

SUSTAINABILITY ASSESSMENTS OF MEDITERRANEAN CITIES

Costas A. Balaras, PhD

Mechanical Engineer, Research Director costas@noa.gr



GRec Energy Conservation (GRec)

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**Institute for Environmental Research & Sustainable Development (IERSD)
National Observatory of Athens (NOA)**

www.iersd.noa.gr



Sustainable MED Cities



**ENI
CBCMED**
Cooperating across borders
in the Mediterranean



Project funded by the
EUROPEAN UNION



**REGIONE AUTÒNOMA DE SARDIGNA
REGIONE AUTONOMA DELLA SARDEGNA**



Generalitat de Catalunya
Departament de la Vicepresidència
i de Polítiques Digitals i Territori

iiSBE
ITALIA R&D



UN
environment
programme



Mediterranean
Action Plan
Barcelona
Convention



**MedCités
MedCities**

ISSUES - HEADLINES

! In the **MED region**, two thirds of the **population** live in **urban areas**

! By 2050, **urban population will grow** to ~170 million in the countries on the north basin and ~300 million on the south & east

! **Inadequate infrastructures & services:**

- Energy
- Environment (air quality)
- Waste
- Water
- Mobility
- Health issues

! **Buildings - Built Environment - Cities** play a major role in tackling these challenges

