

## URBAN EMPATHY – Working Package 3

### RESULT INFORMATION FILE – Phase 1

Description of the result to be capitalized in URBAN EMPATHY

#### 1. Partner's description

(Summary information of the partner presenting the result to be capitalized in URBAN EMPATHY)

Name of the institution presenting the result	Urban ecology Agency of Barcelona
Type of institution (city, region, agency, tech institute...)	Public Agency
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#### 2. Project description

(Summary information of the project corresponding to the result)

Name of the project	Changing the Mediterranean Metropolis Around Time
Acronym of the project	CAT-MED
Starting date	2009-04-01
Ending date	2011-11-30
Project status (finished, execution...)	Finished
Project type (standard, targeted, strategic, ...)	Standard
Lead partner of the project	Malaga City Council
Project website	<a href="http://www.CAT-MED.eu">http://www.CAT-MED.eu</a>
Programme (MED, Interreg...)	MED programme
Programme Priority	2. Environmental protection and promotion of a sustainable territorial development
Programme Objective	2.4. Prevention and fight against natural risks
EU 2020 Strategy (choose the most suitable one from the following options)	<input type="checkbox"/> Smart growth <input type="checkbox"/> Inclusive growth <input checked="" type="checkbox"/> Sustainable growth <input type="checkbox"/> Economic governance

Description of the **PROJECT**. Main topic and objectives. (300 words approx.) *(Describe in more detail the project's main thematic and objectives, providing relevant information about the contents addressed in it and where does the result to be capitalized come from)*

CAT-MED project aims to prevent natural risks related to climate change, thanks to the convergence of metropolitan strategies and actions, connecting natural risks prevention and climate change with the development of sustainable urban models.

Thus, the main objective of CAT-MED is the promotion of sustainable urban models which are based on the classical Mediterranean city: compact, complex and with proximity to basic services, following an integrated approach with 4 pillars: economy, social development, environment and governance.

These characteristics have a clear connection with the ability to save natural resources and the energy efficiency in urban areas, and consequently, the CO<sub>2</sub> emissions reduction and its relation to prevent possible future natural risks related to climate change.

- To fulfil this objectives the project has developed:
  - A common indicator system to measure whether established objectives or targets have been achieved or not in the frame of a sustainable urban model and to assess the impact of sustainable development public policies.
  - A pilot project called the Green Apple; a sustainable urban area, with the objective of showing the main characteristics of the proposed urban model, both at a planning and building level. Those pilot projects are being developed in every city with the definition of Metropolitan Groups, that involve people interested in the development of a Green Apple, residents of the selected pilot areas, urban developers and local key actors.
  - A political commitment and the continuity to the project's aim is achieved by the signing of the Malaga Charter and the constitution of the CAT-MED platform. On the 7<sup>th</sup> of February 2011, the Mayors and representatives of the 11 cities participating in the project signed the Malaga Charter, expressed their interest in the development of a platform for sustainable urban models in order to continue the works carried out during the project.

### 3. Result description

*(Summary information of the result to be capitalized in URBAN EMPATHY)*

Name of the result to be capitalized in URBAN EMPATHY	CAT-MED Common Indicators system
Type of result (operational tool, recommendations, good practices, guideline, ...)	Operational Tool
Current status of the result (under development, completed, not started...)	Completed
Type of deliverable (document, website, database, ...)	Website
Specific URL link	<a href="http://www.CAT-MED.eu/indicators">http://www.CAT-MED.eu/indicators</a>
Publication date	7 <sup>th</sup> February 2011
Language	Spanish, English, French

Description of the chosen **RESULT** to be capitalized in URBAN EMPATHY. Result objectives. Utility and purpose. (200 words approx.) *(Brief description of the result's most relevant characteristics, pointing out the main objectives and purpose.)*

One of the main objectives of the CAT-MED project was to build a common referential on sustainability. The application of the indicators seeks to adjust the compact, complex, efficient and socially cohesive city model, while complying with the principles of efficiency and habitability. Thus the indicators system is an operational tool to measure sustainability with a common methodology agreed by all partners. The next step was its calculation by all city partners.

The indicators were intended to cover a wide range of urban issues, from an integrated vision of sustainability in which every aspect has to be taken into account in a systemic perspective, understanding the city as a system itself. Ecologically, addressing the analysis of a given territory (system) requires the use of holistic approaches. This set of indicators is in fact an evaluation tool: it faces key concepts of urban sustainability with quantitative indicators and allows following its evolution on time.

