



S.A.T.A.P. S.P.A.

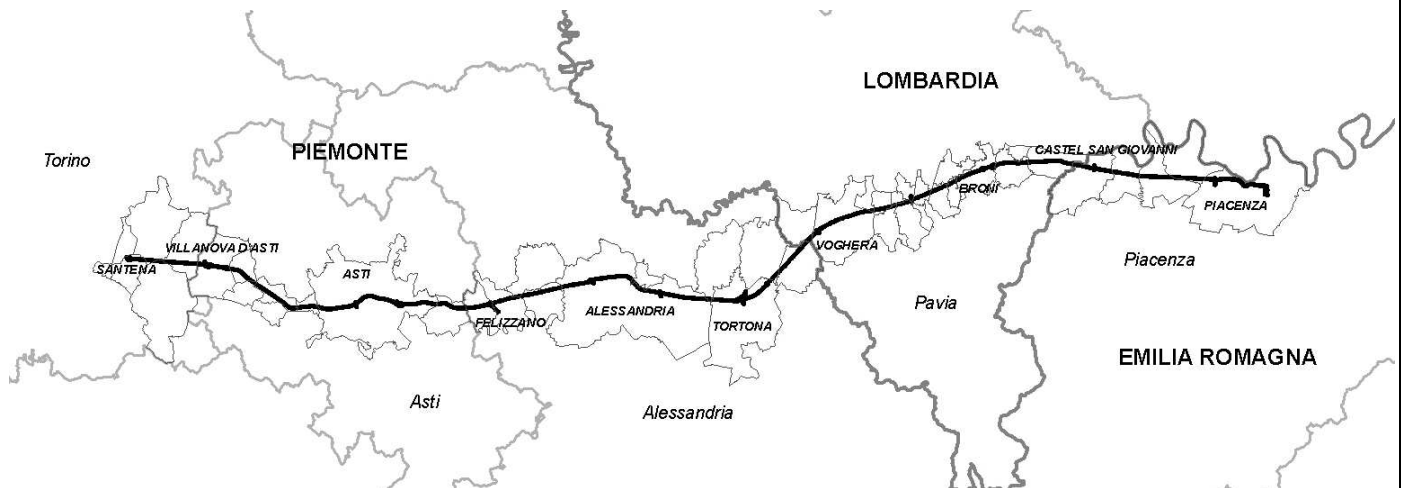
Via Bonzanigo, 22 - 10144 Torino

TRONCO A21: TORINO-ALESSANDRIA-PIACENZA

TRONCO A21: TORINO-ALESSANDRIA-PIACENZA

Adempimenti ai sensi del D.Leg. 19 agosto 2005, n. 194
“Attuazione della Direttiva 2002/49/CE relativa alla
determinazione e alla gestione del rumore ambientale”

Piano d’Azione 2013-2017



Allegato 6 Schede di sintesi comunale (PNZ-06)

PROGETTAZIONE



IDENTIFICAZIONE ELABORATO

Codice Commessa

A105R138S8 194 P13 000 + 000 GN AL 006 - R000 Lug 13

VISTO DELLA COMMITTENTE

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S.A.T.A.P. S.p.A. - Tronco A21: Torino-Alessandria-Piacenza
Adempimenti ai sensi del D.Leg. 19 agosto 2005, n. 194 "Attuazione della Direttiva 2002/49/CE
relativa alla determinazione e alla gestione del rumore ambientale".
Piano d'Azione 2013-2017
Allegato 6 - Schede di sintesi comunale (PNZ-06)



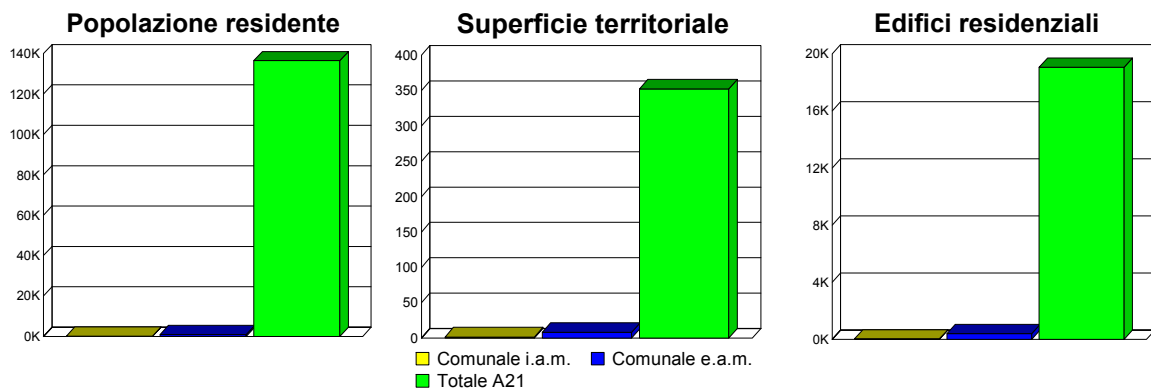
| | | | | | |
|-----------------|----------------|-------------------------|-----------------------------------|--------------------------|------------------|
| | | | | | |
| 0 | Luglio 2013 | Prima emissione | A. C. Bertetti | L. Rossi/ A. Calegari | D. Spoglianti |
| Rev. | Data | Descrizione | Redatto | Controllato | Approvato |
| Attività | A.105.R.138.S8 | Codice documento | 105138S8194P13000+000GNAL006-R000 | | |



COMUNE DI CANTARANA

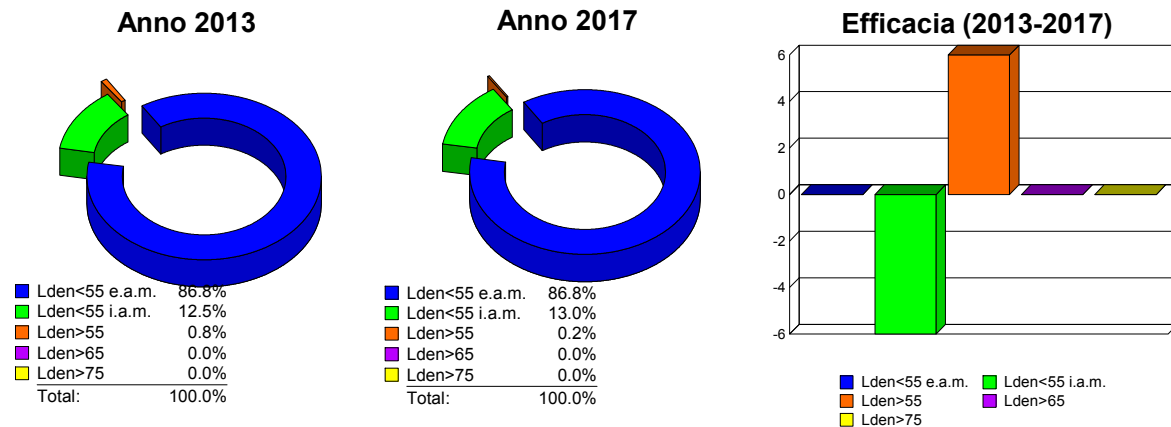
Sintesi Territoriale

| | Territorio comunale Interno ambito di mappatura | Territorio comunale Esterno ambito di mappatura | Autostrada A21 Interno ambito di mappatura |
|-------------------------------|---|---|--|
| Popolazione residente | 136 | 891 | 136544 |
| Superficie territoriale [km2] | 1.642 | 8.080 | 352.424 |
| Edifici residenziali | 28 | 393 | 19070 |



Efficacia del piano d'azione

| Popolazione Esposta | Lden < 55 Esterno a.m. | Lden < 55 Interno a.m. | Lden > 55 | Lden > 65 | Lden > 75 |
|------------------------|---------------------------|---------------------------|-----------|-----------|-----------|
| Anno 2013 | 891 | 128 | 8 | 0 | 0 |
| Anno 2017 | 891 | 134 | 2 | 0 | 0 |
| Efficacia (2013-2017) | - | -6 | 6 | 0 | 0 |

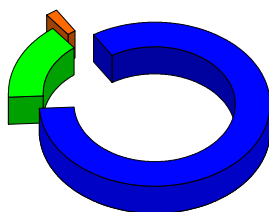




COMUNE DI CANTARANA

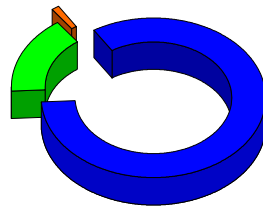
| <i>Superficie Territoriale</i> | Lden < 55 Esterno a.m. | Lden < 55 Interno a.m. | Lden > 55 | Lden > 65 | Lden >75 |
|------------------------------------|---------------------------|---------------------------|-----------|-----------|----------|
| Anno 2013 | 8.080 | 1.492 | 0.150 | 0 | 0 |
| Anno 2017 | 8.080 | 1.526 | 0.116 | 0 | 0 |
| Efficacia (2013-2017) | 0 | -0.034 | 0.034 | 0 | 0 |

Anno 2013



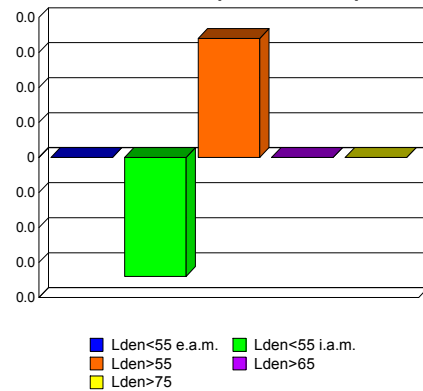
| | |
|----------------|--------|
| Lden<55 e.a.m. | 83.1% |
| Lden<55 i.a.m. | 15.3% |
| Lden>55 | 1.5% |
| Lden>65 | 0.0% |
| Lden>75 | 0.0% |
| Total: | 100.0% |

Anno 2017



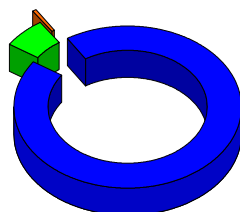
| | |
|----------------|--------|
| Lden<55 e.a.m. | 83.1% |
| Lden<55 i.a.m. | 15.7% |
| Lden>55 | 1.2% |
| Lden>65 | 0.0% |
| Lden>75 | 0.0% |
| Total: | 100.0% |

Efficacia (2013-2017)



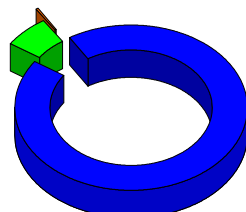
| <i>Edifici Residenziali</i> | Lden < 55 Esterno a.m. | Lden < 55 Interno a.m. | Lden > 55 | Lden > 65 | Lden >75 |
|---------------------------------|---------------------------|---------------------------|-----------|-----------|----------|
| Anno 2013 | 393 | 26 | 2 | 0 | 0 |
| Anno 2017 | 393 | 27 | 1 | 0 | 0 |
| Efficacia (2013-2017) | 0 | -1 | 1 | 0 | 0 |

Anno 2013



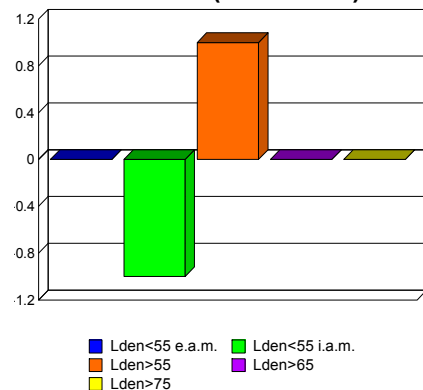
| | |
|----------------|--------|
| Lden<55 e.a.m. | 93.3% |
| Lden<55 i.a.m. | 6.2% |
| Lden>55 | 0.5% |
| Lden>65 | 0.0% |
| Lden>75 | 0.0% |
| Total: | 100.0% |

Anno 2017



| | |
|----------------|--------|
| Lden<55 e.a.m. | 93.3% |
| Lden<55 i.a.m. | 6.4% |
| Lden>55 | 0.2% |
| Lden>65 | 0.0% |
| Lden>75 | 0.0% |
| Total: | 100.0% |

Efficacia (2013-2017)