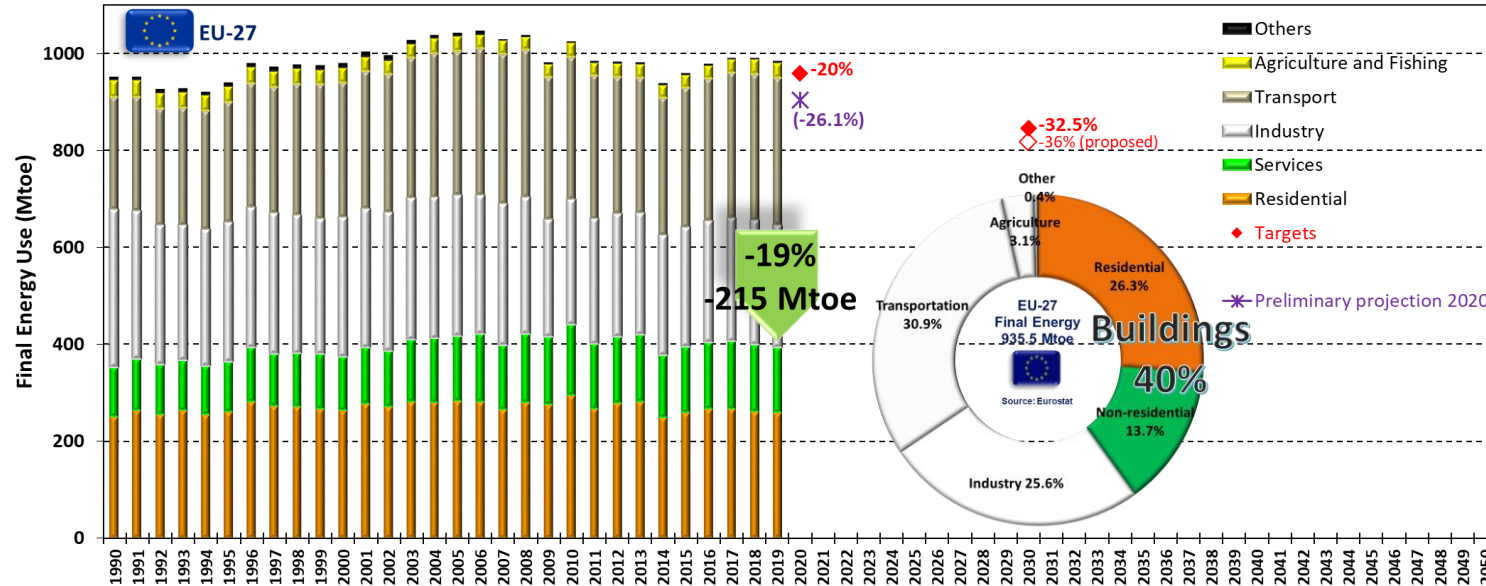
ENERGY - EMISSIONS



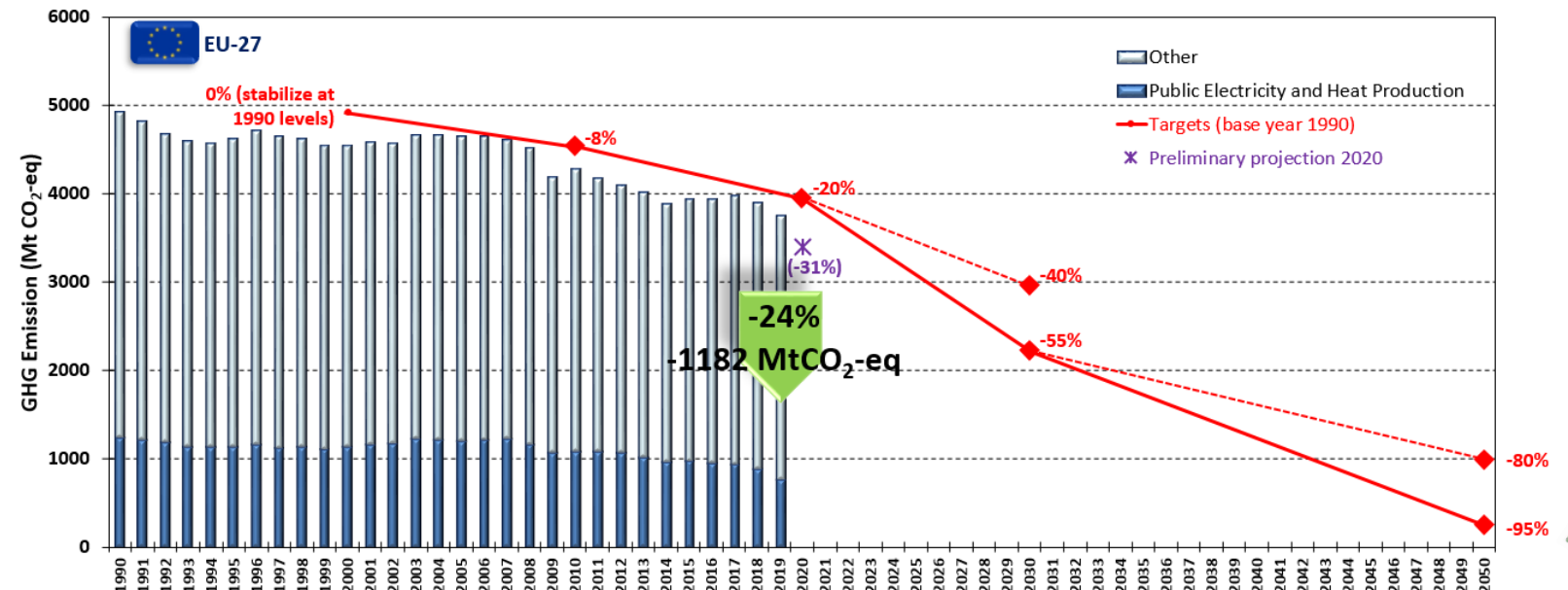
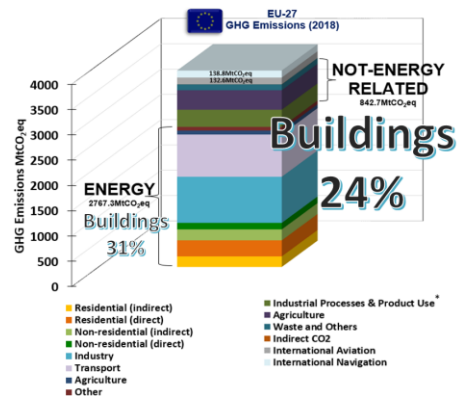
Buildings

Part of the problem ...

Part of the solutions ...



Energy efficiency first!



ENERGY - EMISSIONS



Buildings

Part of the problem ...

Part of the solutions ...



