



REPUBLIC OF ESTONIA
ENVIRONMENT AGENCY



NO₂ measurements around schools in Tartu

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Project plan

Where? Tartu, Estonia

How? 10 primary schools

NO₂ passive samplers

... two passive NO₂ samplers at one location (2,4 m)

... two sampling locations around each school - in front of school (traffic related) and schoolyard (background)

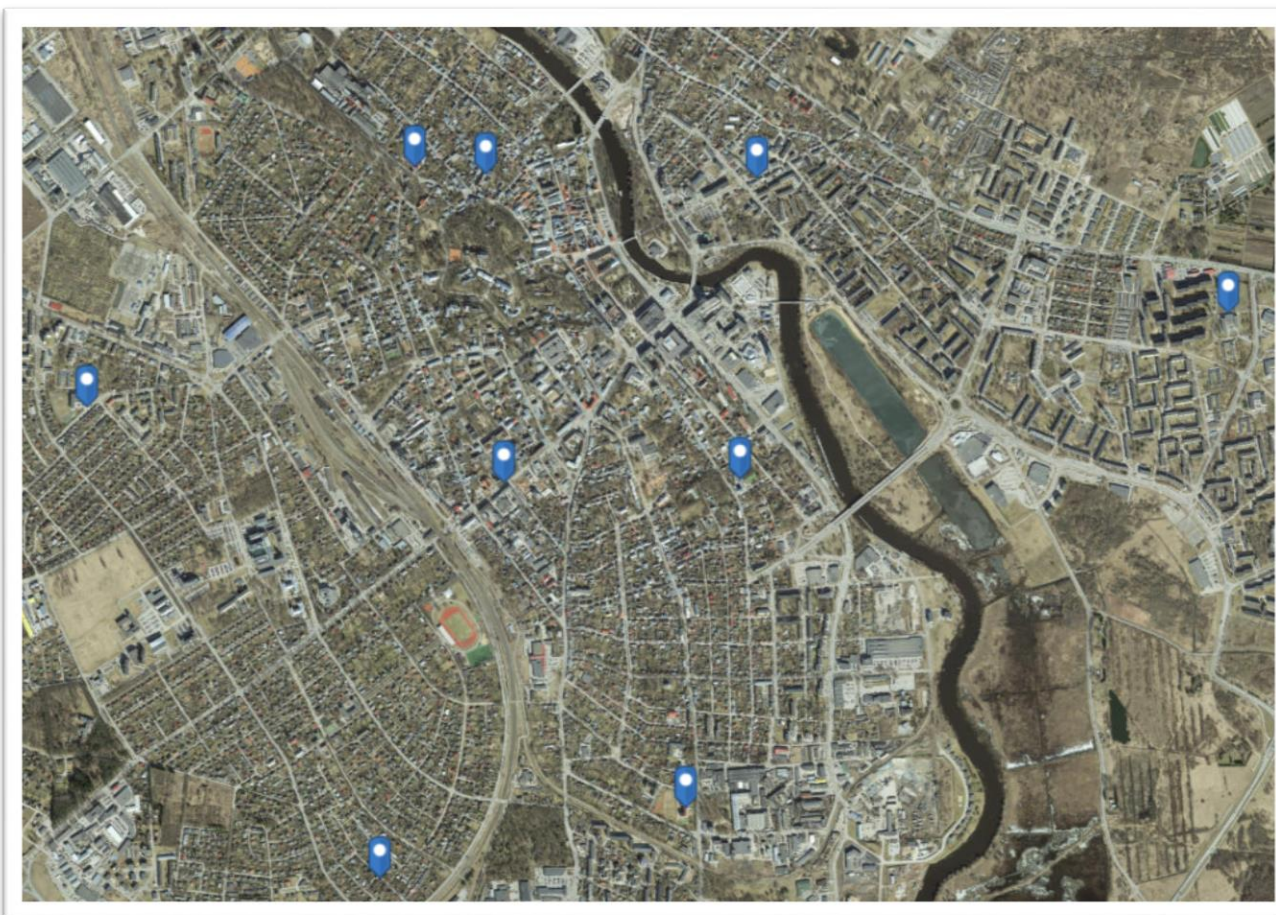
Comparison with air quality monitoring station data

Impact analysed by questionnaires (before and after)

When? 4 weeks (16th September –14th October)

