COVID-19 RESPONSE

UN environment programme

6 Linkages of Air Quality and COVID-19

NO UNCONTROLLED DUMPING, NO OPEN BURNING

Protect the environment and our health

For more information visit **unep.org** or contact **Kevin Helps** (Head, GEF Unit, Chemicals and Health Branch, UNEP) **kevin.helps@un.org**

"Policy measures need to be implemented now to promote transformational change in production, energy generation and behaviors, to sustain reductions in emissions and air pollution. This is the real challenge we need to address fast to overcome both the public health and climate change emergencies"

Helena Molin Valdes, Head of the Climate and Clean Air Coalition Secretariat

The problem

Immediate protection of air quality is needed through the promotion of environmentally sound practices to address the increased volume of waste streams as a result of the COVID-19 pandemic


Air quality is negatively impacted by environmentally unsound practices, such as open burning or other sub-optimal waste management methods; thus, adhering to environmentally sound practices for waste management, and maintaining high environmental standards and enforcement is essential.

Air pollution is a major health risk factor

Studies suggest possible correlations between COVID-19 health outcomes and air pollution.

Learning from COVID-19 experiences include:
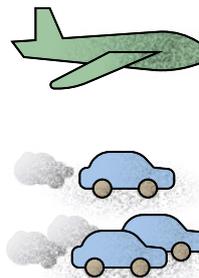
Temporary improvement of air quality as a result of reduced anthropogenic activities

Studies and data show unprecedented reduction in air pollution, especially Nitrogen Oxides (NOx), and atmospheric particulate matter that have a diameter of less than 2.5 micrometers ($PM2.5$), in countries affected by reduced economic activity as a result of measures to reduce the spread of COVID-19. These decreases and any short-term benefits that may derive come with major health, economic and social costs.

Behaviour changes

Changes in behaviour occurring because of the COVID-19 pandemic, such as enhanced teleworking, reduced travel, and preference for certain forms of transport, may have long lasting positive effects on air quality in a post pandemic world - to the extent that they are retained.

Guidance
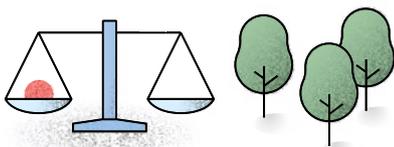
Countries are encouraged to place air quality at the center of decision making on health, environment and development, and prioritize and invest in low pollution alternatives.
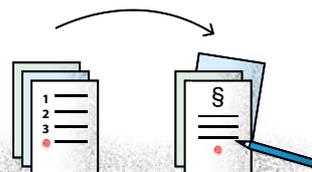
Enhance efforts of governments at different levels to tackle pollution and improve air quality. To include: increased monitoring capacity, data generation/access, legal and policy frameworks and, technology and infrastructure, including nature-based solutions.
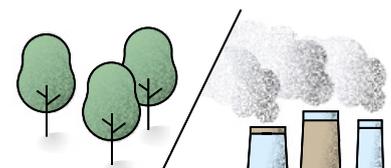
Continue/strengthen the enforcement of existing air pollution regulations to protect human health both during and after the COVID-19 crisis, including to minimize possible rebound effects.

Facts

Air pollution poses serious health risks and kills approximately 7 million people every year (WHO).

Monitoring of air quality confirms a significant decrease in air pollution from the transport and industry sector. This is, however, potentially a short-lived benefit with pollution levels likely to rise as countries ease lock-down restrictions.

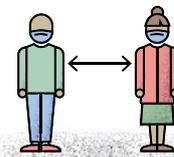Research points to a possible correlation between **COVID-19 health outcomes and outdoor air pollution**.

Long-term exposure to air pollution may increase vulnerability to the most severe COVID-19 outcomes. In the United States, early research has shown an increase of only $1\mu g/m^3$ in $PM_{2.5}$ is associated with a 8% increase in the COVID-19 death rate ([Wu et al. 2020](#)).

People living in an area with high levels of air pollution may be more prone to develop chronic respiratory conditions ([Conticini, E. et al. 2020](#)).

Way forward

Promote control and prevention of air pollution through forward looking measures that are proven to be effective and equitable, with a view to fostering public health and resilience.

Build on the enhanced awareness and on the changes in behaviour which emerged during the pandemic to:

- Redesign our cities to prioritize walking and cycling;
- Switch to zero emissions vehicles world-wide;
- Increase reliance on telecommuting.

Ban open burning and invest in environmentally sound treatment of medical and other waste, and in improved waste management capacities, to in turn reduce emissions into air.

Incentivize financial investments that support these objectives.

Strengthen research on how changes in behavior and lifestyles impact our environment. With a focus on: teleworking, changes in mobility patterns, social distancing measures, and reduced consumption, etc.

Further research into the Linkages between air pollution exposure and COVID-19 impacts on health.

Include air quality in future research and COVID-19 modelling.