

**REPORT**  
**AN INFORMATION NEEDS ASSESSMENT**  
**OF THE CHERNOBYL-AFFECTED POPULATION**  
**IN THE REPUBLIC OF BELARUS**

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## INTRODUCTION

The accident that occurred at the Chernobyl Nuclear Power Plant on April 26, 1986 caused irreparable damage to people and orderly life in a number of regions within the borders of Belarus, Russia and Ukraine. The Republic of Belarus sustained the worst blow from the accident, bearing the heaviest burden of the effects emanating from the radiation disaster.

Approximately 70% of the nuclear radiation fallout that hurled into the atmosphere landed inside the territory of Belarus. Of its total population of slightly less than 10 million people, some 2.3 million were directly affected by the Chernobyl disaster, while today more than 1.6 million people continue to live inside the contaminated areas, including 419,400 children.

The Chernobyl accident has adversely affected all aspects of human activity, including social relations, the economy, health care, culture and the sciences. Chernobyl also changed perceptions of the Belarusian people about the larger world community. It generated angst in the hearts of Belarusians, yielding a deep sense of insecurity about the future, and inflicted upon them deep-seated health and psychological concerns. It seriously upset long-established traditions and societal patterns adhered to by Belarusians for decades if not centuries.

A new approach to Chernobyl-related cooperation, as formulated in the UN report entitled “Human Consequences of the Chernobyl Nuclear Accident: A Strategy for Recovery”, recommends mobilizing and channeling national and international resources to the restoration and sustainable development of the contaminated areas, as well as integrating rehabilitation efforts of affected populations. This implies harmonization, coordination and intensification of priority-driven research; application of the best research findings into practice; elimination of contradictions; establishment of a multi-level public awareness-raising communication system in matters of radiation ecology; involvement of affected inhabitants in development programs; goal-oriented international support of long-term projects; and joint local and national civil initiatives.

This report on the information needs of the Chernobyl-affected population has been prepared as part of the work of the International Chernobyl Research and Information Network Project. This report builds on relevant research data from national Chernobyl-related programs, civil society groups, and foreign and international projects. Utilizing diverse approaches to study the information needs of the affected population has helped ensure a comprehensive and authentic picture, and is aimed at contributing to a common policy for further national, foreign and international support for the rehabilitation and development of the contaminated areas.

The twin aims of this report are, first, to optimize the multi-stakeholder process by highlighting the benefits of cooperation with new players to successfully implement long-term Chernobyl projects and programs, and, second, to bring together all levels of society and government to develop and implement international, foreign, national, regional and local recovery initiatives targeting the contaminated areas.

We are confident that the information contained in this report is a starting point for fruitful dialogue with the people most directly affected by the Chernobyl disaster, the victims themselves, aimed at normalizing their living conditions and addressing their long-term health and development needs.

## CHAPTER 1

### A REVIEW OF PUBLIC INFORMATION NEEDS—PREVIOUS ASSESSMENTS UNDERTAKEN IN THE REPUBLIC OF BELARUS

Considerable efforts have been undertaken in Belarus since the Chernobyl accident to probe into the public information needs of those affected most closely by the disaster, namely those who live in the contaminated areas of Belarus. Such efforts have been undertaken as part of national Chernobyl programs, international projects and other civic initiatives, whether local, national or international in scope.

For example, the Institute of Sociology of the National Academy of Sciences of Belarus has carried out perhaps the most comprehensive research on the social and socio-psychological traits of those who continue to live in contaminated areas. The project was prompted by the wide range of state programs geared at addressing the consequences of the Chernobyl disaster. As part of the research 2,000-2,500 respondents annually participated in a variety of polls (including surveys, tests and expert polls) to analyze the public's information perceptions and needs.

#### 1. THE CHERNOBYL ACCIDENT AS VIEWED BY THE MASS MEDIA

One common information research methodology undertaken in Belarus has been to quantify the amount of time or space devoted by Belarusian media to Chernobyl-related coverage. The results of our own research indicate that in the beginning Chernobyl as a topic was completely suppressed by the media, that is, until a full two weeks after the accident at which time only a few sporadic articles began to appear in print. At the local level, even in the most-affected districts, Chernobyl newspaper coverage did not start until *after* May 9, 1986.

The situation began to change in 1989, prior to elections to the USSR and the BSSR Supreme Council. Numerous publications began to surface reporting early estimates of Chernobyl-induced casualties. Charitable foundations and public organizations independent from governmental control

also came into existence, which served essentially to debunk the actions and declarations of official Soviet government responses, and which in turn served to counterbalance the official views propagated by the Soviet government. As a result, between 1989 and 1991 there was a tidal wave of material generated about Chernobyl discrediting the Soviet leadership and calling upon the world community to help address the grave radiation challenges created in the wake of the accident. It was at this time that the general public began to grow very interested in reading newspapers, as well as other media, for information on Chernobyl. However, ironically, since 1991 the number of Chernobyl-related articles, publications and references in predominantly state-owned or controlled media in Belarus has declined.

By 1993 the public began to shift away from being pro-actively interested in daily political life, trying to learn about concrete changes that they could make in their daily lives, toward developing an apathy and even disinterest in macroeconomic and national civil affairs. It was during this time that a decline of mass media interest in Chernobyl was observed. Polls revealed that only 53.4 % of respondents closely followed news reports in the newspapers about Chernobyl, while 41.8% only occasionally followed reports of Chernobyl on radio and television, and 3.9 % of respondents did not follow any news at all on the topic in any media.

In addition to shrinking interest in obtaining Chernobyl-related information, a widening credibility gap between mass media in general, and printed media in particular, followed. For example, one survey showed that the level of trust in national newspapers was only 6.25% in the Chausy District of Belarus, 15.6% in the Bykhov District, 7.6% in the Mogilev District, 10.9% in the Narovlyany District, 11.8% in the Petrikovo District, and 12.7% in the Khoyniki District. Inhabitants living in the contaminated areas displayed a higher level of trust in television and radio media than in printed media, e.g. 56.3% in Chausy District, 21.1% in the Bykhov District, 45.3% in the Mogilev District, 31.0% in the Narovlyany District, 21.5% in the Petrikovo District, and 18.8% in the Khoyniki District. This gap may be explained by the surfacing of oppositionist and alternate forms of print media at this time, many of which questioned the official

government position on the aftereffects of Chernobyl. In addition, Belarus braced itself for a heated campaign surrounding its first presidential elections in 1994. During the time many articles about Chernobyl in local newspapers were long on opinion and rhetoric, but short on objective evaluation and fact. It is also important to note that some of these and other local newspapers were of questionable, and even very poor, journalistic quality.

Using quantitative research techniques analyzing the contents of large national and regional newspapers from 1986 to 1993 (in the newspapers *Sovetskaya Belorussiya*, *Zvezda*, and *Gomel Pravda*), news articles about Chernobyl accident first appeared in the press a full two weeks after the accident occurred, with articles published only after May 8, 1986. Even then, the articles published were part of larger discussions on *glasnost* and

*perestroika*. Initial surveys of the populace taken at the time demonstrated a solid mistrust of, and disappointment with, the information the public was receiving from the government.

In the Gomel Region for example, 23% of the population “distrusted” official information about the consequences of the Chernobyl accident, 18% “trusted” government’s information and 59% “almost distrusted” it. More than one-third of the respondents (a full 35%) said they believed the government wittingly concealed information from the public or distorted it (Figure 1).

The extent to which the public trusted other sources of information is set forth in Table 1. An amazingly high 88% of people distrusted national newspapers, an even higher 89% distrusted local newspapers, and a similar 84% distrusted television and radio broadcasts.

Figure 1  
Level of public trust in official Chernobyl information in 1993 (as %)

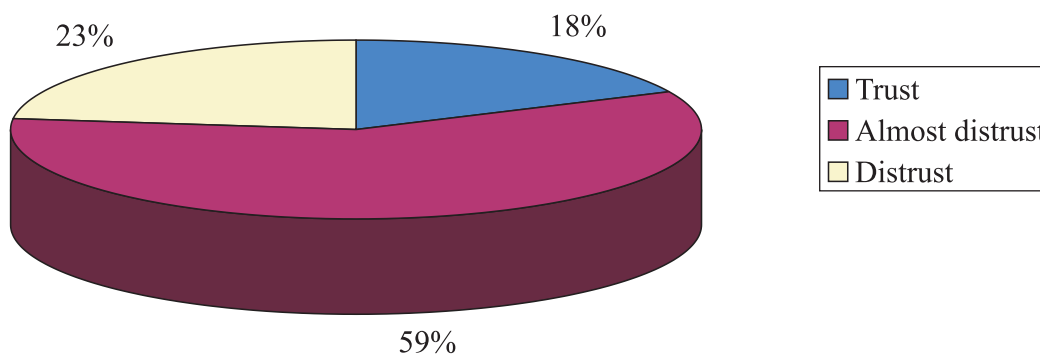


Table 1  
Sources of information and level of trust by affected population of the Gomel Region in 1993 (as %)

Source of information	Trust	Distrust
National newspapers	12	88
Local newspapers	11	89
Magazines	28	72
Television, radio	16	84
Lectures, conversations with experts	12	88
Conversations with friends and acquaintances	14	86



An analysis of media coverage of Chernobyl after-effects in terms of a positive/negative opinion shows that in 1991 materials of a negative or of a mixed negative/positive nature dominated, while by 1993 50% of the coverage was positively oriented and 35.5 % mixed. However, since the media coverage did not address critical issues such as safe living conditions in the contaminated areas, it did not address public needs, nor did it alleviate the public disquiet caused by Chernobyl-induced fears of health risks and other complicated socio-economic conditions that were occurring in Belarus at this time.

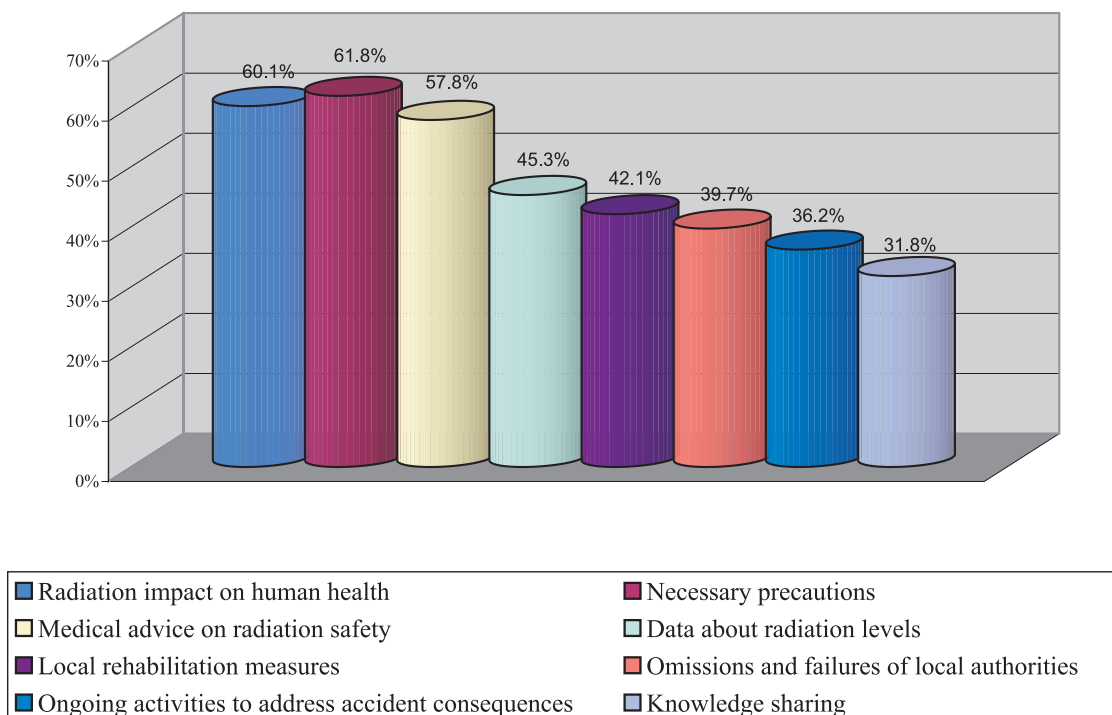
After 1996 some national attempts were made in an attempt to introduce different techniques to improve the efficiency of rehabilitation efforts for residents of contaminated areas (as well as for people who were resettled from the contaminated areas) and to enhance their access to information. Surveys began to be taken to gauge the levels of trust and satisfaction of media coverage. These surveys revealed that Belarusian radio and television were the most informative to the population (47.2% of the respondents). However, a large number of people (83.8%) admitted that they also listened to rumors from friends and family members about

Chernobyl, though only 20.4% indicated they trusted the rumors as being accurate. That so many people continued to participate in rumor-generation suggests that in Belarus the “truth” has oftentimes been found somewhere between official governmental pronouncements and those of opposition forces. Informal means of information gathering and sharing are all the more important at the local level in such an environment.

When asked what type of information those polled wished to receive from the mass media, most said they wanted to know about precautions they could take in their living environment (61.8%), followed by the impact of radiation on human health (60.1% said this was “very important to know”), along with information about medical advice concerning radiation safety (57.8%), information about radiation levels (45.3%), local rehabilitation measures (42.1%), omissions and failures of local authorities (39.7%), on-going activities aimed at addressing accident consequences (36.2%), and “knowledge sharing.” i.e., materials about people who adapted favorably to their own post-Chernobyl living environments (31.8% of respondents).

(Figure 2)

Figure 2  
Public Information Needs Range in 1996 (as %)



According to the polls, 30-40% of respondents in different contaminated areas said they expected mass media to monitor the actions of local authorities in order to overcome the consequences of the Chernobyl accident; more than one-quarter of those polled wanted newspapers, radio and television to communicate to local government officials public opinion about the accident's consequences for the people, and public opinion about the officials' interventions into the situation. It must be noted that the mass media enjoyed a fairly high level of public trust during this time, as more than one-third of those polled said they trusted the media more than they trusted government authorities. In contrast to mass media credibility, local authorities had an extremely low level of trust, with only 2.8% of those polled in the Gomel Region and just 8% in the Mogilev Region said they had a "high" level of trust in government officials, while 44.1% and 44% respectively responded with a "low" level of trust in the government.

To gauge public opinion about radiation coverage in printed media, the Gomel Public Health Center analyzed the content of newspaper publications in the year 1996. The Center found that references to radiation in printed media appeared 1.5-to-2 times more often in the months of April, May and June 1996 as compared to other months of the year. The impact of radiation on the Gomel Region was a source of a relatively large number of editorials and lengthy news stories, but again primarily during these three months of the year. Note that by 1996 ten years had passed since the accident first occurred, meaning that the issue of Chernobyl had become more of a subject for remembrance and commemoration for the media (i.e., a once-per-year anniversary date), rather than a present-day news-story reality.

A different analysis has been undertaken of the stories most covered in printed media both at the time of the accident, and ten years later. At the beginning, most radiation-related articles identified three central topics, namely: description of the radiation situation; radiation's impact on human health; and description of precautions to be taken in light of radiation exposure. Interestingly, one decade after the accident, this same subject of "radiation exposure" remained

the focus of one-half of all printed news articles, while radiation's health impact was the subject of one-quarter of news articles. Problems related to the implementation of protective measures were reported in one-quarter of news stories. What is perhaps most interesting is that even ten years after the accident, a full one-quarter of all publications contained false information which contradicted generally accepted established scientific knowledge in the areas of radiation hygiene and safety. Also of interest is that attempting to predict future problems and offering future solutions to meet those prophesied problems concerning radiation was reported some 29 times (or in 17%) in 172 articles in Belarusian newspapers.

An analysis of the emotional reaction of the affected population to reading articles dealing with radiation revealed that almost one-half of news articles had a neutral or even soothing emotional effect on readers, and publications dedicated to radiation effects "very frequently" contained information that was emotionally neutral and reassuring in nature. However, many of these publications also contained suggestions or inferences found in one-half of cases to be intimidating, and a full 23% of more-detailed informational materials dedicated to topics of protection and precautions were found by the readers to be intimidating. Additionally, respondents said that one-half of the longest and more extensive editorials (along with illustrated publications) contained within them intimidating messages for readers. Most of these publications and articles were written by journalists (79 articles), though some were written by specialists and scientists (36 articles). Articles written by journalists tended to intimidate one-half of the time (54%), while articles written by specialists sounded an "alert" note only on "very rare" occasions.

A content analysis of over 1,000 written news articles, 865 television programs and 800 radio broadcasts from 1986-1999 demonstrated that most news coverage during this time period failed to take into consideration the current socio-psychological situation, and the public's sense of urgency about receiving information. Media coverage of the disaster did increase awareness and understanding by the people about the



problem of Chernobyl, but it also intensified in the minds of the public the perceived level of radiation exposure caused by the accident. A comparative analysis of community expectations vs. media coverage in one of the leading national newspapers in Belarus in 1999 revealed “supply and demand” distortions between expectations and the printed press, in that citizens’ expectations were not met by media coverage, as people wished to receive more information on everyday human problems, and to learn of useful and instructive information of what they could do in light of the exposure. The people also wanted to learn of rehabilitation interventions that were being undertaken or could be undertaken at the local level. Yet the media rarely reported on these topics.

