Parks embedded in Q-zones

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DISSEMINATION WORKSHOP

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CityHush

SEVENTH FRAMEWORK PROGRAMME

Objectives

- ✓ Validate the embedded parks concept
- ✓ Tools
  - ✓ Software tools
  - ✓ Methods

Project overview – "Toolbox"

- ✓ WP 1 – Acoustically green areas - Q-zones
- ✓ WP 2 – Noise score rating models and annoyance
  - ✓ Improved score rating indoors
  - ✓ Development of score rating outdoors
- ✓ WP 3 – Noise and vibrations control at source
  - ✓ Road surfaces
  - ✓ Development of quiet tires
  - ✓ Classification of quiet vehicles
- ✓ WP 4 – Propagation of road traffic noise
- ✓ WP 5 – Validation of results
- ✓ WP 6 – Dissemination of project results

The concept of quiet zones

- ✓ An area where a significantly lower level of traffic noise is maintained by allowing only low noise vehicles to enter

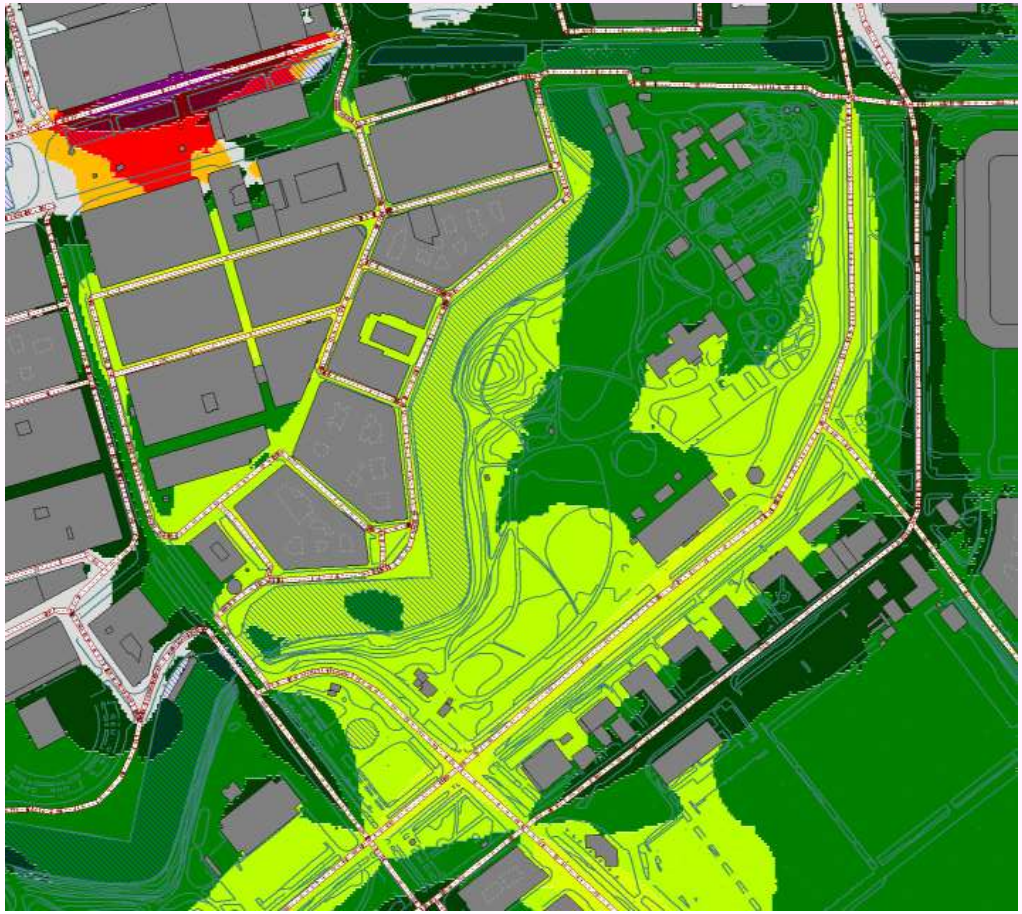
Evaluated parks

- ✓ A total of six parks have been evaluated within WP 5.2.

