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Supplemental Material

Suicide and Transportation Noise: A Prospective Cohort Study from Switzerland

Benedikt Wicki, Beat Schäffer, Jean Marc Wunderli, Thomas J. Müller, Charlotte Pervilhac, Martin Röösli, and Danielle Vienneau

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Supplement Table S1 – Study Population Selection

Description	Ν	% total	% dropped	Notes
Baseline (in cohort 04.12.2000)	7'280'246	100	0	Full population (original sample)
Not matched between old and new SNC	6'680'907	91.8	8.2	Inconsistent data: Mismatch in probabilistic linkage 2000-2010 (lost)
Keep persons 15+	5'512'145	100	15.9	Starting point (24.3% dropped from full population baseline)
Exclude those who die or emigrate before 01.01.2001 (in the 4 weeks since census start)	5'505'715	99.9	0.1	
Exclude invalid xy coordinates & household ID	5'359'204	97.2	2.7	
Exclude housing type = hotels, hospitals, old persons homes	5'212'487	94.6	2.7	
Exclude imputed deaths in original SNC	5'212'487	94.6	0.0	
Exclude Education = child or unknown for those over 20 years	5'087'501	92.3	2.4	
Exclude unknown Local- SEP index	5'084'838	92.2	0.1	

Supplemental Table S2 – Estimated HR per 10dB Lden / 10μ g/m³ PM_{2.5} / 0.1 NDVI (95% confidence interval) for death by all intentional self-harm (ICD-10: X60-84, excluding X61.8, X61.9 and X81-82) from the different models

	Model 0	Model 1	Model 2	Model 3 (Main Model)
	1.058	1.039	1.037	1.040
Road traffic	(1.034, 1.082)	(1.015, 1.063)	(1.013, 1.061)	(1.015, 1.065)
	1.017	1.021	1.021	1.022
Railway	(0.999, 1.034)	(1.004, 1.039)	(1.003, 1.039)	(1.004, 1.041)
	0.978	1.003	0.993	0.997
Aircraft	(0.954, 1.003)	(0.976, 1.029)	(0.962, 1.025)	(0.965, 1.029)
				0.900
PM _{2.5}				(0.811, 0.998)
				0.999
NDVI				(0.978, 1.02)

I

Model 0= road traffic, railway or aircraft noise (other two noise sources included as adjustment), age as timescale, sex as strata

Model 1= Model 0 + individual level covariates (mother tongue, nationality, civil status, education, urbanization, local-SEP)

Model 2= Model 1 + area level covariates (community and regional-SEP and unemployment rate)

Model 3 = Model 2 + air pollution ($PM_{2.5}$) + greenness in a 500m buffer around residence (NDVI)

Supplemental Table S3 –HR per 10dB Lden / $10\mu g/m^3 PM_{2.5}$ / 0.1 NDVI (95% confidence interval) for the association death by specified suicide category, main model (M3)

