

QUADMAP PROJECT



Presentation of Project Outcomes: Guidelines for the identification, selection, analysis and management of Quiet Urban Areas



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Arnaldo Melloni - Den Haag
16-17/4/2015. WG NOISE



Introduction

Quadmap Project has met the challenge of defining a **methodology to select, analyse and manage Quiet Urban Areas (QUAs)** which has been tested in **10 Pilot Areas** located in Florence (6 school yards), Bilbao (a square and a green corridor) and Rotterdam (2 public parks).

The methodology is thoroughly illustrated in the **Guidelines** which can be considered one of the Project's main final result.

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QUA definition

The methodology proposed by the QUADMAP Project is based on a new definition of QUA.

END definition:

"quiet area in an agglomeration" shall mean an area, delimited by the competent authority, for instance, which is not exposed to a value of L_{den} or of another appropriate noise indicator greater than a certain value set by the Member State, from any noise source.

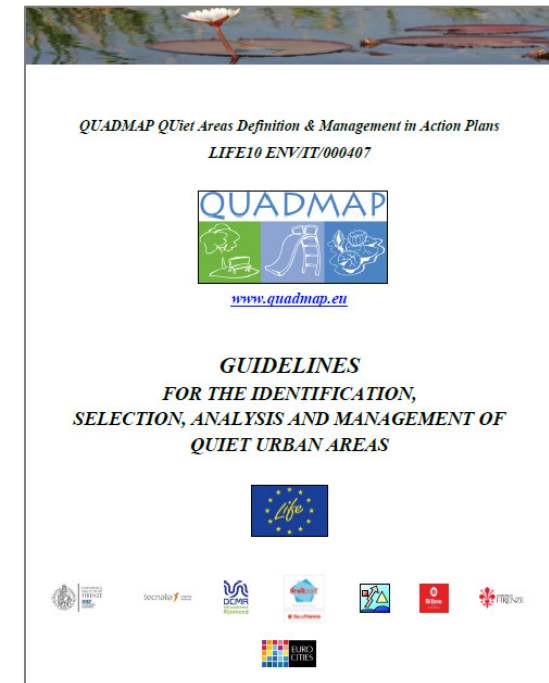
QUADMAP definition:

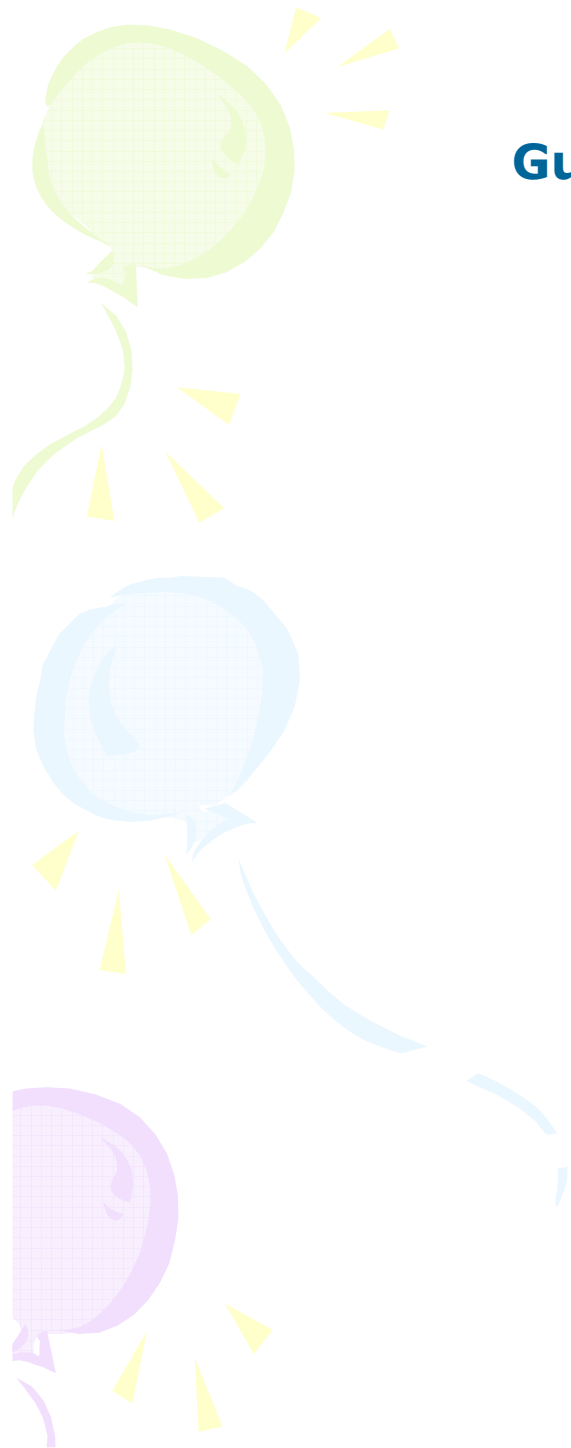
a QUA is an urban area whose current or future use and function require a specific acoustic environment, which contributes to the well-being of the population.

