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Occupational safety and health in the mining industry in Ukraine



OCCUPATIONAL
SAFETY AND HEALTH

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Occupational safety and health in the mining industry in Ukraine

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Foreword

In the framework of the ILO-Canada project “Improving Occupational Safety and Health (OSH) in the Mining Industry of Ukraine,” the ILO assists Ukrainian tripartite partners in the development of modern OSH policies and the capacity building in order to prevent work accidents and occupational diseases in the mining industry of Ukraine.

The purpose of this report is to provide a comprehensive review of the current OSH situation within the mining industry of Ukraine, assess gaps in the national OSH system, and identify priority areas for national OSH policies and programmes.

This report integrates two draft reports prepared under the project. The first report, prepared by Iryna Perevoznik, Executive Director of the Federation of Miners’ Employers of Ukraine, reviews the labour protection legislation in the mining and metal industries of Ukraine. The second report on occupational safety and health in Ukraine’s mining sector and coal industry has been prepared by the Main Educational and Methodological Center of the State Labour Service as one of the chapters of the National OSH Profile for Ukraine.

The final report was compiled and edited by Kenichi Hirose, Senior Social Protection Specialist of Decent Work Technical Support Team for Central and Eastern Europe (ILO DWT/CO-Budapest). The report was validated at the tripartite workshop conducted on 30 October 2018 in Kyiv. Iryna Vintoniuk, National Project Coordinator, and Olena Guz, have provided editorial assistance in finalizing this report.

We hope that this report can serve as a useful reference for national authorities, experts and social partners of Ukraine in their effort to improve occupational safety and health in the mining industry, particularly through formulating a new mid-term sectoral OSH programme.

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1. Current OSH situation in mining in Ukraine

1.1. Overview of the mining industry in Ukraine

Ukraine is rich in mineral resources. Currently, Ukraine extracts coal, iron ore, manganese ore, uranium, titanium, zirconium, graphite, kaolin, bromine, ochre, non-metallic metallurgical raw materials (such as aposandstone, fluxing limestone and dolomite), chemical raw materials (such as native sulphur, stone and potassium salts), facing stone (such as granites, gabbro, labradorite), as well as glass sand. These mineral resources constitute an important source of the national economy. Almost half of the industrial production and up to 20 percent of labour force can be attributed to the extraction and use of minerals.

The mining industry has been deeply affected by the Crimean crisis and the military conflict which followed, in the Donetsk and Luhansk regions in 2014. In Ukraine, more than 90 percent of coal resources are located in the Donetsk coal basin, while almost 50 percent of Ukrainian coal, including almost all anthracite, was extracted in the areas of Donetsk and Luhansk regions which are currently not under government control. It should be noted that many enterprises and institutions that provide ancillary services to mining enterprises were also located in that area. These enterprises and institutions include coal production industry associations, mine construction departments, paramilitary mine rescue units, coal machine-building enterprises, pumping work enterprises, as well as scientific research institutes that design and maintain integrated safety systems, mine rescue operations and underground communication. Since the end of 2014, there have been no official reports with regards to mining or other economic activities conducted in the non-government-controlled area.

Since the outbreak of the conflict in 2014, mining enterprises have dramatically reduced their activities, and some mines have even ceased operations due to the destruction of the infrastructure. In particular, the blockade of railway transport has disrupted the supply of materials and equipment to the coal mining enterprises in the non-government-controlled area in the Donetsk and Luhansk regions, as well as the shipment of coal product from that

area.¹ According to the Ministry of Energy and Coal Industry, coal production saw a decline of more than 50 percent in 2015. In particular, the production of power-generating coal and coking coal in state enterprises decreased by about 70 percent. Accordingly, as illustrated in Table 1, the number of employees in mining decreased from 482,000 in 2013 to 270,000 in 2015, and has been declining since. In 2017, the number of employees in mining was 236,180, which was 1.5 percent of the total number of employees of the country. About half of the miners were engaged in extraction work.

	2012	2013	2014	2015	2016	2017
Coal mining	322	302	186	114	96.2	91.5
Metal and other mining	190	180	171	156	152	145
Mining total	512	482	367	270	248	236
Ukraine total	20,354	20,404	18,073	16,443	16,277	16,156

Source: State Labour Service, State Statistics Service of Ukraine.

In 2013, before the conflict, there were 431 coal mines and 2,098 mining enterprises in Ukraine. These figures decreased to 69 coal mines and 1,328 mining enterprises within the government-controlled area in 2017. Table 2 summarizes the characteristics of these mines.

	Active	Maintenance	Inactive	In liquidation	Under construction	Total
Total	51	4	5	8	1	69
By region						
Donetsk	23	1	5	4	0	33
Luhansk	9	3	0	0	0	12
Dnipropetrovsk (Pavlohrad city)	10	0	0	0	0	10
Lviv	7	0	0	2	0	9
Volyn	2	0	0	2	1	5
By ownership						
State	31	3	0	7	1	42
Private	20	1	5	1	0	27

Source: State Labour Service of Ukraine.

Most mining enterprises in the private sector belong to large Ukrainian conglomerates of metallurgy and electric power industry (7 mines belong to Metinvest Holding LLC; 28 mines belong to Donbas Fuel and Energy Company (DTEK); one mine belongs to Donetsk Metallurgical Plant PJSC; and 6 mines belong to Mechanic SPA). In addition, more than

¹ The State Military Mining Rescue Service in the Coal Industry of Ukraine is the only rescue service for coal mines in the conflict zone. Its two branches in the East of Ukraine serve for 55 enterprises. The State Military Mining Rescue Service, among the other duties, operates in the event of emergencies caused by weapons.

10 independent mining enterprises are operating in the private sector (including O.F. Zasyadko Mine PJSC, Zhdanivska Mine PJSC, Krasnolymanske LLC, V.I. Chapaev Mine Administration, Ukrvuhlebud PJSC, etc.).

Despite the support from the State, state-owned coal mining enterprises have been suffering from low productivity and poor profitability. As of April 2018, the wage arrears in mining amounted to 470 million UAH (The total wage arrears in all sectors of Ukraine were 1.9 billion UAH). It is important to note that 40 percent of the coal mines have been operational for more than 70 years, and 96 percent of them have had no reconstruction for more than 20 years. In addition, a large part of state-owned coal mines operate under difficult geological conditions. Out of seven thousand units of stationary equipment, two-thirds have been completely depreciated and need immediate replacement.

On 24 May 2017, the Cabinet of Ministers of Ukraine approved a new strategic document concerning the reform and development of the coal mining industry, entitled the “Concept of Reform and Development of the Coal Industry for the Period until 2020.” It defines the strategy to restructure mines and make focused investment in order to transform the coal industry to become self-sustaining and to secure a sustainable coal supply (For detail, see Section 5.3).

1.2. Statistics of occupational accidents and diseases in mining

1.2.1. Problems with data collection

When analysing the statistics on work accidents and occupational diseases, it is essential to highlight the problems with data collection.

Firstly, a significant number of accidents are not reported. To demonstrate an indirect evidence of under-reporting of work accidents in Ukraine, a comparison of the work accident statistics of Ukraine and Germany can be made. While Germany has more than 40 million employees and recorded more than one million work accidents, Ukraine has 16 million employees but recorded only 4,313 work accidents in 2017. This implies the reported accident rate of Ukraine is almost ten times less than that of Germany. This comparison indicates that the reported work accidents and occupational diseases in Ukraine account for only a small portion of the actual figures.²

The problem of under-reporting is even more serious with occupational diseases. Due to the lack of a state register of occupational diseases,³ Ukraine, in 2017, recorded only 1,951 cases of occupational diseases out of 16 million employees. However, according to the State Labour Service, 68.7 percent of workers in mining (158,000 out of 230,000) have been working in conditions which fail to meet the sanitary and hygienic standards.⁴ With regards

² The absence of the state body in charge of collecting work accidents and occupational diseases data from private ore-mining enterprises also contributes to the lack of relevant statistics.

³ According to the Law, the creation of the state register of occupational diseases falls under the responsibility of the Ministry of Health of Ukraine (RCMU No. 267 of 25.03.2015). The data from the Social Security Fund are not sufficient to analyse the work-related accidents and diseases properly.

⁴ For all sectors, 24.7 percent of employees work in conditions failing to comply with the sanitary and hygienic standards.

to occupational hazards, 53.5 percent of miners work with excessive dust, 42.3 percent work with excessive noise, 14.2 percent work with excessive vibration, and 9.8 percent work with excessive exposure of harmful chemicals. These rates are more than two times higher than that of the all sector average of Ukraine.

Secondly, the loss of government control of some parts of Ukrainian territory has led to a lack of statistical information in those areas since 2014. In particular, as noted earlier, a large number of coal mines are situated in the non-government-controlled area of Donetsk and Luhansk regions. This makes it difficult to conduct comparative analysis of accidents over time.

1.2.2. Work accident data

Tables 3 and 4 present the number and incidence rates of work accidents in mining for the period 2012–2017. As noted before, there is a gap in the statistics of work accidents since 2014 due to the lack of accident data of enterprises located in the non-government-controlled area. The data gap is particularly significant in coal mining.

Despite this deficiency, it can be observed that 22.7 percent of the work accidents in 2017 occurred in mining, and more specifically coal mining. The share of work accidents in mining was more than 40 percent before 2014. In terms of incidence rates, coal mining is almost 30 times higher than the average rate in Ukraine, and metal and non-metal mining is three to five times higher than the average rate in Ukraine.

TABLE 3 Number of work accidents in mining, 2012–2017						
	2012	2013	2014	2015	2016	2017
Coal mining	3,650 (37.2%)	3,147 (36.7%)	2,034 (32.2%)	752 (17.7%)	864 (19.5%)	780 (18.1%)
Metal and non-metal mining	303 (3.1%)	286 (3.3%)	220 (3.5%)	207 (4.9%)	192 (4.3%)	201 (4.7%)
Mining total	3,953 (40.3%)	3,433 (40.1%)	2,254 (35.7%)	981 (23.0%)	1,056 (23.8%)	981 (22.7%)
Ukraine total	9,816 (100%)	8,568 (100%)	6,318 (100%)	4,260 (100%)	4,428 (100%)	4,313 (100%)

Source: State Labour Service of Ukraine.

TABLE 4 Incidence rates of work accidents in mining, 2012–2017 (per 1,000 workers)						
	2012	2013	2014	2015	2016	2017
Coal mining	11.34	10.42	10.94	6.60	8.98	8.52
Metal and non-metal mining	1.59	1.59	1.29	1.33	1.26	1.39
Mining total	7.72	7.12	6.14	3.63	4.26	4.16
Ukraine total	0.48	0.42	0.35	0.26	0.27	0.27

Source: ILO calculation based on Tables 1 and 3.

Tables 5 and 6 present the number and incidence rates of fatal work accidents in the mining industry for the period 2012–2017.

Although mining exhibits a comparatively lower share of fatal accidents than that of all work accidents combined, it should be observed that the incidence rate of fatal accidents in coal mining is more than ten times higher than the average rate of Ukraine, and the incidence rate of fatal accidents in metal and non-metal mining is two to seven times higher than the average rate of Ukraine.

TABLE 5 Number of fatal work accidents in mining, 2012–2017						
	2012	2013	2014	2015	2016	2017
Coal mining	121 (19.4%)	100 (18.6%)	99 (18.1%)	19 (5.1%)	20 (5.0%)	23 (6.3%)
Metal and non-metal mining	22 (3.5%)	22 (4.1%)	12 (2.2%)	16 (4.3%)	23 (5.8%)	9 (2.5%)
Mining total	143 (23.0%)	122 (22.7%)	121 (22.1%)	35 (9.3%)	43 (10.8%)	32 (8.7%)
Ukraine total	623 (100%)	538 (100%)	548 (100%)	375 (100%)	400 (100%)	366 (100%)

Source: State Labour Service of Ukraine.

