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Air Pollution in Paris

Addressing the Problem

Possible Sources of Financing

Timeline of Project Implementation



The first WHO conference for air pollution took place in Geneva in early November 2018.

Air pollution is a major environmental risk to health. By reducing air pollution levels, countries can reduce the burden of disease from stroke, heart disease, lung cancer, and both chronic and acute respiratory diseases, including asthma.

The lower the levels of air pollution, the better the cardiovascular and respiratory health of the population will be, both long- and short-term.

The WHO Air Quality Guidelines: Global Update 2005 provide an assessment of health effects of air pollution and thresholds for health-harmful pollution levels.

In 2016, 91% of the world population was living in places where the WHO air quality guidelines levels were not met.

Ambient (outdoor air pollution) in both cities and rural areas was estimated to cause 4.2 million premature deaths worldwide in 2016.

Some 91% of those premature deaths occurred in low- and middle-income countries, and the greatest number in the WHO South-East Asia and Western Pacific regions.

Policies and investments supporting cleaner transport, energy-efficient homes, power generation, industry and better municipal waste management would reduce key sources of outdoor air pollution.

In addition to outdoor air pollution, indoor smoke is a serious health risk for some 3 billion people who cook and heat their homes with biomass, kerosene fuels and coal.

4.2 million deaths every

year as a result of exposure to ambient (outdoor) air pollution

3.8 million deaths every

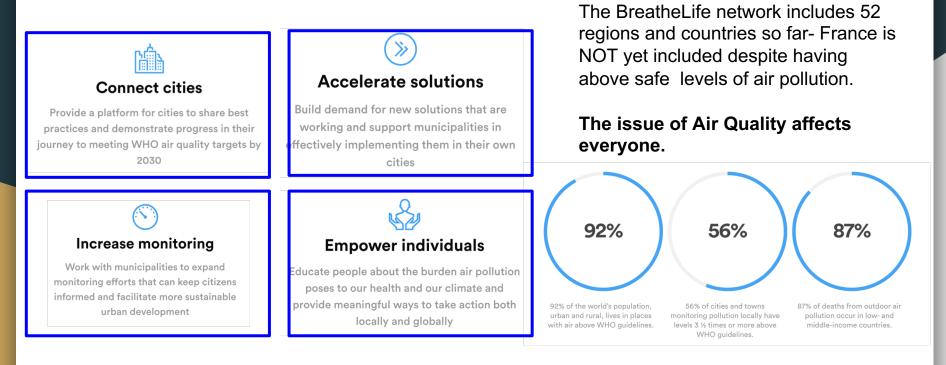
year as a result of household exposure to smoke from dirty cookstoves and fuels

 $91\% \quad \text{of the world's population lives in}$

places where air quality exceeds WHO guideline limits



WHO have launched the BREATHELIFE campaign for cities and organisations







Air Pollution in Paris

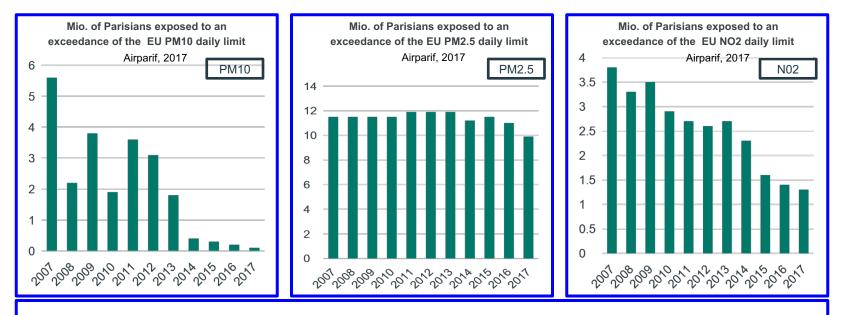
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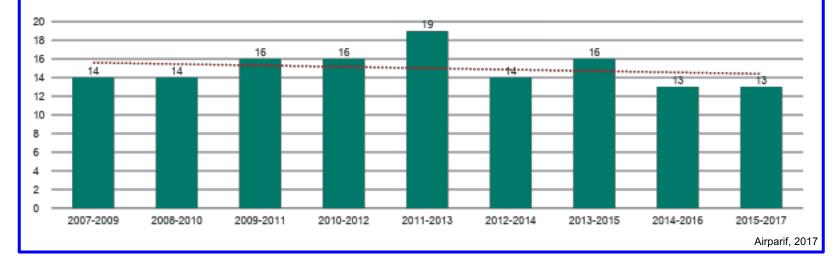
Paris has considerably improved its air quality over the last decade...



