

locals indicate poor awareness of radiological security with respect to their specific environments and the food they consume.

This report, therefore, is a voice in support of preserving the special policy approach towards Chernobyl-affected areas and the population that is exposed to risk. However, we recognize that there are many health threats that are not specifically related to radiation. Some obvious risk factors were spotted in community behavior. These include poor waste management and lack of control when it comes to the feeding practices of farm animals such as chicken, ducks, and cows. There is also a lack of convincing evidence when it comes to water security or water quality improvement. These environmental factors do deserve attention from the communities and task agencies. Campaigns focused on these issues should be very visible and demonstrative — promotion of water filters, household sewage improvement, fencing off waste dumps from animals, promotion of non-burning organic waste management, are just some examples.

Reaction from members of the local communities to us, as volunteers, and our mission was very positive. There is a demonstrated eagerness to welcome other visitors and foreign volunteers or workers. In terms of health promotion, we find the state of physical activity and sportive lifestyles among youth satisfactory. Further in this report, we recommend paying closer attention to non-sportive factors of healthy lifestyle such as spreading knowledge and training on healthy diets, non-sportive or low-cardio recreation, health strengthening and relaxation techniques. In addition, we suggest that some common issues such as waste management, water supply systems and sewage should be treated wisely and improved jointly by any means.

Experiences in detail: Social atmosphere and state of health assessment

Most of our time was spent in cooperation with local youth centres, sponsored by NGOs. In Luhyny, Zhytomyr region, we participated with NGO “Olimpia-Sport.” In Zaliznytsia, Volyn region, we worked with NGO “Spryjanna.”

We were pleasantly surprised at the material comforts in most of the households. People have gas, hot and cold running water, and modern electrical appliances. Some houses even had Internet. The mobile coverage was mostly decent.

Lots of animals walk around the neighborhoods, and there are many children playing in the yards and streets. Men are harder to spot during daytime, but if you see them, they are often fixing houses, building new ones, collecting pumpkins, or transporting bags of potatoes by horse and buggy. Women work a lot. For example, our hostess in Luhyny is a pensioner, but she would collect and bring home about thirty potato bags (each weighting up to 30kg) in a single day. That is, of course, a special day as it was at the time of our visit the harvest season for potatoes. Also, she does not do this entirely on her own. Neighbors and friends unite in groups of 10 to 15 persons and help each other. This means that Maria will go to such intensive potato collecting sessions up to 15 times in a single season. In addition, she is always busy with yard work, farming or taking care of her big household.

Closer to evening, lots of young people hang out and relax in public the same way that youth in cities do. We did not see many youths who smoked or drank. A local teacher told us it was because these are tight-knit communities, and they tend to keep an eye on each other's children. However, we did spot several older men drunk on the streets. One, for example, was sleeping under a tree and another one trying to joke with some of his pals as he started his way

home on a bike. Still, we do not know how widely spread alcoholism is in the area. We have no statistical data. But a vice-head of the local district hospital, Dr. Ivan Godlevski, told us alcoholism is a very prevalent problem. At the same time we should note that we also saw intelligent and sensitive men, healthy and hard-working, obviously loved by their families. We witnessed a lot of weddings, and were told that after their university studies in larger cities, most young people return to the villages. Perhaps there are cultural explanations for this, as they prefer a more rural way of life, or economical — those who cannot immediately find a job are not able to afford life in the city.

Contamination and impact on health

Despite the ongoing scientific debates about radiological threats in the area, we have to consider that these villages are still determined, by national legislation, to be contaminated. Therefore, we should look at how the local populations respond to that existing threat. Naturally, as visitors who were there for a short time with no detailed research plan and lack of medical competence, we did not make systematic study. We only spoke to locals and a district medical expert. However, from our observations, it seems that local residents are not at all informed about their environment concerning radiology. Food checks are very rare, if not exceptional; most of local population consumes that pose a higher risk of contamination through ingestion such as mushrooms, wood berries and game meat.

It is unclear whether people have a lack of access to information about the risks of their environment, or if there is sense of complacency and resistance to change habits. People do talk of known cancer cases within their close acquaintances or relatives, or those who worked in the forests. However, the locals will often say, “We live here all our lives, and we can not avoid everything.” Still, why they choose to avoid nothing, however, is puzzling, although perhaps it shows that people refuse to live in fear of their food and land.