All Male Female Age 15:30 Age 230-65 Age 230-65 Age 240-65 Road traffic (1.015, 1.065) (1.015, 1.065) (1.011, 1.152) (1.011, 1.152) (1.019, 1.082) (0.241, 1.037) Railway (1.004, 1.041) (1.000, 1.043) (0.992, 1.062) 0.983 1.015 (0.998, 1.072) 0.997 0.995 (0.901, 1.072) (0.976, 1.029) (0.978, 1.022) (0.974, 1.037) 0.909 0.918 0.978 0.882 0.917 0.909 0.918 0.976 0.882 0.917 0.909 0.918 0.927 0.986 1.032 0.999 0.116 0.946 1.002 0.987, 1017 0.999 0.116 0.946 1.002 0.911, 0.84) NDVI (0.978, 1.020) (0.992, 1.041) 0.946 1.052 0.974 NDVI (0.978, 1.127) (0.991, 1.041) 1.165 1.022 0.941 0.41 Male Female Age 15.30 Age 30.65 Age 30.65 <		All intentional self-harm (ICD-10: X60-84, excluding X61.8, X61.9 and X81-82)					
(N=11/265) (N=2476) (N=2789) (N=7100) (N=2740) (N=1740) (N=1770) (N=1740)		All	Male	Female	Age 15-30	Age >30-65	Áge >65
1040 1034 1058 1079 1050 0.994 Road traffic (1.015, 1.065) (1.001, 1.122) (1.011, 1.152) (1.019, 1.082) (0.944, 1.047) Railway (1.004, 1.041) (1.000, 1.043) (0.992, 1.066) 0.934, 1.032) (1.004, 1.051) (0.998, 1.077) 0.907 0.995 1.005 0.963 1.015 0.987 Aircraft (9.965, 1.029) (0.982, 1.012) (0.740, 1.137) (0.734, 1.303) (0.776, 1.002) (0.729, 1.149) 0.099 1.016 0.946 1.002 0.986 (0.729, 1.149) 0.999 1.016 0.946 1.002 0.986 (0.729, 1.149) 0.999 1.016 1.026 (0.961, 1.012) (0.991, 1.024) 1.016 1.016 1.006 1.036 (0.946, 1.022) (0.961, 1.012) (0.991, 1.024) 1.010 1.165 1.027 0.965 (0.961, 1.012) (0.991, 1.127) (0.975, 1.15) (0.883, 1.173) (0.996, 1.122) (0.991, 1.127) (0.975, 1.15) (0.883, 1.421)		(N=11'265)	(N=8476)	(N=2789)	(Ň= 1508)	(N=7240)	(N=2517)
Road traffic (1.015, 1.065) (1.006, 1.063) (1.007, 1.112) (1.011, 1.152) (1.011, 1.027) (1.037) Railway (1.004, 1.041) (1.000, 1.043) (0.992, 1.066) (0.934, 1.022) (1.004, 1.051) (0.998, 1.077) Aircraft (0.965, 1.029) (0.958, 0.032) (0.943, 1.071) (0.976, 1.026) (0.887, 1.017) Mas (0.961, 0.29) (0.958) (0.978, 1.037) (0.778, 1.002) (0.292, 1.49) Movi (0.978, 1.020) (0.999, 1.016) (0.948, 1.058) (0.948, 1.058) (0.961, 1.012) (0.991, 1.084) NDVI (0.978, 1.020) (0.992, 1.041) (0.908, 0.986) (0.948, 1.058) (0.961, 1.012) (0.991, 1.084) CiverTes All Male Female Age 15-30 Age >30-65 Age >65 All Male Female Age 15-30 Age >30-65 Age >61 CiverTes (N=775) (N=83, 1.173) (0.971, 1.205) (N=814) (N=774) Read traffic (1.025, 1.139) (0.816, 1.421) (0.307, 1.205) (0.818, 1.155)		1.040	1.034	1.058	1.079	1.050	0.994
1.022 1.021 1.026 0.982 1.027 1.037 Railway (1.004, 1.041) (1.000, 1.043) (0.992, 1.066) (0.934, 1.032) (1.004, 1.051) (0.998, 1.077) Aircraft (0.965, 1.029) (0.959, 1.032) (0.943, 1.071) (0.911, 1.072) (0.976, 1.056) (0.882, 1.071) PMas (0.911, 0.998) (0.798, 1.012) (0.740, 1.137) (0.734, 1.303) (0.776, 1.002) (0.291, 1.149) O.999 1.016 0.946 1.002 0.996 1.036 NDVI (0.978, 1.020) (0.992, 1.041) (0.908, 0.948, 1.058) (0.961, 1.012) (0.991, 1.084) Poisoning (X60-69) Pisoning (X61-69) (N=168) (N=232) (0.78, 1.177) Road traffic (1.022, 1.131) (0.976, 1.151) (0.976, 1.132) (0.991, 1.172) (0.971, 1.202) (0.78, 1.174) 1.052 1.050 1.051 1.052 1.056 1.056 1.056 1.057 1.056 1.052 1.050 1.056 1.077 1.056 1.057 <th>Road traffic</th> <th>(1.015, 1.065)</th> <th>(1.006, 1.063)</th> <th>(1.007, 1.112)</th> <th>(1.011, 1.152)</th> <th>(1.019, 1.082)</th> <th>(0.944, 1.047)</th>	Road traffic	(1.015, 1.065)	(1.006, 1.063)	(1.007, 1.112)	(1.011, 1.152)	(1.019, 1.082)	(0.944, 1.047)
Railway (1.004, 1.041) (1.000, 1.043) (0.995, 1.005) (0.943, 1.071) (0.943, 1.072) (0.976, 1.056) (0.976, 1.056) (0.976, 1.056) (0.976, 1.056) (0.976, 1.056) (0.976, 1.056) (0.976, 1.056) (0.986, 1.017) PM _{2.5} (0.911, 0.122) (0.121, 0.172) (0.174, 1.037) (0.776, 1.002) (0.729, 1.148) 0.999 1.016 0.946 1.002 0.996 1.036 NDVI (0.978, 1.020) (0.992, 1.041) (0.908, 0.996) (0.948, 1.058) (0.961, 1.012) (0.991, 1.036) NDVI (0.976, 1.020) (0.992, 1.041) (0.908, 0.966) (0.948, 1.058) (0.961, 1.012) (0.991, 1.084) NDVI (0.976, 1.025) (0.976, 1.157) (0.766, 1.076) (0.876, 0.982) (0.861, 1.021) (0.991, 1.172) (0.971, 1.251) (0.994, 1.127) (0.975, 1.150) (0.831, 1.173) (0.948, 1.388) (0.885, 1.115) (0.761, 1.024) (0.971, 1.254) Railway (0.997, 1.113) (0.976, 1.277) (0.861, 1.021) (0.991, 1.271) (0.971, 1.224) (0.891, 1.653) (0.484, 1.388) <		1.022	1.021	1.028	0.982	1.027	1.037
0 0.997 0.995 1.005 0.983 1.015 0.063 Aircraft (0.965, 1.029) (0.991, 1.012) (0.943, 1.071) (0.901, 1.072) (0.976, 1.056) (0.887, 1.017) PM2s (0.811, 0.998) (0.798, 1.012) (0.740, 1.137) (0.734, 1.303) (0.776, 1.002) (0.272, 1.149) 0.999 1.016 0.946 1.002 0.986 (1.022, 1.21, 1.149) 0.999 1.016 (0.948, 1.058) (0.961, 1.012) (0.991, 1.084) Poisoning (X60-69) Peisoning (X60-69) Age 15.30 Age 5.30 Age >30-65 Age >65 (N=1176) (N=676) (N=676) (N=68) (N=173) (1.024, 1.127) (0.971, 1.103) 1.005 1.006 1.006 1.014 1.163 1.062 1.041 Aircraft (0.997, 1.111) (0.982, 1.241) (0.986, 1.421) (1.030, 1.232) (0.788, 1.132) (0.971, 1.205) Aircraft (0.994 1.033 0.932 1.085 0.996 0.931 0.940 0.994	Railwav	(1.004, 1.041)	(1.000, 1.043)	(0.992, 1.066)	(0.934, 1.032)	(1.004, 1.051)	(0.998, 1.077)
Aircraft (0.965, 1.029) (0.959, 1.032) (0.943, 1.071) (0.901, 1.072) (0.976, 1.056) (0.887, 0.915) PM2.s (0.811, 0.989) (0.798, 1.012) (0.740, 1.137) (0.734, 1.303) (0.776, 1.002) (0.927, 1.149) 0.999 1.016 0.946 1.002 (0.986) (0.991, 1.041) 0.991 (0.978, 1.022) (0.992, 1.041) (0.908, 0.986) (0.941, 1.012) (0.991, 1.012) 0.992, 1.041) (0.908, 0.986) (0.948, 1.058) (0.941, 1.012) (0.991, 1.012) NDVI (0.978, 1.022) (0.982, 1.241) (0.986, 1.421) (1.030, 1.222) (0.987, 1.151) Read traffic (1.025, 1.133) (1.002, 1.133) (0.977, 1.151) (0.863, 1.173) (0.996, 1.132) (0.997, 1.103) 0.994 0.916, 1.177) (0.801, 1.084) (0.848, 1.388) (0.881, 1.173) (0.996, 1.132) (0.977, 1.55) 0.923 0.941 (0.376, 0.966) (0.766, 1.057) (0.865, 1.062) (0.297, 1.854) 0.923 0.941 (0.374, 2.323) (0.663, 1.480) (0.297, 1.854) </th <th>f</th> <th>0.997</th> <th>0.995</th> <th>1.005</th> <th>0.983</th> <th>1.015</th> <th>0.95</th>	f	0.997	0.995	1.005	0.983	1.015	0.95
PM2.s (0.811, 0.998) (0.798, 1.012) (0.744, 1.337) (0.776, 1.002) (0.729, 1.149) 0.999 1.016 0.946 1.002 0.882 1.002) (0.729, 1.149) 0.999 1.016 0.946 1.002 0.882 1.002) (0.991, 1.022) (0.991, 1.023) (0.991, 1.022) (0.991, 1.023) (0.991, 1.023) (0.991, 1.023) (0.991, 1.023) (0.991, 1.023) (0.991, 1.023) (0.778, 1.172) 0.985 Age >530.65 Age >565 Age >565 Age >565 Age >565 Age >565 Age >565 Age >50.65 Age >50.65 Age >50.65 Age >565 Age >50.65 Age >50.65 Age >565 Age >565 Age >50.65	Aircraft	(0.965, 1.029)	(0.959, 1.032)	(0.943, 1.071)	(0.901, 1.072)	(0.976, 1.056)	(0.887, 1.017)
PM2.5 (0.811, 0.998) (0.798, 1.012) (0.734, 1.303) (0.776, 1.002) (0.729, 1.149) NDVI (0.978, 1.020) (0.992, 1.041) (0.908, 0.986) (0.948, 1.058) (0.991, 1.012) (0.998, 1.012) NDVI (0.978, 1.020) (0.992, 1.041) (0.908, 0.986) (0.948, 1.053) (0.991, 1.012) (0.991, 1.012) NDVI (0.978, 1.020) (N=168) (N=834) (N=174) Railway (1.025, 1.139) (1.002, 1.221) (0.995, 1.413) (1.032, 1.203) (0.977, 1.205) Railway (0.997, 1.111) (0.978, 1.127) (0.975, 1.15) (0.883, 1.173) (0.996, 1.132) (0.907, 1.205) Aircraft (0.992, 1.944) (0.916, 1.177) (0.374, 2.323) (0.663, 1.480) (0.277, 1.854) 0.904 1.038 0.934 0.394 0.394 0.394 0.394 0.904 1.038 (0.484, 1.388) (0.881, 1.480) (0.277, 1.854) 0.904 0.391 0.394 0.394 0.994 0.394 0.913 0.486, 1.944) (0.785, 1.		0.900	0.899	0.918	0.978	0.882	0.915
DVI 0.999 1.016 0.946 1.002 0.986 1.036 NDVI (0.978, 1.020) (0.992, 1.041) (0.908, 0.986) (0.948, 1.058) (0.961, 1.012) (0.991, 1.084) Poisoning (X60-89) All Male Female Age 15.30 Age >30.65 Age >65 (N=1176) (N=676) (N=500) (N=168) (N=834) (N=174) Road traffic (1.052, 1.133) (1.002, 1.221) (0.982, 1.241) (0.956, 1.421) (1.036 1.022 (0.997, 1.117) 1.053 1.050 1.059 1.018 1.062 1.045 Aircraft (0.997, 1.111) (0.975, 1.15) (0.883, 1.173) (0.996, 1.132) (0.907, 1.205) Aircraft (0.902, 1.094) (0.916, 1.177) (0.801, 1.084) (0.848, 1.388) (0.885, 1.115) (0.788, 1.174) 0.943 1.067 0.787 0.996 0.991 0.742 PM2s (0.671, 1.324) (0.688, 1.044) (0.785, 0.96) (0.764, 1.064) (0.797, 0.591 0.923 0.924<	PM _{2.5}	(0.811, 0.998)	(0.798, 1.012)	(0.740, 1.137)	(0.734, 1.303)	(0.776, 1.002)	(0.729, 1.149)
NDVI (0.978, 1.020) (0.992, 1.041) (0.908, 0.986) (0.948, 1.056) (0.961, 1.012) (0.991, 1.084) Poisoning (X60-89) All Male Female Age 15-30 Age >30-65 Age >65 (N=1176) (N=676) (N=500) (N=168) (N=834) (N=174) Road traffic (1.025, 1.193) (1.002, 1.221) (0.982, 1.241) (0.906, 1.421) (1.030, 1.232) (0.978, 1.179) 1.053 1.050 1.059 1.018 1.065 0.993 0.912 Aircraft (0.902, 1.094) (0.978, 1.127) (0.801, 1.084) (0.843, 1.388) (0.885, 1.115) (0.788, 1.127) 0.934 1.067 0.787 0.956 0.991 0.742 PM2s (0.671, 1.324) (0.689, 1.653) (0.459, 1.349) (0.394, 2.323) (0.665, 1.490) (0.977, 1.65) NDVI (0.888, 0.982) (0.886, 1.044) (0.795, 0.96) (0.766, 1.057) (0.865, 1.002) (0.769, 1.064) Hanging (X70) Hanging (X70) Hanging (X70) (0.974, 1.039)		0.999	1.016	0.946	1.002	0.986	1.036
Poisoning (X80-69) Age >30-65 Age >30-61 Age >30-65 Age >30-65 Age >65 Age >65 Age >50-51 Age >30-55 Age >65 Age	NDVI	(0.978, 1.020)	(0.992, 1.041)	(0.908, 0.986)	(0.948, 1.058)	(0.961, 1.012)	(0.991, 1.084)
Poisoning (X80-89) All Male Female Age 15-30 Age >30-65 Age >30 Note: The Second Secon					()(00.00)		
All Male Female Age 15-30 Age >85 (N=730) (N=300) (N=330) (N=730) (N=74) 1.106 1.106 1.106 1.104 1.165 1.127 0.965 Railway (0.977, 1.112) (0.975, 1.15) (0.881, 1.173) (0.961, 1.122) (0.797, 1.125) Railway (0.997, 1.111) (0.976, 1.127) (0.975, 1.15) (0.881, 1.173) (0.961, 1.127) (0.977, 1.265) Aircraft (0.902, 1.094) (0.916, 1.177) (0.801, 1.084) (0.848, 1.388) (0.885, 1.115) (0.708, 1.174) 0.943 1.067 0.777 0.956 0.991 0.742 0.923 0.961 0.874 0.900 0.931 0.909 NDVI (0.868, 0.982) (0.866, 1.044) (0.755, 0.961 0.565 1.014 0.107 NDVI (0.868, 0.982) (N=833) (N=471) (N=2561) (N=723) NDVI (0.868, 0.982, 0.053) 0.905 1.014 1.0073 0.970 ND66 1.062				Poisoning	j (X60-69)		
(N=1176) (N=50) (N=168) (N=178) (N=178) 1.106 1.106 1.003 1.055 1.127 0.965 Road traffic (1.025, 1.193) (1.002, 1.221) (0.982, 1.241) (0.956, 1.421) (1.030, 1.232) (0.789, 1.179) 1.053 1.050 1.059 1.018 1.062 1.048 (0.997, 1.111) (0.976, 1.127) (0.808, 1.173) (0.996, 1.132) (0.907, 1.205) Aircraft (0.902, 1.094) (0.916, 1.177) (0.801, 1.084) (0.888, 1.348) (0.885, 1.115) (0.708, 1.174) 0.943 1.067 0.787 0.996 0.991 0.742 PMz.s (0.671, 1.324) (0.689, 1.653) (0.459, 1.349) (0.394, 2.323) (0.663, 1.480) (0.27, 1.854) NDVI (0.868, 0.982) (0.886, 1.044) (0.755, 0.96) (0.766, 1.057) (0.865, 1.002) (0.769, 1.064) Hanging (X70) 1.060 1.062 1.055 1.144 1.073 0.970 Railway (0.974, 1.039) (0.964, 1.154) (1.017,		All	Male	Female	Age 15-30	Age >30-65	Age >65
Road traffic 1.106 1.104 1.106 1.127 0.985 Road traffic (1.025, 1.132) (0.178, 1.172) (0.982, 1.241) (0.996, 1.132) (0.978, 1.172) Railway (0.997, 1.111) (0.978, 1.127) (0.971, 1.15) (0.883, 1.173) (0.996, 1.132) (0.907, 1.205) Aircraft (0.902, 1.094) (0.916, 1.177) (0.801, 1.084) (0.848, 1.388) (0.885, 1.115) (0.708, 1.174) 0.943 1.067 0.787 0.956 0.991 0.742 PMz.s (0.611, 1.324) (0.889, 1.653) (0.459, 1.349) (0.344, 2.323) (0.663, 1.400) (0.297, 1.854) NDVI (0.868, 0.822) (0.886, 1.944) (0.795, 0.96) (0.766, 1.057) (0.865, 1.002) (0.769, 1.064) NDVI (0.868, 0.892) (0.886, 1.944) (0.795, 0.96) (N=471) (N=2561) (N=723) I.060 1.062 0.927 (N=833) (N=471) (N=2561) (N=723) I.060 1.016 0.970 0.940 1.022 0.931 0.373		(N=1176)	(N=676)	(N=500)	(N= 168)	(N=834)	(N=174)
Road traffic (1.025, 1.193) (1.002, 1.221) (0.982, 1.241) (0.995, 1.421) (1.030, 1.232) (0.789, 1.173) Railway (0.997, 1.111) (0.978, 1.127) (0.975, 1.15) (0.883, 1.173) (0.996, 1.132) (0.907, 1.205) Aircraft (0.902, 1.094) (0.916, 1.177) (0.801, 1.084) (0.888, 1.838) (0.885, 1.155) (0.781, 1.174) PM2.s (0.671, 1.324) (0.689, 1.653) (0.459, 1.349) (0.394, 2.323) (0.663, 1.480) (0.297, 1.854) O.923 0.961 0.874 0.900 0.931 0.904 NDVI (0.868, 0.982) (0.886, 1.044) (0.795, 0.96) (0.766, 1.057) (0.865, 1.002) (0.769, 1.064) Hanging (X70) Hanging (X70) Hanging (X70) Hanging (X70) Hanging (X70) Road traffic (1.1015) (1.131, 1.113) (0.962, 1.142) (1.012, 1.128) (1.020, 1.128) (0.883, 1.066) Railway (0.974, 1.039) (0.980, 1.053) (0.957, 1.031) (0.984, 1.062) (0.922, 1.070) 0.970 0.986 1.017 0.29		1.106	1.106	1.104	1.165	1.12/	0.965
