

**THE REAL
PRICE OF COAL
IN THE WARTIME DONBAS:
A HUMAN RIGHTS PERSPECTIVE**



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SUMMARY OF THE REPORT

This publication presents results of a study conducted by the Eastern-Ukrainian Center for Civic Initiatives in cooperation with partner organizations from the Coalition of human rights organizations and initiatives “Justice for Peace in Donbas” with support of the Heinrich Boell Foundation’s Office in Ukraine. The aim of the study was to create conditions for a wide public discussion about the actual economic, environmental and social consequences of coal mining in Donbas during the war.

The study is based on information collected during a monitoring visit to the territories of Luhansk and Donetsk regions controlled by Ukrainian government, expert interviews and information received from the state authorities and open sources. Analysis of collected data shows multiple violations of social, labor and environmental rights, restricted possibilities for self-fulfillment available to local citizens, especially women, as well as lack of inclusiveness in economic institutes in the region. Authors of this report recommend a number of measures aimed to solve the key issues resulting from the coal industry’s activities and create conditions for gradual transition to renewable energy sources.

HISTORICAL BACKGROUND

In 1991, Ukraine inherited over two hundred mines in Donbas, as well as several dozens of mines in Lviv-Volyn basin, from the Soviet Union. Back then, there were 961 thousand people employed in the coal industry. According to different estimates, there were between 276 and 283 mines.

Collapse of the Soviet Union had devastating consequences for Donbas. A sharp decrease in industrial production led to a drop in demand for coal. During deep economic crisis, material and technical conditions in the mines became significantly worse, including protection equipment and work safety. Social infrastructure was also in decay. The region became depressed, and there was a rise in unemployment and crime, which rapidly became organized.

During a short period of 1996-2000, there were 83 mines closed in Donbas, and hundreds of thousands lost their jobs¹. Mines were shut down without reclamation and necessary safety works to prevent negative consequences. Closure of mines led to flooding of entire districts, soil subsidence and damage to infrastructure, and many villages experienced disruptions in water supply. The process of mine closure was accompanied by wide-scale corruption, as mine equipment and materials were stolen and sold for scrap metal.

Privatization of coal enterprises started in the 2000s. As a result, majority of mines with best prospects and equipment ended up in the ownership of a newly established DTEK LLC, founded by Rinat Akhmetov, or other business structures, whereas many less economically attractive coal enterprises remained in state property. The state kept unprofitable mines running and started allocating large sums of money to maintain them. Most of that money was embezzled and did not reach the miners, and the money directed to restructure the mines was also embezzled.

Another process started in the 2000s along with the growth of private sector and decline of the state sector – establishment and spread of illegal surface coal mining.

By 2013, before the armed conflict in Donbas began, there were 150 mines of all forms of ownership in Ukraine, including 90 state mines. At that time, the state sector already had lower coal production output than private companies.

¹ Decree of the Cabinet of ministers of Ukraine “On the progress of structural reconstruction of the coal industry”, No.280, 28 March 1997.

Coal extraction in Ukraine in 1957-2015

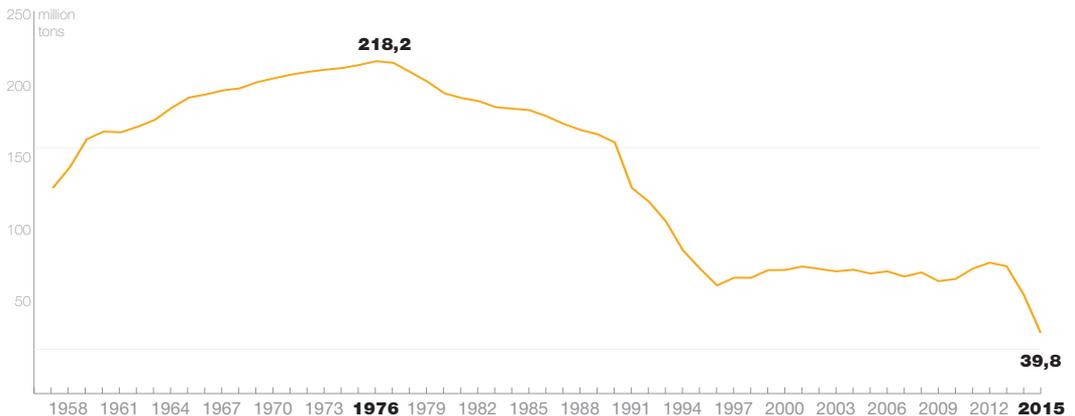


Fig.1: Coal extraction in Ukraine in 1957-2015. Data sources: 1957-1990 –Ministry of coal industry of USSR, 1991-2015 – national statistics.