Schools involved in the project

- | | | |
|-----------------------------|---------------------------|-----------------------------------|
| 1) Tartu Forselius School | 4) Tartu Kesklinna School | 6) Tartu Kivilinna School |
| 2) Tartu Karlova School | 5) Tartu Catholic School | 7) Tartu Christian Primary School |
| 3) Tartu Mart Reinik School | 6) Tartu Raatuse School | 9) Tartu Veeriku School |



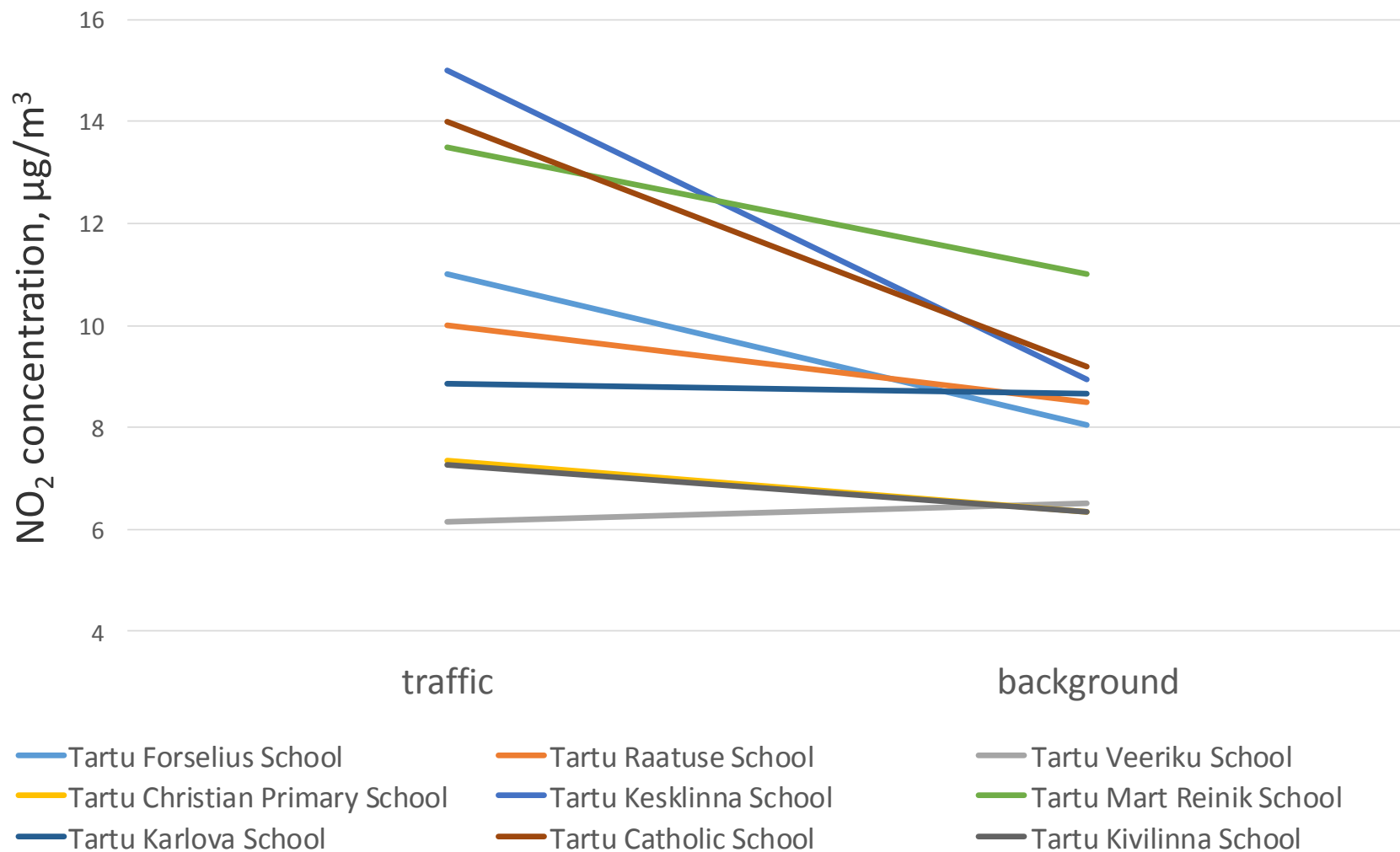
NO₂ passive samplers



Measurement results

Name of school	Location	Distance to closest main road	Number of vehicles during the rush hour		NO ₂ concentration µg/m ³	
			Morning	Evening	Sampler 1	Sampler 2
Tartu Kesklinna School	traffic	8 m	526	771	16	14
	background				8.7	9.2
