



CLIMATE &
CLEAN AIR
COALITION
TO REDUCE SHORT-LIVED
CLIMATE POLLUTANTS

Press Release

New Assessment shows improving air quality in Latin America and the Caribbean will benefit health, eco-systems and the climate

Nairobi, May 23, 2016: Efforts to reduce dangerous air and climate pollutants by Latin American and Caribbean (LAC) countries could reap immediate and long-term benefits for health, food security and the climate according to the first ever Integrated Assessment of Short-lived Climate Pollutants (SLCPs) for the region.

The assessment, released today by the [United Nations Environment Programme](#) (UNEP) and the [Climate and Clean Air Coalition](#) (CCAC), found poor air quality and global warming is already affecting vulnerable populations and ecosystems in the region resulting in premature deaths, crop yield losses, and ecosystem damage.

In 2010 an estimated 64,000 people died prematurely in the LAC region from exposure to fine air polluting particulate matter (PM_{2.5}) and ground level (tropospheric) ozone. Ozone was also responsible for an estimated 7.4 million tonnes in yield losses of soybean, maize, wheat, and rice. If no action is taken to improve air quality, by 2050 annual premature mortality from PM_{2.5} and ozone exposure is expected to almost double while annual crop losses could rise to about 9 million tonnes.

The assessment focuses on four [short-lived climate pollutants](#) (SLCPs): black carbon (soot), methane, tropospheric ozone, and hydrofluorocarbons (HFCs, typically used in refrigeration and air conditioning). SLCPs are present in the atmosphere for a short period of time compared to carbon dioxide (CO₂) – days to decades compared to hundreds of years – and are many times more potent at warming the atmosphere. Black carbon and tropospheric ozone, are also powerful air pollutants that harm human health and the environment.

A number of SLCP reduction measures have been identified that can reduce warming in the LAC region by between 0.3 to 0.9 degrees Celsius by 2050. Over the same timeframe these measures will decrease annual premature deaths from PM_{2.5} by at least 25% and deaths from ozone by 40%, and avoid annual losses of 3-4 million tonnes of four major crops – soybeans, maize, wheat, and rice.

“Unless action is taken to reduce SLCPs now, emissions from the region will increase significantly by 2050 adding additional impacts on climate, health and agriculture,” says Leo Heileman, UNEP Regional Director for Latin America and the Caribbean. “Many countries are already taking part in SLCP reduction initiatives at both national and subnational levels. Scaling up these efforts, strengthening policies and improving regional cooperation will lead to widespread reductions of SLCPs with large near term benefits for the region.”

The LAC region is one of the most urbanized in the world, with almost 80 per cent living in cities. Helena Molin Valdés, Head of the UNEP hosted CCAC Secretariat said that urban air pollution has been a concern for many years but many countries and cities in the region are now making commitments to improve air quality for both health and climate.

"Reducing air pollution from black carbon, methane and tropospheric ozone will show quick results, help achieve many of the global sustainable development goals, save lives now and protect future generations," Ms Molin Valdés said. "Immediate reductions of both CO₂ and SLCPs are necessary to achieve our long-term climate goals, and this can only be achieved by implementing both CO₂ and SLCP measures in parallel."

The Assessment identifies activities that can significantly reduce SLCP emissions. For example black carbon emissions can be reduced by over 80 per cent by 2050 in most countries by focusing on initiatives that modernize cooking and heating stoves, improve diesel vehicle standards to Euro VI equivalent, put diesel particulate filters on vehicles, eliminate high emitting vehicles, and enforce bans on open field agricultural burning.

To reduce methane emissions six measures across four sectors – oil and gas production and distribution, waste management, coal mining and agriculture – have been identified. These include activities like: the recovery and use of vented gas in oil and gas production, separation and treatment of biodegradable municipal solid waste, and recovering biogas from livestock manure using anaerobic digestion.

Using alternatives to HFC's in refrigeration and cooling can almost completely eliminate this potent greenhouse gas and achieve further benefits through improvements in appliance energy efficiency.

"These are all cost effective and technologically feasible measures and policies that can be implemented today to improve air quality and provide climate protection benefits," Ms Molin Valdés said.

The Assessment was released at the [United Nations Environment Assembly](#) taking place in Nairobi, Kenya from May 23 – 27.

