



EUROPE

Fact sheet
Copenhagen and Parma, 10 March 2010

Twenty years of environment and health in Europe: trends and gaps

For the Fifth Ministerial Conference on Environment and Health, to be held in Parma, Italy on 10–12 March 2010, the WHO Regional Office for Europe has released two new studies: a comprehensive assessment of key trends in environment and health in the WHO European Region over the past 20 years and a major review of inequalities in environmental risk. The four regional priority goals set in the 2004 Children’s Environment and Health Action Plan for Europe (CEHAPE) provide the framework for assessing and promoting progress.¹

Twenty years ago, major concerns were raised about poor environmental quality and its current and future impact on people’s health. This released enormous potential for internationally concerted action.

As early as 1989 at the First Ministerial Conference on Environment and Health, countries adopted the European Charter on Environment and Health, a major policy framework setting out the main principles, mechanisms and priorities for gaining health benefits through better environments.² Since then, governments have reviewed progress and agreed on new action at ministerial conferences held every five years. At the Conference in Parma, they face an established but often overlooked reality: environmental contaminants are bad for health, but particularly the health of poor people.

The 10 main trends

Just released, *Health and environment in Europe: progress assessment* describes the progress made by the countries in the WHO European Region over the last 20 years.³ The report focuses on four major environmental risk factors: unsafe water and sanitation, injuries and physical inactivity, air pollution, and chemicals and noise. The analysis used the indicators in the European Environment and Health Information System (ENHIS).⁴ The status of policies on environment and health was evaluated through data submitted by 40 countries responding to a 2009 WHO survey.

¹ *Children’s Environment and Health Action Plan for Europe*. Copenhagen, WHO Regional Office for Europe, 2004 (<http://www.euro.who.int/document/e83338.pdf>).

² *European Charter on Environment and Health*. Copenhagen, WHO Regional Office for Europe, 1989 (http://www.euro.who.int/AboutWHO/Policy/20010827_3).

³ *Health and environment in Europe: progress assessment*. Copenhagen, WHO Regional Office for Europe, 2010 (http://www.euro.who.int/parma2010/docs/20100216_1).

⁴ European Environment and Health Information System (ENHIS) [web site]. Copenhagen, WHO Regional Office for Europe, 2010 (<http://www.euro.who.int/ENHIS>)

1. Access to an improved **water supply and hygiene** has in general increased across the European Region, especially in central and eastern countries, resulting in an 80% decrease in diarrhoeal disease in young children from 1995 to 2005. Nevertheless, more than 50% of the rural population in many countries in the eastern part of the Region still lacks access to an improved water supply.
2. A reduction of up to 40% in **traffic-related deaths** since early 1990s shows that they are preventable. Unfortunately, this downward trend stopped in eastern countries in the last 10 years, increasing the gap between the rates for them and the European Union (EU) to over 50% of the EU level.
3. Proportions of **overweight and obese children** aged 11–15 years in countries range from 3% to more than 30%. Over 50% of 11-year-olds in all countries do not engage in sufficient physical activity, and the proportion is higher among 13- and 15-year-olds.
4. Infant deaths from **respiratory disease** have fallen in most countries, but still account for 12% of total infant deaths, and remain a problem, particularly in eastern countries. Asthma and allergies are an increasing cause of childhood illness, with up to 25% of children aged 13–14 years suffering from them.
5. After substantial decreases in **outdoor air pollution** in most of the Region in the 1990s, progress in the last decade has been minimal. Over 92% of urban populations live in cities with levels of particulate matter that exceed the WHO air quality guideline value.
6. In some countries, up to 80% of children are regularly exposed to **second-hand tobacco smoke** in the home, and even more outside it. Although regulations introducing smoke-free spaces have been proved to reduce the health effects of tobacco, they have yet to be introduced or developed in a large part of the Region.
7. **Dampness and mould** are established as a major indoor air quality problem that affects health and is particularly common among disadvantaged populations. More than 20% of households in the Region have this problem, with levels in countries ranging from 4% to 37%.
8. **Lead emissions** to the atmosphere decreased by 90% between 1990 and 2003, mainly owing to the switch to unleaded petrol in most of the Region. This has been reflected in a decrease of lead levels in children's blood. Leaded petrol is still used in some eastern and south-eastern countries, however, and exposure to lead in paint and water pipes remains a health concern.
9. **Environmental noise** is perceived as the most common stressor in urban areas. A quarter of the population in EU countries is exposed to noise levels leading to a wide range of health effects. Noise levels are likely to be substantially higher in many settlements in non-EU countries.
10. The **safety of the occupational environment** significantly improved in the 1990s, but the improvement levelled off in the eastern part of the Region in the last decade.