TABLE 6 Incidence rates of fatal work accidents in mining, 2012–2017 (per 100,000 workers)						
	2012	2013	2014	2015	2016	2017
Coal mining	37.6	33.1	53.2	16.7	20.8	25.1
Metal and non-metal mining	11.6	12.2	7.0	10.3	15.1	6.2
Mining total	27.9	25.3	33.0	13.0	17.3	13.6
Ukraine total	3.1	2.6	3.0	2.3	2.5	2.3

Source: ILO calculation based on Tables 1 and 5.

As shown in Tables 7, state-owned coal mining enterprises exhibit higher incidence rates of general and fatal work accidents than private coal mining enterprises.⁵

TABLE 7 Incidence rates of work accidents in coal mining by ownership, 2016–2017				
	Total (per 1,000 workers)		Fatal cases (per 1 million tons of coal)	
	2016	2017	2016	2017
Coal mining	8.36	7.86	0.87	1.07
- State-owned enterprises	9.53	8.86	1.76	3.58
- Private enterprises	7.28	6.96	0.57	0.43

Source: State Labour Service of Ukraine.

⁵ There is a slight discrepancy between Table 6 and Table 7.

Table 8 illustrates that gas explosion is the top cause of fatal work accidents in coal mines, which accounts for more than one-third of all fatal accidents. This is followed by electric shock, rock slide and fall when moving.

TABLE 8 Number of fatal work accidents in coal mining by cause, 2017		
	Cases	%
Gas explosion	8	36.4%
Electric shock	3	13.6%
Rock slide	2	9.1%
Fall when moving	2	9.1%
Discharge of flame	1	4.5%
Transport	1	4.5%
Others	5	22.7%
Total	22	100.0%

Source: State Labour Service of Ukraine.

TABLE 9 Number of work accidents in coal mining by region, 2016–2017				
	Total		Fatal cases	
	2016	2017	2016	2017
Donetsk	425	372	12	13
Luhansk	77	49	2	0
Dnipropetrovsk (Pavlohrad city)	193	176	3	2
Lviv	140	154	1	10
Volyn	42	36	2	0
Total	877	787	20	25

Source: State Labour Service of Ukraine.

TABLE 10 Number of fatal work accidents in coal mines by enterprise, 2016–2017		
	2016	2017
SE “Lvivvuhillia”	0	10
SE “Toretskvuhillia”	2	3
SE “Selydivvuhillia”	0	2
SE “Myrnohradvuhillia”	1	2
PJSC “Pokrovske Coal Company”	4	2
PJSC “DTEK Pavlohradvuhillia”	3	2
LLC “DTEK Dobropillyavuhillia”	1	2
LLC “Techinovatsia”, “Svyatopokrovska” mine	0	1
PJSC “Shakhtobudmontazhne upravlinnia No. 1”	0	1
Others	9	0
Total	20	25

Source: State Labour Service of Ukraine.

Tables 9 and 10 present the number of general and fatal work accidents in coal mining by region and by enterprises. Out of 25 fatal accidents in 2017, 22 (88 percent) occurred underground and 3 (12 percent) on the ground. Of these, 20 accidents were due to non-compliance with the safety rules in coal mines. Specific mention should be made to the multiple-death accident in Stepova mine of SE “Lvivuhillia” in March 2017, in which 8 miners were killed and 28 workers were injured.

1.2.3. Occupational disease data

Table 11 presents the number of occupational diseases in mining for the period 2013–2017. A significant decrease in the number of occupational diseases in 2015 would be most likely due to the absence of data of the uncontrolled territory. Nevertheless, it is observed that more than 80 percent of occupational diseases in Ukraine occur in mining, with a large share in coal mining.

Sector	2013	2014	2015	2016	2017
- Coal mining	4,576 (78.1%)	3,278 (72.3%)	1,006 (57.1%)	1,054 (65.8%)	1,367 (70.1%)
- Metal ore mining	258 (4.4%)	215 (4.7%)	238 (13.5%)	195 (12.2%)	160 (8.2%)
- Uranium and thorium ore mining	85 (1.5%)	83 (1.8%)	82 (4.7%)	62 (3.9%)	74 (3.8%)
Mining total	5,023 (85.7%)	3,633 (80.2%)	1,365 (77.5%)	1,311 (81.8%)	1,612 (82.6%)
Ukraine total	5,860 (100.0%)	4,352 (100.0%)	1,761 (100.0%)	1,603 (100.0%)	1,951 (100.0%)

Source: State Labour Service of Ukraine.

As illustrated in Table 12, the highest number of occupational diseases was respiratory diseases (pneumoconiosis, chronic bronchitis etc.), accounting for 46.7 percent, and the second highest is diseases of the musculoskeletal system (radiculopathy, degenerative spine diseases, arthritis), accounting for 36.4 percent. These are followed by diseases caused by physical factors (vibration disease, sensorineural hearing loss etc.) (14.6 percent).

	Cases	%
Respiratory diseases	912	46.7%
Musculoskeletal system	711	36.4%
Diseases caused by physical factors	285	14.6%
Others	43	2.2%
Total	1,951	100.0%

Source: State Labour Service of Ukraine.

Furthermore, a detailed analysis of occupational diseases in the coal industry during 2005–2014 reveals the following:⁶

- Between 40 and 80 percent of registered occupational diseases were caused by the production of dust, resulting in pneumoconiosis, chronic obstructive pulmonary disease, and chronic bronchitis.
- Musculoskeletal diseases represent between 17 and 26 percent of the total occupational disease cases, including peripheral nervous system (81–87 percent) such as sensory polyneuropathy, cervical and lumbosacral radiculopathy.
- Locomotor apparatus diseases represent 7 to 17 percent, including arthritis, peri-arthritis, epicondylitis, spondylosis, aseptic necrosis etc.
- Vibrational illnesses represent 3 to 8 percent, and neurosensory hearing loss 2 to 6 percent.

Table 13 presents the number of occupational diseases in coal mines by enterprise.

TABLE 13 Number of occupational diseases in coal mines by enterprise, 2017		
	Region	Cases
Stepova mine of SE “Lvivvuhillia”	Lviv	96
Vidrodzhennia mine of SE “Lvivvuhillia”	Lviv	83
Lisova mine of SE “Lvivvuhillia”	Lviv	73
“Dobropilliavuhillia”	Donetsk	72
“Pokrovske Coal Company”	Donetsk	70
Kotliarevska mine of SE “Selydivvuhillia”	Donetsk	46
“DTEK Pavlohradvuhillia”	Dnipropetrovsk	494

Source: State Labour Service of Ukraine.

1.3. Mine OSH inspection and moratorium

The State Labour Service is the central executive authority which implements the state policy in the area of mining supervision. As of December 2017, the Mining Supervision Directorates of the State Labour Service had 102 mine inspectors (57 for coal mines, and 45 for non-coal mines).

According to the State Labour Service, there is a need for regular safety inspection at all worksites of mines, particularly at the reinforcing and mounting elements of vertical shafts, control device of mine air conditions (methane and carbon contents), and fire alarms and fire-fighting devices. For state-owned coal enterprises, there is also a need to inspect routine repair and maintenance of electronic fixed equipment and machinery (such as high-voltage cables, winding engines and ventilation fans) that have been used beyond their operating periods.

Table 14 presents the data of mine inspections from 2014 to 2017.

⁶ Nagorna A.M. et.al. “Situation of occupational diseases during the period of legislation changes in Ukraine,” Problems of labour medicine. 2016. No 1.

TABLE 14 Data on mine inspections, 2014–2017					
	Type of mine	Year			
		2014	2015	2016	2017
Number of inspections conducted	Coal	127	33	140	1,035
	Non-coal	72	98	322	987
Of which: unscheduled inspections	Coal	18	19	132	1,019
	Non-coal	2	20	34	644
Number of works prohibited	Coal	201	2	4	82
	Non-coal	118	16	25	228
Of which: prohibited by Court decision	Coal	195	1	5	48
	Non-coal	43	1	5	25
Number of administratively liable cases	Coal	9,418	279	645	1,090
	Non-coal	2,283	143	1,086	598
Amount of fines (thousand UAH)	Coal	2,335	84	193	318
	Non-coal	770	51	395	226
Of which: due to fault of enterprise managers	Coal	417	5	33	85
	Non-coal	286	22	161	148
Amount of fines (thousand UAH)	Coal	158	1.7	13	41.6
	Non-coal	126	9.3	84	75.5

Source: State Labour Service of Ukraine.

Note: The data include the inspections conducted in the non-government-controlled area in Donetsk and Luhansk regions.

The reason for the low number of inspections from 2014 to 2016 is due to the imposition of moratoriums on the state inspection activities, including labour inspection, with the aim to reduce the administrative burden on enterprises, especially small and medium ones.

In 2014, a moratorium on all scheduled and unscheduled inspections, including labour inspections, was introduced⁷ from August 2014 till December 2014, and then later extended to June 2015.⁸ Inspections could only be conducted with permission from the Cabinet of Ministers, except for the State Fiscal Service and the State Financial Inspection.

This moratorium was then lifted in August 2015. However, in November 2016, a moratorium of any unscheduled state inspections, including labour inspections was re-introduced.⁹ According to these Laws, all scheduled inspections continue to be carried out, however, unscheduled inspections are suspended except for the following cases: (i) registered complaint of an individual with the State Regulatory Service; (ii) written request of an enterprise; (iii) Court decision; (iv) occurrence of fatal work accidents; (v) occurrence of incidents with

⁷ Based on Article 31 of the Law on State budget of Ukraine (No. 719-VII of 16.01.2014).

⁸ Based on Article 8 of the Law on Amending and Invalidating Some Legislative Acts (No.6-VIII of 28.12.2014).

⁹ Law “On amendments to the law of Ukraine on Fundamental Principles of State Supervision in the Field of Economic Activity” (No 1726-VIII of 03.11.2016) and Law “On Temporary Peculiarities of Implementation of State Supervision Measures in the Field of Economic Activity” (No. 1728-VIII as of 03.11.2016).

substantial negative effects on the rights, interests, life and health of people, environment and state safety; and (vi) follow-up control of previous inspections.

Such a moratorium inhibits labour inspectors from discharging their duties effectively, and is apparently not consistent with the requirements of the Labour Inspection Convention, 1947 (No. 81) and the Labour Inspection (Agriculture) Convention, 1969 (No. 129), both of which have been ratified by Ukraine.

Following the approval of the State Budget for 2018, the moratorium of inspections was further extended until December 2018. Simultaneously, the Government adopted a list of 24 authorities that are exempted from the moratorium, including the State Labour Service.¹⁰ Since 23 February 2018, the State Labour Service has resumed its inspection work. However, it was laid down that a scheduled inspection still requires a ten-day notice to the employer, and in case of unscheduled inspection due to an accident, the process of suspension of workplace still requires a court decision, which can take up to six months.

1.4. Expenditure on OSH programmes in state-owned coal mining enterprises

As illustrated in Table 15, the total planned budget of the programme for improvement of OSH for state-owned coal mining enterprises in 2017 was 312.7 million UAH (out of which 100 million UAH was from the State budget), while the actual expenditure was 197.2 million UAH which represents only 63.1 percent.

	Plan (million UAH)	Actual (million UAH)	Actual/Plan (%)
2016	214.6	95.1	44.3%
2017	312.7	197.2	63.1%

Source: The Ministry of Energy and Coal Industry.

Table 16 compares the planned and actual spending of the programme for improvement of OSH and industrial safety for state-owned coal mining enterprises during the first half of 2017.

The following observations can be made:

The total planned budget for the implementation of the OSH programme for the first half of 2017 was 140.9 million UAH, which is equivalent to 7.6 percent of the wage payroll (the labour remuneration fund) of the same period.

The actual budget spent for the OSH programme was 51.2 million UAH, or 2.8 percent of the wage payroll (the labour remuneration fund) of the same period. Therefore, the budget actually spent for the OSH programme was 36.3 percent of the planned budget for that period.

¹⁰ Resolution of the Cabinet of Ministers of Ukraine, No. 1104 of 18.12.2017.

The sole reason for the low delivery rate is due to the fact that the procurement of personal protective equipment has not been receiving adequate funding. The procurement of personal protective equipment accounted for 78 percent of the planned budget in the OSH programme, but attained only 16 percent of delivery rate. The insufficient supply of the necessary personal protective equipment to workers is an extremely serious problem in all the state-owned coal-producing enterprises.

