



National Environment Protection Agencies (EPAs) & the European Environment Agency (EEA)

***European-wide
citizen science initiative***

***2019 Ecsite Conference
June 2019
Copenhagen, Denmark***

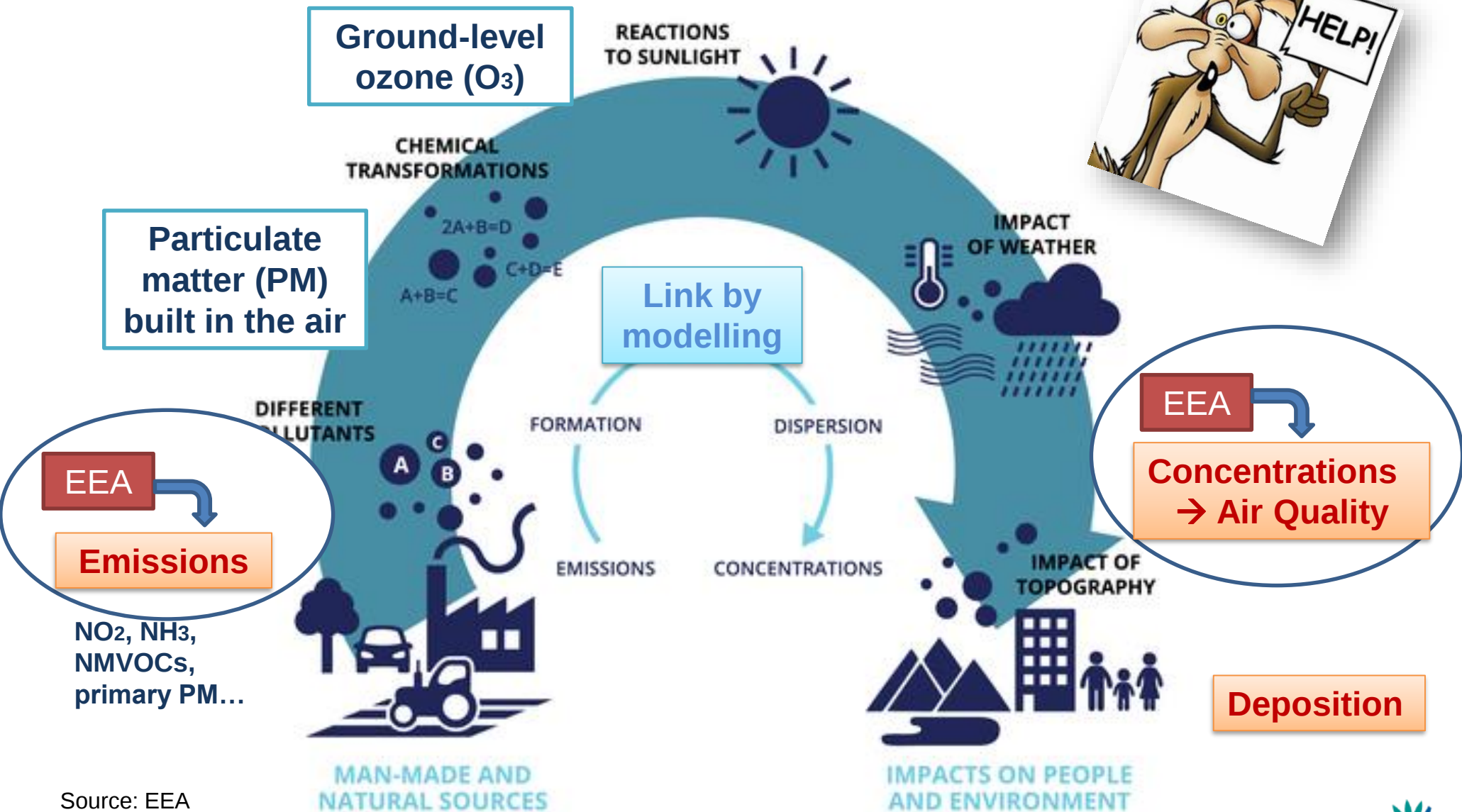
Anke Lükewille (EEA) & EPA colleagues



Ny Hollænderskolen, Frederiksberg/Copenhagen
(Picture: Anke Lükewille)

<https://www.eea.europa.eu/themes/air/cleanair-at-school>
<https://www.youtube.com/watch?v=IPXlvaXI0xg>

Air pollution – a complex issue...

