



Urban Health Initiative

a model process for catalysing change

Air pollution: tools for cleaner, healthier air in cities

The Urban Health Initiative promotes tools and guidance to assess the health impacts of air pollution and the health benefits of sustainable development in energy, transportation, land-use and waste.

Urban Health Initiative tools

These tools provide urban leaders and health policy-makers with estimates of the health impacts of air pollution and short-lived climate pollutants (e.g. black carbon and methane). The tools also support scenario modelling of cleaner developments in key sectors such as waste, energy and transport which reduce air pollution emissions and yield other health benefits.

Health impact assessments: assess health impacts of policies, plans and projects in various sectors using quantitative, qualitative and participatory techniques; identify and address health co-benefits and risks of policy interventions in cities, as well as measures to improve health and reduce health inequities; and help decision-makers make policy choices to prevent disease/injury and to actively promote health.

WHO Global Ambient Air Quality Database: collates data from over 4300 cities in 108 countries measuring air pollution levels in order to recognize associated health impacts.

WHO is also developing software and toolkits to guide policy-makers.

Air pollution health impacts: WHO's AirQ+ tool estimates air pollution-related deaths and disease, and projects gains from better air quality.

Planning healthier development: tools for modelling impacts of policy scenarios include:

- **CHEST** – toolkit to identify and address household air pollution from cooking, heating and lighting.
- **HEAT** – physical activity, air quality and road safety gains from shifting to more walking and cycling.
- **iSThAT** – air pollution reductions and health benefits from shifting to cleaner transport and non-motorized transport.
- **GreenUr** – reduce air pollution, urban heat, deaths and diseases from expanding urban green spaces.

Pilot projects

Urban Health Initiative tools are adapted to needs in developing countries where data are often sparse or scarce. The tools are being tested in two pilot projects in Accra, Ghana, and Kathmandu, Nepal, with national and city leaders from the health, environment, development, transport and finance sectors.

Economic estimates of deaths and disease can be used to determine the costs of inaction and savings for families and health care systems from cleaner, healthier development.

The Urban Health Initiative tracks the consequent adoption of policies that target the reduction in emissions of short-lived climate pollutants and the related health benefits, and explores conditions that enable urban policies to be effective and sustainable over time.

Tools for modelling health and policy scenarios



Air pollution risk

AirQ+ is a health risk assessment and modelling tool that calculates the health effects of long-term exposure to both ambient and household air pollution. AirQ+ allows estimation of the reduction in life expectancy, health effects of air pollution changes, and effects of long-term exposure.

(Developed by WHO/Europe)



Household energy

CHEST (Clean Household Energy Solutions Toolkit) provides the tools for countries and programmes to create and/or evaluate policies that expand clean household energy access and use. CHEST enables comprehensive assessment of the current state of household energy use, air pollution and health impacts.

(Developed by WHO)



Walking and cycling

HEAT (Health Economic Assessment Tool) estimates the health and economic impacts of walking and cycling through reduced mortality, road injuries, air pollution and carbon emissions. HEAT assesses current or past levels of walking or cycling, changes over time and cost-benefits.

(Developed by WHO/Europe)



Transport

iSThAT (Integrated Sustainable Transport Health Assessment Tool) estimates transport fleet emissions based on age and composition, and projects carbon dioxide emissions' reductions, improved air quality, physical activity, and health and economic benefits due to reduced deaths and disease from shifts to sustainable transport.

(In development by WHO/Europe)



Green spaces

GreenUr is a plugin for QGIS (an open source geographic information system) that puts together knowledge and information relating to population health and well-being on the impacts of green space on health and the environment, based on current urban land-use patterns, and availability and use of green space.

(In testing by WHO/Europe)



Health economics

WHO-CHOICE (CHOosing Interventions that are Cost-Effective) is a set of programs, spreadsheets, and instruction guides for performing generalized cost-effectiveness analysis.

(Developed by WHO)