For a long period, the miners' movement was a great illustration of how people could take part in social processes in the country. Economic processes in the coal industry usually had impact on political processes in the state. At the beginning of the 1990s, this impact was quite significant. Suffice it to recall that miners facilitated the proclamation of Ukraine's independence. Widespread miners' protests were a significant factor that urged the Verkhovna Rada (Supreme Council) of the Ukrainian Soviet Socialist Republic to adopt a law "On Economic Independence of Ukraine" in August 1989².

Politicians from Donbas regularly tried to use miners in their political fights. Donetsk clans who united to gain power over the entire country were working hard to promote an opinion among the miners that only local political powers were capable of expressing Donbas interests and protecting the coal industry. They were creating an image of an enemy for the "non-coal" Ukrainian politicians, portraying them as wanting to destroy the entire coal industry and eliminate mines³.

For this reason, a large number of people from the mining towns saw those who spoke about the need for restructuring as enemies. During the Revolution of Dignity in 2013-2014, supporters of Viktor Yanukovich assured the population of Donbas that the European Union would force the government to close all mines if Ukraine chose a path towards European integration. This political propaganda proved to be effective, and the manipulative ideas of opposing the interests of the region's population against the interests of the entire Ukraine facilitated active involvement of the population of the coal-mining region into the armed conflict on the side of the Russian aggressor.

² Strayky shakhtariv pidirvaly systemu [Miners' protests undermined the system]. Photo report. Ukrinform, 16 August 2013. URL: https://www.ukrinform.ua/rubric-other_news/1533860-strayki_shahtariv_pidirvali_sistemu_fotoreportag_1855008.html.

³ Zhevachevskiy, V., Bohdanova, O., Yanukovych, V.: "Bolee tyazheloy situatsii v ugolnoi promyshlennosti, chem nyneshniaia, ne bylo poslednie let 30-40" [There has not been a more difficult situation in the coal industry than the current one for the last 30-40 years], Komsomolskaya Pravda, 28 August 2009. URL: <http://kp.ua/politics/192202-vyktor-yanukovych-bolee-tiazheloi-sytuatsiy-v-uholnoi-promyshlennosti-chem-nyneshniaia-ne-bylo-poslednye-let-30-40>.

CURRENT CONDITIONS

Now, there are 127 coal mines in Donetsk and Luhansk regions, two thirds of which are state-owned. Since the onset of war in eastern Ukraine in 2014, 97 mines of all forms of ownership remain in the territory controlled by illegal armed groups. The majority of state coal enterprises (2/3 of all mines) are unprofitable. According to the State Statistics Service of Ukraine, in 2015 only 122 thousand persons worked in the coal industry, including 51 thousand people employed at state-owned mines (in 1991, there were 961 thousand workers).

Violations of labor and social rights of employees in the coal mining industry take place on both sides of the contact line. Salary arrears are common for both sides. Workers at coal enterprises on the temporarily occupied territories receive half the salary of those who



Flooded facilities of abandoned mine. Horlivka, Donetsk oblast

work in government-controlled areas. According to media reports, on average, miners receive a monthly salary of USD 140-155, whereas miners in the areas controlled by Ukraine make a salary of USD 300-370⁴.

Ukrainian state-owned coal enterprises in areas outside of government's control have been transferred to a complete self-funding mode: workers receive a salary exclusively from the profits from coal product sales. Enterprises receive no support from the "budget" of the self-proclaimed republics.

The sales of coal from occupied areas fill the pockets of local leaders and allows the self-proclaimed republics to stay afloat. However, the situation of ordinary employees has become much worse. Without subsidies from Ukraine's budget, state mines on the territories outside of Ukraine's control are barely functioning, and there was a two-fold decrease in the salary at these enterprises. Moreover, even that salary is paid only in part since coal enterprises in these areas are in complete self-funding mode.

Table 1: Coal sector dynamics in 2011-2015

Coal extraction by year	2011	2012	2013	2014	2015	2011–2015
State mines	37,5	24,9	24,1	17,7	6,7	-82,2 %
Private mines	43,6	61,1	59,6	47,3	33	-24,4 %
including DTEK	38,4	39,6	40	35	26,7	-30,5 %
Total	81,1	86	83,7	65	39,7	-51,0 %
Share of DTEK	47,3 %	46,0 %	47,8 %	53,8 %	67,3 %	

Data source: Ministry of energy and coal industry of Ukraine

⁴ Rabota v "DNR" i "LNR": vysokii konkurs na zarplatu nizhe prozhitochnogo minimum [Work in the "DPR" and "LPR": high competition for a salary lower than the subsistence minimum], Segodnya, 14 February 2016. URL: <http://www.segodnya.ua/life/work/rabota-v-dnr-i-lnr-vysokiy-konkurs-na-zarplatu-nizhe-prozhitochnogo-minimuma-691247.html>.

