

Environmental Awareness in Brest, Belarus: Results of a Pilot Survey

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Belarus is an Eastern European country previously known as a republic of the Union of Soviet Socialist Republics (USSR). In 1991, Belarus established its independence after the dissolution of the USSR. The current political state still retains many of the pre-dissolution social and political positions; the country still maintains many of its old ways of life (Figures 1 and 2).

The country is 80,154 sq mi (207,600 sq km) in size and is populated by approximately 9.6 million people. Much of the land area (34%) is forested (Bell, 2002). The relatively flat topography creates a physiography that supports more than 11,000 lakes and many streams (Central Intelligence Agency, 2008) (Figure 3). There are 1,441 protected natural territories in Belarus, managed at either the national or local level. Three of these are UNESCO Biosphere Reserves. The consequences of contamination caused by radioactive fallout from the Chernobyl nuclear power plant explosion in 1986 are considered to be the largest environmental problems.

Belarus is replete with environmental features and habitats of international recognition, but has been criticized for the lack of opportunities for public participation in environmental matters. On the international level, public participation is considered an essential element of environmental decision making. This pilot survey sought to gather data on the level of environmental awareness among the citizens of the Brest area, Belarus, and to explore some of the relationships between awareness and participation. Brest is a re-



Figure 1. A horse cart is still a common transport in villages of Belarus.



Figure 2. Many older people in villages of Belarus still rely on animal products.

gional center and one of six major cities in Belarus. It is located in the southwest part of the country, on the border with Poland and influenced by Western Europe. The city is considered to be the most advanced of the regional centers.

This article presents and discusses results of a small-scale survey, which was designed to ascertain the degree of general public environmental awareness and conducted in the area in and around Brest, Belarus (Sushko, 2008).



Figure 3. Natural waters are quiet and calm due to the flat landscape in Belarus.

Methods

The survey was conducted in the summer of 2007 in the city of Brest and the Brest area in Belarus. It was conducted by handing out the form to people encountered during the normal course of the day. The form was a questionnaire containing 30 questions and was designed as a pilot study of public opinion on environmental issues. These were a combination of open-ended, multiple-choice, and yes/no questions. The questions were structured in order to cover such subjects as general environmental awareness and natural resource protection, global climate change, air pollution, drinking water quality, environmental law, and public participation. The results will be used to derive simple questions for future surveys. In the Results section of this article, yes/no (significant) answers are indicated.

Results

Demographics

Respondents were all adults ranging from 17 to 52 years old. Half were men and half were women. Half were married and nearly half had children. A large majority were

college or university educated. Most were employed or students.

Of the people who were employed, 40% were employed in either government or state provided jobs. Private companies employed 20% of the respondents and 3% were employed by non-governmental organizations (NGOs). Many (37%) chose not to respond to the question about employment. In response to the question about a respondent's job being associated with the environment, 3% indicated their employment included an environmental aspect. The survey was conducted in the Brest area and, as expected, most (94%) of the people participating in the survey lived in urbanized areas.

General Environmental Awareness

Most of the respondents (97%) felt that the environment in Belarus was polluted; however, 30% thought that protection measures were adequate. Sixty-three percent (63%) believed there were major environmental problems in the country, but 23% were aware of programs to solve them. These percentages were based on yes/no (y/n) questions. Programs people were able to mention included (1) water and air qual-

ity monitoring, (2) protected areas, (3) fees and taxes for environmental protection, (4) "cleanup" events, and (5) various special projects of environmental NGOs. Eco-tourism and the re-flooding of drained wetlands were also mentioned as programs that could solve environmental problems.

Fifty-three percent (53%) of respondents answered that they knew of environmental organizations operating in Belarus (y/n). Greenpeace was most commonly mentioned (26%). Other organizations named included the United Nations, UNESCO, the Ministry of Natural Resources and Environmental Protection, Bird Protection Belarus, the Green Party, Ecological Police, and university groups.

When asked to name environmental organizations operating outside Belarus, 26% could not name any international organization (y/n). Fifty percent (50%) mentioned Greenpeace. The United Nations, UNESCO, and the Green Party appeared in this list too. Others were the World Health Organization, World Meteorological Organization, World Wildlife Fund, World Water Council, and Kyoto signatories. Even though 89% of respondents were able to identify at least one protected area of the 1,441 protected natural territories in Belarus (y/n), they all named one to several of the same nine areas (<1% of the total). Some respondents confused a governmental residence, such as Viskuli, with a nature preserve.¹

Global Climate Change

In response to questions about global climate change, 94% believed that the phenomenon is real and happening; 4% believed it is not happening (y/n). The rest of the interviewed people were not sure and even indicated that they understand that the details are debated by scientists. Six percent (6%) did not know what the term "global climate change" meant in the survey. When asked about the potential consequences of climate change, the respondents mentioned the effects in Figure 4 most often. Acid rain and ozone depletion were also mentioned infrequently.

