Occupational accident statistics 2010

The number of accidents at work in Finland 135,000 in 2010

A total of 135,000 accidents at work occurred in Finland in 2010. Around 124,000 of these occurred to wage and salary earners and some 10,900 to self-employed persons (including farmers). The majority, or almost 115,000 of all accidents at work occurred at places of work or while in work traffic, whereas around 20,000 of them occurred while commuting. These numbers also include minor accidents at work that led to disability lasting less than four days, and on which insurance companies paid compensation only for medical treatment expenses.

Number of wage and salary earners', self-employed persons' and farmers' accidents at work by severity in 2010

	Total	Accidents at work	Commuting accidents
Total	**135 009**	**114 955**	**20 054**
Less than 4 days	73 737	62 751	10 986
At least 4 days	61 211	52 161	9 050
Fatal accidents	61	43	18
Wage and salary earners	**124 063**	**104 513**	**19 550**
Less than 4 days	70 272	59 509	10 763
At least 4 days	53 740	44 971	8 769
Fatal accidents	51	33	18
Self-employed persons	**6 391**	**5 887**	**504**
Less than 4 days	2 814	2 591	223
At least 4 days	3 573	3 292	281
Fatal accidents	4	4	–
Farmers	**4 555**	**4 555**	**–**
Less than 4 days	651	651	–
At least 4 days	3 898	3 898	–
Fatal accidents	6	6	–

The number of accidents at work increased slightly in 2010. In 2009, there were nearly 128,000 accidents at work and in 2008, the respective figure was just over 153,000. Wage and salary earners' accidents at work increased from 2005 to 2008, but in 2009 the total number of accidents at work fell to the level where it was ten years previously. The economic downturn in Finland in 2009 and changes in the number of hours worked explain for the main part the change. It is not meaningful to make detailed comparisons of

the time series prior and subsequent to 2005 with relation to total numbers (incl. cases resulting in disability of under four days) on account of the full-cost renewal that entered into force in 2005.

Since the reference year 2005, an accident at work has been defined in Statistics Finland’s statistics on occupational accidents according to the definition used in Eurostat's (the Statistical Office of the European Communities) European Statistics on Accidents at Work (ESAW). According to the definition, the statistics contain data on accidents at work which have resulted in "disability of at least four days". Most of the data in this online release are presented using this criterion. The time series have been revised retrospectively to correspond with the definition.

In 2010, a total of 61 persons died at the place of work or while commuting. Of the fatal accidents at work, 33 occurred to wage and salary earners, six to own-account workers in agriculture, i.e. farmers, and four to other self-employed persons. In addition, 18 fatal accidents occurred while commuting, all of them to wage and salary earners. The number of fatal accidents at work rose clearly from the year before, as in 2009 a total of 48 persons died at work or while commuting.

The victims of all fatal accidents at work included 51 wage and salary earners, six farmers and four other self-employed persons.

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The risk of fatal accidents at work rose clearly

A total of 33 fatal accidents at work occurred to wage and salary earners in 2010. The number of fatal accidents at work rose clearly from the year before, as in 2009 accidents at work resulted in the death of 26 wage and salary earners. It should be noted that accidents in work traffic cannot always be separated from commuting accidents when settling claims. Therefore, some of the accidents that occur in work traffic are recorded as commuting accidents. The number of accidents in work in traffic has decreased from the early 1990s.

The risk of fatal accidents at work rose clearly. In 2010, an average of 1.6 per 100,000 wage and salary earners died in an accident at work (Figure 1). The respective figure was 1.2 in 2009. This means a growth of good one-third relative to the risk of fatal accidents at work in the previous year (33.3%). The difference between genders in fatal accidents at work is still clear: of the 33 fatal accidents at work 31 occurred to men and two to women. Fatal accidents at work concentrated on certain industries: six out of ten fatal accidents at work occurred in the activities of manufacturing (industry category C), construction (F) and transportation and storage (H). The risk of deaths at work has conventionally been particularly high in the construction industry. In 2010, there were 4.6 fatal accidents per 100,000 wage and salary earners in construction. In the industry of transportation and storage, the risk of fatal accidents at work was also 4.6. In the activity of wholesale and retail trade, 2.3 per 100,000 wage and salary earners, on the average, had a fatal accident at work (see Table 13).

The data by industry have been compiled by the revised Standard Industrial Classification TOL 2008 which was adopted in these statistics in the statistical reference year 2008. The data by the revised industrial classification are not comparable with those produced by its predecessor TOL 2002 (this applies to data from the reference year 2007 and prior to it).

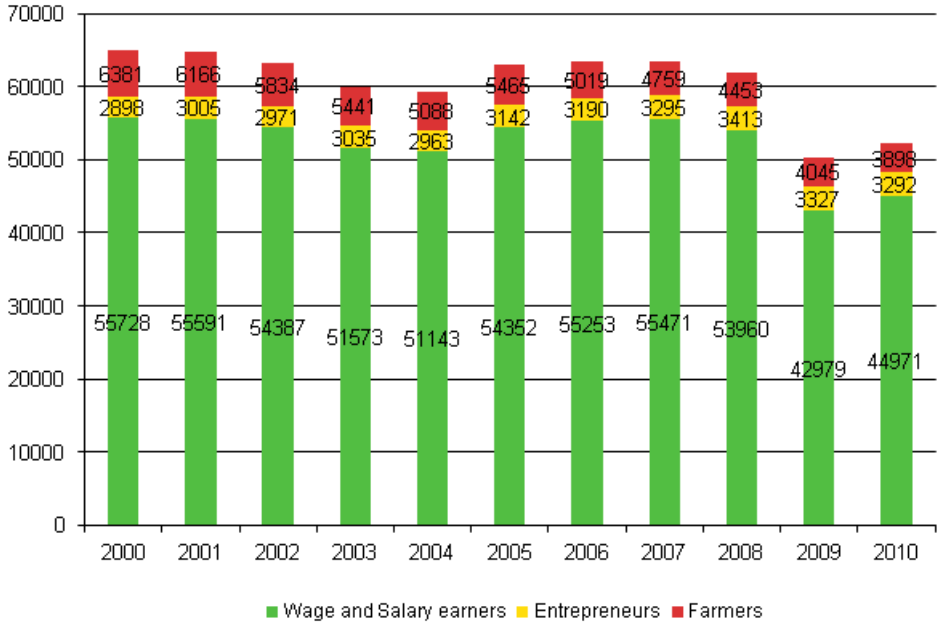
Figure 1. Wage and salary earners' fatal accidents at work per 100,000 wage and salary earners in 1996–2010

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Ratio	2.7	3.1	3.1	2.1	2.3	2.1	1.8	2.1	2.1	2.4	2.2	1.7	1.4	1.2	1.6

The number and risk of wage and salary earners' accidents at work rose slightly

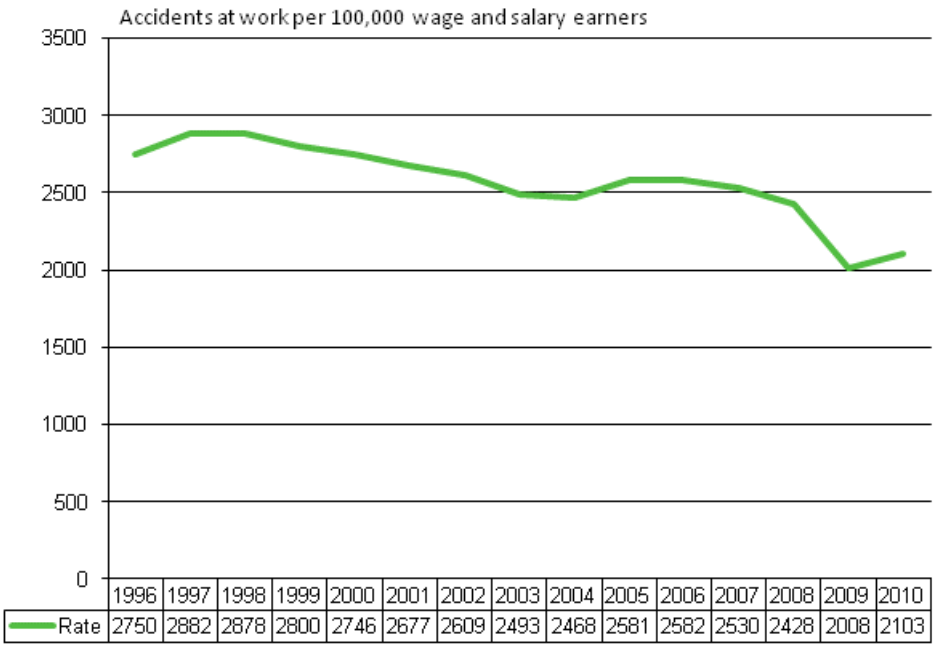
The number of wage and salary earners' accidents at work was slightly higher in 2010 than one year earlier. In 2010, wage and salary earners had 44,971 accidents at work causing disability of at least four days. This was 1,992 accidents, or around five per cent, more than in 2009 (4.6%). Farmers' accidents at work decreased by around 150 from the year before, and the number of accidents suffered by other self-employed people also fell slightly (Figure 2). However, it must be borne in mind that accident insurance is voluntary for self-employed persons, so the number of accidents at work may also indicate the popularity of insurance among self-employed persons. Around 40 per cent of self-employed persons are insured against accidents at work.

Figure 2. Changes in the number of accidents at work by status in employment in 2000–2010



The risk of accidents at work has been falling among Finnish wage and salary earners since the late 1990s (Figure 3). This becomes evident when the number of accidents is expressed per 100,000 wage and salary earners. The accident incidence rate fell by some 14 per cent between 1998 and 2004. In 2010, a total of 2,103 accidents at work resulting in a disability of at least four days occurred per 100,000 wage and salary earners. The corresponding ratio in the previous year was 2,008, which means that the risk of accidents at work rose at the same rate as the total number of accidents (4.7%). The accident incidence rate is used to measure variation in the risks of accidents in different industries and occupational groups.

Figure 3. Accidents at work per 100,000 salary and wage earners in 1996–2010



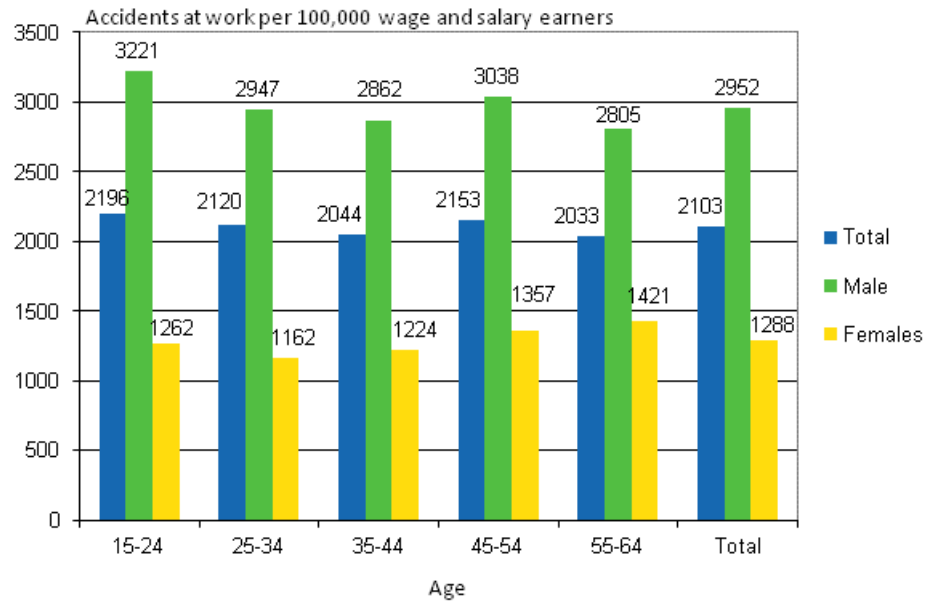
Accidents at work continue to be a problem among men: seven in ten accidents at work (68.7%) occur to men. Men's risk of accidents at work has conventionally been clearly higher than women's. Measured with the accident incidence rate, men's risk of accidents at work is nearly 2.5-fold compared to women's. The key reason is that more men than women work in industries and jobs with a higher than average accident risk.

