



Sustainable MED Cities



**Integrated tools and methodologies for sustainable
Mediterranean cities**

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1. Introduction

Making sustainability a norm in city environments is vital for aiding the necessary shift towards ecological and low-carbon practices. This shift aligns with the objectives outlined in the Objective 3 of the [Mediterranean Strategy for Sustainable Development 2016-2025](#), the [2030 agenda](#) and the Paris Agreement [Paris Agreement](#). In 2023, the third Union for the Mediterranean Ministerial Conference on Sustainable Urban Development [“Implementing the UfM Strategic Urban Action Plan” final declaration](#) considered that the [Mediterranean Assessment Report](#) declared the Mediterranean region as one of the most severely hit by the effects of climate change, with urgent need for action, promoting an agenda to sustainable urban planning and regeneration.

The primary focus of the [Sustainable MED Cities](#) project was to increase the capacity of municipalities to bolster sustainability, a crucial sector due to its significant impact on energy and resource efficiency policies. However, this domain is intricate, involving economic, technical, environmental, and social aspects and interconnected with other challenges like urban planning, mobility, energy autonomy, potable water availability, and waste collection. For that reason, Sustainable MED Cities capitalized the [CESBA MED Method and Tools](#) to the needs and priorities of South-East Mediterranean countries in a similar vein as the [MedUrbanTools](#) initiative.

Improving the Mediterranean’s current building inventory for sustainability lacks a widespread framework for assessing environmental performance. Initiatives have emerged to bridge this gap, proposing diverse methods, tools, and indicators. However, these initiatives predominantly focus on individual buildings, overlooking substantial and cost-effective improvements achievable through groups of buildings and synergies at the city scale. The success seen in implementing energy and sustainability measures at a larger scale, like photovoltaic microgrids and water management communities, points to the effectiveness of approaching improvements at the neighbourhood and city levels to meet human needs on urban sustainability in both the social and environmental fronts.

In response to these challenges, Sustainable MED Cities adapted the [CESBA MED deliverables](#) for a standardized assessment framework and process for buildings, urban areas and extended to the city scale. This initiative was implemented across three South-East Mediterranean countries and entails nine technical outputs. Additionally, Sustainable MED Cities has refined the decision-making model and standardized metrics to enable a

contextualised comparison of sustainability performance among Mediterranean buildings, neighbourhoods, and cities. This multifaceted approach aims to foster a holistic and integrated understanding of sustainability in the built environment, paving the way for transformative changes in the Mediterranean region.

2. Context and background

In the Mediterranean region, approximately two-thirds of the population resides in urban areas. Looking ahead to 2050, the [United Nations Human Settlements Program](#) anticipates a significant surge in urban populations, projecting around 170 million in countries along the northern shore and exceeding 300 million in the south and east. This projection gives rise to critical challenges, including the proliferation of slums and deficiencies in infrastructure and services such as waste collection, potable water, mobility, and health threats.

Addressing these challenges requires a pivotal role from cities. Consequently, there is a pressing need for a fresh, sustainable approach to spatial planning and management in Mediterranean urban centres, one that offers enduring solutions. The Sustainable MED Cities initiative seeks to meet this need by leveraging the insights gained from the Interreg MED project [CESBA MED Sustainable MED Cities](#) and the [ENI CBC MED project Green Building](#). Through this collaboration, Mediterranean municipalities will gain access to numerous innovative tools and methodologies, enabling them to formulate effective policies, strategies, and action plans aligned with the Mediterranean Strategy for Sustainable Development 2016-2025. The initiative also includes the implementation of forward-thinking capacity-building programs to empower Mediterranean cities in driving urban regeneration.

A key aspect of curbing energy demand and CO₂ emissions in the Mediterranean is the acquisition of quantified data. Thus, the Sustainable MED Cities project delivered common tools and methodologies to define shared targets and measure overall progress in terms of sustainability in urban areas. This concerted effort is expected to enhance the capacity of local authorities to act towards a sustainable built environment. Furthermore, the initiative promotes the adoption of participatory and multi-level governance approaches, thereby bolstering the impact of policy instruments used by municipalities, such as urban plans, strategic plans, and building regulations. In essence, Sustainable MED Cities endeavours to usher in a transformative era for Mediterranean urban development, promoting sustainability and resilience in the face of growing urbanization.

