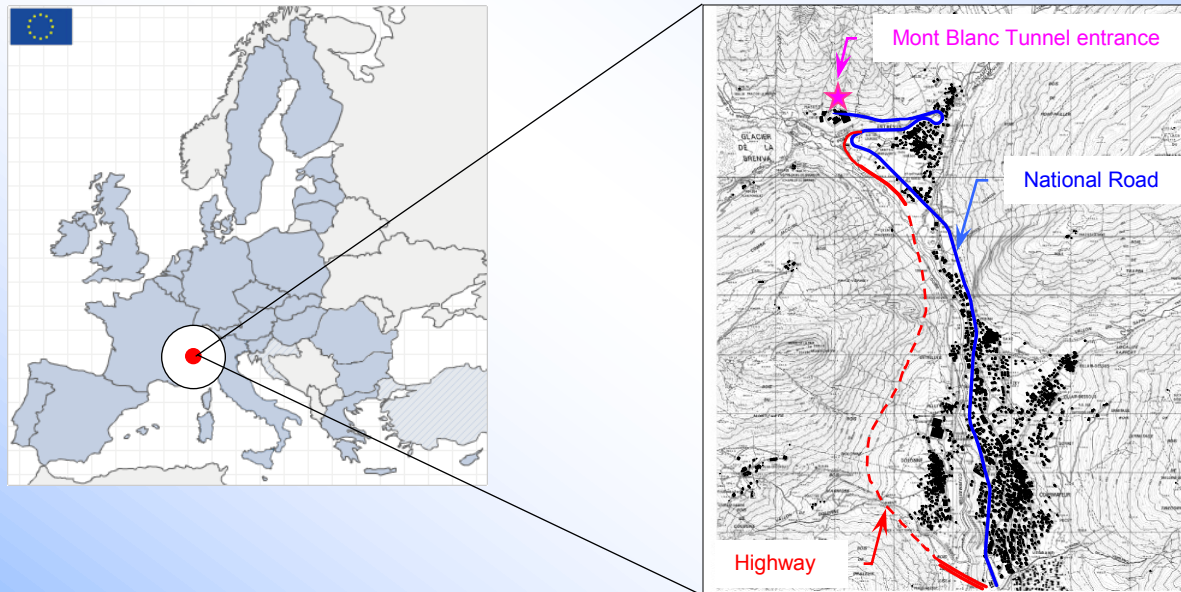


Noise impact of an international traffic corridor in alpine environment: traffic scenarios and population exposure in Mont Blanc area

Giovanni Agnesod,

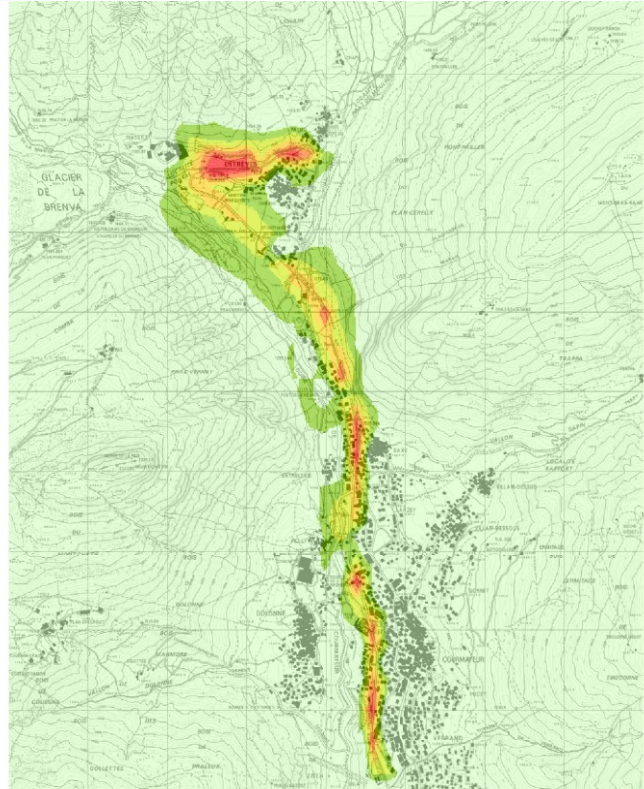
Marco Cappio Borlino, Christian Tibone,
Christian Tartin, Daniele Crea, Filippo Berlier