THE PRICE OF COAL

To answer the main question of our study, we can say that the price of coal extraction in Donbas is not only its high production cost, which is compensated through subsidies at the expense of taxpayers, but also a number of political and environmental consequences paid for by the people in Donbas and the entire population of Ukraine. The social, economic and political price of coal includes the following components:

- Multilevel corruption in the coal industry.
- Economic losses of a large number of enterprises and, as a result, poverty in local communities.
- Violations of labor and social rights (including the use of child labor and restricted opportunities for self-fulfillment of women in the region).
- Social discontent of the population.
- Deterioration of environment in the region.

In the setting of war, these factors create fertile grounds for external informational interference, incitement to social and intranational hatred, as well as undermining of state defense potential. Another grave consequence is a threat to energy security of the state since a number of power plants depend on the coal from the occupied areas.

CORRUPTION IN THE COAL INDUSTRY

Operation of the majority of state coal enterprises on the government-controlled territory of Donbas is maintained only through state subsidies, which are the source to a number of corruption schemes. These schemes include various manipulations with the coal allocated for household needs (the so-called “household coal”)⁵, “laundering” of illegally extracted coal, manipulations with the regulated price calculation formulas and, eventually, sales at inflated prices to state-owned companies.

For many years, the purchasing price for coal at state mines was fixed, i.e. it was determined almost manually by officials. In March 2016, Ministry of energy and coal industry applied a new methodology for coal price calculation, known as the “Rotterdam plus” formula, which was supposed to promote diversification of supply channels and transition of the coal sector to the market basis⁶. In 2016, the cost of coal calculated with the new formula was 63 dollars. At the same time, the domestic price of Ukrainian coal without this formula would be only 44 dollars. The manipulation was that the price of coal extracted in Ukraine (including the occupied areas) was calculated as if it had been transported from Rotterdam. This pricing was met with strong public critique. Following public pressure, the government dismissed the formula “Rotterdam plus” in July 2016⁷, however, the price formation process has remained administrative and non-transparent⁸.

There are also frauds related to the so-called “household” fuel, namely that cheap and low-quality coal from illegal mines, sometimes even debris is mixed into the coal for subsidy recipients. The high-quality coal, which is diverted from deliveries to subsidized population, is sold on the black market.

Since the war started, there was an addition to the list of corruption schemes – coal procurement from the temporarily occupied areas of Donbas for state enterprises at higher prices without verification of legality of its origin. Seven out of fourteen Ukrainian coal power plants are designed to burn anthracite only⁹, and all anthracite reserves remain on the

⁵ According to the law, current and former employees with a tenure of at least 10 years, living in houses with stove heating, have the right to receive free coal to heat their own houses.

⁶ Resolution of the National Energy and Public Utilities Regulatory Commission “On Approving the Procedure for Determining an Optimal Market Price for Electricity”, 03 March 2016, No. 289.

⁷ Minenergo pereglyanulo forumulu formuvannya tsin na vuhillya [The Ministry of Energy has revised the formula for coal price calculations], *Ekonomichna Pravda*, 13 July 2016. URL: <http://www.epravda.com.ua/news/2016/07/13/599002/>.

⁸ Minenergetiki otoshlo ot formuly tsenoobrazovaniya na ugol “Rotterdam plus”, - Nasalik [The Ministry of Energy dismissed the coal price formula “Rotterdam Plus”, says Nasalik], 112 Ukraina, 13 February 2017, URL: <http://112.ua/ekonomika/minenergetiki-otoshlo-ot-formuly-cenoobrazovaniya-na-ugol-roterdam-plyus-nasalik-371703.html>.

⁹ Anthracite is a high-quality sort of hard coal.



temporarily occupied territory. This creates partial energy dependence of Ukraine from the self-proclaimed republics. Currently, there are no precise calculations that allow assessing the amount of coal purchased from the militarized separatist groups, or the amount of money transferred to them. In October 2015, Oleksandr Svetelik, Deputy Minister of Energy and Coal Industry of Ukraine, declared that the government was buying approximately 40 thousand tons of coal from uncontrolled areas for USD 1.4 million daily during preparations for the heating season¹⁰. However, this data did not include coal procurement by private companies and businessmen who also transferred money to illegal armed groups. In fact, actual owners of various LLCs in separatist-controlled areas are usually military and political leaders of the self-proclaimed republics or businessmen from their inner circle who pay a tribute to the criminals for the opportunity to conduct trade.

In general, we can state that billions of hryvnya went to the “LPR” and “DPR”¹¹ during the conflict, and it allows the self-proclaimed republics to support their economy and prevent hunger revolts on their territory. Demand for coal stimulates development of illegal coal industry and increases the number of people who are deprived of any labor rights despite hard work.

