



# ESPN Thematic Report on retirement regimes for workers in arduous or hazardous jobs

## Bulgaria

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**European Social Policy Network (ESPN)**

**ESPN Thematic Report on  
retirement regimes for workers  
in arduous or hazardous jobs**

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## Summary/Highlights

Bulgaria adopted a three-pillar pension model in 2000. The first pillar consists of a defined-benefit public pension fund functioning on a pay-as-you-go (PAYG) basis. The second pillar, which is very important for workers in arduous and hazardous jobs (WAHJs), consists of universal and professional pension funds (UPFs and PPFs) run by private pension insurance companies. WAHJs are the only members of PPFs. The third pillar, participation in which is voluntary, consists of supplementary voluntary pension funds and supplementary voluntary pension funds with occupational schemes.

Bulgaria has a long tradition of facilitating the early labour market exit of WAHJs. In the Bulgarian system there are two different categories of WAHJs. Category I comprises the most arduous and hazardous professions and jobs, of which there are a limited number: very few workers qualify for this category. Category II is much broader and, with all sub-categories, includes more than 100 professions and jobs. Different statutory pensionable ages and additional conditions for retirement are specified for the two categories. These conditions include a minimum required length of service in an arduous or hazardous job in addition to a requirement for a minimum age and minimum sum of the age and the length of service. In calculating the length of service of category I WAHJs, usually three years of service count as being equal to five years of ordinary service. For category II WAHJs, four years of service are treated as five years of ordinary service. For some exceptionally-risky military and civil professions of category I, one year of service counts as being equal to 3 years of ordinary service. These conversion rules allow WAHJs who do not exercise their right to early retirement to qualify for a higher pension because the total length of service is used in the pension formula.

In Bulgaria, the pension system is undergoing a difficult and controversial reform. The most important aspect of the reform is the increasing of the statutory pensionable age. Pensionable age will start to increase from 2017 by two months for men and four months for women each year until it reaches the same age for women and men. The same pace of increase will be used both for ordinary types of occupations and for WAHJs. For people whose jobs belong to category I, the target age for early retirement is 55 years. For people whose jobs belong to category II, the target age is 60 years. Currently (2016) the statutory pensionable age is different for men and women, including for male and female WAHJs.

Judging by the number of pensions recorded in the statistical bulletin of the National Social Security Institute, the number of retired WAHJs seems to be decreasing each year by several thousands. One possible reason for that is that some arduous and hazardous professions have gradually lost their economic significance and have fewer and fewer workers. In 2016, the number of pensions for WAHJs was below 100,000 out of a total number of more than 1.6 million pensions for old age and length of service (i.e. about 6% of all pensions). Among invalidity pensions it is difficult to distinguish which ones are given to WAHJs. In 2015, there were 455,355 invalidity pensions related to employment. In addition there were about half a million social invalidity pensions.

The performance of pension funds in the second pillar has not been spectacular since their establishment in 2000. In general, there have been positive rates of return, but only of around 3%, which is much below expectations. Bulgarian pension insurance companies have a short history of less than two decades, in a period that has witnessed the global economic crisis. This was the reason why payment of early pensions from PPFs was postponed several times. In 2015, the government took the controversial step of allowing a voluntary shift from second-pillar funds to the public pension system. The shift involves a transfer of the full amount accumulated in private pension accounts to the state pension fund, based on a written request from the insured person. It is too early to judge how many WAHJs will use this opportunity. Potentially, this poses a threat to the second, fully funded, pillar of the pension system. The effect on the adequacy of WAHJ pensions is difficult to predict as it will depend on many variables including future social security contributions and their distribution between pillars; retirement rules and patterns; and the performance of PPFs.

## 1 Overall description of the policy mix targeted at workers in arduous or hazardous jobs

According to the ordinance for the categorization of work for the purposes of calculating pensions, all working activities are divided into three categories, according to their nature and difficulty and the working conditions where they are performed by the insured person. The first category includes those employed in the hardest and most hazardous production and activity conditions. The second category of work includes those employed in hard and hazardous production and activity conditions. The third category of work covers all other working activities not included in the first and second category. This category involves a normal degree of strain in normal working conditions.

