

Evaluation of the EU Occupational Safety and Health Directives

COUNTRY SUMMARY REPORT FOR SWEDEN

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The views expressed herein are those of the consultants alone and do not necessarily represent the official views of the European Commission.

Milieu Ltd. (Belgium), rue Blanche 15, B-1050 Brussels, tel: +32 2 506 1000; fax: +32 2 514 3603; nathy.rassmasson@milieu.be; web address: www.milieu.be

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ABBREVIATIONS USED

AFS	<i>Arbetskyddsstyrelsens/Arbetsmiljöverkets författningssamling</i> . The work environment provisions, which are issued by the SWEA under mandate in WEA and the Work Environment ordinance (SFS 1977:1166). The AFSs are published in the SFS-series.
AV	<i>Arbetsmiljöverket</i> . Swedish Work Environment Authority (SWEA)
BFS	<i>Boverkets författningssamling</i> . Provisions are issued by the Swedish National Board of Housing, Building and Planning, and published in the SFS-series.
FD	EU Framework Directive, 89/391/EEC
NIR	National Implementation Report 2013: “Views on the consultation by the Swedish Work Environment Authority regarding feedback on the practical implementation of Directive 89/391/EEC, its individual Directives, and Directives 2009/148/EC, 91/383/EEC, 92/29/EEC and 94/33/EC for the 2007-12 period”
OEL	Occupational exposure limits, as specified in AFS 2011: 18 (<i>Hygieniska gränsvärden</i>)
OHS	Occupational health and safety (referring to Sweden)
OHS services	Occupational health services. The competences of these protective and preventive services are described in WEA ch. 3, section 2c.
OHSM	Mandatory OHS management, e.g. SWEM
OSH	Occupational safety and health (referring to EU)
PPE	Personal protective equipment
RA	Risk assessment
RSR	Regional Safety Representative(s), appointed by the Union and elected to support OHSM within firms in case of the absence of a joint WEC and where the union has at least one member, according to WEA, ch. 6, section 2.
SFS	<i>Svensk författningssamling</i> . Swedish Code of Statutes: the Official journal on legal acts, including provisions issued by authorities (such as SWEA) under legal mandates.
SJÖFS	Provisions of the Swedish Maritime Administration (now a division within <i>Transportstyrelsen</i> - The Swedish Transport Agency); also published in SFS.
SR	Safety Representative, (normally) elected by local unions under WEA ch. 6, section 2.
SWEA	Swedish Work Environment Authority (includes the labour inspection)
SWEM	Systematic Work Environment Management, the provisions on this (AFS 2001:1) transpose the Framework directive 89/391/EC. SWEM is described in WEA ch. 3, section 2a.
TSFS	<i>Transportstyrelsens författningssamling</i> . Provisions issued by the Swedish Transport Agency, as listed in the SFS.
WE	Work environment: the term used in the WEA for occupational health and safety
WEA	The Work Environment Act (<i>Arbetsmiljölagen</i> ; SFS 1977:1160).
WEC	Work Environment Committee: a joint body which has to be set up in workplaces with more than 50 employees (or with less employees in case the employees request it) – described in WEA, ch. 6, section 8.

INTRODUCTION

General introduction to the report

This report presents a review of the main features of the practical implementation of 24 EU occupational safety and health (OSH) Directives in Sweden. The information in this report has been gathered between October 2013 and June 2014. This Country Summary Report, together with the Summary Reports prepared for each Member State, aims at mapping the implementation of the OSH Directives in the EU as a whole. It is based on a desk-study and interviews with national stakeholders (see Annex II for details on interviews carried out) and is one of the sources of information for the overall evaluation of the implementation. The Country Summary Reports will form an Appendix to the Final Report, which will compile the results of the evaluation and the associated recommendations.

This review is based on seven key mapping questions, which will inform the evaluation of the implementation of the OSH Directives in all Member States and the EU in general. The seven general Mapping Questions (MQs), which have been defined by the Commission and are answered in this Country Summary Report are the following:

Mapping question
MQ1: “Across the Member States, how are the different 'common processes' and 'mechanisms' foreseen by the Directives put in place and how do they operate and interact with each other?”
MQ2: “What derogations and transitional periods are applied or have been used under national law under several of the Directives concerned?”
MQ3: “What are the differences in approach to and degree of fulfilment of the requirements of the EU OSH Directives in private undertakings and public-sector bodies, across different sectors of economic activity and across different sizes of companies, especially for SMEs, microenterprises and self-employed?”
MQ4: “What accompanying actions to OSH legislation have been undertaken by different actors (the Commission, the national authorities, social partners, EU-OSHA, Eurofound, etc.) to improve the level of protection of health and safety at work and to what extent are they actually used by companies and establishments to pursue the objective of protecting health and safety of workers? Are there any information needs that are not met?”
MQ5: “What are the enforcement (including sanctions) and other related activities of the competent authorities at national level and how are the priorities set among the subjects covered by the Directives?”
MQ6: “What are the differences of approach across Member States and across establishments with regard to potentially vulnerable groups of workers depending on gender, age, disability, employment status, migration status, etc., and to what extent are their specificities, resulting in particular from their greater unfamiliarity, lack of experience, absence of awareness of existing or potential dangers or their immaturity, addressed by the arrangements under question?”
MQ7: “What measures have been undertaken by the Member States to support SMEs and microenterprises (e.g. lighter regimes, exemptions, incentives, guidance, etc.)?”

The template is structured according to these mapping questions.

1 MAPPING QUESTION 1: STRUCTURAL COMPONENTS OF HEALTH AND SAFETY DIRECTIVES

This first section focuses on how the national legal and institutional frameworks have been designed to reflect the main common processes and mechanisms (CPMs) of each Directive. It includes:

- A review of the national transposing legislation and the general structure of the legal framework;
- Mechanisms of coordination amongst the different authorities responsible for the implementation of the directives;
- The identification of any delays in transposing directives, focusing on most recent ones;
- Differences between the Directives' requirements and the national ones, looking at observed discrepancies, more stringent and more detailed provisions;
- Interactions between CPMs as embedded in the legislation.

