Migration, Development and Environment:
Migration Processes from the Perspective of Environmental Change and Development Approach at the Beginning of the 21st Century

Edited by

Robert Stojanov and Jiří Novosák

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CHAPTER FIVE

THE ENVIRONMENTAL MIGRATION IN CHERNOBYL DISASTER AREA – THE CASE STUDY OF BELARUS[1]

KLÁRA KAVANOVÁ, ROBERT STOJANOV

The phenomenon of the environmentally-induced migration represents one of the scholar issues that is not easy to interpret. The relationship of population migration and environment is problematic (Henry 2006) mainly because that both processes are very complex.

Drbohlav (1994) states that the quality of environment represents one of the basic determinants of population migration. Also Carr (2005) says that environment cannot be excluded from the decision to migrate because it is always a part of the knowledge of local environs and thus always participates on the decision to migrate. Despite these obvious links between migration and environment, the researches and also the public have paid attention to the issue environmental migration just recently, mainly because of its possible linkage with global or regional climate change.

The concept of environmentally-induced migration (more frequently known as environmental migration) results from theory of 'forced (involuntary) migration' that describes the potential factors that 'force' people to involuntary leaving of their habitats. People rarely move for a single reason, the motivation to migrate is composed of many factors, such as personal trajectories and itineraries of the migrants. Humans have

[1] The authors acknowledge the support provided by the Ministry of Education, Youth and Sports of the Czech Republic, project no. MSM 0021620831 "Geographical Systems and Risk Processes in the Context of Global Change and European Integration".

always been in interaction with the environment and both have always influenced each other. The men have always responded to negative changes in the environment (made by the natural forces or from depleting the natural sources) by migrating elsewhere. We can trace the population migration due to changes in environment back to ancient history, but we do not have accurate data to this migration flow. Only some events in the 20th century bring relevant information about the phenomenon; however the environmental conditions are quite different then couple of thousands of years ago. First of all, human demography explosion and growth of population density during the last centuries significantly changed the living conditions in every part of the planet. The space for living became very constraining. The scarcity of land usable for agricultural production (both for cultivation and grazing) is one of the most important factors of limitation for new mass human migration flows due to environmental change. This fact differentiates the present-day migration flows from those we know from history. Modern environmentally-induced migration has already become one of the global challenges that human society has to face and the regular scholar investigation of the phenomenon is a key for managing the possible migration flows in coming times.

Nevertheless, environmental problems cause various troubles to human society also in the present world. People have to face this fact and need to cope with changes. In some cases, the response is represented by migration elsewhere and migration is perceived as the traditional survival strategy. In Belarus, the disaster of Chernobyl nuclear power plant was the main reason that forced people to migrate. The research presented in this chapter discovers how social and economic conditions of people, originally living in the areas that became affected by the disaster, changed after they were forced or 'voluntarily decided' to move from their traditional habitat.

The prime goal of this chapter is to present conceptualization of the environmentally-induced migration on the general level and also to present the field research results that were obtained among environmental migrants and people affected by environmental degradation caused by nuclear disaster in Belarus. The environmental migration in the region (including Ukraine and part of Russia) arose from the Chernobyl nuclear power plant disaster that happened in 1986. So far, lot of research has been done focusing on economic and health impacts of the disaster but no research focusing on the population migration due to the deteriorated environment.

The chapter consists of two parts. First part deals with theoretical conceptualization of the environmental migration issue and it is based on desktop analysis of principal sources dealing with the environmentally-induced migration issue. Authors present a brief summary of historical development of the concept and theories that concern with the definition of the phenomenon, including critical approaches. In the conclusion of this part, they present one of the possible typologies of environmental migrants as some kind of intersection of other classifications.

The second part of the chapter deals with the migrations of people dealing with Chernobyl nuclear disaster in 1986. The authors present first outcomes of their field research in the area in 2007 where they tried to identify present quality of life of environmental migrants in comparison with their quality of livelihood before the disaster. The second objective was to compare the quality of life of environmental migrants with the quality of livelihood of people who did not migrate from the contaminated areas. Along with these two objectives the reasons to resettle or to remain were also examined.

The first group of 'studied migrants' was represented by people who were displaced by former Soviet government in 1986 almost immediately after the Chernobyl disaster; or by people who have decided to migrate during the early 1990s (already in the time of independent Belarus). The second group consisted of people who did not decide to migrate and despite the impaired environment remained living in their original habitat. In total, 28 interviews were made, counting total of 32 respondents. Age of respondents varied from 30 to 80 years and women were the majority of respondents (22 women).