Tartu Catholic School	traffic	16 m	948	647	15	13
	background				8.7	9.7
Tartu Mart Reinik School	traffic	10 m	1710	1749	13	14
	background				11	11
Tartu Forselius School	traffic	21 m	1030	768	11	11
	background				8.4	7.7
Tartu Raatuse School	traffic	11 m	554	274	10	10
	background				8.3	8.7
Tartu Karlova School	traffic	5 m	97	46	10	7.7
	background				8.3	9
Tartu Kivilinna School	traffic	34 m	533	495	7.9	6.6
	background				6.5	6.2
Tartu Christian Primary School	traffic	5 m	-	-	7.5	7.2
	background				6.3	6.4
Tartu Veeriku School	traffic	15 m	59	26	6.7	5.6
	background				6.4	6.6

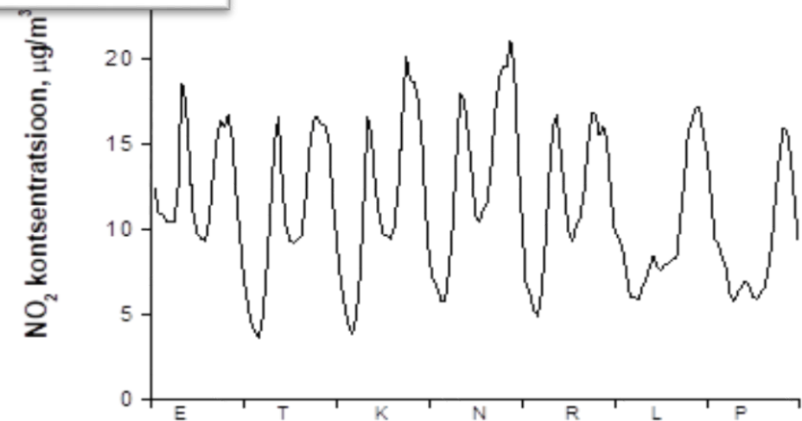
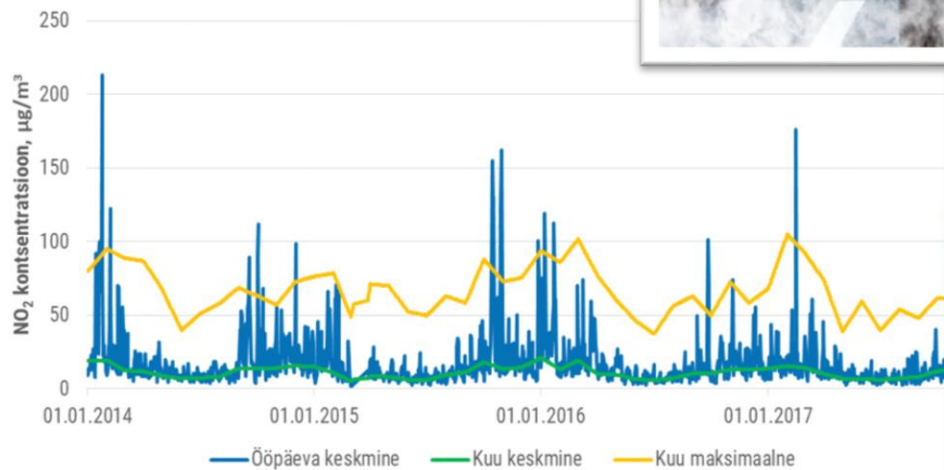
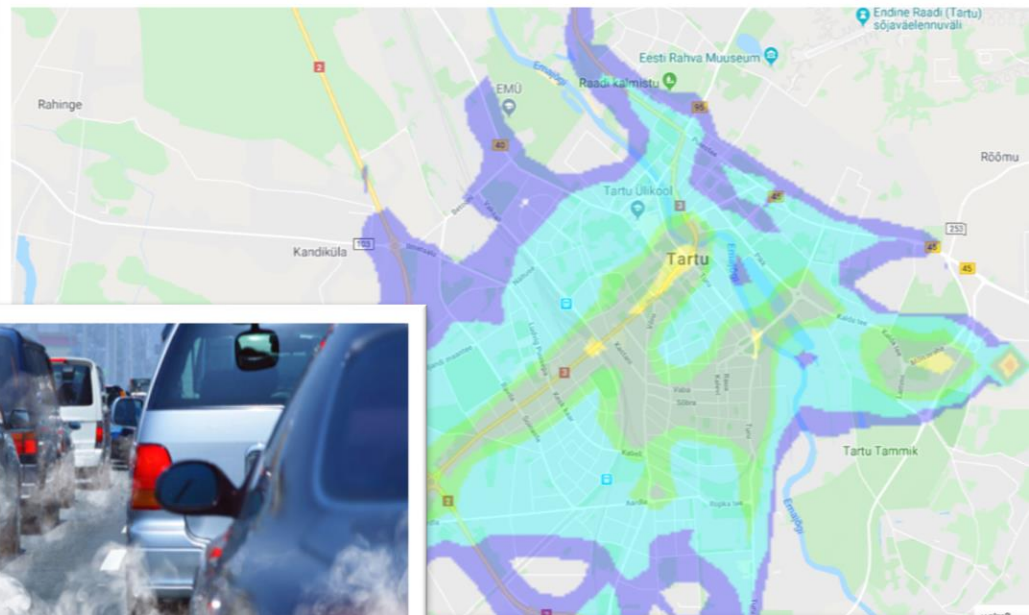
Measurement results