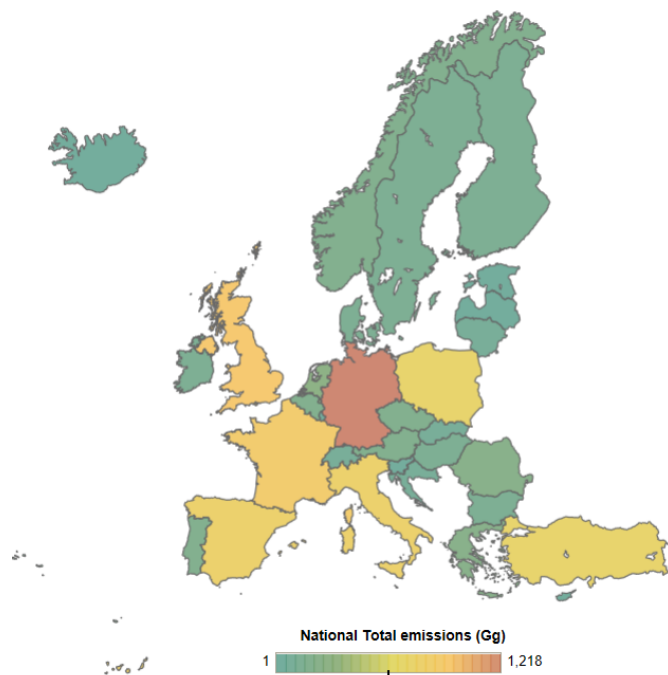


Source: EEA



Air pollutant emissions – EEA collects data

NOx by country (2016)

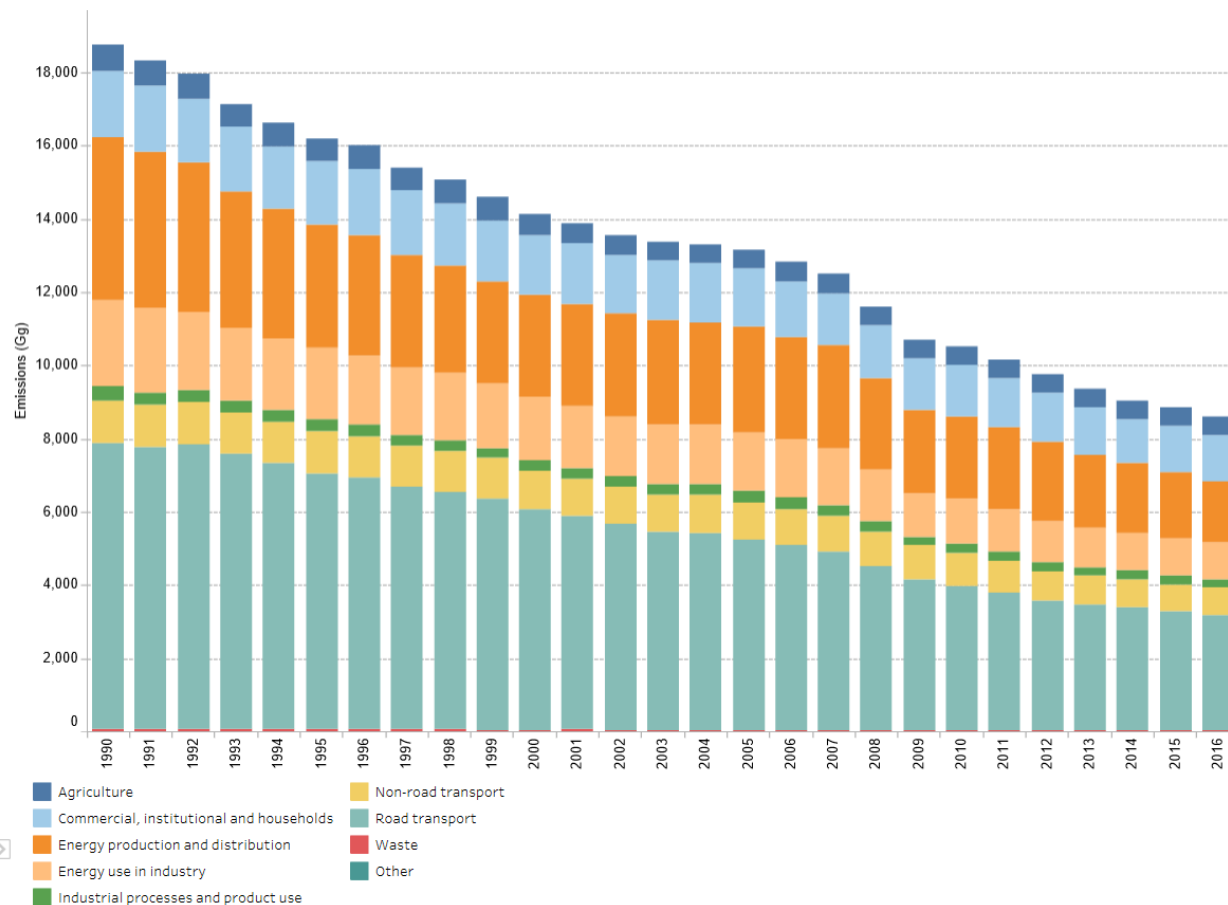


OpenStreetMap contributors

Note: Please zoom in to see the results for small countries such as Lichtenstein.