Table 1. Wage and salary earners' accidents at work by gender and age in 2010

Age	Total		Males		Females	
	N	%	N	%	N	%
Total	**44 971**	**100**	**30 874**	**100**	**14 097**	**100**
15–24	5 496	12,2	3 822	12,4	1 674	11,9
25–34	10 285	22,9	7 652	24,8	2 633	18,7
35–44	9 976	22,2	6 988	22,6	2 988	21,2
45–54	11 600	25,8	7 747	25,1	3 853	27,3
55–64	7 353	16,4	4 487	14,5	2 866	20,3
Others	261	0,6	178	0,6	83	0,6

Among men, the risk of accidents at work is highest among the youngest age group (15 to 24). In 2010, young men had 3,221 accidents at work resulting in at least four days' absence from work per 100,000 wage and salary earners (Figure 4). This meant that, measured with the accident incidence rate, the risk was almost 10 per cent higher than the average for all male wage and salary earners. The risk of accidents at work rose slightly from the previous year among all male wage and salary earners (3.8%). Unlike men's, women's risk of accidents is the highest among the oldest age group, that is, among those aged 55 to 64. However, differences between age groups are fairly small. Overall, the risk lessens almost steadily with increasing age. The picture drawn by the accident incidence rate of the situation with accidents at work by gender has remained nearly unchanged from one year to the next.

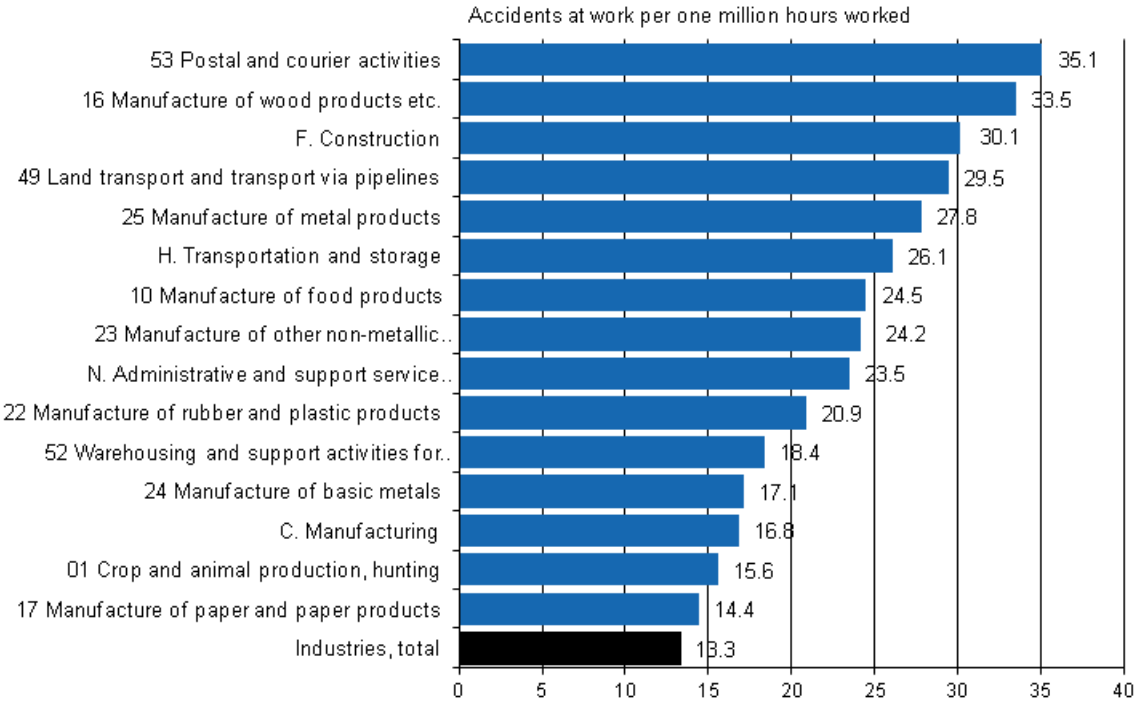
Figure 4. Wage and salary earners' accidents at work per 100,000 wage and salary earners by gender and age in 2010



Building construction is still the riskiest

In 2010, the industries with a high risk of accidents at work when measured with accident frequency were postal and courier activities, (35.1), manufacture of wood and wood products (33.5) and construction (30.1). Figure 5 lists the industries with a higher than average (13.3) accident frequency. The frequencies have been calculated from accidents at work resulting in disability of at least four days, fatal accidents excluded. Municipal sector employees have been classified into their own category, as information on their industry is missing from the data files on accidents at work. Wage and salary earners in the municipal sector had 10.0 accidents at work per one million hours worked in 2010, while one year previously their accident frequency had been 9.9.

Figure 5. Wage and salary earners' accidents at work per one million hours worked by industry in 2010, accident frequency higher than average

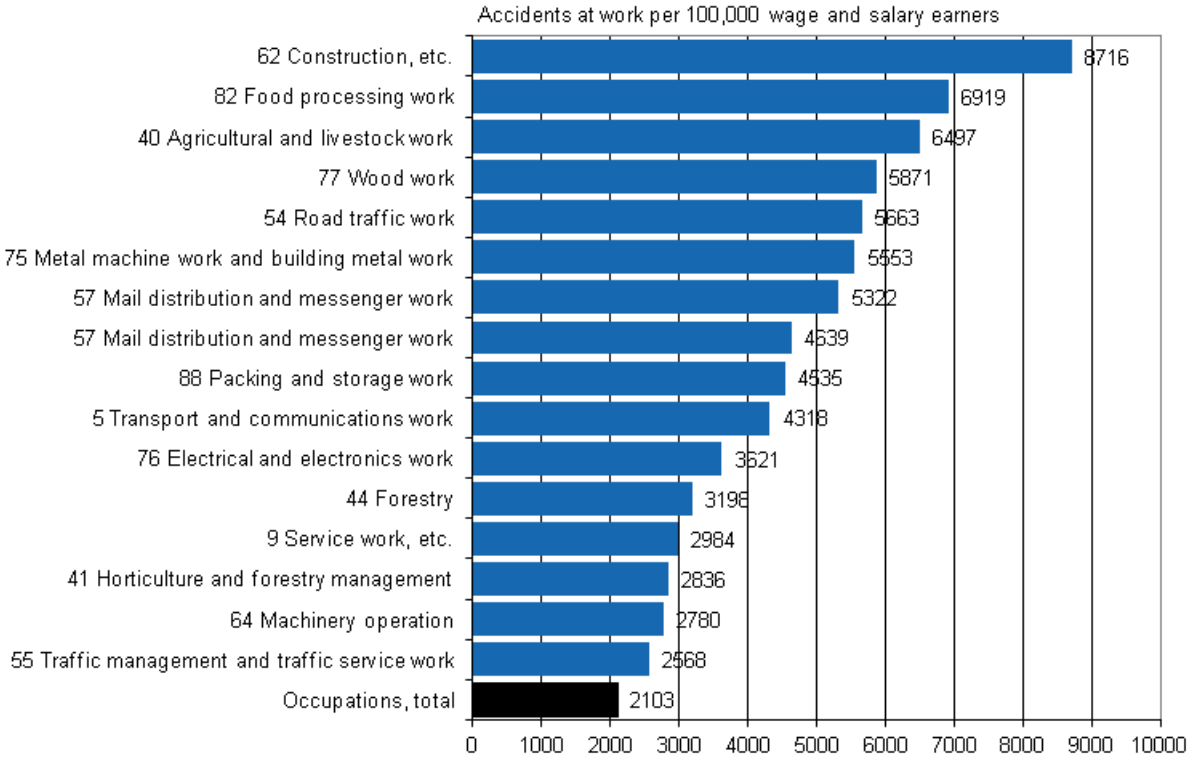


As with the accident incidence rate, the accident risk measured with the accident frequency has been falling almost steadily from the late 1990s. In previous year 2009, the accident frequency in industries totalled 12.9.

An examination by occupation (Figure 6) shows that the accident risk continues to be highest in the occupational group of building construction, where it is over four times as high as the average. In 2010, building construction workers had 8,716 accidents at work resulting in disability of at least four days per 100,000 wage and salary earners. One year earlier, this accident incidence rate was 8,404. In building construction occupations the accident risk measured by the accident incidence rate thus rose slightly (3.7%) from the previous year.

Next come occupational groups in food processing (6,919), agricultural and livestock work (6,497), wood work (5,871) and road traffic work (5,663). Measured by the accident incidence rate, the accident risk in wood processing occupations fell slightly (-2.8%) while the risk in agricultural occupations grew slightly (5.3%). In wood work occupations, and well as in road traffic work occupations the accident risk measured with the accidence incidence rate rose by more than one-tenth (14.5% and 12.7%, respectively). Figure 6 lists the occupational groups with a higher than average risk of accidents at work. On the average, 2,103 accidents at work resulting in disability of at least four days occurred per 100,000 wage and salary earners. As in the previous years, the number of accidents at work was highest in different occupational groups in manufacturing.

Figure 6. Wage and salary earners' accidents at work per 100,000 wage and salary earners by occupation in 2010, accident incidence rate higher than average



The accident frequency is a more accurate measure of risk than the accident incidence rate, as it expresses the number of accidents as a proportion of the time (hours worked) during which wage and salary earners were exposed to accidents at work. The hours worked, that is, the time of being exposed to accidents at work can, however, vary from person to person.

Previously Statistics Finland's occupational accident statistics calculated the accident incidence rate by expressing the number of accidents at work resulting in at least three days' absence from work as a proportion of 1,000 wage and salary earners. The key figures have been harmonised nationally and with Eurostat's practice. The accident incidence rate is now expressed as the number of accidents at work resulting in disability of at least four days per 100,000 persons in the reference population. The accident frequency is expressed as the proportion of accidents at work resulting in at least four days' absence from work of one million hours worked. The data on the number of wage and salary earners and their hours worked are obtained from Statistics Finland's Labour Force Survey.