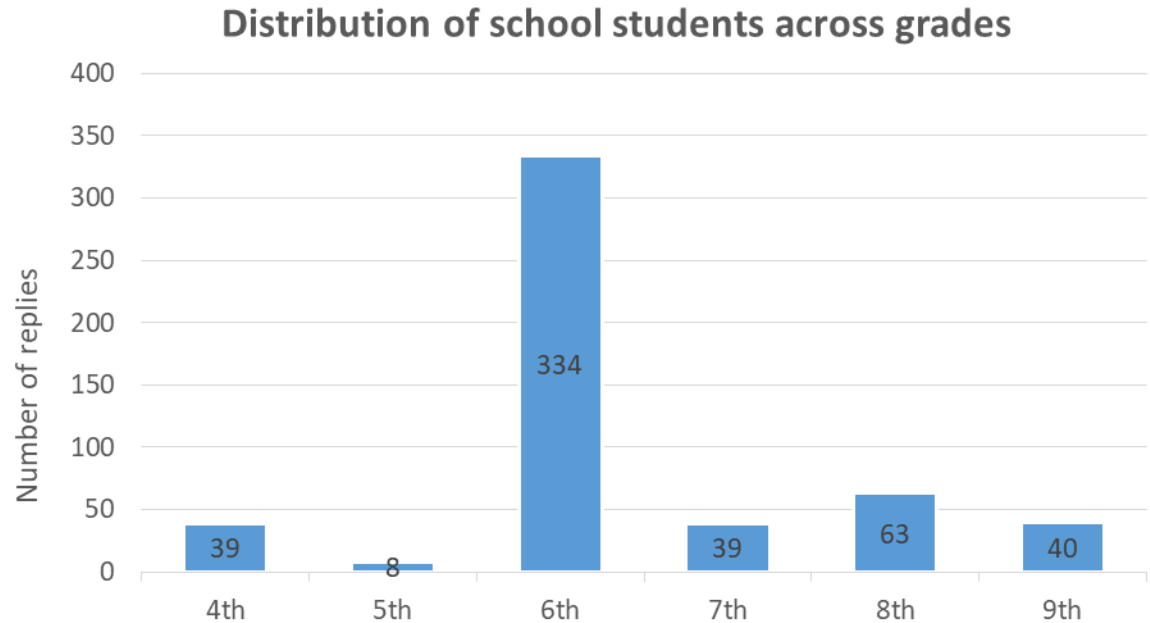
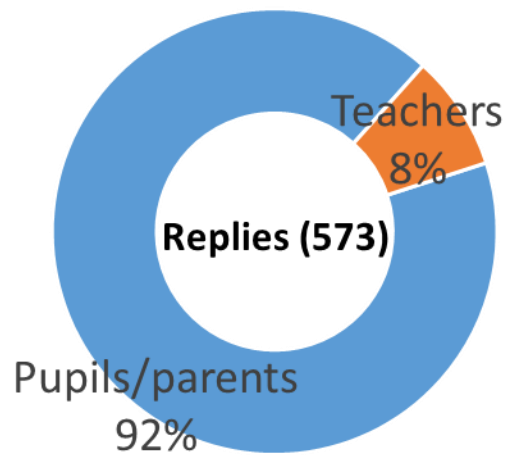
Communication