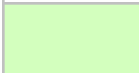
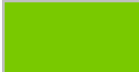




Noise impact of an international traffic corridor in alpine environment: traffic scenarios and population exposure in Mont Blanc area

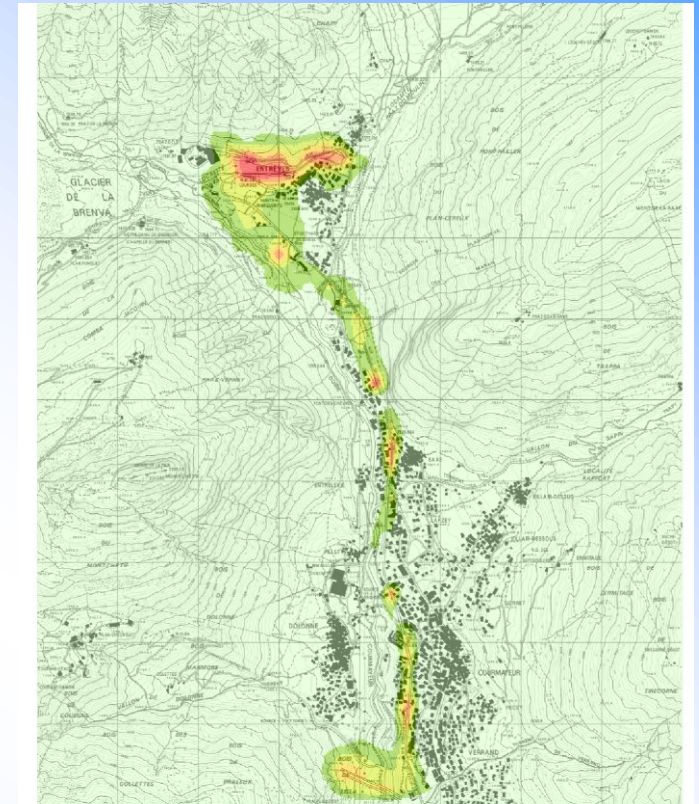


The area object of the analysis and its position in Europe.

Noise impact of an international traffic corridor in alpine environment: traffic scenarios and population exposure in Mont Blanc area



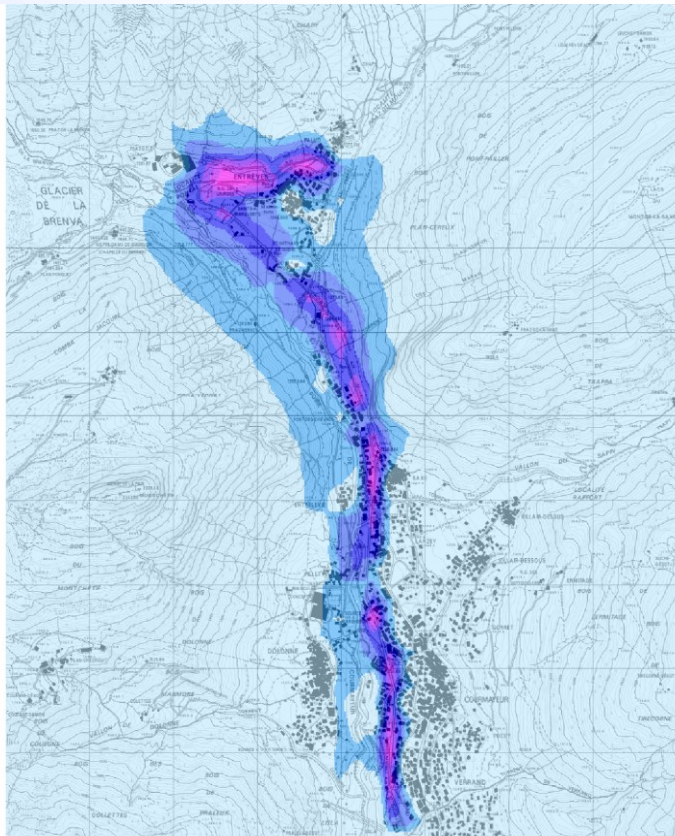
| | dB(A) |
|--|-------|
|  | < 55 |
|  | 55-59 |
|  | 60-64 |
|  | 65-69 |
|  | 70-74 |
|  | > 75 |










