

The Consideration of Human Health in Environmental Law

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One of the objectives of the Community policy on the environment is the protection of human health. This is specified in Article 174(1) of the EC Treaty.

Our concern is to assess the effective role devoted to human health protection in the elaboration of environmental law and policies and, in particular, to appraise its capacity of resistance in conflict of interests situations, under the sustainable development umbrella, especially in the area of standards and critical loads setting. Our moot departure point is whether we can consider that our environment is innocuous to human health when meeting legal standards, and if not, to start investigating the reasons why.

1. Human health is clearly an objective of EC environmental policy

Many texts of secondary law at EC level do demonstrate that human health is a specific focus of environmental policy, when dealing with pollution prevention and management, in conformity with Article 174(1) of the EC Treaty, which states that:

"Community policy on the environment shall contribute to pursuit of the following objectives:

- preserving, protecting and improving the quality of the environment,*
- protecting human health,*
- prudent and rational utilisation of natural resources,*
- promoting measures at international level to deal with regional or worldwide environmental problems."*

The health objective is indeed clearly specified in the protection regime of many core Directives. Directive 75/442 on Waste¹ is adopted in order to protect human health and the environment against harmful effects caused by the collection, transport, treatment, storage and tipping of waste which provides. This is clearly reflected in its main provisions, stipulating that "Member States shall take the necessary measures to ensure that waste is recovered or disposed of without endangering human health and without using processes or methods which could harm the environment"² and that "Member States shall take appropriate measures ... in order to ensure a high level of protection for the environment and public health". Similarly, the general aim of the Ambient Air Quality Directive³ is to define the basic principles of a common strategy to, among others, define and establish objectives for ambient air quality in the Community designed to avoid, prevent or reduce harmful effects on human health and the environment⁴

¹ Council Directive 75/442/EEC of 15 July 1975 on Waste.

² Article 4.

³ Council Directive 96/62/EC of 27 September 1996 on ambient air quality assessment and management, Article 1.

⁴ Towards sustainability – A European Community programme of policy and action in relation to the environment and sustainable development, supplemented by Decision No 2179/98/EC on its review.

as a whole,⁵ and one of the motivation for the adoption of the Incineration Directive⁶ was to meet the objective that all people should be effectively protected against recognised health risks from air pollution,⁷ or at least to prevent or to limit as far as practicable negative effects on the environment and the resulting risks to human health.⁸

The concern is also, quite logically, inserted in many crucial definitions, such as the notions of "pollution", "pollutant", "major accident", "hazard" or "damage".

"Pollution" in the IPPC Directive⁹ means "the direct or indirect introduction as a result of human activity, of substances, vibrations, heat or noise into the air, water or land which may be harmful to human health or the quality of the environment, result in damage to material property or impair or interfere with amenities and other legitimate uses of the environment", and a similar definition is inserted in the Water Framework Directive.¹⁰ A "pollutant" is "any substance introduced directly or indirectly by man into the ambient air and likely to have harmful effects on human health and/or the environment as a whole" according to the Ambient Air Directive¹¹ and "the discharge, directly or indirectly, of nitrogen compounds from agricultural sources into the aquatic environment, the results of which are such as to cause hazards to human health, harm to living resources and to aquatic ecosystems, damage to amenities or interference with other legitimate uses of water" according to the Nitrate Directive. Under the regime instituted by the Seveso Directive,¹² a "major accident" is "an occurrence such as a major emission, fire, or explosion resulting from uncontrolled developments in the course of the operation of any establishment covered by this Directive, and leading to serious danger to human health and/or the environment, immediate or delayed, inside or outside the establishment, and involving one or more dangerous substances", and "hazard" is "the intrinsic property of a dangerous substance or physical situation, with a potential for creating damage to human health and/or the environment". Under the Directive on Environmental Liability,¹³ the notion of "damage" includes "land damage", which is "any land contamination that creates a significant risk of human health being adversely affected as a result of the direct or indirect introduction, in, on or under land, of substances, preparations, organisms or micro-organisms". And so on.

What catches the eye in such an indicative inventory is the fact that "human health" and the "environment" are seen as two different concepts, most often placed on a same footing in

5 Article 1(1).

6 Directive 2000/76/EC of the European Parliament and of the Council of 4 December 2000 on the incineration of waste.

7 As stipulated by the Fifth Action Programme, Towards sustainability – A European Community programme of policy and action in relation to the environment and sustainable development, supplemented by Decision No 2179/98/EC. That Programme further sets as an objective a 90 % reduction of dioxin emissions of identified sources by 2005 (1985 level) and at least 70 % reduction from all pathways of cadmium (Cd), mercury (Hg) and lead (Pb) emissions in 1995.

