



European Environment and Health Process and its impact on the Environmental Health Policy in Croatia

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Abbreviations:

WHO	World Health Organization
HFA	Health for All
EFE	Environment for Europe
UN/ECE	United Nations/ Economic Commission for Europe
NIS	Newly Independent States
SEE	South Eastern Europe
EEHC	European Environment and Health Committee
EHAPE	Environment and Health Action Plan for Europe
NEHAP	National Environment and Health Action Plan
CEHAPE	Children's Environment and Health Action Plan for Europe
UN/OECD	United Nations/Organization for Economic Cooperation and Development
EHIS	Environment and Health Information System
CNIPH	Croatian National Institute of Public Health

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Abstract

Raising awareness of the importance of environment for human health resulted in several initiatives such as European Environment and Health Process and Environment for Europe Process. However, they should not be confused with the environmental health acquis requirements deriving from a large number of EU Directives or Council Regulations in which important aspects of protection of environment and human health are incorporated. In 2003 the European Commission adopted the European Environment and Health Strategy, which soon was followed by EU European Environment and Health Action Plan 2004-2010 as an additional complementary system to the existing EU Directives. On the other hand, National Environmental Health Action Plans were developed on the basis of the Environment and Health Action Plan for Europe within the European Environment and Health Process, as a tool to assist individual country in evaluating and improving the environmental health management system, but with no legal binding at all.

By reviewing the existing legal framework and policy documents, as well as by investigating available instruments and capacity for the implementation and evaluation of environmental health policy in Croatia, the actual »diagnosis and prognosis« of Croatian environmental health was assessed in this paper. As an EU accession country, Croatian first priority is to fully harmonize its legislation with all EU directives concerning environmental health, as a prerequisite for establishing relevant and highly operational system of environmental health characterized by high level of multisectoral and interdisciplinary cooperation at different levels.

INTRODUCTION

Over the past four decades it has been increasingly recognized that success in protecting human health is closely dependent on, among other factors, the quality of the environment in which people live. The Stockholm Conference on the Human Environment, which was held in 1972, marked the road towards sustainable development. It was followed by a number of global initiatives aimed at protecting the environment, and, through that, protecting the human health. The World Health Assembly laid in 1977 the foundations of a global strategy on health when it decided that »the main social target of governments and WHO in the coming decades should be the attainment by all citizens of the world by the year 2000 of a level of health that will permit them to lead a socially and economically productive life«, defining at the same time the global environmental health targets (Resolution WHA30.43)

(1). Following this Global initiative, the WHO Member States of the European Region adopted in 1984 the Health for All (HFA) strategy. For the first time a common health policy, both in individual Member States and in the European Region as a whole was endorsed, setting a number of targets to be met by the year 2000 (2). Recognizing the dependence of human health on a wide range of environmental factors, the HFA strategy defined among 38 Targets the priority areas in environment and health, and formulated eight environmental health targets, such as the following: Target 11 Accidents, Target 18 Policy on environment and health, Target 19 Environmental health management, Target 20 Water quality, Target 21 Air quality, Target 22 Food quality and safety, Target 23 Waste management and soil pollution, Target 24 Human ecology and settlements, and Target 25 Health of people at work (2).

Concerned about the growing evidence of the impact of hazardous environments on human health, and emerged difficulties in achieving the HFA Environmental Health Targets without stronger intersectoral collaboration, the WHO Regional office for Europe initiated the Environment and Health Process, as a mechanism of collaboration between different sectors, particularly the health and environment sectors (3). The process resulted in a series of Ministerial Conferences held every 5 years (Frankfurt 1989, Helsinki 1994, London 1999, and Budapest 2004). However, Europe in the 1980s was very much different from the one that we know today, with only 29 WHO Member States in the European Region at that time. Gradually, the process and the conferences changed their main objectives, reflecting primarily the social, political and economic changes that occurred in Europe during the last two decades.

The concept of environmental health has been evolving during that time, and because of the historical, geopolitical and linguistic reasons it is not equally understood by all European countries. In some countries, the environmental health concept is very well established, but in some other countries there is even a problem in finding the equivalent term for the environmental health. Therefore, in an attempt to define the environmental health concept that would be acceptable to all Member States of the WHO European Region, the following definition was provided in the European Charter on Environment and Health (WHO 1989): »environmental health 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. 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« (4).