Railway 1.053 1.050 1.059 1.018 1.0162 1.045 Railway (0.997, 1.111) (0.978, 1.127) (0.983, 1.173) (0.996, 1.132) (0.907, 1.205) Aircraft (0.902, 1.094) (0.916, 1.177) (0.801, 1.084) (0.848, 1.388) (0.885, 1.115) (0.708, 1.174) PM2.5 (0.671, 1.324) (0.669, 1.653) (0.459, 1.349) (0.394, 2.323) (0.663, 1.480) (0.297, 1.854) O.923 0.961 0.874 0.900 0.931 0.904 NDVI (0.868, 0.982) (0.886, 1.044) (0.795, 0.96) (0.766, 1.057) (0.865, 1.002) (0.769, 1.064) Hanging (X70) Hanging (X70) All Male Female Age 15-30 Age >30-65 Age >65 (N=3755) (N=2922) (N=833) (N=471) (N=2561) (N=723) Railway (0.974, 1.039) (0.980, 1.053) (0.905, 1.04) (0.857, 1.031) (0.984, 1.052) (0.922, 1.070) Railway (0.977, 1.039) (0.980, 1.123) (0.906, 1.142) (0.785, 1.086)	Road traffic	(1.025, 1.193)	(1.002, 1.221)	(0.982, 1.241)	(0.956, 1.421)	(1.030, 1.232)	(0.789, 1.179)
Railway (0.997, 1.111) (0.978, 1.127) (0.975, 1.15) (0.883, 1.113) (0.996, 1.122) (0.907, 1.205) Aircraft (0.902, 1.094) (0.916, 1.177) (0.801, 1.084) (0.848, 1.388) (0.885, 1.115) (0.708, 1.174) 0.943 1.067 0.787 0.956 0.991 0.7742 PM2.5 (0.671, 1.324) (0.689, 1.653) (0.459, 1.349) (0.394, 2.323) (0.663, 1.460) (0.297, 1.854) NDVI (0.868, 0.982) (0.886, 1.044) (0.795, 0.96) (0.766, 1.057) (0.865, 1.002) (0.769, 1.064) MDVI (0.866, 0.982) (0.886, 1.044) (0.795, 0.96) (0.766, 1.057) (0.865, 1.002) (0.779, 1.064) Maging (X70) Hanging (X70) Hanging (X70) (N=2561) (N=272) (N=233) (N=471) (N=2561) (N=723) Road traffic (1.017, 1.105) (1.013, 1.113) (0.964, 1.154) (1.019, 1.285) (1.020, 1.128) (0.883, 1.066) No 0.970 0.966 1.017 0.923 1.019 0.823 Aircraft <th>B ''</th> <th>1.053</th> <th>1.050</th> <th>1.059</th> <th>1.018</th> <th>1.062</th> <th>1.045</th>	B ''	1.053	1.050	1.059	1.018	1.062	1.045
Aircraft 0.994 1.038 0.932 1.085 0.993 0.912 Aircraft 0.994 1.037 0.881 1.182 0.785 0.991 0.742 PM2.5 0.671 1.324 (0.689 1.653) (0.459 1.349) (0.394 2.323 (0.663 1.486) (0.297 1.854) O.923 0.923 0.961 0.874 0.900 0.931 0.994 NDVI (0.868 0.982) (0.886 1.044) (0.795 0.96) (0.766 1.057) (0.865 Age >30-65 Age >65 (N=3755) (N=2822) (N=833) (N=471) (N=2561) (N=723) Road traffic 1.006 1.062 1.055 1.144 1.073 0.970 Nobe 1.006 1.053 (0.905, 1.04) (0.857, 1.031) (0.984, 1.062) (0.922, 1.070) 0.970 0.970 0.965 0.910 0.714 0.923 1.019 0.823 Aircraft (0.974, 1.039)<	Railway	(0.997, 1.111)	(0.978, 1.127)	(0.975, 1.15)	(0.883, 1.173)	(0.996, 1.132)	(0.907, 1.205)
Aircraft (0.902, 1.094) (0.916, 1.177) (0.801, 1.084) (0.884, 1.385) (0.885, 1.115) (0.742, 1.15) PM2.s (0.671, 1.324) (0.689, 1.653) (0.459, 1.349) (0.394, 2.323) (0.663, 1.480) (0.297, 1.854) NDVI (0.868, 0.982) (0.866, 1.044) (0.795, 0.96) (0.766, 1.057) (0.865, 1.002) (0.769, 1.064) NDVI (0.868, 0.982) (0.866, 1.044) (0.795, 0.96) (0.766, 1.057) (0.865, 1.002) (0.769, 1.064) Imaging (X70) Imaging (X70) Imaging (X70) Imaging (X70) Imaging (X70) (N=2351) (N=2325) (N=2325) (N=237) (N=723) (N=743) (0.970) Railway (0.974, 1.039) (0.980, 1.053) (0.904, 1.154) (1.019, 1.285) (1.020, 1.128) (0.883, 1.066) Aircraft (0.917, 1.027) (0.896, 1.019) (0.906, 1.142) (0.754, 1.039) (0.714, 0.949) Mu30 (0.691, 1.033) (0.817, 1.771) (0.581, 1.590) (0.754, 1.149) (0.572, 1.254) Mu40 Imaging (X2-55) Imaging (X2-55) Imagin		0.994	1.038	0.932	1.085	0.993	0.912
PM2.5 0.943 1.067 0.787 0.949 0.941 0.742 NDVI (0.671, 1.324) (0.689, 1.653) (0.459, 1.349) (0.394, 2.323) (0.663, 1.480) (0.297, 1.854) NDVI (0.868, 0.982) (0.886, 1.044) (0.795, 0.96) (0.766, 1.057) (0.865, 1.002) (0.769, 1.064) Hanging (X70) Hanging (X70) Age 15-30 Age >30-65 Age >65 (N=3755) (N=2222) (N=833) (N=471) (N=2561) (N=723) Road traffic (1.017, 1.105) (1.013, 1.113) (0.964, 1.154) (1.019, 1.285) (0.883, 1.066) 1.006 1.062 1.055 1.144 1.073 0.970 1.006 1.016 0.970 0.984, 1.082) (0.922, 1.070) 0.970 0.956 1.017 0.923 1.019 0.823 Aircraft (0.917, 1.027) (0.896, 1.019) (0.964, 1.122) 0.974, 1.039 0.847 PM2.5 (0.767, 1.086) (0.699, 1.033) (0.	Aircraft	(0.902, 1.094)	(0.916, 1.177)	(0.801, 1.084)	(0.848, 1.388)	(0.885, 1.115)	(0.708, 1.174)
PM₂.s (0.671, 1.324) (0.689, 1.653) (0.459, 1.349) (0.394, 2.23) (0.663, 1.480) (0.297, 1.884) NDVI (0.868, 0.982) (0.886, 1.044) (0.795, 0.96) (0.766, 1.057) (0.865, 1.002) (0.769, 1.064) Hanging (X70) Hanging (X70) Age >30-65 Age >65 (N=723) 1.060 1.062 1.055 1.144 1.073 0.970 Road traffic (1.017, 1.105) (1.013, 1.113) (0.964, 1.154) (1.019, 1.285) (1.020, 1.128) (0.883, 1.066) 1.006 1.062 0.970 0.940 1.022 0.993 Railway (0.974, 1.039) (0.986, 1.013) (0.975, 1.04) (0.877, 1.031) (0.884, 1.062) (0.922, 1.070) 0.970 0.956 1.017 0.923 1.019 0.823 Aircraft (0.917, 1.027) (0.880, 1.019) (0.906, 1.142) (0.785, 1.086) (0.974, 1.039) (0.714, 0.949) 0.971 0.0850 1.205 0.961 0.931 0.847 PM2.5 (0.767, 1.086) (0.943	1.067	0.787	0.956	0.991	0.742
0.923 0.961 0.874 0.900 0.931 0.904 NDVI (0.868, 0.982) (0.886, 1.044) (0.795, 0.96) (0.766, 1.057) (0.865, 1.002) (0.769, 1.064) Hanging (X70) Hanging (X70) Hanging (X70) Age >55 Age >65 Age >65 (N=723) Road traffic (1.017, 1.105) (1.013, 1.113) (0.964, 1.154) (1.019, 1.285) (1.022) (0.922, 1.070) Railway (0.974, 1.039) (0.980, 1.053) (0.905, 1.04) (0.887, 1.031) (0.984, 1.062) (0.922, 1.070) 0.970 0.956 1.017 0.923 1.019 0.823 Aircraft (0.917, 1.027) (0.896, 1.019) (0.906, 1.142) (0.754, 1.089) (0.714, 0.949) 0.913 0.860 1.205 0.961 0.931 0.847 PM2.s (0.767, 1.086) (0.699, 1.033) (0.819, 1.771) (0.581, 1.590) (0.754, 1.149) (0.572, 1.254) 0.102 1.009 1.001 1.202 0.993 Age >30-65 Age >65 MDVI	PM2.5	(0.671, 1.324)	(0.689, 1.653)	(0.459, 1.349)	(0.394, 2.323)	(0.663, 1.480)	(0.297, 1.854)
NDVI (0.866, 0.982) (0.886, 1.044) (0.795, 0.96) (0.766, 1.057) (0.865, 1.002) (0.769, 1.064) Hanging (X70) All Male Female Age 15-30 Age >30-65 Age >65 (N=3755) (N=2922) (N=833) (N=471) (N=2561) (N=723) Road traffic (1.017, 1.05) (1.013, 1.113) (0.964, 1.154) (1.019, 1.225) (1.020, 1.128) (0.883, 1.066) 1.006 1.016 0.970 0.940 1.022 0.993 Railway (0.974, 1.039) (0.986, 1.019) (0.905, 1.04) (0.857, 1.031) (0.984, 1.062) (0.922, 1.070) 0.970 0.966 1.017 0.923 1.019 0.823 Aircraft (0.917, 1.027) (0.896, 1.019) (0.964, 1.142) (0.785, 1.1086) (0.954, 1.149) (0.572, 1.254) 0.913 0.850 1.205 0.999 1.026 1.063 NDVI (1.005, 1.081) (1.012, 1.098) (0.924, 1.080) (0.982, 1.072) (0.977, 1.156) 0 <th></th> <th>0.923</th> <th>0.961</th> <th>0.874</th> <th>0.900</th> <th>0.931</th> <th>0.904</th>		0.923	0.961	0.874	0.900	0.931	0.904
Hanging (X70) All Male Female Age 15-30 Age >30-65 Age >665 (N=3755) (N=2922) (N=833) (N=471) (N=2561) (N=723) Road traffic (1.017, 1.105) (1.013, 1.113) (0.964, 1.154) (1.019, 1.285) (1.020, 1.128) (0.883, 1.066) Node 1.006 1.016 0.970 0.940 1.022 0.993 Railway (0.974, 1.039) (0.980, 1.053) (0.905, 1.04) (0.857, 1.031) (0.948, 1.062) (0.922, 1.070) 0.970 0.936 1.017 0.923 1.019 0.823 Aircraft (0.917, 1.027) (0.896, 1.019) (0.906, 1.42) (0.785, 1.086) (0.954, 1.089) (0.714, 0.949) 0.931 0.835 1.205 0.999 1.099 1.026 1.042 1.042 1.055 0.999 1.099 1.026 1.063 NDVI (1.005, 1.081) (1.012, 1.098) (0.924, 1.080) (0.982, 1.072) (0.977, 1.156) Curst (N=3236) <t< th=""><th>NDVI</th><th>(0.868, 0.982)</th><th>(0.886, 1.044)</th><th>(0.795, 0.96)</th><th>(0.766, 1.057)</th><th>(0.865, 1.002)</th><th>(0.769, 1.064)</th></t<>	NDVI	(0.868, 0.982)	(0.886, 1.044)	(0.795, 0.96)	(0.766, 1.057)	(0.865, 1.002)	(0.769, 1.064)
All Male Female (N=3755) Age >30-65 (N=2922) Age >45-30 (N=471) Age >30-65 (N=2561) Age >65 (N=723) Road traffic (1.017, 1.105) (1.013, 1.113) (0.964, 1.154) (1.019, 1.285) (1.020, 1.128) (0.883, 1.066) Nobe 1.006 1.016 0.970 0.940 1.022 0.993 Railway (0.974, 1.039) (0.980, 1.053) (0.905, 1.04) (0.857, 1.031) (0.984, 1.062) (0.922, 1.070) 0.970 0.956 1.017 0.923 1.019 0.823 Aircraft (0.917, 1.027) (0.896, 1.019) (0.966, 1.142) (0.754, 1.086) (0.954, 1.089) (0.714, 0.949) 0.913 0.850 1.205 0.961 0.931 0.847 PM2.s (0.767, 1.086) (0.699, 1.033) (0.181, 1.590) (0.754, 1.149) (0.572, 1.254) NDVI (1.005, 1.081) (1.012, 1.098) (0.924, 1.080) (0.994, 1.214) (0.982, 1.072) (0.977, 1.156) Correst Guns (X72-75) Guns (X72-75) Age >30-65 Age >65 (N=				Hangin	g (X70)		
(N=3755) (N=2922) (N=333) (N=471) (N=2661) (N=723) Road traffic 1.060 1.062 1.055 1.144 1.073 0.970 Road traffic (1.017, 1.105) (1.013, 1.113) (0.964, 1.154) (1.019, 1.285) (1.020, 1.128) (0.883, 1.066) 1.006 1.016 0.970 0.940 1.022 0.993 Railway (0.974, 1.039) (0.980, 1.053) (0.905, 1.04) (0.857, 1.031) (0.984, 1.062) (0.922, 1.070) Aircraft (0.917, 1.027) (0.896, 1.019) (0.906, 1.142) (0.785, 1.086) (0.994, 1.089) (0.714, 0.949) 0.913 0.850 1.205 0.961 0.931 0.847 PM2.5 (0.767, 1.086) (0.699, 1.033) (0.819, 1.771) (0.581, 1.590) (0.754, 1.149) (0.572, 1.254) 1.042 1.055 0.999 1.006 1.063 1.066 NDVI (1.005, 1.081) (1.012, 1.098) (0.924, 1.080) (0.994, 1.214) (0.982, 1.072) (0.977, 1.156) C		All	Male	Female	Age 15-30	Age >30-65	Age >65
1.060 1.062 1.055 1.144 1.073 0.970 Road traffic (1.017, 1.105) (1.013, 1.113) (0.964, 1.154) (1.019, 1.285) (1.020, 1.128) (0.883, 1.066) Railway (0.974, 1.039) (0.980, 1.053) (0.905, 1.04) (0.857, 1.031) (0.984, 1.062) (0.922, 1.070) 0.970 0.970 0.956 1.017 0.923 1.019 0.823 Aircraft (0.917, 1.027) (0.896, 1.019) (0.906, 1.142) (0.785, 1.086) (0.931 0.847 PM2.5 (0.767, 1.086) (0.699, 1.033) (0.819, 1.771) (0.581, 1.590) (0.754, 1.149) (0.572, 1.254) 1.042 1.055 0.999 1.099 1.026 1.063 NDVI (1.005, 1.081) (1.012, 1.098) (0.924, 1.080) (0.994, 1.214) (0.982, 1.072) (0.977, 1.156) Male Female Age 15-30 Age >30-65 Age >65 (N=3236) (N=3106) (N=130) (N=455) (N=1985) (N=796) Road traffic (0.964, 1.055) <th></th> <th>(N=3755)</th> <th>(N=2922)</th> <th>(N=833)</th> <th>(N= 471)</th> <th>(N=2561)</th> <th>(N=723)</th>		(N=3755)	(N=2922)	(N=833)	(N= 471)	(N=2561)	(N=723)
Road traffic (1.017, 1.105) (1.013, 1.113) (0.964, 1.154) (1.019, 1.285) (1.020, 1.128) (0.883, 1.066) Railway (0.974, 1.039) (0.980, 1.053) (0.905, 1.04) (0.857, 1.031) (0.984, 1.062) (0.922, 1.070) 0.970 0.956 1.017 0.923 1.019 0.823 Aircraft (0.917, 1.027) (0.896, 1.019) (0.906, 1.142) (0.785, 1.086) (0.954, 1.089) (0.714, 0.949) 0.913 0.850 1.205 0.961 0.931 0.847 PM2.5 (0.767, 1.086) (0.699, 1.033) (0.819, 1.771) (0.581, 1.590) (0.754, 1.149) (0.572, 1.254) NDVI (1.005, 1.081) (1.012, 1.098) (0.924, 1.080) (0.994, 1.214) (0.982, 1.072) (0.977, 1.156) Current Gurs (X72-75) Current Gurs (X72-75) Age >30-65 Age >65 Nead traffic (0.964, 1.055) (0.956, 1.048) (0.972, 1.532) (0.922, 1.073) (0.885, 1.063) 1.009 1.001 1.220 1.042 1.012 1.040	-	1.060	1.062	1.055	1.144	1.073	0.970
n.1006 1.016 0.970 0.940 1.022 0.993 Railway (0.974, 1.039) (0.980, 1.053) (0.905, 1.04) (0.857, 1.031) (0.984, 1.062) (0.922, 1.070) Aircraft (0.917, 1.027) (0.896, 1.019) (0.906, 1.142) (0.785, 1.086) (0.954, 1.089) (0.714, 0.949) 0.913 0.850 1.205 0.961 0.931 0.847 PM2.5 (0.767, 1.086) (0.699, 1.033) (0.819, 1.771) (0.581, 1.590) (0.754, 1.149) (0.572, 1.254) 1.042 1.055 0.999 1.099 1.026 1.063 NDVI (1.005, 1.081) (1.012, 1.098) (0.924, 1.080) (0.994, 1.214) (0.982, 1.072) (0.977, 1.156) MDVI (1.005, 1.081) (1.012, 1.098) (0.924, 1.080) (0.994, 1.214) (0.982, 1.072) (0.977, 1.156) MDVI (1.005, 1.081) (0.912, 1.532) (0.994, 1.214) (0.982, 1.073) (N=796) Made Female Age 15-30 Age >30-65 Age >65 Most 1.015	Road traffic	(1.017, 1.105)	(1.013, 1.113)	(0.964, 1.154)	(1.019, 1.285)	(1.020, 1.128)	(0.883, 1.066)
Railway (0.974, 1.039) (0.980, 1.053) (0.905, 1.04) (0.857, 1.031) (0.984, 1.062) (0.922, 1.070) Aircraft (0.917, 1.027) (0.896, 1.019) (0.906, 1.142) (0.785, 1.086) (0.954, 1.089) (0.714, 0.949) 0.913 0.850 1.205 0.961 0.931 0.847 PM2.5 (0.767, 1.086) (0.699, 1.033) (0.819, 1.771) (0.581, 1.590) (0.754, 1.149) (0.572, 1.254) 1.042 1.055 0.999 1.099 1.026 1.063 NDVI (1.005, 1.081) (1.012, 1.098) (0.924, 1.080) (0.994, 1.214) (0.982, 1.072) (0.977, 1.156) Guns (X72-75 All Male Female Age 15-30 Age >30-65 Age >65 (N=3236) (N=3106) (N=130) (N=455) (N=1985) (N=796) 1.015 1.012 1.072 1.042 1.018 0.970 All Male Female Age 15-30 Age >30-65 (0.985, 1.063) 1.015 1.012	D ''	1.006	1.016	0.970	0.940	1.022	0.993
Aircraft (0.970 0.956 1.017 0.923 1.019 0.823 Aircraft (0.917, 1.027) (0.896, 1.019) (0.906, 1.142) (0.785, 1.086) (0.954, 1.089) (0.714, 0.949) PM2.5 (0.767, 1.086) (0.699, 1.033) (0.819, 1.771) (0.581, 1.590) (0.754, 1.149) (0.572, 1.254) 1.042 1.055 0.999 1.099 1.026 1.063 NDVI (1.005, 1.081) (1.012, 1.098) (0.924, 1.080) (0.994, 1.214) (0.982, 1.072) (0.977, 1.156) Guns (X72-75) Guns (X72-75) All Male Female Age 15-30 Age >30-65 Age >65 (N=3236) (N=3106) (N=130) (N=455) (N=796) 1.009 1.001 1.220 1.042 1.018 0.970 Road traffic (0.964, 1.055) (0.956, 1.048) (0.972, 1.532) (0.925, 1.174) (0.962, 1.078) (0.885, 1.063) 1.009 1.001 1.012 1.072 0.994 1.012 1.040	Rallway	(0.974, 1.039)	(0.980, 1.053)	(0.905, 1.04)	(0.857, 1.031)	(0.984, 1.062)	(0.922, 1.070)