8 Article 1.

9 Article 2(2).

10 Directive 2000/60/EC of the European Parliament and of the Council of 23 October 2000 establishing a framework for Community action in the field of water policy. Article 2(33): "Pollution" means the direct or indirect introduction, as a result of human activity, of substances or heat into the air, water or land which may be harmful to human health or the quality of aquatic ecosystems or terrestrial ecosystems directly depending on aquatic ecosystems, which result in damage to material property, or which impair or interfere with amenities and other legitimate uses of the environment.

11 Council Directive 96/62/EC of 27 September 1996 on ambient air quality assessment and management.

12 Council Directive 96/82/EC of 9 December 1996 on the control of major-accident hazards involving dangerous substances.

13 Directive 2004/35/CE of the European Parliament and of the Council of 21 April 2004 on environmental liability with regard to the prevention and remedying of environmental damage.

the various definitions, but rarely assimilated. Does it mean that the "environment", as such, does not include the human being?

A legal definition of "the environment" is not easy to find, strangely enough. The rare definitions of the notion are made on basis of the technique of the open list, drawing an indicative inventory of what the term does at least include, with a secondary thought that it might probably mean more. For instance, the Lugano Convention of 1993 on Civil Liability for Damage resulting from Activities Dangerous to the Environment defines the "environment" as "including natural resources, both abiotic and biotic, such as air, water, soil, fauna and flora and the interaction between the same factors; property, which forms part of the cultural heritage; and the characteristic aspects of landscape"¹⁴. From the Incineration Directive, one can infer that the environment is "in particular pollution by emissions into air, soil, surface water and groundwater"¹⁵, and from the Landfill Directive¹⁶ that the possible negative effects on the environment are "in particular the pollution of surface water, groundwater, soil and air", to be distinguished from effects on the global environment, including the greenhouse effect, as well as any resulting risk to human health. An indirect definition is provided for in the Aarhus Convention on access to information, public participation in decision-making and access to justice in environmental matters, under the definition of "Environmental information", which means "any information in written, visual, oral, electronic or any other material form on: (a) the state of elements of the environment, such as air and atmosphere, water, soil, land, landscape and natural sites, biological diversity and its components, including genetically modified organisms, and the interaction among these elements; (b) factors, such as substances, energy, noise and radiation, and activities or measures, including administrative measures, environmental agreements, policies, legislation, plans and programmes, affecting or likely to affect the elements of the environment within the scope of subparagraph (a) above, and cost-benefit and other economic analyses and assumptions used in environmental decision-making; (c) the state of human health and safety, conditions of human life, cultural sites and built structures, inasmuch as they are or may be affected by the state of the elements of the environment or, through these elements, by the factors, activities or measures referred to in subparagraph (b) above".¹⁷

Indirect definitions of the concept can be found in the impact assessment regimes, where the human being seems to be included, on the contrary, in the very notion of "environment". The 1985 Directive¹⁸ stipulates indeed that the environmental impact assessment must assess effects on the following factors: human beings, fauna and flora, – soil, water, air, climate and the landscape, – the inter-action between the factors mentioned in the first and second indents, – material assets and the cultural heritage, while the 1991 Espoo Convention¹⁹ similarly defines the notion of "impact" as "any effect caused by a proposed activity on the environment including human health and safety, flora, fauna, soil, air, water, climate, landscape

14 Convention on Civil Liability for Damage Resulting from Activities Dangerous to the Environment (Lugano, 1993).

15 Directive 2000/76/EC of the European Parliament and of the Council of 4 December 2000 on the incineration of waste.

16 Council Directive 1999/31/EC of 26 April 1999 on the landfill of waste.

17 Article 2(3), OJ L 124.

18 Council Directive 85/337/EEC of 27 June 1985 on the assessment of the effects of certain public and private projects on the environment.

19 Convention on Environmental Impact Assessment in a Transboundary Context (Espoo, 1991) – the "Transboundary EIA Convention".

and historical monuments or other physical structures or the interaction among these factors; it also includes effects on cultural heritage or socio-economic conditions resulting from alterations to those factors".