The interviews took places in 6 localities. One locality in the 'clean area' (city of Minsk) and five localities in the 'contaminated area' (towns or villages in southern Belarus - Bragin, Cecersk, Narovlje, Savici and Cechy) that were chosen after the interviews in Minsk were made. It was done so in order to compare answers of Minsk respondents with answers of people still living in the contaminated area. Thus, each of the chosen locations in the contaminated area used to be 'home' for part of the interviewed environmental migrants in Minsk. The anonymous semi-structured in-depth interviews were used as the main methodological tool for the field research. The analysis of interview was completed by data and information that were compiled from scholar literature received during the

field survey in Belarus or other sources such as scientific journals and publications dealing with the issue.

The concept of environmentally-induced migration

The concept of environmentally-induced migration (more frequently known as environmental migration), as it was mentioned above, results from 'forced (involuntary) migration' approach. It is described by the potential factors that 'force' people to involuntary leave their habitats. Castles (2005: 1) notes that forced migration includes a number of legal or political categories and popular usage of the term tends to call all forced migrants 'refugees', but in legal terms refugees are actually a quite narrow category. He argues that the majority of forced migrants flee for reasons not explicitly recognized by international refugee law and that many of them are displaced within their own country of origin. Even if the governments particularly want to make clear distinctions between refugees and economic migrants, many people are forced to flee their homes and families due to 'mixed motivations' which produce new term 'the migration-asylum nexus'. That refers to the blurring of the distinction between economic and forced migration (Castles 2005: 1, compare with Myers 1993: 752).

Environmental degradation, natural resource depletion and natural disasters can play a contributing role as an important push factor in affecting population movement during the human history, often filtered through contexts of poverty, food or/and water deficiency, civil conflicts and social inequity. In this way, Myers (1993 and 2001), Myers and Kent (1995), Brown (2004) and others declare the rapidly increasing number of incidents that force people to leave their houses and fields due to environmental change. Moreover, the same authors regard environmental migration as an emerging issue of global importance, especially in the light of analysis of climate change carried out by the Intergovernmental Panel on Climate Change (McLeman and Smit 2004: 5).

According to Saunders (2000: 229), the concept of environmental migration was first popularized in 1976 by Lester Brown et al. in Worldwatch Institute as the 'ecological refugees' because of various environmental reasons. The first definition of environmental migration phenomenon was proposed by El Hinnawi (1985: 4) in his report for United Nations Environment Programme (UNEP), where he defined environmental refugees as those people who have been forced to leave

their traditional habitat, temporarily or permanently, because of a marked environmental disruption (natural and/or triggered by people) that jeopardized their existence and/or seriously affected the quality of their life.

Jacobson (1988: 37-38) argues that 'environmental refugees' have become the single largest class of displaced persons in the world that includes three broad categories:

- Those who have been temporarily displaced because of a local disruption such as avalanche or earthquakes
- Those who migrate because environmental degradation has undermined their livelihood or poses unacceptable risks to health
- Those who resettle because land degradation has resulted in desertification or because of other permanent and untenable changes in their habitat

One of the most cited definitions offers Myers (1993: 752 and 2001: 609). According to him 'environmental refugees' are people who can no longer gain a secure livelihood in their homelands because of drought, soil erosion, desertification and other environmental problems, together with the associated problems of population pressures and profound poverty. In their desperation, these people feel that they have no alternative but to seek sanctuary elsewhere, regardless how hazardous the attempt is. He adds that not all of them have fled their countries, many being 'internally displaced', but all have abandoned their homelands with little hope of foreseeable return. Similarly, Leiderman (2002) claims that 'environmental refugee' is someone fleeing or who has fled from a natural disaster or chain of events that includes severe environmental deterioration; depending on combination of causes, they may be both environmental refugees, even refugees from economic disaster.

Generally, environmental migrants (refugees) are people who were forced to leave their traditional habitat, temporarily or permanently, because of a lack of natural resources and/or environmental disruption that had jeopardized their existence and seriously affected the quality of their life. Thus, the home-region was not able to ensure them safe livelihood. By ´environmental disruption´ is meant any physical, chemical and/or biological change in ecosystem (or the resources base) rendering it temporarily or permanently in the way, which is unsuitable to support human life. Environmental disruption, often triggered by population

pressures and poverty, can be caused by natural and/or human activities. Not all migrants flee their country, many of them are being labelled as 'internally displaced people' (compare with Myers 2001, Leiderman 2002).

The definitions of environmental refugees or environmental migrants were criticized or commented from many points of view. Black (2001) is one of the most cited authors dealing with the issue. He agrees with the central point that the environmental degradation and natural hazards may be important factors in the decision to migrate, however the conceptualization of environmental degradation (change) as a primary cause of forced displacement is unhelpful and unsound intellectually and unnecessary in practical terms (Black 2001: 1). Similarly Homer-Dixon (1993: 40-41) believes that the term 'environmental refugees' is misleading because it implies that environmental scarcity will be the direct and sole cause of refugee flows. Usually, it will be just one of the large numbers of interacting physical and social factors that together may force the people from their homelands. The term does not also distinguish between people who are fleeing due to genuine disaster or acute hardship and those who are migrants for a variety of less urgent reasons. He suggests using the term 'environmental refugees' only when there is a sudden and large environmental change. He presents an example of population displacement rising from environmental land scarcity in Bangladesh where the issue has been a key factor causing the large-scale movement of people from the country to the Indian state Assam (Homer-Dixon 1993: 41-42).