ESAW variables describing the circumstances and manner of accidents at work among wage and salary earners

A revised questionnaire on accidents at work was introduced in Finland in 2003 to collect for the first time data on the circumstances and manner of accidents at work according to the European Statistics on Accidents at Work (ESAW). These data are now published for the eighth time in these Occupational Accident Statistics for 2010. Compared with the previous year's statistics the distributions of the variables are similar and thus appear fairly reliable. Eurostat's project is ambitious and the data needing to be collected are quite detailed at times, which is why the presented data draw a comprehensive picture of the circumstances of an accident at work as well as of its causes and consequences.

The Member States are allowed to exercise discretion as to the extent of their data collection. In Finland the data on accidents at work are collected on the key ESAW variables, for some of them at the main category level only. The data are presented by the incidence process of an accident at work so that the prevailing circumstances are described first, then the progress of events and finally the consequences from

the accident. In some variables, categories were combined for presentation reasons. The text section mainly presents distributions by gender. In addition to this, some data are presented by the national classification only. An example of such data are data on the variable describing the direct cause of the accident at work (see Table 6). An indication that they are in line with the joint European statistics on accidents at work is given in tables and figures based on the ESAW statistics.

Most accidents occur when the person is moving

Data are first presented about the general circumstances prior to the accident at work. The first ESAW variable describes the working process the wage and salary earner was involved in when the accident occurred. However, the working process does not refer to the person's occupation because tasks may vary at different times in the same occupation. Nearly one-third (30.1%) of men's accidents at work occurred in working processes related to production, manufacturing, processing or storing. More than one-half (51.0%) of women's accidents at work took place in working processes related to public or private services (Table 2).

Table 2. Wage and salary earners' accidents at work by gender and working process in 2010

Working process	Total		Males		Females	
	N	%	N	%	N	%
Total	**44 971**	**100**	**30 874**	**100**	**14 097**	**100**
10 Production, manufacturing, processing, storing	11 281	25,1	9 275	30,1	2 006	14,2
20 Excavation, construction, repair, demolition	4 286	9,6	4 191	13,7	94	0,6
30 Agricultural type work, forestry, horticulture, fish farming, work with live animals	1 462	3,2	858	2,8	603	4,1
40 Services provided to enterprise and/or to the general public; intellectual activity	9 350	20,8	2 163	7,0	7 187	51,0
50 Other work related to tasks coded under 10, 20, 30 and 40	9 472	21,1	7 664	24,9	1 808	12,9
60 Movement, sport, artistic activity	7 028	15,7	5 231	17,0	1 797	12,7
99 Other Working Processes no listed above	687	1,5	458	1,5	229	1,6
00 No information	1 405	3,1	1 034	3,3	371	2,6

The specific physical activity illustrates the person's *exact* physical activity just before the moment of injury, while the working process variable describes the general nature of work at the time of the accident. The specific physical activity can be intentional or voluntary, but it need not be of long duration. According to the results (Table 3), nearly four in ten accidents occurred when the person was moving. A larger share (45.7%) of women's than men's (34.8%) accidents took place while in motion. Nearly every fifth (18.7%) accident occurred when the person was carrying a load by hand. Likewise, around one-fifth (18.5%) of accidents took place when handling diverse objects. In relative terms, men had over 50 per cent more accidents at work when working with hand-held tools than women did.

Table 3. Wage and salary earners' accidents at work by gender and specific physical activity in 2010

Specific physical activity	Total		Males		Females	
	N	%	N	%	N	%
Total	**44 971**	**100**	**30 874**	**100**	**14 097**	**100**
10 Operating machine	1 884	4,2	1 579	5,1	305	2,2
20 Working with hand-held tools	4 975	11,1	4 226	13,7	749	5,3
30 Driving/being on board a means of transport or handling equipment	1 130	2,5	880	2,9	250	1,8
40 Handling of objects	8 329	18,5	6 028	19,5	2 301	16,3
50 Carrying by hand	8 405	18,7	5 556	18,0	2 849	20,2
60 Movement	17 201	38,2	10 752	34,8	6 449	45,7
70 Presence	1 057	2,4	587	1,9	470	3,3
99 Other Specific Physical Activities not listed above	1 158	2,6	663	2,1	495	3,5
00 No information	832	1,9	603	2,0	229	1,6

The cause of accident most often stumbling, slipping or falling

We will next examine the progress of the events leading to the actual accident at work. Among women good one-third (35.4%) and among men some 30 per cent (30.5%) of accidents at work were consequences from stumbling, jumping, slipping or falling (Table 4). The proportions are nearly the same as one year earlier. This comes clear from data on the "deviation" variable which describes an unusual occurrence during the physical activity that lead to the accident at work. If several deviating events precede the actual accident, the one that occurred last is recorded. The second most common event leading to an accident was sudden physical stress for both men (18.9%) and women (22.8%).

Table 4. Wage and salary earners' accidents at work by gender and deviation in 2010

Deviation	Total		Males		Females	
	N	%	N	%	N	%
Total	**44 971**	**100**	**30 874**	**100**	**14 097**	**100**
10 Deviation due to electrical problems, explosion, fire	109	0,2	102	0,3	7	0,0
20 Deviation by overflow, overturn, leak, flow, vaporisation, emission	1 113	2,5	814	2,6	299	2,1
30 Breakage, bursting, splitting, slipping, fall, collapse of Material Agent	4 857	10,8	3 640	11,8	1 217	8,6
40 Loss of control (total or partial) of machine, means of transport or handling equipment, hand-held tool, object, animal	5 164	11,5	4 077	13,2	1 087	7,7
50 Slipping – Stumbling and falling – Fall of persons	14 418	32,1	9 423	30,5	4 995	35,4
60 Body movement without any physical stress (generally leading to an external injury)	6 858	15,2	5 016	16,2	1 842	13,1
70 Body movement under or with physical stress (generally leading to an external injury)	9 048	20,1	5 831	18,9	3 217	22,8
80 Shock, fright, violence, aggression, threat, presence	1 215	2,7	461	1,5	754	5,3
99 Other Deviations not listed above	1 601	3,6	1 098	3,6	503	3,6
00 No information	588	1,3	412	1,3	176	1,2

Roughly three in ten (29.6%) of the victims of accidents at work were injured due to horizontal or vertical impact with or against a stationary object (Table 5). This is also indicated in the data on the variable expressing the deviating situation leading to the accident, where stumbling, falling or similar was the most common event leading to the accident. With a few exceptions, the data on these two variables are almost identical for men and women. Roughly every fourth (25.7%) was injured as a result of sudden physical or mental stress. The mode of injury describes how the injured body part came into contact with the cause of the injury. Where there are several modes of injury, the one causing the most serious injury is recorded.

Table 5. Wage and salary earners' accidents at work by gender and contact - mode of injury in 2010

Contact - Mode of injury (ESAW)	Total		Males		Females	
	N	%	N	%	N	%
Total	**44 971**	**100**	**30 874**	**100**	**14 097**	**100**
10 Contact with electrical voltage, temperature, hazardous substances	1 270	2,8	850	2,8	420	3,0
20 Drowned, buried, enveloped	7	0,0	6	0,0	1	0,0
30 Horizontal or vertical impact with or against a stationary object (the victim is in motion)	13 321	29,6	8 667	28,1	4 654	33,0
40 Struck by object in motion, collision with	4 404	9,8	3 324	10,8	1 080	7,7
50 Contact with sharp, pointed, rough, coarse Material Agent	6 611	14,7	5 148	16,7	1 463	10,4
60 Trapped, crushed, etc.	4 766	10,6	3 534	11,4	1 232	8,7
70 Physical or mental stress	11 536	25,7	7 594	24,6	3 942	28,0
80 Bite, kick, etc. (animal or human)	1 091	2,4	416	1,3	675	4,8
99 Other Contacts – Modes of Injury not listed in above	1 561	3,5	1 059	3,4	502	3,6
00 No information	404	0,9	276	0,9	128	0,9

In one-third of wage and salary earners' accidents at work - in 32.5 per cent among men and in 37.2 per cent among women - the direct material agent of the injury was diverse scaffolding, surfaces and planes. Various materials, objects and supplies injured slightly over one-quarter of the victims of accidents at work (Table 6).

The data on the material agent of contact describes the physical factor with which the injured body part was in contact. When several modes are involved persons filling in the accident notification form are asked to report the material agent of the most serious injury.

Table 6. Wage and salary earners' accidents at work by gender and material agent of contact - mode of injury in 2010

Material Agent of Contact-Mode of injury (FAII)[1)]	Total		Males		Females	
	N	%	N	%	N	%
Total	**44 971**	**100**	**30 874**	**100**	**14 097**	**100**
1100–1399 Scaffolding, surfaces and planes	15 266	33,9	10 023	32,5	5 243	37,2
2100–2799 Tools, machines and equipment	7 114	15,9	5 852	18,9	1 262	8,9
2801–2899 Conveying, transport and storage equipment	2 037	4,6	1 379	4,4	658	4,7
3100, 3200 Transport equipment	1 473	3,3	1 198	3,9	275	2,0
4100–4400 Materials, objects and supplies	11 671	26,0	8 635	27,9	3 036	21,5
5100 Living organisms and human-beings	3 042	6,8	929	3,0	2 113	15,0
5200 Bulk waste	177	0,4	146	0,5	31	0,2
5300 Physical phenomena and natural elements	399	0,9	264	0,9	135	1,0
9999 Other material agents not listed above	2 733	6,1	1 750	5,7	983	7,0
0000 No information	1 059	2,4	698	2,3	361	2,6

1) The classification of the variables is national (FAII = Federation of Accident Insurance Institutions).

The classification describing the material agent is national for accident data on wage and salary earners. The classification is considerably more detailed than previously. Two things should be borne in mind when examining the results. First, the occurrence of an accident at work is usually a sum of many factors and no single material agent can always be identified unambiguously. However, the data on the variable show what kind of equipment or tools the victim was using or in what kind of working environment the accident occurred. Second, inadequate guidance or inexperience on the part of the worker can often play a major role in the occurrence of an accident. It is difficult and often impossible to produce statistics on such factors.

Four out of ten (43.6%) injuries caused by accidents at work were dislocations, sprains or strains (Table 7). The next most common were wounds and superficial injuries (24.9%), and diverse concussions and internal injuries (15.6%) . Men's accidents caused relatively more often various wounds and superficial injuries, while women's accidents caused dislocations, sprains and strains. This is concordant with the results presented above, which showed that men more often than women injure themselves in accidents at work in connection with sharp objects whereas women more than men injure themselves by stumbling or slipping.

