

## 2.3 INDOOR AND AMBIENT AIR POLLUTION

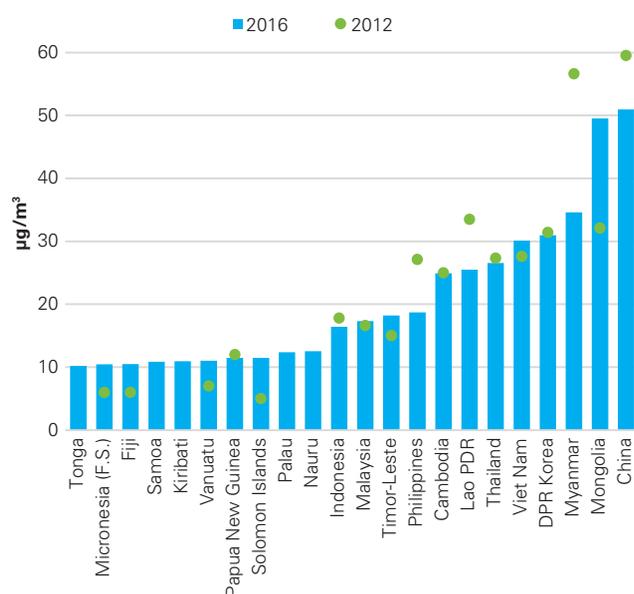
### Key issues in East Asia and the Pacific

Globally, outdoor and indoor air pollution are directly linked with pneumonia and other respiratory diseases that account for almost 1 in 10 under-5 deaths, making air pollution one of the leading dangers to children's health. Up to one third of deaths from the leading non-communicable diseases (stroke, lung cancer, heart attack and chronic obstructive pulmonary disease) are due to air pollution. Air pollution also contributes to child illnesses through its impacts on: fetal growth; pregnancy outcomes; neurodevelopmental disorders; childhood growth and obesity; endocrine function and puberty; allergic diseases; and immune function. Children with pre-existing conditions and the poorest children suffer the most from air pollution-related health and development effects.

About 92 per cent of people in the region are exposed to levels of harmful air pollution. Particulate matter in the atmosphere with a diameter of less than 2.5 micrometers (PM2.5) is the biggest environmental cause of death and illness. South and East Asia contributed 59 per cent of the 4.2 million global deaths attributable to ambient PM2.5 in 2015. Household air pollution is also a key health threat to child and maternal health in Timor-Leste, the Democratic People's Republic of Korea, Papua New Guinea and Myanmar. While some countries in the region are making progress, most face critical challenges in their fight against air pollution due to the lack of availability and use of quality data on air quality and health impacts, and insufficient technical capacity, financing and cross-sectoral governance mechanisms to develop and implement clean air solutions that meet the needs of children and the most vulnerable populations.

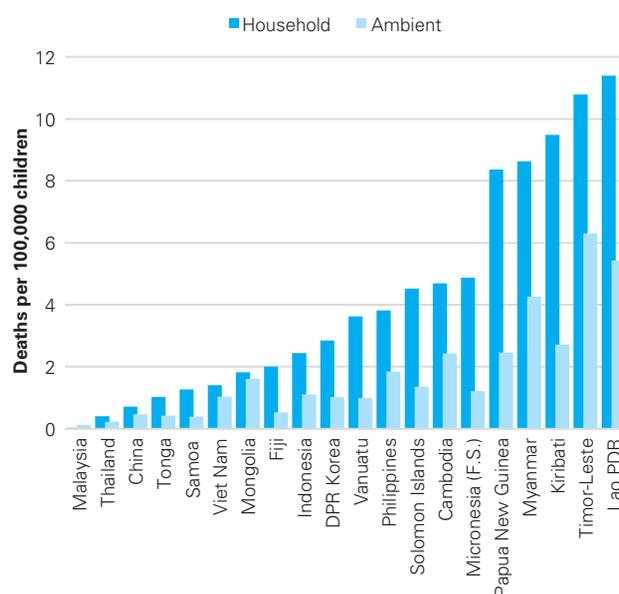


Annual mean levels of fine particulate matter PM2.5 in urban areas



Source: WHO World Health Statistics

Death rates attributed to the effects of household and ambient air pollution among children under 5 years of age, 2016



Source: WHO World Health Statistics

## Driving results for children

UNICEF will leverage its convening power, its technical expertise in health, education, water and sanitation, its capacity to mobilize grassroots movements, and its engagement with the private sector. UNICEF prioritizes support to: (1) reduce the number of deaths of children and the frequency and severity of diseases of children attributed to air pollution (health benefits); (2) decrease negative effects on child development, including learning outcomes (development benefits); (3) improve air quality, especially where it affects child and maternal health (environmental benefits); and (4) contribute to the decrease in emission of pollutants, including long-lived greenhouse gases and short-lived climate pollutants (climate benefits). This action on air pollution will produce co-benefits that will help countries achieve the Sustainable Development Goals (SDGs) on health (SDG 3), energy (SDG 7), cities (SDG 11) and climate change (SDG 13).

## Key programme strategies



### Systems and capacity

Support health and environment agencies and cities to:

- Strengthen child-sensitive air quality monitoring, forecasting and assessment systems.
- Develop and implement an integrated indoor air quality management approach for kindergartens, schools and healthcare centres.
- Pilot and expand proven innovative measures for clean transport, clean fuel for cooking and heating, and better waste management, ventilation and urban planning.
- Strengthen healthcare systems to better address the health effects of air pollution on children, and provide better health care to the most vulnerable.
- Promote active engagement by children and youth in monitoring air quality and promoting clean air solutions as a part of the curriculum and formal/information education activities.



### Data, evidence and knowledge

- Support national and local authorities and youth groups to: (1) review and evaluate current interventions on air pollution; (2) identify the most impactful, cost-effective strategies and options; and (3) develop pilots and expansion of child-focused clean air solutions on the ground, in partnership with private investors and national and local authorities.
- Help national and local health, environment and education authorities to assess current and future children's health and the developmental impacts of air pollution.
- Promote South-South cooperation on research and science-policy on air pollution and children's health, building on the UNICEF publications *Clear the Air for Children and Danger in the Air*.
- Strengthen data on integrated management of childhood illness and improve understanding of the impacts of air pollution on children's health and development.



### Partnerships and alliances

- Engage children in monitoring air quality data around schools and health facilities, finding cost-effective solutions and reducing the exposure of vulnerable children to air pollution.
- Partner with WHO, UN Environment, Climate Clean Air Coalition, Every Breath Counts, Clean Air Asia and regional and local youth networks for a better understanding of children's health and the developmental impacts of air pollution; reducing exposure of children to air pollution and the health effects on children associated with air pollution; and reducing air pollution and improving air quality.



### Governance, policy and budget

- Promote child-sensitive government policies, regulations and standards on air quality and children's health, including the associated economic costs and public financial management implications.
- Support the establishment of functioning governance mechanisms to tackle air pollution, including participation of children and adolescents and cross-sectoral mechanisms bringing together the health, environment and industry sectors.
- Advocate for the development of child-sensitive, cross-sectoral air pollution strategies, policies and action plans, including air quality assessment, standards, legislation, child-focused investment needs, urban planning, design of economic incentives and financing options.



### Behaviour change

- Enhance national and local capacity to provide accurate and user-friendly information about the measures that families, communities, schools and hospitals can take to reduce pregnant women's and children's exposure to air pollution indoors and outdoors, including face masks, air quality monitors, school guidance, teacher training modules, and exposure to second hand smoke.