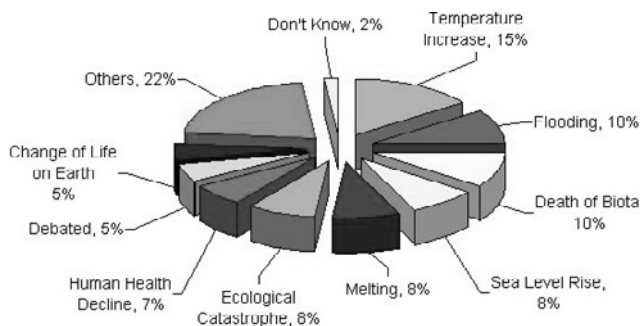


Figure 4. Brest, Belarus survey: respondents' opinions on global climate change consequences.

Air Pollution and Drinking Water Quality

Drinking water was widely believed to be contaminated in Brest (83%; y/n); however, 77% thought the air was clean (y/n). Of the 23% of respondents who had the opinion that the air was polluted, several

mentioned that they can smell the pollution in the urban areas. Figures 5 and 6 show respondents' perceptions on water contamination and air pollution. Iron, iron salts, and iron oxides were named as contaminants by 23% of the respondents. Chlorine was also listed as a contaminant in the water supply.

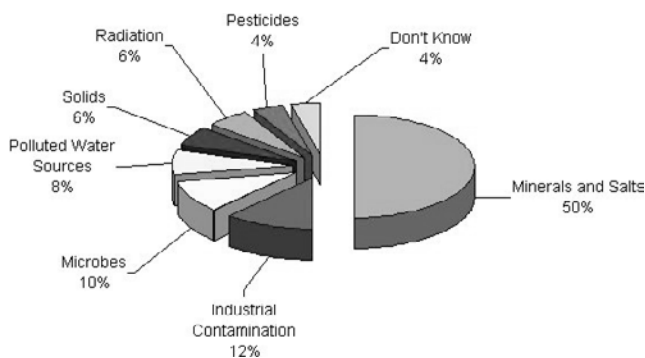


Figure 5. Brest, Belarus survey: respondents' opinions on water contamination.

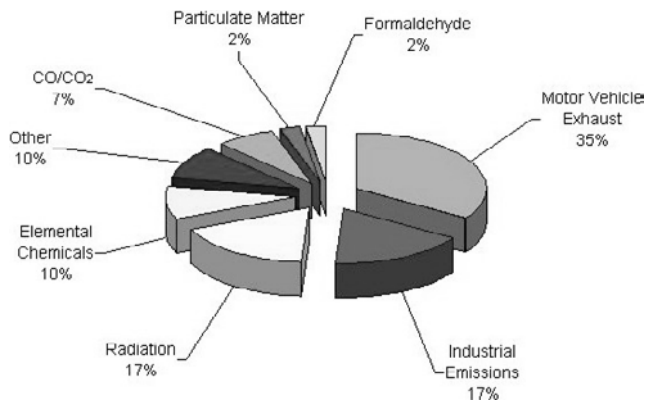


Figure 6. Brest, Belarus survey: respondents' opinions on air pollution.

Because the majority of the people believe that the water is contaminated, they have developed a number of home techniques to assure that the water is clean enough to drink. Figure 7 shows these techniques and their frequency of use. Although the large majority of people believe the air and water is contaminated, few claimed to know where to obtain facts. A third (34%) stated that they don't know where to go to obtain information about air pollution and 53% could not say where to learn about water contamination (y/n). Figure 8 shows sources of information about the water quality named by respondents.

Environmental Law

Only 16% of respondents were aware of national environmental laws or regulations (y/n). Among those, only 6% knew the National Law on Environmental Protection. Others were able to name minor regulations. Most could not specify details of the content of the law and knew it in name only.

International laws or treaties were known by name to 8% of the respondents. The Kyoto Protocol was not recognized by 70% of respondents and 93% were unaware of the Aarhus Convention. The Belovezhskaya Pushcha National Park was named as an international treaty by 3% of respondents.

Environmental Information Access

Belarus signed (1998) and ratified (2000) the Aarhus Convention on Access to Information, Public Participation in Decision Making, and Access to Justice in Environmental Matters, which assures that signatory governments will provide easy public access to environmental information and seek public participation. Despite this, 74% of the respondents felt they had inadequate access to environmental information (y/n). Only 8% felt they were well informed (y/n).

Almost three-fourths (72%) wrote that they would be willing to work for environmental improvement (y/n). Of those, nearly half would agree to work as volunteers.

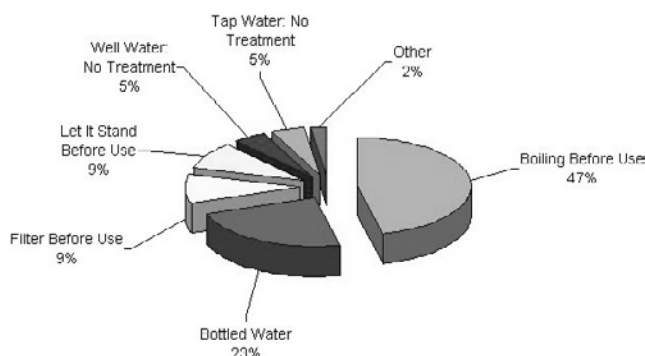


Figure 7. Brest, Belarus survey: respondents' opinions on home techniques to assure clean water.