Guidelines objectives

Guidelines were drawn up to:

- help policymakers, competent authorities and any other stakeholders to understand the END's requirements pertaining to QUAs
- propose a complete and tested methodology in order to fulfill the END requirements, to deliver indicators for selecting, analysing and managing QUAs
- help to answer some research questions posed in the Good practice guide on quiet areas, published by the EEA in 2014



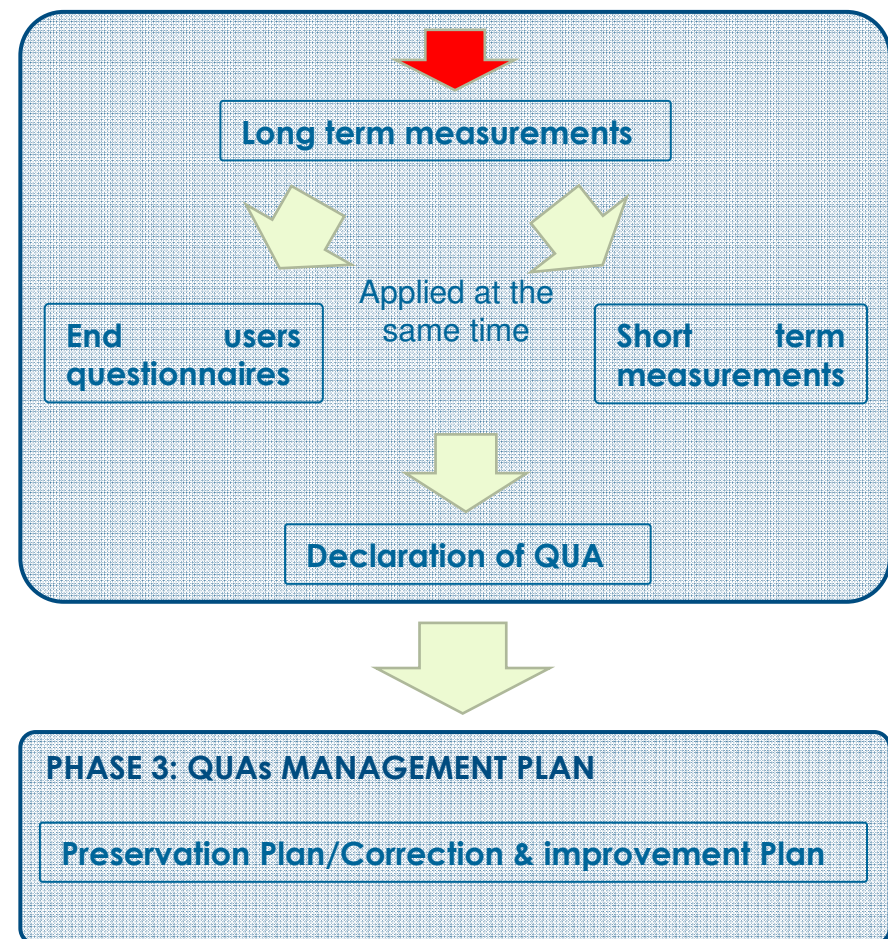
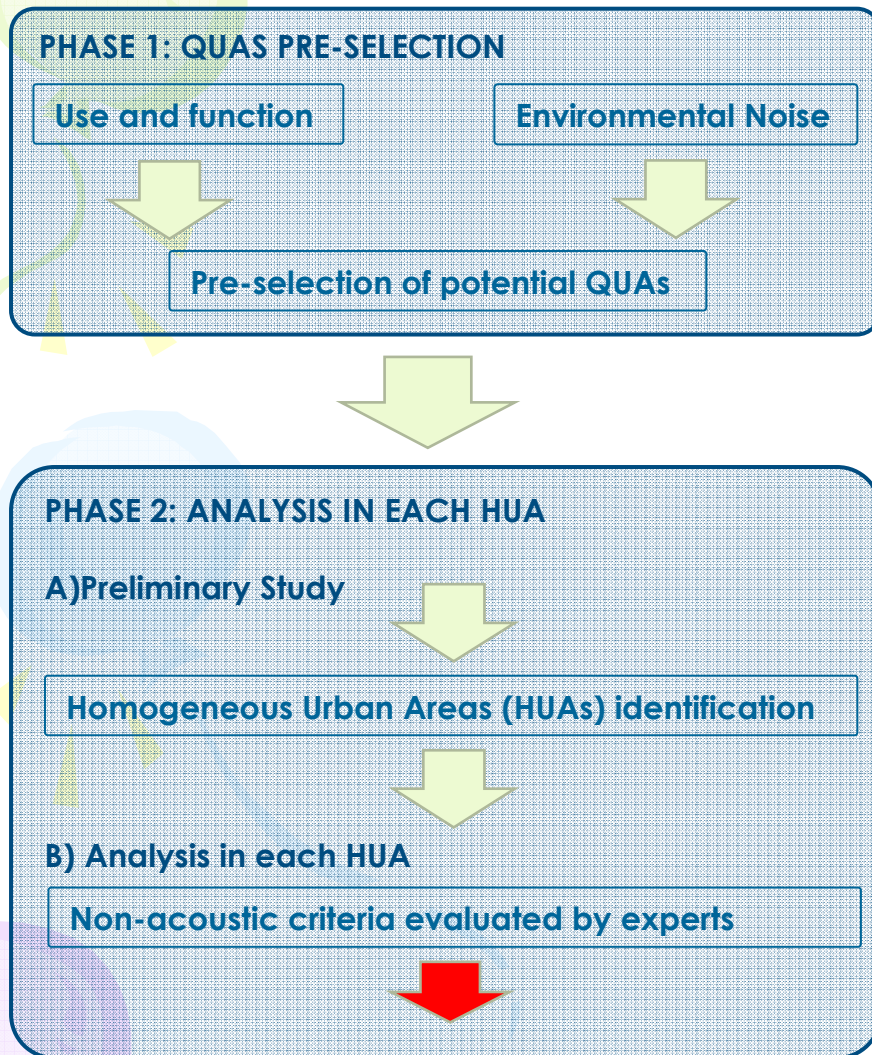


Guidelines - Phases

- QUAs pre-selection: description and tools
- QUAs analysis (non-acoustic evaluations by experts, noise measurements and end-users questionnaires): description, tools and examples
- QUAs management: description and tools