- ✓ Schools – questionnaire, discussions with the pupils and teachers
- ✓ Media – articles in newspapers, radio, social media etc
- ✓ Local government - a cooperation with the Tartu City Government

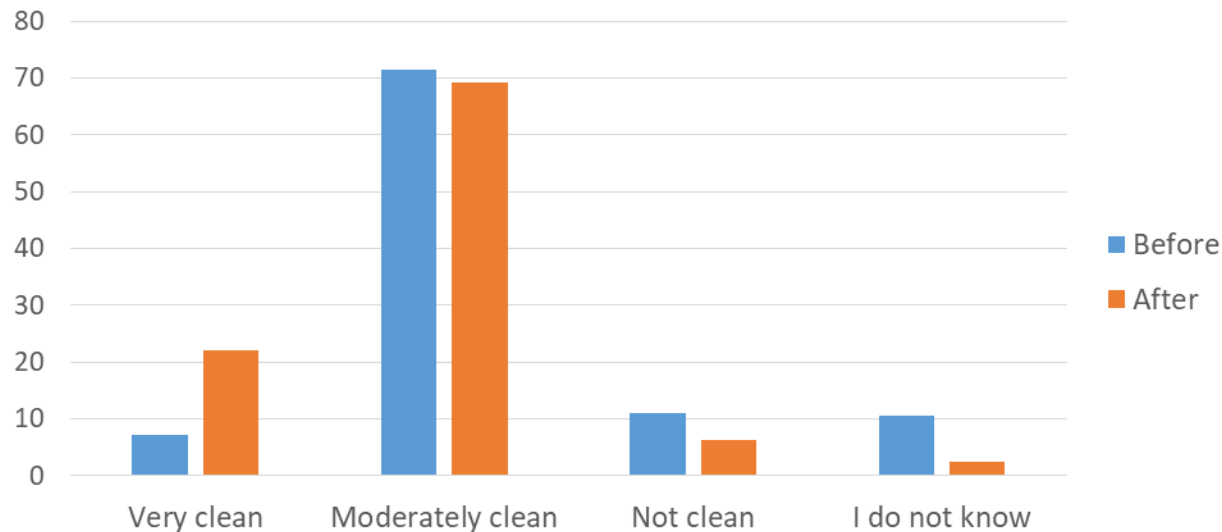


Questionnaire

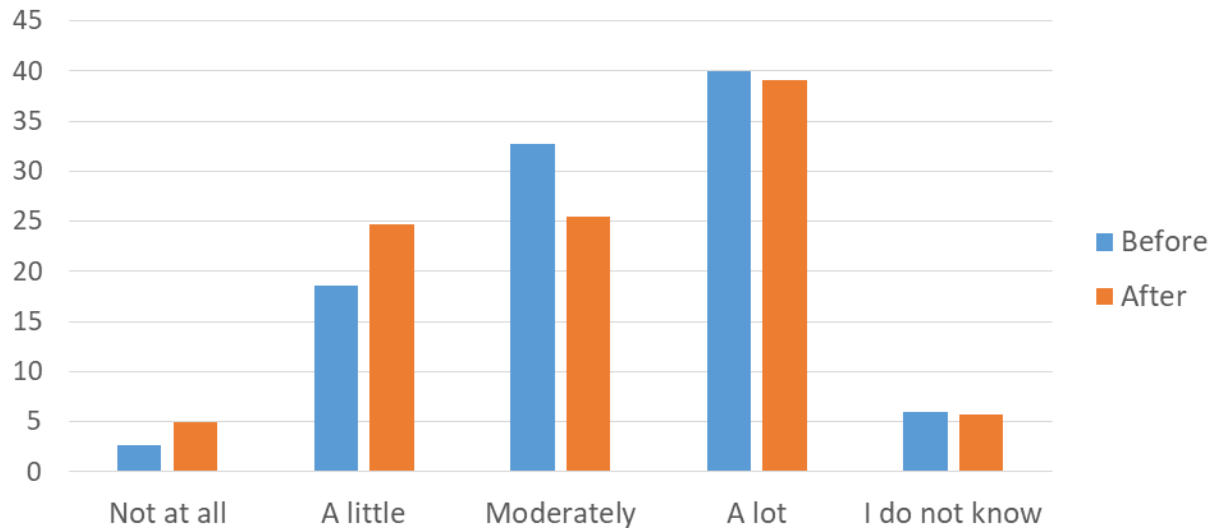


Average age of pupils – 12-13 years (6th grade)

How clean is the air close to your school?