Aircraft $(0.917, 1.027)$ $(0.896, 1.019)$ $(0.906, 1.142)$ $(0.785, 1.086)$ $(0.934, 1.089)$ $(0.714, 0.949)$ PM2.5 $(0.767, 1.086)$ $(0.699, 1.033)$ $(0.819, 1.771)$ $(0.581, 1.590)$ $(0.754, 1.149)$ $(0.572, 1.254)$ 1.042 1.055 0.999 1.099 1.026 1.063 NDVI $(1.005, 1.081)$ $(1.012, 1.098)$ $(0.924, 1.080)$ $(0.994, 1.214)$ $(0.982, 1.072)$ $(0.977, 1.156)$ Guns (X72-75)Class (N=326) $(N=3106)$ $(N=130)$ $(N=455)$ $(N=1985)$ $(N=796)$ 1.009 1.001 1.220 1.042 1.018 0.970 1.009 1.001 1.220 1.042 1.018 0.970 1.009 1.001 1.220 1.042 1.018 0.970 $Road traffic$ $(0.964, 1.055)$ $(0.956, 1.048)$ $(0.972, 1.532)$ $(0.925, 1.174)$ $(0.962, 1.078)$ $(0.885, 1.063)$ 1.015 1.012 1.072 0.994 1.012 1.040 Railway $(0.980, 1.051)$ $(0.977, 1.049)$ $(0.912, 1.259)$ $(0.908, 1.089)$ $(0.968, 1.058)$ $(0.970, 1.115)$ 0.991 0.996 1.100 0.995 1.001 0.979 Aircraft $(0.935, 1.051)$ $(0.929, 1.048)$ $(0.836, 1.447)$ $(0.819, 1.124)$ $(0.929, 1.079)$ $(0.870, 1.102)$ $PM_{2.5}$ $(0.745, 1.101)$ $(0.730, 1.087)$ $(0.515, 3.824)$ $(0.568, 1.612)$ $(0.739, 1.204)$ $(0.515, 1.184)$ </th <th>A :</th> <th>0.970</th> <th>0.956</th> <th>1.017</th> <th>0.923</th> <th>1.019</th> <th>0.823</th>	A :	0.970	0.956	1.017	0.923	1.019	0.823
PM₂.5 0.913 0.850 1.205 0.961 0.931 0.847 PM₂.5 (0.767, 1.086) (0.699, 1.033) (0.819, 1.771) (0.581, 1.590) (0.754, 1.149) (0.572, 1.254) 1.042 1.055 0.999 1.099 1.026 1.063 NDVI (1.005, 1.081) (1.012, 1.098) (0.924, 1.080) (0.994, 1.214) (0.982, 1.072) (0.977, 1.156) Guns (X72-75) All Male Female Age 15-30 Age >30-65 Age >65 (N=3236) (N=3106) (N=130) (N=455) (N=1985) (N=796) 1.009 1.001 1.220 1.042 1.018 0.970 Road traffic (0.964, 1.055) (0.956, 1.048) (0.972, 1.532) (0.925, 1.174) (0.962, 1.078) (0.885, 1.063) 1.015 1.012 1.072 0.994 1.012 1.040 Railway (0.980, 1.051) (0.977, 1.049) (0.912, 1.259) (0.908, 1.089) (0.970, 1.115) 0.991 0.996 0.891 1.404 0.957<	Aircraft	(0.917, 1.027)	(0.896, 1.019)	(0.906, 1.142)	(0.785, 1.086)	(0.954, 1.089)	(0.714, 0.949)
PM2.5 (0.767, 1.066) (0.699, 1.033) (0.819, 1.771) (0.381, 1.390) (0.734, 1.149) (0.372, 1.234) 1.042 1.055 0.999 1.099 1.026 1.063 NDVI (1.005, 1.081) (1.012, 1.098) (0.924, 1.080) (0.994, 1.214) (0.982, 1.072) (0.977, 1.156) Guns (X72-75) All Male Female Age 15-30 Age >30-65 Age >65 (N=3236) (N=3106) (N=130) (N=455) (N=1985) (N=796) 1.009 1.001 1.220 1.042 1.018 0.970 Road traffic (0.964, 1.055) (0.956, 1.048) (0.972, 1.532) (0.925, 1.174) (0.962, 1.078) (0.885, 1.063) 1.015 1.012 1.072 0.994 1.012 1.040 Railway (0.980, 1.051) (0.977, 1.049) (0.912, 1.259) (0.908, 1.058) (0.970, 1.115) 0.991 0.986 1.100 0.957 0.943 0.781 Aircraft (0.935, 1.051) (0.929, 1.078) (0.870, 1.102)		0.913			0.901	0.931	0.847
NDVI 1.042 1.055 0.999 1.099 1.099 1.026 1.055 NDVI (1.005, 1.081) (1.012, 1.098) (0.924, 1.080) (0.994, 1.214) (0.982, 1.072) (0.977, 1.156) Guns (X72-75) All Male Female Age 15-30 Age >30-65 Age >65 (N=3236) (N=3106) (N=130) (N=455) (N=1985) (N=796) Road traffic (0.964, 1.055) (0.956, 1.048) (0.972, 1.532) (0.925, 1.174) (0.962, 1.078) (0.885, 1.063) NDVI (0.980, 1.051) (0.977, 1.049) (0.912, 1.259) (0.908, 1.089) (0.968, 1.058) (0.970, 1.115) Aircraft (0.935, 1.051) (0.929, 1.048) (0.836, 1.447) (0.819, 1.124) (0.929, 1.079) (0.870, 1.102) Aircraft (0.745, 1.101) (0.730, 1.087) (0.515, 3.824) (0.568, 1.612) (0.739, 1.204) (0.515, 1.184) PM2.5 (0.745, 1.101) (0.730, 1.087) (0.825, 1.225) (0.868, 1.068) (0.984, 1.090) (1.050, 1.241) MDVI </th <th>P 1V12.5</th> <th>(0.707, 1.000)</th> <th>(0.099, 1.033)</th> <th></th> <th>(0.561, 1.590)</th> <th>(0.754, 1.149)</th> <th>(0.572, 1.254)</th>	P 1V12.5	(0.707, 1.000)	(0.099, 1.033)		(0.561, 1.590)	(0.754, 1.149)	(0.572, 1.254)
NDVI (1.003, 1.081) (1.012, 1.098) (0.924, 1.080) (0.994, 1.214) (0.982, 1.072) (0.977, 1.136) Guns (X72-75) Guns (X72-75) Age >30-65 Age >65 (N=796) 1.009 1.001 1.220 1.042 1.018 0.970 Road traffic (0.964, 1.055) (0.956, 1.048) (0.972, 1.532) (0.925, 1.174) (0.962, 1.078) (0.885, 1.063) 1.015 1.012 1.072 0.994 1.012 1.040 Railway (0.980, 1.051) (0.977, 1.049) (0.912, 1.259) (0.908, 1.089) (0.968, 1.058) (0.970, 1.115) 0.991 0.986 1.100 0.959 1.001 0.979 Aircraft (0.935, 1.051) (0.929, 1.048) (0.836, 1.447) (0.819, 1.124) (0.929, 1.079) (0.870, 1.102) 0.906 0.891 1.404 0.957 0.943 0.781 PM2.5 (0.745, 1.101) (0.730, 1.087) (0.515, 3.824) (0.568, 1.612) (0.739, 1.204) (0.515, 1.184) 1.048 1.050 1.005 <th></th> <th>1.042</th> <th></th> <th>0.999</th> <th>1.099</th> <th></th> <th>(0.077 1.156)</th>		1.042		0.999	1.099		(0.077 1.156)
$\begin{array}{ c c c c c c c c c c c c c c c c c c c$		(1.005, 1.061)	(1.012, 1.096)	(0.924, 1.000)	(0.994, 1.214)	(0.962, 1.072)	(0.977, 1.150)
All (N=3236) Male (N=3106) Female (N=130) Age 15-30 (N=455) Age >30-65 (N=1985) Age >65 (N=796) 1.009 1.001 1.220 1.042 1.018 0.970 Road traffic (0.964, 1.055) (0.956, 1.048) (0.972, 1.532) (0.925, 1.174) (0.962, 1.078) (0.885, 1.063) 1.015 1.012 1.072 0.994 1.012 1.040 Railway (0.980, 1.051) (0.977, 1.049) (0.912, 1.259) (0.908, 1.089) (0.968, 1.058) (0.970, 1.115) 0.991 0.986 1.100 0.959 1.001 0.979 Aircraft (0.935, 1.051) (0.929, 1.048) (0.836, 1.447) (0.819, 1.124) (0.929, 1.079) (0.870, 1.102) 0.906 0.891 1.404 0.957 0.943 0.781 PM2.5 (0.745, 1.101) (0.730, 1.087) (0.515, 3.824) (0.568, 1.612) (0.739, 1.204) (0.515, 1.184) NDVI 1.0048 1.050 1.005 0.963 1.036 1.141 NDVI (1.007, 1.091)				Guns ()	(72-75)		
(N=3236) (N=3106) (N=130) (N=455) (N=1985) (N=796) 1.009 1.001 1.220 1.042 1.018 0.970 Road traffic (0.964, 1.055) (0.956, 1.048) (0.972, 1.532) (0.925, 1.174) (0.962, 1.078) (0.885, 1.063) 1.015 1.012 1.072 0.994 1.012 1.040 Railway (0.980, 1.051) (0.977, 1.049) (0.912, 1.259) (0.908, 1.089) (0.968, 1.058) (0.970, 1.115) 0.991 0.986 1.100 0.959 1.001 0.979 Aircraft (0.935, 1.051) (0.929, 1.048) (0.836, 1.447) (0.819, 1.124) (0.929, 1.079) (0.870, 1.102) 0.906 0.891 1.404 0.957 0.943 0.781 PM2.5 (0.745, 1.101) (0.730, 1.087) (0.515, 3.824) (0.568, 1.612) (0.739, 1.204) (0.515, 1.184) NDVI (1.007, 1.091) (1.007, 1.094) (0.825, 1.225) (0.868, 1.068) (0.984, 1.090) (1.050, 1.241) Jumping (X80)		All	Male	Female	Age 15-30	Age >30-65	Age >65
1.009 1.001 1.220 1.042 1.018 0.970 Road traffic (0.964, 1.055) (0.956, 1.048) (0.972, 1.532) (0.925, 1.174) (0.962, 1.078) (0.885, 1.063) 1.015 1.012 1.072 0.994 1.012 1.040 Railway (0.980, 1.051) (0.977, 1.049) (0.912, 1.259) (0.908, 1.089) (0.968, 1.058) (0.970, 1.115) 0.991 0.986 1.100 0.959 1.001 0.979 Aircraft (0.935, 1.051) (0.929, 1.048) (0.836, 1.447) (0.819, 1.124) (0.929, 1.079) (0.870, 1.102) 0.906 0.891 1.404 0.957 0.943 0.781 PM2.5 (0.745, 1.101) (0.730, 1.087) (0.515, 3.824) (0.568, 1.612) (0.739, 1.204) (0.515, 1.184) NDVI (1.007, 1.091) (1.007, 1.094) (0.825, 1.225) (0.868, 1.068) (0.984, 1.090) (1.050, 1.241) Jumping (X80) Jumping (X80) Age >30-65 Age >65 All Male Female Age 15-30 <th></th> <th>(N=3236)</th> <th>(N=3106)</th> <th>(N=130)</th> <th>(N= 455)</th> <th>(N=1985)</th> <th>(N=796)</th>		(N=3236)	(N=3106)	(N=130)	(N= 455)	(N=1985)	(N=796)
Road traffic (0.964, 1.055) (0.956, 1.048) (0.972, 1.532) (0.925, 1.174) (0.962, 1.078) (0.885, 1.063) 1.015 1.012 1.072 0.994 1.012 1.040 Railway (0.980, 1.051) (0.977, 1.049) (0.912, 1.259) (0.908, 1.089) (0.968, 1.058) (0.970, 1.115) 0.991 0.986 1.100 0.959 1.001 0.979 Aircraft (0.935, 1.051) (0.929, 1.048) (0.836, 1.447) (0.819, 1.124) (0.929, 1.079) (0.870, 1.102) 0.906 0.891 1.404 0.957 0.943 0.781 0.906 0.891 1.404 0.957 0.943 0.781 PM2.5 (0.745, 1.101) (0.730, 1.087) (0.515, 3.824) (0.568, 1.612) (0.739, 1.204) (0.515, 1.184) NDVI (1.007, 1.091) (1.007, 1.094) (0.825, 1.225) (0.868, 1.068) (0.984, 1.090) (1.050, 1.241) NDVI (1.007, 1.091) (0.825, 1.225) (0.868, 1.068) (0.984, 1.090) (1.050, 1.241) (N=1651)		1.009	1.001	1.220	1.042	1.018	0.970
1.015 1.012 1.072 0.994 1.012 1.040 Railway (0.980, 1.051) (0.977, 1.049) (0.912, 1.259) (0.908, 1.089) (0.968, 1.058) (0.970, 1.115) 0.991 0.996 1.100 0.959 1.001 0.979 Aircraft (0.935, 1.051) (0.929, 1.048) (0.836, 1.447) (0.819, 1.124) (0.929, 1.079) (0.870, 1.102) 0.906 0.891 1.404 0.957 0.943 0.781 PM2.5 (0.745, 1.101) (0.730, 1.087) (0.515, 3.824) (0.568, 1.612) (0.739, 1.204) (0.515, 1.184) NDVI (1.007, 1.091) (1.007, 1.094) (0.825, 1.225) (0.868, 1.068) (0.984, 1.090) (1.050, 1.241) Jumping (X80) Jumping (X80) (N=949) (N=702) (N= 281) Age 15-30 Age >30-65 Age >65	Road traffic	(0.964, 1.055)	(0.956, 1.048)	(0.972, 1.532)	(0.925, 1.174)	(0.962, 1.078)	(0.885, 1.063)
Railway (0.980, 1.051) (0.977, 1.049) (0.912, 1.259) (0.908, 1.089) (0.968, 1.058) (0.970, 1.115) 0.991 0.996 1.100 0.959 1.001 0.979 Aircraft (0.935, 1.051) (0.929, 1.048) (0.836, 1.447) (0.819, 1.124) (0.929, 1.079) (0.870, 1.102) 0.906 0.891 1.404 0.957 0.943 0.781 PM2.5 (0.745, 1.101) (0.730, 1.087) (0.515, 3.824) (0.568, 1.612) (0.739, 1.204) (0.515, 1.184) 1.048 1.050 1.005 0.963 1.036 1.141 NDVI (1.007, 1.091) (1.007, 1.094) (0.825, 1.225) (0.868, 1.068) (0.984, 1.090) (1.050, 1.241) Jumping (X80) Jumping (X80) All Male Female Age 15-30 Age >30-65 Age >65 (N=1651) (N=949) (N=702) (N= 281) (N=939) (N=431)		1.015	1.012	1.072	0.994	1.012	1.040
Aircraft 0.991 0.986 1.100 0.959 1.001 0.979 Aircraft (0.935, 1.051) (0.929, 1.048) (0.836, 1.447) (0.819, 1.124) (0.929, 1.079) (0.870, 1.102) 0.906 0.891 1.404 0.957 0.943 0.781 PM2.5 (0.745, 1.101) (0.730, 1.087) (0.515, 3.824) (0.568, 1.612) (0.739, 1.204) (0.515, 1.184) NDVI (1.007, 1.091) (1.007, 1.094) (0.825, 1.225) (0.868, 1.068) (0.984, 1.090) (1.050, 1.241) Jumping (X80) Jumping (X80) (N=762) (N= 281) (N=939) (N=431)	Railway	(0.980, 1.051)	(0.977, 1.049)	(0.912, 1.259)	(0.908, 1.089)	(0.968, 1.058)	(0.970, 1.115)
Aircraft (0.935, 1.051) (0.929, 1.048) (0.836, 1.447) (0.819, 1.124) (0.929, 1.079) (0.870, 1.102) 0.906 0.891 1.404 0.957 0.943 0.781 PM _{2.5} (0.745, 1.101) (0.730, 1.087) (0.515, 3.824) (0.568, 1.612) (0.739, 1.204) (0.515, 1.184) 1.048 1.050 1.005 0.963 1.036 1.141 NDVI (1.007, 1.091) (1.007, 1.094) (0.825, 1.225) (0.868, 1.068) (0.984, 1.090) (1.050, 1.241) Jumping (X80) Jumping (X80) (N=762) (N= 281) (N=939) (N=421)		0.991	0.986	1.100	0.959	1.001	0.979
0.906 0.891 1.404 0.957 0.943 0.781 PM2.5 (0.745, 1.101) (0.730, 1.087) (0.515, 3.824) (0.568, 1.612) (0.739, 1.204) (0.515, 1.184) NDVI 1.048 1.050 1.005 0.963 1.036 1.141 NDVI (1.007, 1.091) (1.007, 1.094) (0.825, 1.225) (0.868, 1.068) (0.984, 1.090) (1.050, 1.241) Jumping (X80) Jumping (X80) (N=762) (N= 281) (N=939) (N=421)	Aircraft	(0.935, 1.051)	(0.929, 1.048)	(0.836, 1.447)	(0.819, 1.124)	(0.929, 1.079)	(0.870, 1.102)
PM2.5 (0.745, 1.101) (0.730, 1.087) (0.515, 3.824) (0.568, 1.612) (0.739, 1.204) (0.515, 1.184) 1.048 1.050 1.005 0.963 1.036 1.141 NDVI (1.007, 1.091) (1.007, 1.094) (0.825, 1.225) (0.868, 1.068) (0.984, 1.090) (1.050, 1.241) Jumping (X80) Jumping (X80) (N=1651) (N=949) (N=702) (N= 281) (N=939) (N=421)		0.906	0.891	1.404	0.957	0.943	0.781
NDVI 1.048 1.050 1.005 0.963 1.036 1.141 NDVI (1.007, 1.091) (1.007, 1.094) (0.825, 1.225) (0.868, 1.068) (0.984, 1.090) (1.050, 1.241) Jumping (X80) Jumping (X80) All Male Female Age 15-30 Age >30-65 Age >65 (N=1651) (N=949) (N=702) (N= 281) (N=939) (N=421)	PM _{2.5}	(0.745, 1.101)	(0.730, 1.087)	(0.515, 3.824)	(0.568, 1.612)	(0.739, 1.204)	(0.515, 1.184)
NDVI (1.007, 1.091) (1.007, 1.094) (0.825, 1.225) (0.868, 1.068) (0.984, 1.090) (1.050, 1.241) Jumping (X80) Jumping (X80) All Male Female Age 15-30 Age >30-65 Age >65 (N=1651) (N=949) (N=702) (N= 281) (N=939) (N=421)		1.048	1.050	1.005	0.963	1.036	1.141
Jumping (X80) All Male Female Age 15-30 Age >30-65 Age >65 (N=1651) (N=949) (N=702) (N= 281) (N=930) (N=431)	NDVI	(1.007, 1.091)	(1.007, 1.094)	(0.825, 1.225)	(0.868, 1.068)	(0.984, 1.090)	(1.050, 1.241)
Jumping (X80) All Male Female Age 15-30 Age >30-65 Age >65 (N=1651) (N=949) (N=702) (N= 281) (N=939) (N=431)							
All Male Female Age 15-30 Age >30-65 Age >65 (N=1651) (N=949) (N=702) (N= 281) (N=939) (N=431)		• • •		Jumpin	g (X80)	A	A
		All (N=1651)	IVIAIE (N=949)	remale (N=702)	Age 15-30 (N= 281)	Age >30-65 (N=939)	Age >65 (N=431)