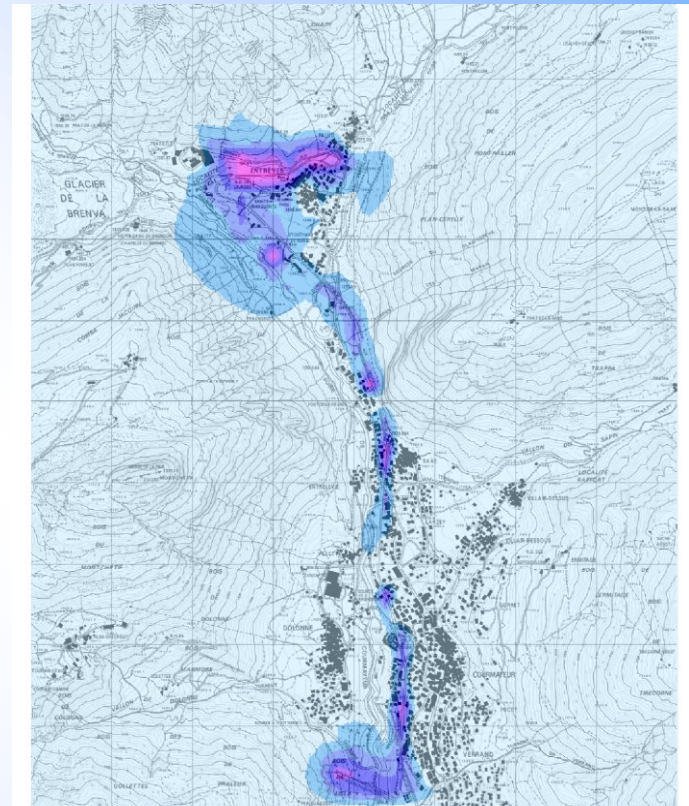
Lden sound levels territorial distribution before (a) and after (b) the opening of the last section of the highway E25, for the most in gallery.

Noise impact of an international traffic corridor in alpine environment: traffic scenarios and population exposure in Mont Blanc area