1.1 GENERAL LEGAL FRAMEWORK

The main legal act that governs occupational health and safety in Sweden is the Work Environment Act (WEA), which is a framework law.¹ The purpose of the Act is to prevent illness and accidents at work and to achieve a sound work environment. The Act requires the work environment to be satisfactory taking into account the nature of the work as well as the social and technological developments. It also requires work conditions to be adapted to people's differing physical and mental capabilities. The employee shall be given the opportunity to participate in the design of his work situation and the work shall be designed in such a way that it does not lead to physical strain or mental stress that may lead to illness or accidents. The Act also sets requirements on the premises where the work is carried out, so that they are suitable from the perspective of the work environment. The employer is required to take precautionary measures to prevent the employee to be exposed to illness or accidents. The Work Environment Act applies to all areas of occupational life, including students, self-employed persons, military conscripts and inmates in institutions, and to all sectors without distinction, including the public sector and SMEs.

The Swedish Work Environment Authority is authorized to issue and enforce secondary regulations. These secondary regulations issued by the Swedish Work Environment Authority are compiled in the Authority's own Statute Book (*Arbetsmiljöverkets författnings samling*, AFS) which defines more closely the requirements to be met by the work environment. As a rule, the OSH Individual Directives are all transposed through a specific AFS. The only exception is the transposition of Directive 93/103/EC (work on board fishing vessels), which is transposed through a large number of secondary regulations. Most of the AFS are further complemented by several other specific regulations.

Several infringement proceedings have been started against Sweden in relation to the transposition of the OSH Directives. Three infringement cases dealt with non-conformity with the Framework Directive and with Directive 92/57/EEC (temporary or mobile construction sites), while there were also two cases of non-communication in relation to the transposition of Directive 98/24/EC (chemical agents at work) and Directive 1999/92/EC (ATEX). There was also a case of bad application of the Framework Directive. All infringement cases have been closed.

The following table provides an overview of the approach to transposition, indicating whether there is one law covering all OSH issues (O) as opposed to transposition spread over different acts (S). It then lists transposing national legislation per directive, specifying whether there was legislation existing

¹ See also: http://oshwiki.eu/wiki/OSH_system_at_national_level_-_Sweden

prior to transposition. Finally, it identifies any infringement proceedings, which were mentioned in an overview table provided by the Commission.

Table 1- 1 General Legal Framework

Directive	O	S	Transposing National Legislation	Legislation prior to transposition (Y/N)	Infringement proceedings
Directive 89/391/EEC (Framework Directive)	○		<p>The Work Environment Act, (<i>Arbetsmiljölagen, SFS 1977:1160</i>), entry into force on 1.1.1978 (WEA).² As amended in 1991, with a new section 3.2.a requiring the adoption of SWEM, entry into force on 1.7.1991.</p> <p>Provisions on Systematic Work Environment Management (<i>Föreskrifter om systematiskt arbetsmiljöarbete, AFS 2001:1</i>), entry into force on 15.2.2001 (SWEM). As amended in AFS 2003:4, and AFS 2008:15.</p> <p>Provisions on Medical Controls in working life (<i>Föreskrifter om medicinska kontroller i arbetslivet, AFS 2005:06</i>), entry into force on 29.3.2005 and amended in AFS 2014:23 (entry in force 1.7.2014). (AFS 2005:06)</p>	Y	<p>Infringement cases No. 1998/2182 and 2005/4819 on non-conformity – cases closed</p> <p>Infringement No. 2001/4378 on bad application of the directive – case closed</p>
Council Directive 89/654/EEC (workplace)	○		<p>Provisions on design of workplaces (<i>föreskrifter om arbetsplatsens utformning, AFS 2009:2</i>), entry into force on 1.4.2010, as amended in AFS 2013:3 (entry into force on 1.7.2013). (AFS 2009:2)</p> <p><i>Other relevant applicable legislation:</i></p> <ul style="list-style-type: none"> • Ordinance on Electric Equipment (<i>förordning om elektrisk materiel, SFS 1993:1068</i>), entry into force on 1.4.1995, as amended in SFS 2004:472 (entry into force on 1.7.2004). • Prevention of Accidents Act (<i>Lag om skydds mot olyckor, SFS 2003:778</i>), entry into force on 1.1.2004 • Building Regulations (<i>Byggregler, BFS 2011:16</i>), entry into force on 2.5.2011, as amended in BFS 2013:14 (entry into force on 1.7.2013) • Provisions on Preventive measures against injuries caused by falls (<i>föreskriftskydd mot skada genom fall,</i> 	Y	

² The Work Environment Act (WEA) is the overall, comprehensive act on the work environment, which transposes 89/391/EEC. Since 1991, the act contains a section (3.2.a) requiring employers to systematically plan, direct and inspect activities in a manner which ensures that the work environment meets the prescribed requirements for a good working environment. This section was first specified in the Provisions on Internal Control (AFS 1992:6), before it was replaced in 2001 by the Provisions on Systematic Work Environment Management (SWEM) (AFS 2001:1; and amended in AFS 2003:4 and AFS 2008:15). WEA also covers work on board vessels but the specifying provisions on the work environment in such work are issued by the Swedish Transport Agency (*Transportstyrelsen*), and not by SWEA (as specified in WEA ch. 1 § 2).