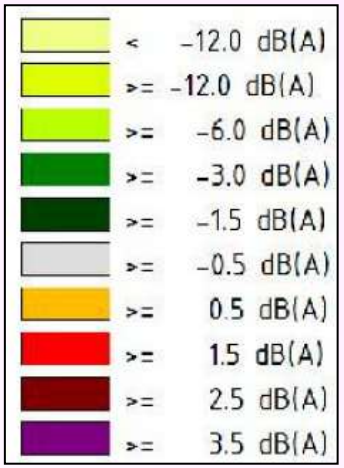
Description of test site - Gothenburg

Description of test site - Stockholm

Gothenburg	Policy	Low noise vehicle ownership outside, %	Low noise vehicle ownership outside, %	Zone size
BC (S0)	none	1	1	-
G16	Low noise vehicles only	20	100	medium



Noise level difference



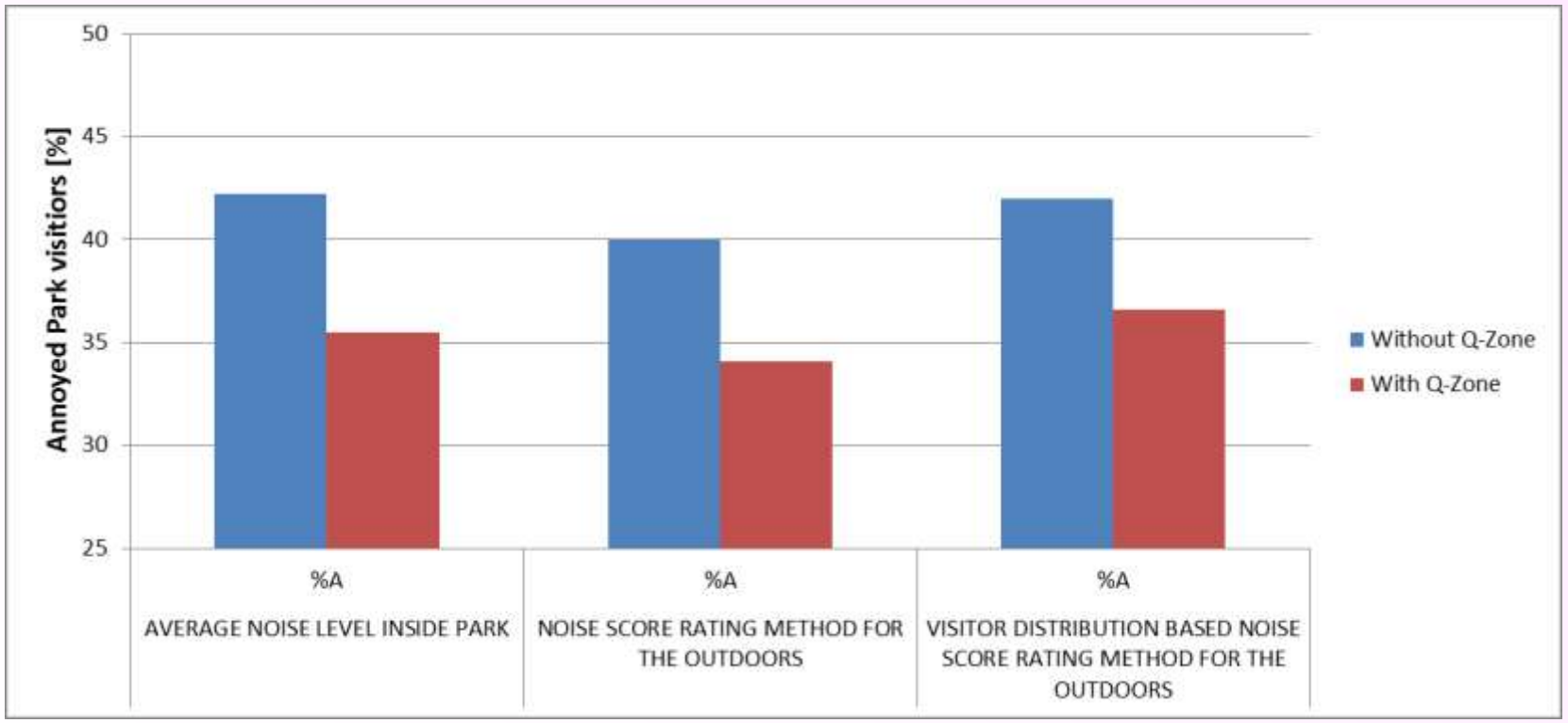
Stockholm	Policy	Low noise vehicle ownership outside, %	Low noise vehicle ownership outside, %	Zone size
BC (S0)	none	1	1	-
S1	Noise free 0.5 €	20	100	large
S2	Low noise vehicles only			

