-Med Workshop** with SEACAP & EEB
- **Launching of 14 North-South Municipalities’ Twinning Agreements**

Tata (MO)-Palmela (PT) –Malaga (SP)  
Sfax (TN) –Grenoble (FR) –Bizerte (TN)  
San Lucido (IT) -Moukhtara (LBN)  
Lisbon (PT) – Sahab (JO) – Al-Karak (JO)  
Gozo (MLT) – El Kef Lahmar (AL)





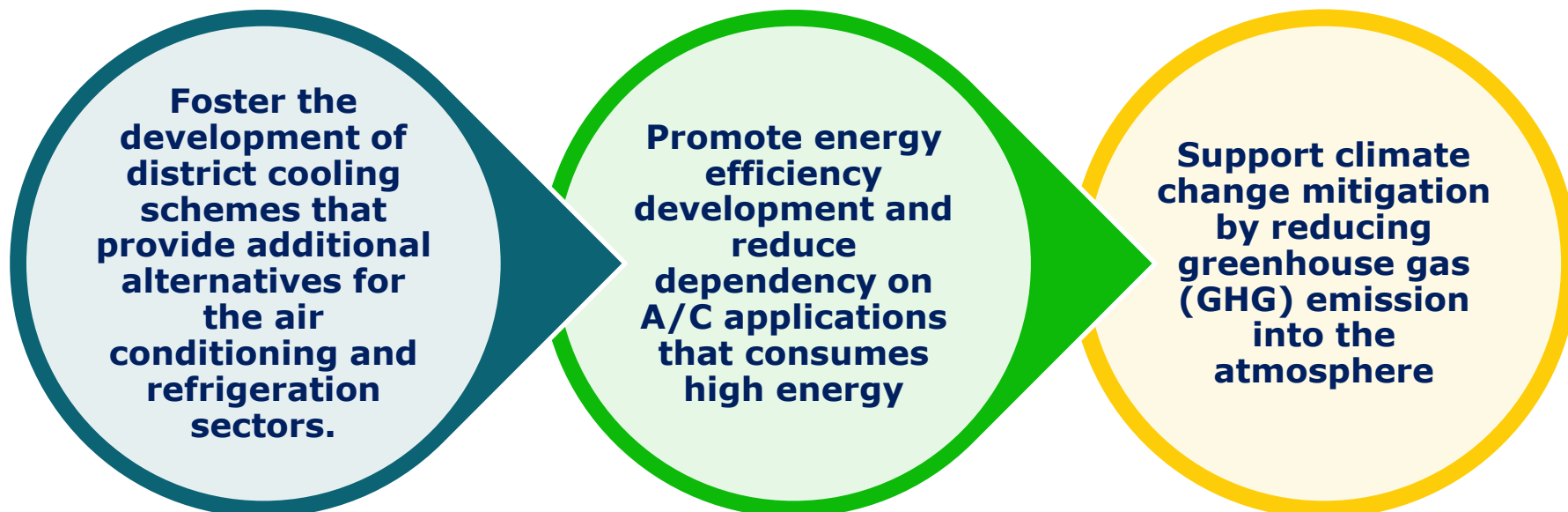
# Key Deliverables related to 10. Raising Public Awareness

- **Awareness-raising videos** on Appliances (Behavioural Change, Appliances Labels, Efficient use of AC)
- **3 District Cooling Programs** (workshops + study tours in Cairo, March 2022, Paris, September 2022, Madrid, November 2023)
- **Outreach activities:**
  - GA of the **GlobalABC** (Feb. 2022)
  - **MEFED** (Dead Sea, June 2022)
  - **World Urban Forum** (Katowice, June 2022)
  - **EUSEW** (September 2022)
  - **COP 27** (Sharm El Sheikh, November 2022)
  - **MED COP 2023** and **3rd UfM Energy Climate Business Forum** (Tangier, June 2023)
  - **6<sup>th</sup> edition of REDEC** (International Conference on RE in Developing Countries, Lebanon, July 2023)
  - **Beirut Energy Week** (Beirut, September 2023)
  - **Joint Workshop** MEDREG/MEDENER/RCREEE/meetMED (Beirut, September 2023)
  - **Cairo Sustainable Energy Week** (Cairo, October 2023)
  - **TAIEX (UfM Urban platform & French Ministry of Ecological Transition)** (Paris, October 2023)
  - **MENA Climate Week** (Riyadh, October 2023)
  - **Global Forum on Buildings and Climate** (Paris, March 2024)



