



Women in Europe for a Common Future

A Healthy Population at the Heart of the EU Economic Strategy

“Clean, clever and Competitive from a Citizens Perspective”

Position Paper

The Environmental Burden of Disease and the EU Lisbon Agenda

WECF believes a healthy environment is a prerequisite for the healthy development of every human being, and that a healthy society is a productive one. As such, diminishing the environmental burden of disease can present a win-win-win situation, benefiting the environment, society, and the economy.

In a follow up to the April 2006 international scientific expert workshop on the environmental burden of disease (EBD), WECF organized a High Level Roundtable in November 2006 for representatives from the EU Commission, Member States, politicians, scientists, industries and NGOs to discuss the EBD and policy implications, particularly for the European economic strategy, the Lisbon Agenda. This paper includes insights and outcomes of that event.

The effect of environmental pollution on our health is underestimated

There is a clear connection between environmental pollution and negative effect on human health, also known as the environmental burden of disease (EBD), a concept addressed by the EU Commission's Environmental Health Strategy (SCALE) in 2003. The environmental burden refers to air, water, and noise pollution, but also climate change and chemical contamination, to name a few. Increases over the last few years in allergies, asthma, cancers, neurodevelopmental disorders, and even cardiovascular disease and obesity, amongst others, have been linked to exposure to environmental pollutants. Many of the increases in modern diseases, particularly cancer and asthma, have occurred in the richest countries. Increase in these diseases in children is particularly alarming.

A wealth of research, supported by a growing body of scientists, demonstrates the size and strength of the environment-health link has been underestimated. This stems, in part, from research based on the conventional, and often uni-causal approach to risk assessment. However, as noted by the European Environment Agency (EEA), amongst others, a multi-causal approach is needed to deal with the complexities involved in estimating the EBD. The timing of exposure (e.g. prenatal exposure), its duration, and the doses received by target tissues have impacts that cannot simply be extrapolated from single, high dose effects. We must therefore also account for the effects of combined exposures, especially in the case of chemicals (the so called “cocktail” effect—combinations of numerous chemicals and their breakdown products), exposure from multiple sources in our environment (e.g. air, water, food), and their impact on developing organs in the most vulnerable life stages. Incorporating all these elements in research and risk assessment is still quite complex, but if we look at developments in Europe we find many disturbing trends:

- Asthma and allergies drastically increased over the past 15-20 years; 1 child in 7 suffers from it.¹
- Cancer incidence in children is increasing at 1% yearly; it is a second cause of mortality.²
- Breast cancer incidence is increasing at 1-2% yearly with growing evidence that some of this is caused by exposure to environmental pollutants.³
- Every citizen has man-made chemicals in his/her body.⁴
- Womb and breast milk are chemically contaminated; pollutants pass through the placental barrier.⁵
- Male fertility has sharply declined in Western countries over the past 50 years; 1 in every 6 boys born in Europe today will have a low sperm count and research suggest links with prenatal exposure to endocrine disrupting substances.⁶

Although the EBD is underestimated, the already accepted effects illustrate the high societal costs and loss of tens of thousands of healthy life years. The increase in environmentally linked diseases is a tragedy in itself. In addition, the related social and economic costs undermine EU aims to become the most “progressive, competitive, knowledge-based economy in the world by 2010,” the *Lisbon Agenda*.

Our health is a key determinant of the economy

Good public health was previously seen as a mere by-product of economic development, but a 2001 World Health Organization (WHO) report changed this view—health is actually one of its key determinants.⁷ A report of the EU Commission’s Health and Consumer Protection Directorate (DG SANCO), ‘The Contribution of Health to the Economy in the European Union’, confirms that health affects a number of economic outcomes, including wages, labour supply (also of those giving care to ill family members), hours worked, and the time of retirement.