Does air pollution where you live affect your health?



Which sources pollute the air around your school most?

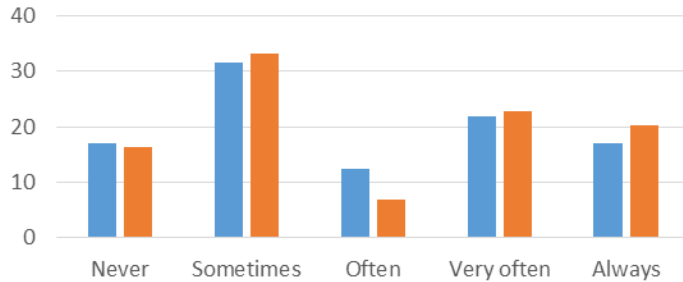
- 1) Cars
- 2) Motorway
- 3) Industry
- 4) Wood stoves and open fireplaces
- 5) Construction sites
- 6) Power plants
- 7) Barbecue and fires in people's gardens

How do you usually come to school?

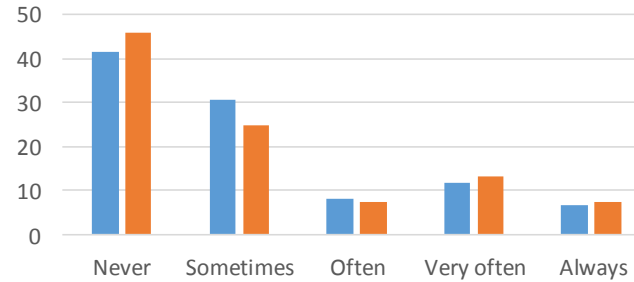
■ Before

■ After

