

**COMMITTEE:** Environment (ILO 6)

**ISSUE:** How to Ensure the Health and Safety of Workers in Industries Affected by Air Pollution?

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## INTRODUCTION



Hello everyone! My name is Filip Drozd, I am 16 years old, and I am currently studying at the international high school in Ferney-Voltaire on the Saint Genis Pouilly campus. I am passionate about sports, especially skiing and cycling. My journey with FerMUN began last year as a resolution admin, and this year I will be chairing Committee 6. During the four days of the conference at the International Labour Organization, we will focus on the environment, specifically on the various protective measures for workers affected by air pollution.

This is a critical issue that concerns everyone as it causes thousands of deaths worldwide and can have severe consequences on our health.

## KEYWORDS

**Industry Sector:** An industry sector groups together multiple companies engaged in the same economic activity, which may be commercial, manufacturing, or service-oriented.

**Air Pollution:** Air pollution is the accumulation of particles and gases in the air that can harm human health. "Atmospheric pollution constitutes... the direct or indirect introduction by humans into the atmosphere and enclosed spaces of substances with harmful effects that may endanger human health, harm biological resources and ecosystems, contribute to climate change, damage material assets, and cause excessive odour nuisances." ([Air Law, 1996 FR](#))

**Fine Particles (PM<sub>2.5</sub>):** Fine particles are a type of particle with a diameter not exceeding 2.5 microns. Due to their extremely light weight, they remain in the air and are transported by the wind. These particles are hazardous to health because, due to their small size, they can penetrate the respiratory tract and cause illnesses such as inflammations or even disorders. ([Ministry of Ecology FR](#))

**Megacity:** A megacity is a massive urban area with significant economic and political functions, such as embassies or financial centres. The minimum population threshold for an area to be classified as a megacity is set by the UN at 10 million people. ([Wikipedia](#))

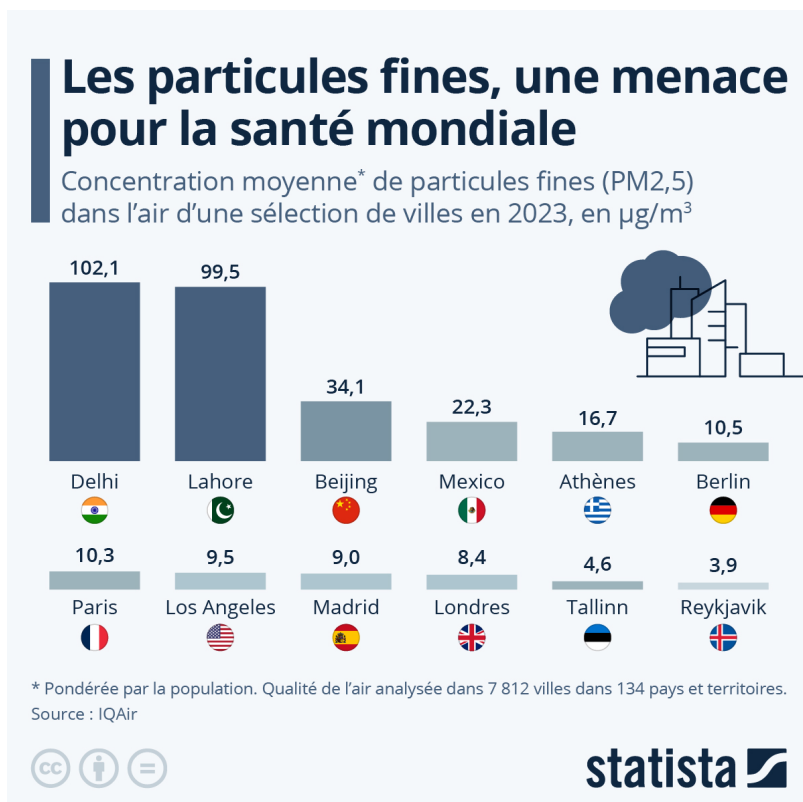
**Senate Inquiry Commission:** A senate inquiry commission is a group of senators who investigate subjects, often of great public importance. Their work can lead to detailed reports and proposals for legislative reform. ([Senate](#))

## OVERVIEW

### 1. High-Risk Sectors

Air pollution is a pervasive phenomenon on Earth, impacting all human activity sectors, including both indoor and outdoor workers. However, it is the outdoor workers who are most affected. Among them are those employed in construction and agriculture, to name a few examples. According to the International Labour Organization (ILO), over 1.6 billion people work outdoors. Working outdoors means they are more exposed to air pollution, which can be

very dangerous to health. With climate change, this situation could worsen, as climate change encourages the production of ozone in the atmosphere. Ozone, in addition to being a greenhouse gas, is a harmful pollutant and indirectly contributes to the formation of PM2.5 particles. Studies indicate that the impact of climate change on atmospheric pollutants like PM2.5 particles will increase significantly, further exposing workers to these fine particles. According to ILO estimates, 860,000 workers die each year globally



due to air pollution.

Exposure levels vary depending on the area of employment, being higher in megacities and industrial zones in low- and middle-income countries. Additionally, 89% of deaths from air pollution occur in these countries.