Table 7. Wage and salary earners' accidents at work by gender and type of injury in 2010

Type of Injury (ESAW)	Total		Males		Females	
	N	%	N	%	N	%
Total	**44 971**	**100**	**30 874**	**100**	**14 097**	**100**
010 Wounds and superficial injuries	11 218	24,9	8 381	27,1	2 837	20,1
020 Bone fractures	4 436	9,9	3 159	10,2	1 277	9,1
030 Dislocations, sprains and strains	19 606	43,6	12 809	41,5	6 797	48,2
040 Traumatic amputations (Loss of body parts)	174	0,4	152	0,5	22	0,2
050 Concussions and internal injuries	7 011	15,6	4 781	15,5	2 230	15,8
060 Burns, scalds and frostbites	984	2,2	606	2,0	378	2,7
070 Poisonings and infections	101	0,2	80	0,3	21	0,1
080 Drowning and asphyxiations	1	0,0	–	–	1	0,0
090 Effects of sound, vibration and pressure	11	0,0	8	0,0	3	0,0
100 Effects of temperature extremes, light and radiation	13	0,0	11	0,0	2	0,0
110 Shocks	112	0,2	56	0,2	56	0,4
120 Multiple injuries	181	0,4	111	0,4	70	0,5
999 Other specified injuries not included under other headings	247	0,5	163	0,5	84	0,6
000 No information	876	1,9	557	1,8	319	2,3

More than four out of ten accidents at work (42.9%) involved the upper extremities (Table 8). Under 30 per cent (29.3%) injure the lower extremities, including hips, thighs, knees, shins and ankles.

Table 8. Wage and salary earners' accidents at work by gender and injured body part in 2010

Part of Body Injured (ESAW)	Total		Males		Females	
	N	%	N	%	N	%
Total	**44 971**	**100**	**30 874**	**100**	**14 097**	**100**
10 Head	1 660	3,7	1 256	4,1	404	2,9
20 Neck	505	1,1	314	1,0	191	1,4
30 Back, spine	6 386	14,2	4 132	13,4	2 254	16,0
40 Torso, internal organs	2 241	5,0	1 729	5,6	512	3,6
50 Upper extremities	19 283	42,9	13 671	44,3	5 612	39,8
60 Lower extremities	13 182	29,3	8 817	28,6	4 365	31,0
70 Entire body or several body parts	1 309	2,9	705	2,3	604	4,3
99 Others	115	0,3	55	0,2	60	0,4
00 Data missing	290	0,6	195	0,6	95	0,7

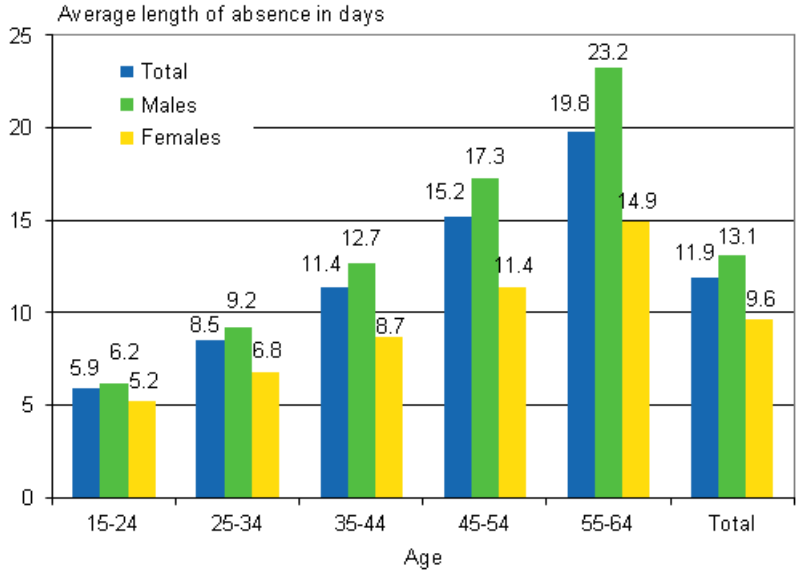
Average duration of absence from work 12 days

The seriousness of accidents at work can be assessed based on the duration of disability resulting from them. The figures prior to 2002 describing the length of absence from work are not fully comparable with

the figures for 2002 to 2010, because it was not previously possible to distinguish cases leading to employment accident pension. The cases leading to employment accident pension are always serious but in some of the cases the recorded number of days of absence may have been low before the decision on the pension was granted. Today, pension cases are excluded from the examination of duration of disability.

The average duration of absence from work due to an accident at work was 12 (11.9) days in 2010. The average duration of disability was 13.1 days for men and 9.6 days for women. The average duration of absence caused by accidents increased with age among both men and women (Figure 7). Included are also accidents at work leading to a disability of under four days.

Figure 7. Average duration of disability caused by wage and salary earners' accidents at work by gender and age in 2010



Slightly under one-third (29.7%) of all accidents leading to disability of at least four days caused disability of four to six days, and around 18.1 per cent of the accidents – including employment accident pension cases – were serious, causing absences of more than 30 days (Table 9).

Table 9. Wage and salary earners' accidents at work by gender and length of disability in 2010

Duration of disability - days	Total		Males		Females	
	N	%	N	%	N	%
Total	**44 971**	**100**	**30 874**	**100**	**14 097**	**100**
4–6 days	13 376	29,7	8 871	28,7	4 505	32,0
7–14 days	15 973	35,5	10 831	35,1	5 142	36,5
15–30 days	7 453	16,6	5 279	17,1	2 174	15,4
31–90 days	5 660	12,6	4 024	13,0	1 636	11,6
91–182 days	1 490	3,3	1 080	3,5	410	2,9
183–365 days	909	2,0	703	2,3	206	1,5
Employment accident pension	110	0,2	86	0,3	24	0,2

Risk of commuting accidents grew slightly

In 2010, wage and salary earners had a total of 19,550 commuting accidents for which insurance companies paid compensation. In statistics commuting accidents are separated from accidents at work and accidents

while in work traffic. A commuting accident means an accident on the journey between home and work. Due to incomplete information on claims forms, some commuting accidents are in practice recorded as accidents at work and vice versa.

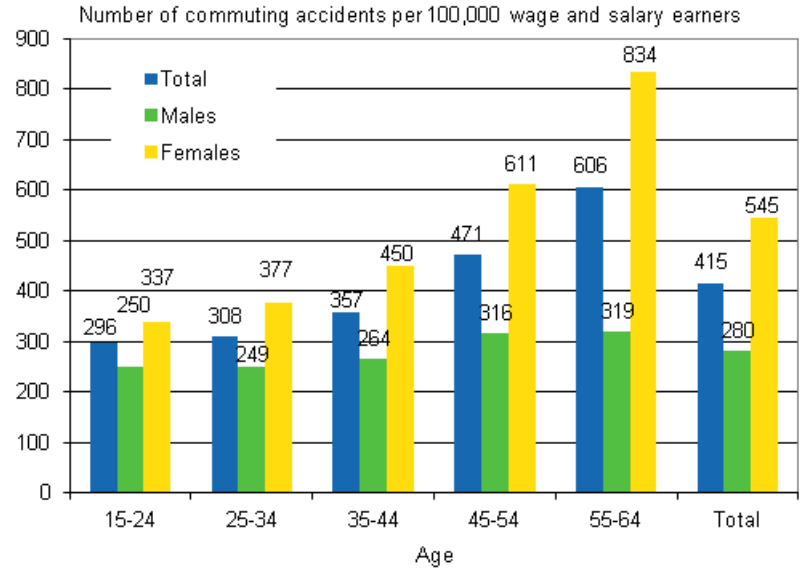
The number of commuting accidents resulting in disability of at least four days grew slightly (2.9%) from 2009. By contrast, the number of fatal commuting accidents increased by nearly two-thirds (63.6%) from the previous year. In 2010, a total of 18 wage and salary earners died while commuting whereas in 2009 the corresponding number was 11. In 2008, the respective figure was 18 and in 2007 fatal commuting accidents numbered 25. Thus, the number of commuting accidents varies greatly by year.

Commuting accidents differ from accidents at work in that they are more common among women than men: nearly two-thirds (68.7%) of all commuting accidents occurred to women. By contrast, twice as many fatal commuting accidents occurred to men (12) than to women (6).

The accident incidence rate of commuting accidents grew slightly (4.0%) from the previous year. In 2010, there were 415 commuting accidents per 100,000 wage and salary earners. In 2009, the corresponding figure was 399. Women had 545 (508 in 2009) and men 280 (284 in 2009) commuting accidents per 100,000 wage and salary earners. Like the number of fatal commuting accidents, the accident incidence rate of commuting accidents varies clearly by year.

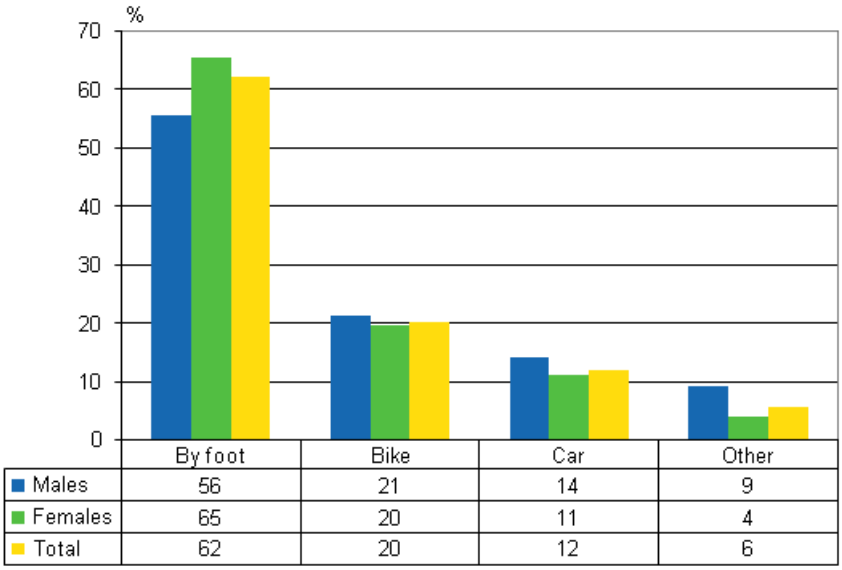
The difference between men and women stays the same when looking at the accident incidence rates in different age groups (Figure 8). Both men's and women's risk of commuting accidents increases with age, but women's risk is still higher than men's in all age groups. The risk of being injured on the way to or from work is 2.5-fold among women aged 55 to 64 in comparison with the youngest age group. The relative difference between men and women is also largest in the oldest age group.

Figure 8. Wage and salary earners' commuting accidents per 100,000 wage and salary earners by gender and age in 2010



Most commuting accidents occur when walking or cycling: more than six out of ten (62%) of those injured in commuting accidents were walking and good one-fifth (20%) were cycling when injured. When comparing men and women by mode of transport there were no major differences in commuting accidents: women were slightly more often injured when walking than men, whereas slightly more of men's than women's accidents occurred in passenger car accidents (Figure 9). It is not possible to take into account in statistics the differences between women and men in their frequency of using a bicycle or a car on the journey between home and work.

Figure 9. Wage and salary earners' commuting accidents by mode of travel and gender in 2010



	By foot	Bike	Car	Other
Males	56	21	14	9
Females	65	20	11	4
Total	62	20	12	6

When considering the modes of travel it is natural that the most common type of accident is falling, slipping or stumbling. In 2010, three-quarters (75.1%) of all commuting accidents resulted from falling or slipping. The second most common type (10.9%) of accident is 'collision with a car' (Table 10).