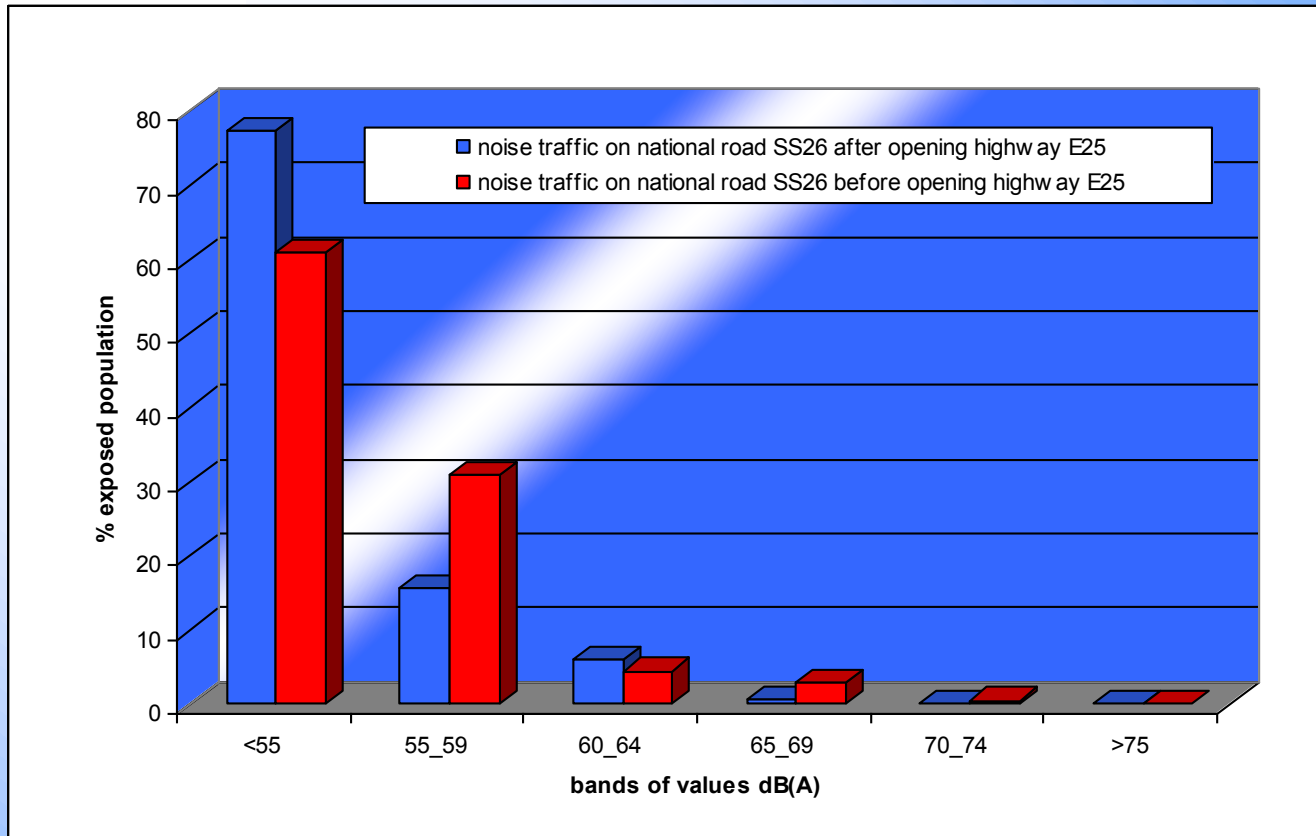
Lnight sound levels territorial distribution before (a) and after (b) the opening of the last section of the highway E25, for the most in gallery.



| | dB(A) |
|---|-------|
|  | < 45 |
|  | 45-49 |
|  | 50-54 |
|  | 55-59 |
|  | 60-64 |
|  | 65-70 |
|  | > 70 |



