

IMPROVING QUALITY OF ENVIRONMENT IN SERBIA

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ABSTRACT

The ecological crisis and the lack of conservation strategies of Planet are still consequences of undeveloped environmental awareness and environmental education. In the wide range of potential creators and carriers of environmental and ethical coups and decisions, the important place belongs to the sanitary engineering profession. Therefore, a priority arouses a great need for building of technical capacity for laboratories to measure these indicators within the network of institutes of public health in Serbia.

Keywords: ecology, air pollution, awareness, habits

1. INTRODUCTION

We constantly complain how our environment is dirty, air is polluted, amount of clean drinking water is decreasing etc. So, lets start from the beginning.

Does the problem exist in something else or in ourselves? All that waste that surrounds us is the product of our hands. All climate changes are affected by man who is unkind to mother nature.

Environmental crissis and lack of strategy for Planet preservation are consequence of undeveloped environmental awareness or environmental habits and environmental education. Sanitary engineering

profession plays an important role within wide spectrum of potential creators and transmitters of environmental – ethically actions and decisions.

Nowadays, environmental pollution becomes increasing problem due to unplanned industry development, infrastructure development and large concentration of people and their activities.

Environmental awareness is based on new knowledges, attitudes, values, opinions and behaviours. Turbulent life of the modern society, unpredictable future, particularity of knowledge related to common existential issues, awareness that environmental crisis has global dimensions indicate on unsustainability of traditional behaviour model.

2. MONITORING, MEASURING AND ANALYSIS OF ENVIRONMENTAL QUALITY INDICATORS

National health condition does not depend only on efficient and quality healthcare system. It also depends on environmental conditions. Environmental indicators such as quality of air and drinking water, food, waste water and surface water are systematically checked during last 50 years within activities of healthcare institutions in Serbia. Data collecting and analysis of measuring of environmental quality are performed in sectors for hygiene, while data on national health condition are collected in sectors for epidemiology. Sampling is used for measurement of air pollution level within each of Local Institutes for Public Health – LIPH. Regarding health hazard, systematic measurement of health indicators for following parameters of living conditions is conducted within network of local institutes for public health:

- Quality of drinking water, quality of surface water which are placed in pools, reservoirs and used for water supplying in Serbia. Data are presented in “Annual report on safety of drinking water”;
- Checking of air quality in cities. Data are also presented and analyzed in Annual report.

All above mentioned publications are regularly published by Public Health Institute in Serbia.

Considering the fact that increase in environmental pollution occurred during last years on a global level which also presents the risk for health, World Health Organization (WHO) developed plan and action methods for environmental health indicators and defined main group of indicators which should be further followed. Since Republic of Serbia is on the territory of South-East Europe, it signed Agreement on stabilization and association. Hence, Serbia accepted application of prescribed methods in its existing system of Public Health Institute and Informational health system of the environment (ENHIS) which is applied in EU states.

Republic of Serbia is active in participating in process of regional activity in cooperation with states of South-East Europe (SEE) which is initiated by the Office of WHO in Bonn and it is related to creating of a group of health environment indicators for SEE region in accordance with Informational system of environmental health (ENHIS).

Furthermore, functioning of informational system based on indicators opens the space for further spreading of information, including environmental risk assessment for health. It should be conducted in methodological part (adaptation of existing methods to national and local conditions) and through capacity strengthening / staff training. Department for health of the Republic of Serbia would use existing developed network of Institutes for public health in order to develop and apply group of environmental indicators and health indicators aligned with WHO methodology.

Regarding monitoring of environmental indicators in network of IPHs in Serbia, there was no significant efforts on improvement of technical possibilities and capacities development of laboratories responsible for sampling and measurement. However, equipment in laboratories of IPHs does not have equal possibilities regarding devices, quality, number of devices and abilities for measurement of indicators prescribed by the Law.

It is necessary to conduct assesment of chances for development of environmental informational health system using WHO methods and improvement of capacities of national public health. Health workers and experts should be prepared to actively participate in development and use of environmental informational health system.

Since only valid data of measured environmental indicators can be compatible with international database and implemented in assessment process prescribed by WHO directives, solving of above mentioned problems is the basis for entire process of improvement of monitoring of IPHs which are also engaged in assessment of quality of living standards.

Improvement of cooperation with municipalities in our region and strengthening awareness of importance of quality and environmental protection are significant for improvement of competencies in areas of production, agriculture and food industry.

2.1 MONITORING OF SUSPENDED PARTICLES IN THE AIR IN SERBIA

The Law on air protection [5] from 2010 and Regulation on the conditions for monitoring and requirements for air quality [6] are adopted in Serbia. It provided harmonization of domestic and valid EU regulative in area of monitoring and air quality management. Instead of monitoring of total suspended particles, Law and Regulation prescribe monitoring of PM₁₀ particles and analysis of heavy metals and benzo(a)pyrens from collected samples. Also, there are preparations for introduction of monitoring of PM_{2,5} particles when it gets the approval in EU states.

Data on air pollution in Serbia are reported to European agency for the environment which is conducted within the project known as AirBASE [7] from 2003. However, data on respirable particles are still insufficient and they include only data on PM₁₀ particles obtained from automatic measurement stations in Belgrade. Reason for that lies in a fact that monitoring of respirable particles in other cities is established during last several years. Beside urban areas, respirable particles should be monitored in rural areas, but it is not yet established in our country.

During 2006, Agency for environmental protection (SEPA) started with measurement of air pollution including monitoring of PM₁₀ particles using automatic monitors. Nowadays, SEPA monitors air pollution on 37 automated stations. Within the project *Supply of Equipment for Air Monitoring* [8], 28 new stations were provided. They started to work during last and this year.

3. ENVIRONMENTAL PROTECTION IN EDUCATION SYSTEM

Researches on modern problems on environmental protection and its internal and multidisciplinary theoretically – methodological constitutioning within natural, social and technical sciences were conducted during last decades according several scientific aspects and needs.

Hence, increased interest in introduction of strategy of sustainable development and environmental protection into concept of lifetime education occurred lately in area of scientific –theoretical system of environmental protection and education. Aslo, research thematic of this paper is focused in that direction. Scope of this thematic and its complex problematic directed researches to wide and detail research in area of education and work in the natural environment. Modern environmental educational and informative practice in our society is used as objective reality for purposes of this research. Methodologically, this practice is analytically compared with theoretic doctrines nad international practice concepts and experiences in developed countries worldwide.

4. CONCLUSION

Presented work can provide following conclusions:

- Quality of the environment is the objective of each individual and society;
- Quality of the environment demands involvement of all interested parties in practice;
- According to the research aspect, quality of the environment is interdisciplinary and multidisciplinary area.

Establishment of structure for monitoring, assessment and reporting on quality is needed for improvement of environmental quality. Furthermore, it is important to develop a system of continuous promotions in all environmental areas which will be covered by monitoring.

5. REFERENCES

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