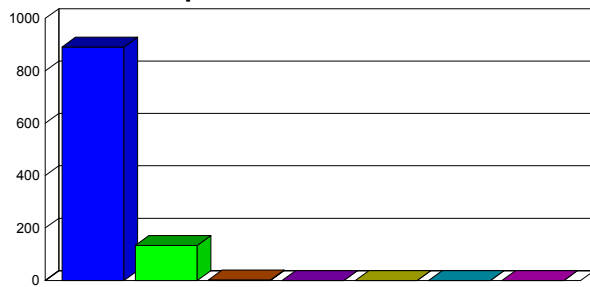




COMUNE DI CANTARANA

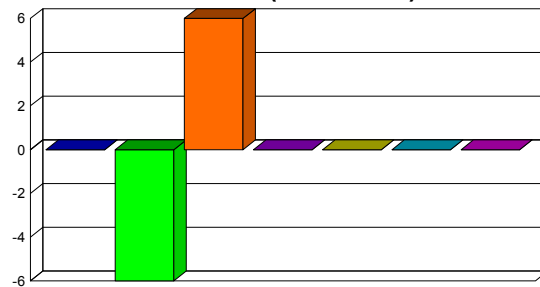
| <i>Popolazione esposta per classi di Lden</i> | Lden < 55 Esterno a.m. | Lden < 55 Interno a.m. | 55-59 | 60-64 | 65-69 | 70-75 | >75 |
|---|---------------------------|---------------------------|-------|-------|-------|-------|-----|
| Anno 2013 | 891 | 128 | 8 | 0 | 0 | 0 | 0 |
| Anno 2017 | 891 | 134 | 2 | 0 | 0 | 0 | 0 |
| Efficacia (2013-2017) | - | -6 | 6 | 0 | 0 | 0 | 0 |

Popolazione Anno 2017



■ Lden<55 e.a.m. ■ Lden<55 i.a.m. ■ 55-59
 ■ 60-64 ■ 65-69 ■ 70-75
 ■ >75

Efficacia (2013-2017)



■ Lden<55 e.a.m. ■ Lden<55 i.a.m. ■ 55-59
 ■ 60-64 ■ 65-69 ■ 70-75
 ■ >75

**Popolazione in edifici
con facciate silenti**

| | 55-59 | 60-64 | 65-69 | 70-75 | >75 |
|-----------------------|-------|-------|-------|-------|-----|
| Anno 2013 | 0 | 0 | 0 | 0 | 0 |
| Anno 2017 | 0 | 0 | 0 | 0 | 0 |
| Efficacia (2013-2017) | 0 | 0 | 0 | 0 | 0 |

**Popolazione in edifici
con insonorizzazione**

| | 55-59 | 60-64 | 65-69 | 70-75 | >75 |
|-----------------------|-------|-------|-------|-------|-----|
| Anno 2013 | 0 | 0 | 0 | 0 | 0 |
| Anno 2017 | 0 | 0 | 0 | 0 | 0 |
| Efficacia (2013-2017) | 0 | 0 | 0 | 0 | 0 |



COMUNE DI CANTARANA

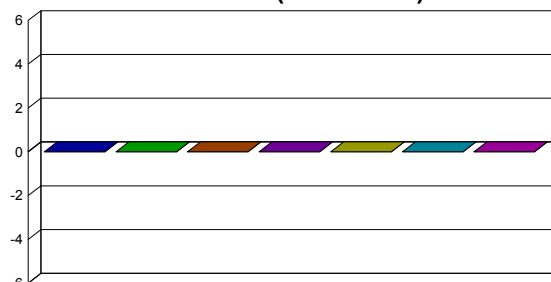
| <i>Popolazione esposta per classi di Lnight</i> | Lnight < 50 Esterno a.m. | Lnight < 50 Interno a.m. | 50-54 | 55-59 | 60-64 | 65-69 | >70 |
|---|-----------------------------|-----------------------------|-------|-------|-------|-------|-----|
| Anno 2013 | 891 | 136 | 0 | 0 | 0 | 0 | 0 |
| Anno 2017 | 891 | 136 | 0 | 0 | 0 | 0 | 0 |
| Efficacia (2013-2017) | - | 0 | 0 | 0 | 0 | 0 | 0 |

Popolazione Anno 2017



■ Lnight<50 e.a.m. ■ Lnight<50 i.a.m. ■ 50-54
 ■ 55-59 ■ 60-64 ■ 65-69
 ■ >70

Efficacia (2013-2017)



■ Lnight<50 e.a.m. ■ Lnight<50 i.a.m. ■ 50-54
 ■ 55-59 ■ 60-64 ■ 65-69
 ■ >70

*Popolazione in edifici
con facciate silenziose*

| | 50-54 | 55-59 | 60-64 | 65-69 | >70 |
|-----------------------|-------|-------|-------|-------|-----|
| Anno 2013 | 0 | 0 | 0 | 0 | 0 |
| Anno 2017 | 0 | 0 | 0 | 0 | 0 |
| Efficacia (2013-2017) | 0 | 0 | 0 | 0 | 0 |

*Popolazione in edifici
con insonorizzazione*

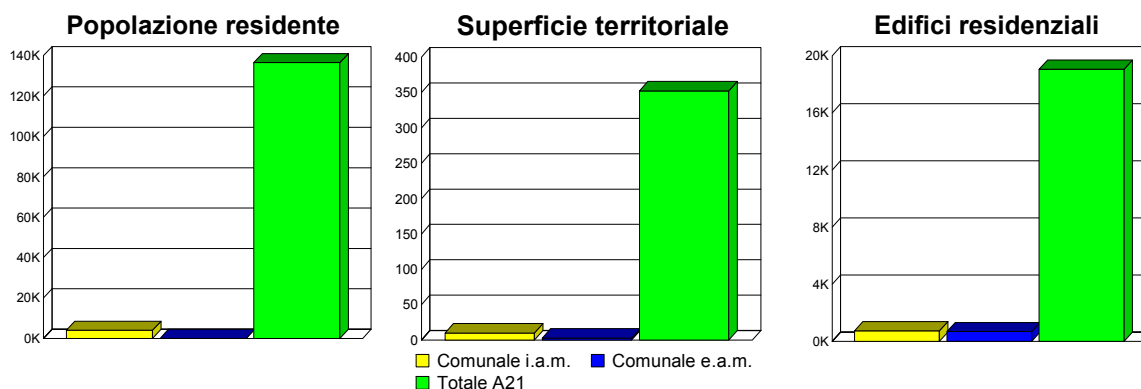
| | 50-54 | 55-59 | 60-64 | 65-69 | >70 |
|-----------------------|-------|-------|-------|-------|-----|
| Anno 2013 | 0 | 0 | 0 | 0 | 0 |
| Anno 2017 | 0 | 0 | 0 | 0 | 0 |
| Efficacia (2013-2017) | 0 | 0 | 0 | 0 | 0 |



COMUNE DI VILAFRANCA D'ASTI

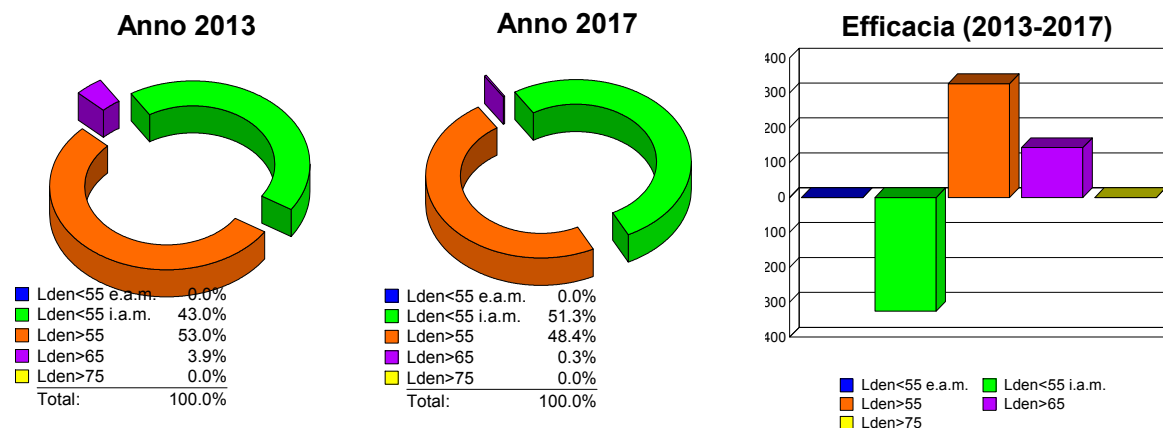
Sintesi Territoriale

| | Territorio comunale Interno ambito di mappatura | Territorio comunale Esterno ambito di mappatura | Autostrada A21 Interno ambito di mappatura |
|-------------------------------|---|---|--|
| Popolazione residente | 3958 | - | 136544 |
| Superficie territoriale [km2] | 10.018 | 2.863 | 352.424 |
| Edifici residenziali | 728 | 675 | 19070 |



Efficacia del piano d'azione

| Popolazione Esposta | Lden < 55 Esterno a.m. | Lden < 55 Interno a.m. | Lden > 55 | Lden > 65 | Lden > 75 |
|------------------------|---------------------------|---------------------------|-----------|-----------|-----------|
| Anno 2013 | - | 1703 | 2255 | 156 | 0 |
| Anno 2017 | - | 2029 | 1929 | 13 | 0 |
| Efficacia (2013-2017) | - | -326 | 326 | 143 | 0 |

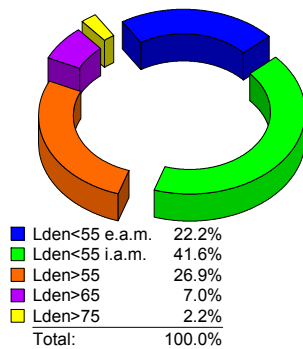




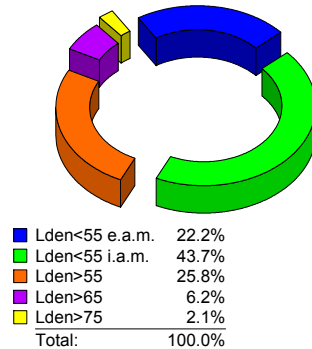
COMUNE DI VILLAFRANCA D'ASTI

| <i>Superficie Territoriale</i> | Lden < 55 Esterno a.m. | Lden < 55 Interno a.m. | Lden > 55 | Lden > 65 | Lden >75 |
|------------------------------------|---------------------------|---------------------------|-----------|-----------|----------|
| Anno 2013 | 2.863 | 5.357 | 4.661 | 1.194 | 0.288 |
| Anno 2017 | 2.863 | 5.631 | 4.387 | 1.065 | 0.271 |
| Efficacia (2013-2017) | 0 | -0.274 | 0.274 | 0.129 | 0.017 |

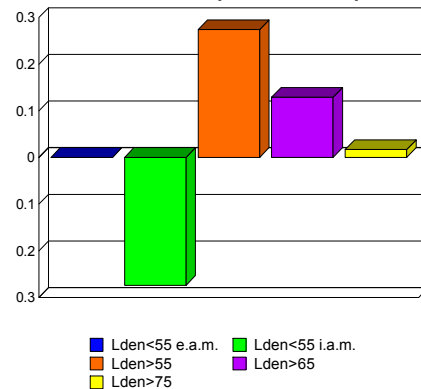
Anno 2013



Anno 2017

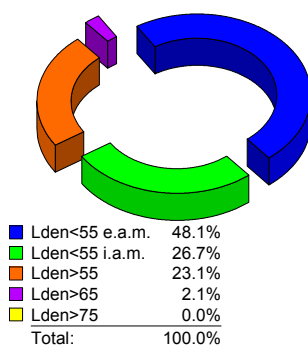


Efficacia (2013-2017)

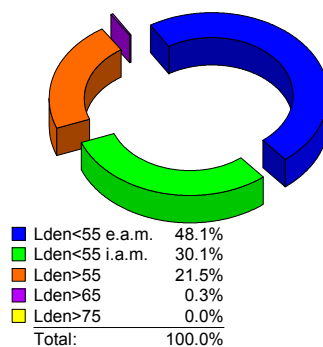


| <i>Edifici Residenziali</i> | Lden < 55 Esterno a.m. | Lden < 55 Interno a.m. | Lden > 55 | Lden > 65 | Lden >75 |
|---------------------------------|---------------------------|---------------------------|-----------|-----------|----------|
| Anno 2013 | 675 | 374 | 354 | 30 | 0 |
| Anno 2017 | 675 | 422 | 306 | 4 | 0 |
| Efficacia (2013-2017) | 0 | -48 | 48 | 26 | 0 |

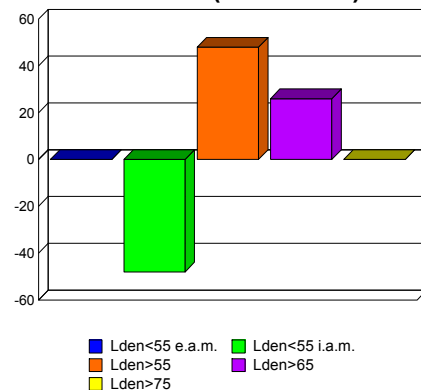
Anno 2013



Anno 2017



Efficacia (2013-2017)