Therefore, we cannot fully support the statement that radiological threat is dramatically declining. In Luhyny, Dr. Godlevski, says the number of people treated for cancer at his institution has increased 30 times since 1986. Moreover, medical records in the district show life duration of patients with cancer has decreased significantly — their life expectancy has shortened five-fold compared to patients he treated in the late 1980s. He also told us that the children’s health statistics in his region is worse than the average for the country. In the district hospital they lack medication and equipment. For instance, they do not have MRT scans, and they have only one X-Ray machine, which is more than 20 years old. Money distributed by the state is only enough to keep the facility running and to buy only basic sanitarian materials, while people have to buy prescribed curing medicine themselves. Clearly, there needs to be better investment in this hospital so that locals can receive proper care when sick. We asked Dr. Godlevski what factors, in his opinion, contribute to health most: is it lifestyle or environment? The doctor said learned habits are most important, but that environment is undoubtedly a very significant health determinant. A polluted environment requires certain precautions, and there is no evidence the local population takes all of these to shield themselves from radiological threats.

Dr. Godlevski also said that the negative stigma of contaminated land is responsible for a negative attitude towards life: some people tend to disregard obvious hazards because they believe their life is already exposed to the risk of radiation. For example, he said the hospital now treats on average one case of heavy alcohol intoxication, known in Ukrainian as “bila goryachka,” per week, whereas in the 1980s it was only three or four cases per year. From this interview, we could not make complete conclusions regarding the state of health issues in the area. While he presented us with data indicating cancer is more prevalent, it is unknown if this is caused by radiation.

Contaminated foods

We saw many disregard the cautions against consuming possibly contaminated foods. The Ministry of Emergencies and the ICRIN recommends that milk is processed into fatty products before consumption, but a lot of locals drink milk fresh, for in the villages they believe this one to be especially healthy. It may be so, unless cows grazed from contaminated lands, and it seems that cattle is allowed to roam free. During a ride through the forest in Zaliznytsia, our host jumped out of the buggy when he spotted berries growing on the side of the path, and ate them, asking his visitors do the same. For dinner, we were regularly served wild boar, elk and mushrooms, with no information on whether these foods were checked for contamination.

Timothy Mousseau, a Canadian scientist who has been researching health and ecology in Chernobyl for more than 10 years, is currently conducting a study on children in Chernobyl-affected areas, examining the long-term effects of radiation exposure. In an interview, he said there are very measurable impacts on the children in Norodichesky, a region adjacent to Chernobyl. Many of the children have significant doses of radiation as a result of what they are eating, he says.

Mousseau's research so far has found that children in the area have reduced pulmonary function, and concludes that some will have "significant respiratory problems as they age." His team has also found abnormal growth defects, he adds. "Clearly, there is a need for monitoring and public health studies," he says.

Mousseau's study is on children who live near the immediate vicinity of the exclusion zone. But even those living in affected zones hundreds of kilometres away are experiencing health issues — some suspect these are related to contaminated soils, other argue they are lifestyle-related problems. In Zaliznytsia, a local gym teacher says about half of the elementary students are exempt from cardio-intensive gym classes either because their parents or the doctor's commissions are not confident about their health.

Yet, for the purposes of this report, we are not drawing comprehensive conclusions on health as affected by radiation. In this case however, we have to agree with Prof. Mousseau and say there does need to be more comprehensive study on this topic. Because when half of the children are exempt from gym class, we consider this to be a serious problem and there needs to be further study into the exact cause. Hence, we will further proceed with our human experiences and talk about obvious health issues and factors we have seen in communities we visited.

Through our close contact with the locals in the communities we saw some obvious risk in collective behavior. These include low quality of waste management — lots of people burn their garbage, which results in a thick fog of smoke, especially in the evenings, which caused an irritating cough for us even though we were short-term visitors. A local landfill in Liubeshiv, just a few kilometres from Zaliznytsia, was eight times over capacity, our host said. We also saw chickens eating from a garbage dump. Since people will eat these chicken or their eggs, we believed this to be an unsanitary food source. We were also informed that some people illegally pump their wastewater into the local river, where household ducks regularly swim.

Most of the people where we stayed use wells in their yards as a water source. People sometimes drink it without boiling it first, although one of our hosts would only drink it in 'kompot' form. We did not hear of anyone filtering water. This might pose a danger if radioactive isotopes seep into the ground waters (e.g. the well waters), which is a theoretical possibility as the isotopes travel underground. However, there are many more possible sources of

water pollution, so water should be processed. We did not have a chance to take scientific surveys or investigation into this matter, but we do believe water security and purity should be addressed.

General Recommendations for Health Promotion

We believe that the importance of the work conducted by radiological control agencies should be emphasized. They should do a better job of informing local populations about the contamination of specific environments. This can be done through visual aids such as maps or signs that would clearly mark contaminated areas. This may prevent locals from eating foods that grow here or allowing their animals to feed on the grass in this area. Apart from that we encourage the concerned and involved groups and agencies to address obvious environmental risk factors: waste management, animal feeding places, and water security.