Directive	O	S	Transposing National Legislation	Legislation prior to transposition (Y/N)	Infringement proceedings
			<p>AFS 1981:14), entry into force on 1.1.1982</p> <ul style="list-style-type: none"> • Provisions on Preventive measures against injuries caused by landslides (<i>föreskrifter om skydds mot skada genom ras</i>, AFS 1981:15), entry into force on 1.1.1982 • Provisions on certain work on ships (<i>föreskrifter om arbetepå fartyg</i>, AFS 1986:26), entry into force on 1.4.1987, as amended in AFS 2000:11 (entry into force on 1.1.2001). • Provisions on First aid and crisis support (<i>Föreskrifter om första hjälpen och krisstöd</i>, AFS 1999:7), entry into force on 1.7.2000 • Planning and Building Act (<i>Plan- och bygglagen</i>), SFS 1987:10, changed in SFS 2010:1948, entry into force on 1.4.2011. 		
Directive 2009/104/EC (work equipment)	○		<p>Provisions on the use of work equipment (<i>föreskrifter om Användning av arbetsutrustning</i>, http://www.av.se/lagochratt/afs/afs2006_04.aspx), entry into force on 1.7.2007, as amended in AFS 2010: 14 (entry into force on 1.1.2011). (AFS 2006:4)</p> <p><i>Other relevant applicable legislation:</i></p> <ul style="list-style-type: none"> • Provisions on work in the motor industry (<i>föreskrifter om Arbeta i motorbranschen</i>, AFS 1998:8), entry into force on 1.4.1999 • Provisions on Machines (<i>föreskrifter om Maskiner</i>, AFS 2008:3) entry into force on 29.12.2009, as amended in AFS 20011:1 (entry into force on 15.12.2011), AFS 2011:7 (entry into force on 1.8.2011) and AFS 2104:22 (entry in force 1.7.2014). 	Y	
Council Directive 89/656/EEC (PPE)	○		<p>Provisions on the Use of personal protective equipment (<i>föreskrifter om Användning av personlig skyddsutrustning</i>, AFS 2001:3), entry into force on 1.7.2001, as amended in AFS 2010:11 (entry into force on 1.1.2011) and AFS 2014:18 (entry in force 1.7.2014). (AFS 2001:3)</p> <p><i>Other relevant applicable legislation:</i></p> <ul style="list-style-type: none"> • Provisions on the Use of chains saws and clearing saws (<i>föreskrifter om Användning av motorkedje-sågar och</i> 	Y	

Directive	O	S	Transposing National Legislation	Legislation prior to transposition (Y/N)	Infringement proceedings
			<p>röjsågar, AFS 2012:1), entry into force on 1.12.2012</p> <ul style="list-style-type: none"> • Provisions on Work in refrigerated food localities (<i>föreskrifter om Arbete i kylda livsmedels-lokaler</i>, http://www.av.se/lagochratt/afs/afs1998_02.aspx), entry into force on 1.7.1998, as amended in AFS 20001:10 (entry into force on 1.1.2001). • Provisions on work in the motor industry (<i>föreskrifter om Arbete i motorbranschen</i>, AFS 1998:8), entry into force on 1.4.1999 • Provisions on work in strong heat (<i>föreskrifter om Arbetet i stark värme</i>, AFS 1997:2), entry into force on 1.5.1998 • Provisions on work with laboratory animals (<i>föreskrifter om Arbete med försöksdjur</i>, AFS 1990:11), entry into force on 1.7.1992 • Provisions on Asbestos (<i>föreskrifter om Asbest</i>, AFS 2006:1), entry into force on 15.4.2006 • Provisions on Sewage facilities (<i>föreskrifter om Avloppsanläggningar</i>, AFS 1984:15), entry into force on 1.1.1986 • Provisions on Pesticides (<i>föreskrifter om Bekämpningsmedel</i>, AFS 1998:6), entry into force on 1.3.1999 • Provisions on Rock- and mining work (<i>föreskrifter om Berg- och gruvarbete</i>, AFS 2010:1), entry into force on 11.12.2010 • Provisions on Lead (<i>föreskrifter om Bly</i>, AFS 1992:7), entry into force on 1.3.1993, as amended in AFS 2000:14, AFS 2005:21, AFS 2008:1 and AFS 2011:21 (entry into force on 1.7.2012) • Provisions on Building and civil engineering work (<i>Byggnads- och anläggningsarbete</i>, AFS 1993:3), entry into force on 1.1.2000, as amended in AFS 2007:11 (entry into force on 1.1.2008) and AFS 2008:16 (entry into force on 1.1.2009) • Provisions on Cytostatika and drugs with 		

Directive	O	S	Transposing National Legislation	Legislation prior to transposition (Y/N)	Infringement proceedings
			<p>lasting toxic effects (<i>föreskrifter om Cytostatika och andra läkemedel med bestående toxisk effect</i>, AFS 2005:5), entry into force on 1.6.2005</p> <ul style="list-style-type: none"> • Provisions on Gases (<i>föreskrifter om Gaser</i>, AFS 1997:7), entry into force on 1.1.1998 • Provisions on Dock work (<i>föreskrifter om Hamnarbetet</i>, AFS 2001:9), entry into force on 1.1.2003 • Provisions on thermosettingplastics (<i>föreskrifter om Härdplaster</i>, AFS 2005:18), entry into force on 19.1.2005 • Provisions on Closed use of genetically modified micro-organisms (<i>föreskrifter om Innesluten användning av genmodifierade mikroorganismer</i>, AFS 2011:2), entry into force on 1.1.2012 • Provisions on Chemical hazards (<i>föreskrifter om Kemiska arbetsmiljörisiker</i>, AFS 2011:19), entry into force on 1.7.2012 • Provisions on Quartz (<i>föreskrifter om Kvarts</i>, AFS 1992:16), entry into force on 1.1.1993, as amended in AFS 2005:10 (entry into force on 1.7.2005) • Provisions on Microbiological work environment risks - infection, toxins, hypersensitivity (<i>föreskrifter om Mikrobiologiska arbetsmiljö- risker – smitta, toxinpåverkan, överkänslighet</i> AFS 2005:1), entry into force on 1.6.2005, as amended in AFS 2012:7 (entry into force on 1.5.2013) • Provisions on Smoke- and chemical diving (<i>föreskrifter om Rök- och kemdykning</i>, AFS 2007:7), entry into force on 1.4.2008 • Provisions on Melting and casting of metals (<i>föreskrifter om smältning och gjutning av metal</i>, AFS 1997:5), entry into force on 1.1.1998, as amended in AFS 2000:20 (entry into force on 1.1.2001) • Provisions on Welding and thenrical cutting (<i>föreskrifter om Smältsvetsning och termisk skärning</i>, AFS 1992:9), entry into force on 1.1.1993, as amended in AFS 2009:3 (entry into force on 1.4.2010) 		

