

INTRODUCTION

There is a clear link between environmental quality and human health. For instance, the air we breathe, the water we drink and the noise to which we are exposed have a more or less direct influence on our health. This prompted the World Health Organization to incorporate new factors into its definition of health and to define, in 1994, the concept of "environmental health": "Environmental health comprises those aspects of human health, including quality of life, that are determined by physical, chemical, biological, social and psychosocial factors in the environment. It also refers to the theory and practice of assessing, correcting, controlling and preventing those factors in the environment that can potentially affect adversely the health of present and future generations." (WHO, 1994).

Environmental health is also of growing concern for the public. The public's perception of the risks posed by the environment to health is changing, risks that have not been chosen by people are becoming less socially accepted, and measures are required to prevent their impact on life expectancy and quality of life.

Although they may be natural, the environmental factors that can affect health are nowadays mostly anthropogenic. In Wallonia, thanks to the measures taken to improve the quality of the environment and the effectiveness of control measures, it is no longer so much acute toxicity problems linked to the point exposure to massive doses of a given factor (pathogen, pollutant, radiation, etc.) that are of concern today, but the effects of chronic toxicity, linked to continuous or repeated exposure to low doses of an often heterogeneous group of substances (cocktail effect). This concerns an increasing number of risk factors.

The links between environmental factors and health effects are difficult to establish for several reasons: (i) in the majority of cases, it is a very low-dose exposure, but over a long period of time, (ii) latency times, which can often be long, separate the exposure from the first signs of a disorder, (iii) the retrospective estimation of exposure is difficult, (iv) given the synergistic effects, it is difficult to attribute the impact of the exposure to one single factor, (v) many effects are non-specific, (vi) our level of scientific knowledge does not always allow a clear causal link to be established and (vii) the effects also depend on individual factors (age, genetic factors, etc.).

Environmental data are in relatively large numbers in Wallonia and the acquisition of health data is becoming increasingly widespread. However, there is no environmental health data as such. The work in this area therefore consists of combining environmental and health data that have been collected separately and generally, without spatial or temporal links. At most, there are environmental health studies (e.g., biomonitoring) that are generally sporadic across time and location, and which are not part of an overall regional environmental health strategy.

The approach chosen to develop the "environment-health links" section of this report is to use only indicators relating to exposure and effects. Unfortunately, due to the lack of data recorded at the individual level, not many indicators relating to exposure and effects can be calculated specifically at the Walloon level. However, this situation could improve, thanks to relatively recent initiatives taken at various levels of government in Belgium (e.g., the EXPOPESTEN¹ project, the DEMOCOPHES² project, the 6th study on Persistent Organic Pollutants (POP) in breast milk², and the HBM4EU³ project). In this edition, the section "Environment-health links" contains fact sheets providing data on the exposure of the Walloon population to noise (road, rail, in agglomerations, and airborne) and a fact sheet presenting data on diseases linked to native wildlife.

Other environmental indicators related to human health can be found in part 5 of this report, relating to the analysis of environmental components. They are status indicators, presenting data on concentrations of pollutants in the air (acidifying pollutants in ambient air, particles suspended in ambient air, etc.) and in water (quality of bathing water, compliance rate of public drinking water vis-à-vis pesticides, etc.). Although the quality of these environmental components (air, water, etc.) can be assessed against legal values based on the preservation of human health, these indicators do not measure population exposure to harmful factors or their effects.

^[1] <http://www.issep.be/expoesten-2/> | ^[2] <http://www.nehap.be/en> | ^[3] <http://www.hbm4eu.eu>