For every indicator, CAT-MED defined:

- Concept and relevance: explanation of the indicator, what does it measure, why is it important in urban sustainability
- Data required for its calculation and format needed, where it comes from, etc.
- Calculation methodology: How can it be calculated, steps to follow, criteria needed
- Formula to calculate the indicator
- Unit of measure
- Result and comments for every city in which the indicator was calculated
- Desirable range to evaluate if the analyzed city is or not in a good path to sustainability

To make it a synthetic tool, suitable for a first global analysis of urban sustainability, the indicators were limited to 20, covering the main aspects of urban sustainability with a balanced perspective: public space, mobility, urban complexity, green areas and urban facilities, urban metabolism in energy, water, waste, noise or air pollution, proximity, social housing, etc. and they were grouped in four areas that define the sustainable model:

1. Territorial management and urban design,
2. Mobility
3. Natural resources management
4. Social and economic cohesion.

List of keywords related to the result (10 words max.) *(Please provide a short list of keywords related to the result to be capitalized in Urban Empathy, e.g.: urban planning, sustainable growth, mobility, energy efficiency, renewable energies, governance...)*

City, Sustainability indicator, data, GIS, qualitative and quantitative analysis, range, policy orientation.

Describe the potential benefits or improvements that the result may generate through the capitalisation process (200 words aprox.) *(Describe improvements either in your result or those that it may generate due to the capitalisation process)*

The accreditation of quality and sustainability in an urban environment, when making a diagnosis and both in the programming and planning process for new developments and in urban recycling initiatives, must be accompanied by previous studies and measures to justify the suitability and viability of an action. The indicators system gives this added value and in a capitalization process they can contribute to spread the importance of a quantitative analysis of sustainability given a qualitative framework (a sustainable urban model) to support the mere calculation.

The capitalisation process could bring the possibility to collaborate with other European initiatives and projects, which could lead to the enrichment of the indicators system through concrete expertise, as well as the identification of inputs to update them.

#### 4. Result evaluation

According to your own criteria, which are the main strong points of your result? Which are the weak ones? (300 words approx.) *(Describe the strengths and weaknesses of the result to be capitalized in Urban Empathy)*

Strong points:

- The list of indicators is synthetic and clear; it is well described and provides accurate information on data requirements and on methodology.
- Evaluation tool: Benchmarks were discussed and provided for every indicator so that every city can see whether it is near or not of the desirable ranges and thus following the objectives of the sustainable model.
- Some indicators require the use of a Geographic Information System (GIS), a tool that provides a high analytical power.
- During the CAT-MED project a free GIS software tool was developed to help members not acquainted with GIS use.
- The indicators system was agreed by eleven cities from four Mediterranean countries. All partners participated in the selection of the indicators of every thematic area, their definition and the definition of the desirable ranges. It means that the tool incorporates experience and points of view from many different partners along the Mediterranean.

Weak points:

Quality information needs skills and time to be processed, so the indicators system requires:

- Need of technical capacity of calculation. Though GIS based methodologies are growing widely spread, they are not found everywhere. Calculating this indicator system requires the availability of staff with skills in GIS technologies.
- Need of complete and exact data availability. When planning the indicator system the idea was to make a balance between simplicity of the tool and significance/accuracy of the measures regarding the main aspects of urban sustainability. Even when the required data inputs are small compared with other indicators system (with 50, 70 or more indicators that makes them suitable for deeper analysis), they have to be correctly provided. This may be a problem for some municipalities that don't have systematized information or that are not used to work with GIS.
- As the indicators measure very different aspects of urban sustainability, they need information from many different administrative sources. This may be a problem if the information is not centralized or if the municipality from which we are requiring it has not a good information flux between departments.

How do you think your result can affect the main aspects to be considered in a sustainable urban model?

(300 words approx.) (Describe the capacity of the result to fulfil the sustainable urban model main principles)

*Cross - cutting aspects*

- Territorial management and urban design
- Social and Economic cohesion

*Sectorial aspects*

- Sustainable mobility
- Energy efficiency

The indicators system is build in the frame of a sustainable urban model, and being a generic tool, it plans to have a global incidence in all sustainability aspects. The indicators offer quantified information about all aspects of the model:

**Territorial management and urban design**

The traditional city, with a compact design and with an integrating role of functions and relations, presented some socioeconomic characteristics that today are disappearing, partly because of major economic changes that are taking place globally and also due to urban sprawl processes. The analysis of various urban systems indicates that the urban model that best fits the principle of urban efficiency and habitability is the city compact in its morphology, avoiding excess of land consumption but providing enough space for city life, and also complex in its organization and economic activities. The indicators related to this aspect are:

- Population density
- Urban compactness
- Urban complexity
- Green zones and recreation areas
- Green zones and recreation areas proximity

**Social and economic cohesion**

Social cohesion in an urban context refers to the degree of coexistence between groups of people with incomes, cultures or ages living in the city, and is linked to other principles of sustainability. In fact the concept of sustainability goes beyond strictly environmental issues to incorporate economic and social aspects, such as relationships balance in a community and social welfare. The indicators related to this aspect are:

- Proximity to basic services
- Social housing ratio
- Labour force participation and unemployment rate
- Tourist frequency rates
- Environmental activities in primary school