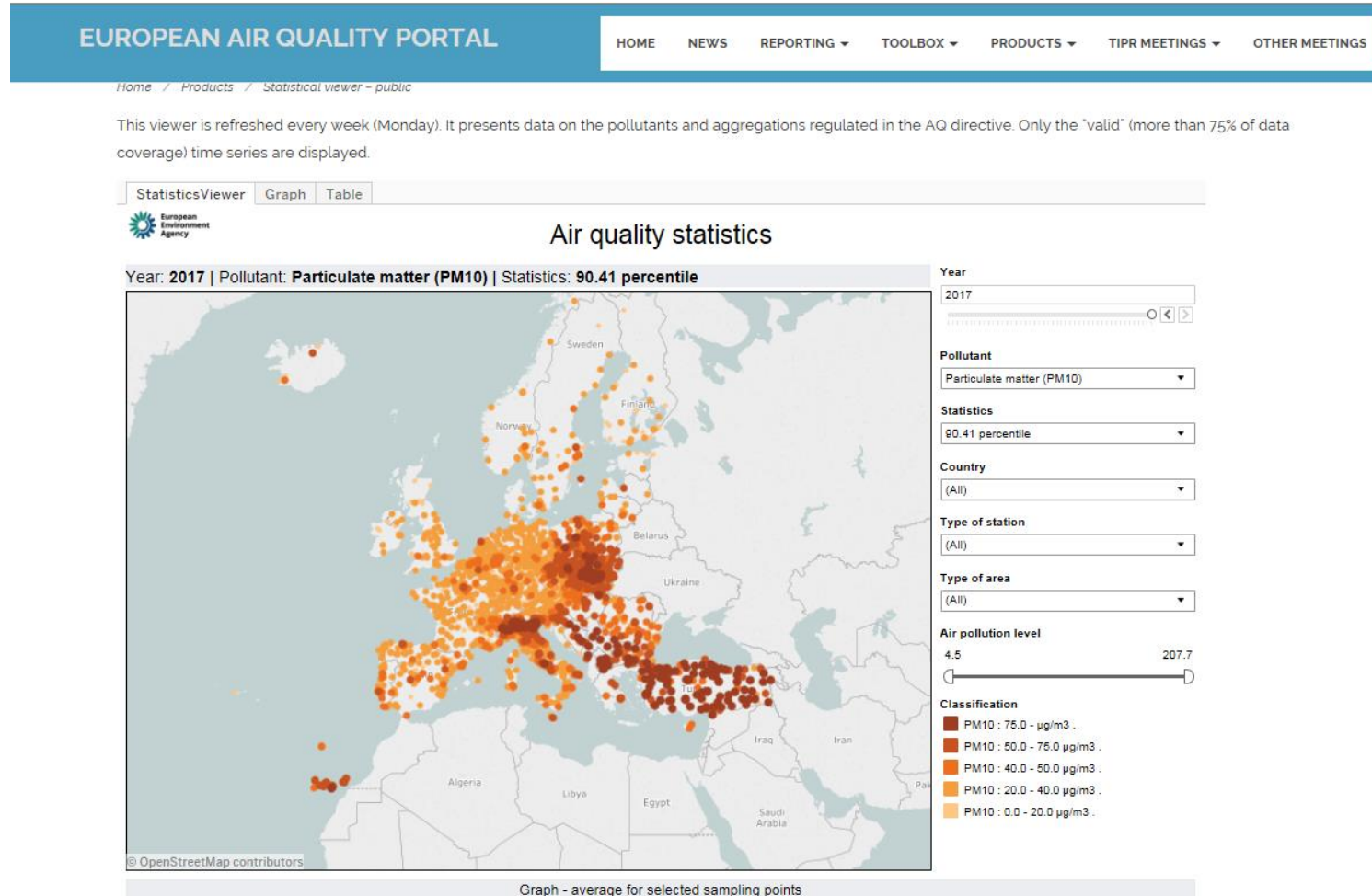
Map shows emissions for year:

NOx by sector



<https://www.eea.europa.eu/data-and-maps/dashboards/air-pollutant-emissions-data-viewer-1>

Air pollutant concentrations – EEA collects data



<https://www.eea.europa.eu/data-and-maps/dashboards/air-quality-statistics>

<http://aqportal.discomap.eea.europa.eu/products/data-viewers/utd-viewer/>

CleanAir@School



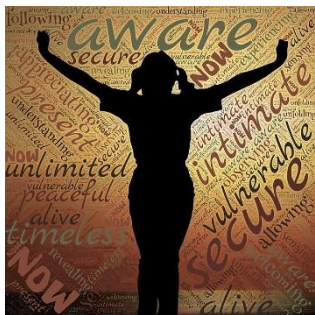
EEA – overall coordination

“What are effective ways of using citizen science to change behaviour of people in and around schools with regard to their own actions that influence air quality?”