## Activity: 3.1.7. Study on the potential of District Cooling in the South Mediterranean Countries

### Objective



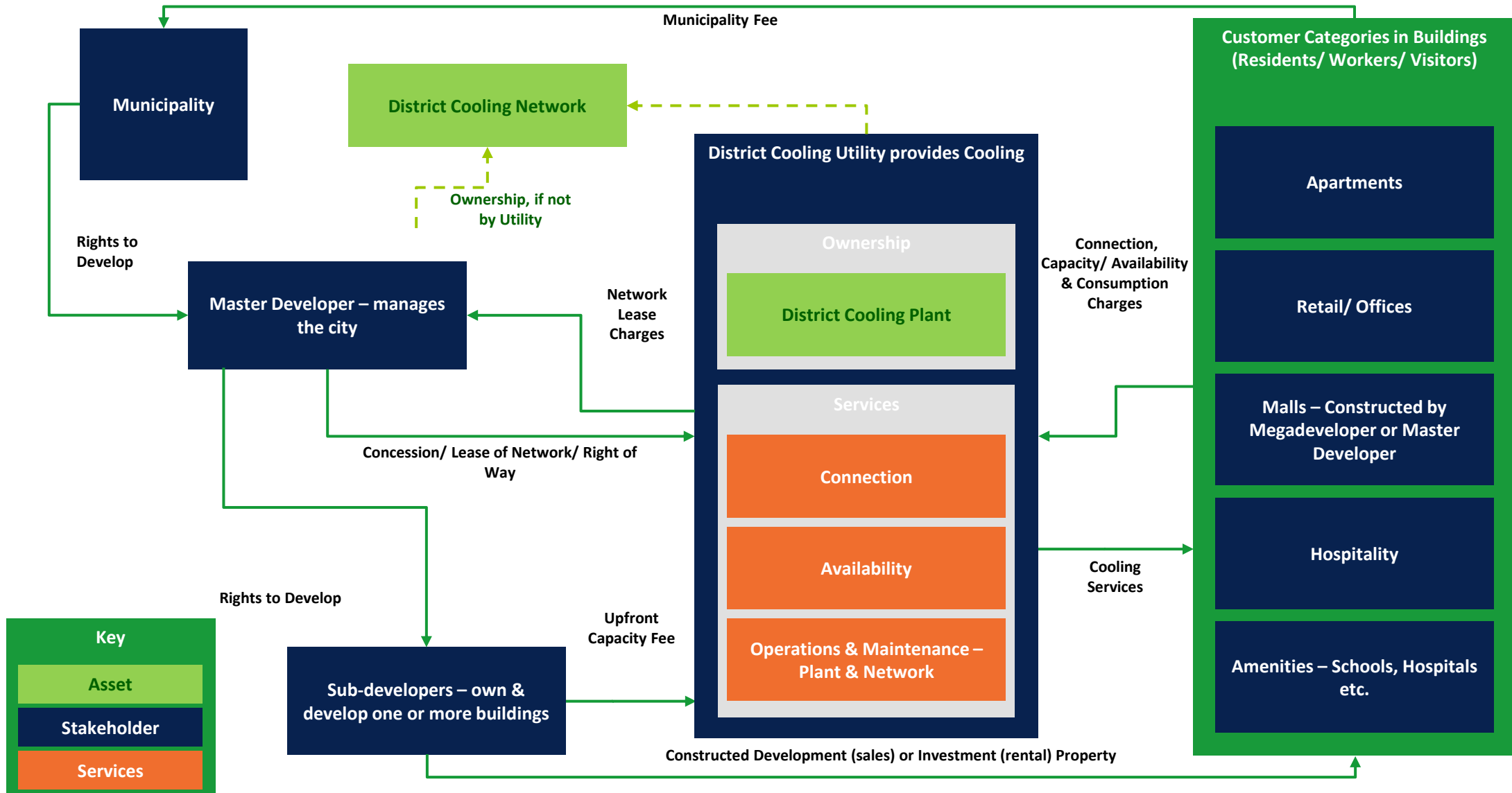
## List of specific stakeholders to be involved:



## Targeted Countries:



## Stakeholders' Relation Map





# What comes next?

## Upcoming events & activities 2024

### EVENTS:

- **COP 29**
- **Cairo Sustainable Energy Week (CSEW), October 1-3, 2024**
- **Twinning Agreements** and North-South study visits
- **2<sup>nd</sup> rounds of National Roundtables** in Jordan, Morocco, Egypt (2024)
- **Appliances scrapping campaign**

### ACTIVITIES:

- **MED'ObservEEER database** implemented and updated in 7 countries, additional workshops and on-job assistance
- **Trainings on EE in Buildings** (development of a new module/MOOC in partnership with ADEME and AFD) (2024)
- **Onsite trainings and audits and call for tender for EPCs implementation** (Tunisia)
- **Roadmap for improving Water-Energy nexus** and training material development (Morocco, Palestine, Jordan)
- **Energy Management Tool implemented in schools** (Algeria, Jordan)
- Regional **Report on the Potential of District Cooling**
- **Study visits** on MEPS & labelling
- **Trainings modules and platform development** for project owners, banks and IFIs



 meetMED Project

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