With the fall of Berlin Wall in 1989, the political shape of Europe was significantly changed. In relatively short period of time the number of WHO Member States increased from 29 to 52, and from the 12 EU member states in 1987 the European Union increased to 27 new mem-

ber countries today. At the same time, the South East European countries expressed their political interest to join the European Union, and Croatia is expecting to accede to the EU in year 2011. Therefore, for Croatia and other accession countries of South Eastern Europe, the Environment and Health policies and programmes of European Union are of the highest importance.

Reflecting the major political, economic and social changes in the 1990s, many other processes and international conferences were organized in Europe, among which the Environment for Europe process is most closely related to the Environment and Health process. The Environment for Europe process (EfE) is primarily under the authority of ministries for environmental protection (5). It has resulted in a series of Ministerial Conferences, with the first one held in Dobris in 1991, where a set of basic guidelines for a Pan-European cooperation strategy was laid down. The 1993 Lucerne Ministerial Conference emphasized the political dimension of the EfE process, with the aim of harmonising environmental quality and policies on the continent, and securing its peace, stability and sustainable development. The 1995 Sofia Ministerial Conference underlined the urgent need for further integration of environmental considerations into all sectoral policies, so that economic growth takes place in accordance with the principles of sustainable development. It endorsed the Programme prepared within the UN/ECE as the first attempt to set long-term environmental priorities at the pan-European level and to make Agenda 21 more operational in the European context, particularly its provision relating to the integration of the environmental policy with other policies. At the fourth Ministerial Conference in Aarhus (Denmark) in 1998, the Convention on Access to Information, Public Participation in Decision –making and Access to Justice in Environmental Matters and the Declaration on Long-range Transboundary Air Pollution were adopted. The Kiev Conference in 2003 adopted the Environment Strategy for Countries of Eastern Europe, Caucasus and Central Asia and encouraged the efforts of the Central Asian States to develop the Central Asian Initiative on Environment, Water and Security. During the last Ministerial Conference held in Belgrade in 2007, the range of important environment protection issues were covered under the slogan – Building bridges to the future (6). The conference raised the question about the purpose and future of the Environment for Europe process, in light of different priorities and interests of the three sub-Regional groups of countries: the EU Member States, the South-Eastern European group, and the Newly Independent States (NIS), including the future role of the UN/ECE, as a main driving force behind this movement. Although there are major differences concerning the environmental problems and priorities, and therefore the expectations from the future EfE, all agreed that a collaboration and dialog between these different groups of countries are very important.

In 2001 the process of collaboration among the South-Eastern European (SEE) states was launched by the

WHO Regional Office for Europe, following initiative of the Croatian minister of health. At the meeting of ministers of health it was decided to establish collaboration under the slogan Dubrovnik Pledge, with the purpose of upgrading seven areas of public health of common interest, one of them being environmental health (7). The process was supported by the Council of Europe and WHO Regional Office for Europe within the framework of the Stability Pact. Seven regional projects, budgeted at over 8 million USD, were designed to put into effect the political commitments of the Pledge. Following the last meeting of the SEE Health Network in November 2008 in Montenegro, it was agreed that Serbia would take a leading role in the environmental health priority areas for the SEE network, and prepare the input to the Fifth conference on Environment and Health in Italy in 2010 (8).

During the last two decades the public health and the environmental health policy in Croatia were developed under specific political, economic and social circumstances, were very much different from those in other European countries, in particular the Central and East European countries.

The European Environment and Health Process

Recognizing that the health sector alone cannot achieve the HFA Environmental Health Targets and that lack of cooperation among different sectors and authorities created or aggravated many problems, the WHO Regional office for Europe started to evaluate the means and ways of building a partnership between the most relevant sectors, such as the environment and agriculture sectors. It was the beginning of Environment and Health Process in Europe, as a mechanism of collaboration between different sectors, particularly the health and environment sectors (9).