In the context, Castles (2002: 2) makes an interesting point - a clear disciplinary divide exists within the literature between ecologists and geographers, or environmental experts and migration specialists. The first ones tend to be strong advocates of environmental ‘refugees’, considered as a new category of migrants (Myers and Kent 1995, Brown 2004, Leiderman 2002 and many others), while the migration or political studies specialists seem to be much more sceptical about the concept, dreading a water-down of the very concept of refugees. Also, they estimate that the concept is unsound intellectually, and unnecessary in practical terms (Black 2001, Homer-Dixon 1993).

The migration experts (e.g. Black 1998 and 2001, Castles 2002) argue that there are no environmental refugees as such, however environmental factors do play a part in forced migration, and displacements due to environmental factors are always closely linked to other factors, such as social and ethnic conflict, weak states, and inequitable distribution of

resources and abuse of human rights. According to Castles (2005: 4) it is thus difficult to define who is an environmental or disaster displacee, or to quantify this category by any meaningful way, and the emphasis on environmental factors can be a distraction from central issues of development, inequality and conflict resolution.

At this approach Myers (1993: 752) is aware of difficulties in making difference between refugees driven by environmental factors and those who are forced by economic problems. According to him are international migrants, notably those with moderate though tolerable economic circumstances, probably pulled by an opportunity of a better economic life elsewhere rather than pushed by the environmental degradation. He claims however, that the people who migrate because they suffer outright poverty are frequently driven by root factors of environmental degradation (Myers 1993: 752), as well as the people who have migrated in large numbers and proportions in the past mainly due to deficits of natural resources (e.g. land, famines). The economic impoverishment is closely related with environmental degradation. The significant or dominant role of environmental factors in human movement decision-making process are evident in the event of migration to regions where economic conditions for living are on the same level or worse than in area of origin. Myers (1993: 752) points out that this is the case of migrants in sub-Saharan Africa and the Indian subcontinent.

However, Suhrke (1993: 4-7) on the bases of the environmental change and population movements literature survey argues, that two different and opposing perspectives can be discerned:

1. The minimalists

The advocates of this view, primarily found in migration studies (compare with Castles 2002: 2 or see above), see environmental change as a contextual variable that can contribute to migration, but warns that there is a lack of sufficient knowledge about the process to draw firm conclusions. According to the minimalists, migration, like social processes generally, is not a mono-causal phenomenon and some environmental degradation by itself is not important as a cause of migration. Moreover, migration is for rural people one of the several coping strategies to deal with poverty which in itself reflects a combination of social, economic, environmental and political conditions.

2. The maximalists

The proponents of this perspective, by contrast, argue that environmental degradation has already displaced millions of people, and more displacement is on the way. They tend to extract the environmental variable from a cluster of causes and proclaim the associated outmigration as a direct result of environmental degradation.

Suhrke (1993: 6) criticizes maximalists for the uncritical approach to the issue such as a very general definition notion of (environmental) refugees and inflated estimation of numbers. She argues by many arguments that there are primary economic and social reasons for environmental degradation which cause outmigration, nevertheless at the same time she claims that we need to do more research about the linkages of the degradation to the patterns of both resource use and migration (Suhrke 1993: 8).

Similarly, Bilsborrow (1992: 3-4) surveyed three categories of environmental degradation factors (such as land degradation, drought relevance in influencing out-migration decisions of rural populations. Environmental degradation may induce outmigration via income effects (by reducing income-earning opportunities through, for example, reduction of soil fertility or depletion of the available water supply) and migration may also be viewed as part of a household survival strategy; by risk effects (by increasing the instability of income resulting such as from greater severity or frequency of drought or flooding), or by making the environment less pleasant or healthful (the product of, for example, increased air pollution).

Nevertheless, Bilsborrow (1992: 3) also supposes the existence of 'environmental refugees' in extreme cases, such as drought or natural disaster, where the role of environmental factors in impelling out-migration becomes dramatically evident and those forced to move are labeled. Finally, Kibreab (1997: 33) in relation to this approach argues that environmental change and population displacement are the consequences of war and insecurity rather than their causes. War and insecurity force people and their animals to congregate in safer areas.