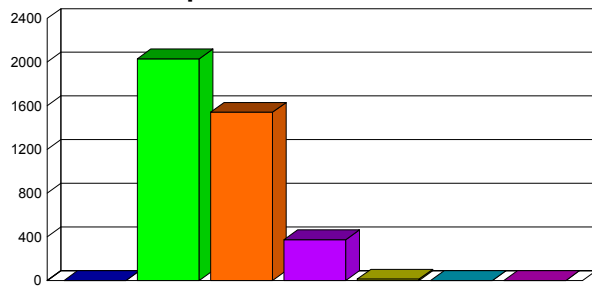




COMUNE DI VILAFRANCA D'ASTI

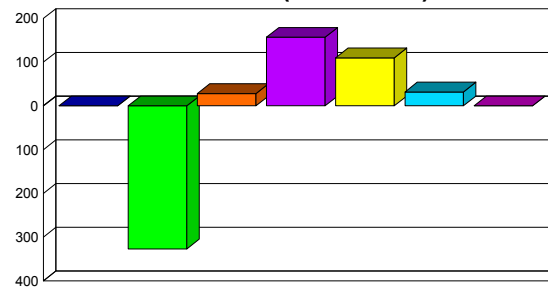
| <i>Popolazione esposta per classi di Lden</i> | Lden < 55 Esterno a.m. | Lden < 55 Interno a.m. | 55-59 | 60-64 | 65-69 | 70-75 | >75 |
|---|------------------------|------------------------|-------|-------|-------|-------|-----|
| Anno 2013 | - | 1703 | 1569 | 531 | 123 | 32 | 0 |
| Anno 2017 | - | 2030 | 1541 | 374 | 13 | 0 | 0 |
| Efficacia (2013-2017) | - | -327 | 28 | 157 | 110 | 32 | 0 |

Popolazione Anno 2017



■ Lden<55 e.a.m. ■ Lden<55 i.a.m. ■ 55-59
 ■ 60-64 ■ 65-69 ■ 70-75
 ■ >75

Efficacia (2013-2017)



■ Lden<55 e.a.m. ■ Lden<55 i.a.m. ■ 55-59
 ■ 60-64 ■ 65-69 ■ 70-75
 ■ >75

Popolazione in edifici con facciate silenti

| | 55-59 | 60-64 | 65-69 | 70-75 | >75 |
|-----------------------|-------|-------|-------|-------|-----|
| Anno 2013 | 0 | 0 | 0 | 0 | 0 |
| Anno 2017 | 0 | 0 | 0 | 0 | 0 |
| Efficacia (2013-2017) | 0 | 0 | 0 | 0 | 0 |

Popolazione in edifici con insonorizzazione

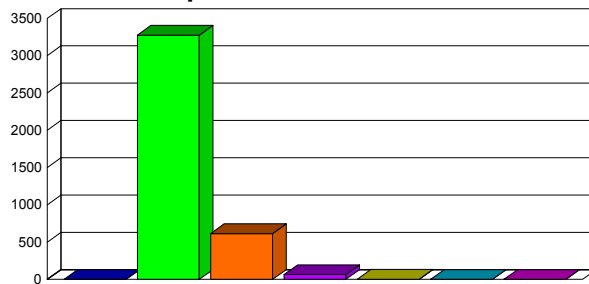
| | 55-59 | 60-64 | 65-69 | 70-75 | >75 |
|-----------------------|-------|-------|-------|-------|-----|
| Anno 2013 | 0 | 0 | 0 | 0 | 0 |
| Anno 2017 | 0 | 0 | 0 | 0 | 0 |
| Efficacia (2013-2017) | 0 | 0 | 0 | 0 | 0 |



COMUNE DI VILFRANCA D'ASTI

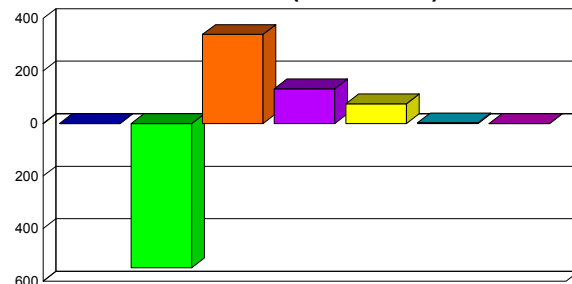
| <i>Popolazione esposta per classi di Lnight</i> | Lnight < 50 Esterno a.m. | Lnight < 50 Interno a.m. | 50-54 | 55-59 | 60-64 | 65-69 | >70 |
|---|-----------------------------|-----------------------------|-------|-------|-------|-------|-----|
| Anno 2013 | - | 2727 | 954 | 197 | 77 | 3 | 0 |
| Anno 2017 | - | 3276 | 615 | 65 | 2 | 0 | 0 |
| Efficacia (2013-2017) | - | -549 | 339 | 132 | 75 | 3 | 0 |

Popolazione Anno 2017



■ Lnight<50 e.a.m. ■ Lnight<50 i.a.m. ■ 50-54
 ■ 55-59 ■ 60-64 ■ 65-69
 ■ >70

Efficacia (2013-2017)



■ Lnight<50 e.a.m. ■ Lnight<50 i.a.m. ■ 50-54
 ■ 55-59 ■ 60-64 ■ 65-69
 ■ >70

*Popolazione in edifici
con facciate silenziose*

| | 50-54 | 55-59 | 60-64 | 65-69 | >70 |
|-----------------------|-------|-------|-------|-------|-----|
| Anno 2013 | 31 | 0 | 6 | 2 | 0 |
| Anno 2017 | 14 | 0 | 0 | 0 | 0 |
| Efficacia (2013-2017) | 17 | 0 | 6 | 2 | 0 |

*Popolazione in edifici
con insonorizzazione*

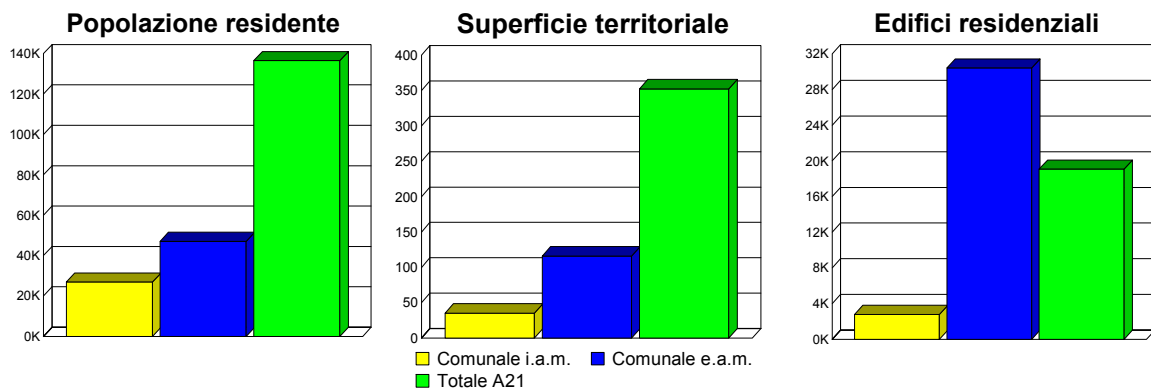
| | 50-54 | 55-59 | 60-64 | 65-69 | >70 |
|-----------------------|-------|-------|-------|-------|-----|
| Anno 2013 | 0 | 0 | 0 | 0 | 0 |
| Anno 2017 | 0 | 0 | 0 | 0 | 0 |
| Efficacia (2013-2017) | 0 | 0 | 0 | 0 | 0 |



COMUNE DI ASTI

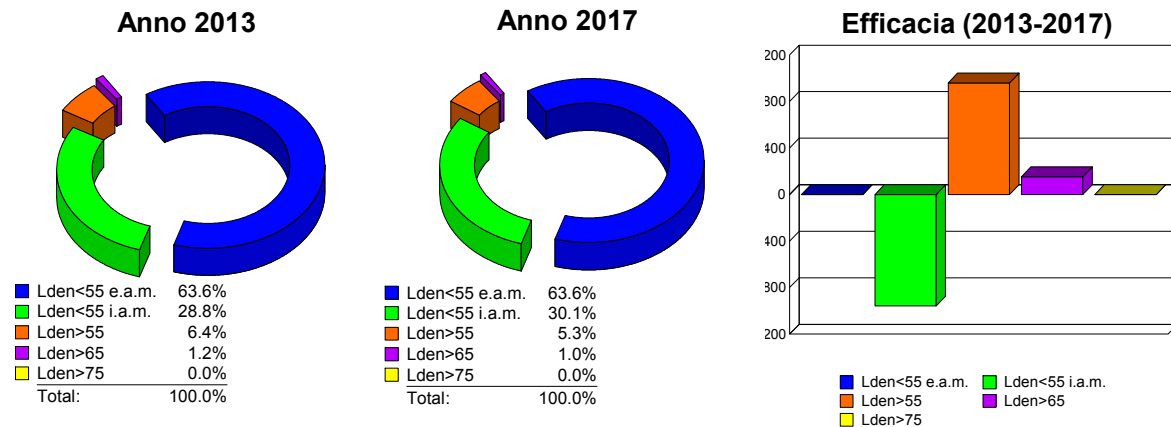
Sintesi Territoriale

| | Territorio comunale Interno ambito di mappatura | Territorio comunale Esterno ambito di mappatura | Autostrada A21 Interno ambito di mappatura |
|-------------------------------|---|---|--|
| Popolazione residente | 26906 | 47071 | 136544 |
| Superficie territoriale [km2] | 35.390 | 115.986 | 352.424 |
| Edifici residenziali | 2778 | 30408 | 19070 |



Efficacia del piano d'azione

| Popolazione Esposta | Lden < 55 Esterno a.m. | Lden < 55 Interno a.m. | Lden > 55 | Lden > 65 | Lden > 75 |
|------------------------|---------------------------|---------------------------|-----------|-----------|-----------|
| Anno 2013 | 47071 | 21304 | 5602 | 870 | 0 |
| Anno 2017 | 47071 | 22263 | 4643 | 716 | 0 |
| Efficacia (2013-2017) | - | -959 | 959 | 154 | 0 |

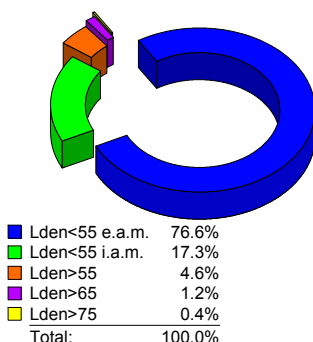




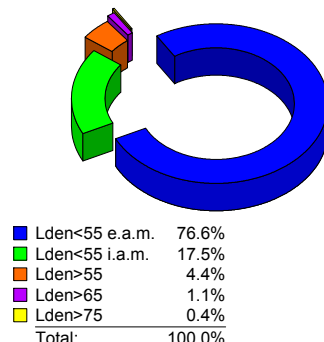
COMUNE DI ASTI

| <i>Superficie Territoriale</i> | Lden < 55 Esterno a.m. | Lden < 55 Interno a.m. | Lden > 55 | Lden > 65 | Lden >75 |
|------------------------------------|---------------------------|---------------------------|-----------|-----------|----------|
| Anno 2013 | 115.986 | 26.178 | 9.212 | 2.320 | 0.537 |
| Anno 2017 | 115.986 | 26.469 | 8.921 | 2.244 | 0.533 |
| Efficacia (2013-2017) | 0 | -0.291 | 0.291 | 0.076 | 0.004 |

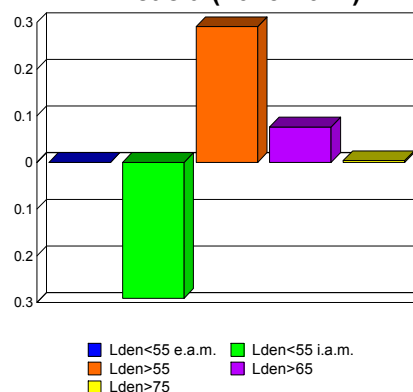
Anno 2013



Anno 2017

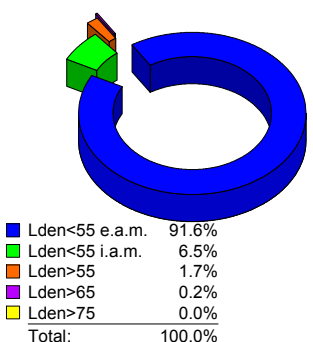


Efficacia (2013-2017)