WHO's *First Ministerial Conference on Environment and Health* was held in 1989 in Frankfurt, bringing together ministers and other senior representatives from the environment and health administrations of 29 European Member States, as well as from the then Commission of the European Communities (now the European Commission – EC, at that time 12 Member States). The Conference unanimously approved the European Charter on Environment and Health, which extends the European HFA strategy in its relation to the environment and represents a major step forward in the joint development of public health and environmental policies.

The *Second Ministerial Conference on Environment and Health* was organized by WHO/EURO in collaboration with the European Community, and held in Helsinki in 1994 in Europe which was very different from that of 1989. Major political events had occurred in the European Region during the intervening five years, bringing the number of its Member States from 29 to 50. The conference endorsed the Environmental Health Action Plan for Europe (EHAPE), with aims to give purpose and direction to environmental health activities within

countries, without interfering with the priorities that each country must set itself. The European Ministers of the environment and of health committed their governments to develop National Environmental Health Action Plans (NEHAP), as specific action plan for eliminating the most significant environmental threats to health as rapidly as possible.

During the *Third Ministerial Conference on Environment and Health* held in London in 1999 under the overarching theme of 'Action in Partnership', the ministers adopted the legally binding Protocol on Water and Health at the 1992 Convention on the Protection and Use of Transboundary Watercourses and International Lakes; the Charter on Transport, Environment and Health; and the London Declaration, which continued the mandate of the EEHC for further five years.

The *Fourth Ministerial Conference on Environment and Health* took place in Budapest in 2004 under the theme 'The future for our children' within the broader context of sustainable development. The ministers committed themselves to implement the Children's Environment and Health Action Plan for Europe (CEHAPE) in their respective countries (10). There are four priority goals set up by CEHAPE: 1. to prevent and significantly reduce the morbidity and mortality arising from gastrointestinal disorders and other health effects, by ensuring safe and affordable water and adequate sanitation for all children; 2. to prevent and substantially reduce health consequences from accidents and injuries and pursue a decrease in morbidity due to a lack of adequate physical activity; 3. to prevent and reduce respiratory diseases due to outdoor and indoor air pollution; 4. to reduce the risk of disease and disability arising from exposure to hazardous chemicals (such as heavy metals), physical agents (e.g. excessive noise) and biological agents and to hazardous working environment during pregnancy, childhood and adolescence (11). The Conference, also, recognized that the effect of environmental factors depends on time, place, intensity (dose), frequency and length of exposure, the factors' mutual interaction, and, finally, on the exposed target population. Such complexity results in gaps in the existing knowledge, demanding continuous and interdisciplinary research as a prerequisite. Moreover, when facing uncertainties in the scientific knowledge of the environmental risks to health, in the context of environmental policy-making, a precautionary principle should be used as a risk management tool (12, 13). Only a multisectoral and interdisciplinary approach allows the establishment of an extensive database, more comprehensive data gathering, processing and interpretation, as well as exchange and comparability of information. In accomplishing that, the establishment of a shared pan-European environment and health information system (EHIS) is a necessity (14). Such EHIS should: 1. help identify and prioritize the environmental health problems that are widespread in countries of the Region and facilitate prompt assessment and management of emergencies; 2. make it possible to monitor the effect of actions taken; 3. ensure timely access to information and

contribute to building advocacy, communication and education strategies; 4. use standardized methodologies for data collection, processing and dissemination, allowing interregional and international comparisons and time trend analyses; 5. be based initially on the existing information and be further developed progressively on the basis of scientific rationale, policy needs and feasibility, while ensuring the streamlining of reporting; 6. integrate system elements such as data from monitoring and statistics, health as well as sustainable development indicators, and assessment and reporting, including information about relevant policies, actions and projects.

The unprecedented political, economic and social changes which occurred in Europe in the last two decades will have influenced the scope and purpose of the EH process in the future, with consequent changes in the main scope and objectives of the EH Conferences, reflecting different priorities of different group of countries: 1. the Newly Independent States (NIS) with their needs for the traditional environmental health programme of WHO in the 1980s, focused on the core »SANEPID« (Sanitary epidemiological services) actions, 2. the EU Member States that would prefer a focus on the »soft« environmental health information and research priorities and 3. the South-Eastern European countries being somewhere in between, although, depending on the level of the accession process, the adoption of the EU environmental health acquis is becoming the highest political priority.