Methodology flowchart

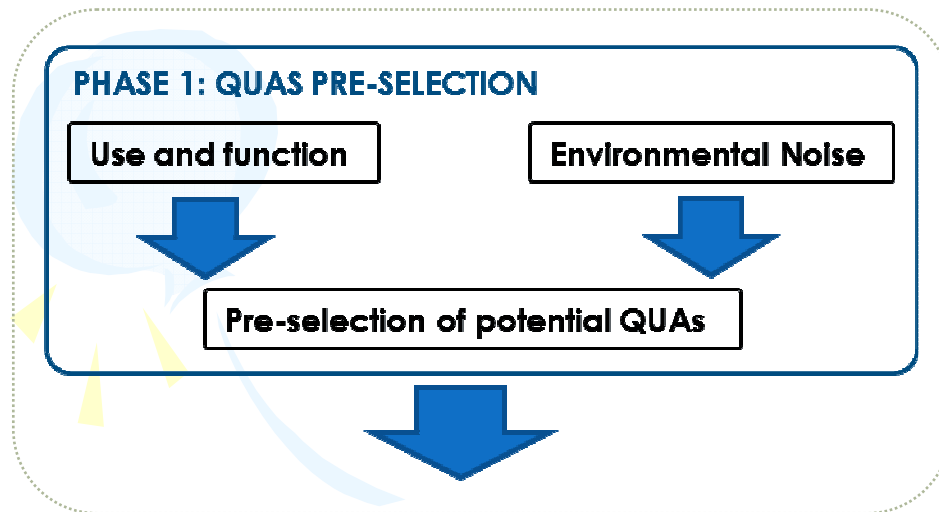


The set of variables to be considered, the procedures to be used and practical tools are described in each section of the Guidelines.



QUAs pre-selection: description and tools

Pre-selection is an important, strategic and political stage to enable the subsequent evaluation of areas in the field and take measures if needed.