Both positions are documented then: the human being is in some cases part of the environment (when the issue is about considering the impact of an activity: one must assess the impact of an activity on neighbours, men and women, not only on fauna, flora and other resources), and, in other – more numerous – cases, external to it but in close and vital interrelation.

It is that close interrelation between "the surroundings" at large and the human being enshrined in it (breathing the air, drinking the water, touching the land, eating its fruits, etc.) that is *the motivation for placing the protection of human health among the objectives of environmental policy* – and this without a necessary connection to the assumed content of the definition of the word "environment". Human quality of life, human length of life and human life are indeed dependent, even if among other parameters for sure, upon the healthiness of the "milieu de vie".

If environmental policy includes a human health objective, it is important to observe yet that human health protection is only one objective among others and is not given an apparent priority over parallel environmental goals of Article 174(1) EC, as there does not appear, a priori, to be a settled hierarchy.

In some environmental law regimes, human health is even not – and it is important that it remains so²⁰ – a stake at all. This is very clear when one observes nature conservation laws, dedicated to fauna, flora and their habitat, with no link to the health of humans, resources conservation regimes (such as fisheries) and efforts made to institute responsibility or liability for damages caused to water areas, land or biodiversity, say the global commons, with no link to personal interests.

One must refrain thus to start confusing environment and health protection, even if in some areas – all concerned with product-linked policies – the borderline is blurred, as it is very clearly demonstrated in recent EC case-law involving the precautionary principle and health issues²¹.

II. A high level of protection

Community policy on the environment shall aim at a *high level of protection*, as specified in Article 174(2). After fixing the targets, among them the protection of human health, the level of ambition is set.

Such a requirement to aim at a high level of protection is naturally also valid for the health component objective of environmental policy. It is furthermore consolidated by Article 152 EC, according to which a high level of human health protection shall be ensured in the definition and implementation of all Community policies and activities (including the environmental policy), together with Article 153 EC which states that in order to ensure a high level of consumer protection, the Community shall contribute to protecting the health, safety and economic interests of consumers.

²⁰ In order not to reduce environmental policy to an exclusive anthropocentric approach.

²¹ See *infra*.

An indication of what such an aim might mean regarding the environmentally-linked health objective can be found in the recent case-law.

1. The precedence of health over economic considerations

One of the fundamental results of case-law is that the pursuit of health protection at a high level, via an environmental legislation, may justify adverse economic consequences.

In Case T-158/03 of 28 June 2005,²² *Metalaxyl, Industrias Químicas del Vallés v Commission*, currently under Appeal,²³ the Court of first instance (hereafter CFI) observes that the objectives pursued by Directive 91/414/EEC concerning the placing of plant protection products on the market were not the protection of the market nor of competition, but the protection of human and animal health and the environment. As a consequence, the CFI declares²⁴ that "it is settled case-law that the importance of the objective pursued, namely the protection of human health, may justify adverse economic consequences, even those which are substantial, for certain traders." The CFI is very straightforward on this as it even states that the protection of public health *must* take precedence over economic considerations (Order in Case C-180/96 R – *United Kingdom v Commission* [1996] ECR I-3903, paragraph 93, and Case T-13/99 – *Pfizer Animal Health v Council* [2002] ECR II-3305, paragraphs 456 and 457. See also Case T-174/00 – *Artegoda GmbH v Commission* [2002] ECR-II, paragraph 184, confirmed by Case C-39/03 – *Commission v Artégoda* [2003]). The case dealt with an action for annulment of Decision 2003/308/EC concerning the non-inclusion of metalaxyl in Annex I of Directive 91/414/EEC, due the fact that the applicant did not present a dossier which was sufficiently complete to participate in the detailed evaluation of the proposed substance. The applicant could thus not demonstrate that, in the light of current scientific and technical knowledge, it may be expected that plant protection products containing the active substance will fulfil certain conditions ensuring that they are not harmful for human and animal health or the environment. The CFI considered that the Decision was legal as it was not manifestly inappropriate in relation to the objective which the competent institution was seeking to pursue (Case C-189/01 – *Jippes and Others* [2001] ECR I-5689, paragraph 82, *Pfizer*, cited above, paragraph 412, and *Alpharma v Council* [2002] ECR II-3495, paragraphs 177 to 180), namely the protection of human and animal health and the environment.

²² OJ 2003 C 158.