That is the framework in which the preparatory process for the *Fifth Ministerial Conference on Environment and Health* (Italy 2010) has to be defined. Until now, it has been planned that the European Environment and Health Process will focus on children and address other environmental health issues of increasing concern, such as climate change, as well as the cross-cutting issues. In this globalized world, the European Region needs strong collaboration between different groups of countries, with full recognition of their particular problems and priorities. The preparatory process should, therefore, be based more on the subsidiarity principles and approach in defining the long term programme of collaboration in the environmental health, and less on the opinion of a small group of experts.

The European Union and Environmental Health Policies

Within the European Community – now the European Union (EU) – the impetus for the adoption of environmental legislation was given by a declaration of heads of state and governments in Paris in October 1972. Immediately afterwards, the first Community action programme (1973–1976) on the environment was adopted in 1973. Although the European Community had been very active in environmental matters and implementing its action programmes through the adoption of a considerable body of legislation, it was not until the Single European Act (a revision of the then existing Treaties), which entered into force in 1987, that the Commission's competence in the area of the environment was formalized (15).

A resolution on health and the environment, which was adopted in 1991 by the Council and the Ministers of Health of the European Community, reflected the basic principles and strategies outlined in the European Charter for Environment and Health and invited the Community and its Member States to take steps to gather knowledge and experience of the relationship between health and the environment.

Treaty on European Union, which came into force in 1993, includes among the EU's main objectives the promotion of sustainable economic growth and markedly strengthens the EC's legal basis for implementation of the Fifth Environmental Action Programme. Significantly, the Treaty provides that considerations related to the protection of health (Article 129) and the environment (Article 130, line 2) should be integrated into the definition and implementation of other policies of the European Union.

Amsterdam Treaty provides in its Articles 152 and 174 legal provisions for Community action in the field of Environment and Health, and the EU has already begun to respond to these concerns. In the Sixth Environmental Action Programme it has set itself the goal of contributing »to a high level of quality of life and social well-being for citizens by providing an environment where the level of pollution does not give rise to harmful effects on human health and the environment.« The Community Action Programme on Public Health (2003–2008) takes the environment as a major health determinant, while the EU Research Framework Programmes have included specific actions on this issue.

European Commission adopted in 2003 the *European Environment and Health Strategy* (also known as the SCALE initiative, which stands for actions on Science, Children, Awareness, Legal instruments, Evaluation) to reduce diseases related to environmental factors, to identify and prevent new health threats caused by environmental factors, and to strengthen the European Union capacity for policy-making in this area (16). This initiative was followed up by the European Environment and Health Action Plan 2004–2010, which proposes an Integrated Information System on Environment and Health, as well as a coordinated approach to Human Biomonitoring between Member States to render the assessment of the environmental impact on human health more efficient (17).

It is important to distinguish the European Environment and Health Strategy and the Action Plan of the European Union, from the Environment and Health Action Plan for Europe (EHAPE), which was adopted at the Second ministerial conference in Helsinki ten years earlier as a basic framework and guidelines for development of National Environmental Health Action Plans (NEHAP) by all WHO European Region Member States, including EU Member States (18). NEHAP was seen as a tool to assist individual countries in evaluating and improving the environmental health management system, primarily through the management instruments such as: the legislation, enforcement, education and training, in-

formation system, research, financing, monitoring, and assessment. In contrast to the EHAP, the EU European Environment and Health Action Plan 2004-2010 is built as an additional complementary system to the existing EU Directives under the *acquis communautaire* (17). Therefore, in order to avoid any confusion and possible overlapping with the *acquis* requirements, the EU European Environment and Health Action Plan is dealing only with the non-binding issues of integrated information system on environment and health, human biomonitoring, research related to the assessment of the environmental impact on human health, and the links between environmental factors and respiratory diseases, neurodevelopmental disorders, cancer and endocrine disrupting effects.

