Summary from the first day of the WHO Conference

Key messages
Air Pollution Monitoring, modelling and forecasting

• Great advancement in the existing methods of monitoring – ground-base and satellite - and modelling air pollution, as well as new techniques (low cost sensors).

• Our information on air pollution exposure expanded on all three spatial scales: global, regional and local.

• However, monitoring sufficient to support health studies and to take action is still limited in many low- and middle- income countries.

• New forecasting methods will allow actions to minimize the exposures and/or to test different intervention scenarios.
Health effects of ambient air pollution (1)

• 91% of the world population, including children, is exposed to air pollution at unacceptable levels. Inefficient energy use in the home is a major source of ambient air pollution, particularly in low and middle-income countries.

• Substantial scientific evidence from studies of short term and long-term exposure to air pollution show that it is a major contributor to disease and early death.

• Adverse effects have been demonstrated at not only high, but also low exposures – even below current WHO guidelines.

• Air pollution affects people of all ages – from birth, to young children, and through old age.

• Air pollution affects people with pre-existing diseases and less affluent: the most sensitive and vulnerable in society are most at risk.
Health effects of ambient air pollution (2)

- Episodes of sand dust are associated with increased risk of cardiovascular mortality and respiratory morbidity.

- Air pollution is a silent killer for workers around the world who work outdoor (construction, transport, street vendors, policemen etc.).

- Air pollution kills millions of people worldwide and it is the second leading cause of Non-Communicable Disease (NCD). Because burden estimates do not yet include all important outcomes (allergies, low birthweight, cognitive effects), the overall impact may be underestimated.

- Long term solutions to improving air quality need to be found. Current evidence on the benefits of personal interventions (masks and air purifiers) is inconsistent.
Health effects of household air pollution

• More than 3 billion people in the world rely on polluting energy sources.

• Consider all the main energy use sources of air pollution arising in the home, particularly cooking, heating and lighting.

• Several carcinogens and air toxics are present in smoke from the combustion of wood smoke as well as fossil fuels.

• Hundreds of epidemiological studies and randomized control studies have shown effects of household air pollution on major non-communicable diseases but also on acute respiratory infections in children.

• The burden of household air pollution falls disproportionately on women and children, and the poor.

• Inefficient energy use and the related air pollution in the home and in the ambient environment requires concerted action and commitment from all different sectors including health, energy, environment, finance, etc.
Air pollution and Climate Change

• Fossil fuel combustion is the dominant driver of climate change.

• The same drivers that are killing people because of air pollution are causing climate changes.

• We already see the consequences of climate change in an increase of infectious diseases, malnutrition, and more frequent and severe extreme weather events.

• Reducing air pollution has profound impact on climate changes and will protect millions of people.

• Solutions exist that benefit air quality, climate change and health. As an example, there are clear health benefits from well designed mitigation policies such as reducing energy production from coal and transitioning to clean energy sources.

• The benefits to the society are huge when compared to costs. Evidence is available showing than costs of mitigation can be offset by health benefits.
WHO Resources and commitments

- WHO Air Quality Guidelines, for both ambient, indoor and household fuel are key resources for setting standards and health based interventions
- Country support with the production of SDG estimates, capacity building on guideline implementation, health impact assessment, and policy options (e.g. AirQ+ -third edition- in English, Russian and French)
- Engagement with cities and local stakeholders to further catalyze effective local action on air pollution and on other urban health risks
- Interventions in the energy sector would provide huge additional co-benefits in climate change, gender, equity
- WHO is working with several international organizations to promote clean air, clean energy and solutions.
- The Global Platform on Air Quality and Health will take follow-up the conclusions of the Conference.
- WHO will continue to provide scientific support, capacity buildings, and track changes.
- WHO support to integrate climate change, health and air pollution agendas, including on National Determined Contributions.
Conclusions

• We know enough to act now. Seven millions people killed each year! “Ten years from now, we cannot say that we did not know…..”

• Data, knowledge and competency gaps have to be filled for a more complete understanding of the burden of disease and to support policy actions.

• Legislation needs to be strengthened and enforced to control both outdoor and indoor air pollution for all people.