Most of the mentioned approaches are based on understanding of only one category - environmental migrant (refugee) - and do not take into account different causes of this type of migration. In this context, Stojanov (2008a: 138) presented his structural cross-sectional typology of

environmentally-induced migration in first version and later he put more preciously (Stojanov 2008b). He divides environmental migrants to three main categories:

1. Environmentally motivated migrants

This category covers people who chose to move relatively voluntarily from their usual place of residence primarily due to relatively serious[2] environmental concerns or reasons (change). These people move because, in their minds, environmental factors are one of the foremost reasons for leaving their usual place of residence (e.g. environmental pollution, natural or human disasters risks, slow-onset land degradation, etc.).

This type of migration is pro-active, and can also be viewed as a coping or adaptation strategy. However, 'amenity migrants', who also move voluntarily, are not included in this category. In the context is important to recognize that environmental dimension in other causes of migration such as politically motivated or economically motivated migration.

2. Environmental displacees

This category includes people who are forced to leave their usual place of residence, because their lives, livelihoods and welfare have been at serious risk as a result of adverse environmental processes and natural disasters. These are people who were displaced by both slow onset and rapid onset environmental process and natural events such as natural disasters, land degradation, water or other natural resources deficiency and sea-level rise, industrial disasters. The speed of departure makes dividing the category into two sub-categories:

- Slow-onset environmental displacees

This category covers people who have relatively longer time for displacement and better presumption of preference for finding place for new livelihood, in comparison with the following sub-category. They have longer experience with environmental degradation or periodical natural disasters, and their decision-making process for migration has gradually grown.

[2] For a clear distinction from amenity migrants, these reasons must be subjectively or objectively evaluated as a serious environmental degradation or change.

- Rapid-onset environmental displacees

They are people who had to move from the place of origin almost immediately before predicted natural disaster or immediately after that. Their habitat is generally completely destroyed (houses, livelihood, fields and crops) or they lost some source fundamental for survival (safe water, food, etc.).

3. Development displacees

Those people are intentionally relocated or resettled due to a planned land use change and economic development. This type of displacement includes people who are displaced due to development projects such as dam construction, irrigation canals building, transport infrastructure development, as well as nature/wildlife conservation projects. This kind of displacement differs greatly from the two previously mentioned categories since the displacement of environmentally motivated migrants and environmental displacees is unplanned and unintended[3]; there is a clear responsibility of some institution (such as government, municipality, private company, etc.) for the environmental degradation and also compensations.

Each of the migrant's group has its own time specification. Environmentally motivated migrants category primarily includes, on principle, permanent migrants because they relatively voluntarily moved from their usual place of residence due to serious environmental concerns or reasons (change) in their mind. Those people probably chose different place for living as a permanency, they had relatively enough time to make decision. However long-term (more than one year) or temporary (lesser than one year) migrants can occur.

Nevertheless broader category of environmental displacees includes permanent and long-term, as well as temporary or cyclical migrants considering the fact there are so many different reasons for migration. Last category development displacees involves, in particular, permanent migrants. Their environment has been completely and permanently destroyed by human activities.

The environmental migration is not a definitely new phenomenon, but recent extend of population pressure, environmental degradation or change in some regions and the threats of climate change (e.g. sea-level rise,

[3] The author of the note is originally Prof. Janos Bogardi from UNU-EHS, Bonn.

rainfall season moving, droughts), together with possibilities to acquire the modern automatic guns (such as AK-47) add new security dimensions to the phenomenon. On behalf of authors of this chapter is necessary to state, that it is more accurate and less conflicting to use the term 'environmental migrant', instead of 'environmental refugee' which falls under the international and national legal definitions of refugees and does not express accurately broad context of the phenomenon (see below). That is why we use the term environmental migrant(s) on the general level as the main issue at the following text. Similarly, by the 'environmental migration' in the following paragraphs is meant the phenomenon originated by environmental change, natural hazards and natural resources depletion which are the only or one of the most important direct factor(s) determining the economic developments or impoverished of the migrant.

The population migration due to the environmental change may increase also because of the dissemination of human activities to regions that are vulnerable to natural hazards (Marsh and Grossa 2002). Despite the importance of this fact, there is rather a lack of research on this topic. According to Shestakov and Streletsky (1998) this phenomenon has been under researchers' scope just from the 1980s. When writing about the relation of migration and environment, most of the authors focus on analyses of the already published literature. The specific research and methodological approaches of the research are missing. It is mainly due to the lack of data that would relate the migration and environment (Henry 2006).

Despite this lack of data and research, the International Organization for Migration has already stated in 1992 that it is necessary to specify the causes of environmental migration (see IOM 1992). Many authors, like Shestakov and Streletsky (1998), Lonergan (2002), Kliot (2004), Myers (2001) and others have dedicated their articles to this issue, but there is no one single solution of how to specify the causes of environmental migration. Almost each author develops own set of causes of environmental migration; however there exist other direct and indirect causes of environmental migration, such as population growth, economic reasons dealing with poverty, malnutrition, unemployment and etc.