Table 10. Wage and salary earners' commuting accidents by gender and type of accident in 2010

Type of accident	Total		Males		Females	
	N	%	N	%	N	%
Total	**8 769**	**100**	**2 904**	**100**	**5 865**	**100**
Falling, slipping or stumbling	6 587	75,1	2 094	72,1	44 93	76,6
Stepping on objects	56	0,6	19	0,7	37	0,6
Driving off the road or car falling over	527	6,0	220	7,6	3 07	5,2
Collision with a car	960	10,9	370	12,7	590	10,1
Collision with a bicycle, moped, etc.	159	1,8	38	1,3	121	2,1
Collision with a track-going vehicle	1	0,0	–	–	1	0,0
Violence	21	0,2	8	0,3	13	0,2
Others	458	5,2	155	5,3	303	5,2

Most of the injuries sustained in commuting accidents were minor, often caused by falling. In more than four cases out of ten, the victim's injuries were diverse dislocations of joints, sprains and strains (Table 11). The injured body parts were often the extremities (Table 12).

Table 11. Wage and salary earners' commuting accidents by gender and type of injury in 2010

Type of Injury (ESAW)	Total		Males		Females	
	N	%	N	%	N	%
Total	**8 769**	**100**	**2 904**	**100**	**5 865**	**100**
010 Wounds and superficial injuries	845	9,6	258	8,9	587	10,0
020 Bone fractures	1 735	19,8	579	19,9	1 156	19,7
030 Dislocations, sprains and strains	3 914	44,6	1 340	46,1	2 574	43,9
040 Traumatic amputations (Loss of body parts)	2	0,0	–	–	2	0,0
050 Concussions and internal injuries	1 787	20,4	564	19,4	1 223	20,9
060 Burns, scalds and frostbites	7	0,1	3	0,1	4	0,1
070 Poisonings and infections	2	0,0	1	0,0	1	0,0
090 Effects of sound, vibration and pressure	–	–	–	–	–	–
110 Shocks	11	0,1	3	0,1	8	0,1
120 Multiple injuries	137	1,6	49	1,7	88	1,5
999 Other specified injuries not included under other headings	28	0,3	10	0,3	18	0,3
000 No information	301	3,4	97	3,3	204	3,5

Table 12. Wage and salary earners' commuting accidents by gender and injured body part in 2010

Part of Body Injured (ESAW)	Total		Males		Females	
	N	%	N	%	N	%
Total	**8 769**	**100**	**2 904**	**100**	**5 865**	**100**
10 Head	298	3,4	83	2,9	215	3,7
20 Neck	434	4,9	138	4,8	296	5,0
30 Back, spine	774	8,8	305	10,5	469	8,0
40 Torso, internal organs	629	7,2	273	9,4	356	6,1
50 Upper extremities	2 403	27,4	795	27,4	1 608	27,4
60 Lower extremities	3 164	36,1	1 015	35,0	2 149	36,6
70 Entire body or several body parts	873	10,0	235	8,1	638	10,9
99 Others	22	0,3	6	0,2	16	0,3
00 Data missing	172	2,0	54	1,9	118	2,0

Self-employed persons' accidents at work

This section focuses on accidents at work among farmers and other self-employed persons. Self-employed persons' (excl. farmers) accidents at work were separated in occupational accident statistics from wage and salary earners' accidents at work for the first time in 1995. Before that self-employed persons' accidents were included as such in wage and salary earners' accidents at work. When examining the figures on self-employed persons' accidents at work it must be borne in mind that accident insurance is voluntary for self-employed persons, and not all of them are insured. Therefore, the distribution of self-employed persons' accidents at work according to different background variables (age, occupation, industry) also illustrates in which occupations and sectors self-employed persons are more insured than usual.

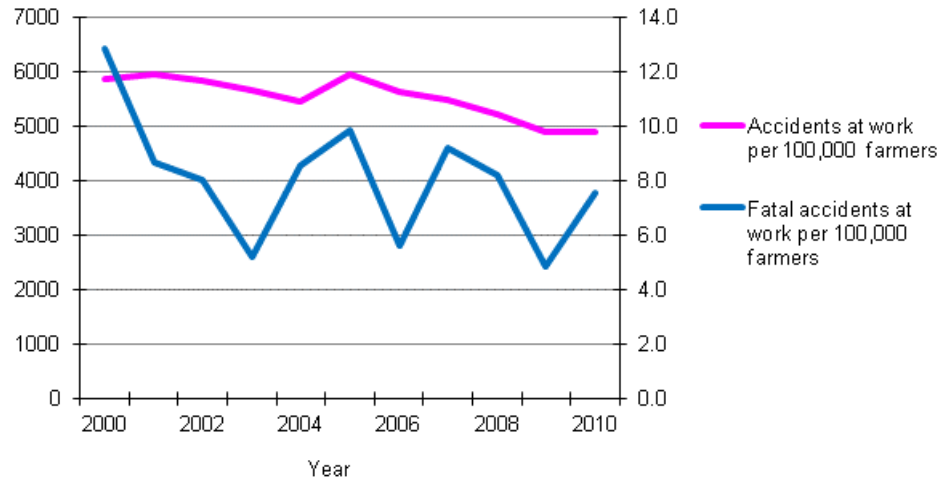
In Finland, most farmers live on their farms, which makes it impossible to make a distinction between accidents at work and commuting accidents. In this publication all accidents occurring to farmers in their work are called accidents at work. The data on farmers' accidents at work are based on the information obtained from the Farmers' Social Insurance Institution (MELA).

Apart from a full-time and working age farmer, the insured can be a pensioner, an under 18-year-old family member or a person practising part-time agriculture, game or reindeer husbandry or fishery. The number of farmers has been falling steadily in recent years. At the end of 2010, there were 78,558 farmers insured by the Farmers' Social Insurance Institution, which is about 2,600 fewer than one year previously and over 33,000 fewer than in 1999.

Farmers' risk of death at work diminished slightly

Of all the farmers' accidents at work for which compensation was paid in 2010 six were fatal, whereas in the previous year four farmers died in consequence of an accident at work. Five male farmers and one female farmer died in an accident at work. Of all the farmers' fatal accidents at work in 2001–2010 only one occurred to a woman. Figure 10 presents the accident incidence rates of farmers from 2000 to 2010 with regard to deaths at work and accidents leading to disability of at least four days. The figure shows that the risk of death at work varies strongly in different years. In 2010, 7.5 per 100,000 insured farmers died, while in 2009 the corresponding ratio was 4.8. In 2008, the ratio was 8.2 and in 2007 it was 9.2. The year 2000 was the darkest in the near past; a total of 12.9 per 100,000 insured farmers died in accidents at work.

Figure 10. Farmers' accident rates in 2000–2010



An examination of the time series reveals that farmers' risk of fatal accidents at work has fallen by good one-tenth (12%) during the 2000 to 2010 period. This becomes clear if we compare two five-year periods with each other. In the 2001 to 2005 period, farmers had 39 fatal accidents at work, which is an average

of 8.0 per 100,000 farmers per year. In the 2006 to 2010 period, a total of 30 farmers died accidents at work, which converts to an annual average of 7.1 fatal accidents per 100,000 farmers.

Table 13 compares the incidence rate of accidents leading to the death of the farmer with the riskiest industries among wage and salary earners in 2010. Because the majority of persons who die as a result of an accident at work are generally men, their accident incidence rates are given separately. The figures indicate that male farmers' work was the most dangerous. Of them, a total of 9.4 per 100,000 insured farmers died in accidents at work in 2010. In 2009, the corresponding figure was 5.5.

In 2010, the riskiest industry for wage and salary earners was transportation and storage. In this industry the risk of death at work was 4.6 (for men 5.9) per 100,000 insured wage and salary earners. The second most risky industry for wage and salary earners was construction. In this industry the risk of death at work was 4.6 (for men 5.1) per 100,000 insured wage and salary earners.

Table 13. Farmer's fatal accidents at work compared with wage and salary earner's fatal accidents in high risk industries per 100,000 farmers or wage and salary earners in 2009–2010[1)]

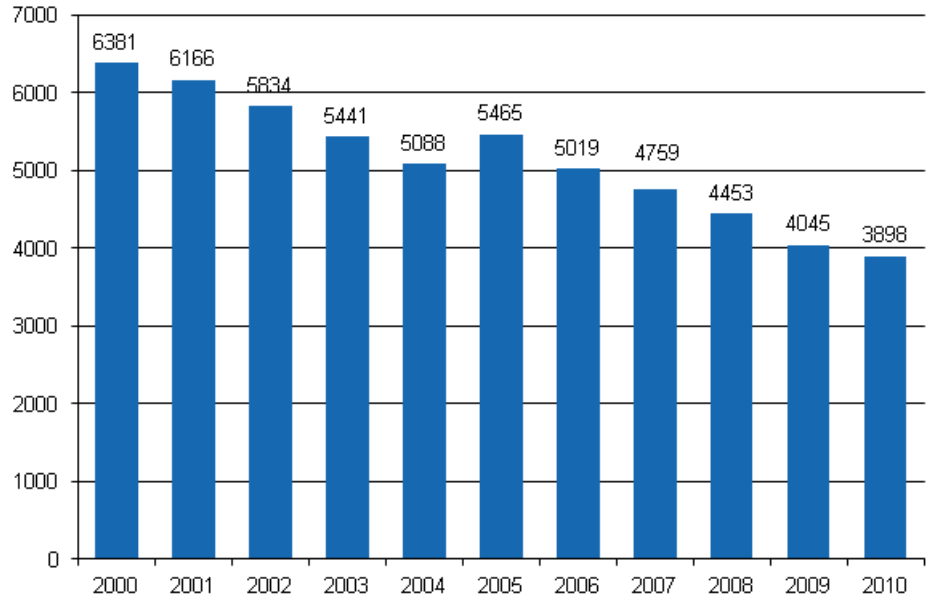
	2008		2009	
	Total	Males	Total	Males
Farmers	**4,8**	**5,5**	**7,5**	**9,4**
Wage and salary earners	**1,2**	**2,1**	**1,6**	**3,0**
Manufacturing	0,3	0,4	2,3	3,2
Construction	4,5	5,0	4,6	5,1
Transportation and storage	4,7	4,1	4,6	5,9

1) The data by industry are based on the revised Standard Industrial Classification TOL 2008 which was adopted in the Statistics on Accidents at Work in the statistical reference year 2008. The data classified by the revised industrial classification are not comparable with those produced by its predecessor TOL 2002 (this applies to data from reference year 2007 and prior to it)

Farmers' accidents at work decreased

The changes in the numbers of farmers are also visible in the numbers of accidents at work. In 2010, MELA paid compensation for 4,555 occupational accidents of farmers. The figure is around 180 cases lower than in the previous year. There were a total of 3,898 occupational accidents leading to disability of at least four days, while in the previous year the respective figure was 4,045 (-3.6%). The number of farmers' accidents at work has been falling during the past ten years, the year 2005 excluded (Figure 11). The accident peak in 2005 could in part be the result of the introduction of the full-cost responsibility system of patient care that year.