	1.046	1.026	1.073	0.994	1.049	1.080
Road traffic	(0.981, 1.115)	(0.943, 1.116)	(0.972, 1.184)	(0.853, 1.159)	(0.964, 1.142)	(0.951, 1.227)
	1.002	1.005	0.998	1.011	0.970	1.067
Railway	(0.956, 1.050)	(0.945, 1.068)	(0.928, 1.073)	(0.904, 1.131)	(0.910, 1.034)	(0.978, 1.165)
	1.057	1.065	1.044	0.952	1.029	1.167
Aircraft	(0.974, 1.147)	(0.957, 1.185)	(0.918, 1.186)	(0.777, 1.166)	(0.921, 1.151)	(1.002, 1.360)
	0.783	0.937	0.621	0.929	0.573	1.587
PM _{2.5}	(0.592, 1.037)	(0.647, 1.357)	(0.404, 0.955)	(0.477, 1.810)	(0.398, 0.826)	(0.894, 2.819)
	0.921	0.903	0.946	0.967	0.902	0.928
	(0.87/ 0.969)	(0.844 0.967)	(0.874 1.024)	(0.856 1.004)	(0.843, 0.966)	(0.836 1.030)

NDVI(0.874, 0.969)(0.844, 0.967)(0.874, 1.024)(0.856, 1.094)(0.843, 0.966)(0.836, 1.030)Results from main model (M3) including noise exposures (road traffic noise, railway noise and aircraft noise, as
Lden), PM2.5 exposure, NDVI, age as timescale, sex as strata, individual level covariates (civil status, education,
mother tongue, nationality, urbanization, local-SEP) and area-SEP and unemployment rate.