Europe faces two landmark demographic challenges: a declining fertility rate and an ageing population. As a response, the EU Commission’s *Integrated Guidelines for Growth and Jobs* makes attracting and retaining more people in the workforce a necessity.⁸ Here, the Commission encourages the “extension of working lives against a background of increased life expectancy.”⁹ Increased life expectancy and healthy life years are not feasible without serious attention to, and investment in public health. However, the priority for investment in human capital is limited to education and skills. Both the WHO and DG SANCO concluded that investments in health lead to gains in economic productivity as well as savings in healthcare costs and healthy life years lost,¹⁰ both critical elements for achieving Lisbon objectives. “If Europe is to compete in the global knowledge society, it must also invest more in its most precious asset—its people.”¹¹

A healthy population at the heart of Lisbon: WECF Recommendations

Women in Europe for a Common Future believes the Lisbon Agenda can be the driver for a competitive European economy. However, it cannot achieve this while neglecting environmental and social aspects of economic activity. Recognizing the EBD and its related effects on competitiveness are urgently needed if the European Commission and Member States want to ensure the Lisbon strategy delivers what it promises.

Future agreements on Lisbon must reconcile environmental health with competitiveness. As such, the recommendations outlined below need to be reflected in the **Community Lisbon Report** to be adopted by the Commission in 2007, and the 2008 revision of the **Integrated Guidelines for Growth and Jobs**, which supports Member States in developing plans for achieving the Lisbon objectives (**National Reform Programmes (NRPs)**). The recommendations also target the mid-term review of the **Environment and Health Action Plan 2004-2010**, the midterm review of the **6th Environmental Action Plan (6th EAP)**, and the upcoming **White Paper on Health Strategy**. Finally, Member States are encouraged to incorporate these recommendations into their related National policies.

¹ EEA/WHO Regional Office for Europe. Tamburini, G. et al, (2002). “Children’s health and environment: a review of evidence.” pp. :44–47

² International Association for Cancer Research (IARC) - Steliarova-Foucher, et al (2004), *The Lancet* 364.

³ European Parliament report (2002) (2002/2279 (INI))

⁴ EEA/JRC Report (2005), “Environment and health” no. 10/2005.

⁵ Noreen, K., Mieronyte, D. (1998) “Contaminants in Swedish human milk, organohalogen compounds”, see also WWF (1999), “Chemical trespass: a toxic legacy.”

⁶ Carlsen E., et al (1992), *British Medical Journal* 305. See also van Waeleghem, K., et al (1996), *Human Reproduction* 112.

⁷ Commission on Macroeconomics and Health (2001), “Macroeconomics and health: Investing in health for economic development.”

⁸ EU Commission Communication to the Spring European Council (2005), “Working together for growth and jobs: Integrated guidelines for growth and jobs (2005-2008)”

⁹ *ibid.* pg. 12

¹⁰ WHO Bulletin. Belli, et al (2005), “Investing in children’s health: what are the economic benefits?”

¹¹ Report from the High Level Group, Kok (2004), “Facing the challenge: The Lisbon strategy for growth and employment.”

1. Shifting the risk assessment paradigm, the precautionary principle as basis

Understanding the reality of the EBD is scientifically complex and demands a shift away from conventional, quantitative factors associated with risk assessment, towards a more qualitative, multi-causal approach, as supported by the **SCALE** strategy. This includes accounting for elements like the timing, duration, and dose-amount of exposures, as well as the “cocktail” effect, and multiple sources of exposures.¹² It also needs to incorporate functional deficits (e.g. loss of IQ level) as health risks, in addition to diseases. But research in this field is complicated, particularly considering the amount of pollutants in the environment. 100% certainty is extremely difficult to achieve, and obtaining levels of evidence are even more complicated in a multi-causal setting, as the EBD is. Yet, there is already more than sufficient evidence from the past decennia warranting concern, especially regarding the effects of chemicals on prenatal development, particularly brain development and gene expression.

This is a clear call for the application of the **precautionary principle (PP)**, grounded in the **Treaty establishing a Constitution for Europe (Treaty)** adopted by all EU Member States. The Treaty requires that a high level of human health protection be ensured in the definition and implementation of all Community policies and actions.¹³ It also demands that the PP be applied in all Community policy on the environment, which applies to environmental effects on human health. A 2000 **Commission Communication**¹⁴ gives some guidelines on how to apply the principle (e.g. when scientific data are inconclusive but preliminary results show potentially dangerous effects for human health), as do certain European Court judgements (e.g. on applying the PP in the use of antibiotics in animal feed). Convincing examples of how environment and health damage, and their costs could have been avoided if the PP had been applied are described in the EEA Report, *Late Lessons and Early Warnings: the Precautionary Principle 1896-2000*. The first warnings of asbestos came in 1898, yet it took more than eighty years before real preventative action was taken, and in the interim millions of lives were lost. The protection of public health must drive policy and give rise to proper use of the precautionary principle. The common practice that chemicals are ‘innocent until proven guilty’ has been catastrophic in many cases and should be reversed.