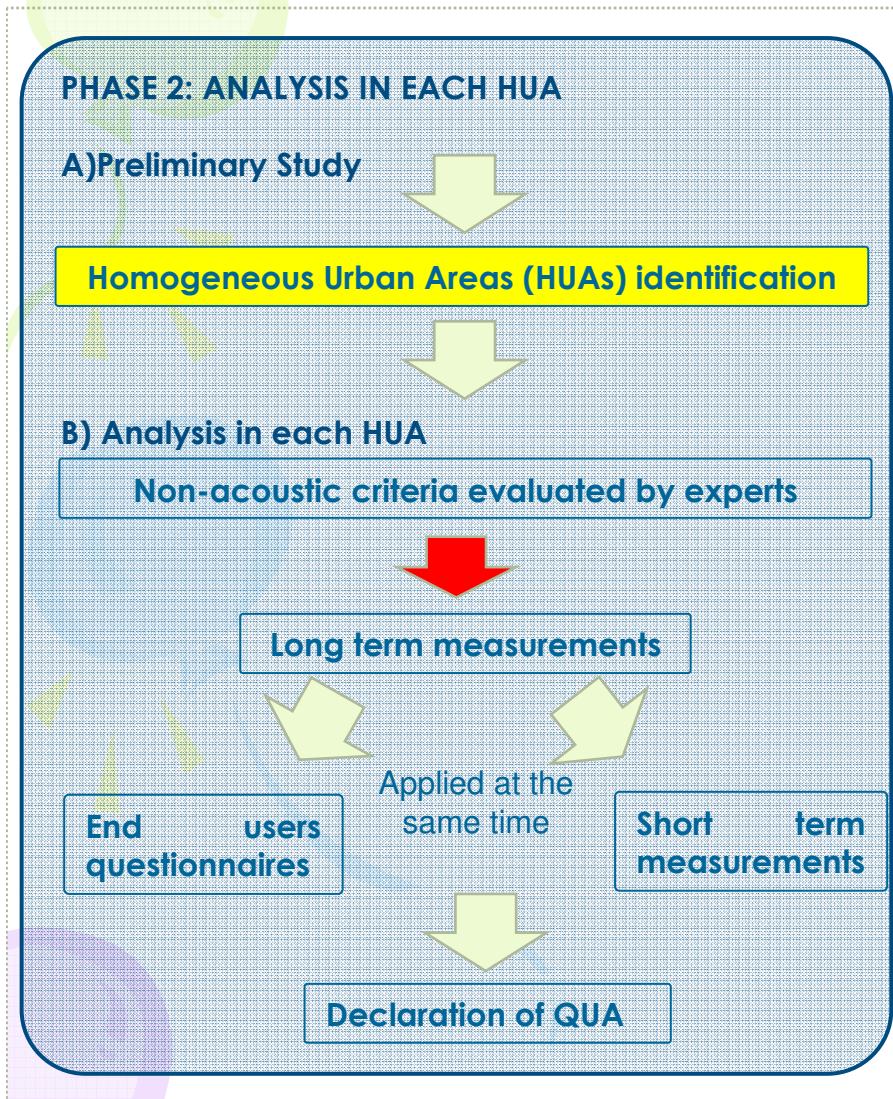


The Tool proposed for the pre-selection consists in two principal variables:

- Variable 1: Use and Function**
- Variable 2: Noise levels**

These variables should be analysed in sequence (variable 1 first).

QUAs analysis: HUAs subdivision