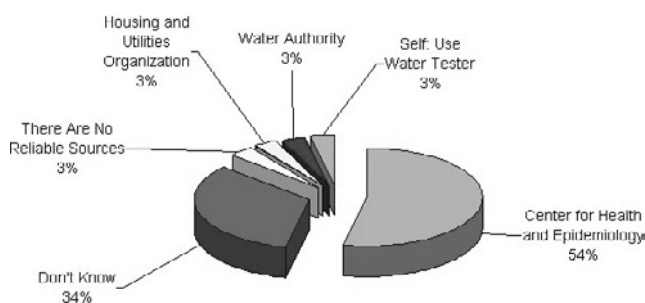


Figure 8. Brest, Belarus survey: respondents' opinions on sources of information about water quality.

Discussion

The profile developed by the survey has two major features. First is the extremely low level of environmental awareness. The second, possibly a result of the first, is the number of internal conflicts among the answers given. Thirty percent (30%) of the people expressed satisfaction with the level of environmental protection, but 97% still felt the environment was polluted. The survey could not resolve whether this is a true conflict of opinion or whether the people feel that the government is working on the problem but still has a long way to go. Most respondents also confessed they did not know how to obtain the details or facts about pollution or the environment-related programs. This conflict is deepened by the high percentage (80%) of respondents with upper level degrees. Other indicators of levels of faith in the government seemed to indicate that the government is not yet fully engaged in environmental protection.

Another conflict is the high number of people who named Greenpeace in a country where the organization is not overtly active. The responses indicate that the people have a better familiarity with environmental organizations operating outside of Belarus than with the actual governmental regulations and programs. This is an area for refinement in future work.

The responses to the potential effects of global climate change indicate that there is a lot of misunderstanding about the change. Ninety percent (90%) of respondents claimed they knew about climate change, but only 30% had heard about the Kyoto Protocol. Some of those thought that the Kyoto Protocol had to do with ozone depletion (3%) or general industrial pollution (15%).

Similarly, the responses to questions about water contamination and air pollution indicate some very common misunderstand-

ings. Iron compounds are frequently mentioned as contaminants, but iron occurs at high concentrations quite naturally in Belarusian waters. These compounds, therefore, do not constitute contaminants, but do reflect on a water supply not treated to standards that are in place in other countries. The visible residue from the iron may contribute to this impression. Chlorine, the disinfectant, which is added to prevent disease, is also listed as a contaminant, further supporting the conclusion that misinterpretation is playing a role.

These misinterpretations surrounding environmental issues may be attributed to "rumor" being the most active source of environmental information—again, raising concerns over the high percentage of misinformed people with advanced degrees. More to the point, the Aarhus Convention was ratified by Belarus in 2000; however, current environmental legislation doesn't contain adequate provisions for public involvement (United Nations Economic Commission for Europe, 2005). The national laws have not yet been amended to encourage public participation and, from the author's own experiences, participation is strongly discouraged. In the survey, the great majority of people felt they were not afforded an opportunity for public comment or participation. This conclusion is based on yes/no responses and is considered to be an accurate reflection of the people within the Brest area. Future study will show if this perception of inadequate participation is felt throughout the country.

Despite the inconsistencies in the types of answers within the survey and some apparently conflicting replies, a large number (72%) of respondents wrote that they would be willing to work for environmental improvement; of those nearly half would volunteer. In a country where the standard of living can be quite low, this is impressive. The elevated percentage may, however, also be an artifact of the high percentage of people with advanced degrees; it might be a sample bias resulting from an unpredicted non-random factor in the survey technique. Interpreting the results without consideration of this potential bias is striking in and of itself. Interpreting these same results, including the poor understanding of the issues, and accepting the bias to-

wards educated respondents, raises even more concern. The presumption is that the more educated people would have a higher awareness and so if the bias were removed, the level of awareness and understanding measured by this survey would be even lower. Regardless, the willingness to work for environmental improvement is an indicator of the high potential of the society to make a difference in the protection of the environment.

Conclusions

The most relevant results of the survey may be the number and intensity of internal conflicts that have been brought out. Although most of the respondents had upper level degrees and were aware of very general issues, only a few respondents provided any of the details. Of those who did, many still gave incorrect answers. This lends credence to the common claim that environmental information is not readily available. In spite of the low level of either awareness or comprehension, about a third would be willing to donate their time and efforts to making improvements. The state-

ment of commitment supports the theory that a greater level of awareness and understanding would precipitate a greater interest in, and in fact a popular demand for, public participation.

The high level of internal conflicts among the results indicates that existing awareness largely is based on a "buzzword" mentality, or awareness coming from rumor. Those who expressed concern about an issue without being able to express understanding of the issue may be simply parroting concerns heard from others. The impact of such a situation is that should public participation opportunities actually become available, credible and fact-based commentary may not easily be obtained.

Acknowledgments

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Note

1. Viskuli is the place where the leaders of Belarus, Russia, and Ukraine signed the Agreement on the creation of the Commonwealth of Independent States on December 8, 1991.

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