

REPORT

for the period 1 June 2010 to 31 May 2015, made by the **Government of Finland**, in accordance with article 22 of the Constitution of the International Labour Organisation, on the measures taken to give effect to the provisions of the

Working Environment (Air Pollution, Noise and Vibration) Convention, 1977 (No. 148)
ratification of which was registered on 8 June 1979.

Direct Request, 2010

Article 4(1)

The Government Decree 205/2009, Section 70, contains provisions on the occupational hygienic measurements of construction work:

At a shared construction site, instructions on the industrial hygiene measurement methods must be contained in the code of practice drawn up by the client referred to in Section 8(3) and in the safety plan drawn up by the project supervisor referred to in Section 10(4).

If it is otherwise impossible to reliably ascertain the exposure of employees to hazardous dust and chemical agents the employer must carry out measurements on a regular basis and always when there are changes in the conditions that increase the exposure of the employees. The measurement results must be compared with the limit values laid down for chemical agents. Hazardous agents must be eliminated as separately provided on them.

If the results of the industrial hygiene measurements show that the limit values are not exceeded, repeat measurements must be carried out as necessary so that it can be determined that the situation is of permanent nature. Closer to the limit values the results of the airborne pollutant measurements are, more frequently the measurements must be conducted.

The supervision of construction industry (TOL F) has been gradually transferred to Vera information system since 2012. During this period, the following number of construction industry inspections have been reported in Vera:

A total of 3724 inspections, of which

- 3537 Workplace inspections
- 54 Accident investigations
- 12 Contractor's liability inspections (in pilot use)
- 120 Inspections of foreign labour
- 1 Inspection of market surveillance

The following obligations have been issued during the workplace inspections:

- Exposure to dust: 13 Pieces of written advice (in 56 inspections)
- Dust prevention plan: 34 Pieces of written advice, 1 improvement notice (in 667 inspections)
- Dust prevention: 70 Pieces of written advice (in 673 inspections)

In Finland, there have been occupational hygiene measurements concerning noise, vibration and chemical agents since the 1960s, with chemical and physical agents being reviewed annually. However, these reviews have focussed on medium-sized or large enterprises. In 2014, the Institute of Occupational Health has launched a completion of the register of occupational hygiene measurements, so that more and more varied information could be available for enterprises. The measurements do not directly improve the conditions, but more guidance about developing workplace environments is needed also in Finland. The expertise of occupational health care is not enough for this guidance, and the resources of the Institute of Occupational Health, Ministry of Social Affairs and Health as well as of the occupational safety and health supervision are low as to guidance work.

There could probably be more measurements, but that would require national resource allocation, especially what comes to guidance and measurements for small enterprises. Most likely the costs and benefits of the measurements would have to be discussed in a new way. The monitoring does not include the reviews conducted by engineering offices when developing companies work environments that can include a significant amount of occupational hygiene measurements.

Article 6 (2)

The own inspection matters taken from the current legislation have been stored in the Vera inspection information system to be used in monitoring common workplaces. These can be found from the topic hierarchy under a title "Shared workplace", the matters to be inspected are "Information duty of a self-employed constructor on a shared workplace", "Information duty of the employer exercising primary authority", "Obligations of the employer exercising primary authority", "Information duty of an external employer on a shared workplace" and "Prevention of shared risks". These also have model obligation texts and decree references.

Article 9

The occupational safety and health authorities and their inspectors monitor the matter within their competence. The basis of the monitoring is to primarily remove the causes and if they can not be removed, using personal protective equipment is a secondary means. The occupational safety and health authorities can issue a decision that binds the employer to remove the cause. The decision may be reinforced by imposing a conditional fine.

The prioritising principles of the Occupational Safety and Health Act should be more clearly presented at workplaces. For example noise prevention can be realised through changing work methods, casings, fixings defects, placing noisy workstations better and building screens. In a likewise matter, controlling the vibration from hand tools is challenging and mostly falls under the competence area of tool manufacturers, but there are many vibration dampeners, floating floors, power tool seats and so on to control vibration coming from fixed sources. From the point of view of air pollutant management, emissions control, changing the source, local air conditioning, general ventilation and machine system casing can sometimes be expensive, but the technical possibilities are still worth considering, despite the economic pressures. Personal protectors, like using a respirator mask during the whole workday, strain the worker in many ways and often makes communication difficult. The Institute of Occupational Health strives to guide enterprises towards using technical and organisational risk management methods that allow to reduce the use of personal protectors.

