



European Foundation for the Improvement of Living and Working Conditions

# Decrease in health risks and accidents at the workplace

*Trends in high risk employment*

*Accidents at work*

*Risk factors and prevention*

*Methodology of GUS research*

*Commentary*

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*Risks to health in the workplace and occupational accidents and diseases have declined significantly in Poland in the 15 years from 1991 to 2005. Nevertheless, there are still a number of risk factors prevailing, with certain sectors being particularly vulnerable. At least 12% of the workforce is working under hazardous conditions and the total is probably even higher, as no data are available for privately owned farms and for enterprises with fewer than 10 employees: these are thought to be among the high risk categories. Due to the surplus of labour supply available, some employers put a high priority on competitiveness and disregard the issue of safety. However, there are signs that this situation is changing, at least in some sectors. The Central Statistical Office survey for 2005 also gathered data on risk prevention.*

In 2005, the study of health risks in the workplace and occupational accidents and diseases in Poland covered a total of 60,800 companies employing 4,819,200 persons, using a standardised employer survey by the Central Statistical Office (Główny Urząd Statystyczny, [GUS](#)). The study findings indicate that 576,500 persons were working in unsafe or hazardous conditions, accounting for 12% of the total workforce of the employers covered by the study. This information is drawn from GUS reports published for all of Poland.

However, these figures do not take into account micro-enterprises, defined as those employing up to nine persons. As micro-enterprises comprise 90% of all Polish companies and provide jobs for almost a quarter of the national workforce, the data are thus based on a sample that is not entirely representative of the Polish workforce. See below for further details on the survey methodology.

### ***Trends in high risk employment***

In 2005, GUS noted a decline in the index of health risks to employees down to a rounded value of 120 – this index measures the number of persons working in unsafe conditions per 1,000 employees. As a result, the health risk indicator attained its lowest level since the onset of political and economic reform in Poland in the early 1990s (see Table 1).

**Table 1: Employees exposed to hazardous conditions, 1991–2005**

Year	No. of employees(in 000s)
<b>1991</b>	871.5
<b>1992</b>	768.4
<b>1993</b>	718.9
<b>1994</b>	701.2
<b>1995</b>	672.2
<b>1996</b>	682.1
<b>1997</b>	619.8
<b>1998</b>	561.4
<b>1999</b>	508.6
<b>2000</b>	454.5
<b>2001</b>	724.7
<b>2002</b>	637.4
<b>2003</b>	581.4
<b>2004</b>	577.2
<b>2005</b>	576.5

Source: GUS

Table 2 provides more detail concerning changes in the number of workers at risk in particular sectors, excluding agriculture (see EWCO article [PL0702019I](#) for information on safety risks in the latter sector). Table 2 sets out data from 1995, 2000, 2004 and 2005; all figures refer to business entities employing more than nine personnel, thereby, as explained above, excluding micro-enterprises.

**Table 2: Main groups exposed to hazardous conditions\*, 1995, 2000, 2004 and 2005**

Category	Total	Including:	
		Manufacturing	Construction
Per 1,000 employees			
<b>Total</b>			
<b>1995</b>	167	227	140
<b>2000</b>	140	195	120
<b>2004</b>	121	174	131
<b>2005</b>	120	175	129
<b>Risks relating to working environment</b>			
<b>1995</b>	113	163	80
<b>2000</b>	87	133	61
<b>2004</b>	71	113	65
<b>2005</b>	70	113	65
<b>Risks relating to difficult work, e.g. work at night</b>			
<b>1995</b>	43	47	51
<b>2000</b>	40	43	47
<b>2004</b>	36	40	52
<b>2005</b>	35	39	48
<b>Risks relating to mechanical factors – particularly dangerous machinery</b>			
<b>1995</b>	11	17	9
<b>2000</b>	13	19	12
<b>2004</b>	14	21	14
<b>2005</b>	15	23	16

Note: \* Employees are counted only once – in their predominant risk group (for a fuller explanation, see below under risk factors and prevention).