These environmental factors do deserve attention from the communities and task agencies. Campaigns focused on these issues could be very visible and demonstrative for many communities in respective regions. These campaigns could be: water filters promotion, household sewage improvement, fencing off waste dumps from animals, promotion of non-burning organic waste management, etc.

With respect to healthy lifestyle, we mostly witnessed active and healthy-minded youth. We were told that smoking is not widely spread among teenagers, and we did not see it to be a problem. Youth visited the youth centres for computer use and sports, and they also work hard to help their parents around the house and farm. Some of the children would leave school early to go potato-digging with their parents. There could be better outdoor infrastructure for sports and activities, but we saw that donor projects are working to improve this situation, such as building football fields and stadiums.

What we do recommend when it comes to lifestyle and health promotion is paying more attention to non-sportive factors such as spreading knowledge and training on healthy diets (such as a food guide), low-intensity recreation and health strengthening such as stretching, nature walks, massages, and relaxation techniques. This would help include those children who are exempt from heavy cardio activities in the physical education classes.

We recognize that changing the curriculum would require well-planned and organized promotion, advocacy and training campaigns, but we believe the communities we visited have a very capable local resource of teachers and community leaders. Activities that fall into this framework could be: inviting athletes and role-models to speak in classrooms; establishing team-based competitions with sportive and educational content; fostering community-based tourism for the locals to nearby districts; movie clubs; training sessions on spine health; cultural activities, etc. The infrastructure required for some of these health preservation and improvement activities can be easily maintained, for instance soft gym mats, carpools or bus rides to other regions. Others, such as saunas, may require more financial investments and research.

Luhyny, Zhytomyr Region and Zaliznytsia, Volyn Region

Our tasks

Tasks as formulated in the assignment paper:	Actual activities performed:
<i>Luhyny, Zhytomyr region, NGO Youth Centre “Olimpia-Sport”:</i>	
<ul style="list-style-type: none"> • Design a promo campaign for local youth • Design posters about Youth Centre services • Develop posters on healthy lifestyle; • Develop recommendations for improvement of services provided by Luhyny Youth Centre 	<ul style="list-style-type: none"> • English classes and cultural communication with youth • Production of brochure promoting the YC • Article for the local newsletter; • Production of short film about Luhyny village for a local rewarded competition announced in Zhytomyr region • Healthy lifestyle promotion event – camp-related activities and fire show • [Direct Action!] Fixed a couple of computers
<i>Zaliznytsia, Volyn region, NGO “Spryjanna”(“Fostering”)</i>	
<ul style="list-style-type: none"> • Support designing promotion of healthy-lifestyle campaign at school • Develop posters on healthy lifestyle • Support development of NGO’s web-page • Help with the community project proposal 	<ul style="list-style-type: none"> • English classes and cultural communication with youth • Article for a village newspaper • Participation in a sport session and inspiration • Exploring actual calls for grant applications, studying other development options • Web-page translation and writing in English about school and NGO

Information for future volunteers in Luhyny, Zhytomyr Region, NGO “Olimpia-Sport”

The Youth Centre organization in the village of Luhyny, a district centre, was opened with support of UNDP. It is located in what was formerly a typical two-storey kindergarten. The second floor is a local sports school focused on martial arts and wrestling. The first floor on the premises is the youth centre.

“Olimpia-Sport” YC serves as an entertainment, sportive and educational resource base for the local community and mostly the youth. In the centre there are computers with access to Internet, a gym with weight-training equipment, a big tennis court, table tennis, billiards, and a small classroom. There is also a mini-sauna. The YC issues a monthly bulletin and a newspaper.

The YC has a strong leader — a young mother, Tetiana Pavlivna Bovsunovska, who maintains good contact with children and teenagers. She tries to organize educational events for them throughout the year. However, she now has a problem with some elder youth, mainly young men, who come to use the gym. Some refuse to pay for attendance, but money is needed to sustain the facility. Because of this, she keeps the gym locked and refuses to let them use it until they pay. The fee is not very large, however it is difficult to determine what is acceptable payment for locals, as it depends on their income. Because of this, they have recently agreed to meet all together, speak and decide on how they will settle their relationships.

Tetiana Pavlivna is keen on childcare issues and she wants to develop a child centre or at least a child room within the YC. This would diversify the attendance to the youth centre as young mothers could come to the gym and leave their children where they would be taken care of. Yet, there is problem of finding resources for this project. The child centre would be a privately run alternative to state kindergartens. According to Tetiana Pavlivna, state facilities do not have enough capacity to take all children in the village. Their schedule is also reportedly inconvenient and there are other considerations. As we toured around the village we found that there is a child creativity centre (former house of pioneers), a state facility designed to educate children in music, choreography, drawing and other creative activities. This facility does not function because of a lack of state finance. However, it has a good building right in the centre, and from what we understand it has a few employees who are there to keep it open. This may be an opportunity for a private-public partnership (PPP) in childcare. A company that takes this on does not have to be very large, and there are enough unemployed teachers in the village who could help run this centre. But there is a lack of start up capital and the marketing strategy.