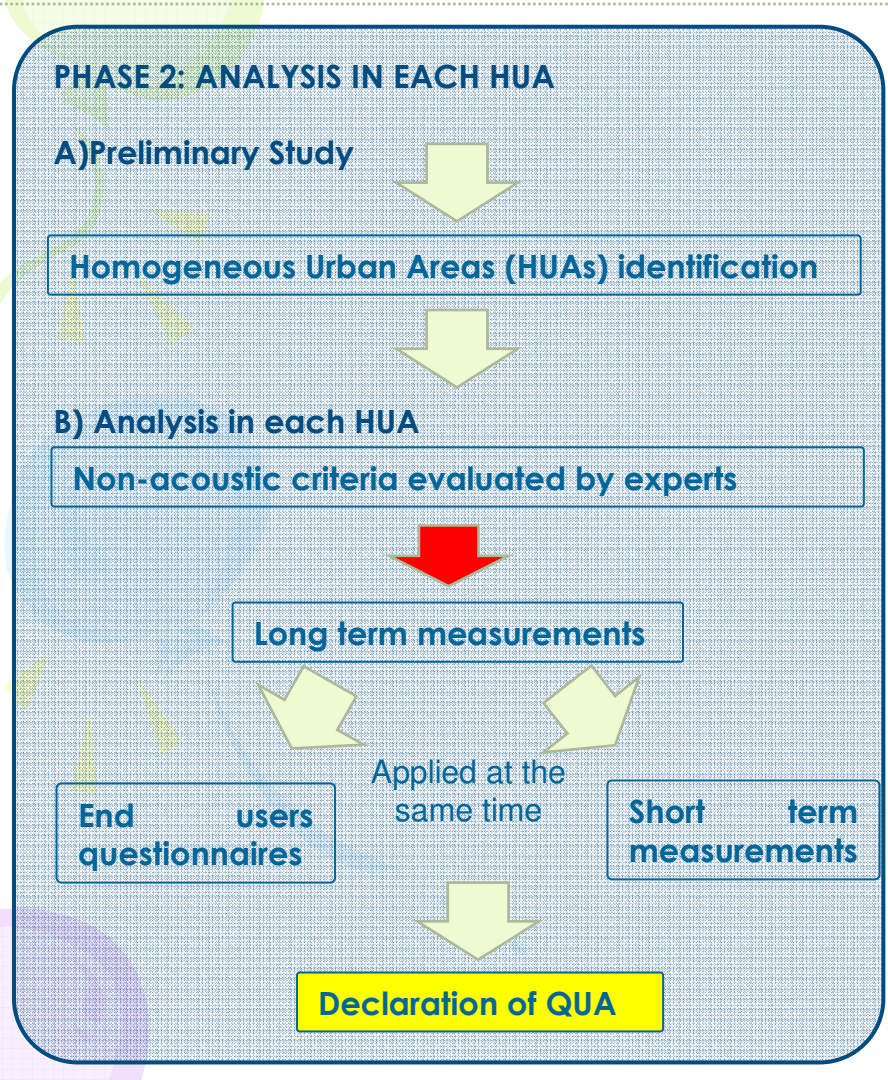
HUAs should be delimited according to one or more of the following criteria:

1 - Landscape: uniform visual elements and landmarks

2 - Use: one main and specific use or function. This is related to the facilities and furniture in the area.