In recent years (2000 to the present) the mass media have continued to devote print space and airtime to Chernobyl, primarily to commemorate an anniversary of an historical event. As a result of this, coverage of Chernobyl is concentrated in the month of April each year. At the same time, more than two-thirds of those surveyed believe that the mass media should keep the public informed of all developments in the contaminated areas on a regular basis. Again, the reason for this is because the majority of people living in the contaminated areas rely upon the mass media as their key source of information about Chernobyl. Their need for information is continuous; a significant percentage of people

want this information on a regular and continuing basis. Yet reticence and incomplete and conflicting data provided by the media about the Chernobyl accident and its full impact and significance, have created a negative multiplying effect on the public, which has generated even more public distrust and disillusionment, has triggered social and psychological tensions, and has contributed to inadequate perceptions of the risk of radiation in the minds of the public.

## 1.2. THE RELEVANCE OF CHERNOBYL TO THE AFFECTED POPULATION. SOURCES OF INFORMATION

To gain a sense of information needs, it is important to examine both the amount (quantity) of media exposure of Chernobyl, and to examine the extent (quality) to which the perceived needs of the affected population have been met by media coverage. It is also important to examine how this need for Chernobyl-based information correlates with other risk factors existing in the minds of the public. Sociological surveys analyzing this correlation have existed in Belarus since 1991. For example, one survey found that other, though related, problems existed in the minds of the people, including food shortages, rising crime rates, other national conflicts, moral degradation and the disintegration of the USSR (Table 2).

*Table 2*  
*Problems causing the greatest concern to residents of the contaminated districts in Mogilev Region in 1991, as %*

Problems	All districts	Bykhov	Krasnopolie	Slavgorod	Chausy
1. Chernobyl NPP accident consequences	59.8	67.3	48.4	64.0	60.2
2. Rising crime rate	53.9	69.5	49.4	41.6	54.8
3. USSR disintegration	42.1	43.4	44.4	31.5	48.3
4. Commodity shortages	38.1	27.1	42.4	49.4	33.3
5. Falling living standards	36.2	34.8	35.4	43.8	31.2
6. Helplessness of authorities	30.6	35.8	37.3	19.1	29.0
7. National conflicts	24.9	25.0	30.3	23.6	20.4
8. Moral degradation	23.1	26.1	27.3	12.4	25.8
9. Sluggish economic reforms	19.3	15.2	16.1	30.3	16.1
10. Privatization	9.7	3.2	13.1	9.0	12.9
11. Other	1.9	1.1	3.0	1.1	2.2

In 1991-1992 another public opinion poll was taken by the Gomel Public Health Center, which surveyed 946 people. The purpose of the poll was to determine the attitude of residents in the city of Gomel, who lived in the most extreme environment brought about by the Chernobyl accident. The poll concentrated on the socio-psychological environment of the time in the city and the demographic orientation of people living in the context of the Chernobyl syndrome. The survey showed that inhabitants regarded virtually all other socio-psychological realities, activities and/or interventions in the city against the larger backdrop of Chernobyl and its impact on them. For example, the most relevant negative factors identified as causing concern to the residents of Gomel included radiation, selected by 79.4%, ecology, by 62.5%, economy, by 32.1%, family and household, by 21.1%, social factors, by 16.6%, and politics, by 13.3%.

This same study further revealed the existence of a low level of public awareness regarding recovery programs undertaken in the city and the wider Gomel region in the period following the disaster, as well as a low level of public awareness of the ecological situation in the region at the time. Even feedback from health care professionals revealed that they did not have sufficient knowledge of medical research aimed at localizing radiation-induced pathologies (only 30.8% of medical doctors had this information). Most significantly, a full 57.7% of health care professionals were completely unaware of such information.

In 1994 the Public Health Center again conducted a survey, with the objective of analyzing public opinion about protective measures being taken in the contaminated areas. The target group of 600 people included 200 from a reference group (non-affected population), 200 people who lived in contaminated areas, and 200 people resettled in non-contaminated areas. The majority of survey respondents—by this time eight years after the accident—still needed more information about a wide range of disaster consequences, including their own health conditions, and especially those of their children (24% of survey). The poll also indicated the need for information on the impact of radiation on the human body (23%); information about local soil contamination levels (20%); information about previously-adopted and planned future interventions

by the government (13%); information about the impact of radiation exposure on various lifestyles (11%); information about food contamination levels (19%); information on the international community's opinion about the health status of the affected population (10%), and information on food practices that could be taken to reduce the level of radionuclides in the human body (7%).

Those polled further indicated that both objectivity and accessibility were very important information needs for understanding and responding appropriately to the effects of the Chernobyl accident. Respondents also suggested a number of specific steps that could be taken to improve the Chernobyl public communication system, including establishing diagnostic (health) and information centers (5% of survey); offering free or low-priced community dosimeter distribution (6%); undertaking independent assessments of contaminated areas (7%), and organizing decontamination efforts (5%).

Another information-needs analysis of the affected population was conducted from 1991 to 1995 by the joint European Community Commission and Commonwealth of Independent States research program. This study found a lack of an effective communication system in health and social fields in Belarus, and identified a low level of dissemination of necessary knowledge and objective information about radioactive contamination levels. The study noted that one of the results of a lack of an effective communication system was the high level of reliance of affected people on unreliable sources of information, including gossip and rumors. The survey indicated that rumors were a preferred source of information either due to lack of reliable information dealing with topics of interest (33.6%); or due to different and often conflicting messages emanating from the source (31.2%), or because the official information came after the fact (32%). Again, the lack of communication and information led to people's grave concerns, in addition to their underlying need for information on contamination levels (92%); health conditions (87%); present environmental status (85%); and public social protection (84%).

A later survey, taken in 1996, revealed an inverse correlation between the population's perceived fears and the amount of information disseminated about a commonly known danger. That is, the less often the information about a commonly

known danger was disseminated to the population, the more acutely the population perceived the related risks of that same danger to be. The survey also showed that radiation risk perceptions varied considerably from one professional group to another within the general populace. And that these differences in radiation risk perceptions held by different community groups affected the activities engaged in or avoided by those in these groups.

From 1996 to 1998 studies were performed in Chernobyl-affected areas by the Community Health and Social Activity Evaluation Project, focusing on children and youth. The purpose of these studies was to determine if the younger population followed or disregarded radiation safety rules that had been previously developed by scientists. The results were chilling: in most cases children did not follow the radiation safety rules. For example, only 7% of senior-grade school children strictly observed radiation safety rules, while 69% of school children seldom did so, and 21% did not observe them at all. Despite the active popularization and organization of radiological education in schools, little progress had been made in radiation safety preparedness. Only 16% of school children knew the radiation safety rules well, while 69% of students had insignificant knowledge of the rules, and 15% knew them poorly. In 1994 a similar survey yielded results of 13%, 54% and 24%, respectively, so the situation is worsening over time. When students were asked why their knowledge of safety rules was so inadequate, even for those living in a contaminated area, 21% of the children said they were not familiar with the rules, 26% admitted they did not feel like learning them, and 22% replied they did not trust the rules at any level (Table 3).

The poor knowledge of the radiation safety rules by the young people and students may be explained by the fact that immediately preceding the survey, the public had been subjected to

controversial, ambiguous, sensationalistic and superficial stories and recommendations through the media, in addition to a lack of community-based dedicated personnel capable of providing clarifications to the public. It should also be noted that yet another reason why young people did not know or follow the safety rules was because their own parents and other adults failed to follow the same rules.

In 1997 the Mogilev Institute of Regional Socio-Political Studies undertook a survey of the social repercussions and post-catastrophic processes caused by the Chernobyl accident. The survey was undertaken in November and December in four districts of the Mogilev Region. Each district had a different level of radiation contamination. Some 373 individuals were polled in Bykhov, Krasnopolie, Slavgorod and Chausy districts. Plus, an additional 399 senior-grade school children were polled in the survey.

Data from the survey suggests that the Chernobyl disaster and its consequences have caused a reversal of the established way of life, values and routine behavioral patterns of peoples living in the contaminated areas. The study revealed a deep sense of public dissatisfaction with virtually all aspects of life post-Chernobyl, plus a rising level of distrust in local authorities and a lack of faith that governmental authorities are capable of effectively addressing the ill effects of radiation. The study also demonstrated that objective radiation risk indicators and the way they are perceived by the populace, and especially so among women raising children, are at variance. Such discordance has, in turn, given rise in the minds of the people several negative socio-psychological phenomena—one of which is a constant fear for their children’s health, which in turn has led to a sharp reduction in birth rate among those of childbearing age in the society. For example, only 8% of those polled who were women under 40

*Table 3*  
*Causes for low level of knowledge of radiation safety in the contaminated areas (1996 – 1998)*

Possible Answers, %	Bragin	Vetka	Svetilovichi
No answer	23	46	33
Not familiar with them	27	9	36
Do not want to learn	25	29	21
Do not trust	25	17	10

years of age reported a willingness to have more children in the future.

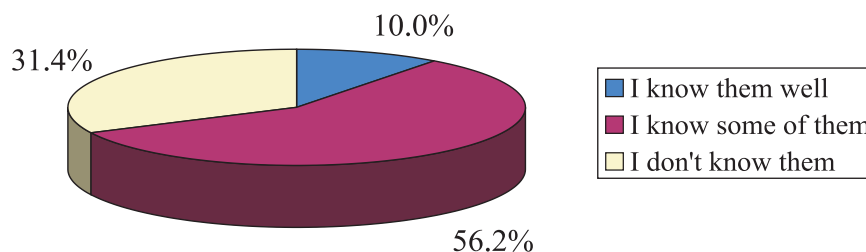
And yet, by April 1997 the greatest concern-causing factor among inhabitants of the Mogilev Region was no longer radiation, but rather economic conditions. This is so because throughout the region economic conditions have deteriorated, with real public incomes dropping and living conditions worsening while crime rates have risen. As a result of these “ever-present” realities, concerns for the problem of eliminating the consequences of Chernobyl have moved to the fourth place in terms of societal importance. Thus, people in Mogilev cannot concentrate on the long-term effects of Chernobyl, for having instead to contend with the short-term hardship of their present socio-politico-economic environment.

For this reason perhaps, the attitude of people living in the contaminated districts of the Mogilev Region toward local authorities has deteriorated (34.1% of respondents). One of the reasons is the lack of full and objective information dissemination to the people living in the contaminated areas. Remarkably, nearly three-quarters of those polled (73.5%) believed that local authorities actually withheld the truth from them about Chernobyl and its consequences. As a result, the number of respondents who stated they appreciated the work of local authorities in the contaminated areas was only 19 to 22%.

In 1999 the National Research Unitary Enterprise “Institute of Radiology” distributed a questionnaire to people in the Stolin District of the Brest Region, concerning psychological health indicators. The survey concluded that the general economic situation throughout the country was more important factor influencing the information needs of the population than was information about Chernobyl. For example, people had become profoundly concerned with inflation as the most important risk factor affecting their lives (75.5% of

respondents), while low standard of living conditions was second in importance to the people (49.1%), with concerns about radioactive contamination being third in importance. It was further found that only 5% of the district’s population regarded radiation safety rules as a countermeasure to internal dose irradiation. Radiation safety knowledge and self-assessment proved to be rather low as well. When asked if people knew the rules of conduct in a radioactive contamination situation, the following answers were given: “I know them well”—10%; “I know some of them”—56.2%; “I don’t know them well”—31.4% (Figure 3).

Figure 3  
Level of public knowledge of the rules of conduct in a contaminated environment, as % (1999)



A correlation was also found to exist between area contamination levels and the knowledge of radiation safety rules in that same area—that is, less-contaminated areas had a lower level of safety rules knowledge than did more-contaminated areas. This may suggest a tapered focus at the preventive level, and a greater nonchalance by the population and by organizations responsible for public education about radioactivity in less-contaminated areas of Belarus. The observance of radiation safety rules in environmentally hazardous conditions broke down as follows: 6.1% of those polled followed the rules strictly, 67.3% followed them from time to time, while 26.1% entirely ignored them. To the question asked, “Do you always agree with what you read and see in the newspapers, on radio and television on Chernobyl problems?” 33.0% of those surveyed replied that normally they agree with what they read and see, while 40.9% said they



frequently disagree, and 25.4% hardly ever agree with what they see and hear in the media.

In 1999 a survey undertaken by the Institute of Sociology polled nearly 600 residents of the Narovlyany District in the Gomel Region and identified the following problems as being most-worrisome to people in that district: environmental radioactive contamination levels (64.2%), crime rate (61.1%), income level (59.5%), social protection of the Chernobyl-affected population (54.9%) and the level of social infrastructure development (50%). The majority of the Narovlyany District population (61.3%) ranked radioactive contamination as the key factor contributing to health deterioration. Furthermore, 52.1% of the urban population and 45.1% of the rural population verbalized a steady interest in information about rules and precautions to follow in a contaminated environment, while only 5 to 6.6% of respondents said they were not interested in such rules or precautions.

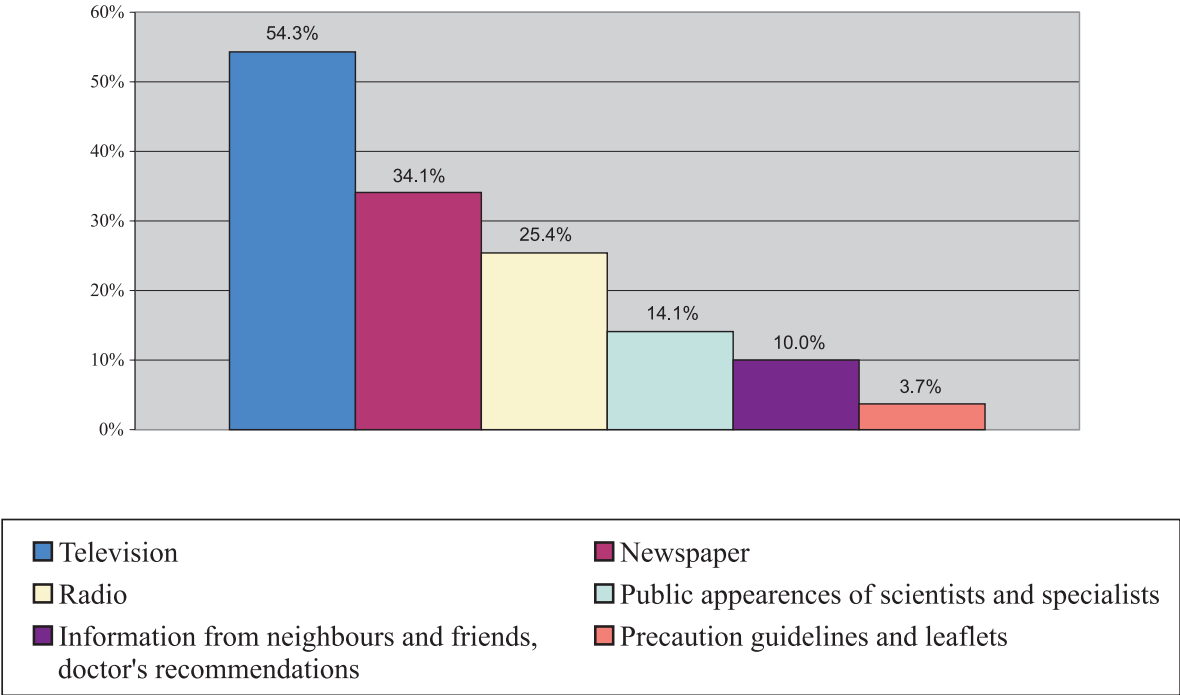
The survey also showed that the main sources of information about protective measures able to be taken by those who lived in a contaminated area were television (54.3% of the respondents), newspapers (34.1%), radio (25.4%), public appearances of scientists and

specialists (14.1%), information from neighbours, friends and from doctor's recommendations (10%), and precautionary guidelines and slips (3.7%). (Figure 4).

As a result of a lack of information about the real magnitude of the Chernobyl accident, and as a result of the prevalence of a plethora of subjective rumors and near-panic which exists among those who live in the contaminated areas, and especially among young women who are raising children, it is extremely difficult to identify and then compare objective indicators of actual radiation dangers, as opposed to their perceived dangers. In social terms, this difficulty is very dangerous, in that radiation-related phobias affect nearly one-third of all young parents. This in turn creates the unsettling condition of such phobias being passed down to children, which in turn reduces their own sense of self-reliance, and creates multiple generations of anxiety and stress within the family unit.

These conclusions were corroborated in 1999-2000, when polls were taken of 919 adult residents of the Narovlyany, Khoyniki and Petrikovo districts of the Gomel Region; the Bykhov, Mogilev and Chausy districts of the Mogilev Region, and the environmentally clean Postavy District of the Vitebsk

Figure 4  
**Main sources of information about protective measures in contaminated areas, as % (2000)**



Region. The polls also included 596 7<sup>th</sup> to 10<sup>th</sup> grade students. The poll showed that a constant and present demand for Chernobyl-related information continued to exist on the part of the population, while at the same time most of those responding said they were poorly informed about safe living conditions and practices in their areas. At least 40% of the people said they hoped to gain such information so as to put it into effect in their daily lives.

However, an analysis of the medical complaints and requests for medical assistance made by patients at Belarusian/Dutch Health Center from 1993 to 1994 shows that there has been, in recent years, a decline in presentation of Chernobyl-related problems. In the study, a comparison was made of one hundred patients in 1994 who visited the health center, and in 1998 to 1999 a similar survey of 115 patients was taken of those who presented themselves to the Center for consultation purposes (81.7% of respondents), for psychological problems (11.3%), and the rest (7%) for psychotherapeutic problems.