²³ An appeal against the judgment delivered on 28 June 2005 by the Second Chamber of the Court of First Instance of the European Communities in Case T-158/03 between Industrias Químicas del Vallés, SA and the Commission of the European Communities was brought before the Court of Justice of the European Communities on 26 August 2005 – Case C-326/05 P. One of the arguments is that the "the CFI erred in law by incorrectly interpreting and applying to the present case the precautionary principle and the principle of proportionality and by upholding the decision of the Commission originally contested on the grounds of public health". The application for interim measures was dismissed (C-326/05 P-R, 15 December 2005).

²⁴ After recalling that the objective of protection of human health and the environment is consistent with the precautionary principle and reflects the case-law upholding the primacy of the protection of health and the environment over economic interests.

2. The precautionary principle

Another consequence is the application of the precautionary principle²⁵ to human health issues, even outside the environmental field.

For the reason that the precautionary principle is expressly enshrined in Article 174(2) EC regarding environmental policy, and that Article 174(1) EC includes protecting human health among the objectives of Community policy on the environment, and although the precautionary principle is mentioned in the Treaty only in connection with environmental policy, the CFI declares that it is broader in scope (Case T-174/00 – *Artegoda GmbH v Commission* [2002] ECR-II, paragraph 183, confirmed by Case C-39/03 – *Commission v Artégoda* [2003]). It is intended to be applied in order to ensure a high level of protection of health, consumer safety and the environment in all the Community's spheres of activity, in conformity with Article 3(p), Article 6 EC, Article 152(1) EC and Article 153 EC.²⁶

In Case C-41/02 of 2 December 2004 – *Commission v Kingdom of the Netherlands*, the ECJ finds arguments in the health component of Article 174 EC and its requirement for a high level of protection in order to solve an issue related to foodstuff content – and not an environmental problem. After specifically stating that “it is clear from Article 130r of the EC Treaty (now, after amendment, Article 174 EC) that the protection of human health is one of the objectives of the Community policy on the environment, that that policy aims at a high level of protection and is to be based inter alia on the precautionary principle, and that the requirements of that policy must be integrated into the definition and implementation of other Community policies”, it recalls that in addition, it follows from the case-law of the Court that the precautionary principle may also apply in policy on the protection of human health which, according to Article 129 of the EC Treaty (now, after amendment, Article 152 EC) likewise aims at a high level of protection (see, to that effect, Case C-157/96 – *National Farmers' Union and Others* [1998] ECR I-2211, paragraphs 63 and 64; Case C-236/01 – *Monsanto Agricoltura Italia and Others* [2003] ECR I-8105, paragraphs 128 and 133; *Commission v Denmark*, paragraph 49; and *Commission v France*, paragraph 56; see also, to that effect, Case T-13/99 – *Pfizer Animal Health v Council* [2002] ECR II-3305, paragraphs 139 and 140; Case T-70/99 – *Alpharma v Council* [2002] ECR II-3495, paragraphs 152 and 153; and Case T-177/02 – *Malagutti-Vezinhet v Commission* [2004] ECR II-2004, paragraph 54).

The application of the precautionary principle in the field of public health implies that where there is uncertainty as to the existence or extent of risks to human health, the institutions may take precautionary measures without having to wait until the reality and seriousness of those risks become fully apparent (Case C-180/96 – *United Kingdom v Commission* [1998] ECR I-2265, paragraph 99, and Case T-199/96 – *Bergaderm and Goupil v Commission* [1998] ECR II-2805, paragraph 66, as quoted in Case T-174/00 – *Artegoda GmbH v Commission* [2002] ECR-II, paragraph 185).

²⁵ See de Sadeleer, *Environmental Principles – From Political Slogans to Legal Rules*, 2002; Macrory (ed.), *Principles of European Environmental Law*, 2004.

²⁶ Prior to the enshrinement in case-law of the precautionary principle, on the basis of the Treaty provisions, that principle was implicitly applied in the review of proportionality (see, to that effect, order in Case C-180/96 R – *United Kingdom v Commission*, paragraphs 73-78, and the order of the President of the Court of First Instance in Case T-76/96 R – *National Farmers' Union and Others v Commission* [1996] ECR II-815, paragraphs 82-93, in particular paragraph 89).