High level of corruption restricts the possibilities for people to take part in alternative economic development. It also prevents progressive exercise of social, economic and cultural rights, which directly depends on state resources.

¹⁰ Ukraina zakupovuje na okupovanyh terytoriiakh 40 tysiach ton vuhillia v den [Ukraine buys 40 thousand tons of coal from the occupied territories daily], *Livyi Bereh*, 16 October 201, URL: http://ukr.lb.ua/economics/2015/10/16/318625_ukraina_zakupovuje_okupovanih.html.

¹¹ “LPR” and “DPR” are the self-proclaimed Donetsk and Luhansk People’s republics.

VIOLATIONS OF LABOR AND SOCIAL RIGHTS

In the areas of Donetsk and Luhansk regions outside of Ukrainian government's control, the miners have illusory possibilities to defend their rights due to **severe restrictions on the freedom of expression and assembly, as well as elimination of independent trade union movement**. Trade unions and associations of trade unions had to refile their documents in accordance with regulations of the self-proclaimed republics to continue their operations on the territory of the so-called "LPR" and "DPR". It created conditions for screening out the independent trade unions and establishing a vertical system of trade unions under complete control of the so-called "authorities".

Two trade union associations represent the trade union movement of miners on the government-controlled area – the Trade Union of Coal Industry Employees of Ukraine and the Independent Trade Union of Miners of Ukraine. The two trade unions have always been competitors due to several socio-economic and political reasons.

The main and most effective instrument of trade union struggle for miners' rights is strike. In 2015-2016, a number of protests of miners from remaining parts of Donetsk and Luhansk regions took place across Ukraine to attract officials' attention to the problems of increased salary debts, lack of protection gear and general reduction of funds allocated to coal industry. One of the protesters in despair tried to commit self-immolation and sustained severe injuries as a result¹².

There is almost no information about miners' protests in the "DPR" and "LPR" since there are restrictions on public protests, as well as lack of willingness among the "local media" to report on these issues. At the same time, participants of isolated protests that we could identify were fired, and organizers were subjected to "criminal prosecution"¹³.

Due to a moratorium on inspections introduced by Ukrainian government, lack of individual safety gear, outdated equipment and personal negligence of the heads of coal enterprises, **even minimal standards of miners' occupations safety** are not upheld. During the military conflict in Donbas, some mines ended up directly in the zone of military

¹² Holodayushchii v Minenergouglya shakhter pytalsia sovershit' samosozhzhenie [A miner on hunger strike at attempted self-immolation at the Ministry of Energy and Coal], 112.ua, 09 August 2016. URL: <http://112.ua/avarii-chp/golodayushchii-v-minenergouglya-shakter-pytalsya-sovershit-samosozhzhenie-volyne-330597.html>.

¹³ Esli trebuesh zarplatu, znachit ty sabotazhnik i predate: terroristy "DNR" nachali repressii protiv bastuiushchih shakhterov [If you ask for a salary, you are a saboteur and a traitor], Dialoh, 17 January 2016. URL: http://www.dialog.ua/news/76544_1452982506.

action. Shelling led to reported mine collapse incidents, emergency power outages and subsequent shutdown of ventilation systems and lack of possibility to evacuate miners working underground at the time.

Mines on the temporarily occupied territory currently **do not have adequate occupational safety control**, which impedes the ability to assess the actual situation. Moreover, according to the media sources, miners are forced to disguise work trauma as household injuries¹⁴. Since many coal enterprises in temporarily occupied areas stopped operations, illegal coal mining became more active in the region. Monthly turnover for illegal coal

¹⁴ Na shakhtah v "LNR" gorniakov zastavliaiut "maskirovat" proizvodstvennye travmy [Miners in the "LPR" are forced to "hide" work trauma], Informator, 23 January 2016. URL: <http://informator.media/archives/140873>.



supply from the temporarily occupied areas to the government-controlled territory was estimated approximately at 600 thousand tons, equivalent to USD 14.8 million according to expert assessment¹⁵.

It is impossible to talk about observance of work safety and mineral extraction rules when it comes to illegal coal mining. There are rumors in mining towns about horrific deaths that happened when owners buried their illegal mines along with the people inside to obviate trouble with upcoming inspections.

There are constant **salary arrears** in mining industry. At the time of preparation of this report, according to official statements on salary arrears made by Ihor Nasalyk, the Minister of Energy and Coal Industry of Ukraine, on 09 September 2016, the salary arrears for miners on state mines was equivalent to USD 13 million¹⁶. According to trade union activists, the amount of salary arrears on 1 December 2016 was USD 14.4 million, which is almost equal to the monthly amount of workers' wages at the state coal enterprises (approximately USD 14.8 million)¹⁷.