Noise level difference

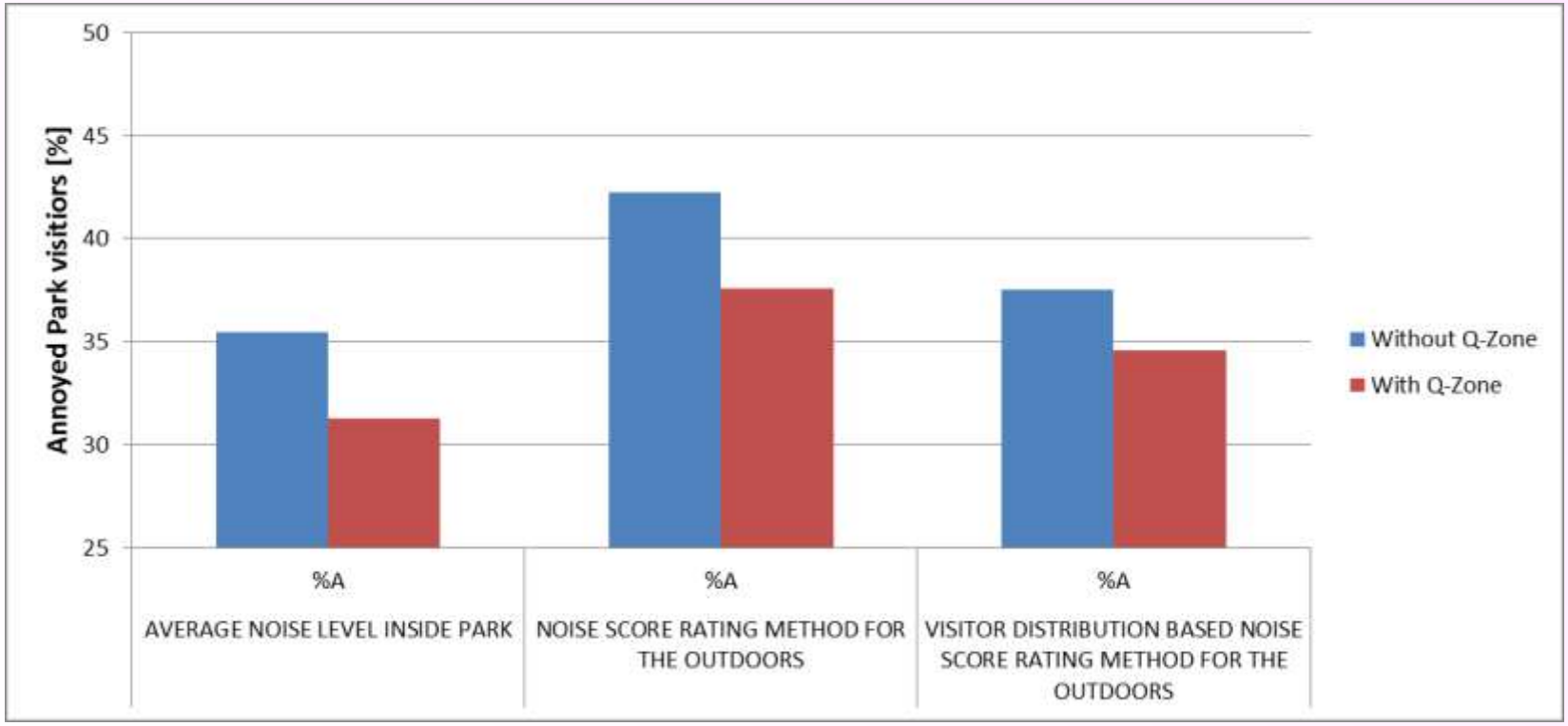
Methods

- ✓ Average noise level inside the park
- ✓ Noise score rating method for the outdoors
- ✓ Visitor distribution based noise score rating method for the outdoors