Source: GUS

Analysis of the data presented in Tables 1 and 2 indicates that working conditions are definitely improving in relation to risk factors, most probably on a long-term basis. At the same time, the data suggest that the improvement might have progressed at a quicker rate were it not for the pronounced economic slowdown observed

during the second half of the 1990s and the resulting increase in unemployment. Only in 2004 did economic growth return to a relatively healthy 5% a year.

Given the figures for 2004 and 2005 – two years of brisk economic growth – a more significant improvement of the situation with respect to safety in working conditions might be expected. However, it could be that the recent expansion in economic growth has yet to be translated into a more noticeable improvement in working conditions on account of the persistently high level of registered unemployment, at 16% in the second quarter of 2006.

As employers strive to make their operations more competitive, they have benefited from a surplus of labour supply, making it easier to disregard safe working conditions in favour of other priorities. Conversely, employees feel that steady employment is hard to come by and that they could be easily replaced; as a result, they are more willing to accept onerous tasks and to work under harmful or dangerous conditions. Notwithstanding, certain sectors of the Polish economy, such as construction, are beginning to show signs of a labour shortage. A similar situation seems to prevail in the road construction and maintenance sector although data are not yet available to confirm this observation.

## **Accidents at work**

The number of people experiencing accidents at work and the incidence of occupational diseases are useful indicators to gain a fuller picture of the situation concerning work in risky or hazardous conditions. In 1995, GUS recorded 11,300 cases of occupational diseases, which declined to 7,300 reported cases in 2000, 3,800 in 2004 and 3,200 in 2005.

Table 3 summarises the number of accidents at work reported between 1991 and 2005, and shows a significant decline in the number of accidents at work. This tendency is a logical outcome of the improved safety trends already illustrated in Tables 1 and 2; it also reflects – to a certain degree, at least – the reduction in the overall number of jobs in certain high risk sectors of the Polish economy, such as mining or manufacturing. At the same time, it is worth noting that, according to the employer survey, the main cause of accidents at work in 2005 – accounting for 50.5% of all cases – was careless behaviour of the employees themselves; the physical conditions of the workplace ranked a distant second, at 11.6%.

**Table 3: Accidents at work, 1991–2005**

No. of persons affected
<b>1991</b>
<b>1992</b>
<b>1993</b>
<b>1994</b>
<b>1995</b>
<b>1996</b>
<b>1997</b>
<b>1998</b>
<b>1999</b>
<b>2000</b>
<b>2001</b>
<b>2002</b>
<b>2003</b>

2004
2005

Source: GUS

In 2005, some 24,600 claims related to accidents at work and occupational illnesses, of which 60.1% were in private sector enterprises. Overall, the value of these claims amounted to PLN 78 million (approximately €20 million, as at 6 March 2007), with 50.1% of this money being paid to private sector enterprises.

## **Risk factors and prevention**

As the data presented in Table 2 above indicate, the GUS study of working conditions takes into account the threat posed by risk factors associated with the following: the working environment, difficult working conditions, and working with machinery. In the general section of the GUS study, only one risk factor is counted per person among the employees at risk, taking into account the dominant factor –that exerting the greatest negative impact on the specific work station.

In addition, the study identifies the category of ‘person-risks’; this enables a calculation of various individual risks even where these may apply to just one individual, whether based at a single work station or at several. The concept of person-risks is justified by the simple fact that, in many instances, a person working in difficult conditions is exposed to potential harm due to not only one but several risk factors, and likewise that such a person may not be confined to a single work station. Thus, the number of person-risks corresponds to the number of persons working in unsafe conditions counted as many times as a risk applies to them; for example, a single employee exposed to a high level of noise and also to noxious chemicals would be counted twice.

GUS estimates the number of person-risks for 2005 at 718,300 cases. Of this figure, 439,400 such threats – amounting to 61.2% – are accounted for by person-risks relating to the work environment. The most harmful of these were as follows:

- noise – 50.2%;
- fibrous dust – 13.3%;
- other industrial dust – 5.8%;
- chemical substances – 5.5%;
- unsuitable lighting – 5.4%;
- other factors, such as mechanical vibrations, electromagnetic fields, optical radiation including lasers and other types, and ionising radiation – 19.8%.