The Bulgarian system of categorizing arduous jobs is characterized by highly-detailed descriptions of specific sectors and sub-sectors of the economy, right down to specific enterprises (the names of actual companies) and even specific production lines and units within these enterprises. There are also detailed descriptions of specific job positions and functions within production units. Some of these categories are probably obsolete and refer to jobs that do not exist anymore, or at least ones where no new staff are recruited and are about to disappear: for example, many professions from the field of metallurgy and ore processing. Most of the biggest enterprises in these sectors have closed down over the last two decades due to the loss of markets and outdated technologies. The categorization resulted from bargaining between trade unions and the government, with some participation of the employers, although it was strongly influenced by custom and tradition. Before that, there were no explicitly-defined criteria for the categorization of professions and jobs. The results of the bargaining were encoded in national legislation. Debates and negotiations took place in the second half of the 1990s before a special ordinance was finally passed at the end of 1998. The general framework is defined in the Social Security Code, i.e. the number of categories and how they are treated in terms of required length of service and other retirement rules. The detailed lists of professions and jobs are defined in by-laws: these are technically (legally) rather easy to amend but very difficult to change politically, which is probably why they have not been changed as often as could be expected and seem actually very conservative in their terminology and approach.

Professions and jobs are categorized as arduous and hazardous on the basis of physical hardship, or hazardous or (potentially) unhealthy conditions. A few professions and jobs on the list require constant concentration and stress due to the need to react quickly and take crucial decisions. There are just a few such professions on the list, for example pilots and heads of flights. The list of jobs and professions in category I and category II is given in Annex 1.

The ordinance specifying the arduous and hazardous professions and jobs under categories I and II was enacted in 1998 to replace decades-old regulation dating back from communist times. The ordinance was then amended many times in the first year and then again in 2011 and 2013 when the debates about categorization of labour and early retirement were reopened. There is a special instruction<sup>1</sup> elaborating further details of the professions that should be considered arduous and hazardous under categories I and II. The instruction was promulgated in October 2000 and contained the names of specific enterprises from the mining, metallurgical and power generation industry, among others. Some of those enterprises, such as the big metallurgical plant Kremikovtsi, had ceased to exist by 2016. Workers from the Kozlodui Atomic Power Station were included among the professions and job positions under category I following pressure from trade unions.

The government also approached this issue from the point of view of work safety regulation. The 2015 report of the Chief Labour Inspectorate Executive Agency shows that most of the heavy sanctions relating to an immediate threat to workers' health and life were imposed in construction and coal mining. These sanctions included closing production sites and injunctions for immediate measures. In coal mining, most of the professions and jobs fall under the most

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<sup>1</sup> Instruction No.13 from October 31<sup>st</sup> 2000 concerning the implementation of the ordinance for the categorization of labour at retirement.

hazardous category of labour. In construction, there are jobs categorized as moderately hazardous and arduous (category II).

Beyond the formal categorization of professions and jobs we should note that the Bulgarian labour market seems to contain quite a lot of jobs with at least some arduous or hazardous conditions. There is no recent research on this issue, but research carried out by the Bulgarian Academy of Sciences in 2003, four years before Bulgaria joined the EU, showed rather high rates of subjectively-declared arduous and hazardous conditions at work<sup>2</sup> (see Annex 2). The survey found some patterns that could still be present today, although many large industrial enterprises in the sectors with most work hazards have been closed or significantly downsized. The survey showed that the incidence of many unfavourable conditions was increasing most rapidly in smaller settlements and villages furthest from the capital.

Asked why they agreed to work in hazardous or arduous conditions, one-half of the respondents said they could not find another job and one-quarter said it was because of the (higher) remuneration. The rest, also about one-quarter, said they felt attached to their profession and job, i.e. because of a vocational choice.

In Bulgaria, there are no special end-of-career options for WAHJs except the special arrangements for early retirement described in the next section. WAHJs do not enjoy special protection against dismissal. There are no special rules for unemployment or sickness benefits concerning WAHJs different from those for the main ordinary occupations. Some WAHJs in occupations described in a special ordinance may enjoy additional paid leave of five days per year or more, but this rule does not apply automatically and is subject to additional conditions. Some WAHJs have reduced daily working hours (7 or 6). The options for reduced working hours are also defined in a by-law and are subject to many additional conditions, including sectoral agreements.

