SOCIAL BACKGROUND OF ENVIRONMENTAL DEVELOPMENT AID IN CENTRAL ASIA

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Abstract

The objective of this study is to determine the relation of inhabitants of Central Asia towards the environment on a basis of theories of social sciences and propose future trends of the environmental development aid in this region. Main social theories dealing with this relation are theory of post-materialism, new environmental paradigm and grid/group theory. The ecological footprint of countries of Central Asia correlates with their human development index. Since 2002, 13 development projects of the Czech Republic have passed in Central Asia. Two of them can be classified as environmental projects - they are aimed at achieving of specific targets of seventh Millennium Development Goal. A realization of development project consisting in plastic wrapping buy-out and continuation of development projects consisting in drinking water cleaning can be recommended for Central Asia.

Key words: environment, development aid, Central Asia, social sciences, water, pollution, human development index, ecological footprint

INTRODUCTION

Relation of humans towards the environment has been a topic of social research since the beginning of postmodernity. The objective of this study is to determine the relation of inhabitants of Central Asia towards the environment on a basis of theories of social sciences and propose future trends of the environmental development aid in this region. In this study, the environmental development aid is meant to consist in activities aimed at achieving of seventh Millennium Development Goal. The United Nations define this goal as Ensure environmental sustainability.

RELATION OF HUMANS TOWARDS THE ENVIRONMENT

Table 1 shows values of the Human Development index (HDI) and other basic indicators in countries of Central Asia and their rank out of 179 countries. Kazakhstan is being classified among countries with high human development (HDI ≥ 0.800) and other countries of interest among countries with medium human development (HDI = 0.500 to 0.799). These data propose basic overview of mentioned countries. There are strong local anomalies here, in environmental sphere in particular. One of component of the HDI, the human

Tab. 1: Human Development Index of countries of Central Asia

Rank	Country	A	B	C	D
71	Kazakhstan	0.807	66.4	99.6	9 832
108	Turkmenistan	0.728	62.8	99.5	4 826
119	Uzbekistan	0.701	66.9	96.9	2 189
122	Kyrgyzstan	0.694	65.7	99.3	1 813
124	Tajikistan	0.684	66.5	99.6	1 609

A – Human development index value in 2006; B = Life expectancy at birth in 2006 (years); C = Adult literacy rate (% aged 15 and above) in 1999–2006; D = gross domestic product per capita (PPP US$) in 2006; PPP = purchase power parity
Source: hdr.undp.org/en/media/HDI_2008_EN_Tables.pdf

health, is very closely tied with environmental situation in localities.

Generally, a relation of people towards the environment is being influenced by various factors. These factors can be categorized into social-cultural, economic as well as political sphere of the human life.

According to the theory of post-materialism (Inglehart, 1971; Soukup, 2001) people firstly satisfy their material needs and only after this satisfaction the individual can attend to the satisfaction of the post-material needs. One of them is the environmental behaviour, or positive orientation of an individual towards the environment.

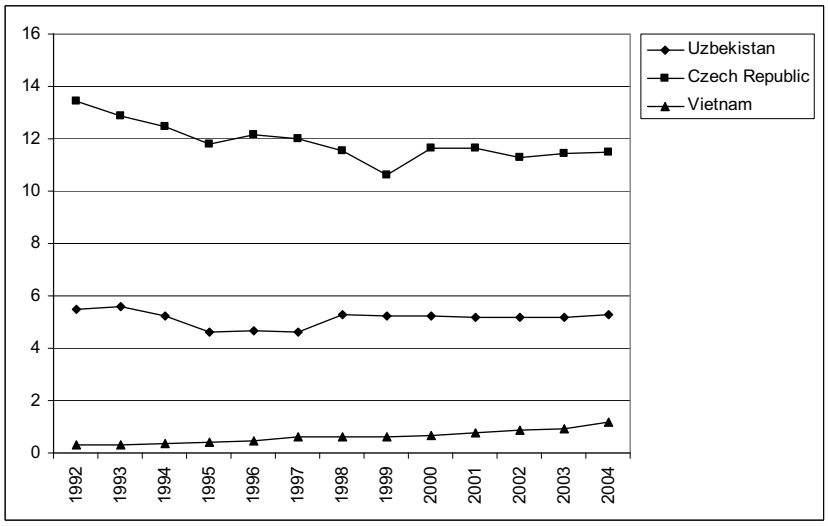
An ability of people of various national cultures to satisfy this post-material need is demonstrated in Figure 1. People in the Czech Republic (as a developed country) can behave more pro-environmentally and, on the contrary, people in Central Asia (as developing countries) cannot. All the three, the Czech Republic Uzbekistan and Vietnam are post-socialist countries. The main indicator of environmental pollution in industrialized societies, carbon dioxide emissions per capita, are shown in Figure 1. In the Czech Republic, a decrease can be observed in post-socialist era between 1992 and 2004. In Uzbekistan, this trend is almost unchanging. However, further developing countries (Eastern Asia in particular) show increase of this indicator (as shown in a case of Vietnam) as a consequence of present-day material satisfaction in a condition of economic growth.