EU's commitment to global climate action under the Paris Agreement



Greenhouse Gas Emissions

2020	2030
-20%	≥-40% ≥-55%

(EU Climate Law)



Renewable Energy

2020	2030
20%	≥32%



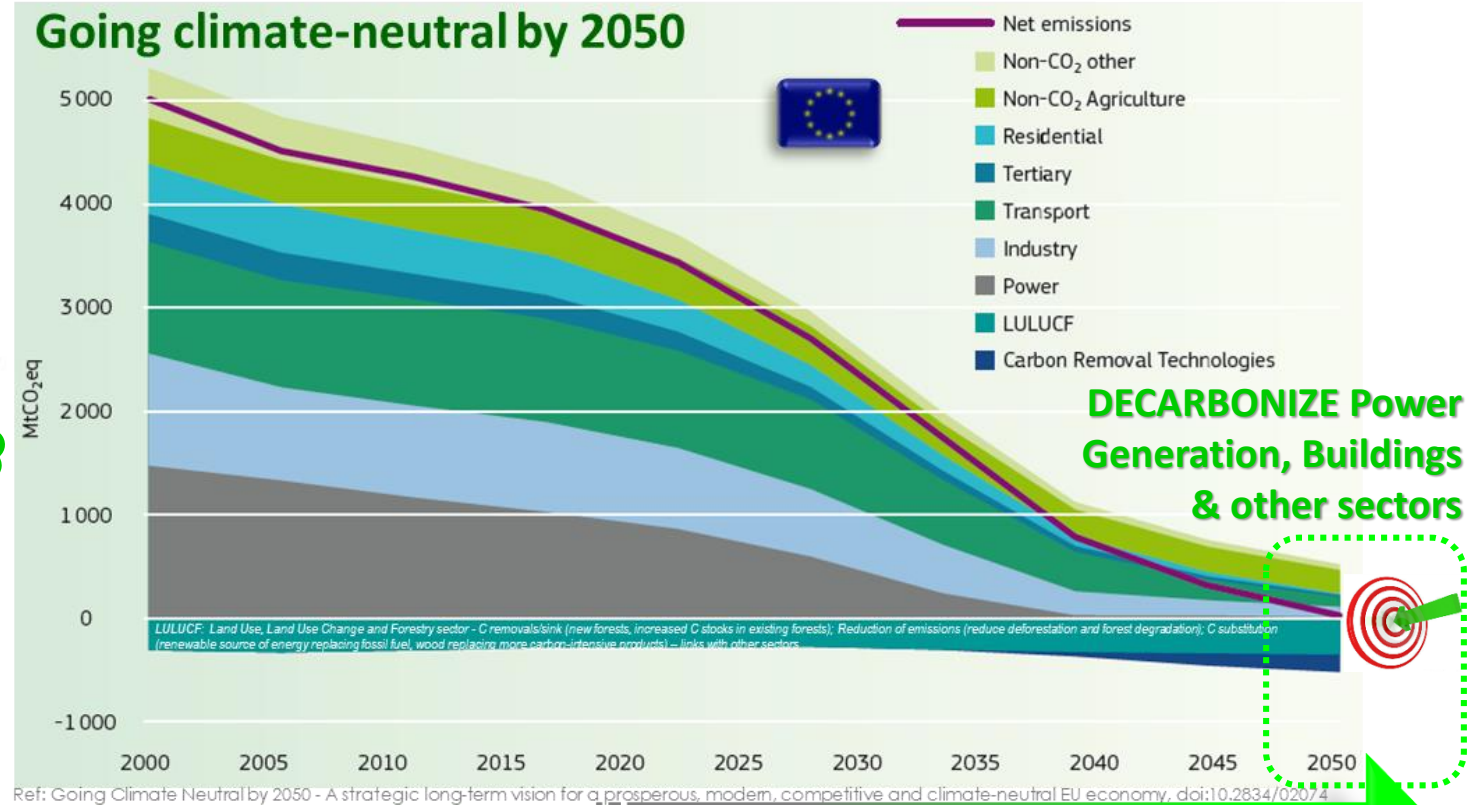
Energy Efficiency

2020	2030
20%	≥32.5%

Becoming more ambitious



EU aims to be climate-neutral by 2050 – an economy with net-zero GHG emissions



- ✓ Energy efficiency is a priority
- ✓ Limit climate change and overcome economic crisis
- ✓ Reduce GHG emissions in a cost effective way and thereby mitigate climate change
- ✓ Improve EU security of supply by reducing primary energy consumption and decreasing energy imports



ISSUES – HEADLINES - SOLUTIONS

 In the MED region, two thirds of the population live in urban areas

 By 2050, urban population will grow to ~170 million in the countries on the north basin and ~300 million on the south & east