TABLE 16			
Plan and actual expenditure of OSH programmes for state-owned coal mining enterprises by components, first half of 2017			
	Plan (million UAH)	Actual (million UAH)	Actual/Plan (%)
Procurement of personal protective equipment	110.4	17.4	16%
Procurement of collective protective equipment	21.2	21.6	102%
Organizational activities and preventive measures	5.4	7.5	139%
Procurement and refurbishment of fixed equipment	4.9	6.2	127%
Medical examination	3.6	4.3	119%
Training	0.3	0.3	100%
Total	140.9	51.2	36%

Source: The Ministry of Energy and Coal Industry website.

Considering that a dominant portion of the budget for the OSH programme is allocated for the procurement of personal protective equipment, the budget for organizational activities and preventive measures, medical examination and training represents only 6.6 percent of the budget of the OSH programme. In the first half of 2017, a total of 710 engineers and technicians of the state-owned coal-producing enterprises participated in OSH trainings and other special training programmes.

2. Key actors in OSH in mining

2.1. State administration

2.1.1. Cabinet of Ministers of Ukraine

According to the Constitution of Ukraine, the Cabinet of Ministers is responsible for the implementation of the policy on labour and employment, social protection, education, science and culture, nature protection, environmental safety and nature management, as well as exercising other powers determined by the law.

2.1.2. Ministry of Social Policy

The Ministry of Social Policy is a central executive authority responsible for the formulation and implementation of the state policy in the fields of labour and social policy, employment and labour migration, labour relations, state social and pension insurance, social dialogue, industrial safety, labour protection, occupational safety, handling of explosive materials, and state mining supervision.

2.1.3. State Labour Service

The State Labour Service is a central executive authority which, under the coordination by the Cabinet of Ministers of Ukraine through the Minister of Social Policy, implements state policy on industrial safety, labour protection, occupational health, handling of industrial explosive materials, and state mining supervision.¹¹

The State Labour Service was established in 2014 through a merger of the State Labour Inspectorate, the State Service for Mining Supervision and Industrial Safety.

It also exercises integral management of OSH at the state level, exercises state regulation and control of activities connected with high-risk facilities, and organizes and exercises state supervision of the facilities using natural gas.

¹¹ According to Art. 31 of the Law on Labour Protection, the bodies that implement a state policy of occupational safety and health also include the Council of Ministers of the Autonomous Republic of Crimea, state local administrations and self-governing authorities.

2.1.4. Ministry of Health

The Ministry of Health is a central executive authority responsible for the formulation and implementation of state policy in health care and epidemiological surveillance, as well as for the formulation of state policy in the field of sanitary well-being and protection of epidemics.

In the field of occupational health, the Ministry of Health defines the procedures for medical examinations of the workers engaged in heavy and hazardous working conditions, defines the lists of heavy and hazardous working conditions in which the employment of women and minors is prohibited; defines the state sanitary rules and regulations in the field of OSH, and records infectious and occupational diseases and poisonings.

2.1.5. Ministry of Energy and Coal Industry

The Ministry of Energy and Coal Industry is a central executive authority responsible for the formulation and implementation of the state policy on the electric power industry, nuclear industry, coal industry, peat mining, oil and gas producing and processing sectors; the formulation of the state policy on supervision of electric power and heat supply sectors; and the public administration in the field of nuclear power use and radiation safety.

The Ministry of Energy and Coal Industry is in charge of recording accidents at fuel and energy complex enterprises and implementing preventive measures.

2.2. Social partners

2.2.1. Employers' organizations

The Federation of Miners' Employers of Ukraine is a joint representative body of employers at the national level. It consists of 20 employers' organizations hiring about 135 thousand workers. The Federation of Miners' Employers of Ukraine is a member of the Federation of Employers of Ukraine.

The Federation of Employers of Fuel and Energy Complex consists of 44 fuel and energy employers' organizations, which cover 46 acting mines in the government-controlled area, 103 service organizations, 21 energy generating stations and 11 other energy enterprises, and employ 105 thousand workers in total. The Federation of Employers of Fuel and Energy Complex is a member of the European Hard and Brown Coal Association.

2.2.2. Workers' organizations

The Trade Union of Coal Mining Workers of Ukraine, which claims to cover 86 percent of the coal industry workers of the country, and the Trade Union of Workers of the Metallurgy and Mining Industry of Ukraine, are member organizations of the Federation of Trade Unions of Ukraine (FTUU), which represents and protects the socio-economic rights and interests of trade union members.

The Independent Trade Union of Miners of Ukraine represents workers in mining and metal industries. It is a sectoral arm of the Confederation of Free Trade Unions of Ukraine (CFTUU). Based on social partnership and tripartism, CFTUU cooperates with the state authorities and

employers' organizations, participates in the negotiations in relation to general, sectoral and regional agreements as well as collective bargaining agreements.

Both FTUU and CFTUU are members of the International Trade Union Confederation (ITUC) and joint representative bodies of trade unions and professional unions at the national level.

2.3. Collective agreements

2.3.1. General agreement at the national level

Following the Law on Collective Contracts and Agreements (No. 3356-XII of 01.07.1993) and the Law on Social Dialogue (No. 2862-VI of 23.12.2010), a General Agreement for 2016–2017 has been concluded between the all-Ukrainian associations of employers' organizations, the all-Ukrainian associations of trade unions and the Cabinet of Ministers of Ukraine. This document contains a specific section “Working Conditions and Occupational Safety and Health,” which specifies the arrangements reached by the parties and their obligations in this regard.

Moreover, the signed parties agreed to elaborate proposals concerning the ratification of ILO OSH Conventions Nos. 121, 152, 167, and 187; OSH training of representatives of employers and trade unions; the improvement of reporting of occupational accidents and diseases; and the introduction of the OSH management system at the enterprise level.

The General Agreement covering the next period has been under discussion, however it has not yet been agreed, as of December 2018.

2.3.2. Sectoral agreement of the coal mining sector

In the coal mining sector, a sectoral agreement has been concluded between the Ministry of Energy and Coal Industry, other public authorities, association of employers in the coal mining sector, and all-Ukrainian trade unions of coal industry.¹² The latest sectoral agreement of the coal mining sector was concluded in 2001 (last amendment in 2009).

While in the metal mining and metallurgy sector, the sectoral agreement for the period 2011–2012 is still in effect. At present, there is an ongoing negotiation regarding the signatures of a new agreement in this sector.

¹² The registry of sectoral agreements: <http://www.fpsu.org.ua/generalna-ugoda-galuzevi-ugodi-teritorialni-godi/galuzevi-dogovori/526-reestr-galuzevikh-mizhgaluzevikh-ugod>.

3. Legislation on OSH in mining

3.1. Basic laws concerning OSH

3.1.1. Law on Labour Protection (No. 2694-XII of 14.10.1992)¹³

The Law on Labour Protection is a fundamental law in the field of OSH, which stipulates key provisions on the workers' constitutional right to protection of their life and health in the course of work, and to proper, safe and healthy working conditions. The Law regulates employer-worker relations on OSH and the working environment with an involvement of relevant public authorities, while establishing a uniform procedure for the organisation of OSH in Ukraine. Moreover, the law also reflects the requirements set forth in the current ILO Conventions and Recommendations as well as other international standards in this field.

3.1.2. Labour Code (No. 322-VIII of 10.12.1971)

The Labour Code also provides legal regulation of OSH, in particular in Chapter XI "Labour Protection," but also in other chapters such as "Employment Agreement", "Working Time", "Periods of Rest", "Female Labour", "Labour of Young People", "Trade Unions, Workers' Participation in Management of Enterprises, Institutions, and Organizations", "Supervision and Control over Compliance with Legislation on Labour."

3.1.3. Law on Mandatory State Social Insurance (No. 1105-XIV of 23.09.1999)

This law defines the legal, financial and organizational foundations for mandatory state social insurance against sickness, maternity and death. With regards to work-related accidents and sicknesses, employment injury benefits include: benefits for temporary incapacity for work; benefits for total loss of earning capacity; survivors' benefits; and medical care and rehabilitation.

Since the passage of the Law on Amendments to some legislative acts of Ukraine on the reform of mandatory social insurance and legalization of payroll (No. 77-VIII of 28.12. 2014), which came into force on 1 January 2015, the Temporary Incapacity Benefits Fund and the

¹³ These laws have been subsequently amended and supplemented by other laws. We only indicate document number of date of the first adopted version.

Employment Injury Benefit Fund have been merged into a single fund, named the Social Insurance Fund of Ukraine.

Furthermore, the Law of Ukraine on Pensions (No. 1788-XII of 05.11.1991) provides preferential conditions on old-age pensions for employees working in heavy and hazardous conditions. The Law on Mandatory State Social Unemployment Insurance (No. 1533-III of 02.03.2000) stipulates entitlement to unemployment benefits.

3.1.4. Fundamentals of the Legislation on Health Care (No. 2801-XII of 19.11.1992)

The Fundamentals of the Legislation on Health Care is a fundamental law, which aims at harmonious development of physical and mental potentials, high working capacity, and a long active life of citizens.

With regards to OSH, the Law stipulates uniform sanitary and hygienic requirements for the organization of production processes involving human activities, as well as for the quality of machinery, equipment, buildings, consumer goods, and other facilities that can have a harmful impact on health (Art. 28); requires compulsory medical examination for workers in certain categories, including employees working in harmful and hazardous conditions (Art. 31); and establishes the legal foundations for medico-social expert examinations on the loss of working capacity and permanent disability (Art. 69).

3.1.5. Other laws relevant to OSH

The Law on High-Risk Facilities (No. 2245-III of 18.01.2001) defines legal, economic, social and organizational foundations for activities related to high-risk facilities, and aims at protecting human life and health and the environment against the harmful impact of accidents through their prevention, restriction of the use of high-risk facilities, and elimination of their consequences.

The Law on Ensuring Sanitary Well-being and Protection from Epidemics among the Population (No. 4004-XII of 24.02.1994) establishes the hygienic standardization of hazardous and harmful physical, chemical and biological factors present in the human life environment, and for their state registration (Art. 9); requirements for design, construction, development, manufacture and use of new means of production and technology (Art. 15); hygienic requirements for atmospheric air in inhabited localities and air inside production and other areas (Art. 19); as well as requirements for provision of radiation safety (Art. 23).

The Law on Technical Regulations and Conformity Assessment (No. 124-VIII of 15.01.2015) defines legal and organizational principles for the development, adoption and implementation of technical regulations and conformity assessment procedures envisaged thereby, as well as for voluntary conformity assessment. It regulates relationships emerging in connection with the development and adoption of technical regulations and conformity assessment procedures with their application to products put into circulation, offered in the market or commissioned in Ukraine, as well as with voluntary conformity assessment.

The Code of Civil Protection (No. 5403-VI of 02.02.2012) stipulates that ensuring fire safety of an economic entity is the responsibility of its owners and managers and that fire safety

measures are an integral part of production and other activities of workers (Art. 55). This requirement is reflected in employment contracts, statutes and regulations.

The Criminal Code (No. 2341-III of 05.04.2001) contains Section X “Crimes Against Production Safety” which establishes criminal liability for violations of OSH requirements that result in severe damage on workers’ health and life (Art. 271–275).

The Code on Administrative Offenses (No. 8073-X of 07.12.1984) provides the imposition of fines on employers and owners of an economic entity for violating the legal requirements on OSH (Article 41).

3.2. Basic laws concerning mine safety

3.2.1. The Mining Law (No. 1127-XIV of 06.10.1999)

This Law defines legal and organizational fundamentals for mining works, organization of emergency protection, as well as safety and health in extremely hazardous conditions (Art. 4). The Law requires that expert examinations of the safety of mining works and emergency protection should be conducted in order to eliminate any unacceptable risks which can cause harm to human life, health and property, natural environment or economic entities (Art. 22). The Law defines technical and organizational measures to prevent emergencies and disasters (Art. 26), as well as an emergency response plan and a mining enterprise manager’s duties during emergency management and rescue of people (Art. 27, 30). Moreover, it sets forth requirements to ensuring safety of mining works (Art. 32), and outlines protective measures of a mining enterprise from harmful effects of hazardous production operations and natural hazards (Art. 33).