It was not possible to establish the amount of salary arrears in the territory outside of the government's control. Delays in salary payment on different enterprises controlled by the "DPR" and "LPR" can range from two months (Voykov and Volodarskyi mines, Dovzhansk¹⁸) to a year and a half (enterprises that are part of "Donbasantratsyt" and "Luhanskvuhillia" associations¹⁹). According to experts, among over 130 social subsidies provided by Ukrainian legislation, there are about 20 benefits foreseen for employees of coal enterprises²⁰. Benefits for miners include higher standards of financial support, recreation support, housing rights, subsidies for utility payments (including household coal for heating), benefits in education, special benefits and compensations in cases of enterprise closure or workplace accident.

The most unrealistic norms are those related to construction of housing and provision of interest-free loans for housing at the expense of mining enterprises. The Ministry of Energy and Coal Industry does not monitor implementation of the norms on housing for miners; however, it is obvious that loans for housing are beyond what is possible given that most state enterprises do not have funds to pay salaries. In case of private coal enterprises, there is no information about interest-free loans or housing construction by these companies. However, according to DTEK, financial support for restoring housing destroyed during military action was included into the social benefits package for workers.

¹⁵ Butchenko, M. Chorna dira. Torhivlia vuhilliam z okupovanyh terytorii peretvorylasia na nalahodzhenni biznes z miliardnymy oborotamy [Coal trade with the occupied territories turned into a tuned business with billion turnovers], *Novoe Vremia*, 19 April 2016. URL: <http://nv.ua/ukr/publications/chorna-dira-torgivlja-vugilljam-z-okupovanih-teritorij-peretvorylasja-na-nalagodzhennij-biznes-z-miljardnimi-oborotami-111155.html>.

¹⁶ Derzhava zaborhuvala shakhtariam 355 mln hryven [The state owes miners 355 million hryvnya], Nasalyk, official website of the CFTUU, 09 September 2016. URL: <http://kvpu.org.ua/uk/profnews/1630-derzhava-zaborhuvala-shakhtariam-355-mln-hryven-nasalyk>.

¹⁷ Stated in an interview with the author on 02 December 2016, Kyiv.

¹⁸ V "LPR" shakhteram mesiatsami ne platiat zarplatu i obeshchaiut uvolit [Miners in the "LPR" do not receive salary for months and receive promises they would be fired], *DonPress*, 16 December 2016, URL: <https://donpress.com/news/16-12-2016-v-lnr-shakhteram-mesyacami-ne-platyat-zarplatu-i-obeshchayut-uvolit>.

¹⁹ Bahalyka, A., Kukin M. Shakhteram v "DNR" i "LNR" platiat tolko na "vitrynnyh" predpriiatiah, - Lysyanskyi [Miners in the "DPR" and "LPR" receive salary only at "for show" enterprises, says Lysyanskyi], *Hromadske radio*, 06 February 2016. URL: <https://hromadske.org/ru/programs/kyiv-donbas/shakhteram-v-dnr-i-lnr-platyat-tolko-na-vitrinnyh-predpriyatiyah-lisyanskyi>.

²⁰ Pilhovyi absats. My znaisly v zakonodavstvi ponad 130 pilh i tse shche ne vse [The benefit fail. We found over 130 benefits in the legislation, and it does not end there], *Teksty.org*, 05 July 2012, URL: http://texty.org.ua/pg/article/editorial/read/37864/Pilgovyj_abzac_My_znaisly_v_zakonodavstvi_ponad.

In the sphere of education benefits, miners with a certain length of underground experience and their children have the right to priority (out-of-competition) admission to educational institutions at the expense of state and local budget. Human rights experts consider that benefits for admission of miners' children are discriminatory in relation to other applicants since their parents can represent other occupations, which can be equally dangerous and hazardous.

The closure of coal enterprises and destruction resulting from military action led to a **significant surge in unemployment of miners**. Ineffective state governance led to creating a system of single-industry cities in eastern Ukraine, and closure of each mine is a tragedy for employees. During first 16 year of independence, 640 thousand workers of coal industry lost their jobs²¹. Unfortunately, despite existence of various historical concepts for reforming and restructuring coal industry, with the growing level of corruption, none of the governments were able to conduct an effective restructuring and create new jobs for the employees.

The State Employment Service does not develop targeted programs for employment of unemployed coal industry workers. Instead, its activities are limited to providing information about its services for the staff of mines subject to closure.

By 2020, the government is planning to close 12 mines in five regions of Ukraine²². Experts say that these closures will cause 8.5 thousand people to lose their jobs. Negative

²¹ The concept for coal industry reform approved by the Cabinet of Ministers decree No. 737-p dd. 14 May 2008.