 Inadequate infrastructures & services:

- Energy
- Environment (air quality)
- Waste
- Water
- Mobility
- Health issues

 **Buildings - Built Environment - Cities** play a major role in tackling these challenges

 **A sustainable approach to spatial planning & management** in MED cities to develop effective policies, strategies and action plans to step up the capacity of cities to drive urban regeneration and progress **towards climate neutrality and SUSTAINABILITY**

ENERGY

EMISSIONS

SOCIETY-SOCIAL

URBAN SYSTEMS

RESOURCES

ENVIRONMENT

Decision Metrics

ECONOMY

SUSTAINABILITY

ENVIRONMENTAL IMPACT

RESOURCES

URBAN SYSTEMS

SOCIETY-SOCIAL

EMISSIONS

ENERGY

DECISION METRICS

Picture Credit: Carmen De la Cruz-Lovera et al., Sustainability 2017, 9(9), 1294; <https://doi.org/10.3390/su9081294>





SDGs - the blueprint to achieve a better and more sustainable future for all

<https://www.un.org/sustainabledevelopment/sustainable-development-goals/>

Think Globally
Act Locally

POLICIES are in place ... BUT ... NEED ACTIONS



SUSTAINABILITY ISSUES

ENERGY RESOURCES
EMISSIONS ENVIRONMENT
ECONOMY URBAN SYSTEMS
SOCIETY-SOCIAL



WORLD LEVEL



EU LEVEL

COM (2016) 739 EUROPEAN ACTION FOR SUSTAINABILITY

NATIONAL LEVEL

NATIONAL STRATEGY (GOALS) for Sustainable Development

REGIONAL LEVEL

REGIONAL STRATEGY for Sustainable Development

MUNICIPALITY LEVEL

CITY STRATEGY for Sustainable Development

SUSTAINABILITY INDICATORS



GOALS *Connect the World-EU-National-Regional-Local levels*
Account for local policies & contribution towards global goals

Think Globally
Act Locally

POLICIES are in place ... BUT ... NEED ACTIONS

most effective at **LOCAL LEVEL**

Harmonized Sustainability Assessment System

Sustainable MED Cities **WHAT ?**

-  **Have a COMMON LANGUAGE** to understand each other
-  Support **COMMON PERCEPTION** of key **sustainability issues**
-  **Set** reliable, measurable-verifiable **PERFORMANCE TARGETS**, based on practical indicators
-  **MONITOR PROGRESS** towards common sustainability objectives
-  Facilitate **TRANSFERRING** of **BEST PRACTICES**; Learning from each other
-  Expedite **transnational** activities & collaborations



Harmonized Sustainability Assessment System

Sustainable MED Cities **HOW ?**

- ✓ Develop a **MULTISCALE** (Building & Urban) & **MULTICRITERIA** (all sustainability issues) **ASSESSMENT SYSTEM** to support **DECISION MAKING**