3. SMC implementation

The Sustainable MED Cities (SMC) project provided Mediterranean municipalities with a system of innovative tools and methodologies to develop effective policies, strategies, and action plans in relation to the Mediterranean Strategy for Sustainable Development 2016-2025.

The SMC objective was to enhance the capacity of public administration in delivering, implementing, and monitoring efficient measures, plans, and strategies to improve the sustainability of cities, neighbourhoods, and buildings with focus on energy efficiency and the promotion of participatory processes.

Furthermore, the SMC project provided common tools and methodologies to set common targets and to measure the overall progress in terms of sustainability in urban areas. By doing this, the capacity to act of local authorities in sustainable built environment was set to be improved. The adaption of the SMC participatory and multi-level governance approaches was set to be improved too. Finally, the impact of policy instruments used by municipalities was also addressed.

The SMC project started on October 2021 and ended in December 2023. Six partners from six different countries participated and achieved nine technical outputs. Following the SBE Method, the pilots used both the SBTool and the SNTool and were performed in three cities as follows:

City and country	Neighbourhood	Buildings
Sousse, Tunisia	Sahloul 3	Municipality of Sahloul
Moukhtara, Lebanon	Moukhtara Central District	Moukhtara Municipality Moukhtara Public school
Irbid, Jordan	Al-Nozha	Abu Bakr Al-Sedeeq Basic School for Boys Irbid Chamber of Commerce Irbid Electricity Company

Sousse, Tunisia

SMC Team

Dagger, Niel (Municipality of Sousse) / The Jenzri, Kais (Team leader) / Zaoui, Maher (Coordinator) / Souilem, Baligh / Ben Hadj Slama, Amani / Blades, Mohamed / M., Awatef / Boujarra, Ahmed / Chaibi, Maissa

Stakeholders

Municipality of Sousse / Tunisian Electricity and Gas Company / National Agency for Energy Management / Foncière Habitation Agency / Order of Tunisian Engineers / Order of Tunisian Architects / University of Sousse / Regional Directorate of Equipment and Housing / National Environmental Protection Agency / Ministry of Environment / National Waste Management Agency / Tunisian Renewable Energy Association / National Institute of Statistics

Selected Scenario

Eco-Quartier / Integration of Green

Technologies

It is a combination of one scenario for the building scale (Integration of Green Technologies) and another for the urban scale (Eco-Quartier). It is the one that best complied with the input received from the decision makers and citizens of the neighbourhood.

Global sustainability score

1.52

Moukhtara, Lebanon

SMC Team

Kanso, Evelyn (Coordinator) / Bassam, Ghazal / Kanso, Rawad / Ghosseini, Zaher / Selman, Wajdi / Hammad, Ihab / Majed Hosneldine / Atef Kanso / Ziad Rasbey / Manal Hdaife / Nizar Hani

Stakeholders

Ain Merched / Moukhtara Cooperative / Saleem / Moukhtara Public School / Shouf Biosphere Reserve

Selected Scenario

Renewable Energy for Moukhtara village

The scenario combines the Renewable Energy for All (REFA) scenario for the adapted SNTool indicators and the Moukhtara Municipality Greener (MMG) for the SBTool indicators related to the municipality and buildings.

Global sustainability score

2.66

Irbid, Jordan

SMC Team

Al Tal, Raed / Mukhaimer, Tala / Al-Tal, Alia / Dabbas, Dana / Al Atrash, Farah / Samhour, Murad / Awadallah, Tala / Hameed, Nibal / Kattab, Rawan

Stakeholders

The Ministry of Public Works and Housing / The Ministry of Environment / Ministry of Energy and Mineral Resources / Royal Scientific Society / EDAMA – Energy, Water & Environment / Greater Amman Municipality / Jordanian Investors Association / Ministry of Water and Irrigation / German Jordanian University / Road Safety Centre / Irbid Chamber of Commerce / Energy and Minerals Regulatory Commission / Land Transport Regulatory Commission / Ministry of Transportation / General Directorate of Civil Defence / Public Security Directorate

Selected Scenario

SN Smart Energy – SB (A & B) Active

The scenario outlines several initiatives, including the use of land and biodiversity to increase energy storage and efficiency. Implementing renewable energy sources such as EV batteries, EV motors, solar PV, and battery storage the aim was to provide affordable access to energy and promote clean and renewable energy sources.