Concerning working conditions in mines, the Law defines principal duties of a mining enterprise owner (manager) (Art. 38); requirements to workplace discipline, vocational training and skills of mining enterprise workers (Art. 39); special requirements for mining enterprise workers (Art. 40); duties of mining enterprise workers (Art. 41); and, additional requirements for the persons exposed to extremely hazardous underground conditions (Art. 42). Offences in performance of mining works include failure to comply with safety rules, operating rules, unified safety regulations for explosive operations, and other regulatory legal acts on mine safety (Art. 49).

3.2.2. The Subsoil Code (No. 132/94-BP of 27.07.1994)

This Code regulates mining activities to ensure the sustainable and integral use of subsoil resources. Specifically, this Code stipulates that subsoil users must ensure safety of people, property and natural environment (Art. 24). Geological exploration of subsoil resources should also ensure maintenance of natural environment ecologically safe to human life and health (Art. 38). Construction projects for mining facilities and mineral resource processing facilities must take safety measures (Art. 50). In case of full or partial closing-down or mothballing of a mining facility, mine workings and wells must be brought into a condition that guarantees safety; in case of mothballing, the condition must also guarantee preservation of deposits, mine workings and wells for the entire mothballing period (Art. 54).

3.2.3. Other laws

The Law on Coalbed Gas Methane (No. 1392-VI of 21.05.2009) defines legal, economic, environmental and organizational operating principles in the field of geological exploration of coalbed gas (methane), including pilot and commercial development, production and recovery of the gas during drainage and further use of both material and energy resources. This Law also includes the provision concerning the improvement of working conditions and occupational safety of miners.

The Law on Enhancing Prestige of Miners' Work (No. 345-VI of 02.09.2008) aims at enhancing prestige of miners' work, providing additional guarantees for wage payment and increase, and addressing miners' social and welfare problems. The most recent amendments were made in January 2018.

3.3. Regulations concerning OSH in mining

The Laws are supplemented by regulations adopted by the Cabinet of Ministers of Ukraine.

Key regulations concerning OSH in general include:

- Procedure for workplace assessment in terms of working conditions (Resolution of the Cabinet of Ministers of Ukraine (RCMU) No. 442 of 1.08.1992);¹⁴
- Regulation on the procedure for state expert examination (RCMU No. 431 of 23.06.1994);
- Regulation on identification and recording of high-risk facilities (RCMU No. 956 of 11.07.2002);
- List of labour protection activities and means (RCMU No. 994 of 27.06.2003);
- Technical regulation on personal protective equipment (RCMU No. 761 of 27.08.2008);
- Criteria for assessing the degree of risk from economic activities in the field of industrial safety and labour protection as well as for determining the frequency of scheduled state control activities (RCMU No. 413 of 28.04.2009);
- Procedure to issue permits for high-risk work or the use of high-risk machines, mechanisms or equipment (RCMU No. 1107 of 26.10.2011);
- Procedure for conducting inspection, testing and expert examination of high-risk machines, mechanisms and equipment (RCMU No. 687 of 26.05.2004); and
- Procedure for investigating and recording occupational accidents, diseases and emergencies (RCMU No. 1232 of 30.11.2011).

Key regulations concerning OSH in mining include:

- Regulation on the procedure for provision of mining leases (RCMU No. 59 of 27.01.1995);

¹⁴ These regulations have been subsequently amended and supplemented by other RCMU. We only indicate document number and date of the first adopted version.

- Regulation on the procedure for writing mineral reserves off a mining enterprise's books (RCMU No. 58 of 27.01.1995);
- Regulation on the procedure for state expert examination and appraisal of mineral reserves (RCMU No. 865 of 22 December 1994);
- Regulation on the procedure for exercising state mining supervision (RCMU No. 134 of 21.02.1995); and
- Regulation on approving a Provisions on order of construction of the areas of the nationwide scale (RCMU No. 33 of 17.01.1995).

3.4. Regulatory legal acts concerning OSH in mining

The Law on Labour Protection and related regulations delegate the specification of rules and procedures of individual OSH issues to numerous subordinate regulatory legal acts. They are mostly ordinances approved by ministries and state committees and registered with the Ministry of Justice. Some of these ordinances were adopted in the Soviet period, however, they are still valid by the Resolution of the Parliament of Ukraine.

The State Labour Service maintains the directory of regulatory legal acts on OSH.¹⁵ As of 15 January 2018, the directory contains 648 documents on OSH, applicable to different types of economic activities. Key information on the regulatory legal acts on OSH in mining in the directory is summarized in Annex.

To improve the structure of legal documents on OSH, the State Labour Service is working towards replacing outdated documents of the Soviet time by updating standards and technical specifications on OSH.

3.5. Need for harmonizing the national legislation with ILO Conventions and EU Directives

The Constitution of Ukraine provides that the international treaties endorsed by the Parliament of Ukraine shall be an integral part of the national legislation of Ukraine.

Recently, with a view to strengthening its political, trade and economic relations with the European Union, Ukraine has signed an Association Agreement with the EU, which entered into force on 1 September 2017. In addition, Ukraine has signed a Free Trade Agreement with Canada, which entered into force on 1 August 2017.

Both agreements require Ukraine to ensure that its labour law and practices embody the international labour standards and ensure gradual approximation to EU law, standards and practices in the area of employment, social policy and equal opportunities. There is an emerging need for further harmonization of the national legislation on OSH for the mining industry with the ILO standards and EU regulations.

¹⁵ Registry of regulatory legal acts on labour protection as of 15 January 2018.
<http://dsp.gov.ua/pokazhchyk-normatyvno-pravovykh-aktiv-z/>

3.5.1. ILO Conventions

As of October 2018, Ukraine has ratified 71 ILO Conventions, including all the eight Fundamental Conventions, all the four Governance Conventions and 59 of the 177 Technical Conventions.

Regarding OSH in mining, Ukraine has ratified the following flagship Conventions:

- Labour Inspection Convention, 1947 (No. 81);
- Occupational Safety and Health Convention, 1981 (No. 155); and
- Safety and Health in Mines Convention, 1995 (No. 176).¹⁶

In addition, Ukraine has also ratified the following up-to-date Conventions:

- Social Security (Minimum Standards) Convention, 1952 (No. 102);
- Labour Inspection (Agriculture) Convention, 1969 (No. 129);
- Workers' Representatives Convention, 1971 (No. 135);
- Minimum Age Convention, 1973 (No. 138);
- Labour Administration Convention, 1978 (No. 150);
- Collective Bargaining Convention, 1981 (No. 154);
- Vocational Rehabilitation and Employment (Disabled Persons) Convention, 1983 (No. 159);
- Labour Statistics Convention, 1985 (No. 160);
- Worst Forms of Child Labour Convention, 1999 (No. 182); and
- Safety and Health in Agriculture Convention, 2001 (No. 184).

However, Ukraine has not yet ratified some important ILO Conventions on OSH including:

- Employment Injury Benefits Convention, 1964 (No. 121);
- Working Environment (Air Pollution, Noise and Vibration) Convention, 1977 (No. 148);
- Occupational Safety and Health (Dock Work) Convention, 1979 (No. 152);
- Safety and Health in Construction Convention, 1988 (No. 167);
- Promotional Framework for Occupational Safety and Health Convention, 2006 (No. 187);
and
- Protocol of 2002 to the Occupational Safety and Health Convention, 1981 (No. 155).

As mentioned earlier, tripartite parties of Ukraine who have signed the General Agreement for 2016–2017 agreed to work for the ratification of ILO OSH Convention Nos. 121, 152, 167, and 187.

The key international labour standards on OSH in mining is the above-mentioned ILO Convention No. 176 and Recommendation No. 183. An expert analysis of the 64 existing

¹⁶ For an overview of the key ILO instruments concerning occupational safety and health in mining, see ILO (2017).

regulatory legal acts on OSH in mining shows that 54 regulatory legal acts comply (or do not contradict) with the ILO Conventions No. 176 but 10 regulatory legal acts require revision in order to bring them into conformity with the ILO Convention No. 176, with regards to the obligation of employers to identify, assess, eliminate or minimize risks.¹⁷ It should be noted that any decision as to the conformity of national legislation and practice with a particular Convention must lie in the first instance with the government concerned, subject to the views of the supervisory bodies of the ILO, in relation to a ratified Convention.

3.5.2. EU Directives

According to the Ukraine–EU Association Agreement, Ukraine shall take the necessary measures to achieve conformity of the national law with EU principles and practices. In the area of OSH, relevant EU legislation includes the Framework Directive No. 89/391/EEC and 29 individual directives focusing on specific aspects of OSH.

Among these individual directives, the relevant one for the mining industry is the Directive 92/104/EEC on the minimum requirements for improving the safety and health protection of workers in surface and underground mineral-extracting industries. This Directive lays down requirements to protect the safety and health of workers at enterprises extracting mineral products by surface or underground means, including; general obligations of employers; measures of protection from fire and explosions; escape and rescue facilities; training of workers; preventive medical examinations; and, minimum requirements to occupational safety and health.

¹⁷ Perevoznyk (2017).

4. Special provisions for workers in heavy and hazardous conditions

As explained in the previous chapter, Ukrainian legislation contains special provisions for employees working in heavy and hazardous conditions, including miners. This chapter summarizes the special provisions relevant to mining.

4.1. Workplace assessment

According to Article 13 of the Law on Labour Protection, employers must conduct the workplace assessment to identify hazardous production factors at the workplace and to determine work heaviness and intensity.¹⁸ The aim of the assessment is to find out harmful and hazardous production factors which can adversely affect workers' health during the production process, or due to equipment and raw materials used at the workplace.

The results of the workplace assessment are used for the following purposes:

Firstly, the findings of the assessment are used to develop a plan of comprehensive measures to improve OSH and the working environment, mainly focusing on eliminating hazardous production factors at the workplace and minimising their adverse impact on workers.

It should be observed that the workplace assessment is not the same as the workplace risk assessment. The workplace assessment does not systematically evaluate the likelihood and consequences of hazards at the workplace or determine the required preventive and protective measures.¹⁹

Secondly, the number and extent of hazardous production factors found at the workplace assessment will be used as a basis of determining the eligibility conditions for benefits and compensations (detailed descriptions are given in the next section). In practice, this is *de facto*

¹⁸ Detailed rules are found in the Procedure for workplace assessment in terms of working conditions (Resolution of the Cabinet of Ministers of Ukraine No. 442 of 1.08.1992).

¹⁹ In addition, it is pointed out that there is an absence of adequate methodology of workplace assessment for the mining industry. For example, there is no comprehensive list of devices for the measurement of physical factors such as noise and vibration.

the main purpose of the workplace assessment in many workplaces, particularly those with unfavourable working conditions.

As a result, employer's obligations on OSH are mainly prioritized to workers engaged in work with harmful and hazardous working conditions, whereas the workers engaged in other activities are not under the scope of such OSH provisions.

4.2. Benefits and compensation for workers in heavy and harmful conditions

Articles 7 and 8 of the Law on Labour Protection and related regulations provide the following benefits and compensations for workers in heavy and hazardous conditions based on the hazardous production factors identified at the workplace assessment:

- Salary increments and supplements: The rate of increment ranges between 4 percent and 24 percent depending on the harmful and heavy production factors at the workplace;²⁰
- Shorter working time: For workers employed in mining, normal working time is 36 hours per week;²¹
- Free provision of prophylactic food and vitamin supplements: The kind and amount of food products depend upon the type of chemical substances produced or used at the workplace. Workers employed in non-ferrous metal enterprises must be provided with prophylactic food and vitamin supplements;²²
- Free provision of 0.5 litre of milk or other equivalent food products per day when the worker was involved in production or use of chemical substances specified in the list;²³
- Free provision of carbonated salt water for employees working in hot shops, blast-furnace, open-hearth, rolling-mill, and other metal industry shops;²⁴
- Free provision of 0.4 kg of soap monthly to workers in certain categories of occupation, including underground workers engaged in mineral extraction;²⁵

20 Model Regulation on appraisal of workplace conditions and the procedure of applying the list of works for which extra payments can be provided to workers (Resolution of the USSR State Committee for Labour and Social Affairs and the Secretariat of the All-Union Central Council of Trade Unions (ACCTU) No. 387/22-78 of 03.10.1986).