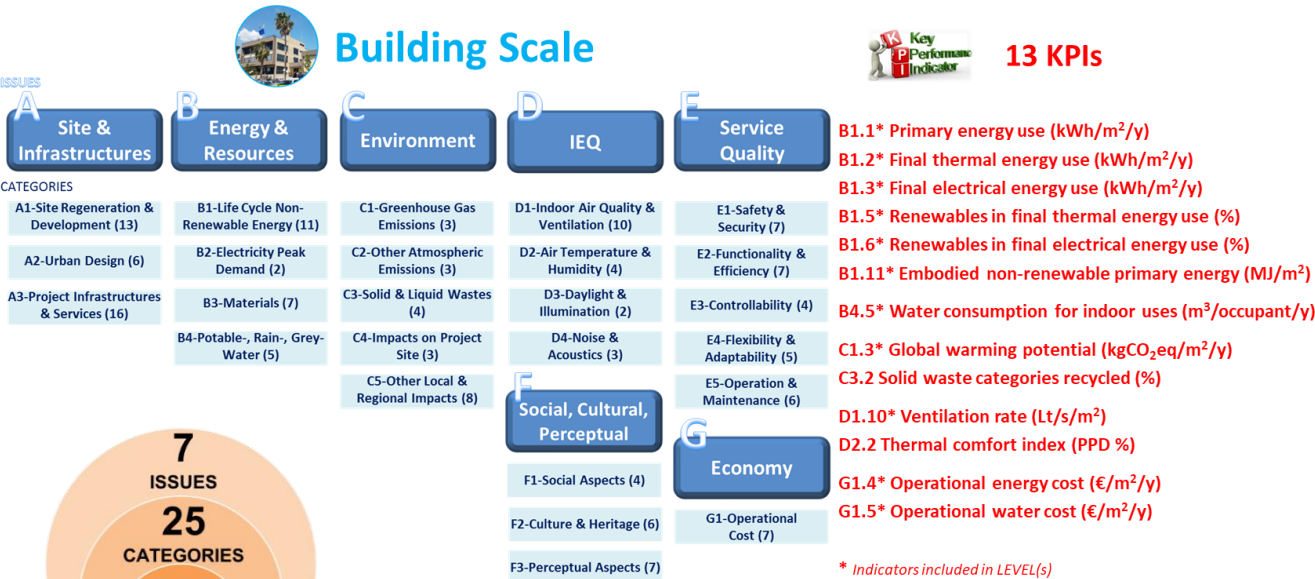
- ✓ Improve the **effectiveness of policies, action plans, planning**
- ✓ **CONTEXTUALIZE** assessment & rating to local priorities
- ✓ Fit public administrations' needs; **SIMPLE** to use, **LOWER COST**
- ✓ **SENSE OF LOCAL OWNERSHIP**; Flexibility to **ADAPT** to local needs & priorities