The environmental migration after Chernobyl disaster

The Chernobyl nuclear power plant disaster from April 1986 is mentioned as one of the examples of man-made causes of environmental migration. Its impact on environment is so noticeable that lead many authors like Jacobson (1988), Ramlogan (1996), Kohut (1997) to state that it is an exemplary case of environmentally-induced migration due to an industrial catastrophe.

The cause of the environmental migration in Belarus was the accident of the Chernobyl nuclear power plant, respectively the surface contamination by the radioactive pollutants released as a result of the accident. Because of the accident, the impaired environment forced a great number of people to leave or move their habitat. Kohut (1997: 24) is explicitly stating: 'Lessons learned from Chernobyl related to migration … may contribute knowledge that can be generalized for managing ecological as well as other mass migration in other parts of the world'. Majority of studies related to the Chernobyl accident focuses on health or environmental impact of the accident, while its impact on social, economic or living conditions of migrants or impacts of emigration from the contaminated areas have not yet been studied.

Before the issue of environmental migrants can be discussed in detail, it is necessary to explain the cause of this issue, thus the causes and consequences of the Chernobyl disaster. The accident occurred on 26 April 1986. The Chernobyl nuclear power plant lies about 110 km north of Kiev (Ukraine), near to the Ukrainian and Belarusian border. The accident has affected many European countries to a certain degree, but Ukraine, Russia and Belarus were, of course, the most hit. Due to the weather condition, Belarus suffered the most radiation contamination out of all countries. All together about 80,000 square kilometres of surface were polluted with about 4 million people being affected by some degree of radiation (Shestakov and Streletsky 1998). The radioactive pollution was distributed very unevenly, creating zones of different levels of contamination. On the bases of this fact, five different zones have officially been identified, each one of them of different extent of radioactive contamination. These zones are marked only on the map, whereas in the countryside are not bounded. The only exception represents the area around the power plant itself – a 30 kilometer zone with very limited and controlled access was created there.

The main impact of the disaster can be recognized as economic, health, environmental and social (UNDP and UNICEF 2002). Up to present day, a lot of money has been dispensed to mitigate the consequences of the accident (cleaning activities, monitoring, informative activities and etc.) as well to secure the power plant itself. Only estimates of the cost of the accident are available (about hundred of billion US$ – The Chernobyl Forum 2006). The health impact was mainly visible in increased number of thyroid cancer in children. The psychological impact of the disaster was also great on public, for example, 64 per cent of Ukrainians think that the Chernobyl disaster is an important factor that influences their health (Panina and Golovakha 2001). The accident affected a large area of fields and forest along with animals and plants. The social impact of the accident is represented by the resettlement and evacuation of the people. These actions led to the disruption of local economic activities and to the displacement of villages. To conclude, living in the contaminated areas represents threat to the people. Some sources like Kohut (1997) or report by UNDP and UNICEF (2002) state that living in the less contaminated areas does not represent a health problem anymore. This statement is very disputable, since no authority or measurements can state with certainty, that there is no danger anymore; this situation is enhanced by uniqueness of the Chernobyl disaster, which remains unmatched.

Environmental migration as a consequence of the Chernobyl accident is specific due to its reason that forced people to migrate. Radioactive contamination cannot be recognized in the countryside, it is not visible by any means to ordinary people, the sequel of radiation will uncover after years; thus habitants do not have the immediate, obvious reason to migrate. In this case of environmental migration the decision to migrate was made by the government, which coordinates most of the population moves.

There is no accurate data of total migrants due to the Chernobyl disaster. UNHCR report (in Zayonchkovskaya 2000) states the number 228,000 of migrants. More precise information can be found in World Bank (2002): about 350,400 people migrated due to the Chernobyl disaster (the number includes government-organized as well the non-organized migrants). The majority of these people have been resettled through the government organized resettlement program. Immediately after the accident, 25,000 people were evacuated from the power plant vicinity and another 91,000 followed till the end of the year 1986 (Shestakov and Streletsky 1998). At first, people from the most contaminated zones were resettled. Table 5-1 shows the proportion of the migrants according to the

nationality. Almost 50 per cent of the migration took place in the Ukraine (UNDP and UNICEF 2002). The policy of the governments was to first resettle the people from the most contaminated zones. This resulted in one of the main problems with the resettlement - most of the people were not resettled until 5 years after the accident. Only 26 per cent of people migrated within the first year after disaster (Shestakov and Streletsky 1998). The reason for late migration was the lack of the new apartments which were not built until the early 1990s.