Risks relating to the arduous nature of the work performed, such as strenuous positions or heavy physical exertion, applied to 193,900 persons (27%); while 85,100 persons (11.8%) were exposed to the harmful impact of mechanical factors associated with particularly dangerous machinery.

## **Sectoral influence**

The highest levels of health risks continued to persist in the mining industry, at 426.8 risks per 1,000 employees recorded in 2005, compared with 417.1 in 2004. Workers in air transport were also particularly vulnerable, reporting 347.4 risks per 1,000 employees in 2005, compared with 372.4 in 2004. As in previous years, a high incidence of health risks in the manufacturing industry persisted in certain sub-sectors, such as wood processing, the manufacture of wood products, and straw and wicker products. Here, some 366.6 risks were reported in 2005, compared with 374.9 in 2004, while 281.1 threats were found in the metal producing industry, compared with 276.2 in 2004, and 274.2 risks were noted in vehicle and transport equipment production, compared with 281.4 in 2004.

## **Regional impact**

The geographic distribution of health risks in the workplace has also remained largely unchanged for several years.

This is hardly surprising, considering that geographic prevalence of any given risk follows directly from infrastructural development and from the concentration of enterprises pursuing a particular type of activity. The most difficult working conditions therefore persisted in the southeastern region of Silesia, the heartland of Poland's hard coal mining industry, where one in five persons is exposed to dangerous factors in his or her workplace. The safest working conditions, meanwhile, were observed in the Mazowsze region around Poland's capital city of Warsaw, with one out of 16 people facing dangerous conditions at work, and in the central and eastern Podlasie region, where one out of 13 people were working in dangerous conditions.

## **Gender distribution**

The proportions between women and men exposed to dangerous conditions in the workplace have also remained constant: as in previous years, every fifth person working in unsafe conditions was female. In terms of occupational activity, women faced the greatest risk levels in the following sectors: air transport (127.9 risks reported in 2005 compared with 153.4 in 2004); the textiles industry (108.7 risks compared with 123.2); and in the manufacture of chemicals (46.1 risks compared with 39.8).

## **Risk prevention**

In accordance with Polish employment law, employers are obliged to provide employee benefits for working under certain conditions. Despite the fact that the European Commission prefers a risk minimisation strategy rather than compensatory benefits, such benefits may be regarded as a form of rudimentary prevention aimed at improving workplace safety. As at late 2005, a substantial number of employees benefited from the following:

- meals – 593,200 employees;
- beverages – 1,693,600 employees;
- other food – 2,229,300 employees;
- cash bonuses – 704,400 employees;
- reduced working time – 45,900 employees;
- additional leave from work – 165,300 employees;
- privileges due to work under certain conditions or in certain capacities – 506,500 employees.

## **Methodology of GUS research**

The GUS studies view working conditions as comprising the combination of factors arising within the work environment with respect to the production process and also to the carrying out of the work in question. Working conditions issues are regarded as a key aspect of the overall health of the population, and likewise as an important element in the compliance of obligations incumbent on employers under the relevant standards.

The statistical reporting of GUS at national level was the source of the information presented in this report. The surveys cover business entities fulfilling two criteria, namely:

- employing more than nine employees;
- pursuing an economic activity listed within specific sections of the Polish Activity Classification (*Polska Klasyfikacja Działalności*, PKD) maintained by GUS and based on the Statistical Classification of Economic Activities in the European Community (NACE).

The study sample for 2005, as mentioned above, included 60,800 entities with a total workforce of 4,819,200 persons. As with other GUS studies, many results were published on an ongoing basis throughout the year, for instance in the Polish statistical quarterly, labour market monitoring documents, information briefs and other publications. The data presented in this report are mainly taken from a report entitled *Working conditions in 2005* (in Polish).

