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**COMMUNICATION FROM THE COMMISSION TO THE COUNCIL, THE
EUROPEAN PARLIAMENT AND THE EUROPEAN ECONOMIC AND SOCIAL
COMMITTEE**

**"Mid Term Review of the
European Environment and Health Action Plan 2004-2010"**

{SEC(2007) 777}

1. CONTEXT

European citizens are concerned about the environment they live in, about their health and about their quality of life. Six out of ten European citizens consider that it is "very" or "fairly likely" that environmental pollution will damage their health¹ and that the European Union is not doing enough.² European citizens also indicated that the environment is a driving force for innovation, and that environmental protection policies are incentives to progress rather than obstacles to economic performance³.

In order to address these concerns, the Commission had adopted the *European Environment & Health Strategy*⁴ in June 2003. This Strategy had the ultimate objectives to reduce the disease burden caused by environmental factors in the EU, to identify and to prevent new health threats caused by environmental factors and to strengthen EU capacity for policymaking in this area. The Strategy was followed up by the *European Environment & Health Action Plan 2004-2010*⁵, which emphasised the need to develop a good information base, including a coordinated approach to human biomonitoring, and the necessity to strengthen research on environment and health with the aim to make the assessment of the environmental impact on human health more efficient. Both the Strategy and the Action Plan got the support from the other EU institutions⁶.

Clear indication of the importance given to the impacts of the environment on public health was also included in Europe's vision for the future in the renewed *Sustainable Development Strategy* agreed by the Council in June 2006⁷. Moreover, savings made and to be made in the health sector by taking appropriate action contribute to the goals of the *Lisbon Agenda*. Currently asthma affects 30 million people across the continent⁸ and costs healthcare services approximately €17.7billion a year⁹.

Further, the experience on environment and health integration achieved so far can be used as an example of effective inter-sectoral work for *Health in All Policies*, which was a priority of the Finnish Presidency and followed-up by the Commission in the EU Health Strategy.

The purpose of *this Communication* is to review and to present the progress achieved at the mid-term of the Action Plan, to describe briefly the developments in the relevant policies referred to in the Action Plan such as chemicals, air, water and noise and to highlight areas that should receive particular attention in the future.

¹ Special Eurobarometer 238, (2006) on Risk Issues

² Eurobarometer 217, (2005)

³ Eurobarometer 215, (2005)

⁴ COM(2003)338

⁵ COM(2004)416

⁶ Council Conclusions on Strategy, European Parliament Resolutions on Strategy and Action Plan, European Economic and Social Committee Opinion on the Action Plan. Dutch and Luxembourg presidencies conferences in December 2004 and June 2005 respectively.

⁷ <http://register.consilium.europa.eu/pdf/en/06/st10/st10917.en06.pdf>

⁸ GINA Global Initiative for Asthma. The Global Burden of Asthma Report, 2004.

⁹ The European Lung White Book: The First Comprehensive Survey on Respiratory Health in Europe 2003.

2. INTEGRATING ENVIRONMENT AND HEALTH

It is understood that health considerations have already driven much of the legislative framework for environmental protection over the last 30 years. Similarly, damage to the environment has triggered public health action and influenced a number of public health policies. However, the Strategy and the Action Plan have boosted new initiatives to integrate environment and health. They have also underlined the important human health component of many environmental policies, highlighting thereby the need for an effective implementation and a coordinated approach. This also calls for the strengthening of the information base to assess the effectiveness of existing policies and the need for new ones.

A detailed analysis of the *information* base carried out in 2006¹⁰ clearly demonstrated that many environment and health information systems have already been put in place, but that efforts must be sustained on the long-term to improve the integration and compatibility between the systems, where relevant, as well as data quality and comparability. In particular, representative data on actual human exposure to environmental pollutants and potential health effects of such pollutants generated by Human Biomonitoring (HBM)¹¹ should be gathered in a comparable manner. To this end, the Commission triggered an intensive cooperation between Member States to address the major difficulties (data interpretation, ethics, communication) to be overcome before HBM can reach its full potential..