Global sustainability score

2.72

Learnings and conclusions

The SMC methodology and tools have been piloted and implemented in three pilot cases summarized in the previous introductory section. After reviewing the results of the application, several learnings and conclusions can be drawn:

- **Using harmonised assessment systems** fosters the reach of greater sustainability standards in the built environment. These systems facilitate the adequate measurement of sustainability performance, allowing regular monitoring and proper comparability of results against other scenarios and/or urban areas.
- **Having access to reliable data and information** is essential to adequately assess the sustainability performance of the urban environment. Ensuring regular access to data and information allows the adaption of good monitoring practices, resulting in better policy formulation and implementation.
- **Using the neighbourhood scale is optimal** to reach significant and cost-effective sustainability improvements. Between the building and the district scales, neighbourhoods allow the full exploitation of the existing potential synergies between the different urban scales.
- **Each urban area has its own unique characteristics.** For this reason, it is important to use disaggregated data and information and assessment systems that can be well adapted to the specific contexts, needs and priorities of the areas to be assessed.
- **Consulting, discussing, and involving citizens in the assessment** of the built environment is key to ensure that local knowledge and priorities are adequately considered and integrated. This ensures an adequate adaptation of the assessment process to the local conditions.
- **Training processes are essential**, both for technical and political agents, to be able to develop urban-scale sustainability policies, plans, and actions that are effective and enduring over time.

4. Policy Recommendations

Drawing from the insights gained through the SMC project, a set of recommendations is presented for policymakers and key decision-makers in both the public and private sectors. These recommendations, designed to enhance sustainability planning in the built environment, aspire to foster a new ethos regarding the built environment, with a particular emphasis on the South and East Mediterranean region. Each recommendation is organized into four sections:

Hints and Tips: This point is located at the top of the page and provides a summary of how to act on the recommendation.

Justification: This section provides context and rationale, offering a comprehensive understanding of the recommendation.

Description: This section elucidates the details and specifics of the recommendation as they have been articulated during the SMC project.

SMC Output: This section includes examples or references associated with each recommendation to enhance its understanding.

SMC recommendations

R1 Ensure the mainstreaming of sustainability in urban planning and management.

R2 Promote the harmonization of assessment tools to measure, monitor and compare the sustainability of the urban environment.

R3 Make environmental, urban, and building data accessible to public administrations.

R4 Ensure the objectivity and measurability of the sustainability targets in regional and national policies, programs, and plans.

R5 Use sustainability assessment system to support integrated design and planning retrofit processes.

R6 Adopt participatory approaches to gather stakeholders' feedback [PGS – Co creation Labs – Collaborative Platform – LPCs]

R7 Improve the competencies of public authorities and professionals working in sustainable construction sectors.

R1: Ensure the mainstreaming of sustainability in urban planning and management

Hints and tips

- **Make visible information on the status and evolution of cities with respect to their environmental objective.**
- **Relate sustainability indicators to the well-being of citizens and the quality of the urban habitat.**

Description

Incorporating sustainability priorities into city-level and local urban planning and development plans, particularly through initiatives like City and Urban Development, facilitates the harmonization of urban economic growth, heightened social equality, and the promotion of improved resource efficiency. This integration is closely linked with other spatial and strategic plans such as Regional Planning Strategies and Sustainable Energy and Climate Action Plans. It is most effective when supported by robust political backing and commitment.

Justification

Since the early 2000s, the idea and application of sustainability within urban planning have gained substantial global recognition and have progressively become a prevalent aspect of policymaking. Embracing global frameworks like the Sustainable Development Goals (SDGs) and engaging in initiatives Covenant of Mayors for Climate & Energy, the Urban Development Network, and the Sustainable Cities Platform present opportunities to construct towns and cities that are more sustainable, inventive, and fair, while also utilizing the Earth's natural resources in a more efficient manner.

SMC Output

- SMC Decision-making methodology
- Contextualization of the decision-making methodology

Description

Methods adapted to local environment for the decision-making processes in urban planning and management.