Supplemental Table S4: Association between eventfulness of noise at night and death from different methods of suicide. Model 4a and 4b, HR per quartile of night-time Intermittency Ratio and number of noise events (Lowest quartile as reference group)

	All intentional self-harm (ICD-10: X60- 84, excluding X61.8, X61.9 and X81-82)	Poisoning (X60-69)	Hanging (X70)	Firearms (X72-75)	Jumping (X80)
	(N=11'265)	All (N=1176)	All (N=3755)	All (N=3236)	All (N=1651)
Model 4a: Intermitt	ency Ratio at nig	jht			
Q2	1.000	0.911	1.002	1.019	0.996
(58.0 – 74.6)	(0.949, 1.054)	(0.777, 1.067)	(0.914, 1.099)	(0.922, 1.126)	(0.871, 1.139)
Q3	0.994	0.782	1.016	1.007	1.003
(74.7 – 85.1)	(0.942, 1.048)	(0.661, 0.925)	(0.926, 1.114)	(0.911, 1.114)	(0.875, 1.150)
Q4	0.964	0.932	0.946	1.007	0.891
(85.2 – 100)	(0.912, 1.019)	(0.788, 1.103)	(0.859, 1.042)	(0.908, 1.116)	(0.768, 1.032)
Model 4b: Number	of Events at nigl	nt			
Q2	1.004	0.881	1.028	1.013	1.047
(52.6-110.3)	(0.952, 1.058)	(0.744, 1.043)	(0.937, 1.128)	(0.921, 1.114)	(0.910, 1.206)
Q3	0.978	0.878	1.034	0.937	1.003
(110.4 – 220.1)	(0.925, 1.034)	(0.737, 1.047)	(0.938, 1.139)	(0.845, 1.038)	(0.866, 1.163)
Q4	0.987	0.915	1.131	0.957	0.823
(220.1 – 13110.2)	(0.923, 1.056)	(0.744, 1.126)	(1.006, 1.270)	(0.844, 1.086)	(0.688, 0.985)