Those who presented themselves to the Center, did so with four basis concerns: first, with questions connected to the health effects of the Chernobyl disaster; second, with somatic questions addressed to specialist through consultations (e.g., a cardiologist, therapist, gynecologist, etc.); third, with group socio-psychological questions, and fourth; for “other” reasons. An analysis of the questions asked of those in the Center shows that by 1999 Chernobyl problems were not as acute as they had been during the years immediately following the disaster. For example, in 1991 some 20% of all questions asked at the Center dealt with radiation safety, while by 1994 that number had decreased to 3%, in 1997 to 2%, and by 1999 less than one-percent (0.3%). (Table 4)

However, it should be noted that sometimes issues relating to radiation exposure or safety may be raised indirectly to a health care official, through a discussion of other, but possibly related, issues, such as, food, nutrition, work in the garden, etc. And yet, even considering these other possibly related matters of inquiry, still only 6.7% questions asked of the Center in 1999 had a link to “Chernobyl-related” problems. Furthermore, those who visited the Center under the age of 20 did not bring any radiation-related questions to the Center. Those between the ages of 40 and 60 did raise many questions related to radiation, while those between 30-50 asked most of their questions in the context of dealing with children. This same question often originated from senior patients (50-60 years old).

A considerable portion (30.9%) of the respondents who visited the Center were those whose lifestyles had been changed by the Chernobyl accident, nearly one-third (32.6%) of whom had changed nutrition due to possible food contamination. Some (12.7%), under the influence of targeted information, had taken early disease prevention measures of one type or another. More than 73% came to the Center to receive information and 26.3% came for specific psychological assistance. The overwhelming majority of visitors to the Center (roughly 80%) took advantage of the information they received to improve their health.

Sociological surveys that have been conducted during the past five years attest that three factors are key to people residing in the contaminated areas of Belarus: income and living standards, radiation risks, and their health status. In fact, a great deal of research on social rehabilitation was conducted in 2000 during a poll of the population of the Vetka District in the Gomel Region. The survey polled a representative sample of 749 people, and collected a large volume of data on the current public

*Table 4*

*Types of questions and their distribution among Center visitors*

<b>Questions</b>	<b>1999</b>	<b>1998</b>	<b>1997</b>	<b>1996</b>
Radiation	0.3 %	1.4 %	1.6 %	2.9 %
Psychosocial	23.6 %	35.6 %	28.5 %	50.1 %
Somatic	66.2 %	55.7 %	63.9 %	39.4 %
Other	7.9 %	7.3 %	6 %	7.6 %



opinion and the public information needs on a range of issues, including:

- the state of affairs in critical social sectors affected by the Chernobyl disaster consequences;
- the efficiency of work by local authorities and their on-going communication activities relating to the consequences of the Chernobyl calamity;
- the efficacy of formal and informal sources of information for the district population and whether such sources of information can be trusted;
- the evaluation of health conditions by different socio-demographic community groups;
- the migration inclinations of the affected population;
- the peculiarities of adaptation to living conditions in the contaminated areas.

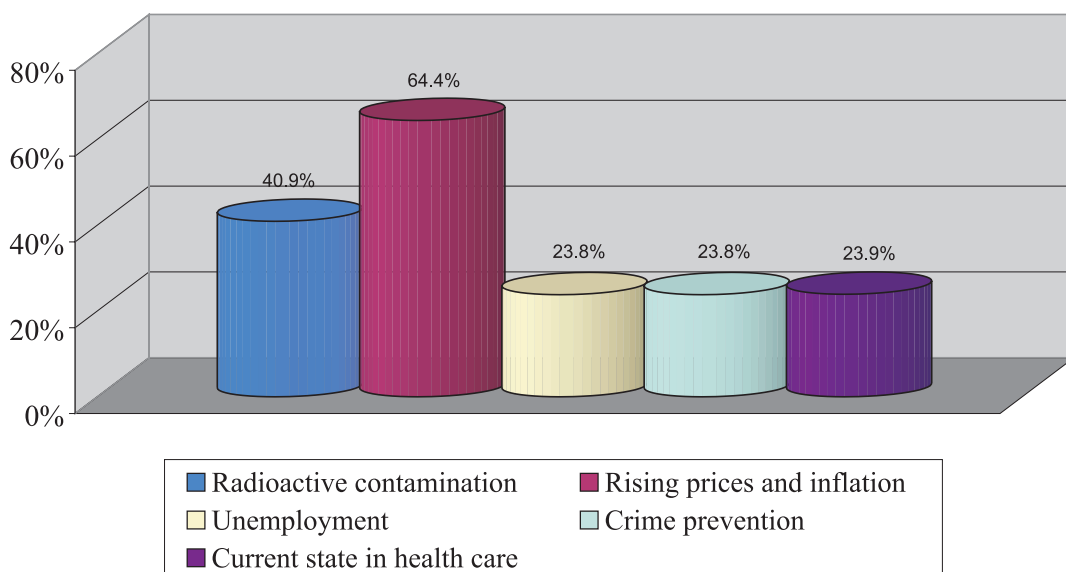
An analysis of the polling data demonstrates that in modern times welfare and income top the list of people as the key factors of private life, followed by factors evidencing the social soundness of the entire community. For example, some 32.6% of the respondents reported experiencing substantial

income shrinkage, with 31.8% saying that their incomes had dropped insignificantly. Most of those surveyed named rising prices and inflation to be the primary sources for concern. Environmental radioactive contamination was prioritized by the population only as a second factor, a worrying 40.9% of the respondents. Three problems—unemployment, crime prevention, and the current state of health care attracted a similar degree of interest in the public’s mind. (Figure 5) Notably, the issue of radioactive contamination over which all the respondents were equally concerned was much less important to the youth.

Public opinion is basically divided when it comes to the problem of addressing the consequences of the Chernobyl disaster: with one-half of people believing that the situation has worsened, while the other one-half say that the situation has not changed. Age has become one of the most important factors, while the ability to adapt by people depends to a large extent on socio-economic factors.

Also, the condition of public information systems has been analyzed in comparison to the credibility of information gained, and the efficiency

Figure 5  
Sources of community concerns, as % (2000)



of various sources of information available in the contaminated areas. Thus, it has been found that information about safety rules of conduct and protective measures in the contaminated areas has remained as relevant and important for the majority of the population regardless of age, residence and gender. In general, one-fifth to one-third of respondents show a steady interest in this type of information, while more than one-half of district residents exhibit occasional interest in these subjects, and one-fifth of respondents replied that they are not interested in such information.

Nearly one-half of respondents (49.5%) cited health professionals as the key official source of Chernobyl-related information, while on an informal basis people over 50 years of age attached the same level of importance to information coming from neighbors and friends, with the second most important source of information for that portion of the population that is employed come from enterprise directors. Students referred to educational system

professionals and officials as being important sources of news, while those who live in the rural areas or who are of retirement age named Local Councils as an important source of information. In general, the entire population of the district favored information outreach groups as good information providers. Among informal sources of information, relatives and parents (around 20% of the respondents) and co-workers (18.4%) were named. (Table 5)

In this particular poll, respondents were asked to evaluate how the local authorities have kept the population of the contaminated areas informed of potential protective measures. Most of the respondents (58.8%) said they were informed only occasionally, while 10.9% believed information came on a regular basis, and 28.7% replied that nobody kept them informed at all. But, it should be noted that many people displayed a high level of trust in the information they received from mass media and specialists, especially health professionals. (Table 6)

Table 5

*Key sources of information in the Narovlyany District in 2000 (as %)*

Source of information	Men	Women	Total
Newspaper	48.3	50.8	49.6
Radio	21.8	28.2	25.4
Television	55.0	53.0	53.7
Leaflets, guidelines	4.9	6.7	5.8
Public appearances by specialists and scientists	7.9	12.2	10.1
Doctor's recommendations	9.6	16.7	13.3
Info from neighbors and friends	15.0	10.0	12.0
No answer	7.3	8.8	8.3

Table 6

*Level of trust in different sources of information among the residents of Vetka District, Gomel Region (2003)\**

Source of information	% of respondents
State-owned radio and television	64.3
Local press	59.5
Regional and district radio	29.3
Regional television	28.6
Rumors	23.3
Speeches by local administration leaders	14.6
Speeches by farm and enterprise leaders	12.5
No-trust attitude	8.2

\* The percentage total is greater than a hundred, because respondents could give three-count answers to questions

The 2001-2002 sociological surveys conducted in the Dobrush District of the Gomel Region showed that having a low-income was the main cause of concern and uncertainty in 96% of respondents, which was also true for those polled from the Narovlyany District. And, out of a total of 185 experts interviewed during 2000 (e.g. local authorities, officials, business and organization leaders, as well as economists, health, education, communal services and law enforcement professionals), 68% of the experts noted negative income trends as the main cause of concern and uncertainty among the populace. Therefore the population of these districts is interested in income/ expenditure information, more so than it is interested in Chernobyl-related information. However, the second most important aspect for which people sought information was the physical health and quality of healthcare for children and adults. An explanation for this may be that some 1.6 million people continue to live in the contaminated areas, including more than 400,000 children, all of whom, at least theoretically, are under special medical supervision by the government. Related to this second concern for health and healthcare, is that number three in the hierarchy of information needs is information about the radiological situation of Chernobyl.

The results of sociological studies carried out by the Institute of Sociology in the Gomel Region show that the affected population experiences a serious shortage of information and knowledge on optimal living conditions in the post-accident context. Only slightly more than 8% of respondents knew of exact contamination levels in their place of residence; there was also a great difference between awareness levels of the urban (22.5%) and rural (7.2%) populations. In the meantime, sociological surveys indicate that 45–46% of residents of the Narovlyany and Bragin districts displayed interest in rules and precautions information, while women were more interested in this information than men (50.6% and 39.2%, respectively).

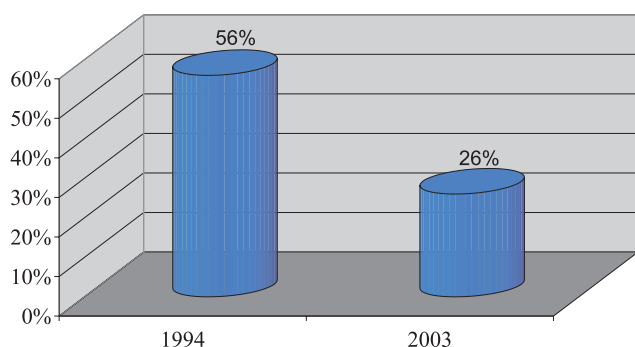
The population living in the affected areas most widely utilized local television and radio, and district newspapers, from which to obtain information (54% and 51% respectively). Nearly 6.5 times less residents in these districts use public appearances by

local administration officials and specialists as their source of information (7.9% total).

What is alarming is that governmental managers and administrative staff members are insufficiently oriented toward improving public information services in their districts and communities. Whereas 18.2 % of polled law enforcement employees and Ministry of Emergencies employees, and 10.8% of health, education and social security professionals, believe that it is very important to keep people regularly informed about safe living practices, only 2.6 % of respondents from governmental staffs subscribe to this same point of view. In the meantime, 71.2% of the affected population continues to express concern over radioactive contamination in their area, and its adverse effects upon human health and life activities. Among the surveyed residents of Gomel Region's affected areas, only 6% fully observe safe living practices in everyday activities, while 66.3% implement them only partially, and more than 19% do not observe them at all. In the Dobrush District of the Gomel Region, only 7% of women polled and 11% of the men polled speak of a need to receive information about safe living measures as their top priority.

It has been shown that as information providers better themselves in the contaminated areas, people gradually rely less and less upon rumors. For example, in 1994 43% to 56% of respondents from the Narovlyany, Khoyniki, Chausy and Kostyukovich districts said that rumors were trustworthy, while polls conducted between 2000 and 2003 showed a considerable decline in rumor credibility in these districts (note that 23–26% of the population resides in the contaminated areas). (Figure 6)

Figure 6  
Public trust in rumors



A lack of adequate public awareness about radiation risk, coupled with a reluctance to follow safety rules, graphically indicates an absence of information and radio-ecological awareness in most of the people living in the contaminated areas. To possess such an awareness level would require both a high level of knowledge about the radio-ecological situation and about safe living measures to be taken in a high-radiation environment, and also information on how to minimize radiation risks in everyday life. However, people rank practical application of safe living rules only fourth in their priorities after higher incomes (1<sup>st</sup> place), improved medical services (2<sup>nd</sup> place) and enhanced social protection of people exposed to radiation (3<sup>rd</sup> place).

Surveys taken during the last five years have paid close attention to youth responses to Chernobyl problems, with both state and non-state organizations working actively in this area. For example, since 1998 the Gomel City Ecological Youth non-governmental organization named "Polesie" has been implementing these kinds of project activities in the Bragin, Khoyniki, Narovyany, Elsk, Lelchitsi, Dobrush, Vetka, Chechersk, Buda-Koshelevo, Kalinkovichi districts of the Gomel Region, in addition to similar work in 10 secondary schools in the Gomel Region. The key target groups for assistance were senior-grade school children, their parents and young families. To date more than 17,000 people have received information on the impact of radiation contamination on natural ecosystems and human health. The experience of Polesie has shown that the best way to achieve success in Chernobyl-related information interventions is by holding on-the-ground meetings, conversations, seminars, round-table sessions, lectures, video lessons and discussions with school children. However, schools have also been provided with resources including books, brochures, etc., on radioecology for the benefit of children and teachers alike. When such materials contain radio-ecological information and a description of the areas where these target groups live, such materials have produced a very good effect.

It should be noted that in the years immediately following the Chernobyl accident there was a great deal of informational materials and reminder notices available for people in hazardous and contaminated areas. Mass media also covered these issues to some extent. However, as time

passed, the amount of these informational materials for public usage and dissemination has lessened substantially.

Since 1998, "Polesie" specialists have polled more than 2,000 people, to define informational needs of Chernobyl-affected population in Belarus, and such needs can be divided into three sections: radioecology, health, and socio-economic problems. Insofar as radio-ecological needs, senior school children (16-18 years old) were interested in the accident impact on natural ecosystems (forest, meadow, field, water reservoir, and river) adjacent to their community. More than one-half of respondents disclosed that they and their parents eat mushrooms, berries, fish, and wild animal meat that have not passed radiation control.

On the need for medical information, senior school children said they were eager to get information about health risks arising out of living in a contaminated area. For example, some wanted to know if it would be wise to leave the area altogether, or what are the effects of having their thyroid removed, while girls were interested to know if it was safe to give birth in a radioactively contaminated environment.

As for the socio-economic need, senior school children wondered what kind of governmental support and/or preferences could people living in contaminated areas claim, including for example when applying to enter a university.

It should be emphasized that before these projects were initiated by Polesie, school children had only exiguous information about the Chernobyl accident. Also, their interest in the Chernobyl problem actually lessened every time they listened to lectures on the situation in their geographical area.

Schoolteachers and school children alike worry about the radio-ecological status of the environment. For example, teachers have mentioned that they want to have continuous access to information about local contamination levels, so that they can present this information to their classes during biology, physics, as well as during extra-curricular and out-of-school activities. However, teachers have suggested that it is necessary to adapt this information to fit the ages of 10-14 and then from 15-17. Teacher interest in health-related aspects of Chernobyl appears to stem from a desire to use this information in teaching-process planning, as well as due to a desire to develop pupil-tailored

approaches. Teachers also want to have information about child recuperation efficiency abroad and within Belarus.

The parents of school children however, first and foremost, have stated they need information about the health status of their children, about the prevention of diseases related to the Chernobyl accident, and about effective methods of child health improvement. Additionally, parents are interested in a set of issues relating to agricultural production on private plots of land in contaminated environments, and also food radiation monitoring. The need to have access to easy-to-understand information about existing legislation in the field of radiation safety was also highlighted.

Elderly people are mostly interested in socio-economic information (clarification of legislation concerning the protection of Chernobyl-affected people, how to procure a ticket to a sanatorium, etc.) and to a lesser extent are interested in radioecology.

The general conclusion is that at the present time most of the population (53.7 %) display decreasing interest in information about Chernobyl and its consequences, while there is clearly disinterest, apathy and despair toward such information especially by elderly people.

### 1.3. OPTIMIZATION OF CHERNOBYL-THEMED INFORMATION WORK

Based on the results of the above-cited studies conducted over many years in contaminated and non-contaminated areas in the Republic of Belarus, it is possible to formulate the principles of the Chernobyl public information system. The objective of this system is to raise public awareness in the contaminated areas in a dedicated, family-by-family manner, in order to change human behavioral patterns to be consistent with healthy lifestyles. But to accomplish this objective, the following needs must be achieved:

- to create and then disseminate informational materials via national, regional and local newspapers, radio and television;
- to arrange traveling lectures by expert and scientific teams for outreach and education of the local population;

- to prepare and disseminate throughout the contaminated areas reminder notices, brochures and booklets on the subject of safe living for the benefit of local people;
- to prepare and publish radiation maps (national, regional, local);
- to release regular legal news bulletins;
- to create and publish methodological and educational literature on radioecology and radiation safety for different strata of the society, including health & agriculture professionals, specialists, and for teachers;
- to develop new approaches to communicate safe living messages and practices to local people living in the contaminated areas;
- to produce and distribute educational/outreach videos and films;
- to organize informational exhibitions and other events;
- to provide socio-psychological assistance to people;
- to train specialists in the fields of radiobiology, radio-physics, radiation medicine, radioecology, and
- to build local managerial capacity in safe living practices in the contaminated environment.

*As adult populations are prone to long-standing attitudinal and behavioral patterns, and thus are not as quickly responsive to active changes, at the present time emphasis should be placed on children and youth, building-up their radio-ecological awareness and developing within them necessary behavioral improvements. This will be instrumental in bringing about the sought-after changes to family environments, which in turn will contribute to a recovery of the Chernobyl-affected population. In this regard, one of the priority tasks must be to ensure obligatory training of school children in contaminated areas in basic radiation safety and radioecology.*

Given the sensitivity of forming public opinion, specialists including medical doctors, health and agriculture professionals, journalists, housing services and Local Council members should coordinate their message formation and dissemination. Similarly, inhabitants located in subsequent relocation zones and in zones potential



to relocation should take priority in communication policies.