The environmental health *acquis* requirements are based on the recognized needs to protect the health of citizens from the early days of the European Community, and therefore, a large numbers of EU Directives or Council Regulations are dealing with different aspects of environmental health issues. Therefore, the important aspects of the protection of environment and human health are incorporated in the *acquis communautaire*. The protection of human health by different legal and enforcement measures is subjects of several *acquis* sectors, such as: Free movement of goods (Ch-1), Food safety, veterinary and phytosanitary policy (Ch-12), Transport (Ch-14), Social policy and employment (Ch-19), Environment (Ch-27), and Consumer and health protection (Ch-28). The indicated *acquis* chapters are based on the Croatian accession framework (Table 1) (19).

It is important to underline that under the current EU treaty provisions, the »health issues« are not under the competence of the EU Institutions, and therefore, the Consumer and health protection chapter (Ch-28) carries only few obligatory requirements. The consequence of this political decision is that in the context of EU *acquis*, the health ministries are competent only for the narrow aspects of health protection and prevention under the Consumer and health protection (Chapter 28), as long as different arrangements are made at the government level, and agreed with the European Commission and Council, as part of the Accession Partnership agreement.

Therefore, the EU environmental health *acquis* requirements are providing a high level of prevention and protection of health through the »vertical« enforcement of laws, and at the same time, the EU Environment and Health Action plan provides »horizontal« links through the »soft« instruments of Environmental health information system (EHIS), standardized monitoring and assessment system, public information and research.

The impact of the Environment and Health Process on the Croatian environment and health policy, plans and practice

After the independence of Croatia, the public health system continued to be based on the foundation of An-

drija Štampar, the founder of the WHO public health policy. The principles of protecting health from environmental hazards in Croatia are well reflected in the Croatian Constitution (Article 69: »... the citizens have the right to live in a healthy environment ...«), and other legislation, as the Health Care Act and Environmental Protection Act. (20-22). During the period of 1990 to 2000, few changes were made in the national environmental health policies and practice, as it was the time of the Croatian War of Independence, and a parallel transition process of replacing centralized with a market-based economy was taking place.

During the same period other Central and East European (CEE) countries were involved in the major reforms and changes in their policies, legislation and enforcement institutions, as a part of the EU accession process. Since the environmental health issues were very high on their agenda, the NEHAP programme was seen to be a very useful instrument in achieving the *acquis* objective, and at the same time preserving as much as possible the public health institutions and capacities.

With the assistance of the WHO Regional Office for Europe, as early as in 1996 Croatia started with the preparation of the *National Environment and Health Action Plan* (NEHAP), which was accepted in 1999 by the National Health Committee – a body appointed by the Parliament with the task to create a general framework for the multisectoral approach to the country's environmental health problems. That implied setting a wide range of objectives related to the development of managerial tools, the prevention or reduction of health risks related to each of the environmental media, as well as to the activities of individual economic sectors. Unfortunately, due to the War for Independence, and other more relevant priorities in the 1990s, the prepared NEHAP was never used as an instrument to assist in the reform of environmental health system and successful implementation of the EU *acquis* requirements.

Starting from the year 2000, a new page was turned in relations between Croatia and the EU. By signing the Stabilisation and Association Agreement in October 2001, Croatia started to work on transposing the EU *acquis*. This first agreement followed the Council decision of October 2005 to start the negotiations with Croatia on its accession to the European Union, and adoption of the first Accession Partnership with Croatia (Council Decision 2006/145/EC) (23).

However, during the very initial period of time of transposing the EU *acquis* into the Croatian legislation, a number of radical decisions were made concerning the distribution of responsibilities for different environmental health issues among different ministries. By those decisions, ministry of health lost its legal competence over some environmental health areas that previously were for decades in its portfolio, such as: chemical safety, food safety, health and safety at work, drinking and bathing water safety, air quality, ionizing radiation control, etc. On the other hand, the other sectors, such as the econ-

TABLE 1

EU *acquis* environment and health protection requirements.