Further theoretical concept, the New Environmental Paradigm (NEP), is also closely connected with postmodernity. It comes from ecocentric view – the need of limitation of economic growth and living in agreement with nature, because a man is a part of the nature, not its ruler. The author of this concept is American sociologist Riley Dunlap. The NEP, as a worldview, is being empirically measured with a questioning scale. Since 2000, a modified 15 item (statements) scale of New Ecological Paradigm has been used for this measurement (Dunlap et al., 2000).

The grid/group theory determines attitudes of the individual towards the environment (Soukup, 2001). The grid means a level of tolerance of external (by norms) appointed behaviour of an individual. The group means an intensity of relations with other people in social group. On the basis of these dichotomies, four types have been specified: individualists, egalitarians, hierarchists and fatalists. Egalitarians (high intensity of relations with other individuals, low level of tolerance of external appointed behaviour) have the most pro-environmental attitudes.

Some authors also find negative dependences between great monotheistic religions and the environmental behaviour. In some passages of holy books, the monotheistic religions enforce on a man the perspective of rule over the nature. According to White's (1967) theory, the Christian religion also contributed to the impacts of a human activity onto the nature, because the relationship man-nature is like ruler-ruled. According to findings of Schultz (1998), people with higher confidence in biblical texts achieve lower values at the comparative scale of the new environmental paradigm. Generally, the Buddhism and other Eastern religions are being better evaluated in terms of a relation of their believers towards the environment than the three monotheistic religions (Christianity, Islam, Hebraism) are.

Figure 1. Carbon dioxide emissions (metric tons of CO2 per capita) in the Czech Republic, Uzbekistan and Vietnam

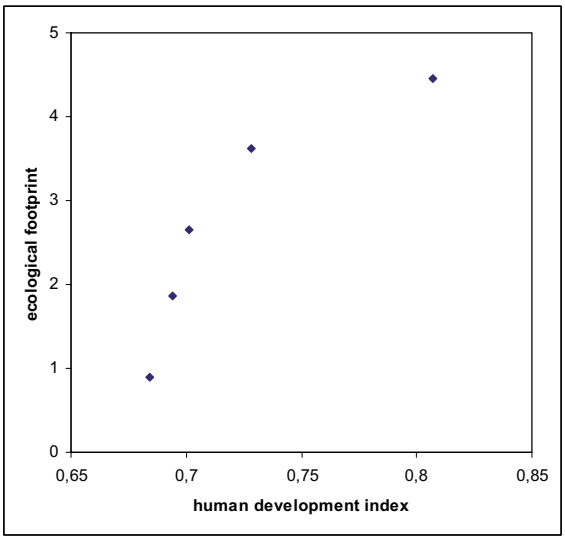


Source: MDG Monitor (2008)

In Central Asia, modern and post-modern components imported from the West as well as traditional components can be traced in present-day society. The acceptance of Western cultural components took place in Central Asia much faster in the era of socialism than in the era of colonialism (until 1917). It can be said that the modernization and its accompanying processes of urbanization and industrialization ended here in 1991. Afterwards, a part of the Central Asian population returned ("secondarily") to the traditional life and livelihood (subsistence farming in the countryside, but also in urbanized areas) and a very small part of the population (mainly the elites in the cities) accept new – post-modern – Western cultural components.

Anthropogenic impacts onto the environment have in Central Asia their origin in Soviet as well as post-Soviet era. Contaminants (polluting substances) affect the outer nature and inner nature (human's organism and its health). They are strong political subject of all the levels and they cause new social phenomena (so-called psychosocial impacts, described in Central Asia e.g. by Crighton et al., 2003). Polluting substances function globally and locally. The contaminants of the atmosphere function globally. Substances polluting soil and underground water (as a source of drinking water in a locality) function mainly locally. In Central Asia, mainly localities, namely rural ones, are affected by strong pollution.

Figure 2. Relationship between the human development index and ecological footprint (hectares per capita) of countries of Central Asia



Source: hdr.undp.org/en/media/HDI_2008_EN_Tables.pdf and NationMaster.com (2008)

POLLUTION AND DEVELOPMENT AID IN CENTRAL ASIA

The ecological footprints of countries of interest are as follows: Kazakhstan 4.45 hectares per capita, Turkmenistan 3.62, Uzbekistan 2.65, Kyrgyzstan 1.87 and Tajikistan 0.90 (NationMaster.com, 2008). The ecological footprint of countries of interest correlates with their human development index (Pearson correlation = 0.885) as shown at Figure 2. This dependence can be attributed to one of three components of the HDI – gross domestic product per capita.