The Commission in close cooperation with Member States also succeeded in concentrating *research* funding on priority diseases and on environment & health interactions in the Sixth Framework Programme of Research (FP6) (2002-2006)¹². Both Council and Parliament supported the need for further efforts in this area under the Seventh Framework Programme of Research (FP7) (2007-2013)¹³, such as human biomonitoring, indoor air quality and long-term health impacts of early exposures to environmental stressors. The Commission will continue to devote efforts to exploit the outcomes of the projects and their usefulness for possible policy action. Translating these results into policy action is a long-term priority and will increase in prominence during the implementation of the Action Plan.

The responsibility for making progress in this complex area must be shared between Member States, the Commission, international organisations such as the World Health Organisation and other stakeholders. The Commission has therefore involved Member States and stakeholders since the start of this process and will surely maintain this effort. A *strengthened cooperation* between environment policy, health policy and the corresponding research fields is one of the major achievements over the last 3 years, leading to the development of an integrated environment and health policy field, which must be taken up by a range of policy areas such as transport, energy, chemicals, employment. The Commission will step up its efforts to that end, in particular for issues such as indoor and outdoor air as well as health effects of climate change, where integration is deemed essential. To achieve this goal, an integrated approach is needed within the framework of the Community's Sustainable Development Strategy.

Efforts have also concentrated on *emerging issues* such as nanotechnology, where the Commission proposes concrete steps towards a "safe, integrated and responsible"

¹⁰ (SEC(2006)1461 User friendly brochure on http://europa.eu.int/comm/environment/health/index_en.htm

¹¹ Measuring pollutants in human tissues and fluids.

¹² <http://cordis.europa.eu/fp6/>

¹³ http://cordis.europa.eu/fp7/home_en.html

development of nanotechnology, which means that environment, health and social aspects of nanotechnology need to be considered at the earliest possible stage¹⁴. Further focus was on new issues such as antimicrobial resistance, an environmental problem with impacts on human health¹⁵. The Commission is in the process of preparing a request for an opinion of the responsible risk assessment bodies to assess the antibiotic resistance effects of biocides. Also the effects of climate change on health was subject of different EU funded projects¹⁶ and will continue to be investigated under FP6 and FP7. A "Communication on Health Consequences of Climate Change" will be proposed in 2008.

In several research projects the Commission has given special attention to **vulnerable groups**, such as children that are particularly sensitive to damaging environmental exposures. The Commission will continue to give special attention to vulnerable groups.

3. PROGRESS ON THE IMPLEMENTATION OF THE ACTION PLAN - HIGHLIGHTS

The Action Plan identified 13 actions with a focus on (1) improving the information chain by developing integrated environment & health information; (2) filling the knowledge gap by strengthening research on environment & health and identifying emerging issues; (3) reviewing and adjusting risk reduction policy and improving communication.

Improving the information chain

The main conclusion of the **review¹⁷ of current environment & health information and monitoring systems** undertaken by the Commission in 2006 is that a number of EU-wide environment & health monitoring and information systems exist and that assessment strategies are in place to cover the range of environmental impacts expected to affect human health. In many cases further development is under way to improve the level of protection. The review makes concrete recommendations for increasing linkage and integration between existing systems, enhancing efforts on research and human biomonitoring, and improving data collection procedures.