Local schools setting up their own projects – coordinated by EPAs



1. To raise public awareness of air quality and to **highlight on-going activities of the participating organisations.**



2. To demonstrate how such initiatives may complement 'official' air quality monitoring to provide **better knowledge of local AQ.**



3. To support the European Commission's reporting and monitoring fitness check: ***Action 8: 'Promote the wider use of citizen science to complement environmental reporting'.***

Stepwise actions leading to the **development of guidelines in 2019.**

Minimum requirements... & recommendations

Citizen science on air quality

[HOME](#)[BACKGROUND](#)[CONCEPT ▾](#)[ACTIVITIES ▾](#)[COUNTRY SPECIFICS ▾](#)[MEETINGS ▾](#)[PRODUCTS ▾](#)[USEFUL LINKS ▾](#)

MINIMUM REQUIREMENTS

[Home](#) / [Concept](#) / [Minimum requirements](#)

CleanAir@School

NO₂

PROPOSAL BASED ON THE DISCUSSIONS DURING THE MEETING (18/10/2018)

- NO₂ passive samplers (chosen by participants themselves)
- Four week period at least
- Two passive NO₂ samplers at one location
- Measurement campaign should be organised ideally in spring or if not possible in early autumn
- Placement: busy street/street canyon in front of school and schoolyard or similar place relatively far away from street (and road to school)
- Minimum number of schools is one per city
- Meta data: info on location of schools, kind of school (age of pupils)
- Concept of communication between school (teachers, parent representatives) and citizens (pupils, parents)



Test map viewer:

https://tableau.discomap.eea.europa.eu/t/Aironline/views/CStest/Dashboard?iframeSizedToWindow=true&embed=y&:showAppBanner=false&:display_count=no&:showVizHome=no