Of course, as noted by a representative of DG SANCO, “policy making in the absence of data is difficult.” Accordingly, strong budgets in this field must be maintained at Community and stimulated at National level (they could be integrated into the NRPs). Special attention should be given to the effects of combinations of exposures from combined sources, low dose effects and timing of exposure. Calls for research proposals should be widely communicated to the independent research community. In addition, environmental health science should be fully integrated into the curriculum of medical students and epidemiologists and into in-service training of medical professionals, for better diagnosis, registration and treatment of environmental health problems.

With a better understanding of the EBD, the real economic impacts become apparent. The WHO already estimated the EU could save about 161 billion Euros yearly if they could reduce air-pollution deaths alone.¹⁵ Direct costs like healthcare must be assessed, but also indirect ones like the loss of productivity (due to morbidity or mortality, and also of household members who need to change their labour habits in response to an ill family member), functional losses like IQ points in the case of neuro-disorders, adjustments needed in society (e.g. special infrastructure, education), loss of quality of life, loss of healthy life years, etc. The full extent of environment-related health effects must be considered by policymakers when designing policies. However, cost-benefit analyses should not replace the fundamental objective of the EU to protect human health.

- Recognize the multi-causality, and current underestimation of the environmental links with health problems (EBD).
- Use policy intervention, based on the precautionary principle, to reduce and eliminate the EBD.
- Further investigation into the EBD, particularly low dose effects from multiple exposures and prenatal exposure, must be stimulated with strong budgets at Community and National level, but cannot delay preventive action.
- Improve environmental health curriculum and training in the medical professions

¹² EU Commission Press Release (2003), “A European Environment and Health Strategy” (Memo/03/130).

¹³ Treaty establishing a Constitution for Europe (2004), Article III-278.

¹⁴ EU Commission (2000) “Communication on the Precautionary Principle” [Com (2000)1].

¹⁵ WHO Press Release (2005), EURO/08/05.

2. Health in all policies—at Community and National level

Only a healthy population is a productive one, and unfortunately the threat to human health from environmental pollution has been left behind in the Lisbon Agenda. Although **Guideline 18** discusses promoting a life-cycle approach to work,¹⁶ and expresses the need to increase the employment rates of youth, women, and the ageing (notably all health-vulnerable groups), the Commission focus is on quality of jobs and access to lifelong learning; insufficient attention is given to health. This is contradictory to the Sustainable Development Strategy and Treaty, which makes the health of citizens a priority, and the 6th EAP, which aims to contribute to a high quality of life and social well being by providing an environment where pollution levels do not give rise to harmful effects on human health or the environment. As such, environmental health aspects must be taken into account when developing policy. Policy interventions must have a multi-sectoral and synergistic approach, originating from the health sector, but also spanning the environment, energy, transport, industry, agriculture, planning, education and even finance sectors. The Finnish EU Presidency approach to “health in all policies” is a step in the right direction and Member States need to follow this initiative.

New and existing policies that eliminate or reduce environmental pollution must be implemented coherently and consistently throughout Member States, in accordance with the precautionary principle. Where there is a question of priorities, protecting human health must take precedence. Hazardous substances need to be taken off the market and substituted by safer alternatives.

Policies aimed at indoor air pollution (including banning smoking) and reducing the use of alcohol and drugs will have tremendous positive health impacts and should continue with full strength. Environmental policies in development, for example REACH, the thematic strategy on sustainable use of pesticides, the directive on priority hazardous substances in water, and climate and energy policies, amongst others, must eliminate pollution at the source to prevent health impacts. This can be achieved through eco-efficiency and clean production policies, e.g. the substitution of hazardous substances and setting ambitious, time-bound reduction targets (see Section 4). In addition, the EU must be prepared to go beyond REACH and other policies to design measures to protect human health, especially that of (unborn) children (see Section 3).