21 List of productions, works, occupations and positions with hazardous working conditions work which entitles a reduced working week (Resolution of the Cabinet of Ministers of Ukraine No. 163 of 21.02.2001).

22 Rules for the free issue of curative and preventive nutrition (Resolution of the USSR State Committee for Labour and Social Affairs and the ACCTU Presidium No. 4/II-1 of 7.01.1977).

23 Procedure of free provision of milk or other food products to workers employed on work with hazardous conditions (Resolution of the USSR State Committee for Labour and Social Affairs and the ACCTU Presidium No. 731/II-13 of 16.12.1987); List of chemical substances for work with which it is recommended to consume milk or other food products of equal value for prophylactic purposes (approved by the USSR Ministry of Health No. 4430-87 of 4.11.1987).

24 Provision of carbonated salt water to hot shop workers (Compulsory Resolution of the ACCTU Secretariat of 11.06.1934).

25 Provision of soap (Resolution of the RSFSR People's Commissariat No. 383 of 26.08.1922).

- Up to 35 days of additional paid leave are granted to employees working in heavy and hazardous conditions according to Article 7 of the Law on Leaves (No. 504/96-BP of 15.11.1996). The list includes the occupations of coal, metal and non-metal mining;²⁶
- Preferential conditions on old-age pensions are granted to employees working in heavy and hazardous conditions according to Articles 13 and 100 of the Law of Ukraine on Pensions (No. 1788-XII of 05.11.1991). In addition, the length of service in these working conditions is calculated with additional rates.²⁷ Workers in mining are included in the list of workers who are entitled to old-age pensions on preferential terms.²⁸

4.3. Provision of personal protective equipment

According to Article 8 of the Law on Labour Protection and the Labour Code, employees working in harmful and hazardous working conditions or on works involving contamination or adverse weather conditions must be provided with special clothes, special footwear and other personal protective equipment free of charge according to established rates.²⁹

Employers are required to ensure procurement, distribution and maintenance of PPE at their own expense according to regulatory legal acts on OSH and a collective labour agreement.

4.4. Medical check-up of workers

According to Article 17 of the Law of Ukraine on Labour Protection, employees working in heavy and hazardous conditions should undergo a mandatory medical check-up prior to the employment, with regular check-ups being carried out during the employment. The medical check-up and any health precautions, if prescribed, should be organized and paid by the employer.

In case of a worker's refusal to undergo the mandatory medical check-up, the employer can suspend the worker from work without pay and hold administratively liable. Workers have the right to keep the workplace, position and salary for the period of medical check-up.

²⁶ List of production sites, works, occupations and positions, and employment which entitle the right to an additional annual paid leave for works with hazardous working conditions and a special character of work (Resolution of Cabinet of Ministers of Ukraine No. 1290 of 17.11.1997, amended by the Resolution No. 679 of 13.05.2003).

²⁷ Procedure on the use of Lists No. 1 and No. 2 of productions, works, occupations, positions and indicators in calculation of the length of service, which entitle the right to an old-age pension on preferential terms (Order of the Ministry of Labour and Social Policy No. 383. of 18.11.2005).

²⁸ List of productions, works, occupation, positions and indicators, employment in which gives the right to an old age pension on preferential terms (Resolution of the Cabinet of Ministers of Ukraine No. 461 of 24.06.2016).

²⁹ Detailed rules of personal protective equipment are found in the following regulations and ordinances:

- Technical Regulation on Personal Protective Equipment (Resolution of the Cabinet of Ministers of Ukraine No. 761 of 27.08.2008);
- Regulation on the procedure for providing workers with special clothes, special footwear and other personal protective equipment, (Order of the State Committee of Ukraine for Industrial Safety, Labour Protection and Mining Supervision (Derzhhirpromnahliad) No. 53 of 24.03.2008);
- Rules of selecting and applying respiratory personal protective equipment (Derzhhirpromnahliad Order No. 331 of 28.12.2007);
- Rates of free provision of special clothes, special footwear and other personal protective equipment to mining industry workers (Derzhhirpromnahliad Order No. 184 of 21.08.2008).

5. National policy and programme on OSH in mining

5.1. National OSH programme

The Ukrainian Government adopted the Nationwide Social Programme for Improvement of OSH and the Work Environment for 2014–2018 (Law No. 178-VII of 4.04.2013, amended by the Law No. 77-VIII of 28.12.2014). The main goal of this programme was to provide comprehensive solutions to OSH problems, develop a modern, safe and healthy work environment, and minimize the risk of work accidents and occupational diseases.

The National Academy of Medical Sciences, the Social Insurance Fund of Ukraine and the ministries and other state authorities were responsible for the implementation. The amount of resources necessary for the implementation of the programme amounted to 221.88 million UAH for the entire period (101.16 million UAH from the State budget, and 120.32 million UAH from the Social Insurance Fund).

However, the implementation of this programme faced impediments mainly due to insufficient financing. In 2014–2017, the programme was financed only by the National Academy of Medical Sciences (3.69 million UAH) and the National Police of Ukraine (3.42 million UAH), which in total represent 8.2 percent of the planned budget of the programme for 2014–2017 (86.66 million UAH). There was no financing provided from the Social Insurance Fund. At present, the current Law “On Compulsory State Social Insurance” (as amended by the Law No. 77-VIII of 28.12.2014) does not authorize the fund to finance the national OSH programme.

5.2. Sectoral OSH programme for state-owned coal mining enterprises

The Ministry of Energy and Coal Industry developed a sectoral programme for the improvement of occupational safety at coal-producing and mine construction enterprises for 2011–2015 (Resolution of the Cabinet of Ministers of Ukraine No. 374 of 29.03.2006, later amended by the Resolution No. 521 of 18.05.2011).

The sectoral programme aimed at preserving miners' life and health by legal, organizational, technical and socio-economic mechanisms to ensure the improvement of OSH conditions at coal-producing and mining enterprises.³⁰

The sectoral programme has achieved certain outcomes. However, there is no mid-term programme to follow after the completion of this sectoral programme. Instead, the Ministry of Energy and Coal Industry issued an order for each state coal mining enterprise to allocate its budget to extend the programme for improvement of OSH and industrial safety in 2016 and 2017. However, as already seen (section 1.4), the programme, particularly the procurement of personal protective equipment, was largely underfunded. The Cabinet of Ministers recommended that a new mid-term sectoral OSH programme should be developed for the period 2018–2022 with the financing from the state budget.

5.3. Concept of the Reform and Development of the Coal Industry until 2020

On 24 May 2017, the Cabinet of Ministers of Ukraine approved a new strategic document for the reform and development of the coal mining industry, namely the “Concept of the Reform and Development of the Coal Industry for the Period until 2020” and its Action Plan for Implementation (Executive Order of the Cabinet of Ministers of Ukraine No. 733-p of 24.05.2017).³¹

The aim of the Concept is to provide comprehensive solutions to the problems with the coal industry operation, formulate systemic measures to increase domestic coal production with improved efficiency to ensure the country's energy security, and to transform the coal industry into subsidy-free and self-sustaining, while addressing environmental and social problems of miners and providing favourable investment conditions for the privatization of mines.

To achieve the objectives, the Concept adopts the following strategies:

- Close down unpromising loss-making coal mines (it is estimated that up to 25,000 miners will be made redundant) while taking social protection measures for the released workers;
- Concentrate state support for promising mines that have major coal reserves and can quickly become profitable through modernization and renovation of equipment while observing the safe working conditions and environmental concerns.

It is expected that 70 percent of total coal mines will be lossless, and 50 percent be profitable within 13 months. At the same time, the Government will advance the debt restructuring of the coal enterprises and create conditions for mobilization of private investments into the coal mining enterprises and their subsequent privatization.

³⁰ Major tasks of the sectoral OSH programme for state-owned coal mining enterprises for 2011–2015 include: (i) improving working conditions, safety and health of miners; (ii) ensuring safety of the technological processes; (iii) improving mine ventilation and gas drainage system; (iv) prevention of gas and dust explosions and outburst; (v) ensuring machinery and technological safety; (vi) enhancing fire protection of mines; (vii) provision of emergency measures and preventive rescue works.

³¹ <https://www.kmu.gov.ua/ua/npas/250358427>

The implementation of the reform has been constrained by the lack of state financing. In 2017, 100 million UAH was allocated for purchase of personal protective equipment. In 2018, the same amount was initially allocated, however it was later retracted by the amendment of the State Budget Law. For the year 2019, no financing has been allocated so far in the State Budget Law.

The Concept also provides for the adoption of a package of laws that will determine economic measures including the debt cancellation of 12.2 billion UAH.

5.4. Concept of the OSH Management System Reform in Ukraine

On 12 December 2018, the Cabinet of Ministers of Ukraine approved the “Concept of the OSH Management System Reform” and its Action Plan for 2019–2020 (Decree of the Cabinet of Ministers of Ukraine No. 989-p of 12.12.2018),³² which establish the principles, main directions and objectives of designing a national OSH system based on a risk-oriented approach. The Concept identifies key challenges in the existing OSH management system in Ukraine and defines future directions to modernize it.

The purpose of the Concept is to create a national OSH system based on prevention and risk management in accordance with the general principles set out in the EU OSH Framework Directive 89/391/EEC. The incorporation of international labour standards and the risk-oriented approach into the national legal practice will be ensured by the possible ratification of ILO Conventions, including the Promotional Framework for Occupational Safety and Health Convention, 2006 (No. 187).

The national OSH system is expected to increase the level of protection of workers’ life and health while decreasing the number of work accidents and occupational diseases through more effective labour inspections, to improve the system of reporting and investigation of work accidents and occupational diseases, to strengthen the responsibility of employers for the provision of proper and safe working conditions while introducing incentives, and to create a preventative OSH culture.

³² <https://www.kmu.gov.ua/ua/npas/pro-shvalennya-koncepciyi-reformuvannya-sistemi-upravlinnya-ohoronoyu-praci-v-ukrayini-ta-zatverdzhennya-planu-zahodiv-shchodo-yiyi-realizaciyi>

6. Conclusions and recommendations

From the analysis made in this report, we can derive the following conclusions and recommendations.

Inherent problems with the mining industry, in particular coal mining

Despite its traditional importance, the mining industry in Ukraine, especially coal mining, has been declining. Although most mines have been in operation for many decades, necessary maintenance of mine sites and equipment has not been carried out mainly due to insufficient allocation of funding. This adversely affected the safety and health conditions in mines. The situation was further aggravated by the global financial crisis and the armed conflict in eastern Ukraine.

The implementation of the Concept of the Coal Industry Reform and Development until 2020, in particular the proposed restructuring of state-owned coal mining enterprises, would entail considerable socio-economic consequences and environmental concerns. The closure of mines will result in massive redundancy. Up to 25,000 miners are estimated to become redundant, who would need support for retraining and job placement. The closure of mines also requires reclamation works, including the reclamation of waste dumps, and protection against methane release into surface buildings and structures.

For the mines which will continue operations, the promised State support for modernization and renovation of equipment should be provided promptly. More importantly, the Government should fulfil its long overdue commitment to allocate funds for the provision of necessary personal and collective protective equipment to state-owned coal enterprises. Such personal protective equipment includes self-rescuers with practical trainings on their use in smoke chambers, special clothes, special footwear, knee protectors, dust masks, and insulation respirators for mine rescue stations. To secure the Government's commitment for OSH, it is also recommended that a mid-term sectoral OSH programme should be developed with budgetary commitments from the State.

Modernization of the OSH policy

In Ukraine, the prevailing principle for the safety and health of workers engaged in work with harmful and hazardous conditions is to provide compensation and benefits according to the assessed level of harmful and hazardous production factors.

In addition, the current OSH measures are mainly based on corrective actions (i.e. reacting to hazardous factors as if they were inevitable and applying mainly protective measures, notably collective and personal protective equipment). Moreover, there is a severe shortage of updated personal protective equipment for the state-owned coal mining enterprises.