European Environment Agency





GOBIERNO
DE ESPAÑA

MINISTERIO
PARA LA TRANSICIÓN ECOLÓGICA



Spain

Citizen Science Project in Spain

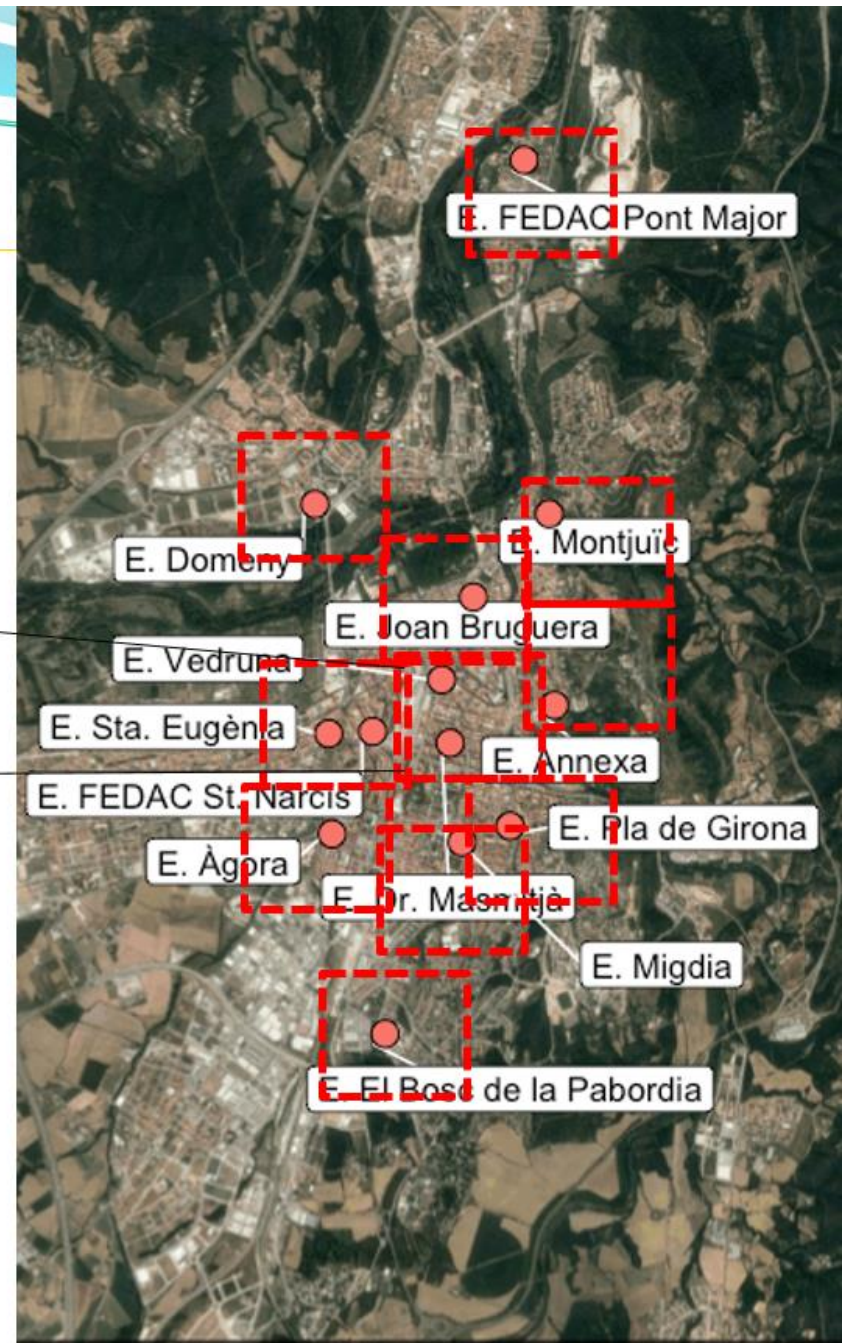
Alberto Campos Garcia, Jaume Targa



At each school

in Girona

- Select 15-20 points around each school



- Minimum:
 - Main school entrance
 - 1 Indoor
 - 1 playground
 - Traffic & background (50:50)

Pilot study



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What is the “cleanest”
way to come to school?



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Rijksinstituut voor Volksgezondheid
en Milieu
Ministerie van Volksgezondheid,
Welzijn en Sport

Hester Volten

Wanted!



Learn to measure air quality

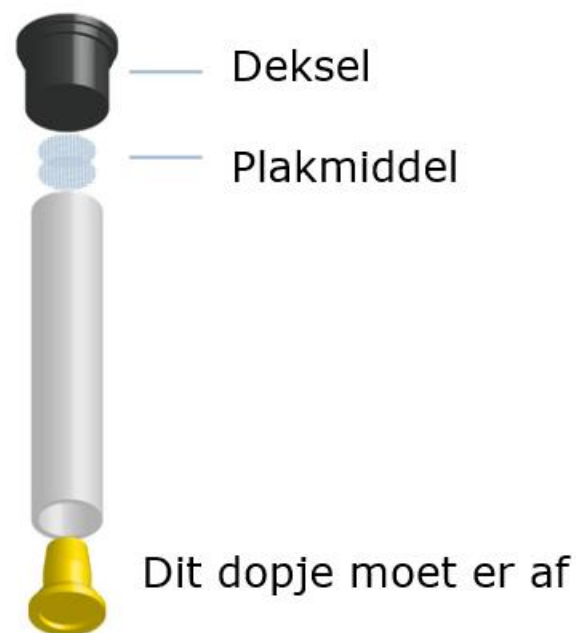




vangen: meten!



Het meetbuisje



We maken groepjes Elk groepje 2 plekken

1 met VEEL , 1 met weinig 

In de klas:

1. Zoek op kaart 2 plekken
2. Vul

Naar buiten:

3. Hang buisjes op de twee plekken
4. Vul

Over 4 weken:

5. Haal buisjes op
6. Vul



Waar hangen de stikstofdioxide-buisjes?

Naam school _____

Naam groepje _____

Code buisjes ____ NL ____ A/B



Ophangen: Haal de gele dopjes  van de 2 buisjes. Hang de zwarte deksel naar boven

Datum ophangen _____ 

Tijdstip ophangen _____ 

Hoogte buisjes _____ cm

Plaats buisjes _____ 

Bijzonderheden over de plaats. Is er dichtbij een muur, een boom, een hek of een weg?








Maak een foto en/of tekening

Ophalen: Doe de gele dopjes  op de 2 buisjes

Datum ophalen _____ 

Tijdstip ophalen _____ 

Bijzonderheden bij ophalen van de twee buisjes. Zat er op één vogelpoep? Was er een buisje weg?

Buisje A	Buisje B
_____	_____
_____	_____
_____	_____

Fair with Air at School

Citizen Science Project on Air Quality

Stefano Miceli

CleanAir@School



- Summer baseline monitoring (10 schools)