Article 11 (3)

Occupational health care experts assist employers and employees in matters related to health at the workplace. Occupational health care monitors the health of those exposed to noise or vibration by performing periodic medical examinations, and, if stopping the exposure is necessary due to health detriments, gives a recommendation of that to the employer. If the employer has no clear solution

how the worker could continue working without compromising their health, it is common practice now to organise a consultation with the worker, the employer and an expert of occupational health care, as well as a safety and health representative or a shop steward or some other support person. If the workplace is unable to offer a task where the worker could continue without exposure to noise or vibration, the accident insurance company can compensate for costs incurred from vocational rehabilitation, for example from retraining for a work where there is no exposure. If vocational rehabilitation is not an option due to for example age or other illnesses limiting a person's ability to work, disability pension is a possible solution. During the inspections, the occupational safety and health authority monitors that the statutory periodic medical examinations have been performed on the workers at risk of exposure.

Sensitive workers and replacement work.

As to the Committee of Experts' question about the measures to relocate the workers that have been exposed to air pollutants, noise and vibration, it should be noted that In Finland the accident insurance compensation criteria and benefits are detailed in the law. This way the cases that by definition of the law do not qualify as an occupational accident or illness, can not be included in the insurance system. In these cases, the accident insurance can not take part in covering the costs caused by a worker's vocational rehabilitation or by relocation. In such situations, the matter concerns the questions related to the scope of application of the Occupational Safety and Health Act, i.e. the employer's obligations and the authorities' monitoring of the Act.

Replacement work is agreed on in the agreements between employers and employees. The noise and vibration decree takes into account the sensitive persons that the occupational health must discover in their monitoring activities. In small workplaces it can be hard to find replacement work. The evaluations and methods of replacement work belong to the insurance companies, through which the occupational illness investigations and vocational rehabilitations are managed. As for illnesses related to indoor air, there have been problems that are partly difficult to solve. The indoor air problems are a big economic question in Finland, referring to for example the report submitted to the Parliament, link

https://www.eduskunta.fi/FI/tietoeduskunnasta/julkaisut/Documents/trvj_1+2012.pdf#search=kosteus%2D%20ja%20homevauriot%20Reijula

Article 12

The market surveillance by the occupational safety and health authorities is targeted to the technical devices' compliance with the requirements. It is targeted neither to processes or substances, nor to air pollutants, noise or vibration. The product liability legislation concerning machinery contains provisions on noise and vibration. They have defined limit values, but exceeding these values is not basis for prohibiting their launch onto the market or for the use of consumers. However, if the limit values are exceeded, the numerical values have to be mentioned in the products' instructions for use. This information is monitored as part of the market surveillance of products.

Article 14

In 2010-2011, with the support of the Ministry of Social Affairs and Health, the Institute of Occupational Health organised a wide, intensified information campaign on the health risks concerning hand-arm vibration and on their management. The results of this campaign and the evaluation of its effectiveness have been reported in the Journal of occupational safety and ergonomics 2015

In another project by the Institute of Occupational Health, an implementation process for hearing protectors was developed. The process takes into consideration the user's hearing, need for

communication and the factors affecting the risk of accident. The process was created in such a way that the occupational health care, line management and occupational safety and health have clear guidelines. Even though in this project the process was developed only for one factory, it is universal and possible to use also in other similar work environments.

The Occupational Health and Safety Administration has published a renewed guide on work noise and its prevention on the Administration's website, where the guide can be freely downloaded (http://tyosuojelujulkaisut.wshop.fi/documents/2013/06/TSO_2.pdf). The guide is suitable also for SMEs. There is also a noise calculator on the website, which enables you to calculate the daily exposure level for a worker, who is exposed to at least four different noise levels during a workday.

With the support of the Ministry of Social Affairs and Health, an online tool for managing chemical risks (Stoffenmanager) and Kemikaalivihi (Chemical hint) site with workplaces' chemical safety information have been published in the Internet site of the Institute of Occupational Health. The site also has a test to be used by enterprises to test the level of their chemical safety. The small enterprises that use and store dangerous chemicals are offered a wide information package on chemical safety and risk management. The Finnish Safety and Chemicals Agency (Tukes) has renewed their popular guide 'Management of chemical and safety risks in small enterprises' by for example updating the decree regulations and practical guidelines.