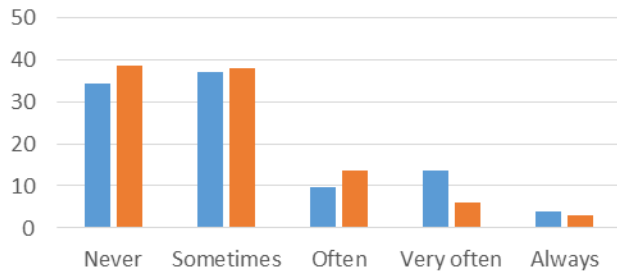
Car



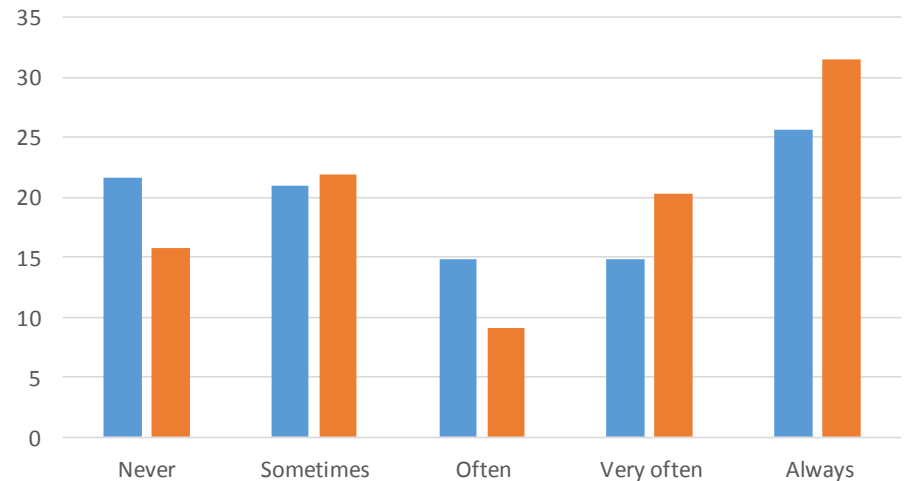
Bus



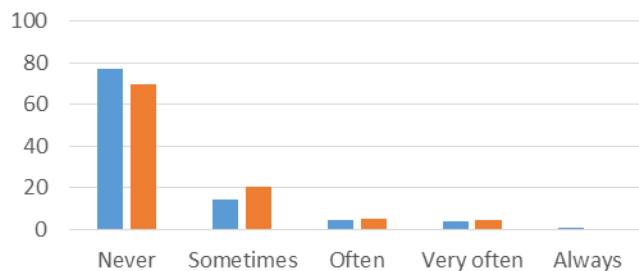
Bicycle



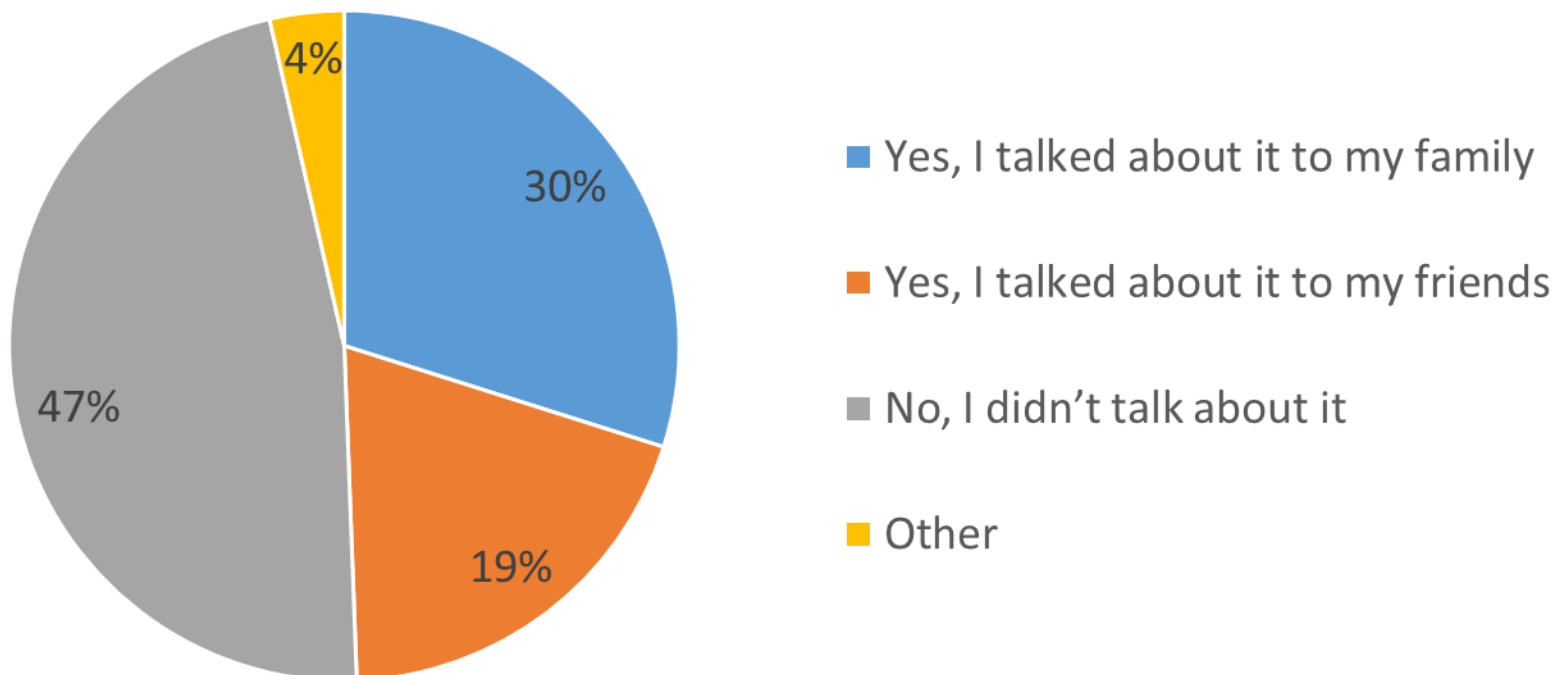
Walk



Push or electric scooter



Did you talk about your air pollution measurements to other people?





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Thank you!

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