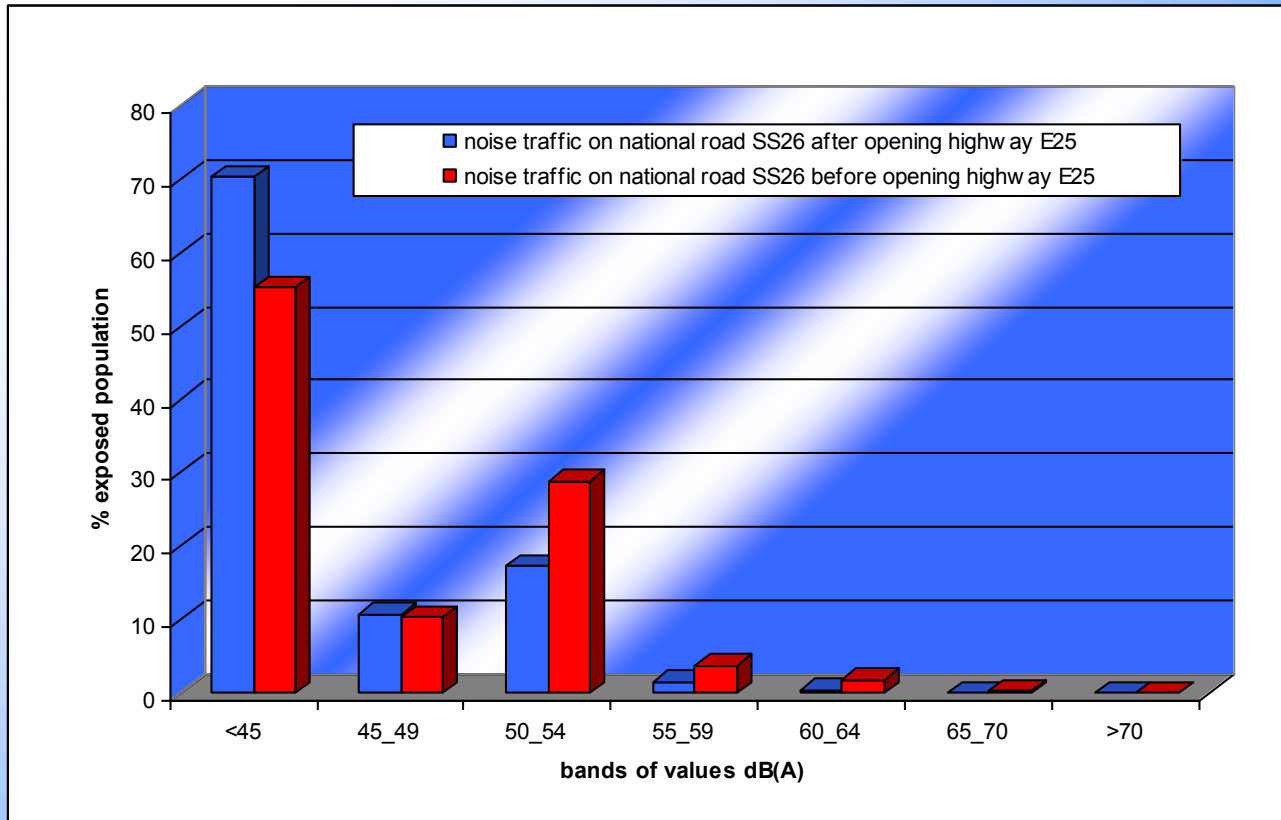
Noise impact of an international traffic corridor in alpine environment: traffic scenarios and population exposure in Mont Blanc area



| Exposed population (%) | Bands of values of L_{06-22} (dBA) | | | | | |
|------------------------|--------------------------------------|-------|-------|-------|-------|-----|
| | <50 | 50-54 | 55-59 | 60-64 | 65-70 | >70 |
| Scenario a | 61 | 26 | 9 | 3 | 1 | 0 |
| Scenario b | 67 | 24 | 8 | 1 | 0 | 0 |

Percentage of exposed population for L_{06-22} bands of values.