Acquis Chapter	Sub-chapter	Competent authority
Chapter 1	1. Free movements of goods	MELE
	1.3.2 Chemical products	MHSW, SI
	1.3.3 Drug precursors	MHSW, SI
	1.3.4 Detergents	MHSW, SI, PHI
	1.3.5 Pharmaceuticals	MHSW
	1.3.7 Cosmetic products	MHSW
	1.4.4 Noise emissions by equipment	MHSW, SI
	1.4.6 Toys 1.4.24 Medical devices	MHSW, SI, PHI MHSW
Chapter 12	12. Food Safety, Veterinary and Phytosanitary Policy	MAFRD
	12.1 Food Safety (including drinking water quality)	MHSW, SI
Chapter 19	19. Social Policy and Employment	MELE
	19.2 Health and safety at work	MHSW, CIOH
Chapter 27	27. Environment	MEPPPC
	27.2 Air Quality	MEPPPC
	27.3 Waste Management (hazardous waste)	MEPPPC
	27.4 Water Quality (drinking water quality)	MEPPPC
	27.5 Quality of the Sea (safety of recreational waters)	MEPPPC
	27.7 Industrial Pollution control and Risk Management- SEVESO II & Chemical accidents	MEPPPC, NPRD
	27.8 Chemicals	MHSW, SI
	27.8 GMO 27.9 Noise protection	MHSW, SI MHSW, SI
Chapter 28	28. Consumer and Health Protection	MHSW
	28.2.1 Public health programmes	MHSW
	28.2.2 Blood and blood components	MHSW
	28.2.3 Tissues and cells	MHSW
	28.2.4 Malignant diseases	MHSW
	28.2.5 Communicable diseases	MHSW
	28.2.6 Mental health	MHSW
	28.2.7 Alcohol	MHSW
	28.2.8 Nutrition	MHSW

Abbreviations: MHSW – Ministry of Health and Social Welfare; MEPPPC – Ministry for Environmental Protection, Physical Planning and Construction; MAFRD – Ministry of Agriculture, Fisheries and Rural Development; MELE – Ministry of Economy, Labour and Entrepreneurship; NPRD – National Protection and Rescue Directorate; SI – Sanitary Inspection; PHI – Public Health Institute; CIT – Croatian Institute for Toxicology; CIOH – Croatian Institute for Occupational Health

Source: National Programme for Accession to European Union 2008

omy, environment, agriculture, etc, did not have appropriate capacities to implement the new legal requirements. In year 2005 and afterwards, a major effort was made to correct these mistakes, and in some of this areas progress has been achieved, such as the chemical safety, GMO, noise, and safety of common goods. In some other areas, such as the drinking and bathing water quality, air quality, food safety, etc., discussions continue, with the

objective of finding the best possible solutions for the country, and utilising as much as possible the existing public health institutions, laboratories and experts.

The current situation is presented in Table 1, showing those *acquis* chapters with a significant aspect of environmental health requirements, including the overall negotiation competence for the entire chapter, or some specific chapter's sub-sections. The Ministry of health and

social welfare has the overall responsibility only for Chapter 28, although some other important environmental health legislations are under other *acquis* chapters. The transposition of EU Directives and Regulations into the Croatian legislation was not only of highest national priority, but also the process of legal and institutional reform supported by EU pre-accession funds and large number of projects with the substantial funding. Therefore, this EU accession process had a major impact on the Croatian environment and health policy, plans and practice. The National Health Development Strategy for the period 2006-2011, which was adopted in the Croatian parliament recognized clearly the above described problems, and paid special attention to the role of the public health institutions as a backbone for the successful implementation of the statutory *acquis* requirements (24). The Strategy, also, defined that the first measure should be to develop »... the strategy for the new public health system that should serve as the basis for the implementation of extensive reform interventions, and especially in the planning of those key activities upon which depends the harmonization with the EU regulation and practice. Moreover, it is also necessary to create a detailed action plan of reform, as well as establish and adequate institutional infrastructure that shall ensure the efficient implementation of reform.« Since the government did not yet implement this measure, it is an opportunity to utilise the NEHAP mechanism as an appropriate tool for achieving the objectives. The additional supporting tool in preparing the environmental health action plan is the recently adopted National Chemical Safety Strategy, fully based on the EU *acquis* requirements and as such supported by the European Commission (25).