Table 5-1 The number and share of environmental migrants due to the Chernobyl disaster in Belarus, Ukraine and Russia

	Belarus	**Russia**	**Ukraine**	**Total**
Number	135,000	52,400	163,000	350,400
Share	38.5 %	15.0 %	46.5 %	100 %

Source: World Bank (2002), UNDP and UNICEF (2002)

As already stated above, the environmental migration due to the Chernobyl disaster can be mostly characterized as government organized. Shestakov and Streletsky (1998) stress that it is very difficult to track non-government organized migration. They conclude that the most migration streams occurred within the boundaries of national states. But Serdiuk (1992) claims, that the disaster affected also the streams of international migration. For example, Czechs by origin (group of 1,812 migrants), living on the territory of Ukraine and Belarus since the 19th century migrated to the Czech Republic between 1991-1993. The main reasons were according to Dluhosova (1998) the increasing health problems and the fear from the consequences of the Chernobyl accident. Interesting characteristic of the migration due to the Chernobyl disaster is that the more time passes, the less people migrate from the contaminated areas. And also, there are cases of people returning and moving to the contaminated areas even from countries far away (e.g. Kazakhstan) (Shestakov and Streletsky 1998). The resettlement of contaminated areas shows an important specificity of the Chernobyl disaster. The type of pollution (radiation) is very unique, as does not harm the environment at the first sight, but the impact will show in few years. Thus, at the first moment there is not an obvious push factor (impaired environment) that would force people to move.

The case of Belarus

There is not much information about environmental migration in Belarus, the reports and articles are mainly focusing on the technical part of the disaster or its impact on people's health, not the migration. Belarus suffered the most contamination, mainly the south-east part of the country. Almost 20 per cent of country's area was contaminated with about 2.5 million people living there (World Bank 2002). Within the first year after accident, 24,700 people (only 18 per cent from total number of Belarusian migrants) left their homes. Until the year 2000, it was already 135,000 environmental migrants in total (World Bank 2002). Majority of these migrants were resettled within the early 1990s. Main Belarusian problem concerning the resettlement activities was that not all people living in the contaminated area were resettled. At present, about 1.6 million people still live in the contaminated area (mainly in the areas where the level of contamination is very low). The government priority is to improve the living conditions of these people (UNDP and UNICEF 2002). The contaminated area has mainly rural character and due to the disaster agriculture cannot be conducted anymore. Thus, today the contaminated regions suffer from migration not because of the disrupt environment, but due to the lack of job opportunities and low wages (World Bank 2002).

The field research outcomes

The field research was realized during June 2007 and the choice of research objectives was relatively simple. The first objective was to identify the present quality of life of environmental migrants in comparison with their quality of life before the disaster. The second objective was to compare the quality of life of environmental migrants with the quality of life of people who did not migrate from the contaminated areas. Along with these two objectives, the reasons to resettle or to remain were also examined. To summarize, the main interest was to find out the impact of the disaster onto the quality of life of ordinary people who happened to become the environmental migrants. But what is the quality of life? The definition of the quality of life depends on who uses the definition. The comprehension of this term differs from the medical point of view as well from the social scientist view. The very general definition by Dragomericka and Škoda (2006) was used in the research of Byelorussian environmental migrants: the quality of life means how a man judges his or her current life situation. Life situation (in this research) was defined as a complex of several related issues: quality of

housing, health, family and labor issues. The income and economic situation and its changes due to the resettlement were discussed as well. Special attention was paid to the economic compensation that was offered to migrants by the government. Also, the reasons that lead the migrants to choose particular city that eventually became their new home (in the case of this research it was the capital Minsk) were interesting.

As Kohut (1997) and Reuveney (2005) propose, the case study method was chosen as the most suitable one for the field research of environmental migration. The in-depth interview with open questions was chosen as a tool to obtain the data. According to Tellis (1997), the interview is the most important tool in this kind of data obtaining. Dunn (2005) adds that it is the only tool that can be used when the data cannot be obtained by other research tools. One of the advantages of the interview method is that very unique data can be obtained. Also, the researchers using the interview method come to very close contact with the subject of the research and that gives the opportunity get really deep with the research. Each of the interview was composed of sets of questions which were related to the housing, health, economic, labour facilities and family issues. The interviews were provided in Russian that was familiar language for each of the respondents.

As stated above, there were two studied groups. The first group was represented by people who migrated because of the Chernobyl disaster (the environmental migrants). The second group was represented by people who decided not to migrate and despite the impaired environment remained living in their original habitat. The choice of the respondents was contingent – they were met and chosen on the streets, in their houses etc. with the only condition moving or not moving due to Chernobyl disaster. In total, 28 interviews were made, counting total of 32 respondents. Age of respondents varied between 30 and 80 years, majority of respondents were women (22). The requirement for age (respondent had to be older than 40 years) was only applied in the case of people who migrated (they had to be old enough to remember the disaster which occurred 21 years ago). In the case of people who did not migrate the requirement for age was not applied. Due to the small number of the respondents, the results of the field research may not be generalized. But despite this fact, the results are interesting and valuable for the future research in issue dealing with environmental displacement.