Since 2004 the Commission has collaborated closely with Member States and experts to prepare an EU pilot project¹⁸ on **human biomonitoring** (HBM) to test out the feasibility of a coherent HBM approach in Europe. The 1st calls for proposals under FP7¹⁹ reserved funding for an EU network on HBM²⁰ to fund the EU Pilot Project. The pilot phase will focus on *capacity-building* and *harmonisation* of procedures, on *the future policy role* of HBM, and on *appropriate communication* at individual and at Community level. For the post-pilot phase the Commission is exploring the possibility to embed future HBM activities in an established

¹⁴ Nanotechnology Action Plan 2005-2009

¹⁵ http://www.who.int/foodborne_disease/resistance/en/
<http://www.who.int/mediacentre/factsheets/fs194/en/>
<http://www.emea.eu.int/pdfs/vet/regaffair/081899en.pdf>
http://www.antibioticos.msc.es/PDF/resist_emea_paper_on_antibiotic_resistance.pdf
http://www.oie.int/eng/publicat/ouvrages/A_119.htm
<http://europa.eu/scadplus/leg/en/cha/c11561.htm>
http://ec.europa.eu/health/ph_information/dissemination/unexpected/unexpected_2_en.htm

¹⁶ SEC(2006)1461

¹⁷ [www.http://www.eu-humanbiomonitoring.org](http://www.eu-humanbiomonitoring.org)

¹⁸ http://cordis.europa.eu/fp7/home_en.html

¹⁹ Environment theme of Cooperation Programme in Environment & Health sub-activity.

²⁰

framework such as the EU Health Examination Survey²¹ and will ensure that HBM is linked to the existing regulatory frameworks. In FP6, the JRC initiated the investigation on application of metabonomics for HBM.

Filling the knowledge gap

Several Community funded projects were launched **to integrate and strengthen EU environment & health research**. Since 2004 the final results of the projects were analysed, consolidated and conferences and workshops were organised to highlight the results. An overview of the key results is given in Table 2. The aims for 2007-2010 are to analyse the interim and final results ; to organise workshops on targeted environment & health issues to highlight the research results and to identify research needs for the future calls for proposals to be implemented in Community Programmes.

The Commission has launched **targeted research projects on diseases, disorders and exposures**. Since 2004 Community research has focused on the causes of asthma and allergy, on the causes and mechanisms of neuro-immune disorders²², on the health effects of exposure to metals, on the development of EU networks to promote research into uncommon cancers and on the identification of gene-environment interactions involved in the development of cancer in high-risk populations²³. The aims for 2007-2010 are to study causes of environment-related diseases and to investigate long-term health impacts of exposure to environmental stressors, taking advantage of existing cohorts or possibly starting new cohorts. By enhancing scientific basis of understanding of associations between exposures to especially chemicals and health impacts, these projects will contribute to many EU policies concerning assessment of risks of exposure to chemicals²⁴.

The Commission funded several projects **to develop methodological systems to analyse environment & health interactions**. The projects aim at improving the methods and models necessary to carry out integrated risk assessment including combined exposures and they will improve methods and tools for health impact assessment and cost/benefit analyses. The aims for 2004-2006 were to develop integrated risk assessment methodologies and models for evaluating cumulative effects, interaction between stressors and their influence on human health; and methodologies, techniques, and models to address complexity in environment/health interactions²⁵. The Commission also aimed to develop accounting frameworks incorporating externalities associated with various environmental stressors, the assessment of health-related externalities, and definition of sustainability thresholds. Furthermore, studies were launched to extend and validate methods and tools for environment & health impact assessment, cost/benefit analysis and the identification of sources of pollution²⁶ and to assess health benefits of food against the health risks of potential environmental contaminants²⁷. The aims for 2007-2010 are to analyse the policy relevance results of FP5 and FP6 projects as regards (i) integrated risk assessment methodologies and models; (ii) methods and tools for environment and health impact assessment, cost/benefit

²¹ http://ec.europa.eu/health/ph_information/dissemination/reporting/ehss_06_en.htm

²² Total EC contribution to these projects: €28M (Table 6)

²³ Total EC contribution to these projects: €30M

²⁴ See tables in Annex III

²⁵ Total EC contribution to these projects: €35M (Table 9)

²⁶ Total EC contribution to these projects: €11M (Table 10)

²⁷ total EC contribution to these projects: €5M (Table 11)

analysis and the identification of sources of pollution; and (iii) risk/benefit analysis of foods affected by environmental pollution.