Figure 11. Farmers' non-fatal accidents at work resulting in at least 4 days' absence in 2000–2010

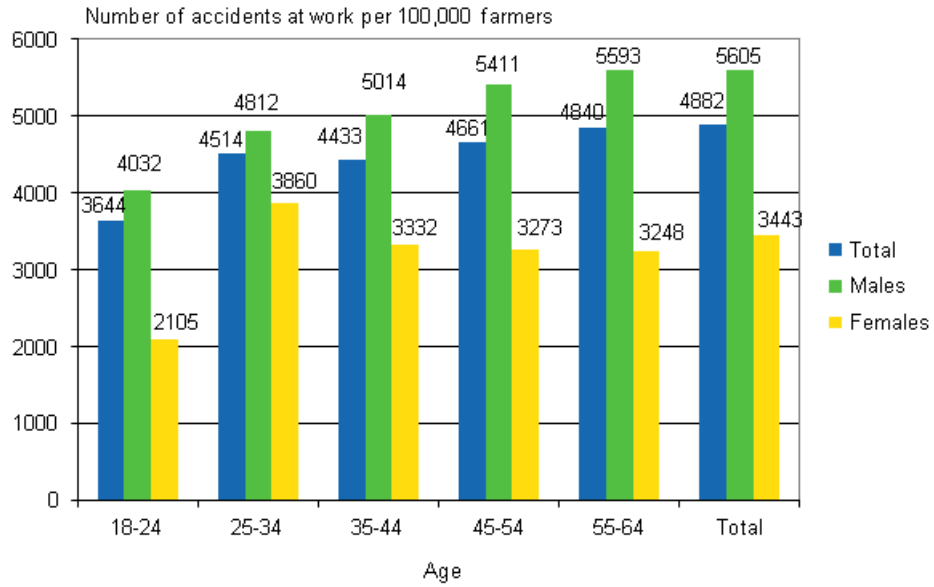


Among farmers, the proportion of minor accidents at work resulting in disability of less than four days has stayed roughly unchanged in recent years at around 15 per cent of all compensated accidents. Nearly every third (32.0%) accident at work was a so-called serious accident, i.e. caused disability lasting longer than one month. In the following, the focus will be on those accidents at work that resulted in absence of at least four days from work.

Farmers' risk of accidents increases with age

In 2010, there were 4,882 accidents at work per 100,000 insured farmers, which is almost as many (-0.3%) as in 2009 (4,897). However, farmers' risk of accidents is still clearly higher than that of wage and salary earners and distinctly higher for men than for women: men had 5,605 and women 3,443 accidents at work per 100,000 insured farmers (Figure 12). The difference between the genders is partly explained by the fact that in farming men conventionally do the kind of work in which accidents are common. Such work includes e.g. construction work and tasks related to the use and maintenance of machinery and equipment.

Figure 12. Farmers' accident at work per 100,000 insured by gender and age in 2010



More than six out of ten (63.2%) of farmers' accidents occur to those aged 45 or over. In 2010, the relative number of accidents was highest among those aged 55 or over: 4,840 per 100,000 farmers. The corresponding ratio for persons aged under 25 was 3,644 in 2010. In 2009, the same ratio for persons aged under 25 was 4,035 and in 2008 it was 3,694. The annual variation in their accident risk can be quite large, as there are not many insured farmers in the youngest age group.

Most accidents occur in animal husbandry

The proportion of accidents occurring in various animal husbandry tasks was about the same as one year previously, or good four in ten (45,9%) of all accidents at work (Table 14). Especially women fell victims to accidents at work when tending cattle; more than four out of five (79.3%) of women's accidents at work took place in animal husbandry. Among men, the respective proportion was good one-third (35.6%). The second highest number (24.3%) of accidents occurred in other agricultural and forestry work, including tasks such as installation and maintenance of machinery and equipment. Approximately one accident in six (13.3%) occurred while performing other tasks related to farming. However, no actual conclusions can be drawn from the available statistical data about the dangerousness of work in different areas, because then the number of working hours spent on different tasks should also be known. The classification of the variables describing the stage of work is national. The classification used by MELA is more detailed than the ESAW variable illustrating the working process (cf. Table 2).

Table 14. Farmers' accidents at work by type of work and gender in 2010

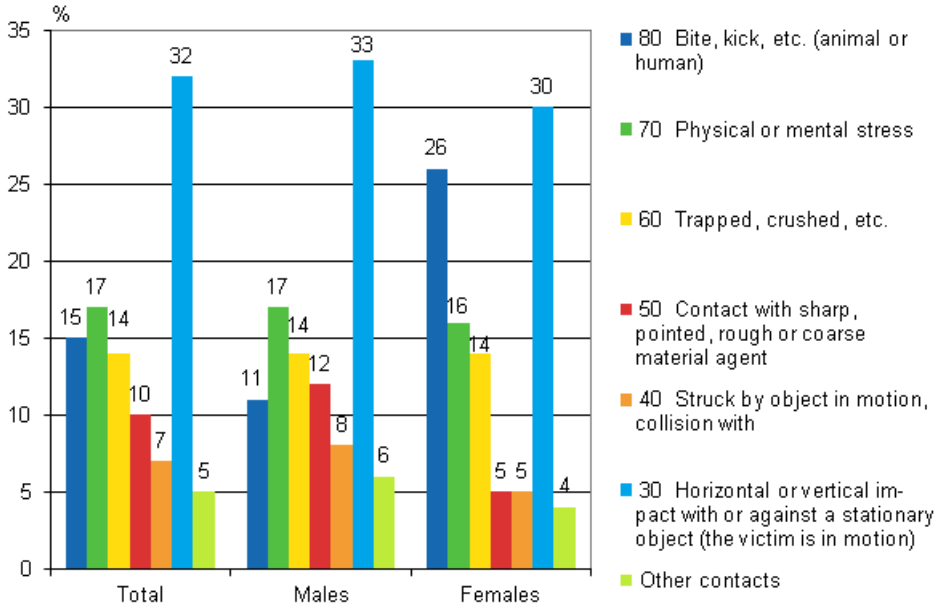
	Total		Males		Females	
	N	%	N	%	N	%
Total	**3 898**	**100**	**2 978**	**100**	**920**	**100**
Farming work	517	13,3	461	15,5	56	6,1
Animal husbandry	1 789	45,9	1 059	35,6	730	79,3
Forest work	324	8,3	300	10,1	24	2,6
Construction work	188	4,8	175	5,9	13	1,4
Other agricultural and forestry work	948	24,3	859	28,8	89	9,7
Other work	132	3,4	124	4,2	8	0,9

Farmers most often injured as a consequence of horizontal or vertical impact with or against a stationary object

Horizontal or vertical impact with or against a stationary object was the most common mode of injury for farmers. In three out of ten (32%) cases the person was injured due to horizontal or vertical impact with or against the floor, ground or the like (Figure 13). Women farmers were pushed or kicked by an animal more often than men, as every fourth (26%) of women farmers' accidents was caused by an animal. Every tenth (11%) man injured in an accident was hurt by an animal bite, kick or the like.

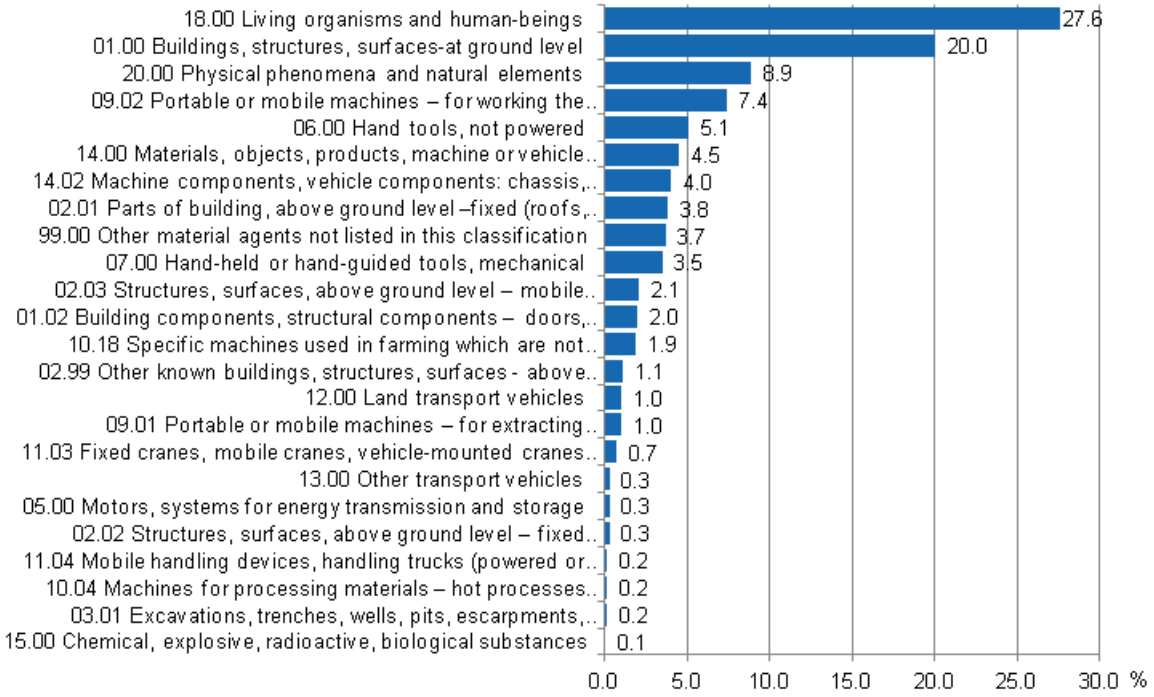
The Farmers' Social Insurance Institution collects data on the material agent, type of injury and injured body part using the ESAW classification.

Figure 13. Farmers' accidents at work by contact-mode of injury and gender in 2010



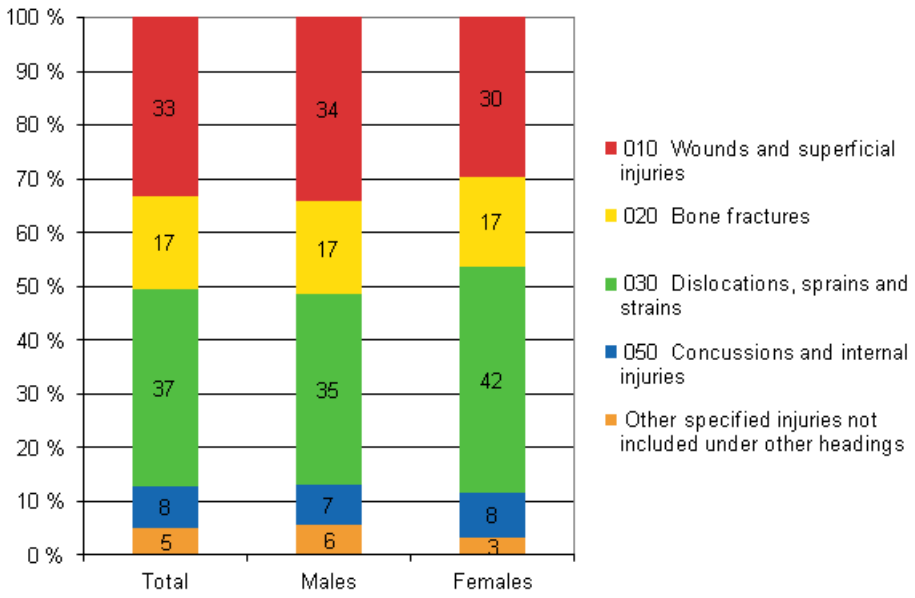
In around one-quarter (27.6%) of farmers' accidents at work the material agent was an animal or a human being, or the injury was caused by a plant (Figure 14). In all probability most of these farmers' accidents were expressly caused by animals. Various buildings, structures and surfaces were the material agents in every fifth accident (20.0%). Physical phenomena and natural elements caused 10 per cent of the accidents at work.