Main Short-Lived Climate Pollutants (SLCPs) in the LAC region

Methane (CH₄): is a powerful greenhouse gas with a lifetime in the atmosphere of approximately 12 years. Increased methane emissions has caused the most significant warming of any greenhouse gas after CO₂. It has a direct influence on the climate but is also notable for being an important precursor to tropospheric ozone (O₃).

The LAC region is responsible for approximately 15% of global methane emissions. Virtually all of these emissions originate from three sectors: agriculture (approximately 50%) coal, oil and gas production and distribution (approx. 40%) and waste management (approx. 10%).

Black Carbon (BC): is a potent climate-warming particle that remains in the atmosphere for a few days or weeks. It is formed by the incomplete combustion of fossil fuels, wood and other fuels. Black carbon

and co-emitted pollutants contribute to the formation of fine air polluting particulate matter (PM_{2.5}). PM_{2.5} has been linked to a number of health impacts including premature death in adults, heart and lung disease, strokes, heart attacks, chronic respiratory disease such as bronchitis, aggravated asthma and other cardio-respiratory symptoms.

The LAC region is responsible for less than 10 per cent of total global anthropogenic emissions of BC, excluding those from forest and savannah fires. Two major source sectors are responsible for about three quarters of BC emissions in LAC: transport and the residential burning of solid fuels for cooking and heating. More than 60 per cent of the region's BC emissions originate in Brazil and Mexico.

Ozone (O₃): is a gas that exists in both the upper (stratosphere) and lower (troposphere) layers of the atmosphere. In the stratosphere ozone protects life on Earth from the sun's harmful ultraviolet (UV) radiation. However, at ground level, it is an air pollutant, which is harmful to human and ecosystem health. It is also a major component of urban smog and the third most important contributor to global warming after methane and CO₂. It stays in the atmosphere for a few hours to days. Recent studies have linked both short- and long-term ozone exposure to premature death, heart attacks, strokes, heart disease, congestive heart failure, and possible reproductive and developmental harm. It reduces crop yields and the quality and productivity of vegetation.

Ozone is considered a secondary pollutant because it is not emitted directly, but is formed when precursor gases such as methane, carbon monoxide, oxides of nitrogen (NO_x) and non-methane volatile organic compounds (NMVOC) react in the presence of sunlight. It is a key reason why methane emissions must be reduced.

Hydrofluorocarbons (HFCs): are a group of industrial chemicals primarily produced for use in refrigeration, air-conditioning, insulating foams and aerosol propellants, with minor uses as solvents and for fire protection. Many HFCs are very powerful greenhouse gases and a substantial number have a lifetime of between 15 and 29 years in the atmosphere. HFC consumption is projected to double by 2020, and their emissions could contribute substantially to global warming by the middle of the century.

The majority of the HFC emissions come from two sectors, mobile air conditioning, about 20 per cent, and commercial refrigeration, around 38 per cent. The third largest source of emissions, contributing around 15 per cent, is residential window- and split-unit air conditioners, listed as stationary air-conditioning. These three sectors offer a large opportunity for mitigation.

Download the [Summary for Decision Maker's here](#).

<http://www.ccacoalition.org/en/resources/integrated-assessment-short-lived-climate-pollutants-latin-america-and-caribbean-summary>

NOTES:

ABOUT THE UNITED NATIONS ENVIRONMENT PROGRAMME

The United Nations Environment Programme (UNEP) is the leading global environmental authority that sets the global environmental agenda, promotes the coherent implementation of the environmental dimension of sustainable development within the United Nations system and serves as an authoritative advocate for the global

environment. Established in 1972, UNEP's mission is to provide leadership and encourage partnership in caring for the environment by inspiring, informing, and enabling nations and peoples to improve their quality of life without compromising that of future generations.

ABOUT THE CLIMATE AND CLEAN AIR COALITION

The Climate and Clean Air Coalition is a voluntary global partnership of governments, intergovernmental organizations, businesses, scientific institutions and civil society committed to catalyzing concrete, substantial action to reduce Short Lived Climate Pollutants (including methane, black carbon and many hydrofluorocarbons). The Coalition has 11 initiatives working to raise awareness, mobilize resources and lead transformative actions in key emitting and cross cutting sectors.

Contacts:

Tiy Chung, CCAC Communications Officer: tiy.chung@unep.org; mobile +33 61 26 71 79 81. (Paris).

María Amparo Lasso, Head of Communications for Latin America and the Caribbean, UNEP, maria.lasso@unep.org 507 3053164. (Panama City).