Participation by older people in the measures funded under the EU operational programmes varies according to the type of programme.

There are no special legal provisions or permanent measures for prolonging the working life of older workers in general and WAHJs in particular. But most of the employment programmes and measures, both the ones funded from the national budget and under the operational programmes for EU funds, accept beneficiaries in pre-retirement and retirement age looking for jobs.

Some summary statistics on the participation of older workers aged 55-64 in employment programmes are given in the National Concept Paper for Encouraging Active Ageing in Bulgaria (2012-2030). Participation varies. About 20% of participants in programmes for integrating vulnerable people in the labour market are older workers. But in the case of measures for promoting adaptability and productivity, the share of older workers is much smaller – about 8%. WAHJs are not mentioned as a separate target group for prolonging working life, either in the National Employment Plan or in the long-term strategy for active ageing.

Since 2014, there have been intensive discussions about the reshaping of the retirement system for WAHJs. The government initially discussed allowing people to move back and forth between private pension funds and the state pension fund; but the final decision was to allow a one-time move from a private pension fund to the state pension fund. Some experts say there is a 'moral hazard' problem; those with low retirement savings in their private accounts would tend to move back to the publicly-funded system while those with high accrual would tend to stay in the private funds.

It should be noted that WAHJs did not get much attention in public debates, beyond the discussion about the state of the pension funds in the second pillar. The need to limit the

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<sup>2</sup> Mihova, G. Working time, work conditions and demographic behavior (in Bulgarian: "Работно време, условия на труд, демографско поведение"), Marin Drinov Academic Publishing, 2007, pp. 123-160.



options for early retirement was discussed and contested mainly in relation to workers in the security sector. WAHJs drew less public attention but they appear to be a critical topic on the social partners' agenda. Trade unions are sometimes accused, by proponents of a more radical reform, of blocking reforms related to WAHJs because WAHJs form a substantial part of their membership.

## 2 Pension rules for workers in arduous or hazardous jobs

From January 2000, Bulgaria adopted the World Bank three-pillar pension model. The first pillar includes the state PAYG pension fund. Supplementary pension insurance is divided into two additional pillars. The second pillar consists of *mandatory universal* and/or *professional pension funds* (UPFs or PPFs). Participation in the third pillar is voluntary: it includes supplementary voluntary pension funds and supplementary voluntary pension funds with occupational schemes. All pension funds in the second and third pillars are established and managed by pension insurance companies (PICs) licensed by the Financial Supervision Commission<sup>3</sup>.

Public and private sector employees and self-employed people, if born in 1960 or later, must become members of a UPF. All category I and II employees must, regardless of their age, become a member of a PPF in addition to a UPF. PPFs are not organized by the employer and individuals may join the fund of their choice. Both UPFs and PPFs are independent legal entities created and managed by a licensed joint-stock company, i.e. a PIC.

The current contribution rates are 12% for category I and 7% for category II. The contributions are paid by the employers. The total assets in PPFs were estimated at BGN770 million (€393.7 million or about 0.95% of GDP) at the end of 2014, up from BGN470 million (€240.3 million) in 2011. These represent very small amounts. The BGN770 million of assets are distributed in the personal accounts of about 260,000 members, which equates to about BGN2,900 (€1,483) per account.

In 2000, a reform was started that was intended to transfer early retirement to special PPFs operating with private pension accounts. Contributions to these accounts would be paid only by employers. The aim was to pay only a pension provided by the PPFs during the entire period from early retirement to the official retirement age. After the retired person reached standard pensionable age the state pension fund would take over the payment of the pension. This idea was, however, not accepted by the trade unions, who insisted on very early retirement. The age for early retirement that was eventually accepted was very close to what the trade unions had originally insisted on. In this way, WAHJs could retire even earlier than envisaged, which made the actuarial projections incorrect and posed a threat to the sustainability of the PPFs. The accrued amounts in private pension accounts were insufficient to cover adequate pensions for the extended period of 13 years instead of eight for those belonging to category I and from three to six years for those belonging to category II.