R2: Promote the harmonization of assessment tools to measure, monitor and compare the sustainability of the urban environment

Hints and tips

- **Study the evaluation systems and indicator working in your area and determine ways to link them.**
- **Use sustainability information systems also to connect people and share experiences.**

Description

It advocates for the implementation of standardized indicators to assess the performance of the built environment, fostering comparability across diverse contexts. By employing common metrics, this recommendation seeks to create a universally applicable framework for evaluating the sustainability of urban development. The use of standardized indicators facilitates objective performance measurement, enabling stakeholders to gauge the effectiveness of built environment initiatives across various settings. This approach encourages transparency, accountability, and informed decision-making in urban planning and development.

Justification

This recommendation underscores the need for uniform indicators in assessing the built environment's performance, promoting a standardized approach for cross-context comparison. Standard metrics enhance transparency and accountability, enabling stakeholders to objectively measure the effectiveness of urban development initiatives. The implementation of common indicators fosters informed decision-making in urban planning and encourages the identification of best practices that can be replicated across diverse geographical and socio-economic settings.

SMC Output

- SMC Decision-making methodology
- SMC Platform
- E-learning Platform

Description

Support for methodological definition, platforms offering tools and utilities, access to the project users' area.

R3: Make environmental urban and building data accessible to public administrations

Hints and tips

- **Create a data system to assess environmental, social, and economic sustainability in the urban environment.**
- **Share information between different administrations, update data and refine analysis models.**

Description

Improve and secure, enforcing the compliance of legal requirements, the easy access to environmental and sustainability data to citizens and public administrations. Environmental information should be easily accessible by public administrations, even when this is owned by private entities. Easy access to environmental data and information allows the adoption of regular, high-quality monitoring practices, resulting in better formulation, implementation, and assessment of policies in relation to the built environment.

Justification

In Europe, the right and freedom to access to environmental information is granted since the early 2000s. Various regulations (including the Aarhus Convention (2001), the Freedom of access to information Directive ([2003/4/EC](#)), and the INSPIRE Directive ([2007/2/EC](#))) ensure that environmental information is systematically available and distributed to the public. The EU regulations require that public authorities make the environmental information they hold available to any legal or natural person on request. But, in some countries, accessing to environmental information is still challenging and difficult, even for public bodies and local authorities.

SMC Output

- Contextualization of the decision-making methodology to partner cities
- SMC Platform

Description

Definition and adaptation of processes, platform tools and project resources.

R4: Ensure the objectivity and measurability of the sustainability targets in regional policies, programs and plans

Hints and tips

- **Assess the built environment to provide baselines for environmental, social, and economic performance.**
- **Determine ambitious, achievable, and measurable local targets against which to define the scope of regulations and standards.**

Description

Both the technical definition and verification of compliance with sustainability objectives require a knowledge and information base built on scientific knowledge. Such a basis is provided by the objectivity and measurability of data integrated in an assessment and rating system. The use of this information and harmonized tools, contextualized according to local environments, is a suitable technical basis for carrying out diagnoses, defining improvement plans and monitoring the development of urban sustainability.

Justification

Scientifically based measurements, data collection and monitoring of the performance of buildings and cities makes it possible to collect and have access to objective information that is necessary to assess sustainability targets. Objective and verified information enable evidence-based decision making, ensuring that policies, plans, and actions respond to reality.

The availability of freely accessible and shared databases facilitates access to information not only for those directly responsible for public policies, but also for all interested actors.

The validation of information and the adoption of evaluation tools allows public administration at regional, and local levels to work with unified data and methodology.

SMC Output

- SMC assessment platform
- SMC Decision-making methodology

Description

Tools for urban assessment and decision-making processes, examples of application and their results.

R5: Use sustainability assessment systems to support integrated design and planning retrofit processes

Hints and tips

- Incorporate sustainability assessment into urban planning regulations, renewal plans and monitoring.
- Compare urban renewal alternatives by measuring their performance using environmental, social, and economic indicators.

Description

The use of sustainability assessment systems in urban planning and local development plans, through city management strategies and city development strategies, has the potential to harmonize urban economic growth, enhance social equity and optimize resources utilization. Encouraging the adoption of such tools can be facilitated through fiscal incentives tied to achieving specific performance thresholds, which can be effectively gauged using standardized assessment tools like the SB, SN, and SC developed within this project.