3 – Presence of and distance from sound sources

Conclusions about the analysis phase



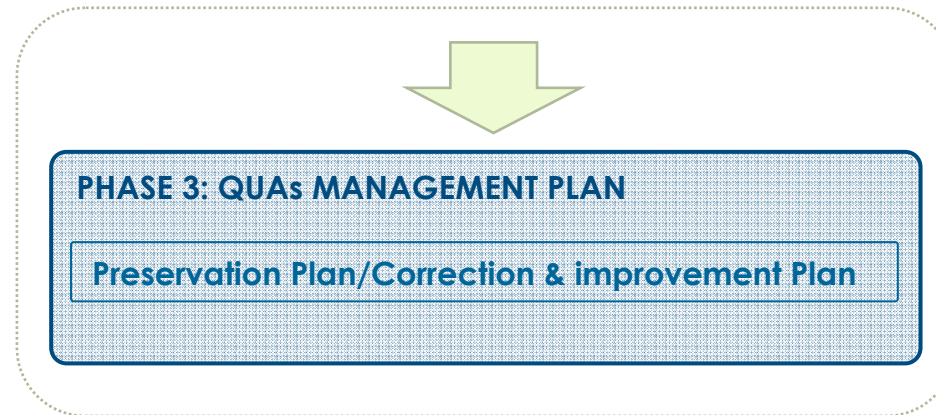
Finally, the following procedure is suggested for evaluating the results of the analysis phase:

-If the criteria of all analysis (expert analysis, end users questionnaires, noise measurements) do not have a negative rating **the area can be defined as quiet;**

-If a criterion is present in only one analysis and has a negative rating **the area is defined as only potentially quiet;**

-If a criterion is present in more than one analysis and has a negative rating in the expert analysis, the corresponding score assigned by end-users should be checked; if the evaluation given by end-users is also negative **the area is defined as only potentially quiet.**

QUAs management: description and tools



Different management goals can be defined depending on whether the selected areas are defined as actually quiet or only potentially quiet during the analysis phase:

- A plan to **preserve the quality** of the area if it is defined as already quiet.
- A plan to increase the value of the area and to promote its use.
- A plan to **improve the quality** of the area if it can only be defined as potentially quiet, and planning of the type of measures to be implemented.

QUAs management: description and tools



According to the analysis carried out in the QUADMAP Project, the suggested criteria for **evaluating the effectiveness of noise abatement measures** in an quiet urban area are as follows:

- the **reduction of noise levels** (mainly concerning the LA50/LAeq indicators) **compared to a threshold level** (e.g. 55 dB);
- the **reduction of noise levels** (mainly concerning the LA50/LAeq indicators) **compared with the noise levels before the interventions;**
- a **reduction of unpleasant noise events and/or an increase in pleasant events;**
- an **improvement in end-users' perception** (evaluated through the end-user questionnaire) compared with the users' perception before the interventions.

Meeting at least one of the above criteria can be considered as an improvement to the area's acoustic environment.

Conclusions



The QUADMAP Project has developed a method for selecting, analysing and managing QUAs.

The method has been tested in ten pilot areas and, according to obtained results, has proved to be valid.

In addition, thanks to its flexibility, the methodology is also easily replicable in other urban environments.

Using the proposed methodology as a starting point, comprehensive guidelines have been produced. The first aim of the guidelines is to help stakeholders, competent authorities and interested parties to understand the END's requirements with respect to QUAs and to suggest a valid and easily applicable methodology.

In addition, the guidelines also suggest possible answers to some research questions posed in the Good practice guide on quiet areas, published by EEA in 2014, in particular the need to combine users' acoustic perception of a QUA with their general opinion of the area.

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