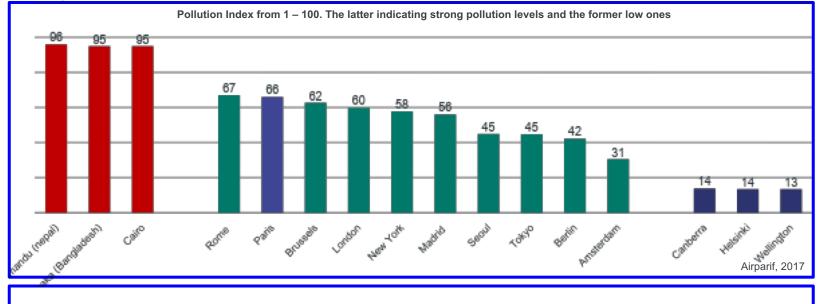
The latest air quality report indicates that Paris has improved its air quality. However, >10mio Parisians remain exposed for a least 1 day to excess air pollution over the course of a year .

However, the number of days exceeding EU target value for the protection of human health has remained stable.

The number of days exceeding EU target value for the protection of human health (120 g/m³ - 8 hour average not over 25 days of exceedance for a 3 year period



Paris is the second most polluted EU-Capital behind Rome.



Although Paris has indeed improved, there remains room for improvement when compared to other developed metropoles.

This has tangible health consequences for those exposed.

8 – cigarettes number smoked a day during a pollution peak. There are currently 13 pollution peaks a year. This amounts to an equal of 104 cigarettes smoked due to air pollution and Paris and its suburbs (Institut de veille sanitaire, 2015)

103,3 Billion - represents the

overall socio-economic cost related to air pollution in France (Ministry of Health, 2016).

2500 – represents the yearly deaths caused by air pollution and the inhalation of fine particles in Paris (Ministry of Health, 2016).

2 Years – of less life expectancy to those

exposed to current levels of air pollution in French cities, including Paris (Ministry of Health, 2016).





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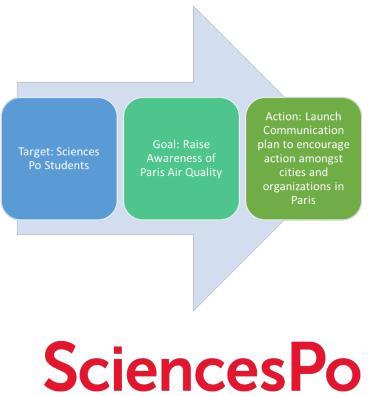
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Understanding the scope and impact of air pollution is the first step to keeping our air safe.

This is a global problem that affects all cities in the world. France has not made as much progress as other cities in raising awareness amongst its population and organizations in order to implement the changes needed to make progress. The network of Sciences Po students in Paris can be leveraged as a starting point for raising awareness of this issue and perhaps act as a baseline for implementing local authorities to take more action. A thorough communication plan around the Sciences Po Campus will be outlined in this brochure as a possible course of action.