Directive	O	S	Transposing National Legislation	Legislation prior to transposition (Y/N)	Infringement proceedings
			and AFS 2011:20 (entry into force on 1.7.2012) <ul style="list-style-type: none"> Provisions on Synthetic inorganic fibres (<i>föreskrifter om Syntetiska oorganiska fibrer</i>, AFS 2004:1), entry into force on 1.10.2004, as amended in AFS 2005:13 (entry into force on 1.7.2005) 		
Council Directive 92/58/EEC (OSH signs)	○		Provisions on signs and signals (<i>föreskrifter om Skyltar och signaller</i> , http://www.av.se/lagochratt/afs/afs2008_13.aspx), entry into force on 1.10.2008 (AFS 2008:13)	Y	
Directive 1999/92/EC (ATEX)	○		Provisions on ATEX (<i>föreskrifter om Arbeta i explosionsfarlig miljö</i> , AFS 2003:3), entry into force on 31.7.2003, as amended in 2013:1 (entry into force on 1.6.2013) and in AFS 2014:13 (entry in force 1.7.2014). (AFS 2003:3) <i>Other relevant applicable legislation:</i> <ul style="list-style-type: none"> Provisions on on Equipment for use in ATEX (<i>föreskrifter om Utrustning för explosionsfarlig miljö</i>, AFS 1995:5), entry into force on 1.3.1996, as amended in AFS 2000:23 (entry into force on 1.1.2001), AFS 2000:40 (entry into force on 1.3.2001), AFS 2010:7 (entry into force on 1.7.2011), AFS 2011:4 (entry into force on 1.8.2011 and AFS 2014: 12 (entry in force 1.7.2014). Provisions on the design of PPE (<i>föreskrifter om personlig skyddsutrustning</i>, AFS 2001:3), entry into force on 1.7.2001, as amended in AFS 2010:11 (entry into force on 1.1.2011) 	Y	Infringement No. 03/0840/SE: non-communication, case closed: national measures adopted and notified following letter of formal notice
Council Directive 90/269/EEC (manual handling of loads)	○		Provisions on Musculoskeletal ergonomics (<i>Belastningsergonomi</i> , AFS 2012:2), entry into force on 1.12.2012; includes requirements on manual handling (AFS 2012:2) <i>Other relevant applicable legislation:</i> <ul style="list-style-type: none"> Provisions on pregnant and breastfeeding employees (<i>föreskrifter om Gravida och ammande arbetstagare</i>, AFS 2007:5), entry into force on 1.4.2008 	Y	
Council Directive 90/270/EEC (display screen)	○		Provisions on work with display screens (<i>föreskrifter om arbete vid bildskärm</i> , AFS 1998:5), entry into force on 1.4.1999 and amended in AFS 2014:2 (entry in force 1.7.2014). (AFS 1998:5)	Y	

Directive	O	S	Transposing National Legislation	Legislation prior to transposition (Y/N)	Infringement proceedings
equipment)					
Directive 2002/44/EC (vibration)	○		<p>Provisions on Vibrations (<i>föreskrifter om Vibrationer</i>, AFS 2005:13), entry into force on 1.7.2005 (AFS 2005:13)</p> <p><i>Other relevant applicable legislation:</i></p> <ul style="list-style-type: none"> Provisions on Medical Controls in working life (<i>föreskrifter om medicinska kontroller i arbetslivet</i>, AFS 2005:06), entry into force on 29.3.2005, and amended in AFS 2014:23 (entry in force 1.7.2014) 	Y	
Directive 2003/10/EC (noise)	○		<p>Provisions on Noise (<i>föreskrifter om buller</i>, AFS 2005:16), entry into force on 1.7.2005 (AFS 2005:16)</p> <p><i>Other relevant applicable legislation:</i></p> <ul style="list-style-type: none"> Provisions on the work environment on board vessels (<i>Sjöfartsverkets föreskrifter och allmänna råd om arbetsmiljö på fartyg</i>, SJÖFS 2005:23), entry into force on 1.1.2006 Provisions on design of workplaces (<i>föreskrifter om arbetsplatsens utformning</i> AFS 2009:2), entry into force on 1.4.2010, as amended in AFS 2013:3 (entry into force on 1.7.2013) Provisions on Medical Controls in working life (<i>föreskrifter om medicinska kontroller i arbetslivet</i>, AFS 2005:06), entry into force on 29.3.2005, and amended in AFS 2014:23 (entry in force 1.7.2014) Provisions on Pregnant and breastfeeding employees (<i>föreskrifter om Gravida och ammande arbetstagare</i>, AFS 2007:5), entry into force on 1.4.2008, and amended in AFS 2014:24 (entry in force 1.7.2014). Provisions on the Use of personal protective equipment (<i>föreskrifter om Användning av personlig skyddsutrustning</i>, AFS 2001:3), entry into force on 1.7.2001, as amended in AFS 2010:11 (entry into force on 1.1.2011) and AFS 2014:18 (entry in force 1.7.2014). 	Y	
Directive 2004/40/EC (electromagnetic fields)		S	<p>Provisions on High frequency electromagnetic fields (<i>föreskrifter om Högfrekventa elektromagnetiska fält</i>, AFS 1987:2), entry into force on 1.1.1988 (AFS 1987:2)</p> <p>Provisions on Work with display screens</p>	Y	