In the final phase of the EU accession process the attention is shifted from transposition of legislation to ensuring the capacities for implementation of legislation. Because of its public health tradition, Croatia has significant capacities in comparison to the size of the country. In addition to very good organization and highly professional sanitary inspection services, there is, also, a significant number of public health institutes available in the country. There are 21 County Public Health Institutes whose activities are being coordinated, monitored and evaluated by the Croatian National Institute of Public Health (CNIPH) as a referral institution. Other institutions and organizations specifically involved in environmental and health issues are the Institute of Medical Research and Occupational Health, Croatian National Institute of Toxicology, Croatian Environment Agency and a few NGOs which operate mostly locally. The universities and the School of Public Health are in charge of professional education and capacity building for environmental health. Despite such well-structured network, a noticeable lack of intersectoral and interinstitutional collaboration, as well as a lack of contacts between environmental and health administrations, affects the ability to assess health risks comprehensively and may hamper the ability to design and implement effective risk reduction actions. Such situation is to some extent a reflection of the already de-

scribed incomplete and partial legislative framework and policy documents.

In other words, it is now a right time to prepare the NEHAP as an operative plan for achieving the EU accession objectives. Children's Environment and Health Action Plan for Europe (CEHAPE) has just been translated, and could also be used as an additional supporting tool.

Finally, it is also a right time to apply the EU European Environment and Health Action Plan, as a very good complementary system for the development of horizontal instruments.

For these actions, it is important to ensure intersectoral collaboration of all ministries, specially the Ministry of Health and Social Welfare, Ministry of Environmental Protection, Ministry of Agriculture, Forestry and Water Management, Ministry of Economy, Labour and Entrepreneurship, Ministry of Science and Technology and all other relevant and competent institutions and stakeholders. The excellent collaboration among those ministries experienced already in the process of development of the National Chemical Safety Strategy will provide a framework for a rational and efficient environmental health system.

One of the areas is the establishment of a comparable and comprehensive information system, and the development of standardised environmental and health indicators. The existing Croatian system of data collection for general health indicators allows a more in-depth assessment of interregional and international variability in health, but no such analysis has been conducted so far.

CONCLUSION

The European Environment and Health Process is a result of European citizens' basic human right to enjoy the highest attainable level of health and well-being and of their growing awareness of the possible magnitude of detrimental environmental impact on it. So far, the process itself has been successful in fostering collaboration between the environment and health sectors, even though in general it was more effective in addressing environmental than health aspects and it did not sufficiently involve the other economic sectors in joint action on environment and health.

Transposition of EU Directives and Regulations concerning environmental health into the Croatian legislation had a major impact in establishing relevant and highly operational system of environmental health in Croatia. Some progress has already been made such as, for example, in the area of chemical safety, safety of drinking water or objects of common use, but much work is still to be done utilising as much as possible the existing public health institutions, laboratories and experts. The National Health Development Strategy for the period 2006-2011 paid special attention to the role of the public health institutions as a backbone for the successful implementation of the statutory *acquis* requirements. It also emphasized that such public health system should be

developed which should serve as the basis for the implementation of extensive reform interventions, and especially in the planning of those key activities upon which depends the harmonization with the EU regulation and practice. Moreover, it is also necessary to create a detailed action plan of reform, as well as establish and adequate institutional infrastructure that shall ensure the efficient implementation of reform. Since the government did not yet implement this measure, it is an opportunity to utilise the NEHAP mechanism as an appropriate tool for achieving the objectives. The additional supporting tool in preparing the environmental health action plan is the recently adopted National Chemical Safety Strategy, fully based on the EU *acquis* requirements and as such supported by the European Commission.

Also, adequate multisectoral and interdisciplinary cooperation at different levels, such as Public Health Institutes, School of Public Health, Institute of Medical Research and Occupational Health, Croatian National Institute of Toxicology, Croatian Environment Agency, in developing a comprehensive, consistent and comparable information system should be established, as well as the cooperation between policy-makers (primarily between Ministry of Health and Social Welfare and Ministry of Environmental Protection, as well as other relevant ministries) in developing evidence-based sectoral policies with incorporated health aspects. Policy-makers should consider establishing national mechanisms for collaboration between the health and environment sectors, as well as other key stakeholders, as appropriate.

If following the above described path in environmental health policy and implementation through the »vertical« enforcement of laws of the EU environmental health *Acquis*, and at the same time utilizing »horizontal« links through the »soft« instruments of Environmental health information system (EHIS), standardized monitoring and assessment system, public information and research, Croatia will be able to offer to its citizens an adequate and timely protection from numerous environmental factors.

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