The Bulgarian pension system had different retirement rules for WAHJs in categories I and II, and different rules for men and women within each category. The rules set requirements for age and career length and for the total sum of age and career length. In addition, when calculating the length of service conversion rules were applied to transform career length under category I and II into ordinary career length; four years of service under category II were treated as five years of ordinary service, and three years of service under category I were treated as five years.

From 2016, the pensionable age for people who have worked 10 years or more under category I will increase by two months each year for men and four months each year for women until reaching 55 years for both genders. The same rule applies for people who have worked 15 years or more under category II until reaching 60 years for both genders.

For example, a woman aged 52 years and 8 months with 15 years of service under category II would have 18 years and 9 months of service (i.e. 15 years converted by 5/4), giving a total of 71.4 points (years). To retire, she needs 22 years and 7 months more of service under the ordinary category III, or 18 years more under category II. So she could realistically retire

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<sup>3</sup>Bulgaria pension system overview 2014, Financial Supervision Commission, 2015.

before 53 if she started working after secondary school and spent her whole life working in jobs under category II. To make the above calculation simpler we ignored residual days, which are, however, also taken into account in the exact calculation according to the regulations.

Ballet dancers and some other categories have the right to retire at 42 years and 10 months if they have a length of service of at least 25 years. From 2017, the retirement age will increase by two months each year until reaching 45 years. This amendment was introduced in 2015.

A special by-law, called an 'instruction', clarifies how the ordinance on arduous and hazardous jobs should be applied. According to the instruction, people working under more than one employment contract can benefit from the more favourable category provided they work for at least one-half of the legally-defined minimum time in the corresponding job position (as described above). Their social security benefits must also be calculated on the basis of this job position, which means that their contributions will be higher but they will enjoy the relevant rights to early retirement.

The procedure for including certain units or job positions on the list under categories I and II is managed by the territorial units of the National Social Security Institute, to which the managers of enterprises and other employers have to send lists of units and job positions falling under the definitions for hazardous and arduous jobs.

The rules for calculating the amount of the pension from the public PAYG pension fund (first pillar) are the same for all categories of labour.

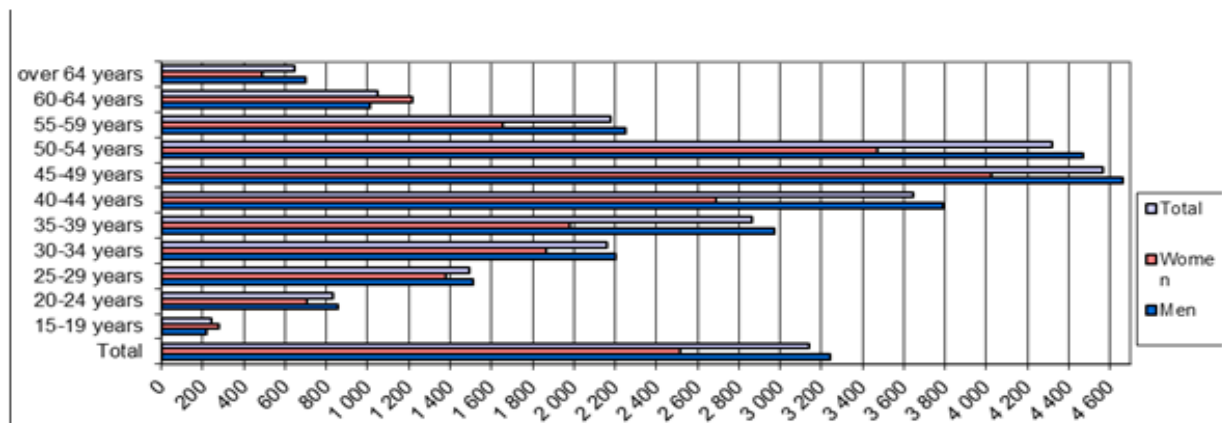
The basic pension is calculated on the basis of the average wage for the last 12 months prior to retirement. This average is multiplied by a percentage that is derived by multiplying each year of service by 1.1. From 2017, the multiplier for each year of service will increase until it reaches 1.5. The growth rate will be equal to or exceed the annual indexation of pensions. This means that currently 40 years of service gives 44% of the average wage as a basic pension and this percentage is projected to grow to 60%. Finally, the so-called personal coefficient is applied. The personal coefficient takes into account the proportion between the average wage and the personal wage for each month when contributions were paid and then the average of these proportions is taken. We will not go into further details on this part of the rules as they contain nothing specific about arduous jobs.