The interviews took places in 6 localities, one in the 'clean area' and five in the 'contaminated area'. The only location that was set at beginning of the field research was the city of Minsk, habitat of the environmental migrants due to the Chernobyl accident. The other five localities were chosen after the interviews in Minsk were made. It was done so in order to compare their answers with answers of people still living in the contaminated area. Thus, each of the chosen locations in the contaminated area used to be 'home' for part of the environmental migrants in Minsk. The localities of the research are described in Table 5-2.

Table 5-2 Research localities in Belarus

Residential area *Malinovka in Minsk*, the capital of Belarus, represents the "clean" zone. The sixteen of environmental migrants were interviewed here.
Town of *Bragin*, *Cecersk*, *Narovlje*, *Savici* and *Cechy* lie in the contaminated region, Gomel oblast province. Bragin, Cecersk, Narovlje are the county capitals while Savici and Cechy are small villages with few inhabitants. The sixteen of people were interviewed here.

According to research outcomes, the respondents were offered by the government few possibilities where to resettle. As places of resettlement government chose large Byelorussian cities like Minsk or Brest. The respondents usually chose the 'new' home according to family tights or because there was no other choice where to resettle.

Woman, 73 years old, ressettled to Minsk from the town of Bragin:
"... my daughter lived in Minsk, that's why I moved to Minsk."

Woman, 78 years old, ressetled to Minsk from the town of Narovlje:
"Son lives here and also granddaughters are here (in Minsk) …but I wanted to go to Brest (where my daughter lives), but there were no apartments …"

Man, 65 years old, resettled to Minsk from the town of Narovlje:
"... people tend to move after their children!"

Woman, 69 years old, resettled to Minsk from the village of Strelicevo:
"They (government) offered Minsk, that there are new apartments here..."

The research results showed that the environmental migrants agree that their present quality of life is better than before the disaster. It can be assumed that it is mainly due to their new place of habitat, the capital Minsk. The big city represents the greater number of opportunities of well-paid and steady jobs, as well other features that big cities can offer.

Woman, 80 years old, resettled to Minsk from the village of Cechy:
"I think that is better (here in Minsk)."

Woman, 48 years old, resettled to Minsk from the village of Uhly:
"It was no problem to find job in Minsk ... I think that it is better in Minks...of course it is better in Minsk .... I live better here, I have bigger salary."

Man, 37 years old, resettled to Minsk from the town of Cecersk:
"… a good job (here), there was no problems with finding the job."

The main reason that led environmental migrants to resettle was identified as anxiety about own health and health consequences on their children because of the radioactive pollution. Thus, there is a truly environmental cause of the resettlement.

Woman, 50 years old, ressetled to Minsk from the town of Narovlje:
"I did not want to (move) but the children got ill."

Woman 69 years old, resettled to Minsk from the town of Strelicevo:
"Son had problems with thyroid gland (that is why I wanted to Minsk)."

Woman, 71 years old, resettled to Minsk from the town of Chojniky:
"… because son and husband got ill … so we moved here."

Beyond the mentioned statements, there are also the predications of people who are still living in contaminated areas and they subjectively do not feel any health problems dealing with Chernobyl nuclear disaster. They usually believe the Belarus central government which promises economic support to people staying in the areas and makes sure that the area and local agricultural products are 'clear' and 'safe'. Some of the respondents have doubts about the correctness of governmental information.

Man, 70 years old, living in the town of Cecersk:
"You know, they (the government) constructed the instruments (for measurinf the radiation) so that they will show only the right numbers."

Woman, 36 years old, living in the town of Cecersk:
"They told us how big is the radiation … however here is not bad radiation … not a big one (the radiation)."

Woman, 45 years old, living in the town of Cecersk:
"Today people got used to it (to radiation)."

In the context these statements of migrants living in Minsk are interesting because most of them indicate some health problems relate with the nuclear disaster.

Woman, 73 years old, resettled to Minsk from town of Bragin:
"Yes, (we have) problems with thyroid glan."

Women, 50 years old, resettled to Minsk from town of Cecersk:
"We have problems with thyroid gland, we are often sick ... and the children are sick."

Woman, 54 years old, resettled to Minsk from town of Cecersk*:*
"Many people died because of oncology problems, many young and children."

But besides this reason, it appears that the attractiveness of the capital city, especially in countries of the former Soviet Union, representing another reason for resettlement, played its significant role. It is necessary to note that capital city in all former soviet countries has always represented city, where every habitant would like to live in.

Women, 50 years old, resettled to Minsk from the town of Cecersk:
"We chose to move to Minsk … (Why?) … because it is a capital city."