In 2002–2003 the Institute of Radiology developed a concept known as the “Public and Government Chernobyl Communication Concept,” as well as an action plan entitled “The Action Plan to Implement Public Information Activities on the

Problems of Chernobyl Disaster until 2005.” In the process of doing so, all previous activities undertaken to communicate Chernobyl problems to the population and to specialists was analyzed, with successes and failures highlighted. This concept reflects the current official policy of the Republic of Belarus in the field of Chernobyl information and communication.

## CONCLUSIONS

The following observations can be gleaned from this and another analyses, which highlight challenges posed by the Chernobyl crisis:

- Despite the top ranking of socio-economic issues on public information needs scale, consequences of the Chernobyl disaster continue to be major causes of concern to the populace.
- Mass media is the key source of information for Chernobyl coverage. At the same time, other sources of information have been identified which enjoy public trust, e.g. industrial leaders, health professionals, specialists, etc., and therefore it is advisable to pursue a targeted information policy strategy in contaminated areas, taking into consideration the specific traditions of each community.
- From the time of the disaster till 2004, public trust in the mass media’s presentation of Chernobyl has risen considerably vis-a-vis a decreasing reliance upon and belief in rumors.
- The populace shows the greatest amount of interest in information on radiation health effects; on precautions that need to be taken in a specific area; on doctor recommendations as to how to remain healthy amidst the amount of exposure registered in a given area, and on reliable data on local-level radiation levels. These areas of information become much more interesting if linked to a specific area and community.
- In recent years (2000 and later) Chernobyl- related materials broadcast or printed by the media have been primarily timed to coincide with the “anniversary” of the tragic events of April, 1986, which “celebration-only” coverage hastens declining public interest in the ongoing effects of the accident, and further places Chernobyl only as being among other “historical events.”
- In spite of governmental efforts and inactivity, public demand for information on addressing Chernobyl disaster consequences, particularly radiation safety measures in the contaminated areas, remains high. The highest informational demand is for complete, objective, area-specific, action-oriented information, which can be received from a variety of sources.
- Due to the socio-economic underdevelopment of affected areas, expert recommendations on safe living practices in the context of contaminated environment are not being widely applied in practice. Long-standing traditional lifestyles pose yet another barrier on this front, as experience shows that changing long-established lifestyles is a very long process, especially when it comes to the adult population.



## CHAPTER 2

### INFORMATION NEEDS ASSESSMENT OF THE CHERNOBYL-AFFECTED BELARUSIAN POPULATION WITHIN THE FRAMEWORK OF THE INTERNATIONAL CHERNOBYL RESEARCH AND INFORMATION NETWORK PROJECT

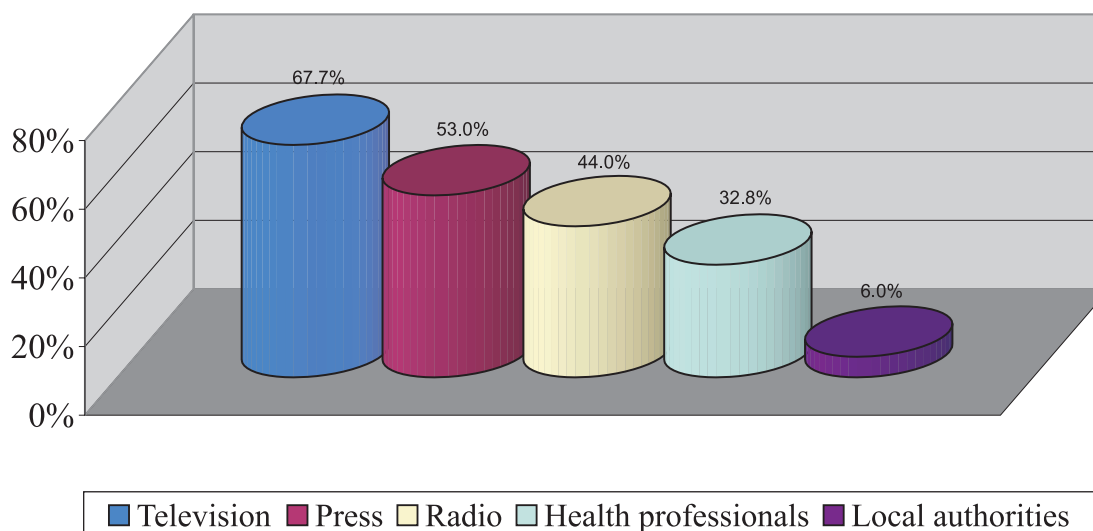
#### 2.1. STUDY OF HEALTH-RELATED INFORMATION NEEDS OF THE AFFECTED POPULATION

Following a decision made by the Multi-Stakeholder Process Group of the International Chernobyl Research and Information Network in March 2004, the National Scientific and Practical Center of Radiation Medicine and Human Ecology (based in Gomel) analyzed the information support status of Belarus' affected population. The Group used feedback received from patients of screening teams at the Center's clinic; plus, the Group polled a total of 137 different-age patients, along with residents of Gomel city and other large towns of Gomel Region, as well as those living in affected rural communities. The primary objective of the

poll was to determine whether there was enough information available to the public about a number of items: first, the health effects of the accident; second, the radiation situation in the contaminated areas; third, safe living rules in the areas contaminated by radionuclides; fourth, key sources of information, and public trust in the incoming information. Additionally, proposals were sought from those polled to recommend ways to improve health care information support for people suffering from consequences of the Chernobyl disaster.

The survey indicated that 65% of all respondents believed there was insufficient information about health effects, with 72.3% feeling this way about radiation situation as well, and 70.6% believing same about safe living rules in contaminated environment. Only 29.4% of those polled believed that the information they received from mass media was completely trustworthy. Major sources of information about the accident's consequences were listed as being television (67.7%), press (53.0%), health professionals (44.0%), radio (32.8%), while only 6.0% of those polled mentioned local authorities as a source of Chernobyl information (Figure 7).

Figure 7  
Key sources of information  
about Chernobyl health effects, as % (2004)



Tables 7 and 8 contain data on Chernobyl information gaps and sources of information for different groups of pollees.

Figure 8 represents the extent of public trust in mass media, by population grouping.

As part of the study, some 32.8% of respondents submitted proposals to improve the information support system. Of those who submitted proposals, 48.9% expressed a need to receive additional information. Of the proposals submitted, 22.2% expressed the

Figure 8  
Public trust mass media, as % (2004)

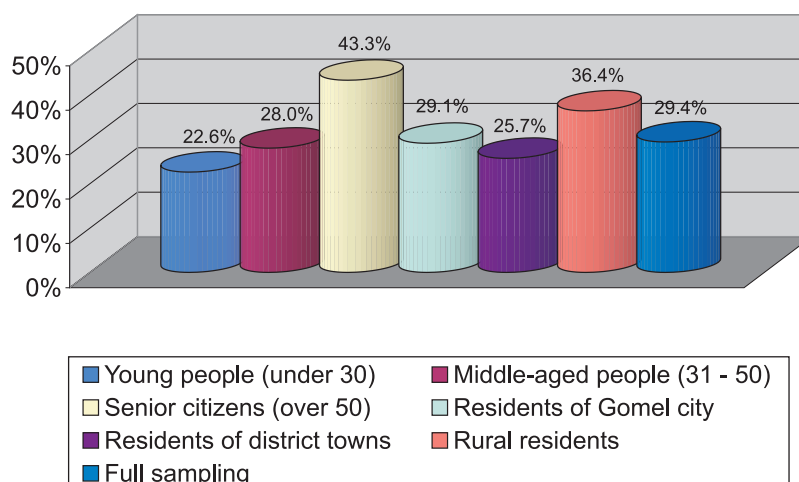


Table 7

Volume of Chernobyl-related information (2004)

Population grouping	There is insufficient information about		
	Accident-induced health effects	Radiation safety	Safe living rules and practices
Young people (under 30)	74.2%	80.6%	71.0%
Middle-aged people (31 – 50)	69.7%	76.3%	70.7%
Senior citizens (over 50)	43.3%	53.3%	43.3%
Residents of Gomel city	68.4%	72.2%	62.0%
Residents of district towns	65.7%	80.0%	77.2%
Rural residents	52.2%	60.9%	50.0%
<b>Full sampling</b>	<b>65%</b>	<b>72.3%</b>	<b>70.6%</b>

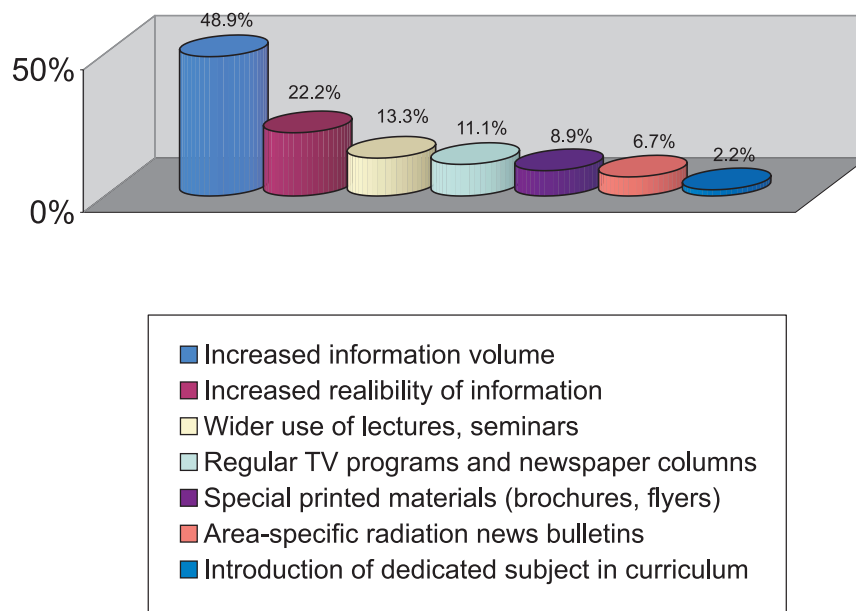
Table 8

Chernobyl sources of information (2004)

Population grouping	Source of information				
	Television	Press	Radio	Health professionals	Local authorities
Young people (under 30)	74.2%	45.2%	35.5%	38.7%	3.2%
Middle-aged people (31 – 50)	67.1%	57.5%	23.3%	43.8%	8.2%
Senior citizens (over 50)	60.7%	53.3%	50.0%	50.0%	3.3%
Residents of Gomel city	65.4%	46.2%	37.2%	41.0%	2.6%
Residents of district towns	67.6%	67.6%	23.5%	52.9%	8.8%
Rural residents	72.7%	54.5%	31.8%	40.9%	13.6%
<b>Full sampling</b>	<b>67.7%</b>	<b>53.0%</b>	<b>32.8%</b>	<b>44.0%</b>	<b>6.0%</b>

need to have more reliable information as well, and suggested there be a more stringent control over how that information is spread to the people. Some 13.3% of respondents suggested using more lectures and seminars, including participation of health professionals and doctors. Another 11.1% championed the introduction of regular TV programs and newspaper columns, while 8.9% proposed the use of dedicated printed materials (brochures, flyers and methodological recommendations)—a similar number (6.7% of proposals) suggested the release of area-specific radiation bulletins, including at the Chernobyl site itself. Only 2.2% of the respondents said they would like to have a separate dedicated subject taught in the schools. (Figure 9)

Figure 9  
Public proposals to improve information support (2004)



## CONCLUSIONS

Based on this study, the following conclusions can be reached:

1. All age groups in the population report a low level of trust in presently available information concerning the health effects of and rehabilitation efforts since Chernobyl.
2. However, rural residents, and especially those from the senior age brackets, report the highest degree of trust in the amount and quality of such information.
3. Health care professionals are one of the most important—but at present underutilized—sources of Chernobyl-related information.
4. Local authorities play at best a marginal role in spreading Chernobyl-related information.

The results of the above analysis prompt the conclusion that the public increasingly needs to receive more reliable data, from non-governmental experts and specialists, in larger quantities, thru the mass media.

## 2.2. THE STUDY BY THE BELARUSIAN STATE AGRICULTURE ACADEMY

In accordance with a decision made by the Multi-Stakeholder Process group of the International Chernobyl Research and Information Network, the Belarusian State Agriculture Academy (BSAA) carried out an information needs assessment in March 2004, targeting Chernobyl-affected populations in contaminated areas.

The purpose of the study was to identify information needs of the Chernobyl-affected population, and to determine the level of public awareness about the environmental status, socio-economic situation, and social protection measures to-date implemented in response to Chernobyl.

### 2.2.1. STUDY SUBJECT DESCRIPTION

The study was conducted in the Kostyukovich District in eastern Mogilev Region. The BSAA research group selected this district for a variety of reasons, including because the number of people living in the district had remained practically unchanged since the time of the accident—and thus a stable population structure could be examined. Also, because the Kostyukovich District is the only district in the Mogilev Region located inside the contamination boundaries, which does not receive governmental subsidies. Thus, it was thought

to be more “pure” in the sense of not being artificially affected by governmental subsidies and other forms of external intervention. Also, in 1991 the Kostyukovich District was the target of a BSAA Laboratory for Sociological Studies survey on the subject of the “Social Adaptation of Inhabitants of Chernobyl-affected Areas.” Therefore, a study of the same district in 2004 could help track the dynamics of public information needs in the district over a 3-year period of time. It should be noted that approximately 40% of the district is contaminated with radionuclides, while 30.3 thousand hectares of land (or 36% of the district’s total land area) has been removed from agricultural use. As a result, eight agricultural enterprises have been closed over time, leaving behind 15 agricultural producer cooperatives and four large farms in the district.

The current population of the Kostyukovich District is approximately 32,700; between 1986-2004 the district’s population decreased by 5,200 (or, 17.9%), but the urban population of the district rose by 5,100, due to relocated population shifts and natural growth. Hence, there has been a very small net decrease of population in the total population numbers of the district.

Note: one of the distinctive features of this district is that private gardens occupy 23% of the land belonging to agricultural enterprises, though both the number of private gardens and their production volume have tended to decline.

The sociological poll of the Kostyukovich District involved 689 residents, or 3.28% of the district’s total population. The sampling structure is given in Figures 10 and 11, respectively.

Table 9

*Population of the contaminated areas of Kostyukovich District (2004)*

<b>Cu/km<sup>2</sup></b>	<b>Families</b>	<b>People</b>	<b>Families with children</b>	<b>Children</b>
1–5	427	938	120	192
5–15	744	1777	207	387
15–40	32	58	2	3
higher	1	1	–	–
<b>Total</b>	<b>1204</b>	<b>2774</b>	<b>329</b>	<b>582</b>

Figure 10  
Sampling structure (men, women)

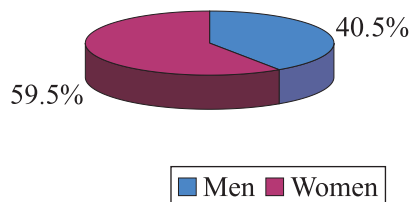
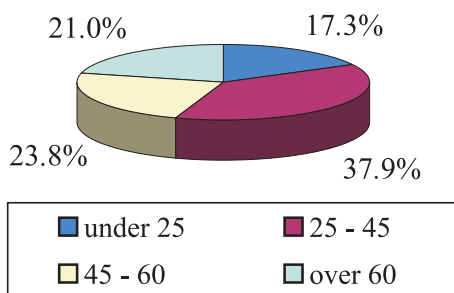


Figure 11  
Sampling age structure



Respondents were selected by field of activity, with information obtained from the statistics department of Kostyukovich District Executive Committee, which had accurate data of the numbers of men and women employed in various economic sectors in the district. As of January 1, 2004 the representative sample of this study included professionals in the following fields: education—81 (11.8%); health care—44 (6.4%); agriculture—161 (23.4%); industry, service and trade—90 (13.1%);

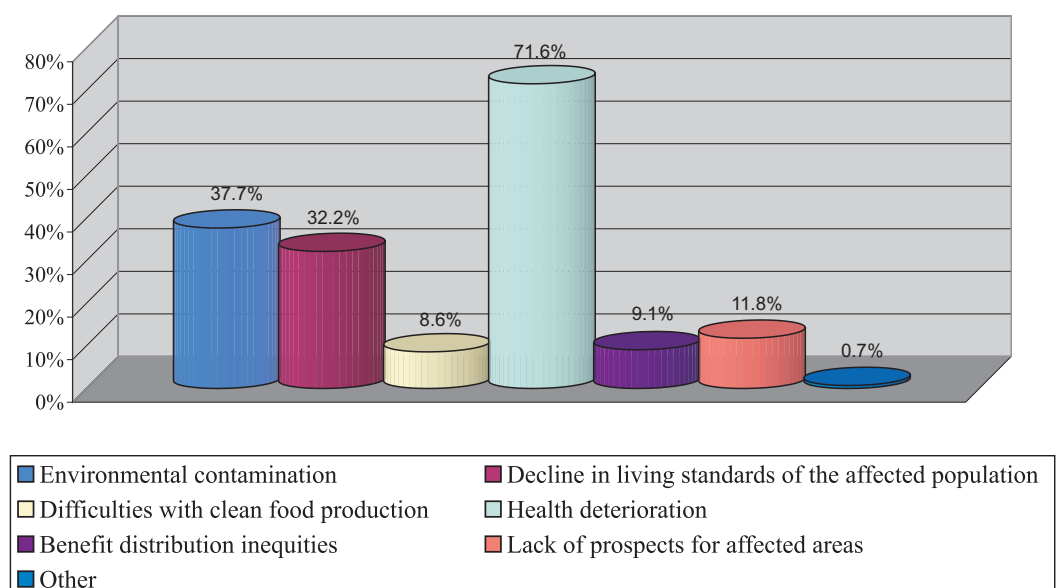
management—29 (4.2%); culture—21 (3.0%); private business—22 (3.2%); BSAA students—53 (7.7%); pensioners—147 (21.3%), and the unemployed—41 (6.0%).