²² Materials of the strategic session of the Ministry of Energy and Coal Industry of Ukraine and the Labor Market Monitoring Centre (LMMC) held on 22 March 2016 with the support of the British Embassy in Ukraine, URL: <http://www.slideshare.net/MaxPramax/human-capital-restructuring-of-the-state-coal-mining-industry-in-ukraine-by-lmmc>.



Aerial view over organized illegal mining operations. Donetsk region, 2013.

socio-economic consequences are virtually imminent; however, they can be reduced to a minimum provided there are measures for alternative employment and new economic opportunities. International experience shows that “soft” restructuring and effective re-use of sites of sealed coal mines is possible.

One of the negative consequences of mine closure is **the growth of illegal coal mining**. Often, it involves the use of minors in these activities. For instance, there are known cases of the **use of child labor** before the start of the armed conflict in 2014. There is insider information about the use of child labor (boys aged 13-15 years) in illegal coal mining in the towns of Antratsyt, Rovenky, Makiivka, and Snizhne. Children were sorting and loading coal on the surface, as well as went underground to the illegal mines. Mykhaylo Volynets, leader of the Independent Trade Union of Miners of Ukraine, spoke about the use of labor of children from Torez specialized boarding school for children with mental and physical development disabilities. They were used to load coal, and the school administration was aware of these activities. In another district of Donetsk region, children were sifting coal through with the permission of a school principal and received payment equivalent to USD 1.2 per one ton of picked coal²³.

Opportunities for self-fulfillment of women in miner mono-cities and villages are especially limited. It is caused partially by the ban on underground work for women, as well as by established stereotypes about “female” and “male” occupations/professions and miners’ subculture based exclusively on “masculinity” and glorification of miners. Consequently, women are rarely in senior positions in the coal industry, which reflects the overall tendency of prevalence of men in higher positions of power in Ukraine²⁴. For example, according to the Ministry of Energy and Coal Industry, there was only one female director in coal industry by December 2016 (state enterprise “Dymytrovsk education and training school”, Myrnohrad, Donetsk region).

While employment opportunities for women at the coalmines are limited, the mines are still key employers in single-industry communities²⁵ in Donbas. This vicious circle forces women to stay at home and give up personal development and career growth, becoming dependent from their husbands-miners, who are primary breadwinners. It is important to note that **economic dependency from men increases vulnerability of women to domestic violence**.

²³ Tymoshchuk, O. Dytiacha pratsia v Ukraini – tradytsiia [Child labor in Ukraine is a tradition], Dzerkalo tyzhnia, 29 August 2008, URL: http://gazeta.dt.ua/SOCIETY/dityacha_pratsya_v_ukrayini__traditsiya.html.

²⁴ Gerasymenko, Ganna; Maksymenko, Klavdiya. 2016. Country gender assessment for Ukraine 2016. Washington, D.C.: World Bank Group. <http://documents.worldbank.org/curated/en/128891470822320083/Country-gender-assessment-for-Ukraine-2016>.

²⁵ A small single-industry town is a small town where specialization of labor of the economically active population is defined predominantly by enterprises of one-two key sectors of economy that form municipal budget revenues, ensure the functioning of social infrastructure and other essential services for population.

DETERIORATION OF THE ENVIRONMENT

With the lack of appropriate planning and control, unregulated closure of mines in late 1990s and early 2000s led to significant increase of a number of environmental hazards. With the lack of appropriate planning and control, unregulated closure of mines in late 1990s and early 2000s led to significant increase of a number of environmental hazards. These include mine flooding and surfacing of poisonous mine waters, damage to treatment facilities, chemical and biological contamination of water resources, pollution with heavy metals and radioactive elements, as well as wide-scale increase of contaminated soil areas.

Over the last decades, the technogenic impact of coal mining led to radical changes in the regional water cycle. The rate and volume of water filtration through ground rock



have increased significantly along with the washing of salts and other soluble chemical compounds contained in the rock. The pumping of mine waters with an average mineral concentration of 3.6 g/l is causes elution of 2.7 million tons of salts per year²⁶.

Underground mining accompanied by collapse of processed mining areas, as well as increased mine water discharge, led to formation of the so-called cones of depression. As a result, the overall groundwater levels, as well as the level of drinking water in wells and drill holes, has decreased. Generally, coal mining led to catastrophic degradation of water resources in the region, decrease of groundwater levels, increase of mineral concentration and contamination. According to UNICEF, **approximately 1.3 million people have restricted access to safe drinking water** in the parts of Donetsk and Luhansk regions affected by the conflict²⁷.