3. Not the highest level of protection possible

The high level of protection requirement does not actually mean that a proposed measure must be based on the highest level of protection possible. This has been demonstrated, regarding environmental matters, in Case C-284/95 – *Safety Hi-Tech Srl* [1998], paragraph 49, according to which, whilst it is undisputed that Article 130r(2) of the Treaty requires Community policy in environmental matters to aim for a high level of protection, such a level of protection, to be compatible with that provision, does not necessarily have to be the highest that is technically possible. The ECJ justifies this flexibility on the fact that the Treaty authorises the Member States to maintain or introduce more stringent protective measures. On a minimum basis, one shall consider at least that the specific reference to a high level of protection no longer permits the adoption of measures which only provide for the lowest common denominator.²⁷

At last, it is worth noting that the very objective of human health protection in environmental policy is also binding on the Member States, even if the European legislation does not specify the actual content of the measures to be taken in order not to endanger human health and the environment, while leaving to them a margin of discretion in assessing the need for such measures (Case C-494/01 – *Commission v Ireland*, paragraph 168, Case C-365/97 – *San Rocco*, paragraph 67, and Case C-387/97 – *Commission v Greece*, paragraphs 55 and 58).

III. Health and risk assessment

Where existing, at macro- (legislative process) or micro-level (decision on individual authorisations), procedures instituted for the assessment of the risk to the environment appear to always include an assessment of the risk to human health. It is an important area of investigation in all sectors, though with a particular focus in areas where a possibility of direct or indirect consumption exists.

If human health impact is an integral part of current environmental assessment, this should not hide the fact that still in many potentially detrimental situations, no *prior* detailed assessment is required by the current legislation – thorough analyses of the risk to human health are not a prerequisite for developing a new substance; potential hazards are dealt with on a case-by-case basis, a posteriori, when searching for the causes of an established problem. This is so for chemicals,²⁸ where most substances or products are currently being marketed without prior and sufficient toxicological testing and risk assessment for human health, a reason why a large revision process of the existing regime is now under debate (the so-called REACH process).²⁹

On the depth of the assessment that should be carried out regarding environmentally-linked health issues, indications can be found in EC case-law dealing specifically with the public health area and the role of public authorities, when confronted to the need to deliver authorisations or other administrative measures.

²⁷ Krämer, *EC Environmental Law*, 5th ed. 2003, p. 11.

²⁸ Pallemerts, "EC Chemicals Legislation: A Horizontal Perspective", in: *30 years of EC Environmental Law*, Krämer/Macroray (eds.), 2005.

²⁹ See *infra*, and other contributions.

The duty imposed on the Community institutions by the first subparagraph of Article 129(1) EC to ensure a high level of human health protection means that they must ensure that their decisions are taken in the light of the best scientific information available and that they are based on the most recent results of international research (Case T-13/99 – *Pfizer Animal Health v Council* [2002] ECR II-3305, paragraph 158). In order to fulfil its function, scientific advice must be based on the principles of excellence, independence and transparency.

However, the fact that it is sometimes impossible to carry out a full scientific risk assessment does not prevent the competent public authority from taking preventive measures, at very short notice if necessary, when such measures appear essential given the level of risk to human health which the authority has deemed unacceptable for society (Case T-13/99 – *Pfizer Animal Health v Council* [2002] ECR II-3305, paragraph 160). In such a situation, the competent public authority must therefore weigh up its obligations and decide either to wait until the results of more detailed scientific research become available or to act on the basis of the scientific information available. Where measures for the protection of human health are concerned, the outcome of that balancing exercise will depend, account being taken of the particular circumstances of each individual case, on the level of risk which the authority deems unacceptable for society. Notwithstanding the existing scientific uncertainty, the scientific risk assessment must enable the competent public authority to ascertain, on the basis of the best available scientific data and the most recent results of international research, whether matters have gone beyond the level of risk that it deems acceptable for society. That is the basis on which the authority must decide whether preventive measures are called for (Case T-13/99 – *Pfizer Animal Health v Council* [2002] ECR II-3305, paragraphs 161-162).

IV. Health and risk management

On the basis of the provided data, the decision-maker must make choices, and those reveal to be tricky ones sometimes, where conflicting interests are at stake.

The public authorities are confronted with the necessity to fix a level of acceptable risk in individual matters or where a new legislation is in development process and, in so doing, they shall be inspired by the level of protection which they deem appropriate for society.