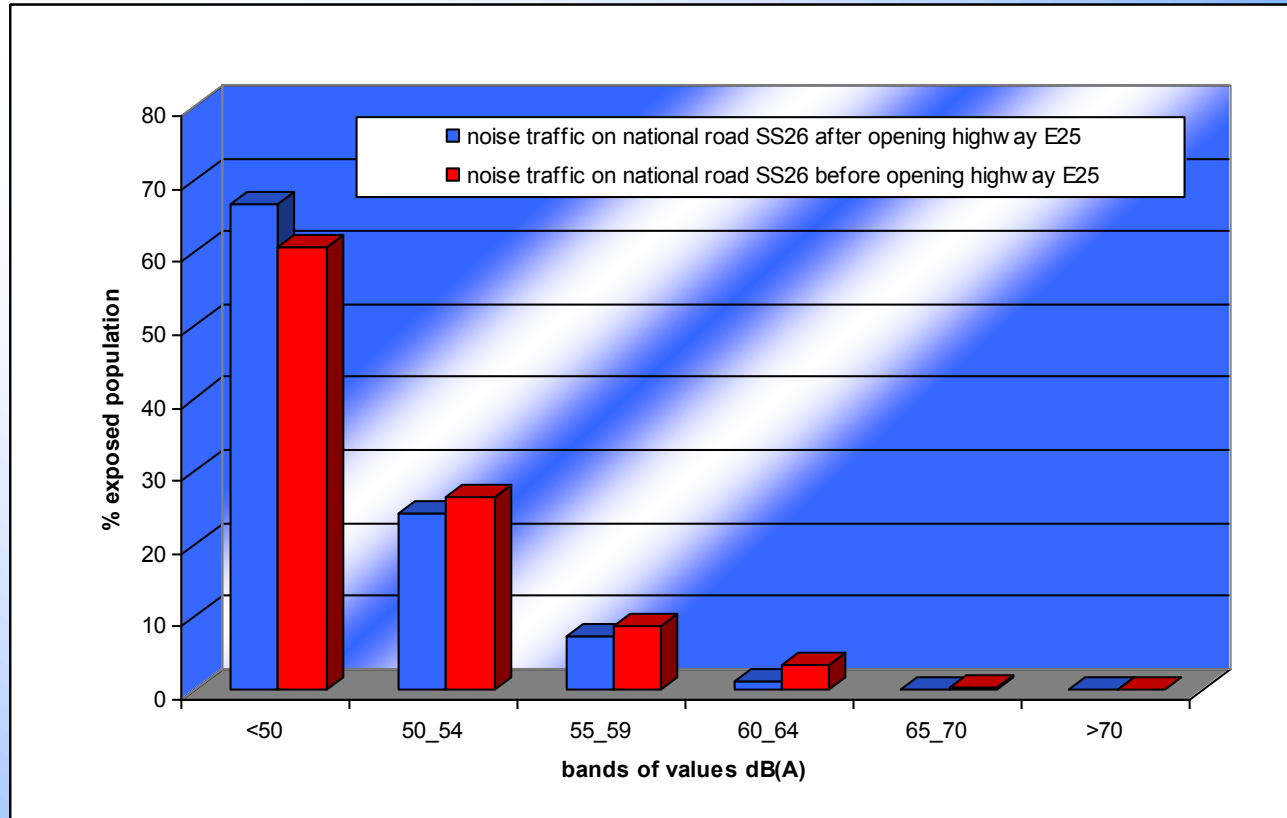
Noise impact of an international traffic corridor in alpine environment: traffic scenarios and population exposure in Mont Blanc area



Percentage of exposed population for L_{night} bands of values.

| Exposed population (%) | Bands of values of L _{night} (dBA) | | | | | | |
|------------------------|---|-------|-------|-------|-------|-------|-----|
| | <45 | 45-49 | 50-54 | 55-59 | 60-64 | 65-70 | >70 |
| Scenario a | 55 | 10 | 29 | 4 | 2 | 0 | 0 |
| Scenario b | 70 | 11 | 17 | 2 | 0 | 0 | 0 |