Sep
2018

- Setting of timeframes

Nov
2018

- Circular to all schools – call for interest

Jan
2019

- Selection of 25 participating schools

Feb
2019

- Meeting with school contact points

Feb
2019

- Monitoring

Mar – Jun
2019

- Analysis and Compilation of Results

Jul – Oct
2019

- Closing Conference

Nov
2019

reference



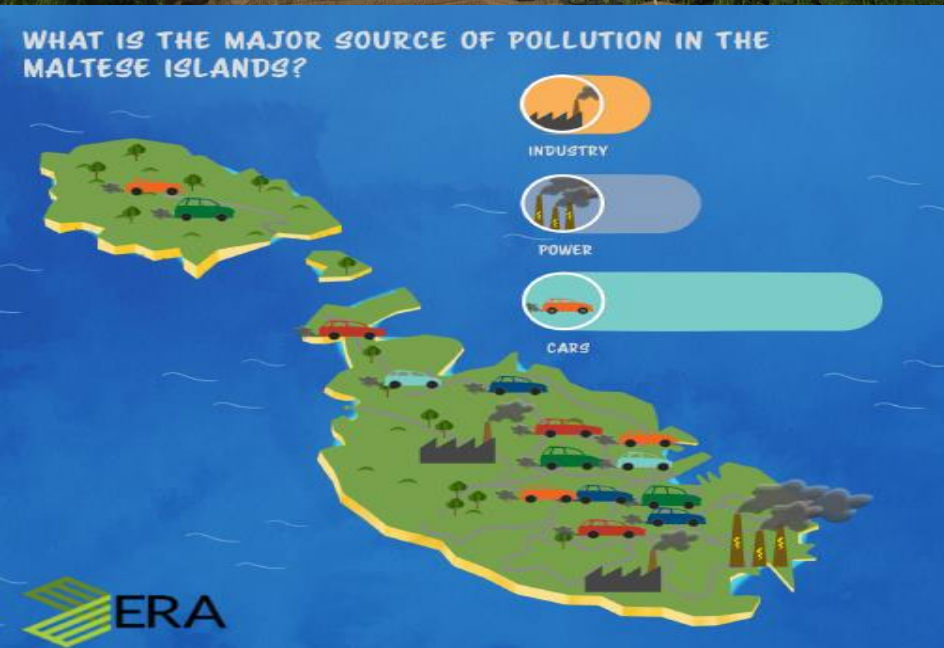
Summer monitoring



Spring monitoring



EU Green Week 2019 Valletta Green Festival 9th – 12th May



Scottish Environment Protection Agency

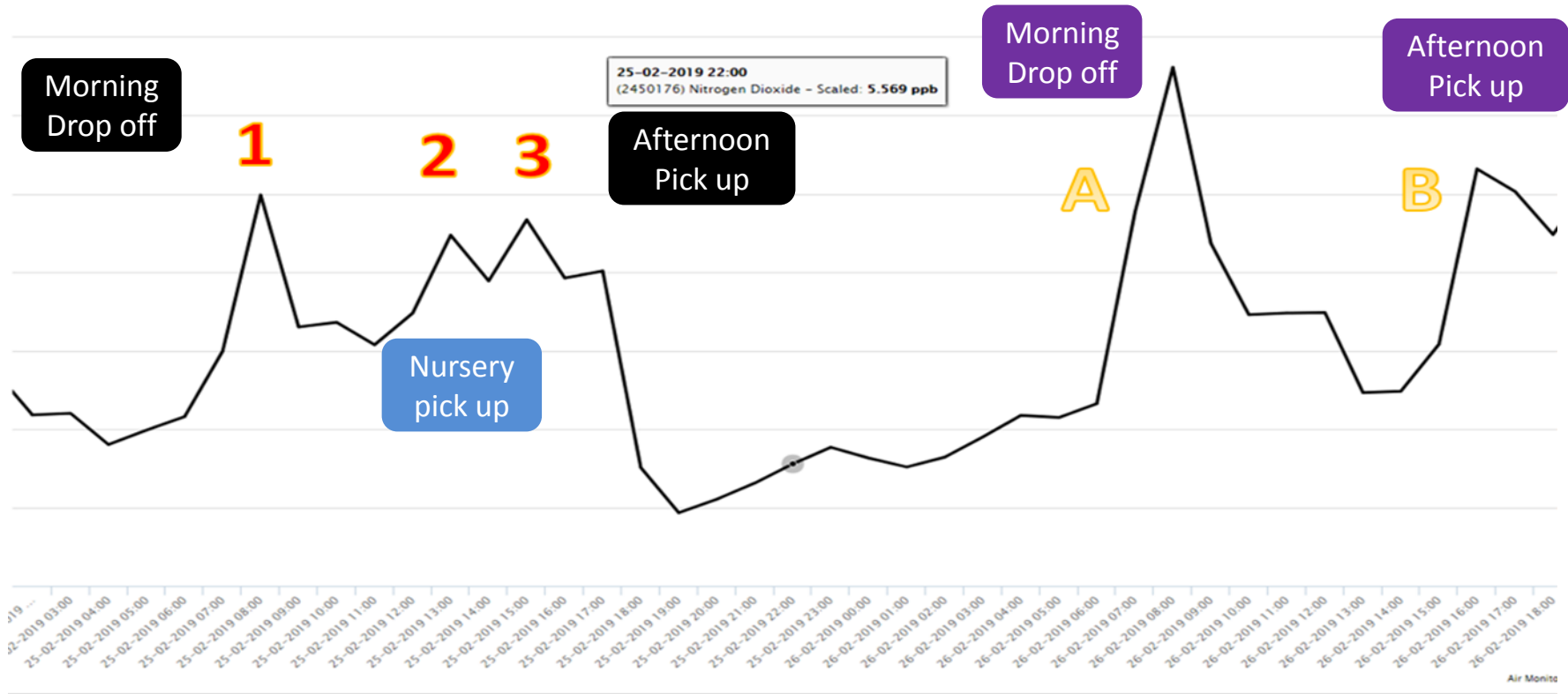
Citizen Science Programme - update

Scotland, UK

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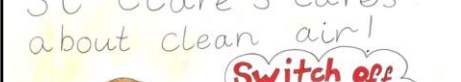
Colin Gillespie, Graham Applegate

St Clare's Primary School – suburban school with low background



St Clare's cares about our air

Designed By: Cecily Coffey-Craig
St Clare's Primary School



St Clare's Cares
about clean air!