It is by reference to that level of protection that they must then, while dealing with scientific expertise, determine the level of risk – i.e. the critical probability threshold for adverse effects on human health and for the seriousness of those possible effects – which in their judgment is no longer acceptable for society and above which it is necessary, in the interests of protecting human health, to take preventive measures in spite of any existing scientific uncertainty (see Case C-473/98 – *Toolex* [2000] ECR I-5681, paragraph 45; Case T-13/99 – *Pfizer Animal Health v Council* [2002] ECR II-3305). According to that European case-law, linked to general public health issues (and not specifically environmental ones), the level of risk deemed unacceptable will depend on the assessment made by the competent public authority of the particular circumstances of each individual case. In that regard, the authority may take account, inter alia, of the severity of the impact on human health were the risk to occur, including the extent of possible adverse effects, the persistency or reversibility of those effects and the possibility of delayed effects as well as of the more or less concrete perception of the risk based on available scientific knowledge.

However, in exercising their discretion relating to the protection of health, public authorities must comply with the principle of proportionality. The means which they choose must therefore be confined to what is actually necessary to ensure the safeguarding of public health; they must be proportional to the objective thus pursued, which could not have been attained by measures which are less restrictive of intra-Community trade (see *Sandoz*, paragraph 18; Case C-42/90 – *Bellon* [1990] ECR I-4863, paragraph 14; Case C-400/96 – *Harpegnies* [1998] ECR I-5121, paragraph 34; and Case C-192/01 – *Commission v Kingdom of Denmark* [2003]).

Though supposedly guided by the high level of protection objective and by the precautionary principle, critical loads and limit values, which are frequently found in environmental regulations, are thus to be considered as a *social compromise*. They should therefore not be too quickly assimilated to a guarantee of innocuousness to human health.

This is even more true when one considers that the scientific knowledge upon which they are built, among other parameters, is in continuous evolution, especially regarding the possible causal link between environmental factors and health effects.

1. The acceptable risk

As demonstrated *supra* and despite the locks inserted in the EC Treaty, it would be too naïve or idealistic to imagine that all critical loads and limit values are the witness of a scientific truth that would guarantee the full absence of risk to man and the environment. Other interests, such as the economy in general (but also the comfort we want to enjoy in our everyday life), force the decision-maker to be “realistic”, at least where no technological solution is available to fully solve the problems – and as far as the measures at stake have not been contested before the European Courts.

A plain illustration of this is the case of benzene. Experts agree that there is no threshold value under which it can be said that a level of emissions is safe for the human being. It is potentially dangerous with no consideration of doses. Still, a European Directive sets critical loads for benzene,³⁰ which are not equivalent to zero, while at the same time declaring that “Benzene is a human genotoxic carcinogen and there is no identifiable threshold below which there is no risk to human health”.³¹ Stricter limits would have amounted to a ban on, among others, some fuel combustion and most fuel-linked transportation means, which is not (yet) acceptable in our society. The adopted standard demonstrates what the public authorities do consider as an acceptable risk for society at large, under the sustainable development and proportionality umbrellas.

The proposed Commission “Thematic Strategy on air pollution”³² is worth investigating in this regard. The document is the outcome of investigations carried on within the Clean Air For Europe programme (CAFE), in order to check whether current legislation is sufficient to achieve the 6th EAP objectives by 2020. It contains quite pessimistic conclusions, stating that “significant negative impacts will persist even with effective implementation of current legislation”.

30 Directive 2000/69/EC of the European Parliament and of the Council of 16 November 2000 relating to limit values for benzene and carbon monoxide in ambient air.

31 Preamble, 9th recital.

32 COM(2005) 446 final, Communication from the Commission to the Council and the European Parliament, 21 September 2005.

However, the Commission proposes NOT to revise the current limit and target values for air pollutants set by current European air quality legislation,³³ preferring to focus on implementation strategies, while at the same time deciding to introduce more "flexibility" in the current regime regarding the obligations set on Member States (*"as part of the new proposal and where Member States can demonstrate that they have taken all reasonable measures to implement this legislation, it is proposed to allow them to request an extension to the deadline for compliance in affected zones if strict criteria are met and plans are in place to move towards compliance"*), and to spend time merging all quality objective directives in one single coherent text. The Commission declares that it is the result of a policy choice, which had to be made as to the level of health and environmental protection that should be achieved by 2020, taking into account the associated benefits and costs;³⁴ extensive analysis was done to determine the costs and benefits of different levels of ambition with a view to finding the most cost-effective level consistent with the Community's Lisbon and sustainable development strategies and the "no move limit" is the consequence of it.