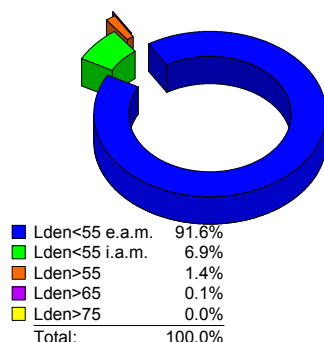


| <i>Edifici Residenziali</i> | Lden < 55 Esterno a.m. | Lden < 55 Interno a.m. | Lden > 55 | Lden > 65 | Lden >75 |
|---------------------------------|---------------------------|---------------------------|-----------|-----------|----------|
| Anno 2013 | 30408 | 2151 | 627 | 55 | 0 |
| Anno 2017 | 30408 | 2283 | 495 | 44 | 0 |
| Efficacia (2013-2017) | 0 | -132 | 132 | 11 | 0 |

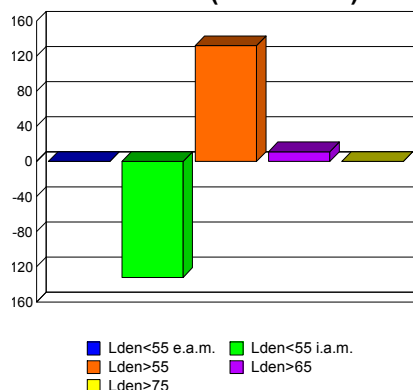
Anno 2013



Anno 2017



Efficacia (2013-2017)

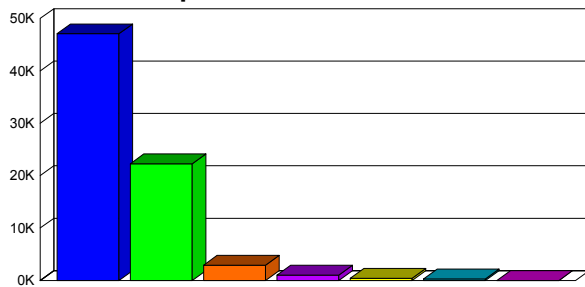




COMUNE DI ASTI

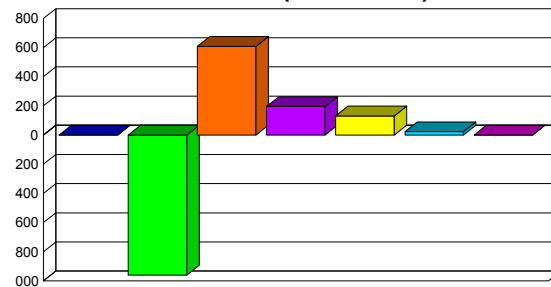
| <i>Popolazione esposta per classi di Lden</i> | Lden < 55 Esterno a.m. | Lden < 55 Interno a.m. | 55-59 | 60-64 | 65-69 | 70-75 | >75 |
|---|---------------------------|---------------------------|-------|-------|-------|-------|-----|
| Anno 2013 | 47071 | 21304 | 3505 | 1227 | 537 | 333 | 0 |
| Anno 2017 | 47071 | 22264 | 2896 | 1031 | 405 | 310 | 0 |
| Efficacia (2013-2017) | - | -960 | 609 | 196 | 132 | 23 | 0 |

Popolazione Anno 2017



■ Lden<55 e.a.m. ■ Lden<55 i.a.m. ■ 55-59
 ■ 60-64 ■ 65-69 ■ 70-75
 ■ >75

Efficacia (2013-2017)



■ Lden<55 e.a.m. ■ Lden<55 i.a.m. ■ 55-59
 ■ 60-64 ■ 65-69 ■ 70-75
 ■ >75

*Popolazione in edifici
con facciate silenti*

| | 55-59 | 60-64 | 65-69 | 70-75 | >75 |
|-----------------------|-------|-------|-------|-------|-----|
| Anno 2013 | 0 | 0 | 0 | 0 | 0 |
| Anno 2017 | 0 | 0 | 0 | 0 | 0 |
| Efficacia (2013-2017) | 0 | 0 | 0 | 0 | 0 |

*Popolazione in edifici
con insonorizzazione*

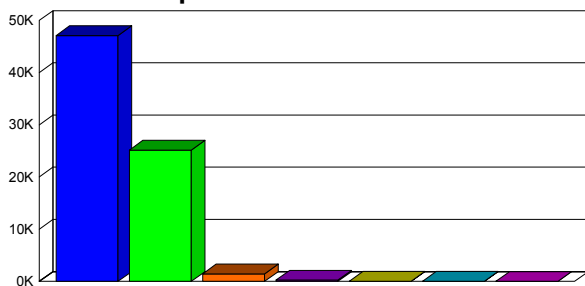
| | 55-59 | 60-64 | 65-69 | 70-75 | >75 |
|-----------------------|-------|-------|-------|-------|-----|
| Anno 2013 | 0 | 0 | 0 | 0 | 0 |
| Anno 2017 | 0 | 0 | 0 | 0 | 0 |
| Efficacia (2013-2017) | 0 | 0 | 0 | 0 | 0 |



COMUNE DI ASTI

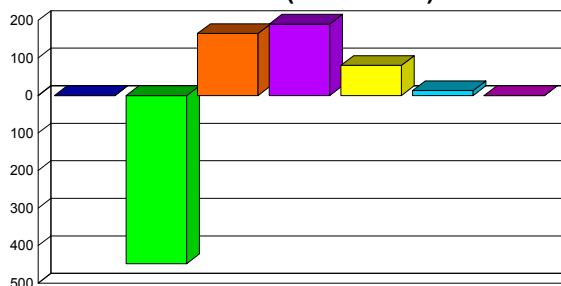
| <i>Popolazione esposta per classi di Lnight</i> | Lnight < 50 Esterno a.m. | Lnight < 50 Interno a.m. | 50-54 | 55-59 | 60-64 | 65-69 | >70 |
|---|-----------------------------|-----------------------------|-------|-------|-------|-------|-----|
| Anno 2013 | 47071 | 24697 | 1625 | 437 | 113 | 34 | 0 |
| Anno 2017 | 47071 | 25145 | 1460 | 247 | 33 | 21 | 0 |
| Efficacia (2013-2017) | - | -448 | 165 | 190 | 80 | 13 | 0 |

Popolazione Anno 2017



■ Lnight<50 e.a.m. ■ Lnight<50 i.a.m. ■ 50-54
 ■ 55-59 ■ 60-64 ■ 65-69
 ■ >70

Efficacia (2013-2017)



■ Lnight<50 e.a.m. ■ Lnight<50 i.a.m. ■ 50-54
 ■ 55-59 ■ 60-64 ■ 65-69
 ■ >70

*Popolazione in edifici
con facciate silenziose*

| | 50-54 | 55-59 | 60-64 | 65-69 | >70 |
|-----------------------|-------|-------|-------|-------|-----|
| Anno 2013 | 93 | 21 | 29 | 0 | 0 |
| Anno 2017 | 93 | 21 | 0 | 0 | 0 |
| Efficacia (2013-2017) | 0 | 0 | 29 | 0 | 0 |

*Popolazione in edifici
con insonorizzazione*

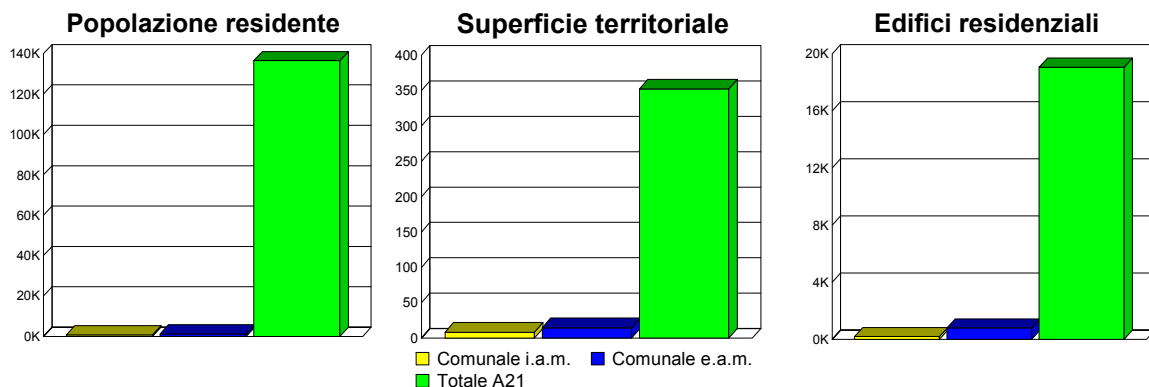
| | 50-54 | 55-59 | 60-64 | 65-69 | >70 |
|-----------------------|-------|-------|-------|-------|-----|
| Anno 2013 | 0 | 0 | 0 | 0 | 0 |
| Anno 2017 | 0 | 0 | 0 | 0 | 0 |
| Efficacia (2013-2017) | 0 | 0 | 0 | 0 | 0 |



COMUNE DI CASTELLO DI ANNONE

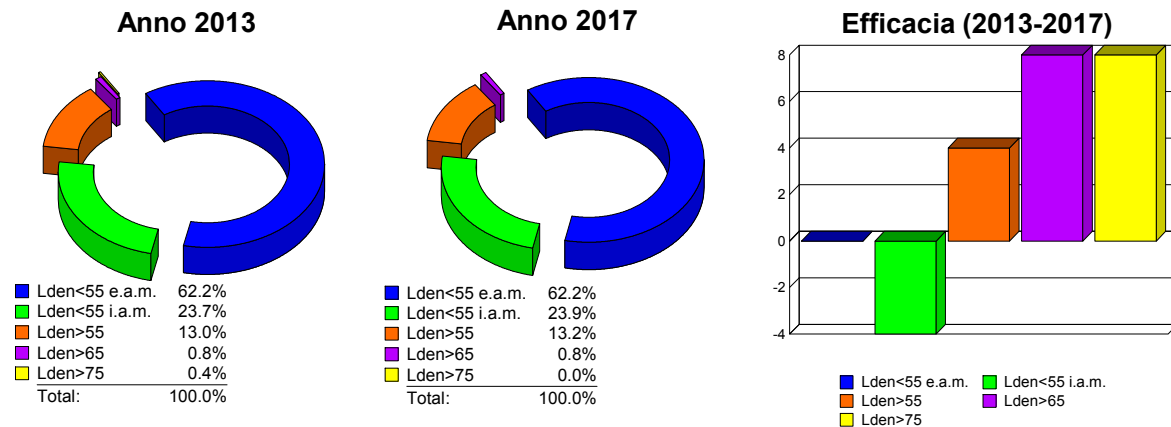
Sintesi Territoriale

| | Territorio comunale Interno ambito di mappatura | Territorio comunale Esterno ambito di mappatura | Autostrada A21 Interno ambito di mappatura |
|-------------------------------|---|---|--|
| Popolazione residente | 735 | 1207 | 136544 |
| Superficie territoriale [km2] | 8.421 | 14.758 | 352.424 |
| Edifici residenziali | 184 | 790 | 19070 |



Efficacia del piano d'azione

| Popolazione Esposta | Lden < 55 Esterno a.m. | Lden < 55 Interno a.m. | Lden > 55 | Lden > 65 | Lden > 75 |
|------------------------|---------------------------|---------------------------|-----------|-----------|-----------|
| Anno 2013 | 1207 | 460 | 275 | 23 | 8 |
| Anno 2017 | 1207 | 464 | 271 | 15 | 0 |
| Efficacia (2013-2017) | - | -4 | 4 | 8 | 8 |

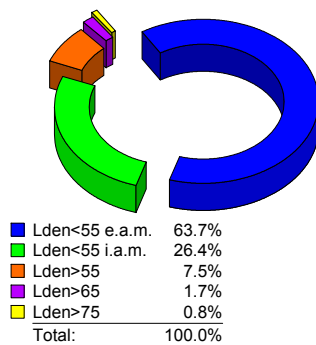




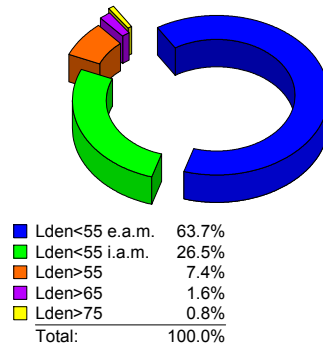
COMUNE DI CASTELLO DI ANNONE

| <i>Superficie Territoriale</i> | Lden < 55 Esterno a.m. | Lden < 55 Interno a.m. | Lden > 55 | Lden > 65 | Lden >75 |
|------------------------------------|---------------------------|---------------------------|-----------|-----------|----------|
| Anno 2013 | 14.758 | 6.115 | 2.306 | 0.566 | 0.178 |
| Anno 2017 | 14.758 | 6.138 | 2.283 | 0.559 | 0.177 |
| Efficacia (2013-2017) | 0 | -0.023 | 0.023 | 0.007 | 0.001 |