One of the most serious consequences for the environment is the spread of spoil tips from mining waste. They have radically changed the environment and damaged natural conditions in the region. Even without emergencies, spoil tips are major sources of contamination. They cause direct and significant harm to the population since many of them are located within city or village areas. The burning spoil tips are particularly dangerous. Toxic emissions from spoil tips spread over large areas, and the soil around each spoil tip is contaminated within 1.5-2 kilometers. Swampy valleys are the most polluted.

Activities of mines and coal enrichment factories in Luhansk and Donetsk region led to formation of 1185 spoil tips and waste rock piles, as well as approximately 170 slime and slurry ponds, which continue to pollute water basins and air. Over a third of all spoil tips are burning, including 211 in Donetsk region and 186 in Luhansk region²⁸. Spoil tip burning can last for decades unless special fire extinction methods are used. The estimated volume of annual emission of combustion products from spoil tips into the atmosphere is 500 thousand tons. Toxic dust weathering also amounts to hundreds of thousands of tons annually.

The majority of all sealed mines in Donbas (600-700 according to different sources) has been flooded. Approximately 200 of them have hydraulic links with functioning mines, which increases water influx into existing workings. Current situation is even worse since leaders of the self-proclaimed republics usually don't care for pumping out water from closed mines²⁹.

Flooding rendered large territories unsuitable for economic use because of swamping and soil salinization. Flooded woods and gardens have died out ("drowning"). Buildings, roads and other infrastructure objects in residential areas have been damaged. Flooding with mine waters with high mineral concentration caused rapid corrosion of underground engineering networks, metal support structures and gradual destruction of reinforced concrete foundations.

²⁶ Environmental safety of coal reserves in Ukraine], ed. Rudko, H.I., Bondar O.I., Kyiv-Chernivtsi, Bukrek, 2016, p. 36.

²⁷ OON pidkreslyla obmezhenyi dostup do vody dlja 1.3 mln zhyteliv Donbasu [UN highlights the restricted access to water for 1.3 million residents of Donbas], Dzerkalo Tyzhnia, 15 July 2015. URL: http://dt.ua/UKRAINE/oon-pidkreslyla-nayavnist-obmezhenogo-dostupu-do-vodi-dlya-1-3-mln-zhyteliv-donbasu-178841_.html.

²⁸ Ekologichna bezpeka vuhilnykh rodovyschch Ukrainy [Environmental safety of coal reserves in Ukraine], ed. Rudko, H.I., Bondar O.I., Kyiv-Chernivtsi, Bukrek, 2016, p. 193.

²⁹ Irina Herashchenko, pervyi vitse-spiker VR, chlen TKG v Minske: Boeviki obeshchali szhech moi dom, eto krasnorechivaia otsenka moei raboty [Irina Herashchenko, first vice-speaker of Verkhovna Rada, member of Minsk TCG: Militants promised to burn my house, it's a telling evaluation of my work], Ukrinform, 30 December 2016. URL: <https://www.ukrinform.ru/rubric-politycs/2149035-irina-gerasenko-pervyj-vicespiker-vr-clen-tkg-v-minske.html>.

In most cities in the region, there were regular high annual pollution levels exceeding the acceptable norm by several times. There is no data on current air quality condition for most areas in Donbas since majority of monitoring stations are no longer operating. Coal dust weathering and spoil tip fires, emissions from coal burning at power plants, metallurgical and coking plants in Donbas have caused **extremely high levels of air pollution with toxic substances**.

Widespread use of coal for boiler stations and stove heating in private houses also leads to emissions of sulfur dioxide and fly ash, which contains metals. Villages and towns in lowlands and river valleys can have local smog from household coal burning in the wintertime.

Now, large-scale forest and step fires are widespread in Donbas because of military actions and lack of preventative measures. In addition to fires, hostilities in Donbas also led to dispersal of metals and chemicals due to explosions of shells and other ammunition. The military often use spoil tips as high grounds, which are used for shooting and, at the same time, become fire targets. It leads to intensive spread of pollutants across the surrounding areas.

Destruction of infrastructure and utility networks, the spread of chemical pollution, damage to sewage systems, insufficient mining water drainage and flooding constitute a threat to the entire population of the region.



PROSPECTS

A combination of unprofitability of state mines, illegal mining, widespread corruption, violations of environmental, labor and social rights exacerbated in conflict situation lead to an increase in social tensions, irreparable damage to the environment, and a plunge into even deeper depression for the region.

Due to a number of economic and, primarily, environmental reasons, particularly following ratification of the Paris Climate Agreement, there is a growing global tendency towards phasing out coal and transitioning to renewable energy sources. This development scenario for the energy sector in Ukraine could have significant positive impact on the environmental conditions; ensure the country's energy independence and elimination an entire layer of corruption that is sprawling from coal industry.