Other things being equal, those working in the most arduous job positions will have the chance to get a 25% to 66% higher proportion of the average wage than the ordinary worker for each year of service retirement. Thus, WAHJs have the chance of getting a much higher pension than an ordinary worker if they continue to work for some time beyond the early retirement age. Moreover, the weight of each year of service is expected to increase in the coming years.

### **3 Retirement patterns and retirement income of workers in arduous or hazardous jobs**

As already mentioned, the second pillar comprises supplementary mandatory pension insurance provided by private UPFs, and PPFs for WAHJs. The current contribution rate to the second pillar is 5%. The total of assets in the second pillar of the pension system at the end of 2014 was BGN6.6 billion (8.1% of GDP), which, from a macroeconomic perspective and in view of the expectation that the second pillar of the system will provide an adequate second pension, is actually a comparatively small amount. The members of UPFs are people born after 31 December 1959, currently around 3.4 million people. The first cohorts of men and women will attain life-time annuities around 2023, depending on changes to the retirement age.

The second pillar also includes PPFs, introduced in 2000, that will start providing fixed-term early retirement pensions to category I and II workers. The total number of beneficiaries, i.e. people currently insured as workers in hazardous conditions, was 254,555 at the end of 2014 (11.36% of all employed people).

**Chart 1. Average accrued amounts per member in PPFs as at 31.12.2015 (in BGN)**

Source: Financial Supervision Commission<sup>4</sup>

Second-pillar pension funds in Bulgaria were affected by the global economic crisis in two respects: a sharp drop in rates of return at the very beginning of the crisis, and a loss of confidence in privately-managed pension schemes. In addition, personal accounts could have been affected by spells of unemployment. The Bulgarian economy did not experience a drop in the average wage during the global economic crisis, just somewhat subdued growth. In 2008, the average non-weighted return yield of UPFs was minus 21.14%. During the following years, losses on individual account balances were compensated for by the positive rates of return achieved. The decreased trust in privately-managed pension funds also affected voluntary pension schemes of the third pillar. The total amount of voluntary contributions (premiums) paid by employers and employees almost halved in the crisis period – from BGN120 million to BGN65 million, with early withdrawals from individual accounts in voluntary pension funds being a common phenomenon. In order to protect individual pension savings and to restore confidence in funded pension schemes, the caretaker government presented a package of measures – improved supervision, more guarantees at the accumulation and pay-out phases, establishment of multi-funds, lower fees etc.

At the end of 2015, the average amount accrued in private accounts in PPFs was BGN3 139. In the age groups around the usual pensionable age for people in arduous jobs, it was BGN4,565 for people in the 45-49 age group and BGN4,318 for people in the 55-59 age group. Such amounts are not enough to provide an adequate pension for the years between early and statutory retirement. This is one of the reasons why the effective payment of early retirement pensions by these funds was postponed several times<sup>5</sup>. This is explicitly explained in strategic government documents. Finally, the low amounts accrued in private accounts prompted the government, against criticism, to allow movement from the second pillar of the pension system to the first (the public PAYG pension fund). For those who participate in a PPF, this shift can be done once with a special application to the territorial service of the National Revenue Agency. After that, they continue to pay an increased contribution to the state PAYG pension fund<sup>6</sup>.