The information gathered by GUS refers to organisations meeting the two criteria specified above, irrespective of their ownership structure or their legal form. In studying such companies, the survey includes information relating to regular, full-time employees as well as to other types of personnel – such as seasonal employees or employees retained on an occasional basis – for whom the enterprise constitutes their principal workplace. The survey also includes trainees retained on the basis of employment contracts.

The best way to gain a complete picture of the health risks posed by harmful chemical substances and by physical and biological factors is to establish the concentration of the noxious agents in the workplace, with the permissible maximum values as a guideline. Unfortunately, exact measurement of such variables often requires specialised equipment which remains beyond the financial means of many employers, particularly of the smaller ones employing fewer than 50 people. Comprehensive monitoring of small and micro-enterprises is also made more difficult by the fact that such entities are prone to changing the profile of their operations as they search for a successful and sustainable market formula.

### Questionnaire format

In its studies in this field, GUS uses a working conditions questionnaire presented in a standardised form known as Z-10. The main part of the Z-10 questionnaire consists of the following five sections:

- Section 1 assesses awareness of the risks posed by harmful factors and health hazards in the workplace. As well as enumerating the individual risks, the respondent – that is, the employer – is asked to state the person-risk figure and to describe the measures taken to counter the risks by choosing from among three possible replies: ‘eliminated or reduced to comply with the relevant standard’, ‘limited’ or ‘present’.
- Section 2 includes questions on the number of employees exposed to risks, formulated in terms of the three major risk categories outlined above (see Table 2), and on the number of risks affecting each employee and the sex of the employees concerned.
- Section 3 gathers information about prevention and assessment of workplace risks, taking into account the following: results of assessments specifying work stations and the persons employed there; actions taken to eliminate or reduce the risks, again with reference to specific work stations and employees; and the measures applied – at a technical and organisational level and in terms of individual protection.
- Section 4 includes questions on the benefits extended to employees, outlined above, in recognition of their work in harmful and onerous conditions, as at July and December of the reporting period in question.
- Section 5 focuses on compensation payments relating to accidents at work and occupational illnesses. Employers are asked to specify the number of recognised claims and the cost of the benefits being extended, broken down by: damages for accidents at work and occupational illnesses as well as equalising benefits; equalising benefits associated with transfer to another job on account of an accident or occupational illness; benefits paid out to employees undergoing occupational rehabilitation; and other benefits financed from the company’s own funds.

### Commentary

It needs to be mentioned again that the GUS research discussed in this report does not take into account micro-enterprises, a category which provides employment for more than 20% of all working Poles. In 2005, for instance, Polish micro-enterprises provided jobs for 3,370,000 persons; for 2,625,000 of these, the micro-enterprise was their primary place of employment. The distribution of workers in micro-enterprises across sectors is similar to 2004: some 39% of employees were in the retail sector; another 14% worked in entities providing services for real estate and companies, 13% worked in manufacturing companies and 10% of employees worked in construction. A casual observation of these enterprises’ activities leads to the conclusion that such employees are quite likely to be exposed to harmful factors. For example, micro-enterprises are well represented in the wood processing industry and the manufacture of wood products, a category reporting a considerable degree of health risks.

The substantial number of accidents at work experienced by agricultural workers on privately owned farms – another sector not included in the GUS research – is also of concern ([PL0702019I](#)). In 1995, some 39,900 one-off damages payments were made in this sector of the economy, declining to 30,900 payments in 2000, 28,000 cases in 2004 and 20,900 in 2005.

In summary, the sustained decrease in the incidence of health risks in the workplace is certainly promising. On the other hand, the likely deficiencies in working conditions at many micro-enterprises should not be neglected, especially as this business category remains outside the scope of GUS monitoring. According to the results of the National Labour Inspectorate (Państwowa Inspekcja Pracy, [PIP](#)) audits, micro-enterprises have the highest incidence of irregularities in registering and filing accidents at work and in completing the necessary paperwork for GUS.