Justification

Methodological, rigorous, and participatory evaluation of buildings, neighbourhoods, and cities, ensures verified, consensual, and reliable results that are essential to achieve permanent urban improvements. Sustainability assessment systems can be used to improve the design and development plans for buildings, neighbourhoods, and cities. This can also facilitate the exchange of knowledge, sharing good practices and increase replication potential. Having assessment systems based on real and verified data makes it possible to monitor and adjust improvement plans and actions according to their evolution. The use of sufficiently agreed and validated assessment systems provides a useful information basis for prioritizing where and how to act.

SMC Output

- SMC Decision-making methodology, Assessment, and e-learning Platform
- Co creation Labs
- Collaborative Platform, LPCs

Description

Methodological resource platforms and tools for learning, assessment, and decision-making. Collaborative applications.

R6: Adopt participatory approaches to gather stakeholders' feedback

Hints and tips

- **Incorporate and improve citizen consultation in urban planning and renewal decision-making.**
- **Review and optimize the mechanisms for receiving, considering, and responding to opinions to ensure transparency and inclusiveness.**

Description

Improve urban development transparency through more open governance and greater public participation, by making compulsory the need to consult and engage with citizens and other local stakeholders (businesses, trade unions, civil society organisations, etc.) during the planning phase. This will ensure that the preferences and priorities of the local communities are considered (accessibility, gender-based urbanism, green infrastructure, etc.) reaching greater public acceptance and ensuring ownership. The SMC experience proves that dialogue is easier when the target audiences are: Single communities of stakeholders, and Stakeholders from small neighbourhoods.

Justification

Urban developments affect not only those that invest in them or occupy the buildings and places within them, but a wider community of influence (citizens, workers, commuters, visitors, etc.). Therefore, it is essential that all the affected parties, including local citizens and businesses, are actively involved in shaping the developments that affect them. Having policies, processes, tools, and methods that empower communities, while keeping a regular conversation between all parties is crucial. But more participation in this area also comes with great expectations for the legitimacy and effectiveness of planning efforts.

SMC Output

- Manuals made related to the participatory approach (PGS, Co-Creation Labs, LPCs, etc.)
- Decision making manual

Description

Guidelines developed with stakeholders' support on participation, co-creation, and decision-making processes.

R7: Enhance the competencies of public authorities and professionals working in sustainable construction sectors

Hints and tips

- **Identify the training and updating needs of regulatory and urban planning development teams.**
- **Grant incentives and recognition for those who improve or complete their education in sustainability and urban planning.**

Description

Implement regular capacity-building and training activities to enhance the knowledge of state-of-the-art technologies, and to develop technical skills and competencies among public officers at local/regional level to effectively address sustainable urban development. Training should evolve into a continuous learning process tackling the different aspects of sustainable urban development, including design and formulation of policy initiatives, project design and development, procurement, monitoring and evaluation, urban retrofitting, governance, public engagement, and more.

Justification

Integrating sustainability in the urban development processes is a dynamic, multi-dimensional and challenging process, given the complexity of aspects involved (economic, technical, environmental, social, etc.) and the multitude of connections with other sectors (urban planning, mobility, energy generation, waste management, water supply, etc.). Amid the emergence of new methodologies, technologies, tools, and approaches to address sustainability challenges, there is a growing need for specialized training in measuring and responding to urban sustainability requirements.

SMC Output

- Contextualisation of the decision-making methodology
- Co creation Labs
- SMC platform

Description

Vision and objectives definition, working groups, participatory ways to develop processes.

5. SMC project references

SMC Participative platform

Pilot cases development, decision-making process, ways to participate in
https://adhocracy.plus/sustainable_med_cities/

SMC E-Learning platform

Online courses on urban sustainability for decision-makers and technicians
<https://www.smc-elearning.eu/>

MED Urban Tools Training System

SMC Training system, Collaborative and Assessment Platform and Decision-making process
https://medurbantools.com/portfolio_page/sustainable-med-cities-training-system/

SMC Evaluation tools

Assessment system, online Tools SBTool MED, SNTool MED, SCTool MED
<https://sustainablemedcities.tools/>

Sustainable MED Cities

Integrated tools and methodologies for sustainable Mediterranean cities
<https://sustainablemedcities.tools/>

6. Contact Details

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