M4a: quartiles of night-time intermittency ratio (IR) from all transportation sources combined as exposure (Q1 (0 – 57.9) as reference), Lden from Road Traffic, Railway and Aircraft Noise, $PM_{2.5}$ exposure, NDVI, age as timescale, sex as strata, individual level covariates (civil status, education, mother tongue, nationality, urbanization, local-SEP) and area-SEP and unemployment rate.

M4b: quartiles of night-time number of noise events from all sources combined as exposure (Q1 (0 - 52.5) as reference), Lden from Road Traffic, Railway and Aircraft Noise, PM_{2.5} exposure, NDVI, age as timescale, sex as strata, individual level covariates (civil status, education, mother tongue, nationality, urbanization, local-SEP) and area-SEP and unemployment rate.

Supplemental Table S5 –HR (95% confidence interval) for road traffic noise and PM_{2.5} for death by all intentional self-harm (ICD-10: X60-84, excluding X61.8, X61.9 and X81-82) in categorical (quartiles) exposure models

		Road Traffic Noise Quartiles						
		Q1	Q2	Q3	Q4			
		35-48.8 dB L _{den}	48.8 – 53.9 dB L _{den}	53.9 – 60.2 dB L _{den}	60.2 – 88.2 dB L _{den}			
	Q1	$1 \left(-roforonco \right)$	1.084	0.990	1.034			
S	0.4 – 14.8 µg/m3		(0.988, 1.190)	(0.895, 1.096)	(0.930, 1.148)			
ile	Q2	0.906	1.035	1.160	1.113			
art	14.8 – 16.2 µg/m3	(0.821, 1.000)	(0.901, 1.190)	(1.002, 1.341)	(0.957, 1.295)			
Su	Q3	0.971	0.938	1.104	1.001			
5	16.2 - 17.4 µg/m3	(0.873, 1.080)	(0.812, 1.083)	(0.953, 1.279)	(0.860, 1.165)			
12.	Q4	0.914	0.978	1.082	1.141			
5	17.4 – 28.0 µg/m3	(0.803, 1.042)	(0.830, 1.152)	(0.919, 1.273)	(0.972, 1.341)			

Road Traffic Noise Quartiles

Categorical exposure model: Adjusted for railway and aircraft noise, NDVI, age as timescale, sex as strata, individual level covariates (civil status, education, mother tongue, nationality, urbanization, local-SEP) and area-SEP and unemployment rate.

Supplemental Table S6 – Effect modification by Local SEP-Index, HR per 10dB Lden / 10µg/m³ PM^{2.5} / 0.1 NDVI (95% confidence interval)

	Local SEP-Index					
	Q1 (0 – 55.96)	Q2 (55.97 – 63.15)	Q3 (63.16 - 70.42)	Q4 (70.43 – 100)		
	(N=2908)	(N=2884)	(N=2831)	(N=2642)		
	1.020	1.085	1.015	1.040		
Road traffic	(0.974, 1.069)	(1.035, 1.138)	(0.967, 1.066)	(0.987, 1.095)		
	1.020	1.015	1.033	1.026		
Railway	(0.986, 1.055)	(0.980, 1.052)	(0.996, 1.071)	(0.985, 1.069)		
	1.031	0.994	0.997	0.974		
Aircraft	(0.963, 1.103)	(0.928, 1.065)	(0.936, 1.062)	(0.918, 1.034)		
	0.908	0.911	0.980	0.782		
PM _{2.5}	(0.765, 1.077)	(0.754, 1.101)	(0.781, 1.229)	(0.568, 1.078)		
	1.009	1.020	0.976	0.983		
NDVI	(0.970, 1.050)	(0.979, 1.063)	(0.936, 1.018)	(0.941, 1.027)		

Stratified analysis by Local SEP-Index Quartiles using the main model (M3) including noise exposures (road traffic noise, railway noise and aircraft noise, as Lden), PM_{2.5} exposure, NDVI, age as timescale, sex as strata, individual level covariates (civil status, education, mother tongue, nationality, urbanization) and area-SEP and unemployment rate.

Supplemental Table S7 – Effect modification by civil status, HR per 10dB Lden / $10\mu g/m^3 PM_{2.5}$ / 0.1 NDVI (95% confidence interval)

	Civil Status				
	Single / Divorced /				
	Widowed (N=5622)	Married (N=5643)			
	1.048	1.033			
Road traffic	(1.013, 1.084)	(0.998, 1.069)			
	1.017	1.028			
Railway	(0.992, 1.044)	(1.001, 1.055)			
	0.993	1.000			
Aircraft	(0.949, 1.040)	(0.956, 1.045)			
	0.957	0.850			
PM _{2.5}	(0.823, 1.113)	(0.737, 0.982)			
	0.997	1.007			
NDVI	(0.970, 1.026)	(0.976, 1.038)			

Stratified analysis by civil status (single, divorced or widowed vs. married) using the main model (M3) including noise exposures (road traffic noise, railway noise and aircraft noise, as Lden), PM_{2.5} exposure, NDVI, age as timescale, sex as strata, individual level covariates (education, mother tongue, nationality, urbanization, local-SEP) and area-SEP and unemployment rate.