Switch off
your engine
and save
my air!



 **SEPA**
 Scottish Environment
 Protection Agency
Beathachadh: Eòran
A'ruinnichail na h-Alba

 **Healthier
Scotland**
Government

 **Cycling Scotland**

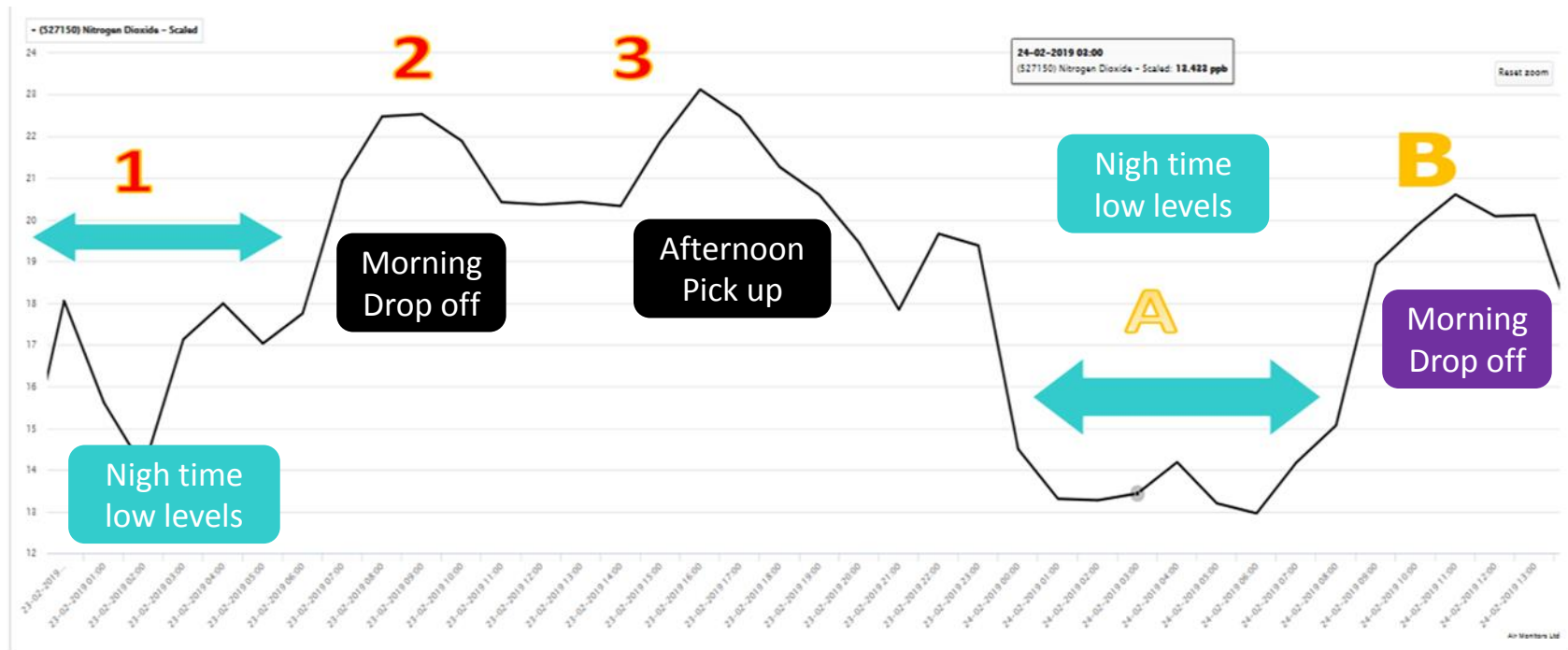
 **LET'S
WALK TO
SCHOOL**

 **European
Environment
Agency**

- **Linked to active travel campaign and Beat the Street**



Cross Arthurlie Primary – urban school with higher daytime background



- Linked to active travel campaign and Beat the Street



MAKE AIR QUALITY YOUR NUMBER 1 PRIORITY



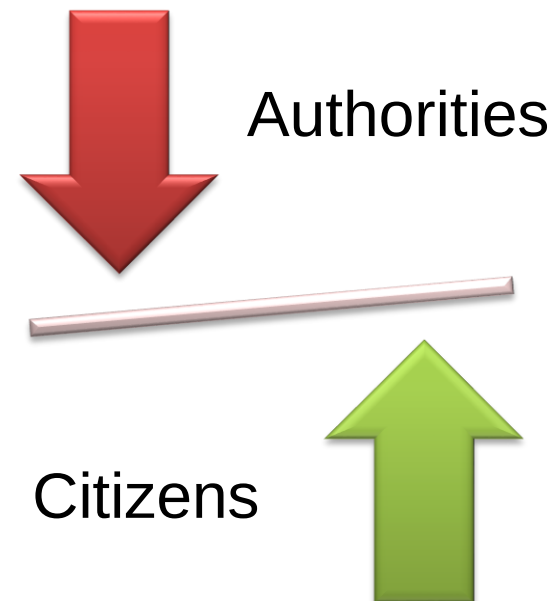
Misha Biswas P6C
Kirkhill Primary School