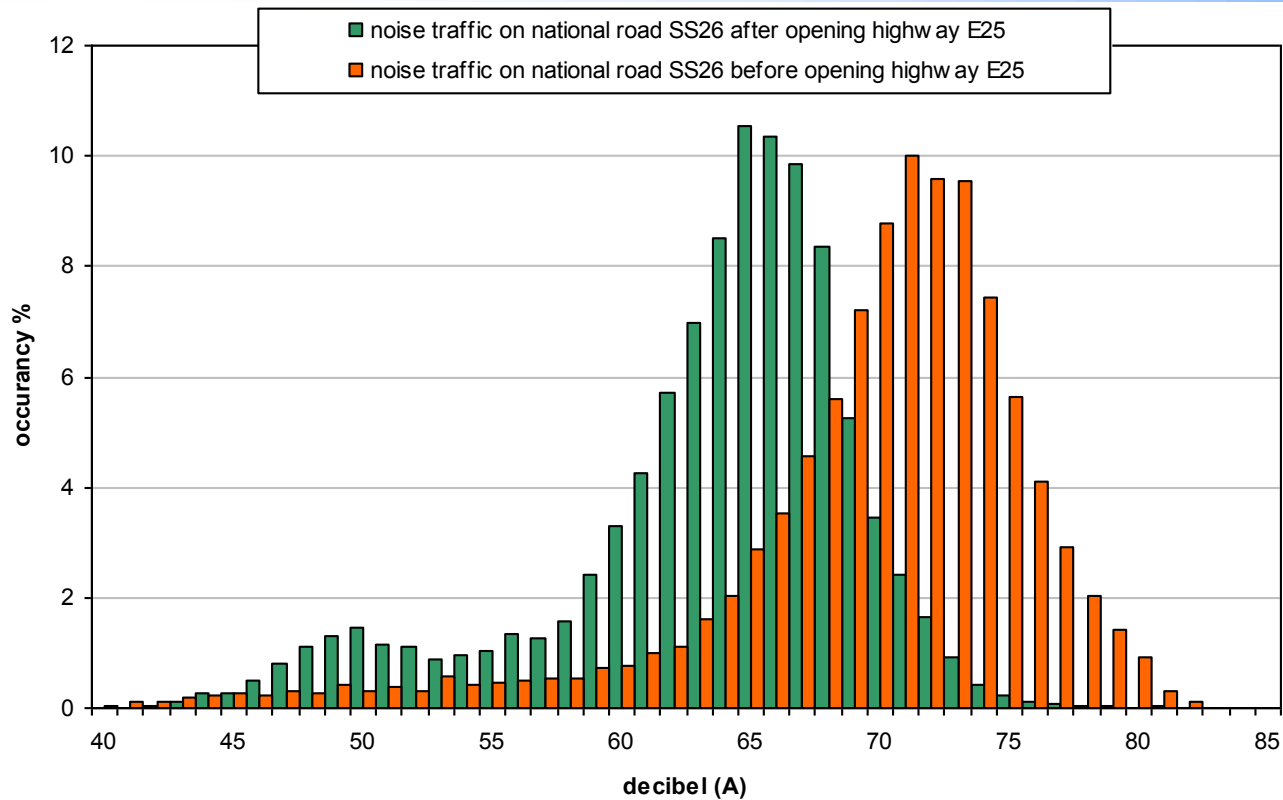
Noise impact of an international traffic corridor in alpine environment: traffic scenarios and population exposure in Mont Blanc area



| Exposed population (%) | Bands of values of L_{06-22} (dBA) | | | | | |
|------------------------|--------------------------------------|-------|-------|-------|-------|-----|
| | <50 | 50-54 | 55-59 | 60-64 | 65-70 | >70 |
| Scenario a | 61 | 26 | 9 | 3 | 1 | 0 |
| Scenario b | 67 | 24 | 8 | 1 | 0 | 0 |