Figure 14. Farmer's accidents by material agent of contact-mode of injury in 2010



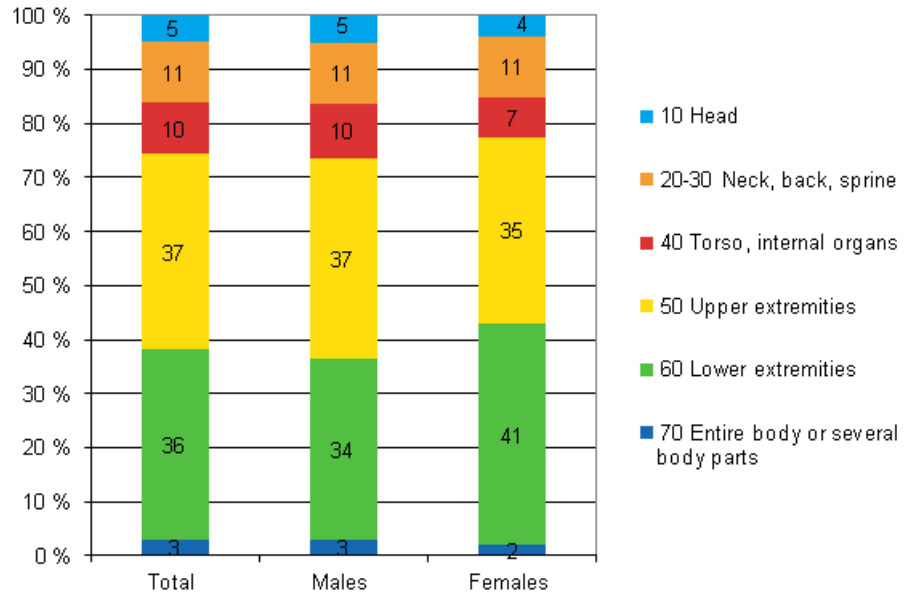
In 2010, a total of 37 per cent of farmers' injuries sustained in accidents at work were diverse dislocations, sprains and strains. Wounds and superficial injuries form another large group of injuries (33%). Seventeen per cent of all injuries to farmers were bone fractures. There were no significant differences in the distributions of men's and women's injuries: men's injuries were more often wounds and superficial injuries, while women's injuries were different kinds of sprains and strains (Figure 15).

Figure 15. Farmers' accidents at work by type of injury and gender in 2010



About seven out of ten (73%) of all the accidents at work which occurred to farmers concerned extremities (Figure 16). Women injured their lower extremities more often than men did. Injuries to lower extremities most often involved knees and those to upper extremities palms or fingers.

Figure 16. Farmers' accidents at work by injured body part and gender in 2010



Self-employed persons most often injured in manufacturing occupations and building construction

In 2010, insurance companies paid self-employed persons compensation for a total of 5,887 accidents at work. This also includes accidents on which compensation was paid only for medical treatment expenses. The proportion of these accidents at work that led to absence from work for less than four days was over 40 per cent in all self-employed persons' accidents. One year previously compensation was paid for 5,694 accidents. These data concern self-employed persons other than farmers.

In 2010, self-employed persons had 3,292 accidents at work that led to disability of at least four days. This is 35 cases fewer than in the previous year. The gender distribution of accidents at work is the same among self-employed persons as among wage and salary earners: the vast majority (84%) of the accidents of self-employed persons occurred to men. The age distribution of victims of accidents at work shows that around two-thirds (61%) of self-employed persons' accidents occurred to persons aged 35 to 54 (Table 15).

Table 15. Self-employed persons' accidents at work by gender and age in 2010

Age	Total		Males		Females	
	N	%	N	%	N	%
Total	**3 292**	**100**	**2 750**	**100**	**542**	**100**
15–24	41	1,2	34	1,2	7	1,3
25–34	425	12,9	361	13,1	64	11,8
35–44	853	25,9	735	26,7	118	21,8
45–54	1 148	34,9	948	34,5	200	36,9
55–64	750	22,8	619	22,5	131	24,2
Others	75	2,3	53	1,9	22	4,1

Similarly to wage and salary earners, self-employed persons also had the highest numbers of accidents at work in manufacturing occupations and building construction. Examined by industry, self-employer persons' risk industries are also mostly the same as those of wage and salary earners. The most dangerous industries are construction, and transportation and storage.

Quality Description: Accidents at Work Statistics

1. Relevance of statistical information

1.1 Contents and purpose of statistical information

Accidents at Work statistics contain statistical information on employment and commuting accidents involving wage and salary earners, farmers and other self-employed persons or entrepreneurs.

The information in the Accidents at Work statistics has been obtained by combining register data compiled in connection with occupational accidents insurance and the data of Statistics Finland. Information on accidents involving wage and salary earners and self-employed persons were obtained from the Federation of Accident Insurance Institutions (FAII). The details on accidents involving farmers are based on information collected by the Farmers' Social Insurance Institution (MELA). The information of Statistics Finland's Labour Force Survey (TYTI) and Employment Statistics has also been used in compiling the statistics.

In the statistics, accidents at work are accidents for which insurance companies have paid compensation. The statistics mainly cover accidents at work of the latest statistical reference year, but in addition, various time series also shed light on changes in the occupational accidents situation during the 1990s and 2000s.

1.2 Definitions of concepts used in the accidents at work statistics

Accident at Work

An accident at work is defined in Section 4 of the Employment Accidents Act. An accident at work means any accident causing injury or illness sustained by the employee in the course of his/her employment or in circumstances arising from employment. According to the Act, accidents at work can be divided according to the place where the accident occurs as follows:

• **An accident at work** has occurred at work or in work-related circumstances. In this case, traffic accidents that occur during work are also defined as accident at work.

• As for **commuting accidents**, these are accidents that have occurred outside the actual working time while commuting from the employee's residence to work or vice versa.

In the statistics, accidents are categorised according to their severity as follows: accidents at work leading to death and accidents at work leading to at least four days of disability or under four days of disability (so-called minor incidents). The statistics almost exclusively cover accidents at work leading to at least four days of disability.

Accident incidence rate and accident frequency

The different types of accident risks in different industries or occupational and other groups can be established by calculating the ratio between the number of accidents that occur and the number of employees in each industry, or the number of working hours. When the ratios between accidents and the number of employees and working hours are established, these ratios can be considered the "risk figures" of certain occupations or industries. In practice, the susceptibility to accidents varies within an industry, for instance, according to work tasks.

• **The accident incidence rate** means the ratio of the number of employees to the accidents that occurred. In accidents that lead to at least four days of disability, the ratio was calculated per 100,000 employees and in fatal accidents per 100,000 employees.

• **The accident frequency** means the ratio of the number of hours worked to the accidents that occurred. The ratio is calculated for 1,000,000 working hours. The frequency is mainly used in comparisons between different industries.

Information on the number of employees and working hours in different industries and occupations is obtained from Statistics Finland's Labour Force Survey.

Occupation

Occupation means an activity or work which constituted the injured party's principal livelihood at the time of the accident. Occupations have been divided into categories on grounds of similar activities, so that education, status in occupation, position or industry does not have an effect on the classification of occupations. Occupations have been categorised by insurance institutions. The insurance institution classification differs slightly from that of Statistics Finland, but for the purposes of this publication, the classification has been harmonised with the one used by Statistics Finland (Statistics Finland: Classification of Occupations 1987).

If the injured party has held several positions, the most dangerous position has been classified as his/her occupation on the grounds of previous information.

The used classification of occupations has a 3-digit structure, but in most tables of the publication, a classification with a 1 or 2-digit structure has been used for the purposes of data protection and reliability. By using a detailed classification, it is possible to identify occupational groups where the risk of an occupational accident is exceptionally high. However, the detailed classification also has its drawbacks: due to the small number of observations in the Labour Force Survey sample, there is some uncertainty related to the calculated accident incidence rates of small occupational groups. The accident incidence rates have only been calculated for occupational categories that have had at least five accidents and 10,000 employees according to the Labour Force Survey sample. It is considered unreliable to calculate an accident incidence rate for a smaller group.

Industry

The classification used in the publication is based on Statistics Finland's Standard Industrial Classification of 2008 (Standard Industrial Classification TOL2008, Handbooks 4, Statistics Finland). The Standard Industrial Classification is a grouping system for companies and equivalent units and establishments with economic activities. The injured party's industry is classified according to the main object of production or type of activity of his/her establishment.

The injured party's industry has been classified by insurance institutions. There may be some uncertainty related to the industry classification, mainly due to the difficulty of classifying multifunctional companies with a single insurance. Accidents occurring in such multifunctional companies fall in the same category regardless of the nature of the activities.

Some municipalities only take out a single insurance on their employees although they employ individuals from several different industries. For this reason, the occupational accidents suffered by the employees of these municipalities fall in the category of the general central government sector.

In the statistics, the Standard Industrial Classification has been used either on the 1 or 2-digit level. The goal was to achieve the most detailed classification in the industries where the number of accidents known to have occurred was greater than average.

ESAW variables (joint European data)

Workstation

The variable describes whether the accident victim was working at a workstation managed by his/her own employer or at a workstation owned or controlled by a party other than his/her employer.

Working process

The working process describes the accident victim's working phase at the time of the accident. However, the working process does not refer to an occupation.

Specific physical activity

The specific physical activity describes the accident victim's actual activities before the accident. Information on this variable specifies the details of the work task with regard to the events preceding the accident.

Deviation

The deviation refers to the last deviant event that led to the accident before the injury occurred.

Contact - mode of injury

The mode of injury describes the way in which the injured body part came into contact with the object that caused the injury.

Material agent of the contact

The material agent of the contact refers to information on the material object with which the injured body part came into contact at the time of the accident.

Part of body injured

The part of body injured refers to the main body part injured in the accident.

Type of injury

The type of injury describes the nature of the physical injury caused by the occupational accident. The information on the type of injury is based either on medical diagnosis or on the description in the accident report.

2. Methodological description of the statistical survey

2.1 Statistical population

The data of the accidents at work statistics, which are part of the Official Statistics of Finland series, have been obtained from several different sources. The Federation of Accident Insurance Institutions (FAII) provides Statistics Finland with the information on accidents to wage and salary earners and self-employed persons, whereas the information on farmers is obtained from the Farmer's Social Insurance Institution (MELA). In addition, the data of Statistics Finland's Employment statistics and the Labour Force Survey are used to compile the statistics.

The data of the Federation of Accident Insurance Institutions

The information on accidents involving wage and salary earners and self-employed persons (excl. farmers) is based on the data obtained from the Federation of Accident Insurance Institutions (FAII) in which the individual accident is used as an observation unit. The data include all accidents that occurred between January 1 and December 31 for which insurance companies have paid compensation. The data contain demographic information on the injured party (age, sex) and diverse information on the circumstances of the accident, and the cause and the consequences of the accident. The data content became increasingly versatile when the collection of data conforming to the joint European variable list began in 2003 in connection with the implementation of Eurostat's new European Statistics on Accidents at Work (ESAW) methodology.