Risks for Health



Heart Disease



Lung Cancer



Stroke



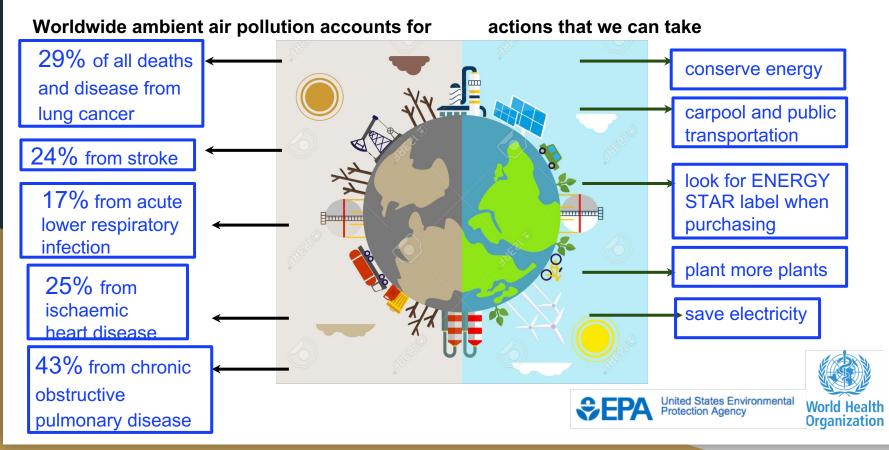
Acute Respiratory Infections





Chronic Obstructive Pulmonary Disease

How to address the problem of air pollution?



A Comparison of Air Pollution levels in major Cities

Country	City	Annual mean ug/m3
Saudi Arabia	Riyadh	156
India	Delhi	122
India	Lucknow	113
Pakistan	Peshawar	111
Bangladesh	Dhaka	90
China	Beijing	85
Egypte	Cairo	76
China	Shanghai	52
Turkey	Istanbul	33
Hong Kong	Hong Kong	29
Poland	Warsaw	26
Hunagry	Budapest	25
Korea	Seol	24
Belgium	Brussels	18
France	Paris	18
Germany	Frankfurt	18

Data source : WHO Global Urban Ambient Air Pollution Database

- The air quality of a city an be assessed according to the level of PM 2.5 (Fine Particles of less than 2.5 microns) or the level of PM10 (Particles of less than 10 microns in diameter)
- The World Health Organisation recommends a minimum air quality level of 10 ug/m3 (PM 2.5)
- Paris's air may have almost twice as many PM2.5s as the levels recommended by the WHO (18 micrograms per cubic metre compared with 10µg/m³)
- However, there are cities with much worse air quality levels such as Delhi with 122 ug/m3 or Beijing with 85 ug/m3
- Despite this fact, the air quality of Paris remains relatively worse compared to certain European and North American cities such as London (15 ug/m3), Los Angeles (11 ug/m3) and Madrid (10 ug/m3)
- From this data, it can be concluded that poor air quality is pressing concern for the health of Parisians and that they should be more informed about this issue.

Fight against urban air pollution: the case of Paris

Vehicle pollution sticker scheme (CritAir) launched in July 2017

Drivers in Paris should display an anti-pollution sticker on their vehicle or risk facing fines.

The different coloured Crit'Air stickers indicate the age and cleanliness of a vehicle. Certain vehicles such as petrol and diesel cars registered before 1996, vans registered before 1997 as well as scooters and motorbikes registered before 2000 and lorries, trucks and buses registered before 2001 – are banned from the city during weekdays between 8am and 8pm.

Diesel vehicles are due to be progressively outlawed in Paris by 2024, and petrol cars by 2030.

Measures to reduce Private Car Use

• Self service bike and electric car sharing programs : Velib and Autolib.

Although used as an example by many other cities, the program has experienced controversy with the failure of the "Second Generation Velib" project.

Incentives to give up private car use

Benefits of up to €600 offered by the French government to individuals to buy a bike. a public transport pass or join a car sharing scheme only if they agree to give up on their private vehicle





Our communication plan



Exposure to air pollution and airborne particulates is the 3rd cause of death in France. Low levels of awareness about this striking fact urge us to remedy this situation starting by our direct sphere of influence : the community of Sciences Po students. This will be done through an effective communication plan that consists of three major lines of action :

Organizing an "Air pollution awareness week" in Sciences Po, with the aim of maximizing its reach and impact. Designing **powerful posters**, and placing them in strategic locations, in order to raise the level of awareness and trigger behaviour change.

Building constructive partnerships with other universities and participating in existing initiatives.

The Sciences Po AIRwareness Week



Understanding air quality and its impact on our health is a crucial step towards further action. Organizing a whole awareness week will put a spotlight on this issue and maximize the expected impact of our campaign.