Environmental development projects in Central Asia are being realized by organizations from developed countries, of which the Western ones still prevail. It cannot be unambiguously said that environmental problems are for governments of Central Asia unsubstantial, because related phenomena (such as mortality rate and migration) are political questions of high importance. But the pollution removal cannot be realized by these countries themselves because of poor economic situation and insufficient know-how.

Especially the water pollution by industrial, agricultural or mining activity is severe local problem. In the republics of Central Asia, a significant salinization of water happens (Tajikistan 7th and Turkmenistan 8th rank from 141 countries of the world). Also in the contents of total dissolved solids in water are these countries at forefronts (Uzbekistan 1st, Turkmenistan 8th and Kazakhstan 15th rank). Kyrgyzstan is at forefront in the water pollution from industry, especially from food-processing – 7th rank from 114 countries (NationMaster.com, 2008).

Since 2002, 13 projects (mainly for three years) of development aid of the Czech Republic have passed in Kyrgyzstan, Kazakhstan and Uzbekistan. The most intensive aid went to this region in 2005 and 2006 as a consequence of the growth of the development aid after the Czech Republic joined the European Union. Two development projects of the Czech Republic can be classified as environmental ones (Table 3) – they are aimed at achieving of specific targets of seventh Millennium Development Goal (Table 2). Two mentioned environmental development projects of the Czech Republic are aimed at specific target 7.B (indicator 7.7) and 7.C (indicator 7.8).

In the entire Central Asia, other forms of pollution (than primary contamination of agricultural soil and plants by pesticides) also appear. These new forms of pollution arise with new Western imports. Using of plastic wrappings as a fuel for food preparation is an example.

Although the realization of environmental development projects in Central Asia has to face social and technological difficulties, organization from post-socialist countries (now donors of the development aid) can profit

Tab. 2: Specific targets (7.A to 7.D) of seventh Millennium Development Goal and indicators (7.1 to 7.10) of their fulfilling

Target 7.A: Integrate the principles of sustainable development into country policies and programmes and reverse the loss of environmental resources.
7.1 Proportion of land area covered by forest
7.2 CO2 emissions, total, per capita and per $1 GDP (PPP)
7.3 Consumption of ozone-depleting substances
7.4 Proportion of fish stocks within safe biological limits
7.5 Proportion of total water resources used
Target 7.B: Reduce biodiversity loss, achieving, by 2010, a significant reduction in the rate of loss
7.6 Proportion of terrestrial and marine areas protected
7.7 Proportion of species threatened with extinction
Target 7.C: Halve, by 2015, the proportion of people without sustainable access to safe drinking water and basic sanitation
7.8 Proportion of population using an improved drinking water source
7.9 Proportion of population using an improved sanitation facility
Target 7.D: By 2020, to have achieved a significant improvement in the lives of at least 100 million slum dwellers
7.10 Proportion of urban population living in slums

GDP = gross domestic product, PPP = purchase power parity
Source: Millennium Development Goals Indicators (2009)

Tab. 3: Environmental development projects of the Czech Republic in Central Asia

Environmental development project of the Czech Republic	Country	Aimed at target	Project will affect indicator	Realization
Biodiversity protection of southern Altai in the context of present-day environmental transformations and socio-economic development	Kazakhstan	7.B	7.7	2005–2007
Improvement of the Quality of Drinking and Irrigation Water in the Aral Sea Region by Cleaning Equipment and Sorbents Produced in the Czech Republic	Uzbekistan	7.C	7.8	2004–2008

For targets and indicators see Table 2
Source: Based on data from Czech Development Agency (2009)

from some advantages here. Ties of the social capital (established during the socialism in the second half of 20th century) can be in development aid successfully used.

CONCLUSION

Various social factors are influencing a relation of humans towards the environment and, thus, the condition of components of environment (water, soil and atmosphere) as it was shown in this paper. These factors are contained in concepts such as the theory of post-materialism, New Environmental Paradigm and the grid/group theory. An indicator of development, the human development index, achieves relatively high values (compared to other developing countries) in Central Asia. It is also well correlated with the ecological footprint of these countries and this dependence can be attributed to one of components of the human development index - gross domestic product per capita. Nevertheless, strong local anthropogenic environmental impacts can be observed in all the countries of Central Asia. The removal of this environmental pollution cannot be realized by countries of Central Asia themselves because of poor economic situation and insufficient know-how. An assistance of developed countries is thus necessary here and it is possible to formulate following recommendations for the environmental development aid in Central Asia. First, a realization of development project consisting in plastic wrapping buy-out. This would prevent from its combus-

tion by local inhabitants. Second, continuation of development projects consisting in drinking water cleaning, especially in extremely polluted areas such as the vicinity of former Aral Sea.

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