

## ENVIRONMENTAL HEALTH AS A FACTOR OF LOCAL DEVELOPMENT

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**Abstract:** *There are a lot of definitions of health used for many purposes. Spatial economy finds it useful to use concepts of public and environmental health. The aim of this paper is to present the concept of environmental health and the way how it may be applied to the concept of local development. The application of environmental health to the concept of local development is based on the model of the developed system of the environment of human life presented by J.J. Parysek.*

**Key words:** *medical geography, environmental health, local development.*

### Ambiguity of the term health

The term health is ambiguous and poses enormous difficulties when one tries to define it. Spatial sciences seem to need a double approach towards the definition of the term health:

- biological and medical – which prevailed until quite recently in European medical sciences;
- cultural – which is the result of social sciences being introduced into medicine causing a slow retreat of the traditional Cartesian dualism health – illness.

To create a universal definition of health seems practically impossible. The phenomenon is not only differently understood by various civilizations but also depends on certain points of view. Furthermore, the concept of health strongly relies on aims which such a definition should serve.

In the course of recent decades paradigms have changed (see E. Korzeniowska, 1988; P. Ochman, 1984) causing the concept of health to shift from the biological approach to ecological one which stresses the environmental aspects of our life. This is a philosophical turning-point in human sciences. Consequently, a mechanical approach towards our world based on Cartesian philosophy has given way to a systemic approach. Medical research has been enriched by using not only medical and biological sciences but also different ones, such as social, economic and earth sciences.

In the case of developmental research on the basic level there are two possible ways of analysing health. One is closer to the notion of public health while the other sees health as a relation between human beings and the environment. The latter is called environmental health. This very concept of health is the subject of the further analysis presented in this article.

### The notion of environmental health

The notion of environmental health has directly come out from the above mentioned turning-point in medical sciences. It has been defined as “a state conditioned by environmental factors”. It is also related to controlling and assessment of environmental factors which are capable of affecting human health. Environmental health deals with the results of how humans are affected by chemical substances, radiation and some other biological factors as well as factors (often indirect) which influence our health and good mood in broadly understood physical,

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psychological and aesthetic surroundings. These aspects of the environment include housing, urban development, grounds management and transport (Agenda 21 w Polsce. Sprawozdanie ... 1997, p. 51). This definition is comprehensive enough to retain a systemic approach with a stress put on human relations with the environment rather than on intrasystemic relations observed within human organisms.

The definition, as good as it is, serves only pure theory unless it is supported by verifiable models which give it its operational value. One of the practical examples referring to social sciences is subjective-relational health model. It takes into account a bipolar arrangement health – illness accompanied by three dimensions of subjective-personal existence and three dimensions of the environment (bio-ecological, social and cultural) as part of a more complex entity (K. Popielski, 1995).

Earth sciences consider numerous relationships between humans and the environment. Among Polish environmental models stemming from geography (see M. Dudkowski, 1995) the best one suitable for transforming the concept of environmental health into the theory of local development seems to be the general model of the interactive environment of human life created by J. J. Parysek (1995). Further considerations are based on this model.

#### **Is the concept of environmental health suitable for local development?**

Although certain differences are expressed among authors involved in writing on local development most of them would agree on the following five statements (I. Kowalska, 2003):

1. Local development is a process not a static phenomenon.
2. The subject of development is a local community, i.e. inhabitants of a given area.
3. Endogenous factors are the main force which drives development.
4. Local development involves more than only local economy.
5. Satisfaction and the feeling of living conditions getting better are the main criteria of development.

The concept of environmental health matches almost all of the five points. If local development is to serve inhabitants of a given region then it is important to take care of their health. Consequently, good health conditions, decent living conditions and the environment in good state form main endogenous factors.

It seems obvious that local development should aim not only at the well-being of local inhabitants but also at good health services, clean environment, etc. If the main touchstone of local development is providing inhabitants with decent living conditions then good health and confidence in what the future holds are the most important criteria for local people.

J. J. Parysek (1987) enumerates eleven general factors of local development:

(1) needs of the local communities, (2) resources and grounds of the local environment, (3) workforce resources, (4) infrastructure and investment, (5) economic potential, (6) local and external markets, (7) investment capital and financial resources, (8) level of education and culture, (9) technology and innovations, (10) benefits of the area, (11) international co-operation.

