

## Barcelona Declaration on air quality, noise reduction and improvements in health in large urban centres

On the occasion of the European Symposium on Air Quality, Noise and their Health Impacts in Large Urban Centres, which was held in Barcelona on 5 June 2015 (World Environment Day), the participating institutions, organizations and individuals from international bodies, sub-national and local governments, research centres and other groups involved in the improvement of air quality, noise pollution and health

### Hereby recognize that:

Numerous studies conducted over the last 20 years have demonstrated a direct link between air pollution and people's health and that pollution also affects the quality of the environment. Furthermore, noise pollution is a type of atmospheric pollution that also has an adverse impact on people's health and is not merely an annoyance.

Large urban centres such as Berlin, London, Milan, Paris and Barcelona, which were represented at the Symposium, are failing to comply with one or more of the air quality limit values set by the European Union (EU) and the guideline values recommended by the World Health Organization (WHO) for air polluting substances such as suspended particulate matter less than 10 microns in diameter (PM<sub>10</sub>), nitrogen dioxide (NO<sub>2</sub>) and tropospheric ozone (O<sub>3</sub>). These breaches affect a large part of the European population.

Road traffic, especially diesel vehicles used for commuter travel, is one of the main sources of pollution behind this problem. Other emission sources which also contribute to the problem, depending on the specific urban reality, are industry, ports and airports, road freight transport, services and housing.

According to the European Environment Agency (EEA, 2014), between 91% and 93% of the European population is exposed to fine particulate matter (PM<sub>2.5</sub>) that exceeds WHO recommendations, and between 95% and 98% are exposed to O<sub>3</sub> levels above those recommended by WHO. Fine particulate matter and ozone are responsible for more than 400,000 premature deaths a year in Europe, while exposure to particulate matter reduces the life expectancy of the population by about a year, mainly due to the increased risk of cardiovascular and respiratory diseases and lung cancer. Children who live near roads with heavy traffic have double the risk of developing breathing problems than those living near less congested streets. Moreover, the European Commission estimates that the total cost of the health impacts of air pollution in 2010 was between 330 and 940 trillion euros; direct economic damage includes 15 trillion euros from workdays lost and 4 trillion euros in healthcare costs.

WHO also reports that about 40% of the European population is exposed to noise levels exceeding 55 dB. As a result of this, Europeans are expected to lose 61,000 years of life annually due to death or disability related to cardiovascular disease. At a worldwide scale in 2010, air pollution caused by particulate matter was responsible for 3.1 million deaths and 3% of disability-adjusted life years lost.

Consequently, WHO considers air pollution to be a major public health problem.

Reducing air and noise pollution is a complex challenge because it is directly related to economic activity, land use, mobility, power generation, domestic activities, and the daily routines and behaviour of the population. Most sources of air pollution emissions are out of the control of individuals and require measures carried out by cities, regions, countries and the European Union, in addition to sector regulations on land-use planning, mobility, energy, housing, industry and construction, to ensure that the signs of change move in the right direction. So far, taxes on automotive fuels and on vehicles are showing signs of having the opposite effect to that of reducing the diesel vehicle fleet.

Therefore,

### We hereby declare that:

- Every person has the right to breathe good-quality air and enjoy this shared commodity, which is crucial for a healthy life.
- Every person has the right to live in an environment free from noise pollution. Natural sound environments must be preserved, since they contribute to well-being and quality of life. Contact with nature and green zones must be encouraged in all types of environment.
- Achieving good air quality and an environment with low noise pollution is an inescapable challenge for the present and future that can only be addressed with a comprehensive, cross-cutting strategy that requires the active participation of all actors and sectors concerned and is shared by all citizens.
- The coordination of air quality, climate change and energy policies leads to synergies that can help reduce energy consumption and emissions of greenhouse gases and other pollutants and improve the health of the population, as is being demonstrated in several places where this coordination is taking place.
- Actions aimed at improving air quality also represent an opportunity to boost the economy through sustainable development criteria. For this reason, comprehensive approaches must be implemented to address structural challenges such as energy efficiency and the use of clean energy in mobility, industry, services and the domestic sector and the application of best available technologies (BATs) in industry, and to address the economic, environmental and social sustainability of a public transport system that represents a more appealing and competitive alternative to private vehicles. These also represent an opportunity to promote active transport (walking and cycling) and to restore natural conditions in urban spaces.
- It is necessary that the diesel vehicles in real circulation conditions meet the emission expectations established by the Euro regulations, because urban circulation of polluting diesel vehicles is a critical factor for urban air quality. Several independent studies conclude that the nitrogen oxides emissions of the diesel vehicles in real circulation conditions exceed 7 times the average values required for their homologation. For this reason, the Euro 6 regulation urgently needs updating in order to assimilate emissions in real-life traffic conditions to design values.

- New financial programs for air quality policies, such as environmental taxation and public-private partnerships, must be implemented to help promote alternatives and improvements to existing mobility, production and living patterns.
- Research on the health impacts of air quality and noise is a necessary tool to improve the protection of public health. In particular, research on strategies to reduce air pollution, exposure to specific pollutants and the effects of all types of intervention should be conducted. Research results must be incorporated into public policies and recommendations to reduce the health impacts of pollution and noise. However, Horizon 2020, the EU Framework Programme for Research and Innovation, does not point to this goal nor does it include research on improving air quality to a sufficient degree in its objectives.
- Information, dissemination, education and awareness raising are fundamental requirements for advancing social co-responsibility for the improvement of environmental quality by calling for global changes and modifying individual behaviour, and it is essential in order to participate, with full knowledge of the facts, in collective decision-making processes.

We hereby call on all stakeholders, citizens, social groups, businesses and governments, within their respective spheres of action and to the best of their abilities, to promote and prioritize measures to:

- Promote, develop and support plans to improve air quality in order to bring air pollution levels below the established legal levels and also reach those air quality values recommended by WHO.
- Rethink cities and land use to promote sustainable mobility based on public transport, intermodality, a shift from private motorized transport to more sustainable options, and active mobility (walking and cycling) in a safe and healthy environment.
- Promote a public transport system that is more competitive than private transport, more appealing to citizens and meets the requirements for frequency, accessibility, comfort and price, by using low-emission vehicles.
- Promote active mobility by encouraging safe and healthy walking in quiet, smoke-free environments, and work towards making all urban centres bike-friendly, in order to substantially increase the modal share of cycling for commuter travel.
- Promote renewal of the vehicle fleet so that it includes new, cleaner and quieter automotive technologies such as electric vehicles, clean-fuel vehicles and low-emission hybrid vehicles.
- Take noise pollution into account in spatial and land-use planning policies, infrastructure construction, urban design and mobility policies.

- Promote research that analyses interventions on noise and air pollution and their effects on health in order to gain a deeper understanding of their impact on health and the environment, and define new reduction strategies based on scientific evidence.
- Raise awareness among the population of the challenges associated with air pollution and involve opinion leaders and, even more importantly, health and media professionals in the task of disseminating accurate information on the subject.
- Increase institutional collaboration and establish mechanisms for sharing and analysing actions and experiences to improve air quality in urban areas and anticipate pollution events, in order to reduce the intensity and the impact on public health.

The organizers of the Symposium hereby undertake to refer this declaration to the European Union and the World Health Organization so that they have knowledge of it.

## World Environment Day

Barcelona, 5 June 2015

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