• A striking communication: we believe that a simple and efficient way to attract students' attention to this topic and stick in their minds is to change a usual element of campus life. How?

⇒ Sciences Po personnel wear N95 face masks : we want to invite the university personnel (security, library and cafeteria staff) to participate by wearing particulate-filtering respirators during the awareness week. This is a great way to make a statement, pique students' curiosity and make our campaign remembered. Those specific masks are proven to have cardiovascular benefits (links in the comment section). This is also to point out that simple paper masks are useless to limit one's exposure to air pollution.

 \Rightarrow Changing the library computers' background : use the library's computers as a tool to reach the maximum number of students. Home screens would present relevant information on air quality in Paris, through catchy phrases/facts, URL links to relevant studies and simple ways to engage in the fight against air pollution.

 \rightarrow The following statements can be mentioned : <u>"Air Pollution kills causes more deaths</u> than HIV, tuberculosis, diabetes and car accidents all together" or "living in Paris is equivalent to smoking 183 cigarettes a year".



The "Sciences Po AlRwareness Week



Series of conferences: the aim is to gather participants with different perspectives on the topic focusing on two major levels.

Informative material presenting the health implications, and identifying ways to limit our exposure to air pollution and improve air quality on a daily basis.

 \rightarrow This would be done with the help of physicians, especially the **"Association Santé Environnement France"** (Asef) which gathers physicians (cardiologists, pulmonologists, etc) and other specialists (physicists and healthcare professionals) **Debate:** exploring solutions to this issue by inviting local representatives, associations and health specialists. What is done at the city level to address the issue, and what policy options can help improve the situation considering their cost and efficiency? Solutions (e.g. gestion charging, bike sharing, etc.) can be discussed in a comparative approach.

 \rightarrow We identified the following organizations to participate to this initiative:

French associations : AirParif, Asef, Fondation du Souffle, RESPIRE, ATMO France, APPO.

International organizations : the WHO, The European Federation of Clean Air and Environmental Protection Associations (EFCA), The European Environment Agency.

Public institutions : Santé Publique France, The Ministry of Environment, RATP **Representatives :** Paris and Ile-de-France representatives

The Sciences Po AlRwareness Week



A GENERALI

In order to build constructive partnerships: this activity would hopefully be a conversation starter for launching strong partnerships that involve Sciences Po and its community of students in addressing the issue of Air quality. On the one hand, we want to promote cooperation with other universities and existing initiatives. On the second hand, we want to create partnerships in the corporate world with engaged companies.



Strengthening cooperation with universities

The project "AirDucation", launched by the University of Paris-Créteil and other partners, provides four online courses on Health and Air Quaplity aimed at the (youth, the general public, health professionals and regional representatives).

We want to make Sciences Po (its students at least) part of such an initiative, and encourage other big universities to join their efforts to increase the issue's visibility.

 \rightarrow We already managed to reach the program's initiators to explore areas for future cooperation.



SUez

We identified two major companies that already engage for Air quality : Suez and Generali. Given the current momentum for ESG standards in the corporate world, other bestperforming firms could be considered.

 \rightarrow Reaching those companies for sponsoring can provide us with the necessary means for the organization of the awareness week and future plans to expand the project.

→ A visit to the "Ballon Generali" (Parc André-Citroën – 75015 Paris) could be added to the Awareness week program as a way to attract more students. This hot air balloon offers a unique experience to learn about air quality.

A Powerful Poster Campaign

What?

- Use of simple visual supports. We have imagined three different posters: each have a different focus with different strategy with an ultimate similar goal: induce a shocking wake-up call for Sciences Po students
- Estimated production requirement of 100 copies.

Where?