Man, 50 years old, resettled to Minsk from the town of Bragin*:*
"Because it is the capital … (you know) jobs and so on."

Man, 65 years old, resettled to Minsk from town of Narovlje:
"Capital city is a capital city."

However the migrants in Minsk, in particular the seniors, have very intimate and sensitive relationship to the habitats of origin and try to still visit the places (especially the graves of grandparents) often as possible. Leaving the original place of habitat was quite difficult for each one of them. Some of them felt a little uprooted.

Woman, 69 years old, resettled to Minsk from the town of Bragin:
"Here (in Minsk) it is total different life ... in Bragin used be gardens, working in garden, we would grow products."

Woman, 69 years old, resettled to Minsk from the town of Strelicevo:
"... village is village ... it is better to live in village than in Minsk ... for young it is good in Minsk not for me..."

Man, 50 years old, resettled to Minsk from the town of Vetki*:*
"If there was no radiation, we would not leave."

To conclude, the reason to resettle was the Chernobyl accident and contamination of land, forests and their houses, but it seems that it was strongly followed by the economic pull factors. The respondents in Minsk stated that the quality of life is also better. The main reason of this assumption may be caused by the fact that all the interviewed environmental migrants (except for one) were resettled within the government resettlement program. This program ensured the migrants with proper housing, jobs, education, limited health service, etc. Thus, their economic and social situation improved, excluding their health condition. Some of them felt also uprooted from their habitats of origin.

In comparison with the quality of life of people who did not migrate from the contaminated areas, the environmental migrants' quality of life is better and some inclining to envy that their neighbors made the best opportunity to move from the areas to any city, especially to Minsk, was recorded. In addition, the quality of life in contaminated areas seems to be mainly influenced by the fall of the Soviet Union and the present bad economic situation of the country than by the consequences of the Chernobyl accident. However these two reasons are interrelated – the bad economic situation had particular roots just in the Chernobyl accident. The main reason of stay in the contaminated area was identified as the family reason. That means that people did not want migrate without the family relatives and thus rather stayed than migrated. Also, a very strong personal relationship to the place of habitat was identified as reason for staying in the contaminated areas.

Conclusion

The chapter has discussed the concept of environmental migration in general, but it also brought the first results of a field research conducted in Belarus, which dealt with environmentally-induced migration due to

Chernobyl nuclear disaster in the region. The first part of the chapter identifies different approaches to the environment-induced migration and defines the phenomenon. Scholar literature, dealing with the issue, is divided into advocates and critics of the approach. However, we can identify that most of the critics point their attention to term of 'environmental refugee', or they understand environmental migration issue through only one category and do not take into account different causes of the kind of migration. Nevertheless, we can discuss some impugnable environmental reasons for migration such as the 'desertification' (Black 2001). However there is some evidence that environmental factors play principal role in decision-making process related with migration. One of the cases is the migration flow caused by Chernobyl nuclear disaster in 1986.

The authors present the first outcomes of their field research in Belarus dealing with comparison of the present quality of life of the environmental migrants with their quality of their life before the disaster. The present economic and social situation of environmental migrants was also compared with the situation of people who did not migrate from the contaminated areas. As a result, the environmental migrants in the capital Minsk were interviewed, along with the people from the Gomel oblast province. For the purpose of the research, the quality of life was identified as a quality of the labour, health, housing, economic incomes or family issues. The reasons to resettle or to remain were identified as well.

The first outcomes of field research show that present quality of life of environmental migrants currently living in Minsk is better in both ways – respectively to the time before the accident and also in comparison with living condition in the contaminated areas. Even though many of the Minsk environmental migrants migrated from the contaminated areas also because of the wealth of the capital city, they may not be labelled as economic migrants. The health risks caused by surface contamination of the radioactive pollutants released because of the nuclear power plant accident in Chernobyl were identified as the main reason for the displacement.

There are two categories of environmental migrants, according to the above mentioned classification. Whereas the first flows of migrants, who were displaced from the most affected areas near the Chernobyl (official 30 kilometer zone) relatively immediately after the accident in 1986, come under the 'rapid-onset environmental displacees' sub-category, the second

group of migrants, who had been taking the advantage of Belarus government offering the relocation from affected areas to selected cities in the country during 1989-1990 are classified as 'slow-onset environmental displacees' sub-category.

The research also showed that interview is a very good form of exploring the environmental migration. The interview method can truly detect the environmental reasons that eventually led to migration. The research also proved that economic and environmental reasons for migration are interlinked and ought to be taken jointly. It is generally observed that the environmental problems in a region are followed up by the socio-economic problems in the same region. The case of Chernobyl migration supports this thesis. According to the World Bank (2002), today's reason that forces people to migrate from contaminated areas is mainly the unemployment and poverty and not the still impaired environment.

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