A questionnaire-based poll was the main tool for collecting information, which consisted of 32 questions divided into sections so as to address research questions and to identify primary information needs of the selected population.

## 2.2.2. STUDY RESULTS

The tables below provide detailed feedback to the survey's questions (Annex 1). An analysis of questionnaire feedback reveals that people who were significantly affected by the Chernobyl accident (and who continue to live in a contaminated area), consider their health deterioration (71.6% of respondents) and their area's environmental contamination by radionuclides (37.7%) to be the most serious effects of Chernobyl. Also, the negative impact caused by Chernobyl is aggravated by socio-economic factors such as declining living standards in the affected areas (32.2%). As a result, 11.8% of the respondents said that the affected areas have no future developmental prospects. (Figure 12)

Figure 12  
Which consequences of the Chernobyl disaster proved to be most serious? (2004)



Of those surveyed, women were more concerned with a decline in health than men (77.6% versus 62.7%), and young people under 25 (76.5%) were more concerned in general than other age groups. This may be explained in that women are more sensitive to health complications because they perform more family and social functions than do men, while youth are more knowledgeable about Chernobyl consequences by virtue of school and possible travel for recuperative treatment (including abroad) than are adults.

The survey also showed that there is a high level of anxiety among pensioners regarding their health status (83.4%). But, the particular location of one's residence does not seem to be an important factor according to the survey. One thing discovered is that there appears to be in the minds of the people a prioritization of factors thought to affect human health—with the most important being the condition of the environment, followed by hereditary factors.

There are two important problems which worry people most living in contaminated areas: first, their own personal health status, and second, the over-all regional and national socio-economic situation. When asked the question, "What worries you most of all these days?" a large number (74.2% of respondents) said "health concerns" while 50.5% said "low living standards." Radioactive

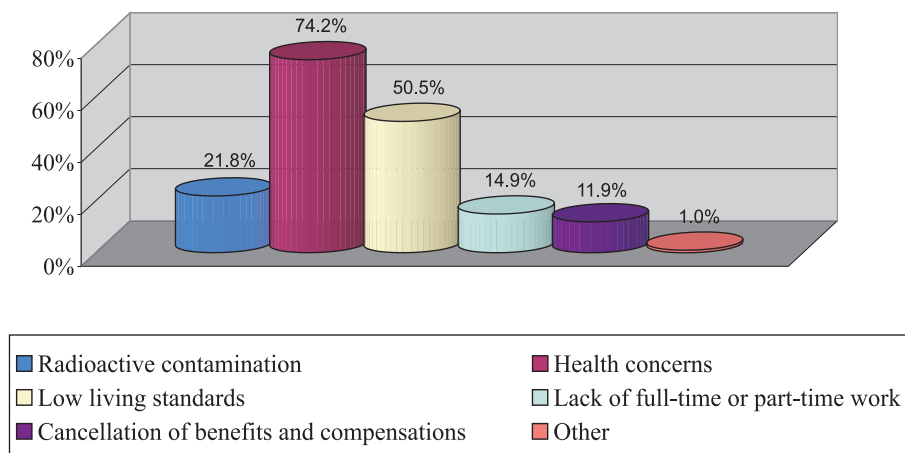
contamination ranked third (21.8%), followed by a lack of full-time or part-time work (14.9%), and a cancellation of work-related benefits and compensations (11.9%). (Figure 13)

When asked the question, "What kind of area do you live in?" more than one-half of respondents said they were unaware of their living area status. Moreover, only 17.9% had knowledge of the radiation level of their geographical location. Radiation-level knowledge is the lowest among the urban population (14.8%), among men (14.7%), among young people age 25-45 (12.3%), and among those under 25 (4.2%). Only 22.6% of respondents were well informed about sources of irradiation, with 60.8% knowing only "something" about exposure sources, and 16.0% not knowing anything at all about the sources of radiation exposure. This type of knowledge is lowest among rural residents (21.5% don't know about sources of radioactive exposure) and among pensioners (29.7%). Some 66.2% of those polled said they wish to gain more knowledge in this area. They also expressed interest in learning about food contamination and land contamination levels (57.0% and 44.8%, respectively). Urban residents cared about clean food to a greater extent than did rural residents (62.6% versus 50.5%), while young people (63.3%) were more concerned with food quality

than were older people, while women (62.6%) possessed a similar level of such concerns.

Survey respondents indicated they have not considerably benefited from recommendations developed in the wake of the Chernobyl accident, because the information contained therein was not useful. Only 34.5% were satisfied with information provided to them on such vital issues as "where is it safe and unsafe to live." Recommendations given to them as to how to measure food

Figure 13  
What worries you most of all these days?





radioactivity were favorably cited by only by 9.6% of respondents, while there was a widespread point of view among those surveyed that these recommendations were useless. This viewpoint is especially true for rural population and pensioners, i.e. low-income population groups. Youth, the employed population, and urban residents believed it to be necessary to monitor contamination levels of agricultural produce (11.8%, 12.3% and 13.4% respectively). Additionally, youth, women and urban residents considered information on food radiation reduction techniques to be useful, as opposed to other polled groups (32.8%, 25.1% and 28.8%, respectfully).

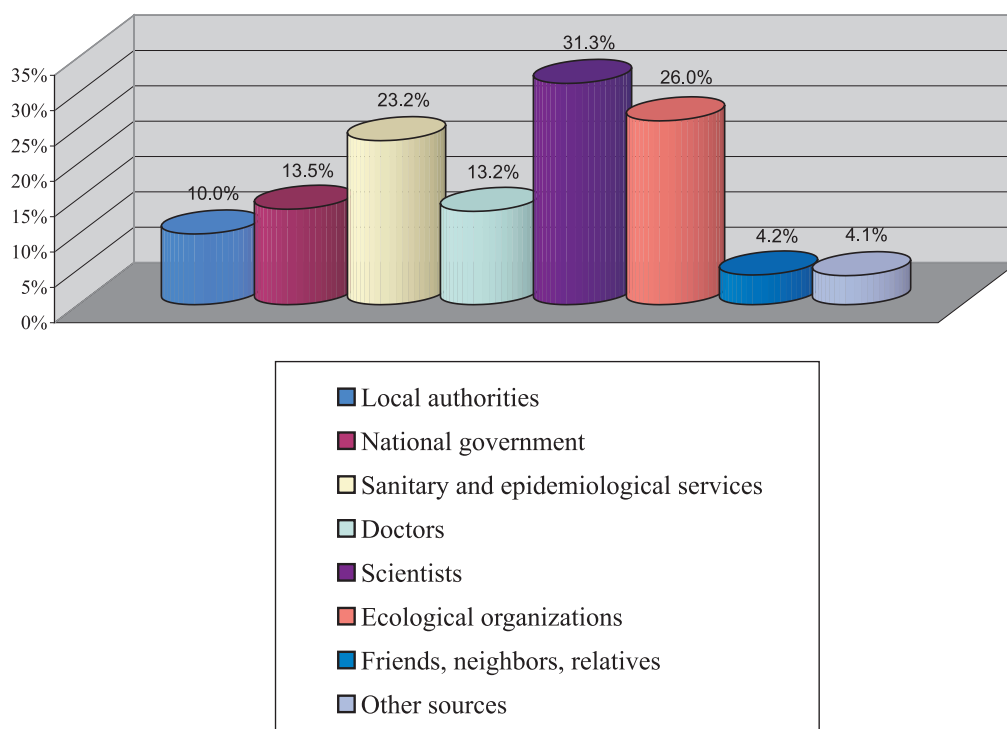
When asked the question, “What kind of information did you need, but never got?” respondents raised a host of problems about which they continue to worry. Among the approximately 30 different opinions given to this question, the most prominent include:

- Radiation’s effect on human health;
- The radiation situation in the district in general, and in particular at home (both now and in the future);

- Ways to obtain the cleanest agricultural produce possible in a contaminated environment, and how to reduce radionuclide content in food;
- Statistical data on lifespan in Chernobyl-affected areas;
- Types and amounts of support provided by international organizations to those living in the contaminated areas, as well as the status of on-going Chernobyl projects and programs.

Conversations with respondents during the course of the survey further revealed that the population was generally aware of large-scale and comprehensive Chernobyl research efforts being conducted, and of the idea that scientists were learning increasingly more about the consequences of the accident. Therefore to the question, “Who do you trust when it comes to radiation information in your district?” some 31.3% of respondents said they trust scientists more than all others (Figure 14). Such a high regard for scientists in the public mind is corroborated

Figure 14  
Who would you trust when it comes to radiation situation in your area?



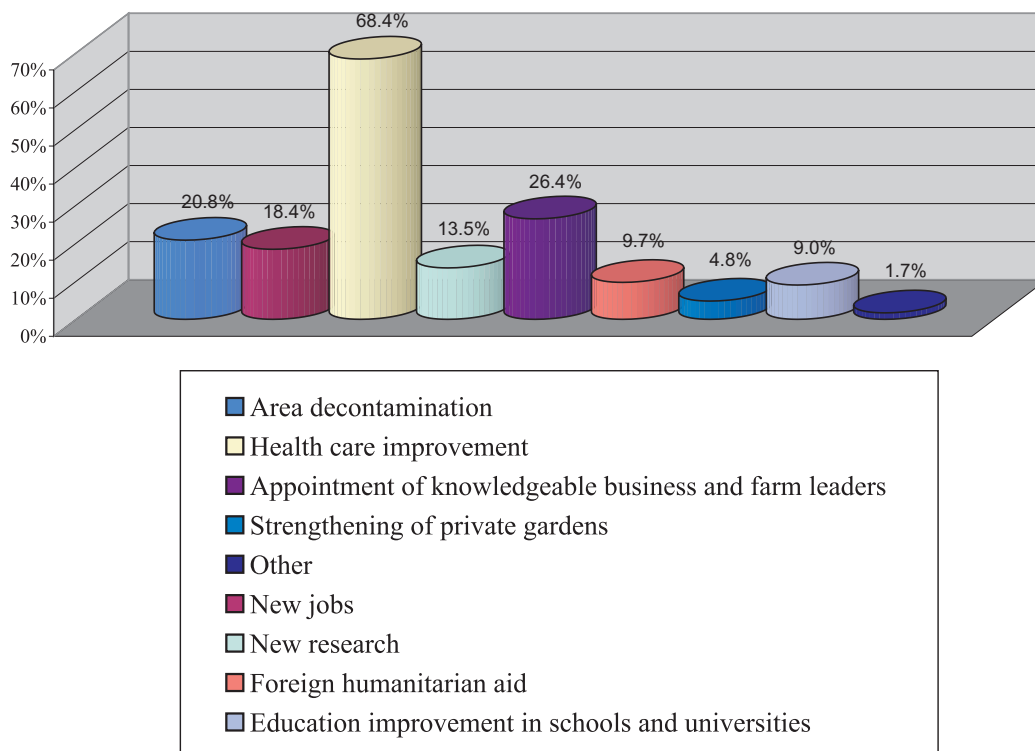
by the response given as well to the question, “Who are you sure not to trust when it comes to radiation situation in your area?” where only 6.2% of respondents said “scientists”.

Different social groups in this survey displayed sharply different levels of trust to organizations, agencies and specialists dealing with Chernobyl-related problems. For example, urban residents had more faith in ecological organizations (33.6%), sanitary and epidemiological services (33.1%) and scientists (28.5%); while rural residents trusted scientists (34.7%) and the national government (20.5%). Women were more likely to trust ecologists and scientists (29.0% and 27.6%, respectively); while men trusted scientists more (36.9%), and the youth trusting ecologists, scientists and epidemiologists (40.3%, 36.1% and 33.6%, respectively). Overall, scientists and ecological organizations enjoyed the highest respect among the population regarding Chernobyl solutions. However, it is worth mentioning that during the course of the survey it became clear that even people with higher and secondary vocational education did not have a clear sense about the functions that ecological organizations were performing or could perform.

The population surveyed had the lowest level of trust in local authorities. This was especially true for youth, persons between 45 and 60, rural residents, and the male population (6.7%, 7.3%, 7.9% and 8.6%). The national government enjoyed roughly the same level of low credibility as did local authorities. This may be due to the fact that during the early days and weeks of the accident, governing authorities at all levels concealed true information about the accident itself and radiation dangers from the people. Another point of interest is that virtually all groups in the surveyed population trust official agencies and organizations over friends, neighbors and relatives—who purport to be sources of information, but who oftentimes turn out to be sources of rumor instead.

According to those polled, to improve living conditions in contaminated areas it is necessary to implement a set of integrated measures, among which are: health care improvement (68.4%); area decontamination (20.8%); the appointment of knowledgeable people as company and farm leaders (26.4%); creation of new jobs (18.4%); the appointment of knowledgeable people as company and farm leaders (26.4%); creation of new jobs (18.4%), and to begin new research activities (13.5%). (Figure 15)

Figure 15  
**Which interventions are the most critical for the improvement of living conditions in the contaminated areas? (2004)**



The implementation of these measures depends on national policy making, said those who were surveyed. When asked the question, “Who do you think can make a difference in the contaminated areas?” those responding said responsibilities should be shared by the government (56.2%), by business and farm leaders (15.1%), and then by inhabitants themselves (11.9%). High expectations were also placed on scientists (20.0%) and on international organizations (25.5%). The older the respondents the more responsibility they placed on national leadership, while younger respondents said they relied more on international organizations.

This survey confirmed what previous surveys have suggested, that the most prevalent sources of information for respondents were television programs (47.8%), followed by newspaper articles (26.0%), conversations with specialists (18.3%), and flyers placed in their mailbox (12.9%). Facilitation of lectures and proliferation of posters, etc., were found to be of little use. However, 31.5% of respondents said they would personally like to be involved in outreach work and to help spread information about the Chernobyl consequences to other affected people. This willingness on the part of respondents is without regard to population grouping, i.e., rural residents (38.2%), working-age persons (from 31.1% in youth to 38.4% in older people), men (38.0%), and women (27.1%).

However, one of the largest challenges facing the population is that 62.4% of that same population is not sufficiently aware of what social protection measures exist. Pensioners are generally more informed in this field (followed by those in rural areas) than are other groups, while the least informed are the youth (21.0%) and urban residents (29.8%). One possible explanation for this may be that the youth may take Chernobyl-related issues and social protection less seriously, or they may be more distrusting of official, governmental communication and media. Urban inhabitants, who have higher and more stable incomes, are perhaps in less need of assistance than are rural residents.

To formulate a scientific correlation regarding the information needs of the population in the area of social protection against Chernobyl’s consequences, one important question asked of those surveyed was, “What kind of information about social support is missing?” Answers to this question include: Who is eligible for benefits and on what

grounds? Why do benefits keep changing all the time? Also, questions were asked as to the existence of social protection interventions targeting people in the contaminated areas; questions about additional health care benefits; questions about what social safeguards exist in case of disablement, and questions about the provision of housing and/or employment to Chernobyl-affected people.

As for questions about the future, 31.1% of respondents said they were interested in information about future consequences of the disaster, while 4.1% consider information about what happened in the past to be of use in the present. The bulk of the population said that it needs multi-faceted information (53.8%). Notably, women expressed the greatest need for multifaceted information (56.8%), as did youth and respondents between 25–45 years of age (58.0% and 59.4%, respectively), followed by those in the urban population (60.2%). Only 9.7% of those surveyed claimed they “do not need information” or that they were “too tired of it.”

Furthermore, the survey analyzed different social and professional groups as either being themselves sources or recipients of information concerning Chernobyl. One question asked of respondents was, “Do you know what kind of major sources of radiation are there in human life?” Answers revealed that the most knowledgeable group was educational professionals (34.6%), followed by health workers (34.1%), and managerial workers (31.0%). This makes sense, as members in these groups are better educated and have direct access to this kind of information. Likewise, the level of knowledge on this subject is low among rural residents (8.1%) and among the unemployed (14.6%). The fact that private business is the most informed sector on this point is of interest (45.5%). Also, it is clear that respondents who were already more cognizant about sources of radiation felt a greater need to expand their own knowledge of this subject.

However, there are differences in what kind of information these socio-professional groups are interested in receiving. For example, radiation health effects are of more interest to health workers (70.5%), while this is the least interesting subject for private entrepreneurs (31.8%). Agricultural workers show a high level of interest in radiation health impact information (65.2%), perhaps due to the fact that they are continually (and especially during

field work) subjected to radiation exposure. Students (81.1%) are keenly interested in information on how to protect themselves against radiation (this indicator is twice as high as the average in the aggregate), which may be due to young people thinking about their future and realizing the importance of protective measures for themselves in the meantime. There is a low level of interest in radiation safety rules among agricultural workers (28.6%) and rural residents (29.0%). Finally, health care professionals, managers and education workers are largely interested in the forecast for future years (47.7%, 34.5% and 33.3%, accordingly), which interest may stem from the nature of their work, which is related to achieving forward looking results.