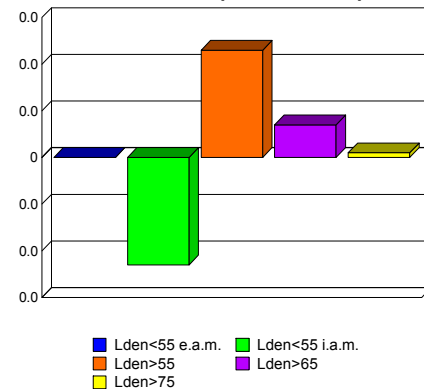
Anno 2013



Anno 2017

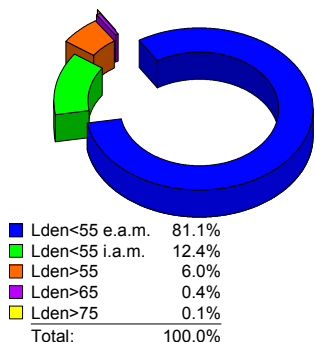


Efficacia (2013-2017)

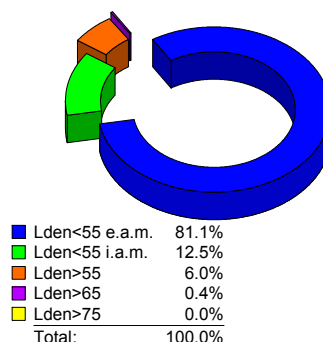


| <i>Edifici Residenziali</i> | Lden < 55 Esterno a.m. | Lden < 55 Interno a.m. | Lden > 55 | Lden > 65 | Lden >75 |
|---------------------------------|---------------------------|---------------------------|-----------|-----------|----------|
| Anno 2013 | 790 | 121 | 63 | 5 | 1 |
| Anno 2017 | 790 | 122 | 62 | 4 | 0 |
| Efficacia (2013-2017) | 0 | -1 | 1 | 1 | 1 |

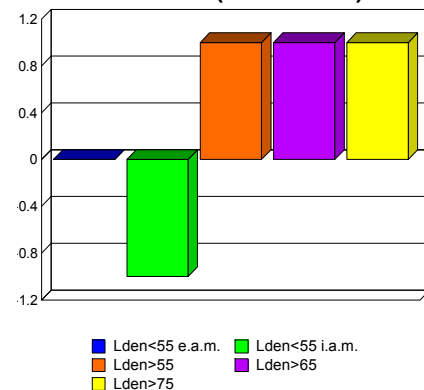
Anno 2013



Anno 2017



Efficacia (2013-2017)

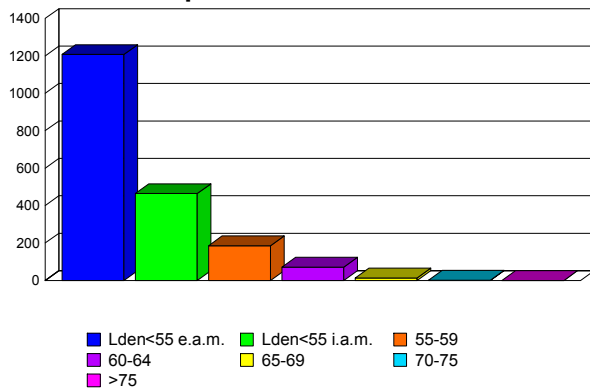




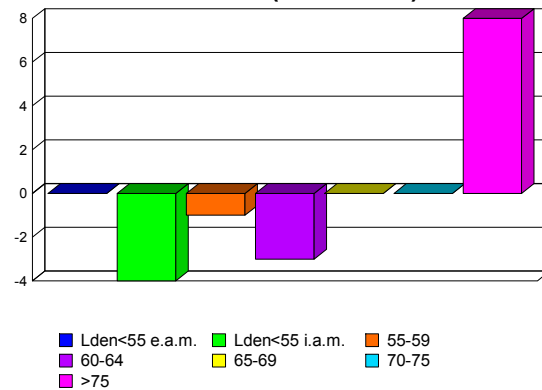
COMUNE DI CASTELLO DI ANNONE

| <i>Popolazione esposta per classi di Lden</i> | Lden < 55 Esterno a.m. | Lden < 55 Interno a.m. | 55-59 | 60-64 | 65-69 | 70-75 | >75 |
|---|---------------------------|---------------------------|-------|-------|-------|-------|-----|
| Anno 2013 | 1207 | 460 | 184 | 68 | 14 | 1 | 8 |
| Anno 2017 | 1207 | 464 | 185 | 71 | 14 | 1 | 0 |
| Efficacia (2013-2017) | - | -4 | -1 | -3 | 0 | 0 | 8 |

Popolazione Anno 2017



Efficacia (2013-2017)



| <i>Popolazione in edifici con facciate silenti</i> | 55-59 | 60-64 | 65-69 | 70-75 | >75 |
|--|-------|-------|-------|-------|-----|
| Anno 2013 | 0 | 0 | 0 | 0 | 0 |
| Anno 2017 | 0 | 0 | 0 | 0 | 0 |
| Efficacia (2013-2017) | 0 | 0 | 0 | 0 | 0 |

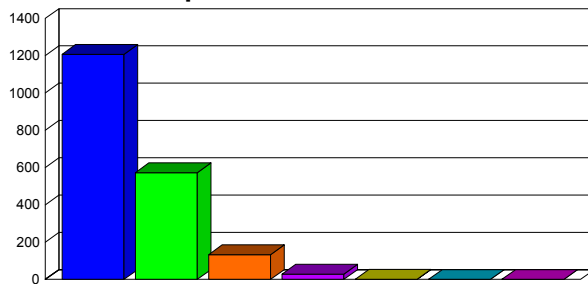
| <i>Popolazione in edifici con insonorizzazione</i> | 55-59 | 60-64 | 65-69 | 70-75 | >75 |
|--|-------|-------|-------|-------|-----|
| Anno 2013 | 0 | 0 | 0 | 0 | 0 |
| Anno 2017 | 0 | 0 | 0 | 0 | 0 |
| Efficacia (2013-2017) | 0 | 0 | 0 | 0 | 0 |



COMUNE DI CASTELLO DI ANNONE

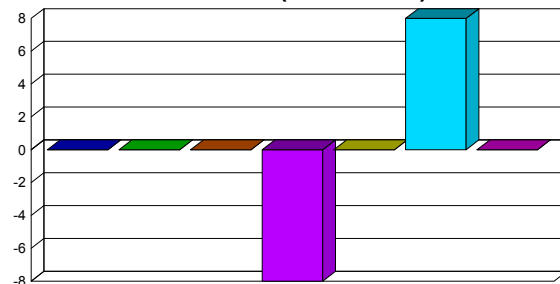
| <i>Popolazione esposta per classi di Lnight</i> | Lnight < 50 Esterno a.m. | Lnight < 50 Interno a.m. | 50-54 | 55-59 | 60-64 | 65-69 | >70 |
|---|--------------------------|--------------------------|-------|-------|-------|-------|-----|
| Anno 2013 | 1207 | 573 | 133 | 20 | 1 | 8 | 0 |
| Anno 2017 | 1207 | 573 | 133 | 28 | 1 | 0 | 0 |
| Efficacia (2013-2017) | - | 0 | 0 | -8 | 0 | 8 | 0 |

Popolazione Anno 2017



■ Lnight<50 e.a.m. ■ Lnight<50 i.a.m. ■ 50-54
 ■ 55-59 ■ 60-64 ■ 65-69
 ■ >70

Efficacia (2013-2017)



■ Lnight<50 e.a.m. ■ Lnight<50 i.a.m. ■ 50-54
 ■ 55-59 ■ 60-64 ■ 65-69
 ■ >70

Popolazione in edifici con facciate silenziose

| | 50-54 | 55-59 | 60-64 | 65-69 | >70 |
|-----------------------|-------|-------|-------|-------|-----|
| Anno 2013 | 0 | 0 | 0 | 0 | 0 |
| Anno 2017 | 0 | 0 | 0 | 0 | 0 |
| Efficacia (2013-2017) | 0 | 0 | 0 | 0 | 0 |

Popolazione in edifici con insonorizzazione

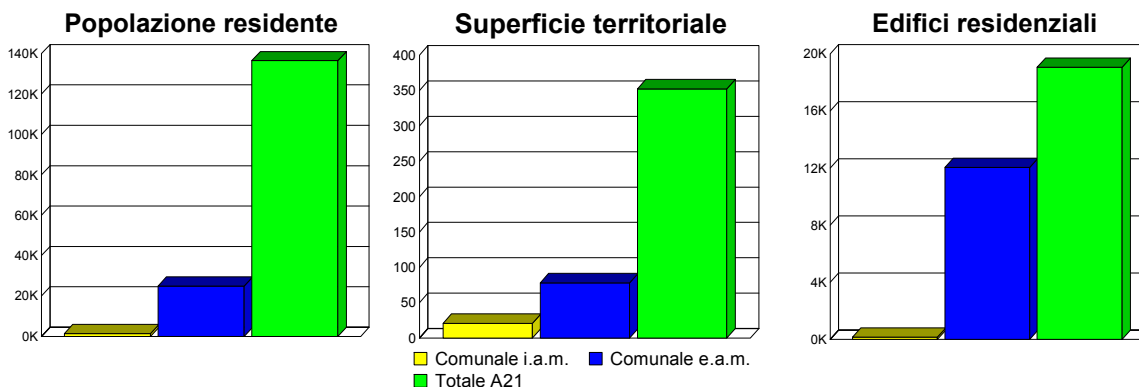
| | 50-54 | 55-59 | 60-64 | 65-69 | >70 |
|-----------------------|-------|-------|-------|-------|-----|
| Anno 2013 | 0 | 0 | 0 | 0 | 0 |
| Anno 2017 | 0 | 0 | 0 | 0 | 0 |
| Efficacia (2013-2017) | 0 | 0 | 0 | 0 | 0 |



COMUNE DI TORTONA

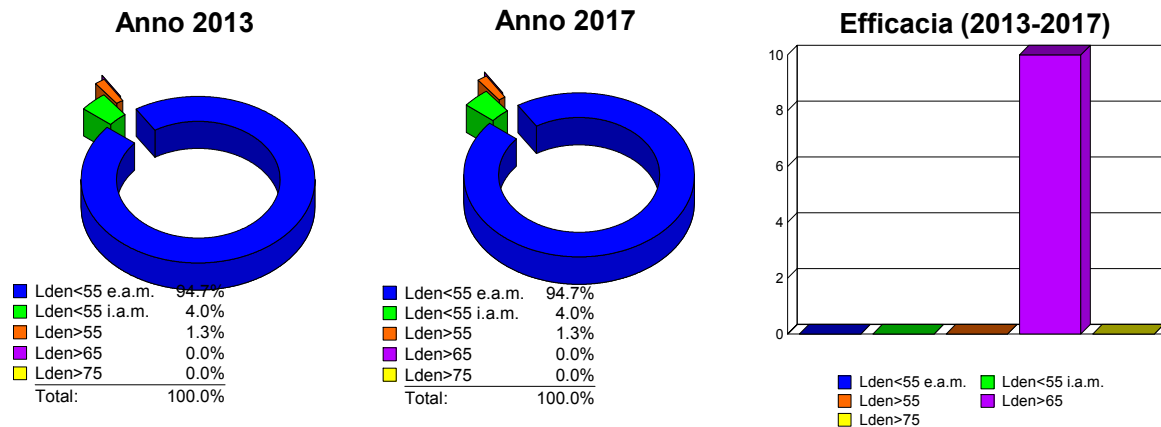
Sintesi Territoriale

| | Territorio comunale Interno ambito di mappatura | Territorio comunale Esterno ambito di mappatura | Autostrada A21 Interno ambito di mappatura |
|-------------------------------|---|---|--|
| Popolazione residente | 1387 | 24937 | 136544 |
| Superficie territoriale [km2] | 20.770 | 78.098 | 352.424 |
| Edifici residenziali | 146 | 12042 | 19070 |



