

# We study 1000 children in 5 Italian cities

## Methodology

In areas close to the schools and in the same periods, analysis on samples of air and cells of the oral mucosa of children, will be carried out to verify a possible association between exposure to air pollutants and biological effects.

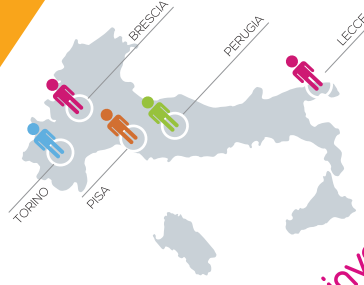


## AIR

Evaluation of cyto-and genotoxicity on in vitro human cell cultures and in bacterial cells. Collection of APPA data on air pollutants.

## CHILDREN

Search for premature damage to DNA (Comet assay and micronucleus test). Data collection on possible indoor air pollutants and lifestyles.



## People involved

The project will involve 1,000 children of 6-8 years old, in 5 Italian cities. The recruitment will take place at the elementary schools and after the consent of parents and children.

# We study early effects of air pollutants

## Partner

The study MAPEC-LIFE was approved in 2013 by the European Commission and funded by the LIFE + program, the European Union's environment fund. The project is coordinated by the University of Brescia.



See the instructions here:

[mapec-life.eu/swan](http://mapec-life.eu/swan)



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**Providing information**  
To guide public health decisions to protect the effects of air pollution.

**Addressing environmental issues**  
in schools.

**Expected impact**  
Deepen scientific knowledge on the effect of pollutants.



**Monitoring of Air Pollution**  
Effects on children to support public health policies



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**Objectives**  
Studying of early biological effects of pollutants in oral mucosa cells and the factors that can affect this damages in children of school age.

**Building global models**  
to estimate the risk and to develop environmental policies aimed to the protection of health.

**Children in particular**  
are the most vulnerable. Some factors, such as exposure to other pollutants or lifestyle, however, can affect the health effects.

**Air pollution and health effects**  
Adverse effects of air pollution on human health have been well documented.

**Expected Results**  
If the indicators of biological effect will show a good association with the parameters of air pollution, these could be a simple and inexpensive test to assess environmental situations and interventions to counteract the effects of pollution.



**We aim to better know the effects of pollution exposure**

**We aim to orient policy options for the health protection**