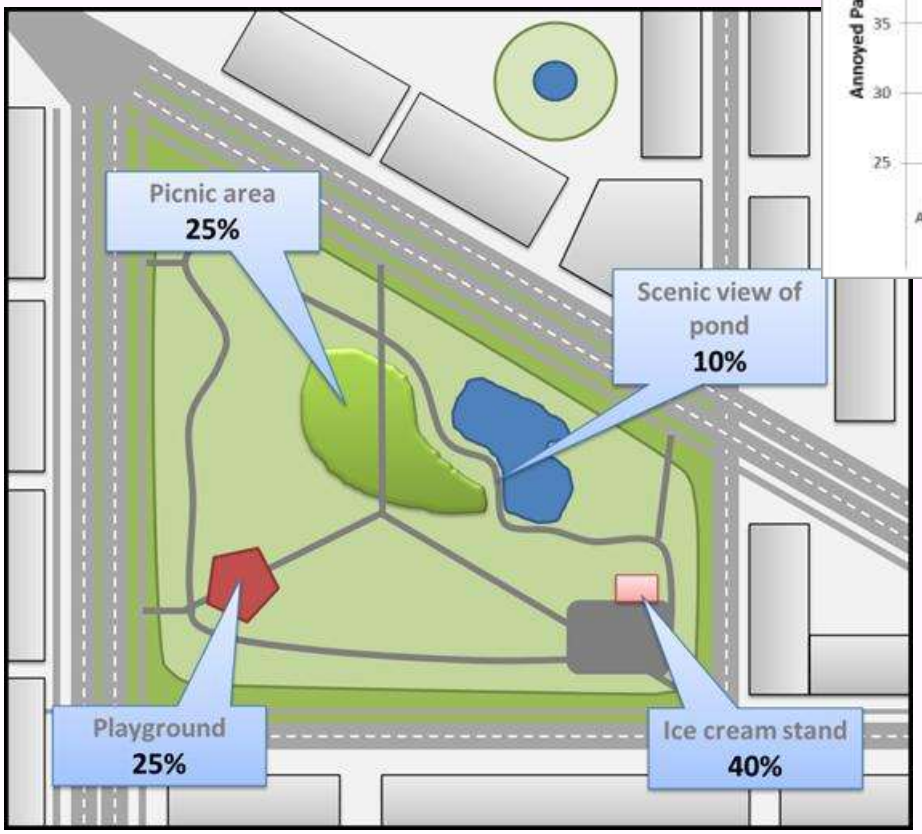
Results Gothenburg

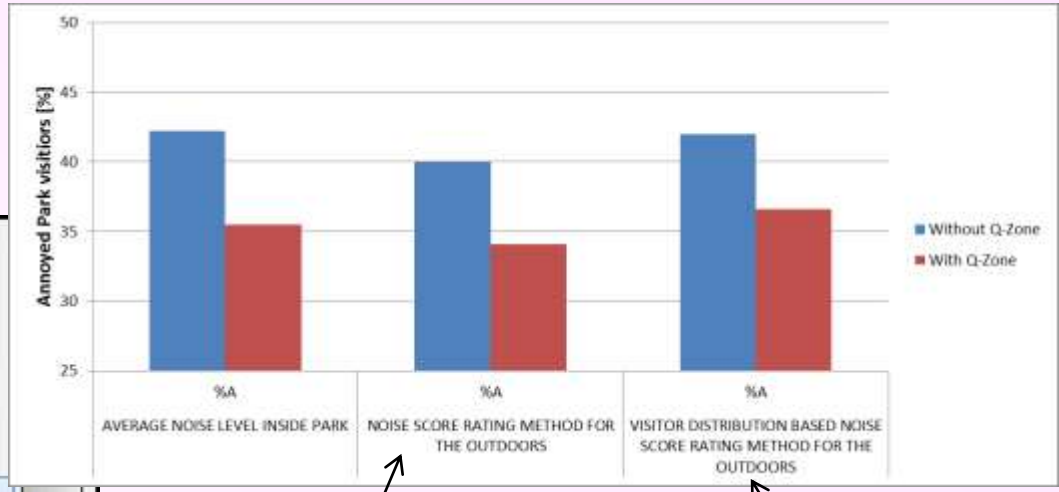


Results Stockholm



Method comparison





Advantage:
A definite number of exposed persons

Advantage: Size independent comparison, planning tool.

Conclusions

- ✓ Noise levels have locally been reduced by 6 dB inside the two test parks
  - ✓ Embedded park in Gothenburg show 7 - 5 % reduced annoyance
  - ✓ Embedded park in Stockholm show 5 - 3 % reduced annoyance
  - ✓ Approximately 1000 people are affected
- ✓ Large percentage of low noise vehicles within the Q-Zone are necessary
- ✓ The park should be centrally located in the Q-zone in order to avoid boundary effects
  - ✓ Evaluation based on the arithmetic average noise level is acceptable if the noise level is evenly distributed in the park.
  - ✓ Park evaluation tools could be used as design tools

Thank you