Efficacia del piano d'azione

| Popolazione Esposta | Lden < 55 Esterno a.m. | Lden < 55 Interno a.m. | Lden > 55 | Lden > 65 | Lden > 75 |
|------------------------|---------------------------|---------------------------|-----------|-----------|-----------|
| Anno 2013 | 24937 | 1042 | 345 | 13 | 0 |
| Anno 2017 | 24937 | 1042 | 345 | 3 | 0 |
| Efficacia (2013-2017) | - | 0 | 0 | 10 | 0 |

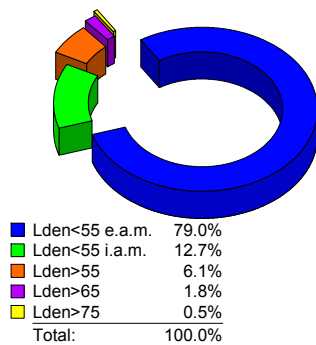




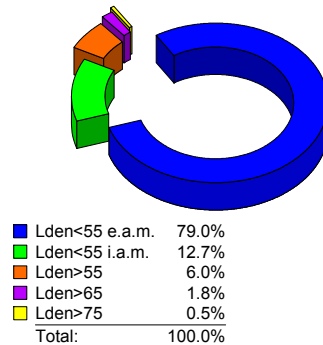
COMUNE DI TORTONA

| <i>Superficie Territoriale</i> | Lden < 55 Esterno a.m. | Lden < 55 Interno a.m. | Lden > 55 | Lden > 65 | Lden >75 |
|------------------------------------|---------------------------|---------------------------|-----------|-----------|----------|
| Anno 2013 | 78.098 | 12.528 | 8.242 | 2.248 | 0.461 |
| Anno 2017 | 78.098 | 12.559 | 8.211 | 2.239 | 0.461 |
| Efficacia (2013-2017) | 0 | -0.031 | 0.031 | 0.009 | 0 |

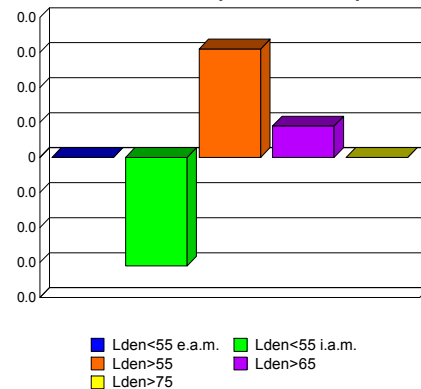
Anno 2013



Anno 2017

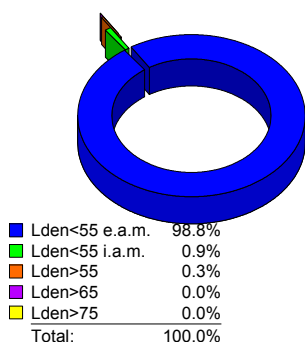


Efficacia (2013-2017)

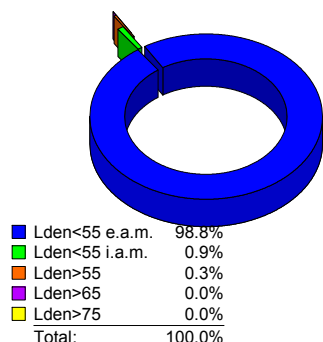


| <i>Edifici Residenziali</i> | Lden < 55 Esterno a.m. | Lden < 55 Interno a.m. | Lden > 55 | Lden > 65 | Lden >75 |
|---------------------------------|---------------------------|---------------------------|-----------|-----------|----------|
| Anno 2013 | 12042 | 109 | 37 | 4 | 0 |
| Anno 2017 | 12042 | 109 | 37 | 2 | 0 |
| Efficacia (2013-2017) | 0 | 0 | 0 | 2 | 0 |

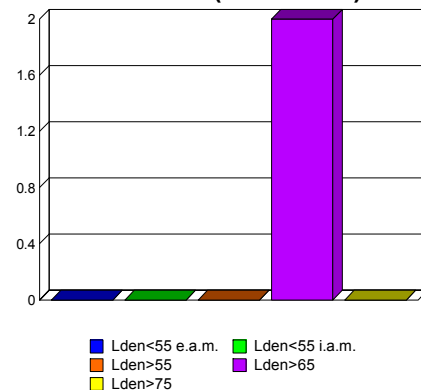
Anno 2013



Anno 2017



Efficacia (2013-2017)

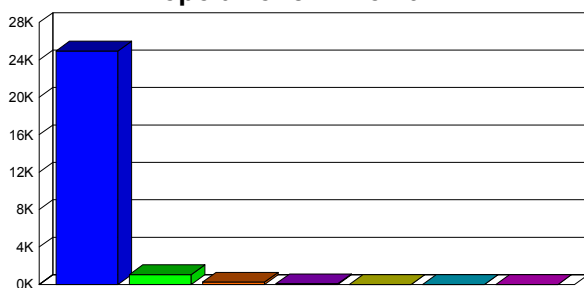




COMUNE DI TORTONA

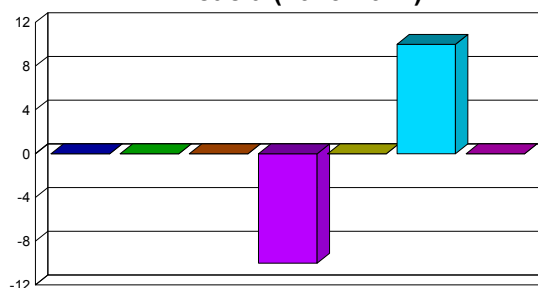
| Popolazione esposta per classi di Lden | Lden < 55 Esterno a.m. | Lden < 55 Interno a.m. | 55-59 | 60-64 | 65-69 | 70-75 | >75 |
|---|--------------------------------------|--------------------------------------|--------------|--------------|--------------|--------------|---------------|
| Anno 2013 | 24937 | 1043 | 254 | 77 | 3 | 10 | 0 |
| Anno 2017 | 24937 | 1043 | 254 | 87 | 3 | 0 | 0 |
| Efficacia (2013-2017) | - | 0 | 0 | -10 | 0 | 10 | 0 |

Popolazione Anno 2017



■ Lden<55 e.a.m. ■ Lden<55 i.a.m. ■ 55-59
 ■ 60-64 ■ 65-69 ■ 70-75
 ■ >75

Efficacia (2013-2017)



■ Lden<55 e.a.m. ■ Lden<55 i.a.m. ■ 55-59
 ■ 60-64 ■ 65-69 ■ 70-75
 ■ >75

| Popolazione in edifici con facciate silenti | 55-59 | 60-64 | 65-69 | 70-75 | >75 |
|--|--------------|--------------|--------------|--------------|---------------|
| Anno 2013 | 0 | 0 | 0 | 0 | 0 |
| Anno 2017 | 0 | 0 | 0 | 0 | 0 |
| Efficacia (2013-2017) | 0 | 0 | 0 | 0 | 0 |

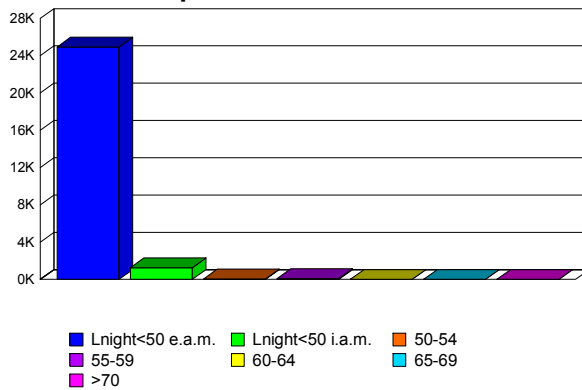
| Popolazione in edifici con insonorizzazione | 55-59 | 60-64 | 65-69 | 70-75 | >75 |
|--|--------------|--------------|--------------|--------------|---------------|
| Anno 2013 | 0 | 0 | 0 | 0 | 0 |
| Anno 2017 | 0 | 0 | 0 | 0 | 0 |
| Efficacia (2013-2017) | 0 | 0 | 0 | 0 | 0 |



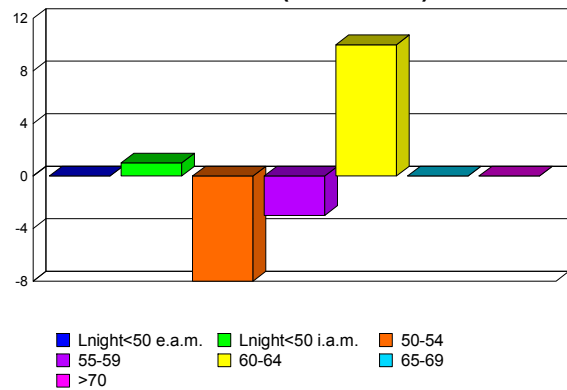
COMUNE DI TORTONA

| <i>Popolazione esposta per classi di Lnight</i> | Lnight < 50 Esterno a.m. | Lnight < 50 Interno a.m. | 50-54 | 55-59 | 60-64 | 65-69 | >70 |
|---|--------------------------|--------------------------|-------|-------|-------|-------|-----|
| Anno 2013 | 24937 | 1254 | 48 | 75 | 10 | 0 | 0 |
| Anno 2017 | 24937 | 1253 | 56 | 78 | 0 | 0 | 0 |
| Efficacia (2013-2017) | - | 1 | -8 | -3 | 10 | 0 | 0 |

Popolazione Anno 2017



Efficacia (2013-2017)



Popolazione in edifici con facciate silenziose

| | 50-54 | 55-59 | 60-64 | 65-69 | >70 |
|-----------------------|-------|-------|-------|-------|-----|
| Anno 2013 | 10 | 0 | 0 | 0 | 0 |
| Anno 2017 | 10 | 0 | 0 | 0 | 0 |
| Efficacia (2013-2017) | 0 | 0 | 0 | 0 | 0 |

Popolazione in edifici con insonorizzazione

| | 50-54 | 55-59 | 60-64 | 65-69 | >70 |
|-----------------------|-------|-------|-------|-------|-----|
| Anno 2013 | 0 | 0 | 0 | 0 | 0 |
| Anno 2017 | 0 | 0 | 0 | 0 | 0 |
| Efficacia (2013-2017) | 0 | 0 | 0 | 0 | 0 |

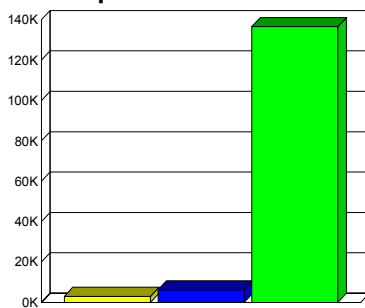


COMUNE DI BRONI

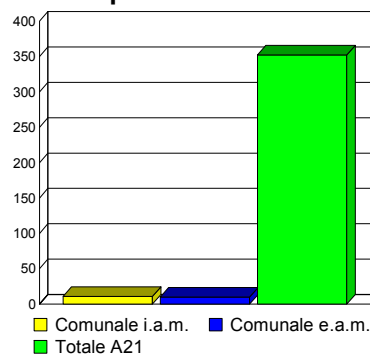
Sintesi Territoriale

| | Territorio comunale Interno ambito di mappatura | Territorio comunale Esterno ambito di mappatura | Autostrada A21 Interno ambito di mappatura |
|-------------------------------|---|---|--|
| Popolazione residente | 2915 | 6173 | 136544 |
| Superficie territoriale [km2] | 10.929 | 10.079 | 352.424 |
| Edifici residenziali | 581 | 4054 | 19070 |

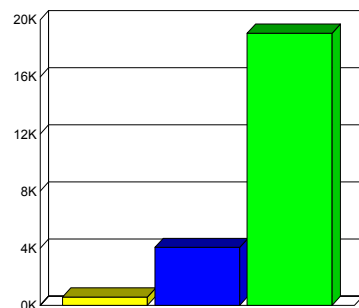
Popolazione residente



Superficie territoriale



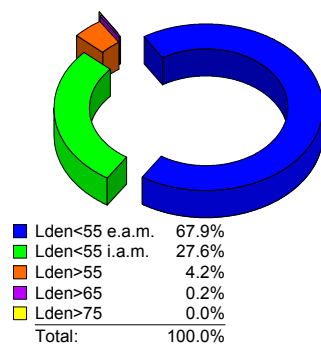
Edifici residenziali



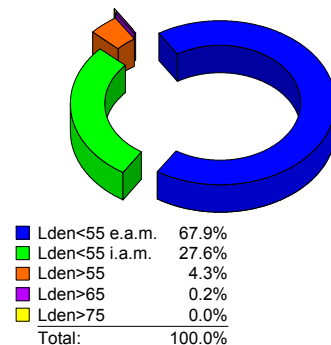
Efficacia del piano d'azione

| Popolazione Esposta | Lden < 55 Esterno a.m. | Lden < 55 Interno a.m. | Lden > 55 | Lden > 65 | Lden > 75 |
|------------------------|---------------------------|---------------------------|-----------|-----------|-----------|
| Anno 2013 | 6173 | 2508 | 407 | 23 | 1 |
| Anno 2017 | 6173 | 2508 | 407 | 15 | 1 |
| Efficacia (2013-2017) | - | 0 | 0 | 8 | 0 |