Directive	O	S	Transposing National Legislation	Legislation prior to transposition (Y/N)	Infringement proceedings
			(Arbete vid bildskärm, AFS 1998:5), entry into force on 1.4.1999 and amended in AFS 2014:2 (entry in force 1.7.2014). (AFS 1998:5) <i>Note: These do not fully transpose the requirements of Directive 2004/40/EC, but Sweden will transpose the reformulated Directive 2013/35/EU.</i>		
Directive 2006/25/EC (artificial optical radiation)	○		Provisions on Artificial optic radiation (<i>föreskrifter om artificiell optisk strålning</i> , AFS 2009:7), entry into force on 27.4.2010, and amended in AFS 2014:8, entry in force 1.7.2014. (AFS 2009:7)	Y	
Directive 2004/37/EC (carcinogens or mutagens)	○		Provisions on Chemical hazards (<i>föreskrifter om kemiska risker</i> , AFS 2011:19), entry into force on 1.7.2012, and amended in AFS 2014:5, entry in force 1.7.2014. (AFS 2011:19) Provisions on OELs (<i>föreskrifter om hygieniska gränsvärden</i> , AFS 2011:18), entry into force on 1.7.2012	Y	
Council Directive 98/24/EC (chemical agents at work)	○		AFS 2011:19 Provisions on OELs (<i>föreskrifter om hygieniska gränsvärden</i> , AFS 2011:18), entry into force on 1.7.2012	Y	Infringement No. 01/0432/SE: non-communication, closed case: national measures adopted and notified following letter of formal notice
Directive 2009/148/EC (asbestos)	○		Provisions on Asbestos (<i>föreskrifter om asbest</i> , AFS 2006:1), entry into force on 15.4.2006, and amended in AFS 2014:27, in force 1.7.2014. (AFS 2006:1)	Y	
Directive 2000/54/EC (biological agents)	○		Provisions on Microbiological work environment risks - infection, toxins, hypersensitivity (<i>Mikrobiologiska arbetsmiljörisker – smitta, toxinpåverkan, överkänslighet</i> , AFS 2005:1), entry into force on 1.6.2005, as amended in AFS 2012:7 (entry into force on 1.5.2013) and in AFS 2014:5, entry in force 1.7.2014 (AFS 2005:1) <i>Other relevant applicable legislation:</i> <ul style="list-style-type: none"> • Provisions on OELs (<i>föreskrifter om hygieniska gränsvärden</i>, AFS 2011:18), entry into force on 1.7.2012 • Provisions on Closed use of genetically modified micro-organisms (<i>föreskrifter</i> 	Y	

Directive	O	S	Transposing National Legislation	Legislation prior to transposition (Y/N)	Infringement proceedings
			<p>om Innesluten användning av genmodifierade mikroorganismer, AFS 2011:2), entry into force on 1.1.2012.</p> <ul style="list-style-type: none"> Provisions on Medical Controls in working life (<i>föreskrifter om medicinska kontroller i arbetslivet</i>, AFS 2005:06), entry into force on 29.3.2005, and amended in AFS 2014:23 (entry in force 1.7.2014). 		
<p>Council Directive 92/57/EEC (temporary or mobile construction sites)</p>	O		<p>Provisions on Construction and civil engineering work (<i>föreskrifter om Byggnads- och anläggningsarbete</i>, AFS 1999:3), entry into force on 1.1.2000, and as amended in AFS 2007:11 (entry into force on 1.1.2008), AFS 2008:16 (entry into force on 1.1.2009) and AFS 2104:26, entry in force 1.7.2014. (AFS 1999:3)</p> <p><i>Other relevant applicable legislation:</i></p> <ul style="list-style-type: none"> Provisions on the workplace (<i>Arbetsplatsen utformning</i>, AFS 2009:02), entry into force on 1.4.2010, as amended in AFS 2013:3, entry in force 1.6.2013. Provisions on Synthetic inorganic fibres (<i>föreskrifter om syntetiska oorganiska fibrer</i>, AFS 2004:1), entry into force on 1.10.2004, as amended in AFS 2005:13 (entry into force on 1.7.2005) Provisions on Chemical hazards (<i>föreskrifter om kemiska risker</i>, AFS 2011:19), entry into force on 1.7.2012) and amended in AFS 2014:5, entry in force 1.7.2014. Provisions on OELs (<i>föreskrifter om hygieniska gränsvärden</i>, AFS 2011:18), entry into force on 1.7.2012 Provisions on Rock- and mining work (<i>föreskrifter om Berg- och gruvarbete</i>, AFS 2010:1), entry into force on 1.12.2010, and amended in AFS 2014:10, entry in force 1.7.2014. Provisions on Blasting (<i>föreskrifter om Sprängarbete</i>, AFS 2007:1), entry into force on 1.7.2007 and amended in AFS 2014:1, entry in force 1.7.2014. Provisions on Equipment under pressure (<i>föreskrifter om Användning av trycksatta anordningar</i>, AFS 2002:1), entry into force on 30.5.2002, as 	Y	Infringement No. 2006/2019 on non-conformity – case closed

Directive	O	S	Transposing National Legislation	Legislation prior to transposition (Y/N)	Infringement proceedings
			<p>amended in AFS 2011:10 (entry into force on 1.8.2011) and in AFS 2014:29, entry in force 1.7.2014.</p> <ul style="list-style-type: none"> • Provisions on Ladders and trestles (<i>föreskrifter om Stegar och arbetsbockar</i>, AFS 2004:3), entry into force on 1.1.2005, as amended in AFS 2011:12 (entry into force on 1.8.2011) and in AFS 2014:17, entry in force 1.7.2014. • Provisions on the Use of lifting equipment (<i>föreskrifter om Användning av lyftanordningar och lyft-redskap</i>, AFS 2006:6), entry into force on 1.7.2007, as amended in AFS 2010:5 (entry into force on 1.1.2011) and in AFS 2014:21, entry in force 1.7.2014. • Provisions on the Use of work equipment (<i>föreskrifter om Användning av arbetsutrustning</i>, http://www.av.se/lagochratt/afs/afs2006_04.aspx), entry into force on 1.7.2007, as amended in AFS 2010: 14 (entry into force on 1.1.2011) • Provisions on Machines (<i>föreskrifter om Maskiner</i>, AFS 2008:3), entry into force on 29.12.2009, as amended in AFS 20011:1 (entry into force on 15.12.2011), AFS 2011:7 (entry into force on 1.8.2011) and AFS 2014:22, entry in force 1.7.2014. • Provisions on Thermosetting plastics (<i>föreskrifter om Härdplaster</i>, AFS 2005:18), entry into force on 19.1.2005, and amended in AFS 2014:32, entry in force 1.7.2014. • Provisions on Quartz (<i>föreskrifter om Kvarts</i>, AFS 1992:16), entry into force on 1.1.1993, as amended in AFS 2005:10 (entry into force on 1.7.2005) and in AFS 2014:4, entry in force 1.7.2014. • Provisions on asbestos (<i>föreskrifter om Asbest</i>, AFS 2006:1), entry into force on 15.4.2006 		
Council Directive 92/104/EEC (surface and underground mineral-	○		Provisions on Rock- and mining work (<i>föreskrifter om Berg- och gruvarbete</i> , AFS 2010:1), entry into force on 11.12.2010, and amended in AFS 2014:10, entry in force 1.7.2014. (AFS 2010:1)	Y	