In many cases, people with long service do not have large amounts accrued in their personal pension accounts. This is a sign that some WAHJs are probably working at least partially in the informal sector. In Bulgaria, there is an illegal practice that the worker and the employer agree to officially declare only a portion of the true salary in order to pay lower social security and health contribution. The 'hidden' part of the salary is paid in cash 'under the table'. The most probable reason for this disparity is that contributions to the fund had been very small,

<sup>4</sup> Financial Supervision Commission, Statistics and Analysis of the Social Insurance Market, available from <http://www.fsc.bg/en/markets/social-insurance-market/statistics/statistics-and-analysis/>

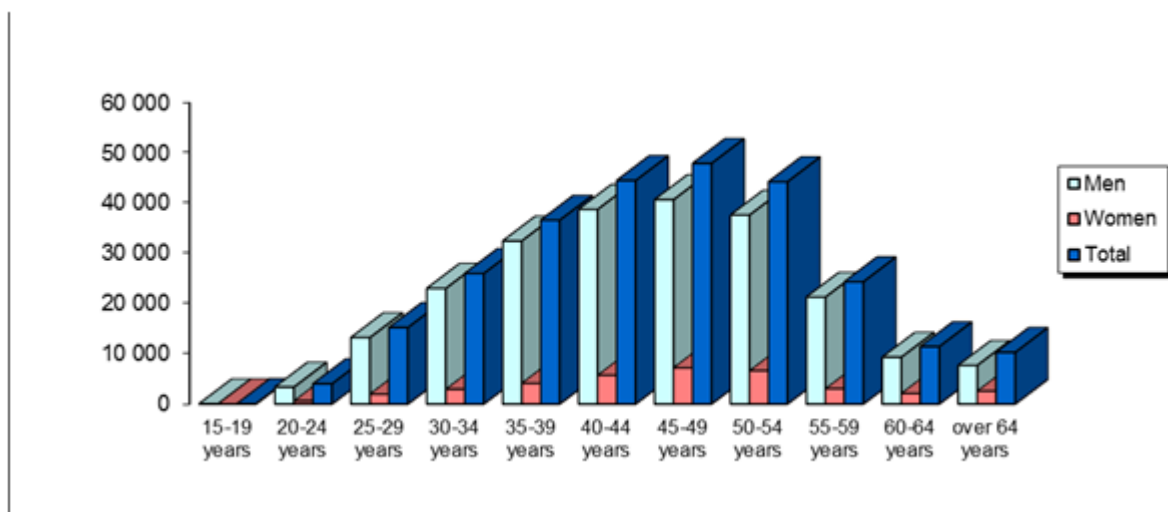
<sup>5</sup> MLSP (2012), *National Concept for Promoting the Active Living of the Elderly in Bulgaria 2012-2030*, Sofia, p. 55.

<sup>6</sup> The procedure is explained on the webpage of the National Revenue Agency.

i.e. the declared income had been small. We can assume that this is the result of tax evasion (see below).

PPFs have been accused of bad management. Proponents of PPFs have used several arguments to show that this is not the case, and that the low capitalization of the funds is due to other reasons. They point out that fewer than 30% of retired people had actually accrued any amount in their private accounts. The length of contribution ranged from one month to 13 years. They also point out that the collection rate was very low and that the transfer of the amounts collected by the National Revenue Agency to the private pension funds was slow. The state failed to reduce the scope of the grey economy, particularly of practices such as declaring a lower income than the true one, paying the difference 'below the counter', and declaring reduced working hours.

**Chart 2. Distribution of members of PPFs at the end of 2015**



*The distribution of PPF members peaks in the 45-49 age group and drops sharply after age 54. This is an indication of when retirement tends to take place.*

At the end of 2015, there were 26,457 pensions (1.6% of all pensions) paid from the public pension fund to retired WAHJs under category I and 65,277 pensions (4% of all pensions) paid to retired WAHJs under category II. These statistics include only pensions extended for old age and service, and exclude all other categories of pension such as invalidity pensions. This puts the total number of WAHJ pensioners at about 90,000. The number of new pensions provided in 2015 to retired WAHJs who have worked only as WAHJs was 140. The total number of pensions provided in 2015 to persons who had worked at least some time during their career as WAHJs was 3,312. The number of WAHJs receiving pensions from the public pension fund is decreasing by about 7,000 each year. At the end of 2013, the number of retired WAHJs was 105,000, whereas at the end of 2010 it had been about 125,000. The best estimate of the number of WAHJs working in the legal economy is the number of members of PPFs. At the end of 2015, PPF members totaled 264,763 people. This represents about 12% of the employed population (2,186,614 people in 2015 according to data from the National Statistic Institute). We should especially note that both data on pensions and membership of PPFs only cover professions and jobs that are legally categorized as arduous or hazardous and only cover people who work in the legal economy. Surveys of the quality of jobs are rare but they show that, if formal criteria are used, the number of people who would be considered to perform arduous jobs may be higher. The Bulgarian list of arduous and hazardous jobs looks very detailed and exhaustive but, in reality, the bulk of working conditions described in the regulations today are no longer relevant and there are fewer and fewer workers in most of these jobs.