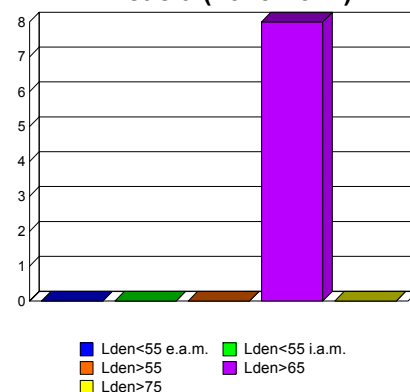
Anno 2013



Anno 2017



Efficacia (2013-2017)

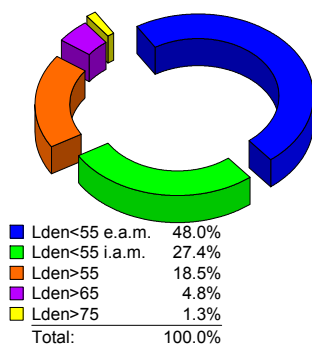




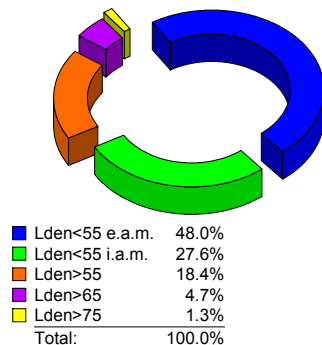
COMUNE DI BRONI

| <i>Superficie Territoriale</i> | Lden < 55 Esterno a.m. | Lden < 55 Interno a.m. | Lden > 55 | Lden > 65 | Lden >75 |
|------------------------------------|---------------------------|---------------------------|-----------|-----------|----------|
| Anno 2013 | 10.079 | 5.757 | 5.172 | 1.291 | 0.276 |
| Anno 2017 | 10.079 | 5.793 | 5.136 | 1.272 | 0.275 |
| Efficacia (2013-2017) | 0 | -0.036 | 0.036 | 0.019 | 0.001 |

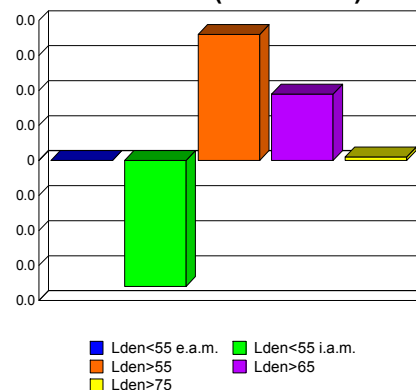
Anno 2013



Anno 2017

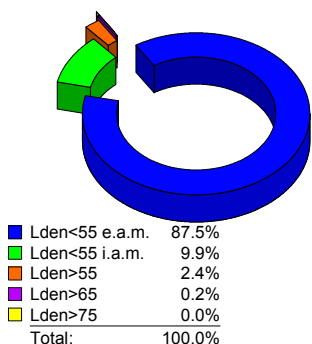


Efficacia (2013-2017)

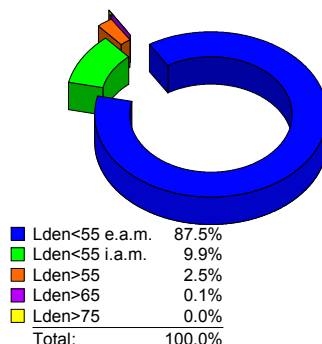


| <i>Edifici Residenziali</i> | Lden < 55 Esterno a.m. | Lden < 55 Interno a.m. | Lden > 55 | Lden > 65 | Lden >75 |
|---------------------------------|---------------------------|---------------------------|-----------|-----------|----------|
| Anno 2013 | 4054 | 459 | 122 | 10 | 1 |
| Anno 2017 | 4054 | 460 | 121 | 7 | 1 |
| Efficacia (2013-2017) | 0 | -1 | 1 | 3 | 0 |

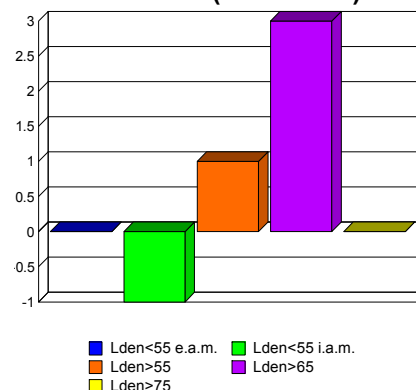
Anno 2013



Anno 2017



Efficacia (2013-2017)

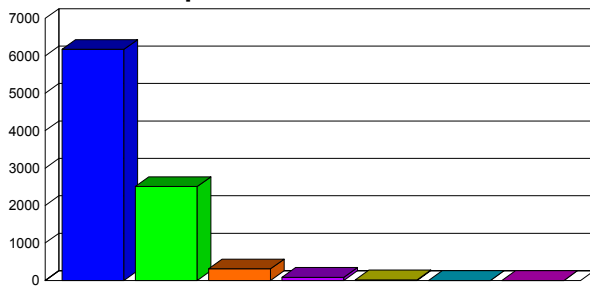




COMUNE DI BRONI

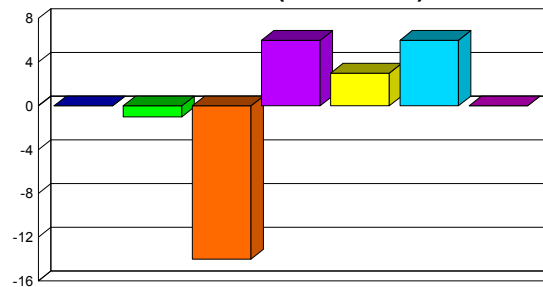
| <i>Popolazione esposta per classi di Lden</i> | Lden < 55 Esterno a.m. | Lden < 55 Interno a.m. | 55-59 | 60-64 | 65-69 | 70-75 | >75 |
|---|---------------------------|---------------------------|-------|-------|-------|-------|-----|
| Anno 2013 | 6173 | 2507 | 295 | 89 | 17 | 6 | 1 |
| Anno 2017 | 6173 | 2508 | 309 | 83 | 14 | 0 | 1 |
| Efficacia (2013-2017) | - | -1 | -14 | 6 | 3 | 6 | 0 |

Popolazione Anno 2017



■ Lden<55 e.a.m. ■ Lden<55 i.a.m. ■ 55-59
 ■ 60-64 ■ 65-69 ■ 70-75
 ■ >75

Efficacia (2013-2017)



■ Lden<55 e.a.m. ■ Lden<55 i.a.m. ■ 55-59
 ■ 60-64 ■ 65-69 ■ 70-75
 ■ >75

| <i>Popolazione in edifici con facciate silenti</i> | 55-59 | 60-64 | 65-69 | 70-75 | >75 |
|--|-------|-------|-------|-------|-----|
| Anno 2013 | 0 | 0 | 0 | 0 | 0 |
| Anno 2017 | 0 | 0 | 0 | 0 | 0 |
| Efficacia (2013-2017) | 0 | 0 | 0 | 0 | 0 |

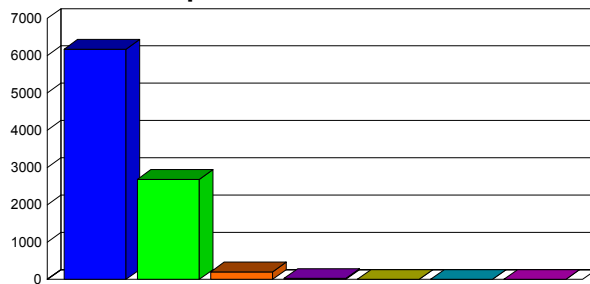
| <i>Popolazione in edifici con insonorizzazione</i> | 55-59 | 60-64 | 65-69 | 70-75 | >75 |
|--|-------|-------|-------|-------|-----|
| Anno 2013 | 0 | 0 | 0 | 0 | 0 |
| Anno 2017 | 0 | 0 | 0 | 0 | 0 |
| Efficacia (2013-2017) | 0 | 0 | 0 | 0 | 0 |



COMUNE DI BRONI

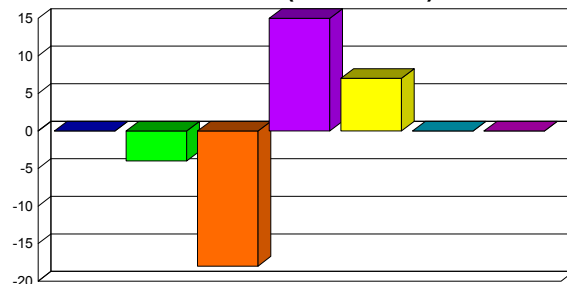
| <i>Popolazione esposta per classi di Lnight</i> | Lnight < 50 Esterno a.m. | Lnight < 50 Interno a.m. | 50-54 | 55-59 | 60-64 | 65-69 | >70 |
|---|-----------------------------|-----------------------------|-------|-------|-------|-------|-----|
| Anno 2013 | 6173 | 2680 | 185 | 41 | 8 | 1 | 0 |
| Anno 2017 | 6173 | 2684 | 203 | 26 | 1 | 1 | 0 |
| Efficacia (2013-2017) | - | -4 | -18 | 15 | 7 | 0 | 0 |

Popolazione Anno 2017



■ Lnight<50 e.a.m. ■ Lnight<50 i.a.m. ■ 50-54
 ■ 55-59 ■ 60-64 ■ 65-69
 ■ >70

Efficacia (2013-2017)



■ Lnight<50 e.a.m. ■ Lnight<50 i.a.m. ■ 50-54
 ■ 55-59 ■ 60-64 ■ 65-69
 ■ >70

*Popolazione in edifici
con facciate silenziose*

| | 50-54 | 55-59 | 60-64 | 65-69 | >70 |
|-----------------------|-------|-------|-------|-------|-----|
| Anno 2013 | 7 | 4 | 0 | 0 | 0 |
| Anno 2017 | 7 | 4 | 0 | 0 | 0 |
| Efficacia (2013-2017) | 0 | 0 | 0 | 0 | 0 |

*Popolazione in edifici
con insonorizzazione*

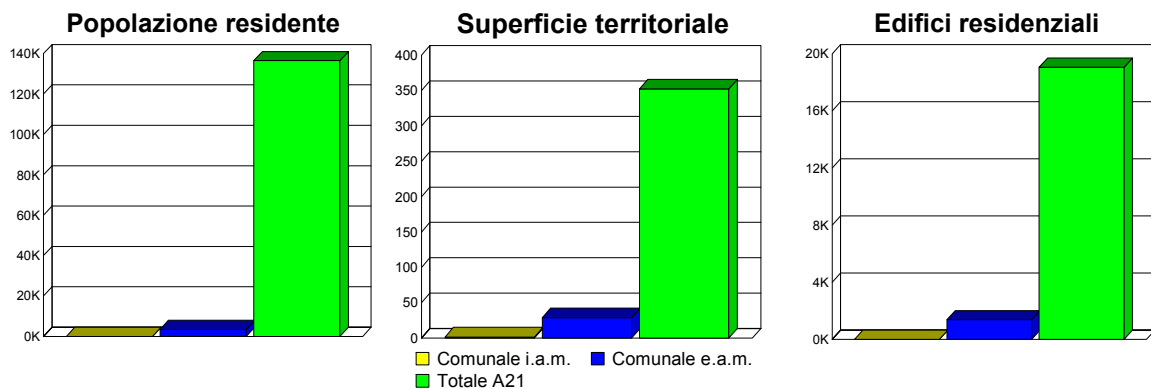
| | 50-54 | 55-59 | 60-64 | 65-69 | >70 |
|-----------------------|-------|-------|-------|-------|-----|
| Anno 2013 | 0 | 0 | 0 | 0 | 0 |
| Anno 2017 | 0 | 0 | 0 | 0 | 0 |
| Efficacia (2013-2017) | 0 | 0 | 0 | 0 | 0 |