### Sustainable mobility

The concept of sustainable mobility is a response to the social, economic and environmental consequences derived from the intensive use of motor vehicles. The solution to urban mobility problems lies in the modal shift towards a more sustainable transportation: with the promotion and improvement of alternative modes, but also with the implementation of restriction on motor vehicles in favour of pedestrian public space. The indicators related to this aspect are:

- Traffic modal split
- Bus and tube stops proximity
- Bicycle lanes and paths proximity
- Pedestrian streets and walkways percentage

### Energy efficiency

Reducing energy dependence from consumption in built environment and public space requires a promotion of energy savings and efficiency, in a way that energy consumption can be satisfied with renewable energy. This is also the main action against climate change. The indicators related to this aspect are:

- Energy consumption
- CO<sub>2</sub> emissions

Other indicators are related to waste, water, noise and air quality



What influence do you consider that your project result could have on environmental governance and what could be its impact on urban policies? At which level? (Local, regional, national, MED or European level...) (300 words approx.) *(Describe the level of influence of the result and its applicability on EU policies)*

This indicator system is a useful tool to make a first diagnosis on sustainability levels of a city. Consequently it offers valuable information for decision making: it can offer information to orientate sustainable policies according the weaknesses detected during the diagnosis. For example a city can see if they need to put more emphasis on sustainable mobility policies or in green spaces. The fact that the indicators are updatable makes this system a suitable tool to follow sustainability evolution on time, an aspect of political and practical utility.

All indicators are measured locally, but are useful to plan policies at different levels, as they measure concepts that are affected by different policy levels. For example sustainable mobility depends mainly in local policies while energy consumption, even when local action has an important role, depends more on regional or national policies. Having detected which sustainability aspects have to be prioritized, local administration actors can also focus their attention on some regional or national policies that should change to implement sustainable policies locally.

All political action on sustainability depends then in the translation of the analysis provided by the indicators system to effective sustainability policies: it does not depend on the diagnosis result but in political commitment, fostered by citizen awareness.

Some barriers to implement the common indicators system are to be found in low coordination levels between different administration departments or lack of technical capacity. Implementing a tool like this can push municipalities to the use of innovative techniques and also improve the sectorial view with which sustainability issues are often faced, promoting an integrated governance view on sustainability.

What is the main target group the result is addressing to? (public administration, public sector, private sector, research groups, ...) How does it enhance public participation? (200 words approx.) *(Describe the target audience that could use the result and if citizen participation processes have been considered)*

This indicators system is intended for public administration use, although other groups focused on urban sustainability may also find it of interest. They are a technical tool to use by public administrations to evaluate levels of sustainability in a Mediterranean framework.

To go further into the analysis, the administration may develop the results in every sustainability area, using more complex and specialised tools. CAT-MED sustainability indicators are intended for a first level analysis, that needs to be processed by technicians, but whose result is suitable for politicians and also for public communication. It provides accurate and significant data which is at the same time easy to understand.

In this way the indicators system is also a useful tool to facilitate public participation on sustainability decisions that the municipality has to undertake, but this will depend again on effective political commitment.

Public participation also played an important role during the implementation of the indicators in pilot areas of CAT-MED project, following the methodology of the metropolitan groups, but not during the development of the indicators panel itself.

Is the result currently in use in the Europe/MED area? (150 words approx.) *(Please provide further information on the usability of the result, pointing out if it has already been implemented or in use)*

The indicators system has been used during CAT-MED project where every city member calculated the indicators and now they are being actualised in the CAT-MED platform. All city members of the platform, now numbering 27, are intended to update them and the new member cities are asked to start the calculation. This is possible because of the political commitment they acquire when they join the platform.

According to your own criteria, what are the main innovative aspects of the result? (150 words approx.) *(Please provide further information on the level of innovation achieved by the result to be capitalized in URBAN EMPATHY: new methodologies, etc...)*

There are many indicators systems, but the main innovative aspect of this one is the way it was built, in an European Project, with a sustainable model of reference that gives a qualitative framework of analysis, and also in a Mediterranean context, with the contribution of eleven different cities.

How do you think your result could be implemented? Through which means? Do you think it is easily transferable? Estimated costs, resources, time needed for implementation, key actors involved... Please include any other relevant criteria you may consider important (300 words approx.) *(Please provide further information on implementation and transferability requirements of the result)*

The transferability potential of this tool relies on:

- The accurate description of every indicator, data needed, including methodological considerations, and its availability on-line (English, French and Spanish). The results of the CAT-MED cities (calculations and maps) are also on line which provides good examples. It all makes easy to follow the calculation process.
- The use of free software and the availability of the GIS tool online
- The tools that provide CAT-MED platform to build skills in GIS: training workshops are being provided for the new members, they are held in every country member for all new cities. The first one developed in Parma in October 2013.
- Support of the platform members for calculation (scientific committee), some of them with wide experience in the field of sustainability indicators.

The implementation of this result is possible through strong political commitment. It requires a destination of budget only via staff hours for training, data search and calculation. It would need around 6 months work, strongly depending in variables like municipality size or information availability.