When analyzing answers to the question, “Who do you (do you not) trust above all?” the most trusted were said to be ecological organizations, scientists, doctors, sanitary and epidemiological services workers, followed by local administration personnel, friends, neighbors, relatives, and in last place the national government. This ranking is accurate regardless of gender, age and place of residence of the respondents. When trying to determine which providers of information were more preferable to handle the information needs of the different population groups, mass media was found by all social and professional groups to be the most efficient: television programs (52.3% among health professionals), and newspaper articles (36.4% among private entrepreneurs). But, personal conversations do remain a present-day effective tool of communication for students (32.1%), art and culture workers (57.1%), educators (27.2%) and

managers (27.6%). Targeted information (a flyer in a mailbox) captured the attention of students (24.5%), culture workers (23.8%), and managers (24.1%), while most agree that other sources of information (lectures, posters, library magazines) are less efficient sources of Chernobyl information.

As for the view of those surveyed with regard to the survey itself, 26.9% of respondents hoped that such a survey could make a positive difference, while 15.7% were pleased that someone wanted to know their opinion. Some 21.8% were glad to be of service. Yet, there was still a negative attitude toward polls in general, for “again all is on paper, nothing is done,” said 34.4% of respondents. Another 25.8% went even farther, saying, “sorry to say, but it is a waste of time.” Therefore, when asked what question they should have been asked in the survey, but were not, the following were mentioned:

- Health status of people living in contaminated areas;
- Income level and availability of resources to improve health;
- Psychological condition of people living in contaminated areas;
- Whether people want to live in contaminated areas or not;
- What the affected population thinks of possible construction of nuclear power plants in Belarus;
- What kind of assistance is required by the affected population;
- Quality of public health care;
- Condition of sports facilities and arrangements for healthy lifestyle.

## CONCLUSIONS AND RECOMMENDATIONS

Based on this survey, the following conclusions and recommendations can be offered:

1. Inhabitants of Chernobyl-contaminated areas are concerned with two vital problems—the state of their health and the more general socio-economic status of their region. These problems should not be viewed in isolation, but should be placed in a tight and coordinated focus, including utilizing a communication strategy targeting different social groups simultaneously to address these two connected issues.

2. Until now, people have not had a clear understanding of the health, radiation and rehabilitation status of the geographic area in which they live; this indicates a lack of knowledge of, among other things, legislation by the national government which purports to regulate the status of areas hazardous for human habitation.

3. Residents of the affected areas are primarily interested in food and area contamination levels, and are still not well informed about sources of radiation exposure.

4. The overwhelming majority of the population deems the recommendations on radiation safety developed during the post-Chernobyl period to be of little relevance. New recommendations need to be drafted taking into consideration the specific information needs of different social groups within the population.

5. It is prudent to disseminate extensively (to all residents of the contaminated areas) information materials containing complete and user-friendly responses and recommendations on issues of radiation safety and the cultivation and consumption of clean agricultural produce.

6. It is necessary to organize regular and systematic sociological monitoring of public opinion in conjunction with radiation control in order to maintain updated information about the radiation situation and living conditions in each contaminated area.

7. To ensure that the Chernobyl-affected population is supplied with quality information on a regular basis, it is advisable to establish local information centers on the premises of existing infrastructure, which already has full access to larger information networks.

8. Given the high degree of public trust and respect for scientists, international organizations, and especially for ecological organizations, it is expedient to create regional offices (affiliates) of these organizations in all contaminated areas.



### 2.3. AN INTERACTIVE STUDY OF THE NON-GOVERNMENTAL ORGANIZATION “BELARUSIAN COMMITTEE “CHILDREN OF CHERNOBYL”

The NGO “Belarusian Committee “Children of Chernobyl” has heretofore commissioned a study to identify information needs of the affected population based on Multi-Stakeholder Process principles; to identify problems in contaminated regions and their causes, and to offer recommendations of possible solutions to local circumstances.

To gather the best quality of information from those surveyed, the study set about to organize and conduct interactive informational research meetings with local stakeholders, where researchers could discuss problems with the populace, and explore possible solutions with representatives of the people from all societal strata. The study attempted to analyze present conditions in the districts taking into account local specifics, and the views and needs of different population groups within each district. Finally, the committee hoped to prepare proposals regarding information needs of Chernobyl-affected people.

To obtain the best results from their research methodologies, a so-called “discussion space” was set up between researchers and those interviewed, allowing researches to identify both individual information needs and those held in common by the larger population in the district. This method of decision-making called “Talaka”

was utilized in the research project, which is a traditional tool used for discussing problems in a local community. The environment thus created by researchers using this method of inquiry and discussion proved to be didactic and educational for the Talaka participants as well, opening their minds, for example, on issues such as sustainable development and safe living practices. Talaka participants were divided into working groups based on factors such as social background, local specifics, accepted lifestyle, and local and religious traditions. Youth groups were used as well. Districts were selected depending on contamination levels, the radionuclide-to-food conversion ratio, as well as by taking into account local conditions, cultivation crops, the general level of culture, and traditions. The number of those participating in the study was 1,787. (Table 10)

The Talaka working groups represented a full scope of interests and needs typical of groups living and working/studying within a district. Each group had a facilitator whose primary purpose was to help organize participatory discussion by individuals on social problems and information needs, and who also tried to identify motivations of group members on which their comments largely depended. Work within each Talaka group normally began with a general session for all to attend, where problems and issues facing their district were discussed, and then a discussion was held on actions at the international and/or national and/or local levels to address the situation, and to create better conditions for the sustainable development of the area.

*Table 10*

*Number of study participants in districts*

No.	District	Number	
		People	%
1.	Vetka	172	9.6
2.	Volozhin	174	9.7
3.	Dribin	402	22.5
4.	Slavgorod	517	29.0
5.	Stolin	372	20.8
6.	Khoyniki	150	8.4
<b>Total:</b>		<b>1787</b>	<b>100</b>



Talaka group discussions also considered indicators of district development such as welfare, culture, education, safety, nutrition, living conditions, demography, ecology—all against the backdrop of the worldviews and sets of values of those present (and hence of the greater population). The choice of questions for Talaka discussions was inspired by the National Sustainable Development Concept.

Talaka groups were organized with district administration civil leaders; industrial and processing workers; state-owned trade workers; bank employees; culture workers; services employees; health professionals; pharmacists; district sanitary and epidemiological specialists; school teachers and senior-grade children; teachers and students of vocational schools and lyceums; community residents; law enforcement officers; representatives of war veterans public organizations; the Belarusian National Youth Union; state farm administration, cattle breeders and mechanics, and of private farmers (Dribin and Volozhin districts). The distribution of participation working groups is set forth in Table 11.

Minutes of each working group were kept so as to collect information, prevailing opinions and conclusions from the group at large, plus to record

especially insightful comments from individual members within each Talaka group. All comments were recorded, as group participants spoke freely and openly. As a result, the study managed to identify specific problems requiring solutions and follow-up research. Said problems (and proffered solutions) are thus believed to be representative of the views of the populace located in all Chernobyl-contaminated areas of Belarus. A summary of those observations and recommendations follows.

Due to low-income levels, the most essential need of rural residents is to determine, daily, how to feed and clothe their families. Parents are concerned with “How can a family survive?” while children wonder “How to get rich?” When told about radiation safety measures, parents from the village of Dvorishche responded, “It is better to die from a disease, than hunger.” All of these adults are accustomed to hard work and want to earn decent wages, while their young people are willing to actively participate in national and international projects aimed to develop the areas where they live.

**Economy.** In all districts, group representatives (over 95%) described the condition of their economy as “unsatisfactory.” The districts are predominantly agricultural and therefore are

Table 11

Study participation distribution by working group

No.	Working groups	Number	
		People	%
1.	District administration	224	12.5
2.	Industrial and processing workers	114	6.4
3.	Trade and services employees	166	9.3
4.	Culture workers	26	1.5
5.	Health professionals	167	9.4
6.	Sanitary and epidemiological specialists	40	2.2
7.	School and vocational school teachers	184	10.3
8.	School and vocational school students	495	27.7
9.	Local police and Ministry of Emergences officers	85	4.8
10.	Pensioners and war veterans’ civil organizations	33	1.8
11.	Belarusian Republican Youth Union and other NGOs	29	1.6
12.	State farm leaders and workers, private farmers	143	8.0
13.	Some community residents	81	4.5
<b>Total:</b>		<b>1787</b>	<b>100</b>

subsidized by the government. Most of the industrial enterprises in these districts are unprofitable; and as a result, there is a continuing trend of recession, human resources reduction and of growing unemployment in these districts (including among the youth). Living standards are falling, and private business and farming are underdeveloped.

Many respondents tended to attribute these facts to two elements: lack of clear and easy-to-understand regulatory framework supporting these factors of the economy and, to the fragility of the existing economy. Small businesses are mostly developed in trade, which is lacking, while private farmers believe it is necessary to set up a product supply/processing cycles in order to create new jobs and reduce farm losses. But resources are needed to open processing companies at the private farms. The working population's main source of income is salary and products grown for personal consumption to ensure adequate food supply. Only in some districts, e.g. the Stolin District, do the residents grow vegetables and then sell them to the public for extra income.

Great many of those surveyed expressed a lack of trust in local authorities, due to their incompetence in addressing socio-economic problems. However, "science" was also questioned, which may be indicative of a lack of awareness on the part of the population about specific research activities that have been or are being undertaken, and an inability on the part of those polled to see the best results of that science applied in practical terms in their district.

The study revealed specific problems that the population relocated from the 30-km zone and high-contamination zone have encountered, including inadequate infrastructure in the settlement housing, as well as difficulties in securing jobs in their new locations. One person said, "These houses seem to have every amenity, but were built hastily, so there is a lot of dampness inside and people get sick very often." Under the pressure of nostalgia for the past, which is aggravated by their current socio-economic insecurity, the relocated population often says that, "Those who had a chance returned to where they lived before."

To address the economic challenges of these districts, the opinion of the local population is to declare Chernobyl areas as top priority; to free companies and state farms of taxes; to implement

new technologies in agriculture, including biotechnologies; to promote private farming based on technology to obtain clean products; to create necessary conditions to facilitate accelerated economic development of the affected areas; to explore possibilities of job creation, construction and establishment of industrial enterprises and commerce; to allocate national and foreign investment for area development, and to scientifically substantiate approaches to area development while taking into account local traditions, natural resources and location, and wise economic practices.

To spur economic development the population deems it necessary to "free private entrepreneurs and farmers from taxes," to offer "long-term soft loans necessary to start-up businesses," and to "learn to grow clean products or purify the land from radiation." Unfortunately, most of the population does not think that it can effectively improve its own economic situation, but instead must turn its hopes to the national government to develop local entrepreneurial activities. Moreover, only a small percentage of the population showed interest in obtaining information relating to small business start-up and development; instead they point to a need for "business schools" and "entrepreneur clubs" to open, where they will purportedly obtain business training.

**Welfare.** Most respondents (over 97%) grade their income level as below average. High unemployment, including among the youth, is typical in many districts. Rural young people have the possibility to work at a state farm, but frequently refuse to do so because of low pay. Compared to their urban neighbors, the villagers are significantly worse off economically. In most districts, pensions and government support are paid promptly whereas salaries are sometimes delayed, especially in villages. It should be noted that pensioners, in particular those receiving disability compensation due to Chernobyl receive relatively high pensions and exhibit moderate needs, measure their welfare as "satisfactory." And their pensions often serve as an additional source of income for the family members of their own adult-children.

The respondents in the survey identified indicators of personal wealth as having an ability to own one's own house or car, to have savings, the ability to afford university tuition for their children, and to financially set up one's children for life.

However, low-income respondents identified a much more conservative definition of “wealth” as the ability to eat and to dress well. Students opine that “wealth” is the ability to afford vacation and travel. The majority (over 91%) of respondents consider their income level to be unsatisfactory.

Information needs of the population are primarily driven by the desire to improve their individual income status. It is the opinion of those polled that access to work and to decent wages is key to improving their living standards in Chernobyl-affected areas. They are interested in information on extra income-generating opportunities as a “right” of their having been victimized by Chernobyl. Thus, part of these “victims” wish to know about indemnification of their property and moral damage, while the other part wish to learn about benefits they can claim (additional allowances, reduction of utilities cost, access to free or discounted prescription drugs, etc.) as a result of Chernobyl.

#### ***Living conditions, social infrastructure.***

The local population (with the exception of the Dribin and part of the Volozhin districts) is generally unsatisfied with their present environmental condition. People are mostly concerned about the radioactive contamination of food, soil and air. The quality of drinking water leaves much to be desired. However, most of the respondents (about 86%), with the exception of young families and specialists, consider their housing needs to be satisfactory. It is still quite difficult to buy an apartment, or to self-finance construction of a house. Almost all of the respondents (about 93%) find that their basic living conditions are unsatisfactory. Practically everyone mentioned inadequate public transport services, especially in rural areas.

Households in polled areas often use locally collected radioactive firewood for heating, with and the ash generated by their fires is used as a fertilizer in their private plots of land where they produced food they will consume themselves or sell to others. Hygiene and sanitary conditions in schools and kindergartens are generally recognized to be adequate. However, some district authorities often disregard the need to ensure basic safety norms in contaminated areas.

The population needs to get reliable and sufficient information about possible benefits or allowances extended to people affected by the Chernobyl accident, in particular for the construction

or purchase of housing, and for reductions of housing and utilities bills. Also, district and local authorities and collective farm managers need more information about sanitary requirements.

***Awareness-raising.*** Among available sources of information, most respondents mentioned local radio and newspapers, television, and schools as the best way to raise awareness of Chernobyl-related information. But practically everyone noted a lack of necessary information in this most vital area of life. The majority of rural and lower-income families named local newspapers as the main source of information. However, a study of newspaper materials from these same districts revealed a high irregularity of publication of newspaper articles about the Chernobyl problem, with most articles being short in size and content. With the exception of *The Vetka Voice* newspaper, there are no systematic publications about radioactive contamination, health effects, environmental threats of the Chernobyl accident, or methods of maintaining safe livelihoods.

People require full, timely and competent information about the health effects of the Chernobyl accident, especially regarding their “children and grandchildren,” and how to maintain safe livelihoods. Many respondents believe that such information should be topical, regularly updated and easily understandable. To satisfy their information needs it is necessary to utilize the capacities of mass media and schools, and also health establishments, NGOs and governmental organizations.

***Culture, safety.*** All respondents believe that their cultural traditions are of great importance, and that they need to be preserved and passed on to younger generations, for in so doing they foster spiritually healthy individuals. But according to the majority of respondents (73%), the general cultural awareness of local people has worsened considerably over the past few years. In many of the polled districts, the local people expressed a need to direct special attention of cultural facilities to socially disadvantaged or street-wise kids, and to involve them in all sorts of technical, sports or hobby clubs.

There is a distinct problem of cultural adaptation for the immigrants from other CIS states (mostly from Kazakhstan), and for the people relocated from highly contaminated areas. Furthermore, many of the relocated or immigrated

families are poor, which contributes to increasing crime rate in these districts.

According to respondents, sustainable development of the studied areas is achievable through fostering cultural values of the local population, optimizing activities of cultural facilities, developing a cultural infrastructure for culturally disadvantaged areas, and through promoting local traditions and folklore. Special attention should be focused on organizing youth pastimes through the development of Internet Clubs, recreation centers, ecological associations and other youth NGOs.

**Education.** Majority of respondents (67%) are generally satisfied with their education, but they recognize the need to upgrade their professional qualifications to measure up to dynamic and constantly changing conditions. The affected population needs more legal information, professional, business and marketing training, more facts about their changing environmental situation, and information on how to promote sustainable development. Another cause of concern is the level of education provided by rural schools, which does not meet the requirements of higher education establishments. Respondents believe this situation could be remedied through specialized retraining courses for district specialists to enhance their professional, legal, economic, radiological and computer skills.

As far as education is concerned, the people need more information about existing opportunities for upgrading their qualification levels through a system of postgraduate studies. Medical workers indicate a lack of information about radiation medicine, radiation ecology and radiobiology. Medical and sanitation services require information about modern medical techniques and approaches to rehabilitation and health care for the affected population.

Information requirements of schoolchildren focus on the need to have access to Internet to get necessary educational, cultural, communicative and other information. The need for computers and Internet access was also mentioned by other professional groups, such as teachers, cultural workers, medical workers, and district administrators. Parents and teachers point to a need to develop customized and adapted curricula and teaching methods for schoolchildren in the contaminated areas.

### **Public health, food, demography.**

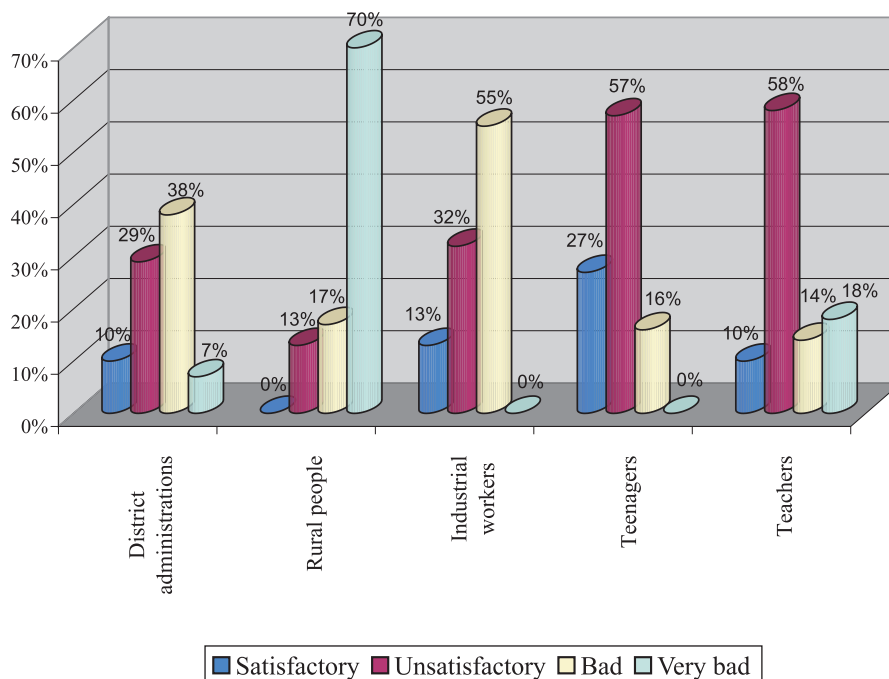
Almost all of the respondents (92%) evaluated their personal health, and the health of their relatives, as being unsatisfactory. Virtually everyone pointed to a recent deterioration of health indicators, which they associated with unfavorable environmental conditions and aggravated living conditions. The greatest concern of respondents was poor health for their children. According to public opinion, in some districts only 20% (or less) of school graduates are sufficiently healthy, while 50% of schoolboys are incapable to serve in the army. The highest incidence rates are for catarrhal and virus diseases, urinary, cardiovascular, gastrointestinal, ocular and musculoskeletal disorders, oncological diseases and thyroid pathologies (respondents from the Slavgorod District estimate that about 50-60% of their children have a thyroid problem). Local people regard available medical services as unsatisfactory. (see Fig. 16).