The projects funded **to ensure that potential hazards on environment & health are identified and addressed** will provide research support for policy actions in the field of climate change, water quality and risk assessment of nanotechnologies. The aims for 2004-2006 were to explore how health sector planning can be improved for future extreme weather events, to facilitate rapid assessment of emerging threats, to launch a research action on the assessment of Global Change-driven factors linked to the risk of introducing and spreading emerging human diseases and to address topics such as: (i) climate change and health; (ii) water pollution including emerging pathogens in drinking water sources; and (iii) possible environmental health impacts of nanoparticles.²⁸

For 2007-2010 effects of climate change on human and animal health and the potential risks from nanoparticles to human health will be investigated.

Reviewing and adjusting risk reduction policy and improving communication

Progress was made on **developing public health activities and networking on environmental health determinants** Environment and Health is a key priority in the PHP²⁹ and has been covered in each of the yearly work programmes. Several projects linked to air quality were launched to reduce active and passive smoking (see below). A project on electromagnetic field (EMF) issues finalised in 2005³⁰ built a network of EU policy makers on EMF issues, an operational science/policy interface and communication tools that improved communication to the public.

Efforts were done on **promoting training of professionals and improving organisational capacity in environment and health**. Education is primarily the responsibility of the Member States and the Action Plan calls on them to take the necessary measures. At EU level some facilitating work was done using the PHP. However, no projects were submitted. Educational materials on children's environment, health and safety were produced to be used by trainers to improve the knowledge of professionals and personnel working in health care³¹. A majority of the FP6 projects have developed extensive training programmes at EU level for environment and health professionals and scientists, which include targeted courses or summer schools for interested stakeholders and web-based initiatives.

Progress was made on **co-ordinating ongoing risk reduction measures on the priority diseases**. The main risk reduction measures put in place are on respiratory diseases, cardiovascular diseases, cancer, neurodevelopmental disorders and endocrine-related impacts. Significant progress has been made in better identification of the mechanisms for coordinating risk reduction measures. However, more work needs to be done in linking research on priority diseases to appropriate policy processes and information systems. Some of the potential actions for further progress to be explored are: use of the EU Health portal section, My Environment; development of relevant questions for health interview and examination surveys, pooling health information systems on priority disease incidence and mortality and

²⁸ Total EC contribution to these projects: €25M (Table 12)

²⁹ http://ec.europa.eu/health/ph_programme/programme_en.htm

³⁰ <http://www.jrc.ec.europa.eu/eis-emf/home.cfm>

³¹ *Children's health, environmental and safety training -*

http://ec.europa.eu/health/ph_projects/2003/action3/action3_2003_09_en.htm

health-related costs, in coordination, whenever relevant, with the European Statistical System. **Improving indoor air quality** was done by several activities. The Commission adopted the Green paper “*Towards a Europe free from tobacco smoke: policy options at EU level*”³² in January 2007 and launched a broad consultation process, on the best way to tackle passive smoking in the EU. Currently, the Commission is preparing a follow-up initiative on smoke-free environments, due to be adopted in 2008 and a report on the implementation of the Council Recommendation³³ on the prevention of smoking and on initiatives to improve tobacco control.

In May 2005 the Commission mandated the SCHER to deliver an opinion on a possible risk assessment strategy to support policy on the indoor air issue, to identify potential areas of concern in relation to the different pollutants and to consider risks associated with the use of air fresheners. The SCHER issued a separate opinion³⁴ on air fresheners in January 2006. On the other questions of the mandate the Committee issued a preliminary report for public consultation in January 2007.

An expert working group was established in October 2006 to follow up the opinions of the Scientific Committee and to fulfil the expectations from the political side, Member States and other stakeholders³⁵ who asked the Commission to use a wide approach and take concrete actions on a number of pollutants/areas.