Model solutions suitable for especially small enterprises' risk management have been published about for example car painting, the work of plater-welders, metal working, concrete industry, construction and renovation as well as hairdressing and beauty care business works.

Prevention programmes

The Institute of Occupational Health investigated the effectiveness of the hand-arm vibration prevention programmes and the information campaign in 2010-2011, mostly in construction and metal industry. The information material consisted of a model solution for hand-arm vibration, a nomogram (calculation stick) to calculate the daily exposure level, creating a separate vibration web page to the site of the Institute of Occupational Health, as well as organising training events in cooperation with the Centre for Occupational Safety. Those participating in the project completed a survey twice, before and after the campaign. According to the results, the awareness of harmfulness of vibration increased, and the enterprises included vibration as part of their risk assessment system significantly more often than before the information campaign. However, the small enterprises (under 20 employees) had taken vibration into consideration significantly less in risk assessment, and only 4% of the small enterprises had a vibration management programme. Small enterprises have drawn up less noise or vibration prevention programmes than large enterprises, and their programmes were more defective. The air pollutant prevention programmes are rarer, as the Government Decree on Chemical Agents at Work (715/2001) does not directly contain provisions on them.

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The Institute of Occupational Health has produced model solutions to be used in workplaces and occupational health care. The risk management model solutions contain work task specific instructions to planning and implementing of risk management. The instructions help to plan corrective measures at the workplace. The solutions aim at rapid risk management, when occupational illnesses occur at certain industry sectors, like they did with plumbing renovators using epoxy and urethane products a few years ago.

Article 16(b)

The resources of occupational health and safety inspectors have not fundamentally decreased:

	2011	2012	2013	2014
Occupational safety and health divisions, person-years	411	421	451	449

The number of inspected workplaces has increased:

	2011	2012	2013	2014
Total number of workplace inspections	22,283	22,517	22,340	24,145
Total number of inspected workplaces	15,983	18,700	20,741	21,779

Vera information system has been gradually implemented since the year 2011.

There have been 1887 inspections on noise, where 515 pieces of written advice and 24 improvement notices have been given. Two cases were transferred to the authorities' decision preparation.

There have been 269 inspections on vibration, where 32 pieces of written advice and 2 improvement notices have been given.

Biological, chemical and physical agents are monitored as to air pollutants, but no specific number is available.

Part IV

The occupational safety and health authority monitors the employer's adherence to obligations. The methods the employer uses to implement the required measures are under the authority of the employer, and neither the occupational safety and health authority nor the inspector have no authority over this. The supervision is targeted systematically and based on risks.

I Legislation and regulations

Air pollutants: Occupational Safety and Health Act (738/2002), Section 37: no amendments

Noise: Occupational Safety and Health Act, Section 39: no amendments,

The Government Decree on the Protection of Employees from Risks Caused by Noise (85/2006; decree on noise): no amendments

Vibration: Occupational Safety and Health Act, Section 39: no amendments,

The Government Decree on the Protection of Employees from Risks Caused by Vibration (48/2005; decree on vibration): no amendments

Shared workplace: Occupational Safety and Health Act, Sections 49-55, amendments 1232/2011 and 364/2013

Act on Occupational Safety and Health Enforcement and Cooperation on Occupational Safety and Health at Workplaces (44/2006, act on supervision), Chapter 5a: no amendments

Removal of dangers: Occupational Safety and Health Act, Chapter 2, amendment 329/2013
Occupational Safety and Health Act, Sections 37 and 39; no amendments
Decrees on noise and vibration; no amendments

II

Articles 1-2

The previous report does not mention the Government Decree on the Protection of Employees from Risks Caused by Vibration (48/2005) that has, however, been in force already in 2010. It is delimited by the scope of application of the Occupational Safety and Health Act (738/2002) and is applied to work in which exposure to vibration caused by work occurs or may occur.

Article 3

Nothing new to report.