It is not possible to know the size of the pensions of WAHJs separately from the pensions of several categories of military and police staff and teachers, all of whom are included in the same paragraph of the Social Security Code; and in the official yearly publications of the National Social Security Institute the breakdown of the size of pensions is given according to the paragraphs in Social Security Code. Both pensions and invalidity pensions for this broad

category are significantly higher than average pensions and invalidity pensions. In 2015, the average pension for this category was BGN552 (€282), and the average invalidity pension was BGN307 (€157). We believe, however, that the difference is due mainly to the high insurance contributions of police and military staff.

## ANNEXES

### Annex 1. List of arduous and hazardous jobs

The **first category** of labour includes:

- Workers, technicians and managerial staff up to the head of unit employed in underground mines, or underground geological and hydro sites, tunnel and mining construction
- Mine rescuers up to the head of a mine rescuing service
- Divers and people working in caissons
- Pilots, navigators, radio operators, flight engineers (mechanics), parachutists, stewardesses (flight attendants) and flight teams working in aviation
- Workers, professionals and managerial staff in a nuclear power plant who are directly engaged in the operation and repair of facilities in close proximity to reactors or carry out collection, treatment and disposal of radioactive waste and spent nuclear fuel
- Flaw detectors, physicists and decontamination workers in nuclear power stations, working in closest proximity to the reactors
- Workers in metallurgy such as blast furnace operators, dispensers of ferrous and non-ferrous metals and their alloys and drivers of continuous casting machines
- Crews on vessels for the transportation of chemicals, petroleum and coal
- Workers in the engine room of ships, excluding those in the coastguard.

The **second category** is very broad, including more than 40 categories with numerous sub-categories. The list of jobs in category II is less stable and more prone to change, which is natural bearing in mind that these jobs are intermediate between ordinary ones and the jobs considered very hazardous and arduous. Below we provide a summary of the main professions and job positions included in category II.

The second category of labour includes:

- other categories of workers in mining, who occupy higher managerial positions
- workers, engineers, technicians and management staff up to the head of unit working in mines and quarries for open mining
- various types of workers, engineers and middle management staff in metallurgy, except those explicitly included in category I including transportation and repair staff
- various types of workers, technicians, engineers and middle management in the lead processing industry including the production of batteries with very detailed descriptions of the specific functions, jobs and the minimum concentration of lead
- workers employed directly in the manufacture of pyrotechnics, explosives, gunpowder and the manufacture, repair and disposal of ammunition
- workers, professionals and managerial staff working permanently in an environment of ionizing radiation other than those listed under category I
- workers employed in the production of: asbestos; asbestos-containing materials; slag, glass, marl and basalt wool; employees performing insulation with such materials
- workers and other staff involved in the production of: chlorine and chlorine derivatives (including bleach); bleach; sodium hydroxide; sulphuric acid; phosphoric acid; nitric acid; ammonia; carbon disulphide; nitrogen and phosphate fertilizers pesticides and a number of other substances used in plant protection and medicine, which are listed in detail
- workers and other categories of staff in the production of lacquers, paints and rubber mixtures; drying and grinding of phosphate rock; preparation of glues and impregnating solutions