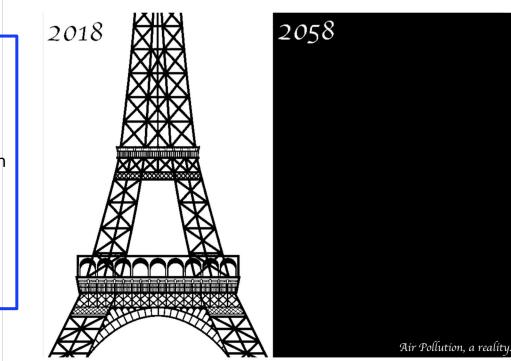
- First Key Location: <u>The restrooms of every building</u>.
 - We spend on average 2min in the toilets according to the World Toilet Organisation
 - Proof of concept student quiz stated that posters in restrooms are noticeable.
 - Simple Message supported by qualitative designs will get 70% more read than any other place
- Numerical Presence: have numeric waves of posters
 - More ecological and no risk of overprinting
 - Presence on social media and SciencesPo's platforms (library computer backgrounds, official social media accounts)



Poster Proposition #1

<u>Description:</u> Use of graphically appealing designs to engage the audience in a reflexion.

<u>Targeted Audience</u>: Any viewer <u>Strategy Used</u>: No confrontation with facts, but a visual that accompanies the intellectual path. If the audience seize the issue "all by itself", the impact of such an awareness is bound to be greater





Poster Proposition #2

<u>Description</u>: Convey striking and alarming facts using references to famous TV Series <u>Targeted Audience</u>: Sciences Po's students tend to be an audience with a strong taste for cultural references and puns <u>Strategy Used</u>: Mixing a familiar

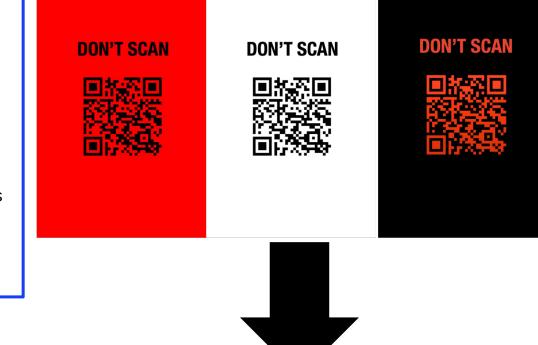
image with a diverting visual to help the audience recognize and incorporate new information





QIR Poster Concept

<u>Description:</u> This was tested as a proof of concept: no information displayed on the poster, just a QR code. This QR code should then be linked to an online interface with a compilation of striking facts. <u>Note:</u> Student questionnaire feedback said that most students would not scan a QIR code so this is not a preferential concept.





Linked Online Interface



Link to a simple with striking facts interface

OR

An already existing Webpage, like:

- BreatheLife
- AirParif
- Airducation







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• Partnership with SciencesPo Student Associations

- We would only need to print out 100 copies of our posters.
- To help finance the production of the posters, we can count on SciencesPo Student Associations: we have contacted PAVéS that is looking for student projects to finance as they have an excess budget from the CafÉ (student owned cafeteria located on the 28 Rue des Saints Pères
- We also plan to work with SciencesPo Environnement team

• Company sponsorships

- We plan to contact the SciencesPo Careers Office and SciencesPo Alumni office to reach out to companies willing to sponsor our project
- Possible partnerships with local NGOs and foundations dedicated to environmental issues







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Step 1: Poster Campaign Step 2: Awareness Week Step 3: Sustainable Collaborations

SHORT TERM March - April 2019 First, implement our poster awareness strategy in order to acquire a partly aware and curious audience in reaction to striking facts and visuals. During the springtime of 2019 (March - April).

MID TERM

Then, at the beginning of summer (Mai 2019), the awareness week should occur. Giving the team a consequent time to organise quality intervention and communication. As pollution varies seasonally, we would reconduct the operation at the beginning of the winter time for optimal awareness. LONG TERM Lastly, thanks to the student support gained during the awareness week, pressure the administration to implement the interuniversity collaboration. Those organisation could then leverage as an actor in the public sphere.





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Final Remarks

This brochure has provided information about the plans to raise awareness about Air Pollution amongst Sciences Po students. An awareness week of events paired with an eye-catching poster campaign will act as a prompt for further action.

Details regarding the proof of concept and the business model are provided in the supporting documentation. All posters were rendered by our team and original copies have also been provided.

If you require further information, please do not hesitate to get in contact.

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