Article 4

By the Decree on Concentrations Known to be Hazardous (268/2014), the Ministry of Social Affairs and Health has confirmed a list of concentrations of impurities in workplace air known to be hazardous (HTP values) and a list of corresponding indicative limit values for biological exposure indicators. The values are intended to be taken into account when assessing the quality of workplace air, the employees' exposure and the significance of the results of measurements.

Articles 5-7

Nothing new to report.

Article 8

Please, see article 4.

Articles 9-10

Nothing new to report.

Article 11

Please, see direct request 4.

Articles 12-13

Nothing new to report.

Article 14

See direct request 6.

Articles 15-16

Nothing new to report.

III-V.

Nothing new to report

VI

A copy of this report has been sent to the following labour market organisations

1. The Confederation of Finnish Industries (EK)
2. The Central Organization of Finnish Trade Unions (SAK)
3. The Finnish Confederation of Professionals (STTK)
4. The Confederation of Unions for Professional and Managerial Staff in Finland (AKAVA)
5. The Commission for Local Authority Employers (KT)
6. The State Employer's Office (VTML)
7. The Federation of Finnish enterprises

Central Organisation of Finnish Trade Unions (SAK)

SAK refers to its earlier statement (2010).

Akava

As to air pollutants, Akava refers to its statement on biological agents' effect concerning Convention 155.

ATTACHMENT to the report

Table 1. Wage-earners' workplace accidents caused by dangerous substances, compensated according to statutory accident insurance, divided by main lines of businesses

LINE OF BUSINESS	ACCIDENT YEAR				
	2009	2010	2011	2012	2013*
A Agriculture, forestry and fisheries	38	48	55	55	39
B Mining and quarrying	22	23	21	23	21
C Industry	1465	1447	1463	1158	1285
D Electricity, gas, steam and air conditioning supply	45	42	33	33	35
E Water supply, sewerage and waste water management	35	24	23	31	26
F Construction	726	810	761	678	694
G Wholesale and retail trade	365	370	397	371	450
H Transportation and storage	179	189	173	193	171
I Hotels and restaurants	53	73	66	61	78
J Information and communication	6	9	15	13	18
K Financing and insurance	7	8	7	3	3
L Real estate sector	37	24	30	36	26
M Professional, scientific and technical activities	95	88	73	94	107
N Administration and support services	228	298	374	322	310
O Public administration and defence, excl. municipal sector	59	37	45	49	87
P Education	40	100	88	83	70
Q Health and social services	50	55	82	74	64
R Arts, entertainment and recreation	9	13	13	8	19
S Other service activities	25	30	32	30	40
T Households as employers	10	4	10	7	7
Unknown business	10	17	4	0	0
Z Municipal sector	534	542	562	482	540
Total	4038	4251	4327	3804	4091

Table 2. Wage-earners' occupational illnesses and suspected illnesses caused by chemical exposure agents, compensated according to statutory accident insurance

EXPOSURE AGENT	REGISTERING YEAR			
	2009	2010	2011	2012
01 arsenic and its compounds	4	7	4	0
02 beryllium and its compounds	1	0	1	1
04 phosphorus and its compounds	2	4	3	0
05 cadmium and its compounds	1	0	2	0
06 cobalt and its compounds	6	4	8	6
07 chrome and its compounds	22	27	16	13
08 lead and its compounds	8	1	3	7
09 manganese and its compounds	2	0	2	0
10 nickel and its compounds	20	22	13	12
11 zinc and its compounds	6	5	7	8
13 halogens and their inorganic compounds	0	7	8	4
14 cyanide compounds	7	9	7	5
15 carbon bisulphide, hydrogen sulphide, sulphur dioxide and sulphuric acid	1	2	2	1
16 nitrogen dioxide, nitric acid and ammonia	12	10	9	7
17 carbon monoxide and phosgene	18	1	0	0
18 inorganic alkali and their anhydrides	22	14	12	13
19 aliphatic, aromatic and alicyclic hydrocarbons	35	27	23	28
20 halogen, nitro and amino derivatives of hydrocarbons, amines	4	2	4	4
21 nitroglycerin and ethylene glycol dinitrate	0	2	1	0
22 aldehydes, ketones, alcohols, ethers and esters	134	120	102	68
23 organic acids and acid anhydrides	4	5	3	4
24 phenol, its homologues and their halogen and nitro derivatives	4	1	1	2
25 antibiotics	0	1	0	2
26 plastics and resins and the materials used in their manufacturing	136	100	79	60
27 organic dusts and exposure agents	464	525	430	387
28 mineral dusts	828	960	758	742
29 thirams, carbamates, derivatives of paraphenylene diamine etc.	32	32	22	16
30 aflatoxins	0	1	1	6
32 cancer medication	0	0	0	1
34 occupational diseases caused by handling of other chemical substances	768	768	702	668
Total	2541	2657	2223	2065