Some departments in district hospitals and outpatient clinics are either understaffed or have no qualified specialists. All respondents identified a direct correlation between health and food quality. At the same time, most respondents were unsatisfied with the choice or quality of foodstuffs that they consume. The development of private farming is, as a rule, regarded by most as a last resort, because the produced vegetables, milk and meat are often contaminated with radionuclides. Private plots show increased levels of radiation because they are usually fertilized with ash or with manure of cattle which graze on contaminated meadows, and fed contaminated fodder. Most of the respondents admitted that they regularly consume forest mushrooms, berries, and wildfowl, and in most districts people use no protective measures to reduce the radionuclide content of their foodstuffs. Virtually none of the respondents were even aware of methods of cultivating more-clean/safe ecological products. Many of those polled held the opinion that it is impossible to fight radiation, which makes all safety and protection measures useless, while others shared the viewpoint that cultivation of ecological products is too expensive and thus is unaffordable for them.

**Demography.** The demographic situation in the Chernobyl-contaminated districts is generally described as “depressing.” The “aging” tendency of the population is often noted, i.e., many senior



Figure 16  
**Health conditions in the Chernobyl-affected areas, as evaluated  
 by the respondents in 2004 (%)**



citizens, low birth rate, and youth moving away to cleaner districts. “Young people do not want to stay—they run away from Chernobyl,” said one respondent.

As a rule, most respondents (73%) do not want their children to live in their same area, due to the radioactive contamination and poor living conditions.

**Ecology.** The ecological situation in the affected areas is described by most (88%) as “worse than bad,” with radioactive contamination being the cause of major concern. Among the chief sources of ecological information named by those polled are radio, newspapers, schools, consultations with professional ecologists, and television.

The population has assumed a passive and resigned attitude toward their unfavorable ecological situation, with most simply never thinking about the consequences of contamination on them. At the same time, the ecological attitude of most local people is characterized by putting all of the blame for their presently unfavorable environment on local governments and public associations.

The information needs of the affected population can be largely explained by a lack of trust

toward presently available sources of public information.

**Social positions and orientations of the population.** Respondents generally believe that most aspects of their livelihoods are their own responsibility. Such a view is especially held by those who live in the Vetka District, which is known for its very strong cultural traditions. Similarly this view is very strong in the Stolin District, with its well-developed enterprising spirit, as well as among farmers in the Dribin District. As a result, these people, and perhaps others, do not fully trust international projects and programs, which can to a certain extent be explained by a lack of openness by certain international project teams.

Proactive respondents voiced a need to receive different types of information (legal, ecological, economic, educational, etc.) to help them improve their living conditions and to make them feel safer. However, passive respondents stated they have minimal information needs, and instead require social assistance to optimize their lifestyles. They perceive their information needs to be a tool for resolving their domestic problems.



### 2.3.1. SUMMARY OF A SCHOOL ESSAY COMPETITION HELD IN THE CONTAMINATED AREAS OF BELARUS

In an essay competition held in schools throughout contaminated areas of Belarus, a total of 122 essays written by school children were collected and scrupulously analyzed. It is interesting to note that in their composition papers, children identified the most important elements of happiness for them as being love, health and prosperity. The children stated they are likewise concerned with how to save themselves and their families from the adverse effects of their environment. One wrote, "We breathe dirty air, drink dirty water, eat dirty food contaminated with harmful chemical compounds." Another wrote, "Radiation comes with the wind, and clouds and with rain." Another wrote, "The ecology of my district disrupts my health and affects the quality of my life." Another wrote, "Radionuclides greatly undermine the physical and mental development."

Most teenagers (47 kids) believed that the happiness of a family is attainable mainly through material wealth, and that it is impossible to go far in life without good education. Kids stated that not everything depends on local initiative, as kids from the Chernobyl-affected areas need comprehensive international and national support. One student wrote, "I think that the quality of life in our district is rather poor; the main reason for that is the general indifference toward the Chernobyl problem."

Some 38 senior-level school children considered the happiness and prosperity of a family to stem from good health. One student said, "first of all, we need to guard and strengthen our health." Most stated that it is important for a family to be healthy physically and morally, and that health is connected to the environment. One stated, "I was born in the Gomel Region which had been covered by the black cloud of the tragedy" and "from early on I had to be very careful about my health, not to aggravate my condition" and "although I myself feel fine, the disease might still surface like it did with my mom who became a victim of the Chernobyl disaster. She passed away more than a year ago."

## CONCLUSIONS

Based upon the above-summarized survey, to develop the areas contaminated by the tragedy of Chernobyl, those affected in each area need more and better information consisting of:

- a detailed and specific profile of the natural resources of the district and how to manage them properly;
- integration of the district's economy into regional and national economies, and how to upgrade to the international level;
- practical marketing skills;
- how to use new technologies for ecological food production, together with understanding of their cost, possibilities and benefits of use;
- an evaluation of the environmental situation in their area, and ways to improve it;
- ongoing international and national Chernobyl projects and programs;
- participatory opportunities for the affected population.

The detailed description of the information needs of different groups of Chernobyl-affected population is represented in the Annex 3.

## FINAL CONCLUSIONS

The results of the above series of demographic studies into the information needs of the affected population of Belarus, conducted within the framework of the International Chernobyl Research and Information Network Project, attest to the complexity of efforts aimed at post-Chernobyl rehabilitation and development.

For example, public interest in Chernobyl is flagging. Residents of the contaminated areas instead attach primary importance to socio-economic issues, e.g. improvement of living standards, family and personal income, and social protection. Therefore it is advisable to extend theoretical and applied research in pursuit of product competitiveness improvement and integrated economic recovery of the contaminated areas, and to promote new forms of business. At the national level, the development and use of economic preferences for business development in contaminated areas may produce a positive impact. In ensuring and coaching sustainable socio-economic development of contaminated areas, priority should be given to long-term national and international projects aimed at promoting local business (establishment and support of clean production, business clubs, services sector improvement), with adequate educational and informational support being provided to the local population.

Virtually all of those living in contaminated areas are seriously concerned with the status and prospects of their health as a result of Chernobyl. Thus, those in the contaminated areas need (and want) to receive more information about radiation-induced disease prevention and treatment, and new pharmaceuticals to take to be in good health. Such information should originate directly from specialists and scientists working in close contact with local people (health professionals, sanitary and epidemiological services).

The radio-ecological situation in the contaminated areas worries mainly the youth. Young people wish to gain a comprehensive picture of the range of radio-ecological problems facing their areas of residence, and then to actively participate in ecological activities and efforts to make conditions better for themselves and for others. During the course of the studies described above, students living in affected areas repeatedly proposed setting up ecological clubs, and improving their PC literacy by having greater access to the Internet to obtain true and objective information about the ecological situation in their areas. At the same time, a lack of computers and other equipment is an obstacle to efficient educational and awareness-raising activities.

The main source of information about the consequences of Chernobyl for the general population continues to be the mass media. Trust in the mass media has increased noticeably since the days immediately following Chernobyl.

The information needs of the population with respect to overcoming the consequences of the Chernobyl disaster, especially measures of radiation safety and ecologically sound production in the contaminated areas, remain high. The greatest demand is for continuous and objective information oriented at concrete actions to be taken in present contamination conditions in the area, and received by the people from different sources.

A multi-level communication system needs to be developed for all groups of the Chernobyl-affected population, and especially for pupils in educational institutions (including schools and places of higher education).

The success of information activities in the Chernobyl-contaminated areas depends in large part on the involvement of non-government and religious organizations, plus an active involvement by a wide group of those directly affected by the disaster in each local community.

Differences in the level of social and economic development of the districts contaminated by Chernobyl are the primary reasons for different perceptions of information needs expressed by those living in such districts. Therefore, it is worthwhile to use a strategy to target information in contaminated areas in ways that reflect local characteristics and traditions.

To use targeted information effectively, it is necessary to use a quantitative assessment of the effectiveness of information activities in order to rank information influence according to a cost-benefit analysis, thereafter choosing the most optimal informational activities.

**QUESTIONNAIRE ANSWER DISTRIBUTION ACCORDING TO THE SOCIOLOGICAL SURVEY  
MADE BY THE BELARUSIAN STATE AGRICULTURE ACADEMY IN 2004**  
(as % of total participants\*)

Questions and answer options	Aggregate	Gender		Age			Place of residence		
		men	women	under 25	25–45	45–60	over 60	Urban	Rural
<b>1. Gender:</b>									
1. Men	40.5	100.0	0.0	44.5	45.6	39.6	29.0	32.0	50.5
2. Women	59.5	0.0	100.0	55.5	54.4	60.4	71.0	68.0	49.5
<b>2. Age:</b>									
1. Under 25	17.3	19.0	16.1	100.0	0.0	0.0	0.0	23.7	9.8
2. 25–45	37.9	42.7	34.6	0.0	100.0	0.0	0.0	38.2	37.5
3. 45–60	23.8	23.3	24.1	0.0	0.0	100.0	0.0	24.2	23.3
4. Over 60	21.0	15.1	25.1	0.0	0.0	0.0	100.0	14.0	29.3
<b>3. Field of activity:</b>									
1. Education	11.8	7.2	14.9	11.8	18.4	11.6	0.0	18.5	3.8
2. Health care	6.4	2.9	8.8	2.5	10.7	5.5	2.8	9.7	2.5
3. Agriculture	23.4	36.2	14.6	16.8	33.3	31.7	1.4	1.1	49.5
4. Industry and services sector	13.1	17.2	10.2	8.4	17.6	20.1	0.7	21.5	3.2
5. Local authorities and administration	4.2	3.9	4.4	2.5	5.7	6.7	0.0	7.0	0.9
6. Private business	3.2	3.9	2.7	4.2	3.4	4.9	0.0	4.8	1.3
7. Science	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8. Student	7.7	7.2	8.0	44.5	0.0	0.0	0.0	11.6	3.2
9. Pensioner	21.3	14.0	26.3	0.0	0.0	7.9	92.4	13.4	30.6
10. Unemployed	6.0	5.4	6.3	5.0	8.8	7.3	0.0	8.6	2.8
11. Culture	3.0	2.2	3.7	4.2	1.9	4.3	2.8	3.8	2.2

\* 1. A total of answers to questions 8, 10–14, 16, 19–21 is greater than 100%, because the respondents could choose several answers.  
2. A total of answers is less than 100% is when part of the respondents failed to provide an answer.

Questions and answer options	Aggregate	Gender		Age				Place of residence	
4. What kind of area do you live in? 1. Zone of relocation 2. Zone entitled to relocation 3. Zone with preferential socio-economic status 4. Other	6.8 6.1 28.3 58.8	8.6 8.6 37.6 45.2	5.6 4.4 22.0 68.0	5.9 3.4 16.8 73.9	7.7 8.4 35.2 48.7	9.1 6.1 28.0 56.7	3.4 4.1 25.5 66.9	0.8 2.4 13.4 83.3	13.9 10.4 45.7 30.0
5. Do you live in a city or in a village? 1. Urban resident 2. Rural resident	54.0 46.0	42.7 57.3	61.7 38.3	73.9 26.1	54.4 45.6	54.9 45.1	35.9 64.1	100.0 0.0	0.0 100.0
6. Do you know what kind of major sources of radiation are there in human life? 1. I know them well 2. I know some of them 3. I don't know	22.6 60.8 16.0	23.3 57.3 18.6	22.2 63.2 14.1	21.8 73.1 5.0	20.7 65.5 12.6	23.2 59.1 17.1	26.2 44.1 29.7	27.2 61.6 11.3	17.4 59.9 21.5
7. Do you need to know more about it? 1. Yes 2. No	66.2 32.9	64.9 34.4	67.1 32.0	69.7 28.6	65.1 33.7	65.2 34.1	66.2 33.8	72.0 27.7	59.3 39.1
8. What kind of information do you need most of all? 1. Radiation health impact 2. Radiation units of measurement 3. Safe and unsafe radiation levels 4. How can one protect oneself against radiation 5. Which government agencies supervise radiation safety 6. How will the radiation situation change in time 7. Other	52.5 4.2 11.5 40.5 9.9 20.5 3.0	50.2 4.7 11.8 33.3 9.7 16.8 1.8	54.1 3.9 11.2 45.4 10.0 22.9 3.9	54.6 5.0 14.3 55.5 12.6 24.4 3.4	53.6 3.1 11.1 40.2 10.3 25.3 3.8	55.5 6.1 11.0 32.9 7.3 22.0 3.7	45.5 3.4 10.3 37.2 9.7 6.9 0.7	49.2 4.0 14.0 50.3 12.6 32.3 4.6	56.5 4.4 8.5 29.0 6.6 6.6 1.3

Questions and answer options	Aggregate	Gender		Age			Place of residence		
9. Do you know the radiation situation in your area of residence? 1. I know it well 2. I am not sure if I know everything about it 3. I don't know	17.9	14.7	20.0	4.2	12.3	19.5	37.2	14.8	21.5
	43.1	47.3	40.2	58.8	46.5	41.5	26.2	40.3	46.4
	38.8	37.6	39.5	37.0	41.2	38.4	36.6	44.6	31.9
10. What exactly do you need to know about the radiation situation? 1. Food contamination 2. House radiation situation 3. Area contamination 4. Other	57.0	50.9	61.2	63.3	57.9	52.4	55.9	62.6	50.5
	19.3	17.9	20.2	19.3	26.4	19.5	6.2	25.3	12.3
	44.8	47.3	43.2	43.7	48.3	50.0	33.8	48.7	40.4
	4.2	3.2	4.9	5.0	4.2	4.9	2.8	5.6	2.5
11. Who would you trust when it comes to radiation situation in your area? 1. Local authorities 2. National government 3. Sanitary and epidemiological services 4. Doctors 5. Scientists 6. Ecological organizations 7. Friends, neighbors, relatives 8. Other source	10.0	8.6	11.0	6.7	9.6	7.3	16.6	11.8	7.9
	13.5	12.5	14.1	6.7	6.9	10.4	34.5	7.5	20.5
	23.2	18.3	26.6	33.6	24.1	19.5	17.2	33.1	11.7
	13.2	12.9	13.4	17.6	13.0	15.9	6.9	13.2	13.2
	31.3	36.9	27.6	36.1	36.8	34.1	14.5	28.5	34.7
	26.0	21.5	29.0	40.3	27.2	19.5	19.3	33.6	17.0
	4.2	7.2	2.2	0.8	6.1	6.7	0.7	3.0	5.7
	4.1	3.6	4.4	5.0	3.4	4.3	4.1	6.2	1.6
12. Who are you sure not to trust when it comes to radiation situation in your area? 1. Local authorities 2. National government 3. Sanitary and epidemiological services 4. Doctors 5. Scientists 6. Ecological organizations 7. Friends, neighbors, relatives 8. Other source	34.7	36.9	33.2	42.9	42.5	28.7	20.7	41.7	26.5
	15.4	14.3	16.1	26.1	14.6	13.4	10.3	22.8	6.6
	13.8	17.9	11.0	16.8	15.3	14.6	7.6	10.5	17.7
	11.6	15.4	9.0	9.2	14.9	15.9	2.8	6.2	18.0
	6.2	9.0	4.4	2.5	6.9	10.4	3.4	3.8	9.1
	14.2	19.4	10.7	10.1	11.1	21.3	15.2	9.1	20.2
	43.0	34.8	48.5	39.5	32.2	40.2	68.3	44.6	41.0
	3.2	2.2	3.9	5.0	3.1	4.9	0.0	5.4	0.6