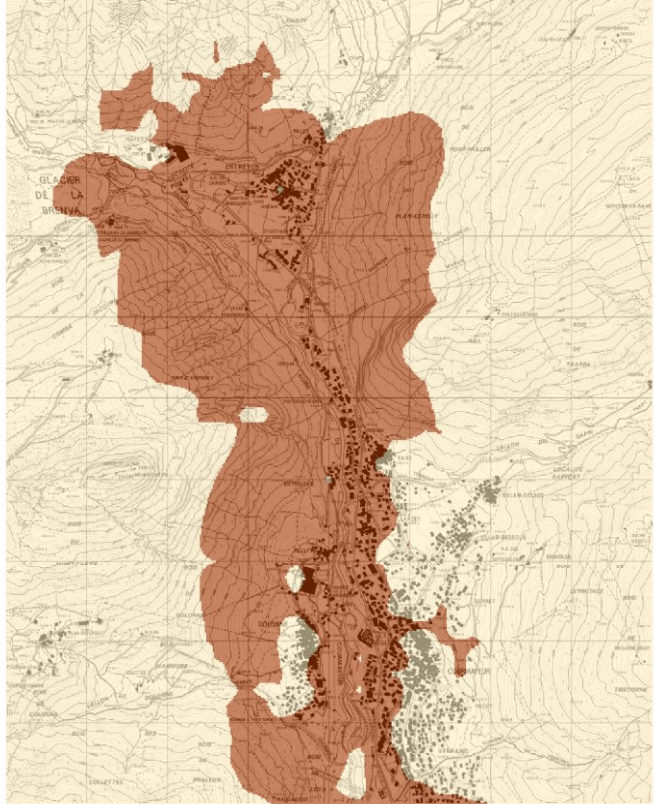
Percentage of exposed population for L_{06-22} bands of values.

Noise impact of an international traffic corridor in alpine environment: traffic scenarios and population exposure in Mont Blanc area

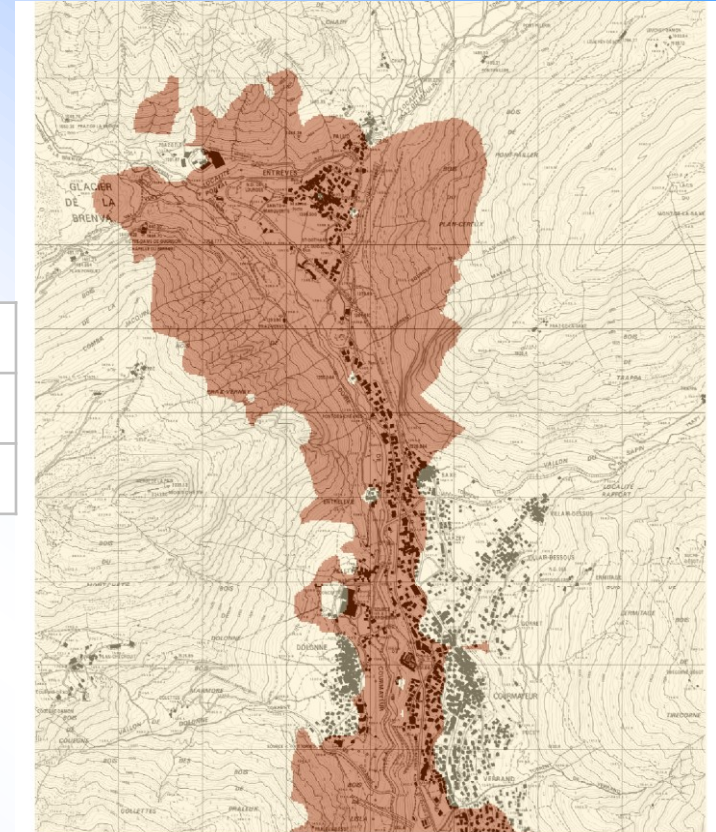


Statistic distributions of short term Leq values (30 s), 06-22 period, at an hotel near the national road.

Noise impact of an international traffic corridor in alpine environment: traffic scenarios and population exposure in Mont Blanc area



| | dB(A) |
|--|-------|
| | < 40 |
| | > 40 |



L06-22 curve of the sound levels at 40 dBA
before (a) and after (b) the opening of the last section of the highway E25,
for the most in gallery.

Noise impact of an international traffic corridor in alpine environment: traffic scenarios and population exposure in Mont Blanc area



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