The data on accidents involving wage and salary earners and self-employed persons (excl. farmers) were originally obtained from accident report forms used by employers to inform insurance companies of accidents to their employees. The same forms are used to inform insurance companies of occupational diseases, but in Finland, statistics on occupational diseases and occupational accidents are compiled separately. The Finnish Institute of Occupational Health annually compiles a set of statistics on occupational diseases which is part of the Official Statistics of Finland (OSF) series.

The information is supplemented during the compensation procedures, but final information cannot be expected during the compilation of the statistics. The statistical data (mainly the period of disability) are updated almost 1.5 years after the end of the year following the accident. This means for instance that the information in the data for the 2010 statistics has been supplemented until early 2012. The relatively long period is required to ensure the sufficient reliability of the data.

The data of the Farmers' Social Insurance Institution

The information on accidents involving farmers is based on the comprehensive individual-level total data provided to Statistics Finland by the Farmers' Social Insurance Institution. These data contain information on all occupational accidents for which the MELA has paid compensation.

The basic acts on farmers' accident insurance are included in the Farmers' Accident Insurance Act. The compulsory insurance covers farmers aged 18 to 64 years who reside in Finland. A farmer is an individual involved in agricultural activities on a farm of at least five hectares on his/her own or joint account, as a member of a family business or as a self-employed person's cohabitant. Fishermen involved in professional fishing activities without an employment relationship or as family members are also considered farmers. Reindeer rearers involved in reindeer husbandry on their own account, or who are employed by a family member or a married couple, and persons involved in reindeer husbandry as a reindeer owner's family members, are also considered farmers.

The definition of "accident" used in the statistics corresponds to the definition of accidents involving other self-employed persons and wage and salary earners. Farmers involved in regular agricultural activities but who are excluded from compulsory insurance due to their age or their small labour input may take out an optional accident insurance policy. The content of the data is largely equivalent to the data compiled by the FAII. For some variables, the MELA classification is more detailed than that of the FAII data.

The data of Statistics Finland

Statistics Finland's Employment statistics have also been used to compile the statistics: information on accident victims' level of education has been collected from these statistics by using social security numbers. Statistics Finland annually compiles the Employment statistics, whose main purpose is to provide regional information on the population's economical activities. Information on the number of employees and labour input (hours worked) has been obtained from Statistics Finland's Labour Force Survey. The survey illustrates the employment of the entire population aged 15 to 64. The Labour Force Survey's average annual data are used to compile the statistics.

3. Correctness and accuracy of data

3.1 The reliability of the data

In Finland, private insurance companies are in charge of accident insurance. The Federation of Accident Insurance Institutions (FAII) is the central body of the statutory accident insurance whose main purpose is to coordinate the implementation of statutory accident insurance. In Finland, insurance companies that provide statutory accident insurance must be members of the FAII.

For work done for the employer, the employer must take out an obligatory accident insurance policy in accordance with the Accident Insurance Act (608/48) at an insurance company licensed to issue accident insurance policies. However, the employer's obligation to take out insurance does not begin until the work done for the employer during a calendar year exceeds 12 days. The obligation to take out insurance does not concern State officials or individuals with a working relationship with the State. However, the State must pay them compensation from State resources for occupational accidents and occupational diseases in accordance with the Accident Insurance Act.

As for accidents involving wage and salary earners, the statistical coverage is good, since all employees are in practice covered by the accident compensation. Accident reporting is not neglected, since reporting accidents is financially profitable to the employer. Coverage is also affected by the employer's choice of either a compulsory or fully comprehensive insurance. The fully comprehensive insurance does not include the employer's contribution. The information on accidents involving central government sector wage and salary earners has been obtained from the FAII. As for the information on accidents involving State employees, this was originally obtained from the State Treasury, but Statistics Finland can also acquire it through the FAII.

The insurance is optional for self-employed persons except for farmers, who must take out a compulsory insurance policy at the Farmer's Social Insurance Institution (MELA) if the size of the farm exceeds five hectares. Fishermen and reindeer rearers must also take out an insurance policy at the MELA. For this reason, all occupational accidents involving self-employed persons mentioned above are comprehensively included in the statistics. The MELA has a national network of agents who transmit accident information to the MELA. As for other self-employed persons, they may take out optional insurance policies.

Approximately 41 to 42 per cent of self-employed persons other than farmers have taken out an optional accident insurance policy.

In 2010, accident data was collected according to the ESAW variables for the eighth time. Compared with the previous years, the distributions seem uniform and reasonable. In addition, the variables describing the chain of events leading to an accident are similar. With increasing experience, however, adjustments may be made to the recording instructions. Over the years to come, this may have some effect on the results related to the ESAW variables that were obtained from the data.

Information on occupational accidents is collected by using accident report forms. Accident reporting is usually not neglected, since fulfilling the reporting obligation is financially profitable to the employer. The MELA data are probably more reliable than those of the FAII, since the employees recording the statistics are also in charge of the compensation procedures. The reliability of the data is also improved by the fact that the MELA agents act as intermediaries in filling in and submitting compensation applications.

4. Timeliness and promptness of published data

4.1 The frequency and the assessment period of the statistics

The accidents at work statistics data are completed with the delay of "n+1 years", where n refers to the statistical year. For instance, the data on the accidents at work of 2010 are completed at the beginning of 2012. However, the data are not final at the completion: due to compensation procedures, they will be complemented with a few cases even after having been submitted to Statistics Finland. Since the breaking point is the same every year, statistical years are comparable, unless other, e.g. legislative changes affecting the compensation practices have occurred.

The relatively long delay is indispensable due to the final information on consequences. Information on consequences means the duration of disability due to an injury or the number of days absent from work. The long delay ensures sufficient reliability of the data.

According to the Accident Insurance Act, daily benefits are paid if the injured individual is fully or partially incapacitated for at least three consecutive days, excluding the day of the accident.

5. Accessibility and transparency/clarity of data

Since the statistical reference year 2005, the accidents at work statistics are only published online. The online publication and database tables on the statistics are available at:
http://tilastokeskus.fi/til/ttap/index_en.html.

The Working conditions research and adult education statistics unit of the Social Statistics Department are in charge of the publication of the accidents at work statistics. The persons responsible for the statistics are Arto Miettinen (firstname.lastname@stat.fi) and Tarja Seppänen (firstname.lastname@stat.fi).

6. Comparability of statistics

6.1 Additional information on accidents at work and occupational diseases

Other parties also provide information on accidents at work and occupational diseases:

The Federation of Accident Insurance Institutions (FAII)

The FAII annually publishes its own statistics on accidents at work and diseases for which compensation has been paid. The statistics are available in print and online. In addition, the FAII publishes on its website cross-sectional statistics that compare two time periods. In these statistics, the accidents at work figures are not final. The statistics can be used to examine the tendency in the number of accidents. The statistical data published by the FAII and Statistics Finland are based on the same source data, but the principles for

statistics compilation differ. Since 2005, both Statistics Finland and the FAII have defined an accidents at work as disability for at least four days. This is the definition used in the Eurostat accidents at work statistics. The statistics published by the FAII do not include accidents involving self-employed persons. Both the FAII and Statistics Finland have a separate category for the central government sector.

The FAII also publishes survey reports on accidents at work leading to death which are based on the fatal workplace accident investigation system (TOT).

The Farmer's Social Insurance Institution

The Farmer's Social Insurance Institution publishes its own statistics on accidents at work involving farmers.

The Finnish Institute of Occupational Health

Since 1964, the Finnish Institute of Occupational Health has maintained a register of work-related diseases (formerly the occupational diseases register). The register includes information on new occupational diseases reported to insurance companies and on new occupational diseases reported to labour protection authorities by physicians, and on other work-related pathological conditions. The Finnish Institute of Occupational Health annually publishes a set of statistics on diagnosed occupational diseases. The Finnish Institute of Occupational Health also releases accidents at work statistics in which central government sector accidents at work are included according to occupation.

Eurostat

The Statistical Office of the European Communities (Eurostat) annually publishes information on accidents at work in the European Union Member States (European Statistics on Accidents at Work, ESAW).

Miscellaneous

The Labour Protection Department of the Ministry of Social Affairs and Health maintains an accident report register which contains data on accidents at work leading to severe injuries or death from 1982 onwards. The documents report on the course of the accident, the direct and indirect reasons for the accident and the possibility of preventing similar accidents in the future. Since 1985, investigated work and workplace accidents leading to death have been included in the register as a result of an agreement between the Federation of Accident Insurance Institutions (FAII) and the central labour market organisations.

Information on accidents at work involving forest holders and wage and salary earners is available in the Forest Statistics Yearbook published by the Finnish Forest Research Institute.

6.2 Time series

The contents of the accidents at work statistics have not remained the same over the years, as the occupational accident statistics time series also includes the occupational diseases discovered between 1976 and 1994. However, commuting accidents were not included in the figures of this time period. This information has been collected since 1992.

Accidents at work involving self-employed persons have only been included in the statistics if the self-employed person has taken out an optional insurance policy. Approx. 41 to 42 per cent of self-employed persons currently have an occupational accident insurance policy (n = 125,000). Therefore, the number of accidents also reflects the popularity of insurance policies among self-employed persons. It can be estimated that individuals involved in high-risk jobs are more likely to take out an insurance policy than those whose line of work involves fewer risks. Between 1995 and 2010, the number of accidents at work involving self-employed persons has varied between 2,000 and 3,500 cases.

Since 1992, the accidents at work statistics have been compiled at Statistics Finland. Since the 2007 statistics reform, it has been possible to update reliably the time series on wage and salary earners' employment accidents until 1996. The accidents at work information on farmers can be obtained from 2000 onwards.

6.3 Statistics Finland's accidents at work statistics reform

In 2007, Statistics Finland's accidents at work statistics (reference year 2005) were harmonised with the Eurostat ESAW statistics as a result of statistical cooperation. At the same time, justified changes were made to enable nationally uniform figures as well. The changes or amendments made were as follows:

• The definition of disability for at least four days was adopted (until 2004, the time period was at least 3 days)

• Statutory injury (SAPA60) cases were included in the data.

• Schoolchildren working under work-experience programmes, institutional population, etc. were removed from the ratio examinations (they are not included in Statistics Finland's Labour Force Survey figures)

• Based on the type of insurance policy, some self-employed persons had previously been considered wage and salary earners; the FAII corrected the error, and the corrected data for 1996 to 2005 were received in May 2007

• The key figure for the accident incidence rate describing the ratio between accidents and the number of employees was calculated for 100,000 employees. Until 2004, the key figure was calculated for 1,000 employees.

• In the industry examination, the central government sector is given as a separate category

As for wage and salary earners, it was possible to update the time series to reflect the changes until 1996. As for farmers, the time series goes back to 2000.

7. Coherence and consistency/uniformity

The coherence and comparability of the statistics with other sets of statistics has been presented in 6.1.

Statistics Finland

Suomen virallinen tilasto
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