One could wonder, though, if the seriousness of the health problems which were identified through the research exercise should not have called for more drastic measures, and if health considerations should not have taken a higher precedence upon economic interests, due to the high level of protection requirements, as interpreted by the EC case-law? One can understand that a strong focus must be set on closing the implementation gap instead of reinforcing further a legislation that would anyway not be respected, but one can wonder why the pressure originally put on Member States shall be relaxed, turning the obligations to achieve a result within a given deadline into a mere obligation "to do their best".

2. An ever evolving knowledge

As pointed out in the 6th Environment Action Programme,³⁵ existing standards are generally established with the "average" adult in mind, without taking into account the need to protect particularly vulnerable groups in society such as children and the elderly. These standards are also based on a poor understanding of the effects of small quantities of pollutants that accumulate in our bodies as well as the way different contaminants interact (the so-called cocktail effect).

Calls have henceforth been made in that same Programme to give environmental-health issues renewed attention, considering in particular the statements of the European Environ-

33 Proposals are made, though, to repeal the indicative limit value of PM₁₀ for 2010 and – on the basis of scientific advice and health evidence – to start regulating fine particulate matter below 2.5 microns (called PM_{2.5}) differently, proposing a two-stage approach by first setting a concentration reduction target of 20 % between 2010 and 2020 for PM_{2.5}.

34 "The level of ambition chosen for this Strategy has been estimated to deliver at least € 42 billion per annum in health benefits. These benefits include fewer premature deaths, less sickness, fewer hospital admissions, improved labour productivity etc. Although there is no agreed way to monetise ecosystem damage, the environmental benefits of reduced air pollution will also be significant in terms of reduced risks and reduced areas of ecosystems that may be damaged by acidification, eutrophication and ozone. Previously damaged ecosystems will also recover more quickly. In addition, damage to buildings and materials will also be reduced. Similarly, for agricultural crops the damage is reduced by around € 0.3 billion per annum. Attainment of these targets is estimated to cost approximately € 7.1 billion per annum (representing about 0.05 % of the EU-25 GDP in 2020). No net change in employment is expected. Production lost through ill health would be reduced and low income groups generally exposed to the highest levels of air pollution may benefit most."

35 COM(2001) 31 final, Environment 2010: Our future, Our choice.

ment Agency on the link we should draw between exposure to pollutants, even at low level, and via air, water, food, consumer products and buildings and the current high level of asthma, allergies, some types of cancer, neuro-toxicity and immune suppression.

A very ambitious objective is embraced: *the Community must achieve a quality of the environment where the levels of man-made contaminants, including different types of radiation, do not give rise to significant impacts on, or risks to, human health. Health is defined as a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity*, a duplicate of the definition of health in the Constitution of the World Health Organisation (WHO) of 7 April 1948.

As a general approach, the 6th Environment Action Programme proposes the reinforcement of research and expertise (both on risks to human health, taking into account all vulnerable groups as on "roads" by which the contaminants reach the body) and, accordingly, an adaptation of existing standards and limit values, where relevant.

Commitments are made to set a greater focus on precaution and prevention, but also on the emerging *substitution principle*, according to which one should substitute the use of hazardous substances with less hazardous ones wherever technically and economically feasible.

Last but not least, the Programme point out important defects, regarding the consideration of health, of existing legislation on chemicals (no data on the health impact of many existing chemicals, burden of proof resting on public authorities), pesticides (accumulation in food and drinking water, via the agricultural sector), water protection (update standards to take account of new scientific evidence), air (especially on indoor pollution) and noise pollution, while committing itself to tackle the problems.

It is in that context that the Commission proposed a new EU regulatory framework for the Registration, Evaluation and Authorisation of Chemicals (REACH) on 29 October 2003. The aim is to improve the protection of human health and the environment through the better and earlier identification of the properties of chemical substances, a duty which should rest on the industry, under supervision of an independent Chemicals Agency. At the same time, innovative capability and competitiveness of the EU chemicals industry should be enhanced. Manufacturers and importers will be required to gather information on the properties of their substances, which will help them manage them safely, and to register the information in a central database, where consumers and professionals shall find hazard information. One of the greatest challenges involved in the REACH process is about how to strike the right balance between a much better protection of health and the environment and the competitiveness of the chemical industry.³⁶

V. An increasing awareness, worldwide

Within the World Health Organisation, an environment and health process began in 1989, on the basis of findings that a poor environmental quality contributes to 25-33 % of global ill health.³⁷

³⁶ See also the article by Martin Führ and Uwe Lahl in this book, pp. 209-220.