Table 3. Wage-earners' workplace accidents caused by noise and vibration, compensated according to statutory accident insurance, divided by main lines of businesses

LINE OF BUSINESS	ACCIDENT YEAR				
	2009	2010	2011	2012	2013*
A Agriculture, forestry and fisheries	0	4	3	1	2
B Mining and quarrying	0	0	0	1	2
C Industry	18	33	34	27	28
D Electricity, gas, steam and air conditioning supply	2	1	1	2	4
E Water supply, sewerage and waste water management	0	1	0	0	1
F Construction	13	20	16	25	29
G Wholesale and retail trade	8	20	17	15	17
H Transportation and storage	13	8	11	12	14
I Hotels and restaurants	4	1	2	1	8
J Information and communication	2	1	3	3	6
K Financing and insurance	2	0	0	1	0
L Real estate sector	1	0	1	1	2
M Professional, scientific and technical activities	2	4	5	4	6
N Administration and support services	5	9	6	8	12
O Public administration and defence, excl. municipal sector	11	11	14	24	56
P Education	6	5	2	2	8
Q Health and social services	5	3	5	1	7
R Arts, entertainment and recreation	0	1	0	4	2
S Other service activities	0	2	0	0	2
T Households as employers	0	0	1	0	1
Unknown business	0	1	0	0	0
Z Municipal sector	29	36	43	44	45
Total	121	161	164	176	254

Table 4. Wage-earners' occupational illnesses and suspected illnesses caused by noise, compensated according to statutory accident insurance, divided by main lines of businesses

LINE OF BUSINESS	REGISTERING YEAR			
	2009	2010	2011	2012
A Agriculture, forestry and fisheries	27	38	19	25
B Mining and quarrying	18	18	12	9
C Industry	881	768	552	494
D Electricity, gas, steam and air conditioning supply	14	21	14	18
E Water supply, sewerage and waste water management	4	7	6	6
F Construction	244	264	188	159
G Wholesale and retail trade	83	76	78	58
H Transportation and storage	79	77	66	69
I Hotels and restaurants	8	8	10	5
J Information and communication	15	12	6	7
K Financing and insurance	7	4	6	0
L Real estate sector	8	7	7	9
M Professional, scientific and technical activities	21	27	25	19
N Administration and support services	19	24	8	15
O Public administration and defence, excl. municipal sector	45	48	50	42
P Education	5	9	7	6
Q Health and social services	12	28	12	5
R Arts, entertainment and recreation	8	3	5	2
S Other service activities	10	9	9	7
T Households as employers	1	0	0	2
Unknown business	5	12	10	3
Z Municipal sector	129	104	69	111
Total	1643	1564	1159	1071

Table 5. Wage-earners' occupational illnesses and suspected illnesses caused by vibration, compensated according to statutory accident insurance, divided by main lines of businesses

LINE OF BUSINESS	REGISTERING YEAR			
	2009	2010	2011	2012
A Agriculture, forestry and fisheries	4	3	2	3
B Mining and quarrying	2	1	0	0
C Industry	19	13	19	24
D Electricity, gas, steam and air conditioning supply	0	0	1	0
E Water supply, sewerage and waste water management	0	0	1	0
F Construction	11	9	12	12
G Wholesale and retail trade	7	9	8	11
H Transportation and storage	7	4	3	5
L Real estate sector	1	0	1	0
M Professional, scientific and technical activities	0	0	2	0
N Administration and support services	0	2	1	0
O Public administration and defence, excl. municipal sector	1	1	0	2
P Education	0	0	1	0
Q Health and social services	1	1	0	0
S Other service activities	0	1	0	0
Z Municipal sector	3	4	6	4
Total	56	48	57	61