What we recommend to “Olimpia-Sport” for enhancement of community development:

- keep up with activities such as running the newspaper, but try to include as many new contributors and writers as possible
- organize classes on Basics of Health and Healthy Lifestyle
- unite community through events in the centre
 - mini-theatre, film club, book club, debate club
 - invite outstanding local or other personalities to tell stories and share experience
 - firemen
 - sportsmen
 - entrepreneurs
 - state servants etc.
- unite community through eco-action
 - garbage cleaning sessions in the green zones
 - fencing-off a nearby dump from ducks and chicken
- we follow the advice of a previous volunteer from Japan who suggested the centre should add a working washroom for visitors and a hand-washing station

Zaliznytsia, Volyn Region, NGO “Spryjanna”

Zaliznytsia is a village in Lubeshiv district of northern Volyn. The name of NGO “Spryjanna” can be translated into English as “Fostering”. This community organization was established in 2010 within the school – Zaliznytski NVK (educational complex). The NGO received support from UNDP and mobilized local community and state resources to buy energy-saving windows for the school. A lot of optimistic improvements were done in the school under school director Sergiy Grygorovych Kutynetz — a sensitive and humorous, but well-respected

and effective community leader. The school has good material base, modern computer classrooms, projectors and other equipment, but there is no Internet.

It would very beneficial for this school and the community at large to have access to Internet, so that they can receive and spread information about health and risks associated with radiation, pollution and poverty. The web would not only be important for connecting to high-level scientific research or abstract recommendations, but it is very important for the local cooperation and links between similar communities all striving for a better future, some of which could share their success stories in solving joint problems such as fixing schools, medical stations, and water supply systems.

Sergiy Kutynetz has heard of a program that helps provide public Internet – Bibliomist, but their community cannot apply because it is not a district centre. Nevertheless, the leaders here are very active and reliable in terms of bringing positive changes to the community. We are confident in their ability to effectively utilize donations or other resources, for we have seen them implementing the ICRIN-cofunded project of constructing a soccer stadium. They are persistent and their collective is united in their efforts. They mobilize all resources that they can, including state structures and local business, as well as inspiring the local community to take part and come to the stadium, the sports arena common for all village. Kutynetz also spoke fondly of a community newspaper that was launched with the help of a start-up donation, but that was recently discontinued for lack of funds. It seemed as if the publishers did not explore enough the possibility of seeking funds from advertisers in the paper, as opposed to trying to recover costs by charging readers. We believe the paper could be free, but that local shops or restaurants would be willing to pay a small fee for advertisements. If enough parties are interested, this could be explored further.

We could not really help Zaliznytsia with the Internet, but we explored the existing options for establishing the connection and studied open calls for grant proposals. Those available at that time were irrelevant. We are sure that the “Spryjanna” community organization has all chances of winning in a relevant grant competition should there be one.

What we recommend to “Spryjanna” for enhancement of community development:

- pay more attention to classes in Basics of Health and Healthy Lifestyle; organize training sessions on healthy diet and non-sportive healthy lifestyle: relaxation techniques, massages, mild exercise (for spine and else), safety at work etc
- continue to promote successful and popular activities
- unite community through eco-action
 - garbage cleaning sessions in the green zones
- organize sportive events for the whole village
 - promote local soccer and volleyball cups
 - massive dance sessions – these can be organized as local analogue to the nationwide TV- dance show of “Maidans”
- write the newspaper with schoolchildren as authors (even under lack of resources to publish it massively, it would be good to keep the tradition and it will give results in future), publish it within school with regular updates. Then transfer it online to a website.

Our gratitude

We thank all people who coordinated the volunteers Scheme, in particular Dzvinka Kachur, Alla Yushchuk, Giovanni Mozzarelli; those who guided and aided research – Klavdia Maksimenko, Natalia Nason, Thimoty Mosseau.

We thank the people we met in communities, in particular Maria and Tetiana Bovsunivski, Tetiana Pavlivna Bovsunovska, Tanya Volodymyryvna, Tanya Olehivna, Dr. Ivan Godlevski, Grisha and the wonderful girls of Luhyny, Sergiy and Galyna Kutynetz, Mr. Nestor and Mr. Mykola, Vira Grygorivna, Igor Cherevko, Viktor Bubalo, Bogdan Maksymchuk, Grygory Shemetylo, Oksana Tokarchuk, Katherine Zasekina, Sergiy Polishchuk, Mykhailo Abramovych and all bright children of Zaliznytsia!