COMUNE DI SAN ROCCO AL PORTO

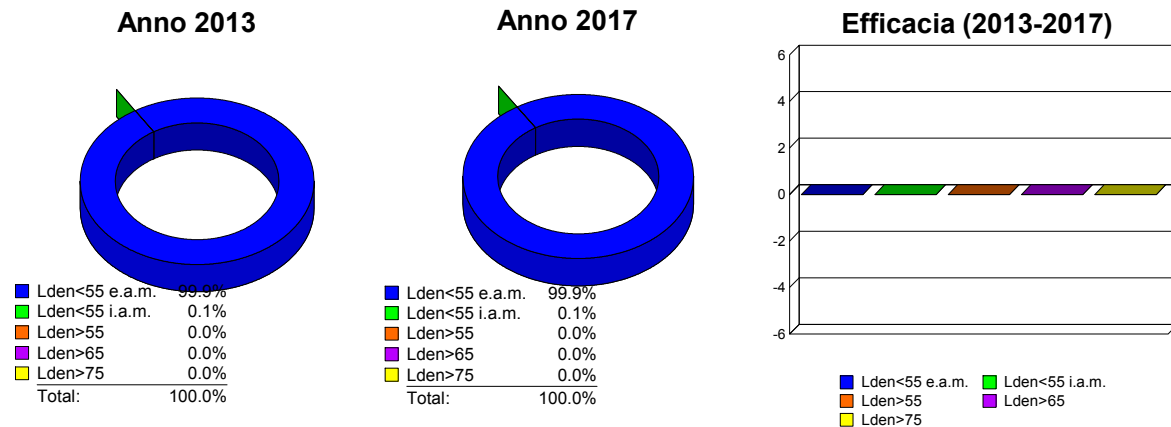
Sintesi Territoriale

| | Territorio comunale Interno ambito di mappatura | Territorio comunale Esterno ambito di mappatura | Autostrada A21 Interno ambito di mappatura |
|-------------------------------|---|---|--|
| Popolazione residente | 3 | 3462 | 136544 |
| Superficie territoriale [km2] | 1.673 | 29.036 | 352.424 |
| Edifici residenziali | 1 | 1371 | 19070 |



Efficacia del piano d'azione

| Popolazione Esposta | Lden < 55 Esterno a.m. | Lden < 55 Interno a.m. | Lden > 55 | Lden > 65 | Lden > 75 |
|------------------------|---------------------------|---------------------------|-----------|-----------|-----------|
| Anno 2013 | 3462 | 3 | 0 | 0 | 0 |
| Anno 2017 | 3462 | 3 | 0 | 0 | 0 |
| Efficacia (2013-2017) | - | 0 | 0 | 0 | 0 |

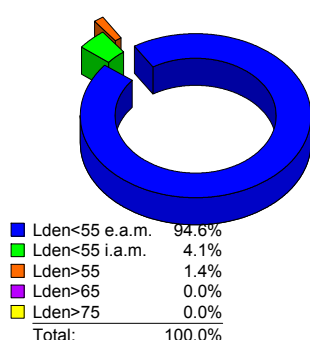




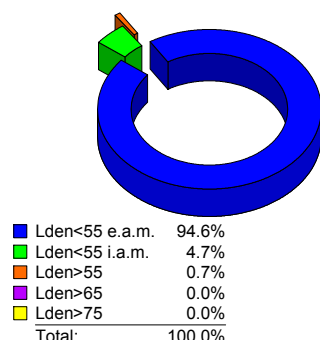
COMUNE DI SAN ROCCO AL PORTO

| <i>Superficie Territoriale</i> | Lden < 55 Esterno a.m. | Lden < 55 Interno a.m. | Lden > 55 | Lden > 65 | Lden >75 |
|------------------------------------|---------------------------|---------------------------|-----------|-----------|----------|
| Anno 2013 | 29.036 | 1.251 | 0.422 | 0 | 0 |
| Anno 2017 | 29.036 | 1.451 | 0.222 | 0 | 0 |
| Efficacia (2013-2017) | 0 | -0.200 | 0.200 | 0 | 0 |

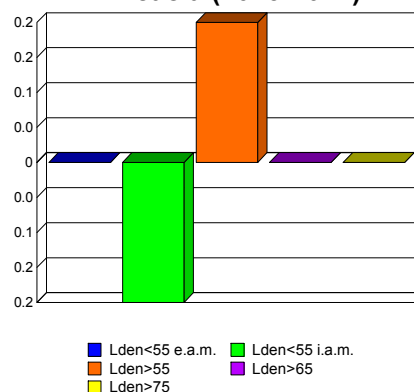
Anno 2013



Anno 2017

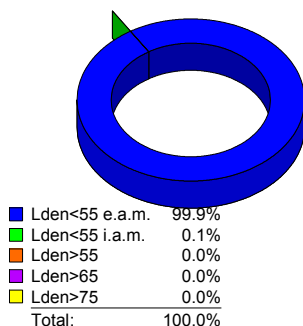


Efficacia (2013-2017)

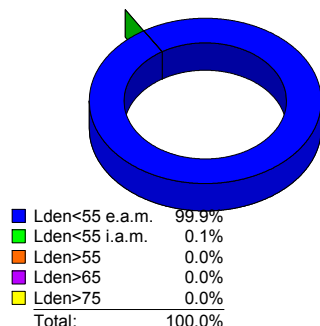


| <i>Edifici Residenziali</i> | Lden < 55 Esterno a.m. | Lden < 55 Interno a.m. | Lden > 55 | Lden > 65 | Lden >75 |
|---------------------------------|---------------------------|---------------------------|-----------|-----------|----------|
| Anno 2013 | 1371 | 1 | 0 | 0 | 0 |
| Anno 2017 | 1371 | 1 | 0 | 0 | 0 |
| Efficacia (2013-2017) | 0 | 0 | 0 | 0 | 0 |

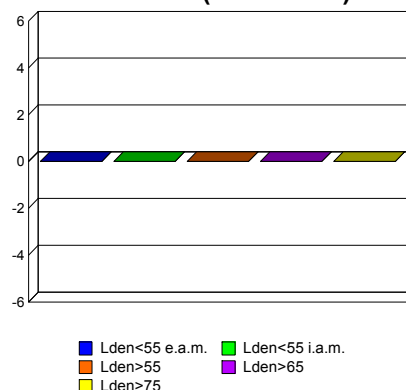
Anno 2013



Anno 2017



Efficacia (2013-2017)

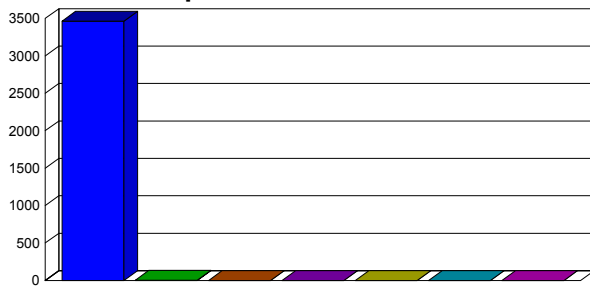




COMUNE DI SAN ROCCO AL PORTO

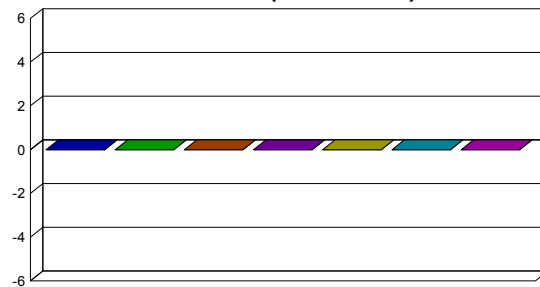
| <i>Popolazione esposta per classi di Lden</i> | Lden < 55 Esterno a.m. | Lden < 55 Interno a.m. | 55-59 | 60-64 | 65-69 | 70-75 | >75 |
|---|---------------------------|---------------------------|-------|-------|-------|-------|-----|
| Anno 2013 | 3462 | 3 | 0 | 0 | 0 | 0 | 0 |
| Anno 2017 | 3462 | 3 | 0 | 0 | 0 | 0 | 0 |
| Efficacia (2013-2017) | - | 0 | 0 | 0 | 0 | 0 | 0 |

Popolazione Anno 2017



■ Lden<55 e.a.m. ■ Lden<55 i.a.m. ■ 55-59
 ■ 60-64 ■ 65-69 ■ 70-75
 ■ >75

Efficacia (2013-2017)



■ Lden<55 e.a.m. ■ Lden<55 i.a.m. ■ 55-59
 ■ 60-64 ■ 65-69 ■ 70-75
 ■ >75

| <i>Popolazione in edifici con facciate silenti</i> | 55-59 | 60-64 | 65-69 | 70-75 | >75 |
|--|-------|-------|-------|-------|-----|
| Anno 2013 | 0 | 0 | 0 | 0 | 0 |
| Anno 2017 | 0 | 0 | 0 | 0 | 0 |
| Efficacia (2013-2017) | 0 | 0 | 0 | 0 | 0 |

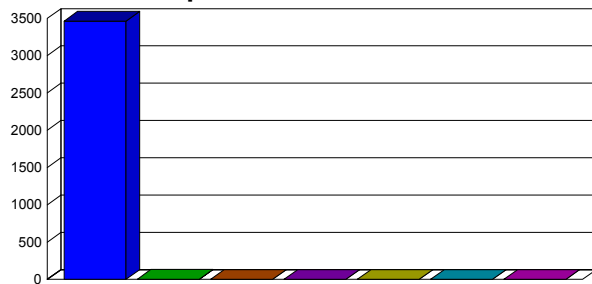
| <i>Popolazione in edifici con insonorizzazione</i> | 55-59 | 60-64 | 65-69 | 70-75 | >75 |
|--|-------|-------|-------|-------|-----|
| Anno 2013 | 0 | 0 | 0 | 0 | 0 |
| Anno 2017 | 0 | 0 | 0 | 0 | 0 |
| Efficacia (2013-2017) | 0 | 0 | 0 | 0 | 0 |



COMUNE DI SAN ROCCO AL PORTO

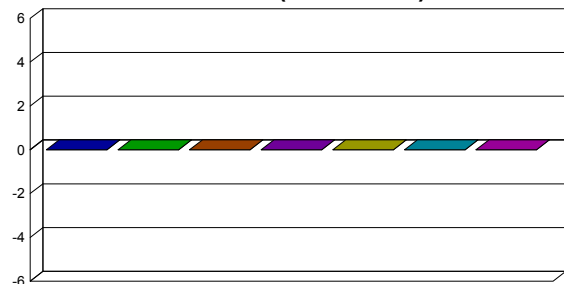
| <i>Popolazione esposta per classi di Lnight</i> | Lnight < 50 Esterno a.m. | Lnight < 50 Interno a.m. | 50-54 | 55-59 | 60-64 | 65-69 | >70 |
|---|--------------------------|--------------------------|-------|-------|-------|-------|-----|
| Anno 2013 | 3462 | 3 | 0 | 0 | 0 | 0 | 0 |
| Anno 2017 | 3462 | 3 | 0 | 0 | 0 | 0 | 0 |
| Efficacia (2013-2017) | - | 0 | 0 | 0 | 0 | 0 | 0 |

Popolazione Anno 2017



■ Lnight<50 e.a.m. ■ Lnight<50 i.a.m. ■ 50-54
 ■ 55-59 ■ 60-64 ■ 65-69
 ■ >70

Efficacia (2013-2017)



■ Lnight<50 e.a.m. ■ Lnight<50 i.a.m. ■ 50-54
 ■ 55-59 ■ 60-64 ■ 65-69
 ■ >70

| <i>Popolazione in edifici con facciate silenziose</i> | 50-54 | 55-59 | 60-64 | 65-69 | >70 |
|---|-------|-------|-------|-------|-----|
| Anno 2013 | 0 | 0 | 0 | 0 | 0 |
| Anno 2017 | 0 | 0 | 0 | 0 | 0 |
| Efficacia (2013-2017) | 0 | 0 | 0 | 0 | 0 |

| <i>Popolazione in edifici con insonorizzazione</i> | 50-54 | 55-59 | 60-64 | 65-69 | >70 |
|--|-------|-------|-------|-------|-----|
| Anno 2013 | 0 | 0 | 0 | 0 | 0 |
| Anno 2017 | 0 | 0 | 0 | 0 | 0 |
| Efficacia (2013-2017) | 0 | 0 | 0 | 0 | 0 |