[https://fr.statista.com/infographie/31953/pollution-particules-fines/ \(FR\)](https://fr.statista.com/infographie/31953/pollution-particules-fines/)

### 2. Impact of Air Pollution on Human Health

According to the WHO, air pollution causes 6.7 million premature deaths annually worldwide. For workers, the ILO estimates this number at 860,000. These figures may still vary as they

only account for outdoor workers, who are the most vulnerable, but there are also indoor workers to consider. However, atmospheric pollution can cause numerous dangerous health conditions, whether indoors or outdoors. These include cancers, heart attacks, respiratory illnesses, and cardiovascular diseases, among others. In fact, air pollution is classified as a Group 1 carcinogen for humans by the IARC, meaning there is sufficient evidence to establish a direct link between air pollution and cancer development in humans. Each year, it causes 223,000 deaths worldwide due to lung cancer alone (IARC, 2013). A 2022 study by Barthwal assessed the health consequences of air pollution on workers in Delhi. Among 228 rickshaw drivers, street vendors, and sweepers surveyed, the most common symptoms were headaches, dizziness, and nausea.

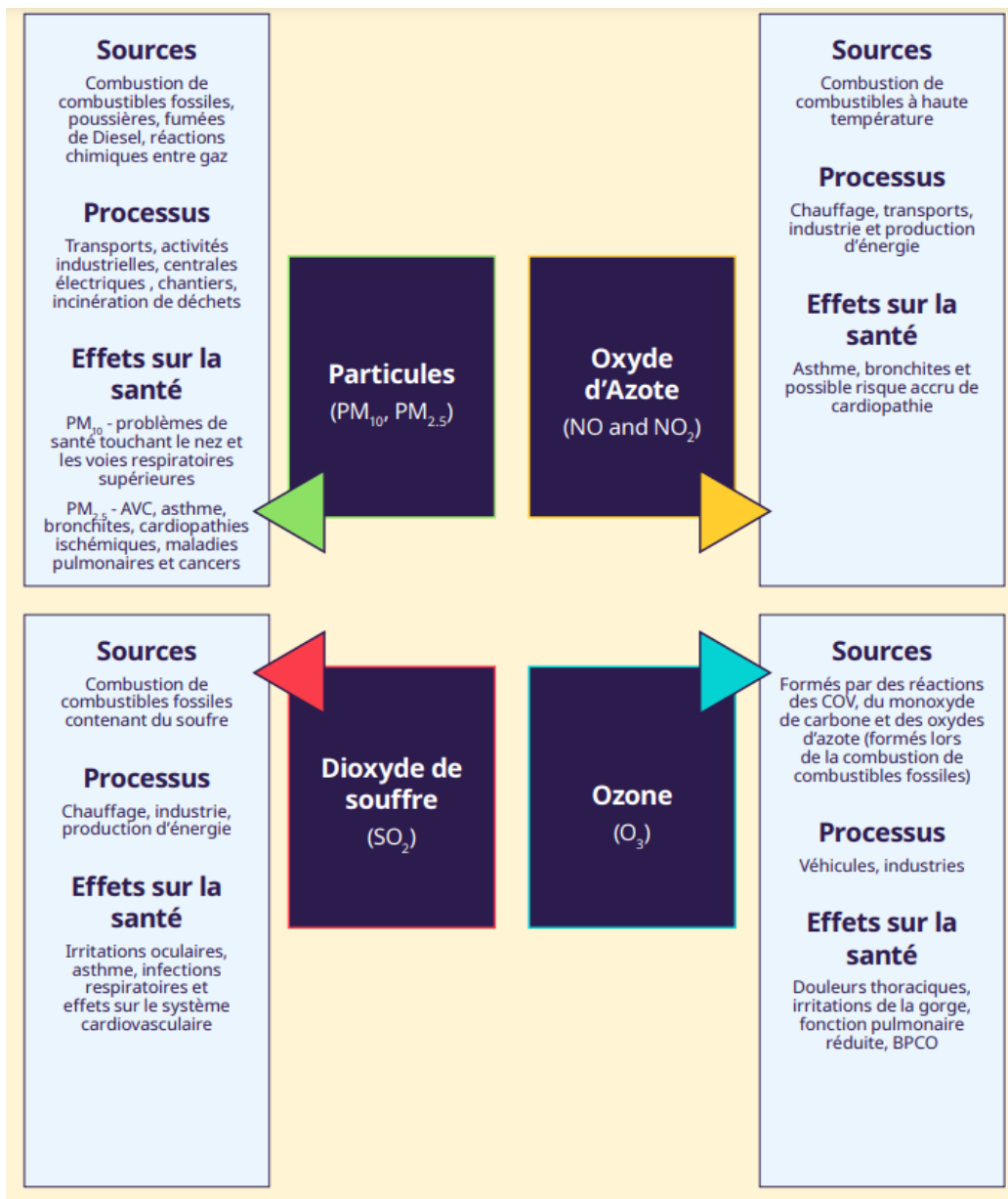


Table showing air pollutants and their effect on humans from [the ILO report on the effects of climate change on health and safety in the workplace](#)