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- workers employed in the primary processing of oil and processing of chemical and oil products; workers in the preparation of waxes, oils, aromatic hydrocarbons, rubber, latex and synthetic fibres
  - workers dealing with cement, hydrated lime and dolomite, including filling compartments
  - workers employed in units and plants indoors, involving crushing and grinding ore and non-metallic minerals and aggregates that can cause silicosis
  - drivers of buses and trolleybuses on urban transport running on schedule, with more than 60 seats in the vehicle or with more than 40 seats in the vehicle if they are working in a city with more than 300 thousand inhabitants; drivers of trucks with load capacity of 12 tons and more
  - crews on vessels that are not included in category I except those working in the coastguard
  - workers, engineers and technicians and management staff up to the head of department at solid fuel power stations
  - some professions in ship building and ship repair working on the ship hulls; those working in closed containers and in double bottoms of boats
  - heads of flights in international airports, both licensed to working with radars and managing procedures
  - emergency workers and repair teams serving power lines and networks and different transmitters and receivers
  - workers, engineers and technicians and management staff up to the head of the department, including people employed in weaving workshops in textile production, production of glass; working with dyes and finishing
  - workers constantly performing work in cold rooms and refrigerators for deep freeze at a temperature below minus 10°C
  - maintenance teams of underground urban sewage systems and wastewater facilities
  - circus performers, acrobats, gymnasts, balancers and equilibrists
  - musicians playing wind instruments.

## Annex 2. Statistical tables

**Table 1. Characteristics of the working environment – postures, movements and environmental factors (% positive answers)<sup>7</sup>**

Characteristics of the work and the working environment	Positive answer (the condition is present at the working place)
Pollution	38,5%
Humidity	22,7%
Draft	40,3%
Work in upright position	55,5%
Inconvenient postures at work	38,2%
Long and frequent walk	26,1%
Moving heavy burden	30,2%
Excessive noise	32,2%
High temperature (heat)	24,9%
Low temperature (cold)	23,1%
Working outdoors	29,6%
Quakes and vibrations	16,3 %
No WCs or WCs in poor condition	22,6 %
Inhaling fume and dust	38,3 %
Inhaling poisonous substances	16,4%
Contact with poisonous or harmful substances	14,6 %
Contact with explosive substances	6,1 %
Exposure to radiation (irradiation)	5,7 %

**Table 2. Number of people insured in PPFs in 2015 by gender and age groups**

gender	total	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	over 64	average age
<b>Professional Pension Funds (PPF)</b>													
men	227650	52	3395	13245	23041	32479	38775	40699	37632	21299	9332	7701	44,2
women	37113	30	634	1989	2966	4142	5735	7232	6632	3051	2110	2592	43,8
<b>Total</b>	<b>264763</b>	<b>82</b>	<b>4029</b>	<b>15234</b>	<b>26007</b>	<b>36621</b>	<b>44510</b>	<b>47931</b>	<b>44264</b>	<b>24350</b>	<b>11442</b>	<b>10293</b>	<b>44,1</b>
<b>Voluntary Pension Funds under Occupational Schemes (VPFOS)</b>													
men	2246	0	34	253	448	355	305	262	238	174	105	72	41,4
Women	4556	0	115	580	860	731	572	539	575	394	151	39	40,7
<b>Total</b>	<b>6802</b>	<b>0</b>	<b>149</b>	<b>833</b>	<b>1308</b>	<b>1086</b>	<b>877</b>	<b>801</b>	<b>813</b>	<b>568</b>	<b>256</b>	<b>111</b>	<b>40,9</b>

Source: Financial Supervision Commission

<sup>7</sup> Mihova, G. (2007), *Working time, conditions at work and demographic behaviour*, Marin Drinov Academic Publishing House, chapter III. Working conditions: realities and consequences, pp. 123-160.



**Annex 3. Bibliography**

*Bulgaria pension system overview 2014*, Financial Supervision Commission, 2015.

Financial Supervision Commission, Statistics and Analysis of the Social Insurance Market, available from <http://www.fsc.bg/en/markets/social-insurance-market/statistics/statistics-and-analysis/>

Instruction No.13 from October 31<sup>st</sup> 2000 concerning the implementation of the Ordinance for the categorization of labour at retirement.

MLSP (2012), National Concept for Promoting the Active Living of the Elderly in Bulgaria 2012-2030, Sofia, p. 55.