Questions and answer options	Aggregate	Gender		Age				Place of residence	
13. Select the most convenient way of receiving information:									
1. Flyer in a mailbox	12.9	12.5	13.2	21.8	13.8	12.8	4.1	18.8	6.0
2. Poster in a hospital	3.0	2.9	3.2	2.5	2.7	3.0	4.1	2.7	3.5
3. Magazine in a library	3.3	3.6	3.2	4.2	5.4	2.4	0.0	4.0	2.5
4. Newspaper article	26.0	21.5	29.0	24.4	22.6	21.3	38.6	30.1	21.1
5. Television program	47.8	46.6	48.5	45.4	48.3	46.3	50.3	46.0	49.8
6. Lecture in a leisure-development center	7.3	9.3	5.9	8.4	8.4	6.7	4.8	6.7	7.9
7. Conversation	18.3	16.5	19.5	25.2	20.7	20.1	6.2	22.0	13.9
8. Other	2.3	3.6	1.5	4.2	1.5	4.3	0.0	1.9	2.8
14. Many recommendations have been developed after the Chernobyl accident. What kind of information was the most useful for you?									
1. Where it is safe or unsafe to live	34.5	35.1	34.1	31.1	35.2	34.1	36.6	31.5	38.2
2. Which food products contain more radiation, which less	26.7	25.8	27.3	32.8	27.6	25.0	22.1	33.9	18.3
3. How to produce clean agricultural products	19.6	21.1	18.5	22.7	17.6	22.0	17.9	16.9	22.7
4. Where one can check food for radiation level	9.6	10.0	9.3	11.8	12.3	7.9	4.8	13.4	5.0
5. Ways to reduce radiation content in food	22.5	18.6	25.1	32.8	18.4	21.3	22.8	28.8	15.1
6. What consequences consumption of unclean food entails	17.1	14.0	19.3	21.8	22.2	15.2	6.2	25.8	6.9
7. Other	2.3	3.6	1.5	5.0	2.3	2.4	0.0	2.7	1.9

Questions and answer options	Aggregate	Gender		Age				Place of residence	
15. Which consequences of the Chernobyl accident do you think proved to be most serious? 1. Environmental contamination 2. Decline in living standards of the affected population 3. Difficulties with clean food production 4. Health deterioration 5. Benefit distribution inequities 6. Lack of prospects for the affected areas 7. Other	37.7 32.2 8.6 71.6 9.1 11.8 0.7	36.6 33.3 12.2 62.7 7.2 8.6 1.8	38.5 31.5 6.1 77.6 10.5 13.9 0.0	38.7 37.0 6.7 76.5 10.1 10.1 0.0	35.2 30.3 10.3 69.3 11.5 10.7 1.5	30.5 36.0 7.9 70.1 11.6 12.2 0.6	49.7 27.6 7.6 73.1 1.4 14.5 0.0	39.5 28.2 9.1 75.8 9.9 14.2 0.8	35.6 36.9 7.9 66.6 8.2 8.8 0.6
16. What kind of Chernobyl information is more useful for you? 1. It is more useful to know which consequences have already happened 2. It is more useful to know which consequences we have yet to face 3. It is equally useful for me to know both what happened and what will happen 4. No information is useful, too tired of it	4.1 31.1 53.8 9.7	5.4 34.4 49.5 10.0	3.2 28.8 56.8 9.5	4.2 33.6 58.0 3.4	5.4 27.6 59.4 6.1	3.7 30.5 53.0 11.0	2.1 35.9 41.4 20.0	2.7 27.4 60.2 8.6	5.7 35.3 46.4 11.0
17. Would you like to be personally involved in the dissemination of Chernobyl information? 1. Yes 2. No	31.5 67.2	38.0 60.9	27.1 71.5	31.1 68.1	34.9 63.6	38.4 59.1	17.9 82.1	25.8 73.7	38.2 59.6

Questions and answer options	Aggregate	Gender		Age				Place of residence	
18. Who do you think can make a difference in the contaminated areas?									
1. Inhabitants themselves	11.9	10.0	13.2	15.1	13.4	6.1	13.1	14.2	9.1
2. Business and farm leaders	15.1	13.3	16.3	22.7	10.7	13.4	18.6	16.1	13.9
3. Scientists	20.0	22.9	18.0	21.0	24.5	20.1	11.0	18.8	21.5
4. President	29.9	23.7	34.1	19.3	24.9	29.3	48.3	30.4	29.3
5. Government	56.2	50.5	60.0	42.0	54.8	62.2	63.4	51.3	61.8
6. International organizations	25.5	34.1	19.8	39.5	28.0	30.5	4.1	24.7	26.5
7. Other	3.8	2.2	4.9	5.0	3.8	3.7	2.8	6.2	0.9
19. Which measures are the most critical for the improvement of living conditions in the contaminated areas?									
1. Area decontamination	20.8	19.7	21.5	31.1	13.8	14.6	31.7	24.7	16.1
2. New jobs	18.4	20.4	17.1	15.1	22.2	15.9	17.2	21.2	15.1
3. Health care improvement	68.4	59.9	74.1	67.2	60.9	73.2	77.2	64.8	72.6
4. New research	13.5	15.8	12.0	11.8	18.8	11.6	7.6	17.7	8.5
5. Appointment of smart business and farm leaders	26.4	23.3	28.5	26.9	25.7	27.4	26.2	30.4	21.8
6. Foreign humanitarian aid	9.7	15.4	5.9	7.6	10.7	16.5	2.1	2.2	18.6
7. Strengthening of private gardens	4.8	4.3	5.1	1.7	3.4	6.1	8.3	3.0	6.9
8. Education improvement in schools and universities	9.0	10.0	8.3	7.6	10.7	11.6	4.1	5.6	12.9
9. Other	1.7	1.1	2.2	1.7	3.1	1.2	0.0	2.7	0.6
20. What worries you most of all these days?									
1. Radioactive contamination	21.8	20.1	22.9	22.7	21.5	17.7	26.2	22.3	21.1
2. Health concerns	74.2	67.7	78.5	73.1	71.6	70.7	83.4	75.8	72.2
3. Low living standards	50.5	47.7	52.4	54.6	42.1	57.9	53.8	53.2	47.3
4. Lack of full-time or part-time work	14.9	16.1	14.1	15.1	18.4	16.5	6.9	19.4	9.8
5. Cancellation of benefits and compensations	11.9	14.0	10.5	6.7	13.8	16.5	7.6	6.5	18.3
6. Other	1.0	1.8	0.5	0.0	1.9	0.6	0.7	1.1	0.9

Questions and answer options	Aggregate	Gender		Age				Place of residence	
21. Are you sufficiently informed about social protection measures? 1. Yes 2. No	37.2 62.4	36.6	37.6	21.0	31.4	30.5	68.3	29.8	45.7
		62.7	62.2	79.0	68.2	68.3	31.7	70.2	53.3
22. You represent local administration. You know you don't have a lot of money at your disposal. Which one of the social protection options would you choose? 1. Small benefits for all residents 2. Large benefits, but only for residents of the most contaminated areas 3. Large benefits, but only for those who need them most of all 4. Other	31.2 35.7 27.0 4.9	31.2	31.2	29.4	33.0	30.5	30.3	34.7	27.1
		35.8	35.6	37.0	37.9	37.8	28.3	26.9	46.1
		27.2	26.8	26.1	25.7	26.2	31.0	30.9	22.4
		4.7	5.1	5.0	3.1	3.7	9.7	6.2	3.5
23. Can you recall any real funny story associated with radiation? 1. Yes 2. No	14.5 84.3	20.1	10.7	11.8	16.5	15.2	12.4	12.9	16.4
		79.2	87.8	86.6	82.0	84.1	86.9	86.6	81.7
24. Do you think such polls can make a difference? 1. Yes 2. No	26.9 72.9	26.2	27.3	39.5	20.7	25.6	29.0	32.3	20.5
		73.8	72.2	60.5	78.9	73.8	71.0	67.7	78.9
25. What do you think about this poll? 1. It means my opinion counts 2. Sorry to say, but it is a waste of time 3. Glad to be of service 4. Again all is on paper, nothing is done 5. Other	15.7 25.8 21.8 34.4 1.7	13.6	17.1	15.1	9.2	9.1	35.2	16.4	14.8
		26.9	25.1	19.3	30.7	25.0	23.4	22.6	29.7
		20.1	22.9	24.4	21.5	23.2	18.6	28.8	13.6
		36.2	33.2	37.8	35.6	41.5	21.4	29.8	39.7
		2.9	1.0	3.4	2.7	0.6	0.0	1.9	1.6

**ANSWER DISTRIBUTION TO QUESTIONNAIRE'S OPEN QUESTIONS ACCORDING TO THE SOCIOLOGICAL SURVEY,  
MADE BY THE BELARUSIAN STATE AGRICULTURE ACADEMY IN 2004**

**(as % of those who provided answers)**

Questions	Answers by respondents		Answers, %	
	2	3	of the aggregate	of those who provided answers
1			3	4
What kind of information did you need, but never get?	There is not enough information on anything There is no explanatory information about radiation impact on human health I don't know radiation level at my home What is the current radiation situation in our town and what is a forecast for the future? What assistance is currently provided by international organizations? How can one produce more or less clean agricultural produce in a contaminated area? What are the ways to reduce food radiation content? What should we expect in terms of consequences from living in the contaminated areas? There is no statistics on lifespan in the Chernobyl-affected areas. Is living in the area where we are living right now possible at all? Which parts of Belarus is it unsafe to live in because of radiation? Which parts of Belarus have radiation levels that are safe for human health? What is an iodine impact? How do different food products accumulate radiation? How can radionuclides be removed from a body? Where can one measure food products for radiation? What was the radiation level in the world in 1990 and how did it impact on people? How many generations will take the consequences of radiation? We need prompt information about radiation level changes What was the actual radiation situation in urban environment in the 90's?	10.9 4.9 4.4 3.0 2.6 2.2 2.0 1.9 1.7 1.3 1.2 1.2 1.2 0.7 0.7 0.1 0.1 0.1 0.1	25.3 11.4 10.1 7.1 6.1 5.1 4.7 4.4 4.0 3.0 2.7 2.7 2.7 1.7 1.7 0.3 0.3 0.3 0.3	



1	2	3	4
	<p>Which of the accident's consequences will be affecting people in 2030? Are there other sites in Belarus similar to the Chernobyl Nuclear Power Plant? If yes, what condition are they in? Which food products have higher iodine content? How will the demographic situation change in the future because of the Chernobyl NPP accident? Where can I procure a small home dosimeter? Will living safely in a contaminated area be possible in the future? How does the sun radiation affect people living in a contaminated area? What should a person do in the early hours of a nuclear power plant accident to avoid greater health harm? What will happen after full disintegration of Cesium and Strontium? What are the consequences of consuming radiation products?</p>	<p>0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1</p>	<p>0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3</p>
<p>What kind of information about social support do you think is missing?</p>	<p>Who is eligible for benefits and on what grounds? Why do benefits keep changing all the time? Which social protection interventions targeting people living in the contaminated areas are available? What are additional health care benefits? What social benefits can be claimed for health deterioration? On provision of housing, employment for the Chernobyl-affected people. I do not know about social safeguards in case of disablement</p>	<p>17.1 2.2 1.2 1.2 0.7 0.6 0.4</p>	<p>39.7 5.1 2.7 2.7 1.7 1.3 1.0</p>

1	2	3	4
<p>Which important things did this poll fail to cover or what haven't you been asked about ever since the Chernobyl accident?</p>	<p>Health status of people living in the contaminated areas            Do we have sufficient income level and availability of resources to improve health?            Financial status            What future should we expect because of the Chernobyl disaster?            What is the psychological condition of people living in the contaminated areas?            Where we would like to live at the moment            Whether people want or don't want to live in the contaminated areas            Whether we need an annual full medical examination            Do we need new nuclear power plants?            What kind of assistance does the affected population require?            Do we receive enough information about ecological status?            How often do we undergo medical examination?            The current condition of sports facilities            Healthy lifestyle arrangements in our town</p>	<p>13.2            4.8            4.8            3.6            1.2            1.2            0.4            0.4            0.4            0.3            0.1            0.1            0.1            0.1</p>	<p>4            30.6            11.1            11.1            8.4            2.7            2.7            1.0            1.0            1.0            0.7            0.3            0.3            0.3            0.3            0.3</p>

**Annex 3**  
**INFORMATION NEEDS FOR THE CHERNOBYL-AFFECTED REGIONS ACCORDING TO THE RESULTS OF THE RESEARCH, MADE BY THE NON-GOVERNMENTAL ORGANIZATION “BELARUSIAN COMMITTEE “CHILDREN OF CHERNOBYL” (2004)**

<b>Groups of population</b>	<b>Information needs</b>	<b>Methods to satisfy the information needs</b>
Villagers	<ul style="list-style-type: none"> <li>- on the rights of the population, affected by the Chernobyl catastrophe (additional pecuniary aid, receiving medicine on preferential terms, etc.);</li> <li>- on the tariff reduction for public utilities;</li> <li>- on the possible additional sources of income.</li> </ul>	Through local radio and TV (special series of broadcasts), rubrics in local newspapers.
Schoolchildren, pupils	<ul style="list-style-type: none"> <li>- on the knowledge about ecology, radiation hygiene, human rights, sustainable development of the territories, new agricultural technologies;</li> <li>- to receive educational, cultural, communicative and other information via Internet.</li> </ul>	Elective courses, seminars, youth research activity. Opening of Internet-clubs.
Teachers	<ul style="list-style-type: none"> <li>- in the receiving of information for the organization of successful radio-ecological training for pupils;</li> <li>- in the questions of radiation hygiene, law, sustainable development of the country and districts;</li> <li>- about existing opportunities to raise the level of professional skills in the system of postgraduate education;</li> <li>- in adapted educational programs and methods of training for Chernobyl-affected regions;</li> <li>- in computer skills and Internet access.</li> </ul>	Organization of the seminars “Life near the radiation”, “Role of a rural school in the development of Chernobyl-affected regions”. Elaboration or improvement by scientist special educational programs and methods of training for Chernobyl-affected regions.
Doctors	<ul style="list-style-type: none"> <li>- in raising of skills on radiation medicine, radiation hygiene, radioecology, radiobiology;</li> <li>- in receiving of information about modern medical research achievements for prophylaxis, treatment and rehabilitation of the affected population;</li> <li>- in computer skills and Internet access.</li> </ul>	Organization of special courses, series to improve professional skills, seminars on radiation medicine, radiation hygiene, radiobiology and radio-ecology, participation in scientific conferences, issue of special periodicals.
Culture workers	<ul style="list-style-type: none"> <li>- in rebirth and support of traditions, arts and folklore;</li> <li>- in the organization of leisure for teenagers and youth;</li> <li>- in the development of culture initiative and popular spontaneous actions;</li> <li>- in the organization of Internet-clubs, cultural and entertaining centers, sport clubs;</li> <li>- in computer skills and Internet access.</li> </ul>	Organization of series of seminars “Organization of spare time for youth”, “About the cultural initiative of population development”, etc.

Groups of population	Information needs	Methods to satisfy the information needs
District authorities	<ul style="list-style-type: none"> <li>- about health requirements for health support of population under the conditions of radioactive exposure;</li> <li>- about concept of sustainable development of the country, the possibilities of transition to the sustainable development of a district, the opportunities to satisfy citizens' inquiries regarding work and social services;</li> <li>- about the preparation of purpose programs of the development of a district;</li> <li>- about the embedding of district economy into region economy, country economy, about the possibilities to enter the foreign markets;</li> <li>- about new agricultural technologies, their costs, perspectives and possibilities to use;</li> <li>- about existing natural resources in a district and their usage for sustainable development;</li> <li>- in increasing of legal, economic and marketing skills;</li> <li>- in the improvement of non-government organizations and initiatives activity;</li> <li>- in computer skills and Internet access.</li> </ul>	<p>To organize series of lectures "Sustainable development of the Chernobyl-affected regions".</p> <p>Organization of seminars "Radiation hygiene requirements in production process, preschool and school institutions, in private life", "Resource centers is a way to sustainable development of a district".</p> <p>To organize special rubrics for the heads of the Chernobyl-affected regions in the information materials of the National Academy of Sciences and other institutions.</p> <p>Organization of information and practical edition for leaders of the Chernobyl-affected regions on sustainable development and the organization of safe vital activity.</p>
Regional authorities	<ul style="list-style-type: none"> <li>- about the concept of sustainable development of the country, about opportunities of transition to the sustainable development of the Chernobyl-affected regions;</li> <li>- about the preparation of programs for the development of regions.</li> </ul>	<p>Series of lectures and seminars "Sustainable development of the Chernobyl-affected regions."</p>
Mass media	<ul style="list-style-type: none"> <li>- on the organization of information of the population in the questions of safe vital activity under the conditions of radioactive contamination;</li> <li>- about the concept of sustainable development of the country and region;</li> <li>- on the effective realization of "recovery stage";</li> <li>- on satisfaction of the information needs of the people of the contaminated regions.</li> </ul>	<p>Organization of seminars "Safe vital activity in the Chernobyl-affected regions", series of lectures and seminars "Sustainable development of the Chernobyl-affected regions". It is necessary to organize for district newspapers and radio, regional TV interviews with specialists on the safe vital activity under the conditions of radioactive contamination of the territories.</p>

**An Information Needs Assessment of the Chernobyl-affected Population in the Republic of Belarus:** The report has been prepared under the UNDP/Belarusian Chernobyl Committee Project entitled “International Research and Information Network”, with support from the UN Office for the Coordination of Humanitarian Affairs (UN OCHA) and Swiss Agency for Development and Cooperation (SDC) – Minsk: Unipack, 2004. – 60 p.

This report identifies and analyzes the information needs of the Chernobyl-affected population of Belarus. It describes key communication obstacles that have caused information gaps, which in turn have caused concerns on the part of the affected population; this report also presents conclusions and offers project proposals designed to enhance the public integrated communication system in order to ensure rehabilitation and sustainable development of contaminated areas. This report has been compiled by a national team of experts, governmental agencies and NGOs, working together in accordance with a Multi-Stakeholder Process, under the UNDP/Belarusian Chernobyl Committee Project entitled, “International Chernobyl Research and Information Network,” with support from the UN OCHA and SDC. The report is intended for the UN system and its funds, programs and specialized agencies, as well as for the international community, including donor organizations, governmental agencies and local authorities, as well as for health, education and culture professionals, non-governmental organizations and for general readership.

Popular scientific edition

Report

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