STRUCTURE

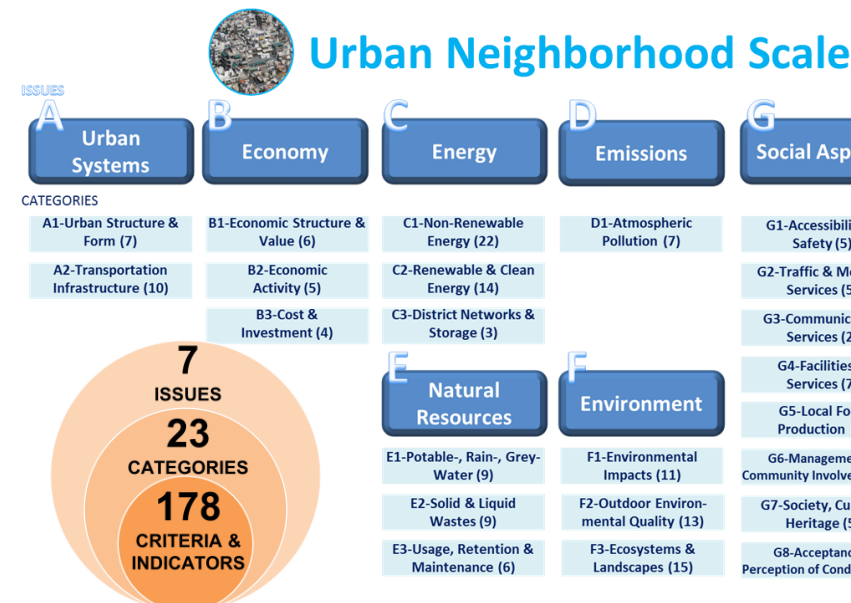
TOOL

RESULTS

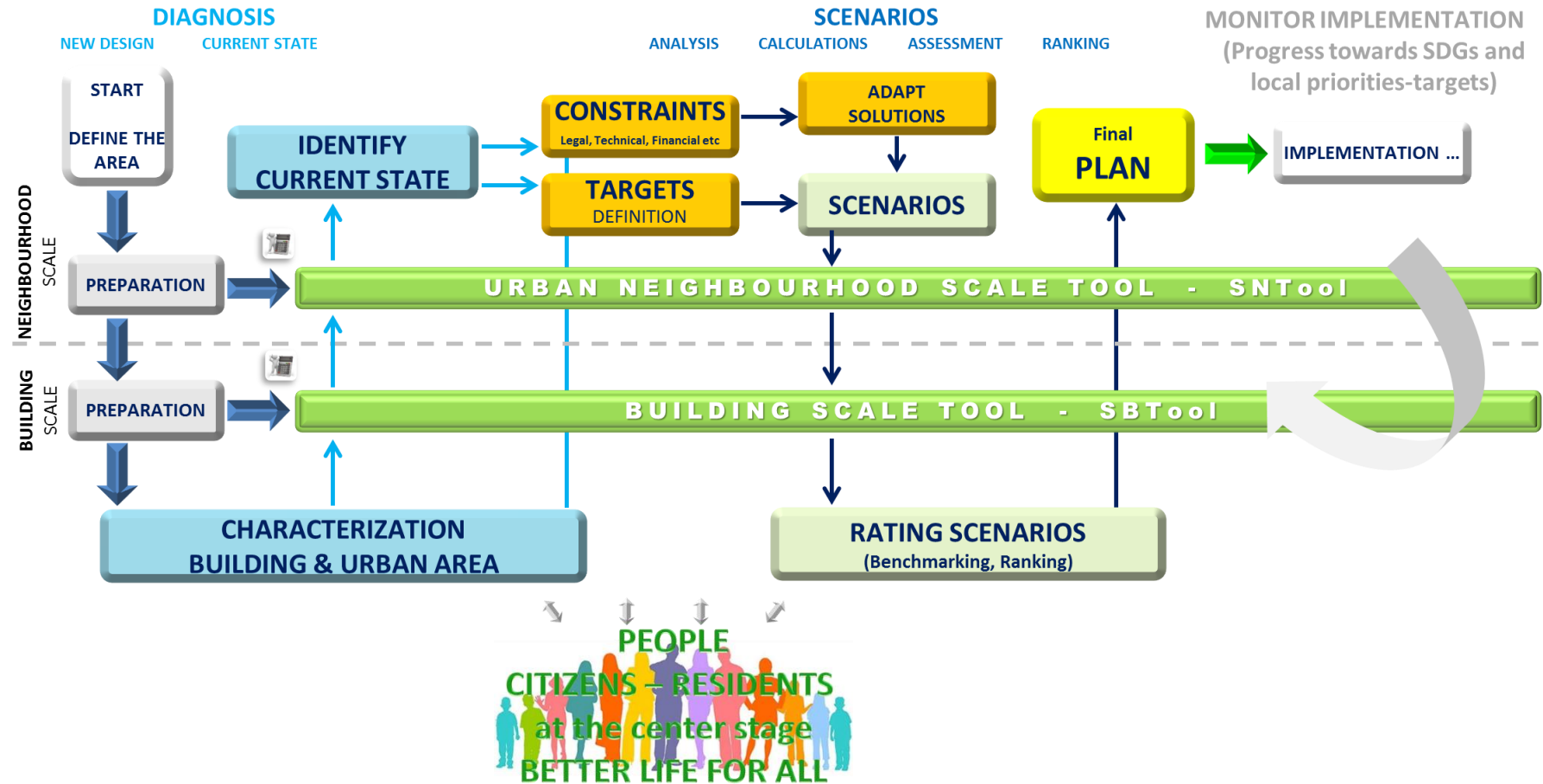
TRAINING



Generic Framework



Support every step of the DECISION MAKING PROCESS



PILOTS



Pilot Test Results

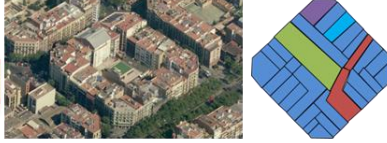


CESBA MED

SPAIN: Sant Cugat Del Vallès Monestir
Sant Francesc neighborhood



SPAIN: GenCat, Barcelona



ITALY: City of Torino



ITALY: City of Udine, Aurora
District



FRANCE: ZAC du Bon Lait, Lyon



FRANCE: EcoQuartier Parc des Calanques,
Marseille



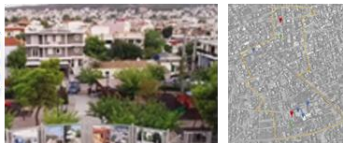
MALTA: University of Malta



CROATIA: City of Solin, Mravince
neighborhood



GREECE: Municipality of Fylis



Sustainable MED Cities



Jordan: Greater Irbid
Municipality



Lebanon: Moukhtara
Municipality



Tunisia: Municipality of
Sousse

PRACTICAL



Capitalize on Existing Knowledge for SUSTAINABLE MEDITERRANEAN CITIES

Generate New Knowledge & Experiences



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 Sustainable MED Cities

INTEGRATED TOOLS
AND METHODOLOGIES
FOR SUSTAINABLE
MEDITERRANEAN CITIES

 CAPITALISATION PROJECT

OBJECTIVE 

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.