2 FP6 projects are focused on issues related to indoor air quality^{36,37}. Measuring campaigns in several European cities were carried out by the JRC to monitor indoor/outdoor and personal exposure concentrations of selected substances³⁸. In 2006, the JRC issued a milestone report describing strategies to determine and control the contribution of indoor air pollution to total inhalation exposure³⁹.

The Commission will continue supporting research activities on indoor air quality. Future actions will focus on information to the public and professionals, exchange of best practices at national and local level and on coordination of ongoing policies linked to indoor air quality.

The SCENIHR has adopted an opinion on "Possible effects of **Electromagnetic Fields (EMF)** on Human Health" on 21 March 2007⁴⁰. The PHP and FP7 will continue to provide support to projects addressing the research gaps identified. The Commission can also count on the EMF-NET⁴¹, a large EU network of scientists and experts that reviews and evaluates the emerging scientific evidence on possible health impacts from human exposure to EMF. In addition product standards have been adopted under internal market legislation and updated to ensure that products that are placed on the market and put into service will not expose the public beyond levels that have been recognised by science as safe.

32 http://ec.europa.eu/health/ph_determinants/life_style/Tobacco/keydo_tobacco_en.htm

33 2003/54/EC. <http://europa.eu/scadplus/leg/en/cha/c11574.htm>

34 http://ec.europa.eu/health/ph_risk/committees/04_scher/scher_opinions_en.htm

35 Parliament Resolution, Final A6 – 0008/2005; Dutch and Luxembourg Presidency conferences, December 2004, June 2005

36 <http://indoorairenvie.cstb.fr/>

37 <http://www.proneteurope.eu>

38 European indoor air monitoring and exposure assessment project – www.jrc.ec.europa.eu/project/airmex/index.htm.

39 STRATEX http://www.jrc.cec.eu.int/pce/modnoiseca_ecareports.htm

40 http://ec.europa.eu/health/ph_risk/committees/04_scenihhr/scenihhr_opinions_en.htm. Conclusions summarised in Technical Annexes

41 <http://www.jrc.cec.eu.int/emf-net/>.

4. SUMMARY OF PROGRESS ON HEALTH RELATED ENVIRONMENTAL POLICIES AND RELEVANT FOOD POLICIES

As the overall objective of the Action Plan is to integrate environment and health and to ensure that human health aspects are duly taken into account in environmental policy and vice versa, its effective implementation is dependant on the specific environment and health policies. In this respect, a number of new initiatives have been adopted since 2004 with a view to decreasing the risk to human health and gathering better information. These are summarised below.

A **Water** Information System for Europe (WISE) has been further developed and endorsed by the Commission Services, the European Environment Agency and Member States. Further development including the integration of drinking water data is foreseen in a detailed WISE Implementation Plan; new WISE-oriented reporting guidelines have been developed and are foreseen for final endorsement by the end of 2007. A Commission Proposal for revising the Drinking Water Directive is foreseen for end of 2008. The Commission adopted a proposal for a new Directive to protect surface water from pollution⁴², which will set limits on concentrations in surface waters of 41 chemical substances that pose a risk to animal and plant life in the aquatic environment and to human health.

In 2004 the last of the **air quality** 'daughter' directives⁴³ has been adopted, setting target values for arsenic, nickel, cadmium and benzo(a)pyrene in ambient air. The Commission adopted in 2005 the Thematic Strategy on Air Pollution⁴⁴ and the proposal for the Directive on Ambient Air Quality and Cleaner Air for Europe⁴⁵. The Commission proposal for new heavy duty vehicle emission standard EURO VI proposal is scheduled in 2007, as well as the revision of the existing legislation on industrial emissions⁴⁶.