Instead of taking a car or bus to go to school and releasing harmful gases and pollution you could try to cycle, walk, scooter, skateboard or park and stride to reduce the amount of pollution cars and buses make.

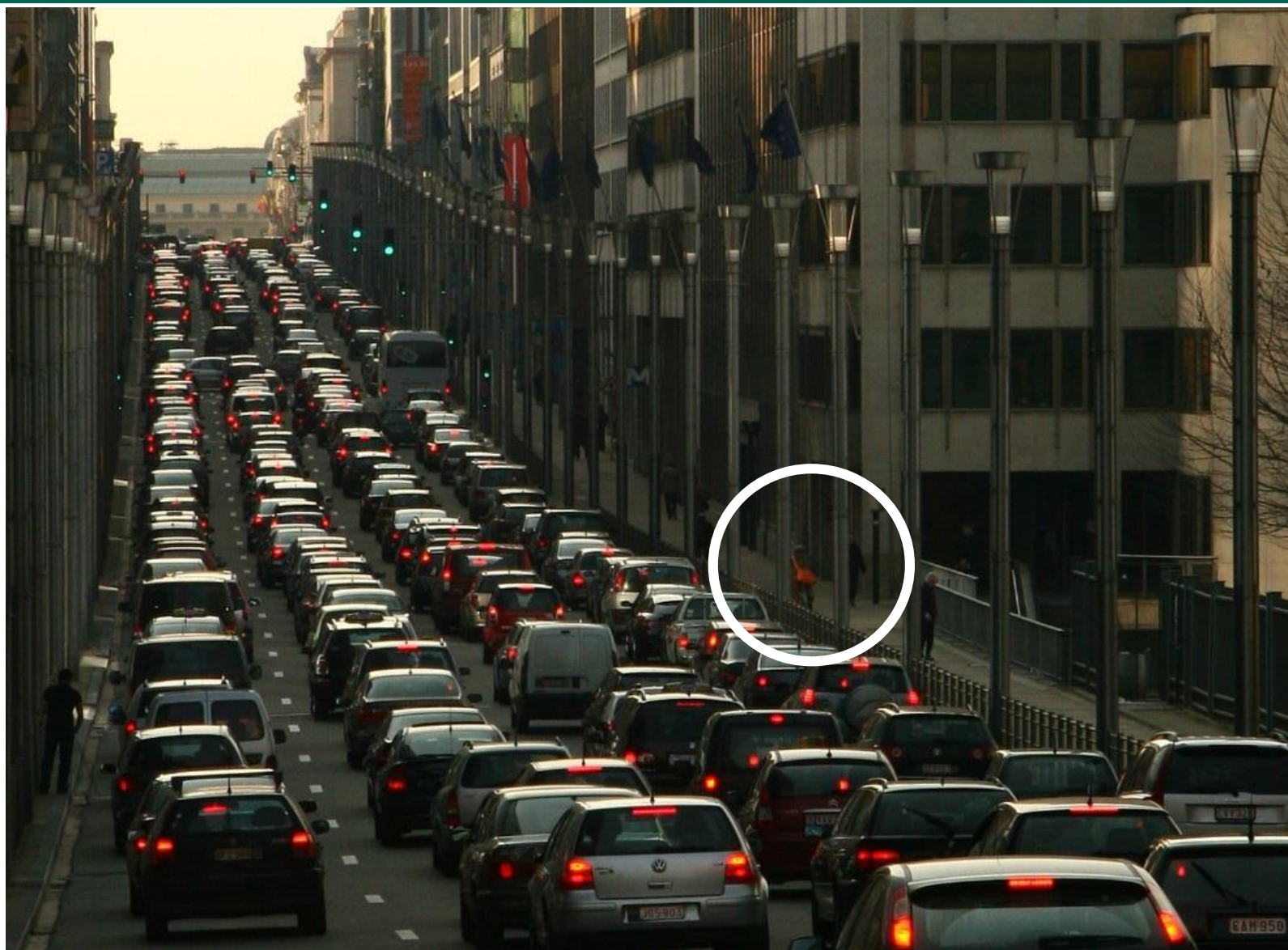
Re-establish trust



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Change (urban) mobility!



Electric car (sharing) ! – energy mix?



Cycling network, e.g. in Copenhagen!