At the same time, rapid half-baked elimination of coal industry can lead to irreparable socio-economic consequences. Therefore, what the coal industry in Ukraine needs is development of short term targeted programs for coal industry reform against a backdrop of conflict in Donbas. It is necessary to create conditions for organized transition to renewable energy sources, as well as gradual implementation of effective programs for social and labor rehabilitation of miners with the aim of reducing social tension and improving economic situation in Donbas.

Main priorities of regional policies in Donetsk and Luhansk regions should include a systemic approach to solving coal industry's structural problems, search and implementation of economic alternatives and innovative development models. There is an urgent need for alternatives to unregulated coal mining with particular attention to creating jobs and economic opportunities for local population and displaced persons, which is crucial for reintegration of population of occupied areas of Donetsk and Luhansk regions into Ukrainian society.

The international community should pay special attention to the issue of prosecution of trade union members and activists who are speaking out to protect their economic and social rights on the territory of the self-proclaimed republics.

Given the unstable socio-political situation in Donbas, we consider that solving coal industry problems and helping the region rise from depression are important for decreasing social tensions and achieving peace in the region.

RECOMMENDATIONS

For the international community:

- To demand from Russian Federation and the self-proclaimed republics upholding technogenic safety in the region;
- To increase pressure by international organizations on the leadership of the self-proclaimed republics and the Russian Federation, which exercises effective control over the temporarily occupied areas of Donetsk and Luhansk regions, to stop persecution of the independent trade union movement;
- To take into account the needs of vulnerable groups in the process of planning humanitarian assistance to residents of mono-industry mining communities;
- To ensure support for programs and projects of NGOs and local governance bodies in mining communities that stimulate transition to renewable energy sources.

For the state authorities:

- To implement effective restructuring of coal enterprises accompanied with appropriate technical safety measures to prevent uncontrolled flooding and further negative consequences;
- to give full account and restrict coal supplies from the temporarily occupied territories to the amount that is strictly necessary;
- To increase oversight and control of occupational safety norms at coal industry enterprises;
- To eliminate salary arrears for employees of coal enterprises;
- To develop effective retraining and employment programs for residents of mining communities that take into account social norms and mentality of mining community residents;
- To simplify permit procedures for projects on renewable energy.

For the local governance bodies:

- To provide conditions for alternative economic development and creating new jobs in the region;
- To ensure appropriate technical and environmental safety measures during mine closures to prevent flooding and other negative consequences;

- To develop concepts of post-industrial development of mining communities in Donetsk and Luhansk regions taking into account the needs of vulnerable groups (including unemployed, women, and minors);
- To support and promote action on energy savings and energy efficiency (e.g. comprehensive thermo-modernization of buildings, autonomous heating installation, the use of alternative energy sources – heat pumps and solar collectors) among population, implement these measures in state-financed institutions;
- Promote establishment of public energy cooperatives to fulfill consumer needs and create joint private investments into the new infrastructure based on renewable energy sources.

The Coalition is an informal union of 17 human rights organizations and initiatives, which was founded in 2014 in response to the outbreak of the conflict in Donbas. Most Coalition members are public association of Luhansk and Donetsk regions. The mission of the Coalition is to build a sustainable and just peace in Donbas by consolidating the efforts of civil society institutes to ensure proper respect for human rights and freedoms.

Coalition members cooperate to collect, systematize and save the evidence of human rights violations during the armed conflict in eastern Ukraine. According to members of the Coalition, bringing perpetrators to justice is a prerequisite for the restoration of peace and reconciliation in eastern Ukraine.



EUCCI is non-governmental, non-profit organization established in December 2002 in Luhansk. Mission of EUCCI: to develop and maintain the ability of the Ukrainian society to face the current challenges based on the principles of democracy and the rule of law through education, advocacy and research.

Since the beginning of the military conflict in Donbas, main activities of the organization include documentation of gross human rights violations that occurred during the conflict in the east of Ukraine; facilitation of the restoration of peace in the east of the country. EUCCI is one of the founders of the Coalition “Justice for Peace in Donbas.”

The organization also continues to implement projects that promote public access to urban planning documentation and support development of civil society organizations.

Heinrich Boell Foundation’s Office in Ukraine is regional representation of the German political left-liberal Heinrich Boell Foundation that is close to the Green Party (“Alliance ‘90 / The Greens”) of Germany and is part of the European Green movement. The Foundation is a nonprofit independent public organization. It is an international resource organization working in Germany and abroad. It includes 16 state assets in Germany and 28 foreign representative offices that are active in 60 countries on four continents.

Heinrich Boell Foundation’s Office in Ukraine has been working since 2008 and implements the following programs: Democracy Support; Gender Democracy and Women Rights; Environment, Climate and Energy policy.