<https://www.enicbcmed.eu/projects/sustainable-med-cities>



Jordan: Greater Irbid Municipality



Lebanon: Moukhtara Municipality



Tunisia: Municipality of Sousse



Spain: Government of Catalonia



Italy: iiSBE Italia R&D srl



Greece: National Observatory of Athens



UN Environment Programme - Mediterranean Action Plan



MedCities Association

SUSTAINABILITY ASSESSMENTS OF MEDITERRANEAN CITIES



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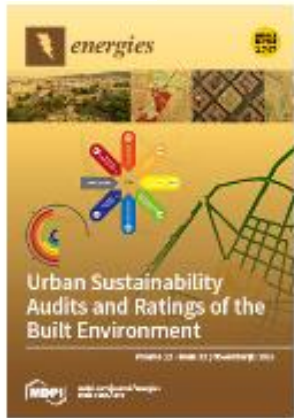
Thank you for your attention...



OPEN ACCESS ARTICLE



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Feature Paper

Article

Urban Sustainability Audits and Ratings of the Built Environment

by Constantinos A. Balaras ^{1,*} , Kalliopi G. Droutsas ¹ , Elena G. Dascalaki ¹ ,
 Simon Kontoyiannidis ¹ , Andrea Moro ^{2,*} and Elena Bazzan ²

¹ Group Energy Conservation, Institute for Environmental Research and Sustainable Development, National Observatory of Athens, GR-15236 Athens, Greece

² iiSBE Italia, International Initiative for a Sustainable Built Environment, I-10138 Torino, Italy

* Authors to whom correspondence should be addressed.

Energies **2019**, *12*(22), 4243; <https://doi.org/10.3390/en12224243>

Open Access: <https://doi.org/10.3390/en12224243>



Cover Story (view full-size image) The Common European Sustainable Built Environment Assessment for the Mediterranean is an open source system for measuring the sustainability of urban areas. Cities can adapt it to reflect their own policy targets and priorities. The system is structured around the UN 17 SDGs, aiming to support users and their efforts towards a sustainable future. [View this paper.](#)

The Sustainable MED Cities Team (2021-2023)



Sustainable MED Cities

<https://www.enicbcmed.eu/projects/sustainable-med-cities>

Partnership - 8 Organizations from 6 Countries

Spain: Government of Catalonia ♦ **Italy:** iiSBE Italia R&D srl ♦ **Tunisia:** Municipality of Sousse
♦ **Lebanon:** Moukhtara Municipality ♦ **Jordan:** Greater Irbid Municipality ♦ **Greece:** National Observatory of Athens ♦ **UNEP:** United Nations Environment Programme - Mediterranean Action Plan ♦ **MedCites:** MedCities Association


Coordinator: Government of Catalonia



<https://cesba-med.interreg-med.eu/>



Implemented by

 Generalitat de Catalunya
Departament de la Vicepresidència
i de Polítiques Digitals i Territori

 iiSBE
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Associated partners

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environment

 MedCités
MedCities

 <https://enicbcmed.eu/projects/sustainable-med-cities>

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www.facebook.com/GROUPEnergyConservation



www.linkedin.com/in/costasbalaras



www.researchgate.net/profile/Constantinos_Balaras/



MAIN ACTIVITIES

GREC is active since 1995 in the following areas of expertise:

- C**omputational fluid dynamics – CFD & Thermal simulations
- O**perational diagnostic audits of buildings & E/M installations
- N**ondestructive testing and inspections of buildings & E/M installations using infrared thermography
- S**olar cooling & solar combi-plus systems
- E**nergy audits of buildings & E/M installations; Certification of buildings (TEE-KENAK - http://portal.tee.gr/portal/page/portal/SCIENTIFIC_WORK/GR_ENERGEIAS/kenak)
- R**efurbishment & new energy efficient buildings
- V**arious publications and software
- A**ssessment of photovoltaics performance
- T**ypologies of buildings (TABULA - EPISCOPE - <http://episcopes.eu>)
- I**ndoor environmental quality
- O**perational & Environmental impact of buildings
- N**ormative advice & consulting services to E/M & Architectural offices

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