- The European Commission, Member States, and Members of the European Parliament need to acknowledge that the reduction and prevention of environment-related health effects is a prerequisite for effective economic policy and sustainable development.
- Protecting human health must take precedence over protecting sectoral interests.
- EU policies to reduce the EBD must be synergistic and multi-sectoral in approach (with attention to streamlining), and be implemented and monitored coherently and consistently.

3. Children, the basis of a “knowledge society”

It is recognized at the Commission level that children are especially vulnerable to environmental factors. Per unit of body weight children are more heavily exposed to environmental hazards—they drink more water, eat more food, breathe more air, and absorb more toxins than adults.¹⁷ They are open to longer term risks because of early exposure, including foetal exposure that may lead to chronic diseases which can take decades to appear. The effects incurred during development are likely to be lasting and may therefore impact the whole lifespan. As such, there is need for policy intervention aimed specifically at reducing their exposure. The increase in asthma, allergies, and cancers in children is alarming and despite gains in life expectancy, a recent survey in the Netherlands shows that 75 % of children who survived cancer, have chronic disabilities and need lifelong care.

The **Community Lisbon Programme** indicates knowledge as a critical factor by which Europe can preserve its international competitive advantage, however new research shows that foetal and early childhood exposure to low doses of neurotoxic industrial chemicals can damage the developing brain and lead to neuro-developmental disorders like learning disabilities, attention deficit disorders, mental retardation and loss of IQ points.¹⁸ There has been an increase in such diseases and one in every six children has developmental brain damage.¹⁹ Such findings fly in the face of a “knowledge-based society.”

¹⁶ Idem ⁸

¹⁷ HEAL (formerly EEN) Policy Paper (2004), “Children’s special health vulnerability to environmental hazards and REACH.”

¹⁸ Grandjean, P., Landrigan P.J. (2006), “Developmental neurotoxicity of industrial chemicals” *The Lancet* (368)

¹⁹ ibid

DG SANCO asserted that good childhood health enhances cognitive functions and reduces school absenteeism and early drop out rates.²⁰ Thus, children with better health can be expected to attain higher education levels and therefore be more productive in the future.²¹ Tackling early school drop out and investing in education are clearly identified in **Guideline 23, *Expand and improve investment in human capital***,²² but there is insufficient attention to health. According to the WHO, investments in health, especially for children, can give even better long term financial returns than investments in education.²³ In addition, investing in environmental protection to minimize related health impacts can help ensure real success of this guideline.

- The EU must undertake urgent action to protect the health of children, especially in the prenatal phase.
- The EU must address human exposure to neurotoxins by developing a legislative framework that includes identification and screening, data collecting, and phasing out, with particular attention for prevention of developmental brain damage.
- Investments in education are not enough to meet the Lisbon objectives; investments are needed in protecting the health of children (and other vulnerable groups), and will maximize the value of investments in education.

4. Effective regulation and eco-innovation to boost health and competitiveness

We applaud **Guideline 11, *Encourage the sustainable use of resources and strengthen the synergies between environmental protection and growth***, but are discouraged that only few Member States have incorporated this into their **NRPs**.²⁴ This must be incorporated to stimulate innovation, competitiveness, and to boost synergies between the economy, environment, and human health. Eco-efficiency and innovation should integrate environmental health aspects and can even serve the aim to eliminate health risks (e.g. clean production, substitution). Improved regulation, which stimulates eco-innovation, can have tremendous, multi-faceted benefits for the environment and subsequently human health. The substitution principle stimulates innovation and needs to be incorporated in all policy areas relating to chemicals: REACH, pesticides, cosmetics, emissions into air and water, amongst others.

The results of the 2005 Prague summit of EU Environmental Protection Agencies revealed that good regulation can actually reduce costs for industry and business. This involves a mix of policy tools including market-based measures and effective engagement of all stakeholders. Such approaches create markets for goods and services and promote innovation, a key driver for competitiveness.²⁵ Because the **Community Lisbon Programme** calls for the improvement and simplification of business regulatory frameworks,²⁶ we urge the Commission to opt for effective, not less regulation, that reduces health and environmental costs and promotes eco-efficiency and innovation. Such regulation must also integrate environmental health targets, as noted in Section 2. Without due attention to environmental health aspects, eco-innovative products and processes may still be harmful to human health.

In addition, social and public accountability of industries must be legally strengthened and enforced.