The current OSH policy which is mainly focused on correction and compensation should change to a more proactive and preventative approach based on risk assessment while promoting the improvement of OSH conditions at workplace in line with the basic principles enshrined in ILO Conventions and EU Directives.

The introduction of risk assessment and OSH management system at the workplace level is a crucial ingredient in the recently adopted Concept of the OSH Management System Reform in Ukraine. To fully achieve this goal, there is a vital need to build the capacity of the central authorities and social partners. At the same time, there is a need to prepare practical guidelines with regards to hazard identification, risk assessment and the technical prevention measures.

As the OSH policy shifts from a reactive to a proactive approach, the purpose of the current workplace certification should be transformed from the determination of compensation and benefits to a proper risk assessment which identifies key occupational hazards, assesses their frequency and impact, and develops practical prevention measures for prioritized hazards at the workplace.

Harmonization of the national OSH legislation with ILO Conventions and EU Directives

The ILO Safety and Health in Mines Convention, 1995 (No. 176), an internationally recognized sector-specific standard, stipulates the following general responsibilities of the Government, employers as well as rights and duties of workers and their representatives in mining.³³

- The Government is responsible for formulating, implementing and periodically reviewing a national OSH policy in mining after consultations with the representative organizations of employers and workers. The Government is also responsible for adopting and implementing laws and regulations that prescribe the measures for ensuring the application of the Convention and to ensure that the required preventive and protective measures are effectively developed and implemented.
- The employer is responsible for taking all necessary measures to eliminate hazards or minimize the risk to safety and health in mines under their control. In taking preventive and protective measures, the Employer shall assess the risks and deal with it in the following

³³ See ILO (2017).

order of priority: (i) eliminate the risk; (ii) control the risk at source; (iii) minimize the risk; (iv) provide personal protective equipment, having regard to what is reasonable, practicable and feasible, and to good practice and the exercise of due diligence.

- Workers shall have the right to report to the employer and the competent authority; request and obtain inspections; obtain information of relevant workplace hazards; obtain safety and health information; remove themselves from dangerous workplaces; select safety and health representatives; and not be subject to discrimination or to retaliation. At the same time, workers have the duty to comply with safety and health measures; take reasonable care; report risks to their supervisor; and cooperate with the employer.
- Workers' representatives shall have the right to represent workers; participate in inspections and investigations; monitor and investigate safety and health matters; have recourse to advisers and independent experts; consult with employer on OSH matters; consult with the competent authority; receive notice of accidents and dangerous occurrences; and not be subject to discrimination or to retaliation.
- Convention No.176 also provides that measures shall be taken to encourage cooperation between employers and workers and their representatives to promote safety and health in mines.

Ukraine should ensure that the national legislation on OSH should be fully in conformity with these principles as stipulated in ILO standards as well as in EU regulations. At the same time, the existing 648 regulatory legal acts on OSH need to be streamlined and updated. Ideally, they should be reorganized into less numbers and made to a higher level regulation.

Conclusions

Ukraine is facing multiple challenges in improving safety and health in mines under unfavourable conditions surrounding the mining industry. These challenges are deep-rooted and complex.

Amid the existing difficult conditions, the Government and social partners in Ukraine are committed towards promoting the implementation and integration of consistent OSH management systems in order to protect workers from workplace hazards, to prevent occupational accidents and diseases, and to improve the general working environment.

The ILO will continue to support this process within the framework of the ILO-Canada project "Improving occupational safety and health in the mining industry of Ukraine" which aims to reduce work accidents and occupational diseases through a systematic development of modern OSH policies, supported by an enhanced capacity of social partners and the promotion of a safety and preventative culture in Ukraine.

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Annex.

List of regulatory legal acts on OSH related to mining

No.	Code	Title	Document type and authority	Date and No.
Regulatory legal acts applicable to different types of economic activities				
1.	NPAOP 0.00-1.24-10	Labour protection rules for open-pit development of mineral resource deposits	Derzhhirpromnahliad; Registered with Ministry of Justice of Ukraine	18.02.2010 Order No. 61; 03.06.2010 No. 356/17651
2.	NPAOP 0.00-1.61-12	Labour protection rules for crushing, sorting and processing of minerals and for lumping of ores and concentrates	Ministry of Emergencies of Ukraine; Registered with Ministry of Justice of Ukraine	27.06.2012 Order No.933; 20.07.2012 No.1227/21539
3.	NPAOP 0.00-1.58-12	Labour protection rules for operation of electric equipment and networks in open-pit mining works	Ministry of Emergencies of Ukraine; Registered with Ministry of Justice of Ukraine	05.04.2012 Order No.671; 27.04.2012. No.641/20954
4.	NPAOP 0.00-1.72-14	Labour protection rules for operation of large-tonnage automobiles and other process vehicles during open-pit mining of ore and non-ore mineral resources	Ministry of Energy and Coal Industry of Ukraine; Registered with Ministry of Justice of Ukraine	13.02.2014 Order No.149; 15.04.2014 No.421/25198
5.	NPAOP 0.00-1.71-13	Labour protection rules for work with tools and devices	Ministry of Energy and Coal Industry of Ukraine; Registered with Ministry of Justice of Ukraine	19.12.2013 Order No.966; 25.02.2014 No.327/25104
6.	NPAOP 00.0-1.01-85	Uniform rules of subsoil protection for development of solid mineral deposits	USSR State Committee for Supervision over Safe Works in Industry and Mining Supervision (USSR Derzh-hirtekhnahliad)	14.05.1985 No.22
7.	NPAOP 00.0-5.02-76	Intersectoral instruction on definition and control of mining and open-cast quarry works	USSR Derzhhirtekhnahliad	10.08.1976

8.	NPAOP 0.00-5.05-85	Instruction on the procedure of closing-down and mothballing of mineral producing enterprises	USSR Derzhirtekhnahtad	11.07.1985
9.	NPAOP 00.0-7.03-73	Model guidelines for determination and recording of solid mineral loss during mining works	USSR Derzhirtekhnahtad	28.03.1973
10.	NPAOP 00.0-7.05-72	Model guidelines for rating of solid mineral loss during mining works	USSR Derzhirtekhnahtad	28.03.1972
11.	NPAOP 0.00-5.38-14	Instruction on labour protection during mechanized charging of underground workings with explosives	Ministry of Energy and Coal Industry of Ukraine; Registered with Ministry of Justice of Ukraine	10.02.2014 Order No.122; 15.04.2014 No.422/25199
12.	NPAOP 0.00-1.67-13	Technical rules for blasting works on the day surface	Ministry of Energy and Coal Industry of Ukraine; Registered with Ministry of Justice of Ukraine	18.07.2013 Order No.469; 05.08.2013 No.1320/23852
13.	NPAOP 0.00-1.66-13	Safety rules during handling of industrial explosive materials	Ministry of Energy and Coal Industry of Ukraine; Registered with Ministry of Justice of Ukraine	12.06.2013 Order No.355; 05.07.2013 No.127/23659
14.	NPAOP 0.00-6.04-06	Procedure of accounting for industrial explosive materials	Ministry of Emergencies of Ukraine; Registered with Ministry of Justice of Ukraine	06.07.2006 Order No.424; 23.08.2006 No.1006/12880
15.	NPAOP 0.00-5.41-14	Instruction on safe organization and realization of bulk blasts of borehole charges in open-pit mining works	Ministry of Energy and Coal Industry of Ukraine; Registered with Ministry of Justice of Ukraine	12.06.2014 Order No.426; 26.06.2014 No.709/25496
16.	NPAOP 0.00-5.39-14	Instruction on prevention, detection and elimination of borehole charge misfires in open-pit mining works	Ministry of Energy and Coal Industry of Ukraine; Registered with Ministry of Justice of Ukraine	12.05.2014 Order No.342; 28.05.2014 No.563/25340
17.	NPAOP 0.00-5.40-14	Instruction on safe organization and realization of bulk blasts at ore extracting enterprises using underground mining	Ministry of Energy and Coal Industry of Ukraine; Registered with Ministry of Justice of Ukraine	12.05.2014 Order No.343; 28.05.2014 No.564/25341
18.	NPAOP 0.00-7.01-06	Requirements to workers who manage blasting operations	Ministry of Emergencies of Ukraine; Registered with Ministry of Justice of Ukraine	15.05.2006 Order No.294; 29.05.2006 No.620/12494
19.	NPAOP 0.00-7.08-07	Technical safety requirements to storage sites of industrial explosive materials	Derzhirpromnahtad; Registered with Ministry of Justice of Ukraine	15.05.2007 Order No.104; 27.05.2007 No.546/13813
20.	NPAOP 0.00-1.74-15	Rules of labour protection in operation of tail and slime facilities of mining and non-metal enterprises	Ministry of Energy and Coal Industry of Ukraine; Registered with Ministry of Justice of Ukraine	19.01.2015 Order No. 20; 03.02.2015 No.127/26572

21.	NPAOP 0.00-4.15-98	Regulations on development of labour protection instructions	State Committee of Ukraine for Labour Protection Supervision; Registered with Ministry of Justice of Ukraine Amended by Ministry of Social Policy of Ukraine; Ministry of Justice of Ukraine	29.01.1998 Order No. 9; 07.04.1998 No. 226/2666 30.01.2017, Order No. 526 21.06.2017 No. 779/30647
22.	NPAOP 00.0-1.01-85	Uniform rules of subsoil protection for development of solid mineral deposits	USSR Derzhirtekhnahtad	14.05.1985
23.	NPAOP 00.0-5.01-84	Instruction on safe performance of works near drowned wastes	USSR Ministry of Coal Industry	02.10.1984
24.	NPAOP 74.2-5.01-84	Instruction on occupational safety in performance of principal mine surveying and special topographic and geodesic works	State Union Topographic and Surveying Trust of the Chief Directorate for Geodesy and Cartography under the USSR Council of Ministers	1984
25.	NPAOP 0.00-4.01-08	Regulations on the procedure for providing workers with special clothes, special footwear, and other personal protective equipment	Derzhirpromnahtad	24.03.2008 Order No. 53
26.	NPAOP 0.00-1.13-71	Rules of construction and safe operation of stationary compressor installations, air ducts, and gas pipes	USSR Derzhirtekhnahtad	07.12.1971
27.	NPAOP 0.00-1.15-07	Rules of labour protection for performance of work at height	Derzhirpromnahtad; Registered with Ministry of Justice of Ukraine	27.03.2007 Order No. 62; 04.06.2007 No. 573/13840
28.	NPAOP 0.00-4.36-87	Procedure for free provision of special food, milk or food products of equal value to workers employed on works with harmful working conditions	USSR State Committee for Labour	16.12.1987 Res- olution No.731/ П13
29.	NPAOP 0.00-1.59-87	Rules of safety and safe operation of pressure vessels	USSR Derzhirtekhnahtad	27.11.1987
30.	NPAOP 0.00-1.60-66	Rules of construction and safe operation of steam and hot water boilers	USSR Derzhirtekhnahtad; Amended by USSR Derzhirtekhnahtad	30.08.1966; 11.07.1972
31.	NPAOP 0.00-1.77-16	Safety rules for underground development of ore and non-ore mineral deposits	Ministry of Social Policy of Ukraine; Registered with Ministry of Justice of Ukraine	23.12.2016 Order No. 1592; 30.01.2017 No. 129/29997
32.	NPAOP 0.00-2.01-05	List of high-risk works	Derzhnahtadokhoron- pratsi; Registered with Ministry of Justice of Ukraine	26.01.2005 Order No. 15; 15.02.2005 No. 232/10512