Directive	O	S	Transposing National Legislation	Legislation prior to transposition (Y/N)	Infringement proceedings
extracting industries)			<p><i>Other relevant applicable legislation:</i></p> <ul style="list-style-type: none"> • Provisions on Quartz (<i>föreskrifter om Kvarts</i>, AFS 1992:16), entry into force on 1.1.1993, as amended in AFS 2005:10 (entry into force on 1.7.2005) and in AFS 2014:4, entry in force 1.7.2014 • Provisions on Blasting (<i>föreskrifter om Sprängarbete</i>, AFS 2007:1), entry into force on 1.7.2007 and amended in AFS 2014:1, entry in force 1.7.2014. • Provisions on Chemical hazards (<i>föreskrifter om kemiska risker</i>, AFS 2011:19), entry into force on 1.7.2012, and amended in AFS 2014:5, entry in force 1.7.2014. • Provisions on OELs (<i>föreskrifter om hygieniska gränsvärden</i>, AFS 2011:18), entry into force on 1.7.2012 • Provisions on Pregnant and breastfeeding employees (<i>föreskrifter om Gravida och ammande arbetstagare</i>, AFS 2007:5; in force 1.4.2008) and amended in AFS 2014:24, entry in force 1.7.2014. 		
Council Directive 92/91/EEC (mineral-extracting industries through drilling)	○		<p>AFS 2010:1</p> <p><i>Other relevant applicable legislation:</i></p> <ul style="list-style-type: none"> • Provisions on Quartz (<i>föreskrifter om Kvarts</i>, AFS 1992:16), entry into force on 1.1.1993, as amended in AFS 2005:10 (entry into force on 1.7.2005) and in AFS 2014:4, entry in force 1.7.2014 • Provisions on Blasting (<i>föreskrifter om Sprängarbete</i>, AFS 2007:1), entry into force on 1.7.2007 and amended in AFS 2014:1, entry in force 1.7.2014. • Provisions on Chemical hazards (<i>föreskrifter om kemiska risker</i>, AFS 2011:19), entry into force on 1.7.2012, and amended in AFS 2014:5, entry in force 1.7.2014. • Provisions on OELs (<i>föreskrifter om hygieniska gränsvärden</i>, AFS 2011:18), entry into force on 1.7.2012 	Y	
Council Directive 92/29/EEC (medical	○		Provisions on health care and pharmacies on ships (<i>Sjöfartsverkets föreskrifter och allmänna råd om sjukvård och apotek på fartyg</i> , SJÖFS 2000:21), entry into force on	Y	

Directive	O	S	Transposing National Legislation	Legislation prior to transposition (Y/N)	Infringement proceedings
treatment on board vessels)			<p>1.1.2001. (SJÖFS 2000:21)</p> <p><i>Other relevant applicable legislation:</i></p> <ul style="list-style-type: none"> • Provisions on training and (recognized) competence for personnel at sea (föreskrifter och allmänna råd om utbildning och behörigheter för sjöpersonak, TSFS 2010:20), entry into force on 1.4.2010. • Provision of living and economy premises on vessels (Sjöfartsverkets kungörelse om bostäder och ekonomilokaler m.m. på fartyg, SJÖFS 1970:A4), entry into force on 1.7.1970, as amended in SJÖFS 1992:6 (entry into force on 1.6.1992) 		
Council Directive 93/103/EC (work on board fishing vessels)		S	<p><i>Note: Directive 93/103/EC is fully transposed but through a large number of regulations. All workplaces – fishing and other vessels included - have to comply with all (relevant) work environment provisions issued by SWEA. Additionally, the Swedish Transport Agency (and formerly the Swedish Maritime Administration, now a part of the Transport Agency) issues provisions on seaworthiness and other regulations for vessels. The latter provisions for vessels, that transpose 93/103/EC directly are listed below:</i></p> <p>The Sea act (Sjölag, SFS 1994:1009), entry into force on 1.7.1994</p> <p>The Vessel safety Act (Fartygssäkerhetslag, SFS 2003:364), entry into force on 21.7.2003, as amended in SFS 2003:986 (entry into force on 1.9.2014)</p> <p>The Vessel Safety Ordinance (Fartygssäkerhetsförordningen, SFS 2003:438), entry into force on 21.7.2003, as amended in SFS 2013:991 (entry into force on 2.1.2014)</p> <p>Provision of living and economy premises on vessels (Sjöfartsverkets kungörelse om bostäder och ekonomilokaler m.m. på fartyg, SJÖFS 1970:A4), entry into force on 1.7.1970, as amended in SJÖFS 1992:6 (entry into force on 1.6.1992)</p> <p>Provisions on Fire safety on board (Föreskrifter om brandskydd ombord, SJÖFS 1970:A13), entry into force on 1.9.1970, as amended in SJÖFS 2000:7</p>	Y	