Expert committees and advisory boards on environmental health policy issues must consist of truly independent experts. Nomination should be transparent. Civil society, including women's and workers' organisations must be able to nominate independent experts.

The EU and Member states must lead the dialogue with industries, but industries, particularly in the chemicals field, must be more pro-active and strive for safer products. Forerunners must be rewarded.

²⁰ European Commission DG Health and Consumer Protection (2005). "The contribution of health to the economy in the European Union," pg. 12.

²¹ *ibid*

²² *idem*⁸

²³ *idem*⁷, see also¹⁰

²⁴ According to EEB analysis (2006).

²⁵ Network of Heads of European Environmental Protection Agencies (2005), "The Contribution of Good Environmental Regulation to Competitiveness."

²⁶ Communication from the Commission to the Council and the European Parliament (2005), "Common actions for growth and employment: the Community Lisbon programme" [SEC (2005) 981].

- Embrace effective legislation in favour of environmental protection to reduce the EBD.
- Include environmental health as an essential aspect (and target) in eco-innovation.
- Earmark investments in R&D for eco-technologies geared towards eliminating toxic substances and other pollution linked to the EBD.
- Ensure that advisory boards and expert committees (on matters related to environmental health) consist of truly independent experts and include the voice of civil society.

5. Citizens concerns at the heart of Lisbon

European citizens are worried about high unemployment levels and are concerned about their health and quality of life. The majority feel this is influenced equally by economic and social factors, as well as the state of the environment.²⁷ A Eurobarometer on the Lisbon Agenda revealed that Europeans give priority to protecting the environment over economic competitiveness.²⁸ They also indicated that the environment is a driving force for innovation, and environmental protection policies are incentives to innovate rather than obstacles to economic performance.²⁹ However, the Commission and other proponents of the renewed Lisbon Strategy claim that securing the economy is a necessary precondition for fulfilling our wider social and environmental ambitions. We dispute this claim; growth has not yet been decoupled from environmental degradation, and the evidence shows that poor environments negatively impact human health. In addition, the greatest increases in modern diseases like cancers, asthmas, and allergies are occurring in the richest countries. The combined effects of industrial chemicals, pesticides, food contaminants, air pollution, noise pollution, and climate change are, in concert, exerting a considerable burden of disease on the European population, and urgent action is needed to reduce the EBD and protect the health of citizens. Eliminating the EBD is not simply a social, environmental, or economic issue, but an ethical one.

EU citizens want more information on the impact of everyday chemicals on their health³⁰. Recent scientific findings show they have good reason to be concerned. While there is a vast array of information available to citizens and downstream users, it must be more readily available, practical and understandable, aimed particularly at youth, young couples, pregnant women and workers. It should not neglect information that might be politically sensitive, and we foresee the new EU health portal playing a large role here. Such information empowers consumers and downstream users to make better choices while simultaneously putting pressure on producers to reduce or substitute harmful substances.

Debates on protective legislation like the air quality directive and REACH, which resulted in compromised legislation, give citizens the impression that industry interests outweigh public health ones. Citizen trust, waning for a long time, can be strengthened by, e.g. listening to public concerns and ideas about health and environment, and acknowledging their right to appeal to the European Courts when they feel their health is affected by EU decisions regarding the environment (a right based on the ratified **Aarhus Convention**). A Europe looking for broader public support must take such measures onboard. "If Europe is to compete in the global knowledge society, it must also invest more in its most precious asset—its people."³¹

- Pursue economic competitiveness in concert with environmental sustainability and public health, inline with the views of the European population.
- Better inform citizens with information on health impacts of environmental pollutants, including chemicals in everyday products.
- Reaffirm the Aarhus convention, right of information and public access to justice regarding policy decisions where citizens expect or experience environmental health effects.

WECF, December 2006

WECF Women in Europe for a Common Future is a Network of 78 Organisations in 31 Western and Eastern European countries, the Caucasus and Central Asia, working on sustainable development, health and environment, and poverty reduction.

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²⁷ European Commission, Eurobarometer 217 (2005), "The attitude of European citizens towards the environment."

²⁸ European Commission, Eurobarometer 215, (2005), "Lisbon."

²⁹ *ibid*

³⁰ *Idem* ²⁷

³¹ *Idem* ¹¹