Major gaps within countries

The largest compilation of European evidence on inequalities in environmental risk, released by the WHO Regional Office for Europe for the Parma Conference and published in the *European Journal of Public Health*,⁵ points to great variations within countries in the distribution of environmental

⁵ Special section: environmental inequalities. *European Journal of Public Health*, 20(1):12–42 (http://eurpub.oxfordjournals.org/current.dtl#SPECIAL_SECTION_ENVIRONMENTAL_INEQUALITIES).

exposure and related disease and disability across social groups and the sexes. Social characteristics were measured using indicators such as education, income or deprivation. Poverty-related inequalities are found for all environmental risk factors.

- Differences between urban and rural areas in **water and sanitation supply** are still extreme in some countries in the WHO European Region. Sanitary equipment is insufficient in some rural areas in both western and eastern countries, where poorer households can still lack toilets for their private use. The proportion of such households in the lowest-income groups in the EU are up to 2.5% in countries belonging to the EU before May 2004 (EU15) and up to 30.4% in the other EU Member States. In some eastern countries, lack of toilets in schools hinders girls' attendance.
- While **road traffic injuries** to children have decreased in most socioeconomic groups over the last 20 years, inequalities remain, particularly for pedestrians. Children from families with no adult in paid employment have nearly five times the excess risk of fatal pedestrian injuries as children from better-off families. In Greece, less wealthy towns have twice the excess pedestrian injuries of wealthier ones, and poor areas in Sweden have approximately 90% higher risk of such injuries than the most affluent areas. Traffic-related injuries rates are higher for boys across age groups and countries.
- Death rates due to fire for children from families with the lowest occupational status may be as much as 37.7 times higher than those for children from families with the highest status. A study on unintentional **home injuries** in Denmark observed that the lowest-income group had up to up to 2.4 times the risk of burns and hot water, tea or coffee scalds as the highest-income group. Hospital admission rates for unintentional poisoning among children aged 0–4 years are 2–3 times higher in the most deprived wards of the East Midlands (United Kingdom) than in the least deprived. In Europe, boys suffer 3 out of 4 of injury deaths.
- As to **air pollution**, differences in concentrations of pollutants in ambient air are the best markers of social inequalities in exposure. For example, nitrogen dioxide levels at Swedish children's residences were 21.8 $\mu\text{g}/\text{m}^3$ for the lowest-income classes and 13.5 $\mu\text{g}/\text{m}^3$ for those with the highest income. The Finnish part of the Expolis project, which measured exposure to pollutants in cities, found that unemployed people's personal exposure to fine particulate matter was almost three times that of employed subjects.
- Studies from European countries find that children in low-income households are exposed to **second-hand tobacco smoke** (SHS) about twice as much as their wealthier peers, and this figure is even higher for exposure in cars. A number of social determinants – such as low educational and income levels, unemployment, migrant status and membership of single-parent households – shape the frequency of smoking at home and consequently the degree of child exposure to SHS.
- A German study found that exposure to roads with heavy traffic is about twice as frequent for people with low-skill jobs or low incomes than for those with high-skill jobs or high incomes. Similar results were obtained for Switzerland, where 65% of the poorest households live in industrial areas, where levels of background **noise** are around 7 dB higher than in residential areas.
- In EU Member States and candidate countries, the risk of having problems with **housing** (shortage of space, damp and leaks, and lack of flush toilet or bath/shower) is usually double and can be five times as high for low-income households as for richer ones. In almost 30% of EU

countries, households in relative poverty have half the chance to keep their homes adequately warm. In addition, households with damp or leaks are at least twice as common in the lowest quartile as the highest one. Recent WHO guidelines for indoor air quality⁶ conclude that occupants of damp or mouldy buildings have up to a 75% greater risk of respiratory symptoms and asthma.

- As to **industrial contamination**, in England (United Kingdom), the percentage of people living within 500 m of a site declared to be polluted was five times greater in the most deprived wards as in the least deprived.
- **Climate change** is already affecting health in the WHO European Region. Over 70 000 excess deaths were observed in 12 European countries in the summer heat-wave of 2003. The risk of heat-related mortality increases with age, but people with particular social and/or physical vulnerability are more at risk. Of the almost 1100 excess deaths during the 2003 heat-wave periods in Italy, the most deprived groups accounted for 17.8% and the least deprived, 5.9%. In France, female mortality was 15–20% higher than male mortality in all age groups.

Fifth Ministerial Conference on Environment and Health

Further information on the Conference, including all documents, is available on the WHO Regional Office for Europe web site (<http://www.euro.who.int/parma2010>).

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⁶ WHO guidelines for indoor air quality: dampness and mould. Copenhagen, WHO Regional Office for Europe, 2009 (http://www.euro.who.int/InformationSources/Publications/Catalogue/20090629_4).