### 3. Financial Consequences

The financial impact of air pollution is expected to rise to 1% of the global GDP by 2060, according to the Organisation for Economic Co-operation and Development in 2016. The OECD is an international organisation that conducts economic studies and provides economic consulting for member countries. These financial impacts include reduced workplace productivity, increased healthcare spending, and decreased crop yields. In France, the cost of

#### LA PROBLÉMATIQUE DE LA QUALITÉ DE L'AIR : TOUS CONCERNÉS

 **48 000**  
**décès prématurés par an**  
c'est l'impact sanitaire, en France, de la pollution atmosphérique.  
Source : Agence nationale de santé publique, 2016

 **20 à 100**  
**milliards d'€ par an**  
c'est l'évaluation du coût socio-économique global annuel de la pollution de l'air.  
Source : Commission d'enquête du Sénat, 2015

**0,9 à 1,8**  
**milliard d'€ par an**  
  
c'est le coût supporté par le système de santé français du fait des principales pathologies respiratoires dues à la pollution de l'air.  
Source : Commissariat général au développement durable, 2015

 **58 millions d'€**  
c'est le budget annuel des AASQA. Cela représente un ratio de 1 € par an et par habitant, somme excessivement modeste au regard du coût sanitaire de la qualité de l'air, évalué aux environs de 500 € par an et par habitant.  
Coût sanitaire en France : 101,3 milliards d'Euros soit 1300 € par habitant  
Coût non sanitaire en France : à minima 4,3 milliards d'Euros  
Source : Commission d'enquête sénatoriale - 2015

 **19 milliards d'€**  
**par an**  
c'est le coût socio-économique de la pollution de l'air intérieur.  
Source : Anas/Observatoire national de l'air intérieur, 2014

Source: Atmo France, 2020

air pollution is estimated at €20 to €100 billion per year by the Senate Inquiry Commission (report from 2015). Healthcare costs related to air pollution are also expected to increase globally, from €21 billion in 2015 to €176 billion by 2060.

According to OECD projections, the number of workdays lost annually worldwide, which was 1.2 billion in 2016, is expected to reach 3.7 billion by 2060.

## RELEVANT UNTREATIES AND EVENTS

### **June 20, 1977:**

Adoption of [Convention No. 148](#), which aims to protect workers from occupational hazards due to air pollution, noise, and vibrations in the workplace.

### **June 20, 1977:**

Adoption of [Recommendation No. 156](#), concerning the work environment, particularly air pollution, vibrations, and noise. It connects workplace protection to the broader environment.

### **June 22, 1981:**

Adoption of [Convention No. 155](#), which aims to promote a coherent national policy on occupational safety and health and to improve working conditions to prevent workplace accidents and occupational illnesses. This covers all aspects of safety, health, and worker welfare in every industry.

### **June 22, 1981:**

Adoption of [Recommendation No. 164](#), which strengthens accident and occupational illness prevention by suggesting practical measures and specific standards to improve working conditions, specifically to improve recording and reporting procedures for work-related accidents and illnesses.

### **June 15, 2006:**

Adoption of [Convention No. 187](#), which promotes a culture of prevention in workplace safety and health. This convention calls on member states to establish and implement a national policy on occupational safety and health and a national system for occupational safety and health management.

### **June 15, 2006:**

Adoption of [Recommendation No. 197](#), which focuses on improving occupational safety and health by encouraging the development and implementation of national policies. It sets out rules to strengthen national occupational safety and health systems.

## **POSSIBLE SOLUTIONS**

- Install air filtration systems in enclosed work environments, such as factories and offices, to reduce atmospheric pollutant concentrations.
- Use controlled mechanical ventilation (CMV) systems with HEPA filters to remove fine particles and other pollutants from indoor air.
- Provide workers with respirator masks tailored to specific pollutants they are exposed to.
- Encourage research on new air filtration and purification technologies, as well as less-polluting building materials.
- Collaborate with scientific institutions to develop solutions adapted to the specific contexts of different sectors.
- Implement preventive measures, such as air quality monitoring tools that could alert populations when air pollution is deemed too dangerous.

## **QUESTIONS TO CONSIDER**

- To what extent is your country affected by air pollution?
- Does your country have workplace infrastructure that allows workers to perform their jobs safely?
- Does your country have the resources to fund various worker assistance programs and research costs for new solutions?
- Does your country have an NGO that advocates for worker health and safety?

## BIBLIOGRAPHY

### Definitions:

- Industry Sector: ([INSEE](#))
- Air Pollution: ([Air Law, 1996](#) FR)
- Fine Particles: ([Ministry of Ecology](#))
- Megacity: ([Wikipedia](#))
- Senate Inquiry Commission: ([Senate](#))

### Main Sources:

- [Health and Safety Impacts](#) (European Agency for Safety and Health at Work)
- [Air Pollutants: Status, Impacts, and Regulation](#) (Ministry of Ecology FR)
- [Ambient Air Pollution](#) (Public Health FR)

### Reports:

- [Climate Change and Occupational Health and Safety](#) (ILO)
- [Health and Safety at the Heart of the Future of Work](#) (ILO FR)