Directive	O	S	Transposing National Legislation	Legislation prior to transposition (Y/N)	Infringement proceedings
			<p>(entry into force on 15.2.2000)</p> <p>Provisions on lifting equipment on board (<i>Sjöfartsverkets kungörelse om lyftinrättningar på fartyg</i>, SJÖFS 1973:A9), entry into force on 1.10.1973</p> <p>Provisions on safety on fishing vessels of 24 meters or more (<i>Sjöfartsverkets föreskrifter och allmänna råd om säkerheten på fiskefartyg som har en längd av 24 meter eller mer</i>, SJÖFS 1999:27), entry into force on 3.2.2000, as amended in SJÖFS 2002:16, SJÖFS 2006:2, SJÖFS 2006:21, SJÖFS 2008:43 and SJÖFS 2009:35</p> <p>Provisions on refrigerators using ammonia on board (<i>Sjöfartsverkets föreskrifter och allmänna råd om kylanläggningar med ammoniak på fartyg</i>, SJÖFS 2004:12), entry into force on 16.7.2004, as amended in SJÖFS 2008: 51 (entry into force on 1.1.2009)</p> <p>Provisions on Life saving equipment (<i>Sjöfartsverkets kungörelse med föreskrifter om livräddningsutrustning och anordningar på fartyg som inte omfattas av den internationella konventionen om säkerhet för människoliv till sjöss</i>, SJÖFS 2004: 30), entry into force on 19.8.1996</p> <p>Provisions on safety equipment and safety measures on vessels (<i>Sjöfartsverkets föreskrifter och allmänna råd om skyddsanordningar och skyddsåtgärder på fartyg</i>, SJÖFS 2005:25), entry into force on 1.1.2006</p> <p>Provisions on hull construction, stability and free board (<i>Sjöfartsverkets föreskrifter och allmänna råd om skrovkonstruktion, stabilitet och fribord</i>, SJÖFS 2006:1), entry into force on 1.3.2006</p> <p>Provisions on Machine and electric installation and periodically unmanned machineroom (<i>Sjöfartsverkets föreskrifter och allmänna råd om maskininstallation, elektrisk installation och periodvis obemannat maskinrum</i>, SJÖFS 2008:81), entry into force on 1.12.2008 as amended in TSFS 2009: 117 (entry into force on 1.1.2010.</p>		
Council Directive	○		Provisions on Pregnant and breastfeeding employees (<i>föreskrifter om Gravida och</i>	Y	

Directive	O	S	Transposing National Legislation	Legislation prior to transposition (Y/N)	Infringement proceedings
92/85/EEC (pregnant/breastfeeding workers)			ammande arbetstagare, AFS 2007:5), entry into force on 1.4.2008 and amended in AFS 2014:24, entry in force 1.7.2014. (AFS 2007:5)		
Council Directive 91/383/EEC (temporary workers)	○		<i>Note: The Work Environment Act (WEA) and all provisions issued by SWEA under mandate in this act apply equally to temporary employees</i>	Y	
Council Directive 94/33/EC (young people at work)	○		Provisions on the Work environment of minors (<i>Föreskrifter om minderårigas arbetsmiljö</i> , AFS 2012:03), entry into force on 1.2.2013. (AFS 2012:03)	Y	

1.2 GENERAL INSTITUTIONAL FRAMEWORK

This section presents key policy documents and describes the institutional structure together with roles and responsibilities of the main authorities and other stakeholders. It reviews all mechanisms and structures for coordination amongst those authorities in the framework of the transposition and implementation of the directives. Control and enforcement authorities will be covered under Section 5 below.

The Swedish Government has devised a renewed national action plan for working environment policy for the period 2010 – 2015. In addition, there are several policy documents which all refer to major changes in the work environment policies, often being the result of public inquiries.

The Swedish Work Environment Authority (SWEA) is the key actor responsible for the transposition of EU Directives on the work environment and for implementing and enforcing occupational health and safety legislation.

With regard to OHS services, it is the employer who is ultimately responsible for the working environment. The law especially emphasizes the employer's responsibility for internal control, introduction, instruction, training and education, job modification, rehabilitation and consideration for the worker's individual qualifications and conditions. The law points out that employers should seek external help on safety and health matters when their own operational competence is not sufficient. However, it is left to the employers' own discretion to judge whether this is needed. Internal control means that an employer should ensure that he is intergrating health and safety measures in his day-to-day management. In other words, employers are generally not obliged to provide occupational health services by law. If the employer lacks the necessary competencies in house to perform prevention work, he/she may use an external occupational health service or expert. The law defines occupational health service as an independent expert resource in the field of work environment and rehabilitation and describes the role of occupational health services as advisory. The occupational health care services shall devote special work to prevent and eliminate health hazards in workplaces and also have the competence to identify and describe the relationship between work environment, organisation, productivity and health.

1.2.1 Key policy documents

The Swedish work environment system stems from the late 1800s, but its present form was organised through major reforms in the 1970s. As with most other political reforms, these were mainly investigated and proposed by public inquiries. The government and parliament largely enacted these proposals into the Work Environment Act WEA. Later public inquiries have since resulted in major changes in the work environment policies. It should be added that some other government documents also have impacted policies and practices on the work environment. The following documents are the most important ones:

1. **SOU 1972:86 *Bättre arbetsmiljö***; 'Better work environment', a public inquiry, dominated by the social partners, that much strengthened the position of union appointed safety representatives enlarged the system of regional safety representatives to all of working life (Frick & Walters, 1998) and strengthened the labour inspection and its supervision.
2. **SOU 1976:1 *Arbetsmiljölagen***; 'Work environment act', the final report of the same public inquiry that proposed the still largely intact Act with its broad work environment concept.
3. **SOU 1990:49 *Arbete och hälsa***; 'Work and health', the public inquiry proposing the introduction of SWEM, which is the most important change to the WEA.
4. **Ds 2001:28 *Långsiktig verksamhetsutveckling ur ett arbetsmiljöperspektiv***; 'Long term development of business and public operation from a work environment perspective', an internal but still broadly based inquiry within the government that proposed an action plan with several changes to renew work environment policies. It was largely a reaction to sharply rising sickness absenteeism that was very costly for the public social insurance, and the action plan focused much on improvement of the psychosocial work environment.
5. **Prop. 2006/07:1 *Budgetproposition för 2007***; The new centre-right government's first budget bill that cut the funding for SWEA by a third over three years, closed the National Institute for Working Life and abolished the funding for central training of safety representatives.
6. **Regeringens skrivelse 2009/10:248 *En förnyad arbetsmiljöpolitik med en national handlingsplan 2010-2015***; The government's letter to parliament on a renewed work environment policy with a national action plan for 2010-2015. This proposed e.g. more focus on information and on the economic benefits of good work environments as strategies to reduce risks at work.
7. **SOU (2011: 57). *En bättre arbetsmiljö genom effektivare sanktioner***; 'A better work environment through more effective sanctions', an inquiry that has resulted in a new sanctioning system with effective (but adapted to employer size) and more direct fines against clear-cut violations of provisions issued under WEA, which will come into force from 1 July 2014.
8. **SOU 2013:25 *Åtgärder för ett längre arbetsliv. Slutbetänkande av Pensionsåldersutredningen***; 'Measures for a longer working life. Final report of the inquiry into the retirement/pension age'. Apart from insurance and other financial measures to make people work longer, this public inquiry also looked at how poor work environments reduced the health and work ability of large groups and hence obstructed the broadly supported political goals to raise the retirement age in line with a longer life. The inquiry therefore proposed increased funding, especially for SWEA.