As many as four general factors of local development out of eleven are directly related to the notion of environmental health. The necessity of providing local communities with medical care and proper quality of the environment (with respect to its influence on the broadly understood health situation of local inhabitants) is among important community needs. Environmental resources and grounds show a direct connection with the previous point as they affect the quality and impact of the environment on human health. The stress here is put on the assessment of this impact in the context of the degree of the environment transformation carried



out by humans. The factor of workforce resources is closer to public health although it has much to do with the notion of environmental health. For this reason it has to be included into the analysis. The existing technical infrastructure transforms the environment considerably and, as a result, changes its impact on the health situation of local people. Finally, the social infrastructure includes the health service system and organizations providing social care.

Although most of the points on the list of general factors of local development do not show explicit relationship with environmental health, they are part of numerous developmental activities carried out within the framework of local economies.

### **Environmental health in local development – model approach**

The general model of the system of the interactive environment of human life by J. J. Parysek (1985), as well as the system of the human environment consist of the subsystems of nature and man. The subsystem of nature includes such components of the environment as atmosphere, hydrosphere and lithosphere. This subsystem, on the one hand, sees processes of physical and chemical characteristics typical of inanimate nature, and on the other hand, is home to people with all ecological conditions of adaptation, homoeostasis, etc. The subsystem of man contains of the following components:

- biophysical, in which human beings are considered to be biological organisms while human population is regarded as an animal population subjected to processes of physical adaptation (these processes refer to both internal and external conditions of life processes concerning individuals as well as the entire population. The most important mechanisms of this component are processes of metabolism, homoeostasis and resistance);
- psycho-social, in which human beings are regarded as social individuals while an analysis of the entire population is enhanced by an element of cultural adaptation (It includes a comprehensive range of elements and relationships concerning mental existence and rational behaviour of individuals. This factor involves elements of personal qualities of an individual, elements of social life and certain aspects of cultural life.);
- techno-productive, in which human beings are considered to be producers (It refers to technical equipment, technological processes and activities aiming at meeting material needs of a population).

According to J. J. Parysek (1985) people live in the subsystem of nature, but this subsystem is external in relation to the subsystem of man. It means that the subsystem of nature creates living conditions for human beings as living organisms. It is the very subsystem that provides people with air, water and food. Obviously, the short depiction of both subsystems does not exhaust the entire complexity of the relationships between them.

The general model of the system of the interactive environment has already been applied to the concept of the ecologically balanced development (see J. J. Parysek, M. Dutkowski, 1994a, 1994b) and spatial order (T. Michalski, 2003). Table 1 presents an attempt to include the concept of environmental health into local development by means of the discussed model.

While analysing Table 1 one can see certain similarities to the concepts of health which have already been applied to local development. Namely, the self-influence of the system of man is fully included in the concept of public health (see S. Paździoch, 1996).

First of all, a range of social attitudes towards health awareness should be mentioned. It is very important as social factors take about 40–50% of the decisions affecting health situation of a local community. Furthermore, the concept of public health cannot be separated from the quality of health services and social care services (whose influence on health situation of a local community takes about 10%). In the case of a local community the state of health services

and social care services is relatively insignificant because it mainly involves general practitioners. It is due to the fact that qualified medical care is concentrated on the regional and central levels.

The present broader approach, in comparison with the previously used health concepts, consists in a partial inclusion of interactions between the subsystem of nature and the subsystem of man into research analysis. As far as the impact of the subsystem of man on the subsystem of nature is concerned, the analysis is carried out indirectly as the impact is analysed to show only destructive results inflicted on the environment. On the other hand, the impact of the subsystem of nature on the subsystem of man has two aspects: the impact of the unspoiled natural environment on human health and the impact of the degraded environment on a population's health situation.

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**ENVIRONMENTÁLNE ZDRAVIE AKO FAKTOR MIESTNEHO ROZVOJA***Zhrnutie*

Z dôvodu nárastu bohatstva populácie sa mení aj spektrum ľudských potrieb. Lokálne komunity pritom nie sú výnimkou. Jedným z dôsledkov zbohatnutia komunity je jej ochota zlepšovať zdravie a život v prírode, ktorá je čistá a estetická. Kým v štátoch EU 15 sa tento proces uplatňuje už dlhý čas, v postkomunistických krajinách, ktoré sa stali súčasťou EU v roku 2004 je len na počiatočnom štádiu. Autor sa domnieva, že prezentovaný koncept environmentálneho zdravia a praktický pokus uplatnenia v miestnom rozvoji na základe všeobecného modelu interaktívneho prostredia ľudského života vypracovaného J. J. Parysekom rešpektuje tieto nové potreby.

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