33.	NPAOP 0.00-3.06-22	On distribution of soap at enterprises	RSFSR People's Commissariat for Labour Explanations on the subject 1 and 2	06.08.1922 Resolution 22.06.1924; 14.09.1926
34.	NPAOP 0.00-3.10-08	Rates of free provision of special clothes, special footwear and other personal protective equipment to mining industry workers	Derzhhirpromnahliad; Registered with Ministry of Justice of Ukraine	21.08.2008 Order No. 184; 10.09.2008 No. 832/15523
35.	NPAOP 0.00-3.21-13	Rates of free provision of special clothes, special footwear and other personal protective equipment to members of mine rescue and gas rescue teams	Ministry of Energy and Coal Industry of Ukraine; Registered with Ministry of Justice of Ukraine; Came into force	19.12.2013 Order No. 967; 25.02.2014 No. 332/25109; 18.03.2014
36.	NPAOP 0.00-4.09-07	Model regulations on an enterprise labour protection commission	Derzhhirpromnahliad; Registered with Ministry of Justice of Ukraine; Amended by Derzhhirpromnahliad; Registered with Ministry of Justice of Ukraine	21.03.2007 Order No. 55; 04.04.2007 No. 311/13578; 25.09.2007 Order No. 216; 07.11.2007 No. 1252/14519
37.	NPAOP 0.00-4.10-93	Model regulations on professional paramilitary emergency rescue units	Derzhnahliadokhoronpratsi; Registered with Ministry of Justice of Ukraine	29.12.93 Order No. 138; 05.04.1994 No.67/276
38.	NPAOP 0.00-4.12-05	Model regulations on the procedure for training and knowledge testing on labour protection	Derzhnahliadokhoronpratsi; Registered with Ministry of Justice of Ukraine; Amended by Derzhhirpromnahliad; Registered with Ministry of Justice of Ukraine; Amended by Ministry of Social Policy of Ukraine; Registered with Ministry of Justice of Ukraine	26.01.2005 Order No. 15; 15.02.2005 No. 231/10511; 16.11.2007 Order No. 273; 03.12.2007 No. 1334/14601; 30.01.2017 Order No. 140; 20.02.2017 No. 234/30102
39.	NPAOP 0.00-4.21-04	Model regulations on a labour protection service	Derzhnahliadokhoronpratsi; Registered with Ministry of Justice of Ukraine; Amended by Derzhhirpromnahliad; Registered with Ministry of Justice of Ukraine; Amended by Ministry of Social Policy of Ukraine; Registered with Ministry of Justice of Ukraine	15.11.2004 Order No.255; 01.12.2004 No.1526/10125 02.10.2007 Order No. 236; 18.10.2007 No. 1191/14458; 31.01.2017 Order No.148; 21.02.2017 No. 236/30104
40.	NPAOP 0.00-5.12-01	Instruction on organization of safe performance of hot works at explosive-flammable and explosive facilities	Ministry of Labour of Ukraine; Registered with Ministry of Justice of Ukraine	05.06.2001 Order No. 255; 23.06.2001 No. 541/5732

41.	NPAOP 0.00-5.14-93	Instruction on the procedure of technical investigation and recording of explosive material losses at enterprises, in organizations, and at facilities located in the territory of Ukraine	Derzhnahliadokhoron-pratsi	14.09.1993 Order No.85
42.	NPAOP 0.00-5.15-86	Instruction on the procedure for approving the measures of protection of buildings, structures and natural objects from harmful impacts of mining operations	USSR Derzhhirtekhnahtad	26.02.1986
43.	NPAOP 0.00-5.32-79	Instruction on monitoring of dust content at mining and non-ore industries (mines, quarries, geological prospecting works, processing, agglomerating and crushing-sorting factories)	USSR Derzhhirtekhnahtad	12.11.1979
44.	NPAOP 0.00-5.33-80	Instruction on safe performance of mining works in ore and non-ore deposits prone to rock bumps	USSR Derzhhirtekhnahtad	29.07.1980
45.	NPAOP 0.00-6.15-99	Procedure for certification of consumer electric installations	Derzhnahliadokhoron-pratsi	30.12.1999 Order No. 258
46.	NPAOP 0.00-6.17-14	Procedure for approval of design technical documentation for demolition operations	Ministry of Energy and Coal Industry of Ukraine; Registered with Ministry of Justice of Ukraine; Came into force	12.06.2014 Order No. 425; 05.08.2014 No. 914/25691; 26.08.2014
47.	NPAOP 0.00-7.09-07	Indices for labelling of electric caps and capsular caps in metal cases	Derzhhirpromnahtad; Registered with Ministry of Justice of Ukraine	03.10.2007 Order No. 238; 18.10.2007 1193/14460
48.	NPAOP 0.00-7.12-13	Requirements to employers on ensuring safe performance of works in potentially explosive environments	Ministry of Energy and Coal Industry of Ukraine; Registered with Ministry of Justice of Ukraine; Came into force	05.06.2013 Order No. 317; 26.06.2013 No. 1071/23603; 30.08.2013
49.	NPAOP 0.00-1.79-17	Rules on OSH during operation of cyclic-flow technology objects during ground mining	Ministry of Social Policy of Ukraine; Registered with Ministry of Justice of Ukraine	29.09.2017 Order No. 1524; 18.10.2017 No. 1275/31143
50.	NPAOP 0.00-3.07-09	Regulations on providing workers of general occupations employed in different industries with special clothes, special footwear and other personal protective equipment free of charge	Derzhhirtekhnahtad; Registered with Ministry of Justice of Ukraine	16.04.2009 Order No. 62; 12.05.2009 No. 424/16440
51.	NPAOP 0.00-4.03-04	Regulations on a state directory of regulatory legal acts on labour protection	Derzhnahliadokhoron-pratsi; Registered with Ministry of Justice of Ukraine; Amended by Ministry of Social Policy of Ukraine; Registered with Ministry of Justice of Ukraine	08.06.2004 No. 151; 23.06.2004 No. 778/9377; 20.03.2017 No. 432; 06.04.2017 No. 458/30326

52.	NPAOP 0.00-4.24-03	Regulations on the procedure for labour and professional training of minors on professions related to works in heavy and hazardous conditions and high-risk works	Derzhnahliadokhoron-pratsi	15.12.2003 Order No. 244
53.	NPAOP 0.00-5.37-87	Instruction on safe operation of underground lifting installations in pits and mines of mining and non-metallic industry	USSR Derzhhirtekhnahtad	29.12.1987 Resolution No. 47
54.	NPAOP 0.00-6.03-93	Procedure on development and approval by an employer of regulatory acts on OSH in force at an enterprise	Derzhnahliadokhoron-pratsi; Registered with Ministry of Justice of Ukraine; Amended by Ministry of Social Policy of Ukraine; Registered with Ministry of Justice of Ukraine; Came into force	21.12.1993 Order No. 132; 07.02.1994 No. 20/229; 01.11.2016 Order No. 1259; 23.11.2016 № 1517/29647; 27.12.2016
55.	NPAOP 0.00-6.08-07	Procedure for certification of experts conducting a technical review and/or expert examination of high risk equipment	Derzhhirtekhnahtad; Registered with Ministry of Justice of Ukraine	20.12.2006 Order No. 16; 07.02.2007 No. 103/13370
56.	NPAOP 0.00-6.11-97	Procedure for conducting and establishing the results of supervision (inspection) for the activities of certified personnel	Derzhnahliadokhoron-pratsi; Registered with Ministry of Justice of Ukraine; Amended by Derzhhirpromnahtad; Registered with Ministry of Justice of Ukraine	15.08.1997 Order No. 221; 29.10.1997 No. 515/2319; 01.10.2007 Order No. 220; 30.10.2007 No. 1226/14493
57.	NPAOP 0.00-7.11-12	General requirements to employers as to ensuring OSH of workers	Ministry of Emergency Situations of Ukraine; Registered with Ministry of Justice of Ukraine	25.01.2012 No. 67; 14.02.2012 No. 226/20539
58.	NPAOP 0.00-5.37-87	Instruction on safe operation of underground lifting installations in pits and mines of mining and non-metallic industry	USSR Derzhhirtekhnahtad	29.12.1987 Resolution No. 47
59.	NPAOP 00.0-5.03-74	Model guidelines for determination and recording of minerals loss during extraction of blocks	USSR Ministry of Construction Materials Industry	30.05.1974
60.	NPAOP 00.0-5.04-75	Model guidelines on economic evaluation and regulation of solid minerals loss during mining at Ministry of the Chemical Industry enterprises	USSR Ministry of the Chemical Industry	20.06.1975
61.	NPAOP 00.0-7.01-86	Guidelines for determination and control of the safe conduct of mining works in hazardous areas	Derzhhirtekhnahtad	16.05.1986
62.	NPAOP 00.0-7.03-73	Model guidelines for determination and recording of minerals loss during mining	USSR Derzhhirtekhnahtad	28.03.1973
63.	NPAOP 00.0-7.05-72	Model guidelines for regulation of solid minerals loss during mining	USSR Derzhhirtekhnahtad	28.03.1972

Coal and peat mining				
64.	NPAOP 10.0-1.01-10	Coal mine safety rules	Derzhhirpromnahliad; Registered with Ministry of Justice of Ukraine; Amended by Ministry of Emergencies of Ukraine; Registered with Ministry of Justice of Ukraine; Amended by Ministry of Energy and Coal Industry of Ukraine; Registered with Ministry of Justice of Ukraine	22.03.2010 Order No. 62; 17.06.2010 No. 398/17693; 07.09.2011 Order No. 960; 3.10.2011 No. 1135/19873; 24.09.2014 Order No. 661; 14.10.2014 No. 1270/26047
65.	NPAOP 10.0-1.03-90	Safety rules for enterprises engaged in coal (shale) upgrading and briquetting	USSR Ministry of Coal Industry	24.05.1990
66.	NPAOP 10.0-1.04-64	Safety rules for mine shaft sinking with special methods	USSR Derzhhirtekhnahtsiad	20.03.1964
67.	NPAOP 10.0-1.07-02	Safety requirements for mine conveyer belts and their testing methods	Ministry of Labour of Ukraine	31.05.2002 Order No. 250
68.	NPAOP 10.0-3.01-90	Safety standards for packing machines, complexes and aggregates	USSR Ministry of Coal Industry	25.06.1990
69.	NPAOP 10.0-5.01-04	Instruction on drafting of emergency response plans	Derzhnahliadokhoronpratsi	26.10.2004 Order No. 236
70.	NPAOP 10.0-5.02-04	Instruction for monitoring of mine air composition, fume characteristic determination, and classification of mines in terms of methane	Derzhnahliadokhoronpratsi	26.10.2004 Order No. 236
71.	NPAOP 10.0-5.03-04	Instruction for performance of hot works in underground mine workings and surface installations	Derzhnahliadokhoronpratsi	26.10.2004 Order No. 236
72.	NPAOP 10.0-5.04-04	Instructions for usage of refrigerating units	Derzhnahliadokhoronpratsi	26.10.2004 Order No. 236
73.	NPAOP 10.0-5.05-04	Instruction for reversal of ventilation flow and checking of reversing units in ventilation plants	Derzhnahliadokhoronpratsi	26.10.2004 Order No. 236
74.	NPAOP 10.0-5.06-04	Instruction for degassing of mine workings, investigation, recording and prevention of gas contaminations	Derzhnahliadokhoronpratsi	26.10.2004 Order No. 236
75.	NPAOP 10.0-5.07-04	Instruction of comprehensive air dust removal	Derzhnahliadokhoronpratsi	26.10.2004 Order No. 236
76.	NPAOP 10.0-5.08-04	Instruction on measurement of dust concentration in mines and recording of dust loads	Derzhnahliadokhoronpratsi	26.10.2004 Order No. 236
77.	NPAOP 10.0-5.09-04	Instruction on prevention and localization of coal-dust explosions	Derzhnahliadokhoronpratsi	26.10.2004 Order No. 236
78.	NPAOP 10.0-5.10-04	Instruction on drafting of ventilation plans	Derzhnahliadokhoronpratsi	26.10.2004 Order No. 236
79.	NPAOP 10.0-5.18-04	Instruction on fire protection of coal mines	Derzhnahliadokhoronpratsi	26.10.2004 Order No. 236