³⁷ <http://www.who.int/en>.

According to the WHO, environmental health "comprises those aspects of human health and disease that are determined by factors in the environment. It also refers to the theory and practice of assessing and controlling factors in the environment that can potentially affect health. Environmental health as used by the WHO Regional Office for Europe, includes both the direct pathological effects of chemicals, radiation and some biological agents, and the effects (often indirect) on health and wellbeing of the broad physical, psychological, social and aesthetic environment which includes housing, urban development, land use and transport".³⁸

The WHO/Europe programme on environmental health policy supports Member States as they plan and implement national and international policies. Most countries in the European Region have addressed national policies through national environment and health action plans (NEHAPs), as first agreed in Helsinki in 1994, following the publication of the Environmental Health Action Plan for Europe (EHAPE), with a specific attention devoted to the issue of indoor pollution.

Beyond these welcome planning processes, regrets remain, on the side of health professionals, that not enough efforts are yet being made in everyday practice to draw the link between health issues and their possible multi-environmental causes. In order to control better the apparition and expansion of diseases, one should try to better master their possibly environmental or consumption-linked origins, and not focus on cure and recovery only.³⁹

Medical doctors do also start to claim a say in the policy matter, as demonstrated by the "Call of Paris" on chemical policy, with much media coverage. This call, initiated in 2004 by medical doctors, scientists and NGOs,⁴⁰ took the form of an international declaration on diseases due to chemical pollution, proclaiming that the development of numerous current diseases is a result of the deterioration of the environment and that chemical pollution represents a serious threat to children and to man's survival. It promotes the adoption of REACH and, more specifically, supports the substitution principle and pleads for the adoption of toxicological standards or international thresholds to protect people, which are based on the assessment of risks for the most vulnerable, i.e. mostly children and the embryo. This call is now added to the large bulk of interests which is being balanced by the European authorities in the current decision-making process.

VI. Conclusions

Our health is influenced by the quality of our environment. This is well known by the EC institutions, as demonstrated by the insertion of the protection of human health among the objectives to be pursued by EC environmental policy.

The ambition, regarding these environmentally-linked health aspects, is to reach a high level of protection. Indications of what this means can be found in recent case-law, stating that health may or even must be given precedence over economic considerations – a declaration with an important potential effect, even if interpreted in the light of the proportionality prin-

³⁸ Environment and Health, the European Charter and Commentary, Frankfurt, 1989.

³⁹ Gérin et al., *Environnement et Santé publique, Fondements et Pratiques*, Canada, 2003.

⁴⁰ By ARTAC, the "association française pour la Recherche Thérapeutique Anti-Cancéreuse", French Association for Research and Cancer Treatment, joined by the Standing Committee of European Doctors (CPME).

principle. Another consequence is the application of the precautionary principle to health issues, justifying the adoption of measures without having to wait until the reality and seriousness of those risks become fully apparent. Health, be it environmentally-linked or not, appears actually to be given much consideration when questioned before the EC Court and Tribunal.

Still, the effective level of protection in a given area, as materialised in specific legal regimes, including standards and critical loads, remains a societal choice, and one should not too quickly consider that a legally-conform environment is necessary healthy for all, children and the elderly included. If the level of protection must be high, "high" does not mean the highest possible level, according to the ECJ. There remains a true margin of negotiation, the width of which would be worth investigating, especially in the light of recent developments regarding the air and chemicals policies.

"Health and the environment" proves to be a very common expression in environmental law, an inseparable duo in most cases, the content of which is not necessarily so clear-cut as one would a priori imagine, as demonstrated by our search for what "the environment" exactly means in law, shedding light on the fact that the human being is at the same time part of it (one among the other inter-related elements) and a potential beneficiary or victim of it (men and women versus their surroundings), while the notion cannot be reduced to mere anthropocentric interests.

Man-made health-unfriendly elements of the environment are a source of concern. A relatively new guideline, fully in line with the prevention principle, is quite interestingly emerging in that area: the so-called substitution principle, according to which one should substitute the use of hazardous substances with (truly) less hazardous ones wherever technically and economically feasible. One should keep an eye on it, in order to assess how it is gaining ground to perhaps be soon endowed with a seat among the established principles of environmental policy.