Supplemental Table S8 – Effect modification by urbanization, HR per 10dB Lden / 10µg/m³ PM_{2.5} / 0.1 NDVI (95% confidence interval)

		Urbanization	
	Urban	Peri-Urban	Rural
	(N=3406)	(N=4643)	(N=3216)
	1.050	1.045	1.022
Road traffic	(1.004, 1.098)	(1.005, 1.087)	(0.979, 1.066)
	1.018	1.043	1.009
Railway	(0.986, 1.051)	(1.014, 1.072)	(0.972, 1.048)
	0.975	1.025	0.962
Aircraft	(0.908, 1.047)	(0.983, 1.068)	(0.882, 1.049)
	1.210	0.884	0.856
PM _{2.5}	(0.966, 1.516)	(0.741, 1.055)	(0.727, 1.008)
	0.942	1.010	1.072
NDVI	(0.912, 0.973)	(0.974, 1.048)	(1.027, 1.119)

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Stratified analysis by degree of urban (urban, peri-urban, rural) using the main model (M3) including noise exposures (road traffic noise, railway noise and aircraft noise, as Lden), PM_{2.5} exposure, NDVI, age as timescale, sex as strata, individual level covariates (education, mother tongue, nationality, local-SEP) and area-SEP and unemployment rate.

Supplemental Table S9a-c – HR and 95% Confidence interval at certain values of the exposure-response relationship for the association between transportation noise sources (Lden [dB]) and mortality from intentional self-harm (ICD-10: X60-84, excl. ICD-10 X61.8, X61.9, X81-82) displayed in Figure 2 in the main article

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	35dB	40dB	50dB	60dB	70dB	75dB
HR	1.084	1.038	1.002	1.075	1.133	1.150
(95% CI)	(0.986, 1.192)	(0.987, 1.091)	(0.979, 1.025)	(1.047, 1.104)	(1.068, 1.201)	(1.021, 1.294)

Supplemental Table S9a – Road traffic noise

Supplemental Table S9b – Railway noise

	30dB	40dB	50dB	60dB	70dB	80dB
HR	1.000	1.019	1.041	1.067	1.097	1.129
(95% CI)	(0.982, 1.018)	(0.997, 1.041)	(1.009, 1.075)	(1.025, 1.111)	(1.011, 1.189)	(0.976, 1.304)

Supplemental Table S9c – Aircraft noise

	30dB	35dB	40dB	45dB	50dB	55dB
HR	1.045	1.014	1.001	1.004	1.021	1.051
(95% CI)	(1.027, 1.063)	(0.991, 1.037)	(0.962, 1.041)	(0.960, 1.049)	(0.972, 1.073)	(0.980, 1.127)

Numerical values of exposure-response relationship for the association between road traffic, railway or aircraft noise (Lden, dB) and mortality from all intentional self-harm (ICD-10: X60-84, excl. ICD-10 X61.8, X61.9, X81-82) calculated using natural splines (3 df, knots placed at tertiles of noise distribution). Results from main model (M3) including noise exposures (road traffic noise, railway noise and aircraft noise), PM_{2.5} exposure, greenness (NDVI) within 500m around the residence, age as timescale, sex as strata, individual sociodemographic covariates (civil status, education, mother tongue, nationality, urbanization, local-SEP) and area-SEP and unemployment rate were used as base.

As reference for HR calculation (HR=1.000) minimum risk noise levels were used (Road traffic noise: 48.2dB, Railway noise: 30dB, Aircraft noise: 41.4dB)

Supplemental Figure S1 – HR and 95% CI for death by suicide involving vehicles per 10dB source-specific Lden



Results from preliminary analysis of an association of suicides involving vehicles and the three different noise sources using Model 3

Model 3 = Lden road traffic, railway or aircraft noise (other two noise sources included as adjustment), PM_{2.5}, NDVI, age as a timescale, sex as strata + individual level covariates (mother tongue, nationality, civil status, education, urbanization, local-SEP) + area level covariates (community and regional-SEP and unemployment rate) Dots mark HR per 10dB source-specific Lden, whiskers the corresponding 95%CI



DAG (Directed Acyclic Graph) for the association between transportation noise exposure and suicide. Nodes indicate factors/variables, arrows a causal effect of one variable on the other. Green arrows indicate the causal pathway. Red arrows would indicate confounding paths (here, none). Blue nodes indicate unmeasured covariates which are no confounders. White nodes indicate controlled for confounders. Red node indicates an unmeasured, potential confounder (which here is indirectly controlled for).

Supplemental Figure S3 – Correlation Matrix



Numbers indicate Pearson coefficient.

Notes: Road = road traffic noise (L_{den} [dB]), Rail = railway noise (L_{den} [dB]), Air = aircraft noise (L_{den} [dB]), IR = Intermittency ratio at night, NrEv = number of noise events at night, NDVI = normalized difference vegetation index, PM2.5 = PM2.5 [μ g/m³], NO2 = NO₂ [μ g/m³], 01, 06 and 11 respectively refer to years 2001, 2006 and 2011



Supplemental Figure S4 – HR and 95% CI for death by specified suicide category per 10dB source-specific Lden

Results from main model (M3): Lden road traffic, railway or aircraft noise (other two noise sources included as adjustment), PM_{2.5}, NDVI, age as a timescale, sex as strata + individual level covariates (mother tongue, nationality, civil status, education, urbanization, local-SEP) + area level covariates (community and regional-SEP and unemployment rate). Dots mark HR per 10dB source-specific Lden, whiskers the corresponding 95% CI. The numerical values of the results displayed in this figure can be found in Table 3.





Categorical exposure to either one, two or three different noise sources >50dB Lden (all three transportation noise sources [road traffic, railway and aircraft noise] <50dB Lden as Reference). Adjusted for PM_{2.5}, NDVI, age as a timescale, sex as strata + individual level covariates (mother tongue, nationality, civil status, education, urbanization, local-SEP) + area level covariates (community and regional-SEP and unemployment rate). Dots mark HR, whiskers the corresponding 95% CI



1.1 (1.016, 1.191)

1.057 (1.012, 1.104)

1.028 (0.961, 1.1)

Road

1.052 (0.997, 1.11)

1.005 (0.974, 1.038)

1.028 (0.98, 1.077) 1.015 (0.981, 1.051) 0.999 (0.942, 1.06)

1 (0.954, 1.048)

Rail

0.99 (0.899, 1.09)

0.967 (0.914, 1.023)

1.045 (0.963, 1.134)

Air

Exposure Road

🕨 Rail

🔶 Air

Supplemental Figure S6 – Sensitivity Analysis comparing models adjusting for $PM_{2.5}$ (=Model 3) versus NO₂ (=Model 3b)

Model 3 (main model) = road traffic, railway or aircraft noise (other two noise sources included as adjustment), PM_{2.5}, NDVI, age as a timescale, sex as strata + individual level covariates (mother tongue, nationality, civil status, education, urbanization, local-SEP) + area level covariates (community and regional-SEP and unemployment rate)

Model 3b= same as Model 3, adjusting for NO₂ instead of PM_{2.5}

1.2

1.1

1.0

0.9

HL per 10 dB 1.0 dB 1.0

> 0.9 1.2

11

1.0

0.9

1.1

1.0

0.9

1.106 (1.025, 1.193)

1.06 (1.017, 1.105)

1.046 (0.981, 1.115)

Road

1.053 (0.997, 1.111)

1.006 (0.974, 1.039)

1.009 (0:964, 1.055) 1.015 (0.98, 1.051) 0.991 (0.935, 1.051)

1.002 (0.956, 1.05)

Rail

0.994 (0.902, 1.094)

0.97 (0.917, 1.027)

1.057 (0.974, 1.147)

Air

Dots mark HR per 10dB source-specific Lden, whiskers the corresponding 95% CI. Numerical values are indicated below the dots.

Exposure



Supplemental Figure S7 – Association between air pollution and suicide, adjusted vs. unadjusted for source-specific transportation noise and greenspace

adjusted = air pollution (either PM_{2.5} or NO₂) adjusted for road traffic, railway and aircraft noise Lden, NDVI, age as timescale, sex as strata + individual level covariates (mother tongue, nationality, civil status, education, urbanization, local-SEP) + area level covariates (community and regional-SEP and unemployment rate) unadjusted= same as adjusted, but without noise exposure and NDVI variables. Dots mark HR per 10 µg/m³ PM_{2.5}/NO₂, whiskers the corresponding 95% CI.



Supplemental Figure S8 – Effect modification by sex: HR and 95% CI for death by specified suicide category per 10dB source-specific Lden

Model 3: road traffic, railway or aircraft noise (other two noise sources included as adjustment), PM_{2.5}, NDVI, age as a timescale, sex as strata + individual level covariates (mother tongue, nationality, civil status, education, urbanization, local-SEP) + area level covariates (community and regional-SEP and unemployment rate). Dots mark HR per 10dB source-specific Lden, whiskers the corresponding 95% CI. The numerical values of the results displayed in this figure can be found in Table S3.

Supplemental Figure S9 – Effect modification by age: HR and 95% CI for death by all intentional self-harm per 10dB source-specific Lden



Model 3: road traffic, railway or aircraft noise (other two noise sources included as adjustment), PM_{2.5}, NDVI, age as a timescale, sex as strata + individual level covariates (mother tongue, nationality, civil status, education, urbanization, local-SEP) + area level covariates (community and regional-SEP and unemployment rate). Dots mark HR per 10dB source-specific Lden, whiskers the corresponding 95% CI. The numerical values of the results displayed in this figure can be found in Table S3.



Supplemental Figure S10 – Effect modification by local-SEP category: HR and 95% CI for death by all intentional self-harm per 10dB source-specific Lden

Model 3: Stratified analysis by SEP-Quartile using the main model (M3) including noise exposures (road traffic noise, railway noise and aircraft noise, as Lden), PM2.5 exposure, NDVI, age as timescale, sex as strata, individual level covariates (civil status, education, mother tongue, nationality, urbanization) and area-SEP and unemployment rate. Dots mark HR per 10dB source-specific Lden, whiskers the corresponding 95% CI. The numerical values of the results displayed in this figure can be found in Table S6.





Model 3: Stratified analysis by degree of urbanization (urban, peri-urban, rural) using the main model (M3) including noise exposures (road traffic noise, railway noise and aircraft noise, as Lden), PM_{2.5} exposure, NDVI, age as timescale, sex as strata, individual level covariates (education, mother tongue, nationality, local-SEP) and area-SEP and unemployment rate. Dots mark HR per 10dB source-specific Lden / 10 µg/m³ PM_{2.5} / 0.1 NDVI, whiskers the corresponding 95%CI.

The numerical values of the results displayed in this figure can be found in Table S8.