80.	NPAOP 10.0-5.19-04	Instruction on ensuring noise and vibration occupational safety in coal mines	Derzhnahliadokhoron-pratsi	26.10.2004 Order No. 236
81.	NPAOP 10.0-5.20-04	Instruction on operation of miners' personal protective means	Derzhnahliadokhoron-pratsi	26.10.2004 Order No. 236
82.	NPAOP 10.0-5.21-04	Instruction on preventing self-ignition, extinguishing and dismantling waste heaps	Derzhnahliadokhoron-pratsi	26.10.2004 Order No. 236
83.	NPAOP 10.0-5.22-84	Temporary instruction on the safe conduct of works in coal mines, hazardous for oil and gas production	USSR Ministry of Coal Industry	2.03.1984
84.	NPAOP 10.0-5.23-84	Instruction on transportation of people by belt conveyers in coal mine underground workings	USSR Ministry of Coal Industry	23.03.1984
85.	NPAOP 10.0-5.24-76	Instruction on occupational safety and safety of movement in mine industrial sites (open-cuts at the enterprises engaged in loading and unloading of railway cars)	USSR Ministry of Coal Industry	11.11.1976
86.	NPAOP 10.0-5.25-89	Instruction on safe performance of mining works on seams hazardous in terms of sudden bursts of coal, rock and gas	USSR Ministry of Coal Industry USSR Derzhhirtekhnahtsiad	1989
87.	NPAOP 10.0-5.26-88	Instruction on safe performance of mining works developing the seams prone to rock bumps	USSR Ministry of Coal Industry	1988
88.	NPAOP 10.0-5.27-84	Instruction on safe performance of mining works near drowned wastes	USSR Derzhhirtekhnahtsiad	22.08.1984
89.	NPAOP 10.0-5.28-87	Instruction on forecasting and preventing sudden methane breakthroughs from soils of mine workings	Ukrainian SSR Ministry of Coal Industry	12.08.1987
90.	NPAOP 10.0-5.30-79	Instruction on safe methods and techniques of workers' performance of operations for roof management and linings in mining faces equipped with narrow-web cutter-loaders and individual lining in Donbas flat and inclined seams	USSR Ministry of Coal Industry	1979
91.	NPAOP 10.0-5.31-81	Instruction on safe installation of mine rolling stock on rails	USSR Ministry of Coal Industry	17.10.1981
92.	NPAOP 10.0-5.32-85	Instruction on safe operation of overhead railways in coal mines	USSR Ministry of Coal Industry	20.04.1985
93.	NPAOP 10.0-5.33-76	Instruction on occupational safety for technical maintenance and repair of mine vertical shaft equipment	USSR Ministry of Coal Industry	21.07.1976
94.	NPAOP 10.0-5.34-83	Instruction on arranging protective ground using natural grounding electrodes (in coal mines)	USSR Ministry of Coal Industry USSR Derzhhirtekhnahtsiad	08.04.1983

95.	NPAOP 10.0-5.35-95	Instruction on training of mine workers	Derzhnahliadokhoron-pratsi; Registered with Ministry of Justice of Ukraine	30.05.1995 Order No. 79; 01.08.1995 No.272/808
96.	NPAOP 10.0-5.36-96	Instruction on drafting of front passports, making and lining underground workings	Derzhnahliadokhoron-pratsi	18.01.1996 Order No. 7
97.	NPAOP 10.0-5.37-13	Instruction on electric power supply and operation of electric equipment in gas-hazardous ventilated blind workings	Ministry of Emergencies of Ukraine; Registered with Ministry of Justice of Ukraine; Came into force	12.12.2012 Order No. 1404; 03.01.2013 No. 47/22579; 01.02.2013
98.	NPAOP 10.0-5.38-13	Instruction on safe performance of works in underground electric installations	Ministry of Emergencies of Ukraine; Registered with Ministry of Justice of Ukraine; Came into force	12.12.2012 Order No. 1401; 03.01.2013 No. 46/22578; 05.02.2013
99.	NPAOP 10.0-5.39-13	Instruction on using electric equipment in standard mining construction and general-purpose electric equipment in gas- or dust-hazardous mines	Ministry of Emergencies of Ukraine; Registered with Ministry of Justice of Ukraine; Came into force	12.12.2012 Order No. 1405; 03.01.2013 No. 36/22568; 05.02.2013
100.	NPAOP 10.0-5.40-13	Instruction on equipping, inspecting and measuring mine ground resistance	Ministry of Emergencies of Ukraine; Registered with Ministry of Justice of Ukraine; Came into force	12.12.2012 Order No. 1403; 02.01.2013 No. 18/22550; 05.02.2013
101.	NPAOP 10.0-5.41-13	Instruction on determining short-circuit currents, selecting and checking overcurrent protection settings in up to 1200 V mains	Ministry of Emergencies of Ukraine; Registered with Ministry of Justice of Ukraine; Came into force	12.12.2012 Order No. 1408; 02.01.2013 No. 27/22559; 12.02.2013
102.	NPAOP 10.0-5.42-13	Instruction on electric power supply and operation of electric equipment in mines hazardous in terms of sudden bursts developing steep seams	Ministry of Emergencies of Ukraine; Registered with Ministry of Justice of Ukraine; Came into force	12.12.2012 Order No. 1406; 03.01.2013 No. 48/22580; 12.02.2013
103.	NPAOP 10.0-5.43-13	Instruction on checking of overcurrent protection of mine devices	Ministry of Emergencies of Ukraine; Registered with Ministry of Justice of Ukraine Came into force	12.12.2012 Order No. 1402; 02.01.2013 No. 26/22558; 22.02.2013
104.	NPAOP 10.0-5.44-13	Instruction on inspection and revision of explosion-proof mining electric equipment	Ministry of Emergencies of Ukraine; Registered with Ministry of Justice of Ukraine; Came into force	12.12.2012 Order No. 1407; 03.01.2013 No. 49/22581; 22.02.2013
105.	NPAOP 10.0-5.45-13	Instruction on prevention and localization of coal-dust explosions	Ministry of Energy and Coal Industry of Ukraine; Registered with Ministry of Justice of Ukraine; Came into force	11.10.2013 Order No. 724; 30.10.2013 No.1834/24366; 26.11.2013

106.	NPAOP 10.0-5.46-14	Instruction for reversal of ventilation flow and checking of reversing units in ventilation plants	Ministry of Energy and Coal Industry of Ukraine; Registered with Ministry of Justice of Ukraine; Came into force	24.09.2014 Order No. 660; 16.10.2014 No.1285/26062; 11.11.2014
107.	NPAOP 10.0-7.05-90	Manual on endogenous fire control at mines of the USSR Ministry of Coal Industry	USSR Ministry of Coal Industry	30.10.1990
108.	NPAOP 10.0-7.06-86	Guideline on procedure and control of safe performance of mining works in hazardous areas	USSR Ministry of Coal Industry	04.10.1986
109.	NPAOP 10.0-7.07-87	Guidelines on organization of miners' training to use self-rescue devices in smoke chambers	USSR Ministry of Coal Industry	03.06.1987
110.	NPAOP 10.0-7.08-93	Manual on designing of coal mine ventilation	Derzhnahlidokhoron-pratsi	20.12.1993 Order No. 131
111.	NPAOP 10.0-7.09-82	Temporary safety requirements for major mining conveyer equipment for coal and shale mines	USSR Ministry of Coal Industry	05.07.1982
112.	NPAOP 10.0-7.10-80	Temporary safety requirements for technology and means for levelling of oversized loads under load vessels	USSR Ministry of Coal Industry	21.04.1980
113.	NPAOP 10.0-7.11-80	Uniform requirements to signals and signs in underground workings and mine transport	USSR Ministry of Coal Industry	16.09.1980
114.	NPAOP 10.0-7.12-83	Model solutions on safe transportation of people and cargos by locomotives in workings with 0.005-0.050 o/oo slope	USSR Ministry of Coal Industry	28.10.1983
115.	NPAOP 10.0-7.13-83	Temporary safety requirements for operation of monorail roads in coal mines	USSR Ministry of Coal Industry	1983
116.	NPAOP 10.0-7.14-81	Uniform requirements for safe operation of unloading devices	USSR Ministry of Coal Industry	25.12.1981
117.	NPAOP 10.0-7.15-84	Project for establishment of hazardous area boundaries in performance of mining works in a hazardous area near drowned wastes	USSR Ministry of Coal Industry	1984
118.	NPAOP 10.2-3.01-83	Safety standards on operation of electrical equipment on coal cuttings	USSR Ministry of Coal Industry	08.12.1983
119.	NPAOP 10.3-1.01-87	Labor safety rules at the peat industry enterprises	RSFSR Ministry of Energy Industry	26.03.1987
120.	NPAOP 10.3-3.01-80	Model industry regulations on providing workers employed in peat and peat processing enterprises with special clothes, special footwear and other personal protective equipment free of charge	USSR Derzhkompraci; Amended	18.08.1980 Resolution No. 241/П-9; 21.08.1985 Resolution No. 289/П-8

121.	NPAOP 10.0-1.01-03	Rules for tapping of buildings, structures and natural objects in underground coal mining. GSTU 101.00159226.001-2003	Ministry of Fuel and Energy of Ukraine	28.11.2003 Order No. 703
122.	NPAOP 10.0-5.01-69	Instruction on the procedure for approving forgery of railway tracks in the coal and shale deposits of the USSR	USSR Derzhirtekhnahtad	26.08.1969
123.	NPAOP 10.0-5.02-74	Sectoral instruction on record of balance and calculation of industrial stocks, determination, regulation, accounting and economic evaluation of the coal (shale) loss during mining	USSR Derzhirtekhnahtad	30.09.1974
124.	NPAOP 10.1-7.01-91	Guidelines for the regulation, planning and economic evaluation of the coal loss in the Donetsk basin bowels	USSR Ministry of Coal Industry	12.03.1991
Carbohydrates mining				
125.	NPAOP 11.1-1.01-08	Safety rules in the oil and gas production sector of Ukraine	Order: Derzhirprom-nahliad; Registered with Ministry of Justice of Ukraine	06.05.2008. No.95; 02.06.2008 No.497/15188
126.	NPAOP 11.2-4.01-89	Regulations on procedure for closing oil, gas and other wells, and for writing off their construction costs	USSR Derzhirtekhnahtad	27.12.1989
127.	NPAOP 11.2-4.03-86	Regulations on transition of oil and gas injection and monitoring wells to other horizons	USSR Derzhirtekhnahtad	17.10.1986
128.	NPAOP 11.2-4.02-89	Regulations on the procedure for mothballing of wells in oil and gas deposits, underground gas storages (UGS), and thermal water deposits	USSR Derzhirtekhnahtad	27.12.1989
129.	NPAOP 11.10-1.01-70	Rules for development of gas and gas condensate fields	USSR Derzhirtekhnahtad	06.04.1971
130.	NPAOP 11.10-1.02-84	Rules for development of oil and gas-oil fields	USSR Ministry of Oil Industry	15.10.1984 Protocol No. 44
Metallic ores mining				
131.	NPAOP 13.0-5.06-76	Instruction for hanging and safe operation of fire-resistant rubber-cord balancing ropes at skip hoistings in mines	USSR Ministry of Ferrous Metallurgy USSR Ministry of Non-ferrous Metallurgy	2.07.1976
132.	NPAOP 13.0-5.10-72	Instruction for hanging and safe operation of fire-resistant rubber-cord balancing ropes at skip hoistings in mines	USSR Derzhirtekhnahtad	20.06.1972
Mineral water mining				
133.	NPAOP 14.0-1.01-87	Rules for development and protection of therapeutic mineral water deposits	Derzhirpromnahliad	27.08.1987 Resolution No.28

134.	NPAOP 14.0-4.02-78	Regulations on the procedure for drafting and content of reservoir management plans for therapeutic mineral water deposits	USSR Derzhirtekhnahtad	18.08.1978
Non-ore mineral resources mining				
135.	NPAOP 14.3-7.02-06	General requirements to OSH for workers at mining enterprises	Ministry of Emergency Situations of Ukraine; Registered with Ministry of Justice of Ukraine	19.07.2006 Order No. 459; 4.08.2006 No. 943/12817
Metallurgy industry				
136.	NPAOP 27.0-3.01-08	Regulations on providing workers employed in iron and steel industry enterprises with special clothes, special footwear and other personal protective equipment free of charge	Derzhirpromnahtad; Registered with Ministry of Justice of Ukraine	27.08.2008 Order No. 187; 01.10.2008 No. 918/15609

Source: Directory of regulatory legal acts on labour protection