Much has been done in the **chemicals** sector. Further to the **Mercury** Strategy⁴⁷, adopted in 2005, a number of proposals have been adopted by the Commission since then with a view to banning mercury for certain uses within the EU⁴⁸, banning mercury exports from the EU⁴⁹ from 2011 and imposing safe storage of unused mercury. The SCENIHR is currently assessing the safety of dental amalgam and alternative dental restoration materials for patients and users⁵⁰. In parallel, the SCHER is working on a request for an opinion on the environmental risks and indirect health effects of mercury in dental amalgam⁵¹.

A proposal has been made to improve the procedure for placing plant protection products on the market. In addition and with a view to decreasing the overall risk from pesticides use in the EU, the Commission adopted both a Thematic Strategy on the Sustainable Use of Pesticides⁵² and a proposal for a Framework Directive⁵³, which will inter alia impose appropriate training for professional users, restrict the use of pesticides in certain areas and

42 COM(2006)397

43 2004/107/EC

44 COM(2005) 446

45 COM(2005) 447

46 IPPC 96/61/EC

47 COM(2005)20

48 COM(2006)69

49 COM(2006)636

50 http://ec.europa.eu/health/ph_risk/committees/04_scenihhr/docs/scenihhr_q_009.pdf

51 http://ec.europa.eu/health/ph_risk/committees/04_scher/docs/scher_q_050.pdf

52 COM(2006) 372

53 COM(2006) 373

start the development of relevant indicators. The priority list of substances for further evaluation of their role in endocrine disruption recently established will be taken into account by regulators when drafting legislation as the list ranks the substances according to possible effects to wildlife, human health and to exposure concerns. Regarding chemicals, an important step has been reached with the final adoption of the REACH Regulation⁵⁴ in December 2006, which will enter into force in June 2007 and impose gathering information on toxicological properties of chemicals through the EU Chemicals Agency. REACH recognises endocrine disruptors as substances of very high concern and they will thus be covered under the authorisation regime. An important development in relation to the Strategy on Dioxins & PCBs was the adoption in 2004 of the Regulation on persistent organic pollutants (POPs)⁵⁵ and the Community Implementation Plan on POPs⁵⁶ listing EU measures, including measures to further address industrial and domestic sources for dioxin emissions in the coming years.

For environmental and industrial contaminants in **food**, maximum levels are set in EU legislation and sampling and analysis provisions are set out for monitoring compliance with these in order to ensure consumer safety.

Regarding exposure to **noise** and associated health effects, the Commission effectively contributed to the WHO Night Time Noise Guidelines project over the last 3 years, from which the results will be used in the frame of Commission activities in 2007 to review the health effects of noise. In the **Nanotechnology Strategy**⁵⁷ and Action Plan 2005-2009 the Commission proposes concrete steps towards a "*safe, integrated and responsible*" development of nanotechnology, which means that environment, health and social aspects of nanotechnology need to be considered at the earliest possible stage. One of the activities in 2006 was to review current regulatory frameworks to find out whether they adequately cover manufactured nanomaterials and provide sufficient protection against their effects.

5. CONCLUSIONS AND NEXT STEPS

While 3 years is a short period for the implementation of any major action plan, the strengthened cooperation between the environment, health and research fields at Community and Member States level is a true achievement.

In the next 3 years, the Commission in close cooperation with Member States will continue to implement the various actions foreseen in the Action Plan. To this end, the Commission will maintain its focus on the integration of environment and health concerns into other policies as well as on the integration of the many actors involved. In order to strengthen EU capacity for policymaking in this area, the Commission will gradually step up its effort to exploit the outcomes of research projects and other information gathering efforts and their translation into policy.

⁵⁴ http://ec.europa.eu/environment/chemicals/reach_intro.htm

⁵⁵ Regulation (EC) No 850/2004 amending Directive 79/117/EEC, OJ L 158, 30.4.2004.

⁵⁶ SEC(2007)341

⁵⁷ COM (2004) 338

In 2010 the Commission will identify the elements to be addressed in the next cycle.

The Commission will present this midterm review in the Intergovernmental Midterm Review meeting on Environment and Health in Vienna in June 2007.