In addition, the Swedish Government has devised a renewed national action plan for working environment policy for the period 2010 – 2015 and currently there is a half-time follow-up being

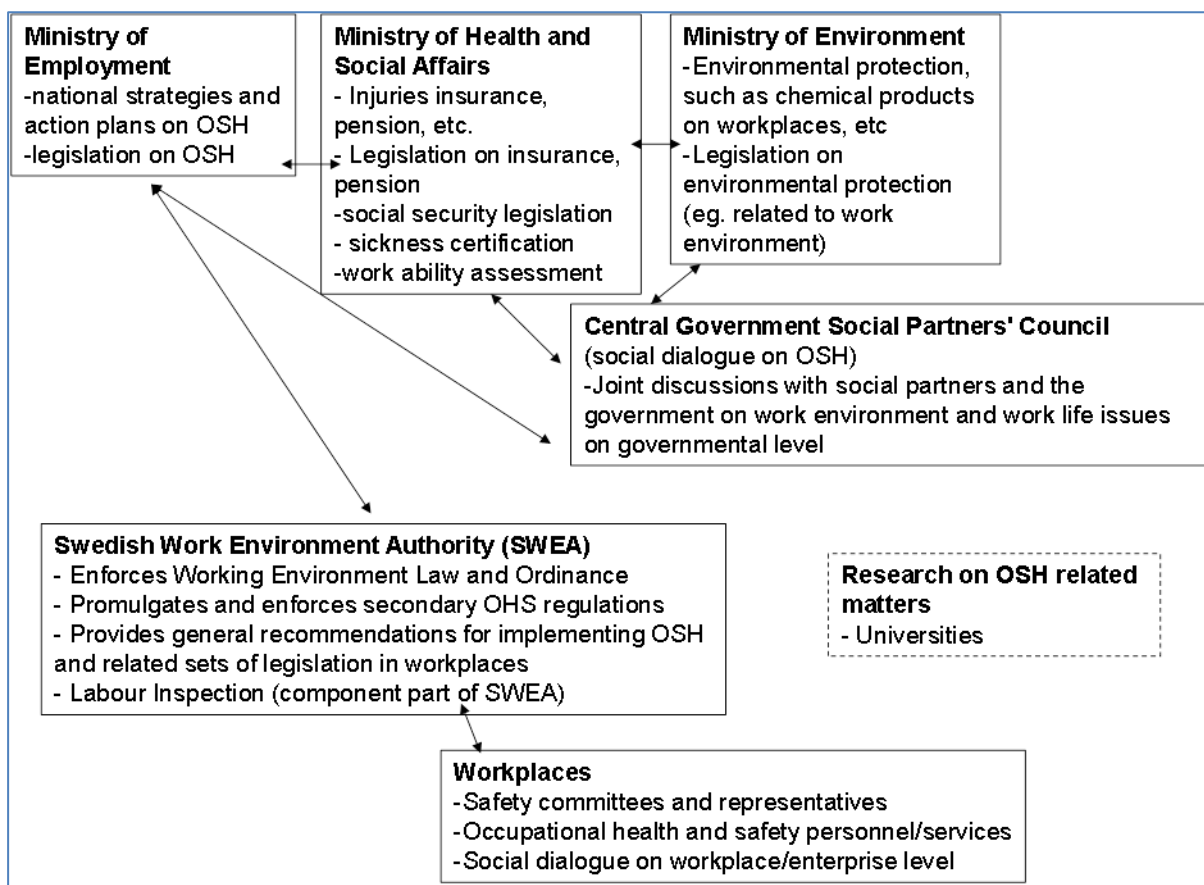
carried out. This national action plan emphasizes a working environment that prevents ill health and accidents, prevents people being excluded from work, takes account of people's different situations, and helps both individuals and the organisation to develop.³

1.2.2 Main authorities and stakeholders

The **Swedish Work Environment Authority (SWEA)**, which includes the labour inspection, is responsible for specifying the requirements of the Work Environment Act (WEA) in the various provisions and for promoting their implementation. The government has cut SWEA's funding by some 35-40 % since 2006. This has much reduced the authority's central expertise and the rate of inspectors, which is now 0.6 per 10.000 employees (as compared to around 1.8 in Norway and Denmark).

The **Ministry of Employment** only occasionally intervenes in this process. SWEA is thus the key actor responsible for the transposition of EU Directives on the work environment.

Other actors, such as the **Ministry of Health and Social Affairs** and the **Swedish Social Insurance Agency**, are involved in issues and processes around the management of employee health, such as absence due to sickness, rehabilitation and early retirement. However, their policies on these aspects do not much interfere with the implementation of the directives.



Source: "OSH infrastructure in Sweden" report, EU OSHA⁴

The **occupational health services**, to which two third of all employees have access, mainly provide health care and services and rarely directly support and contribute to the implementation of SWEA's

³ http://oshwiki.eu/wiki/OSH_system_at_national_level_-_Sweden

⁴ Document "OSH Infrastructure in Sweden" from EU-OSHA Extranet.

provisions.

The **Trade Union Federations** are:

- *Landsorganisationen (LO)*, which is the Swedish Trade Union Confederation bringing together blue collar workers.
- *Tjänstemännens Centralorganisation (TCO)*, which is the Swedish Confederation of Professional Employees bringing together white collar employees.
- *Sveriges Akademikers Centralorganisation (SACO)*, which is the Swedish Confederation of Professional Associations, bringing together employees with academic qualifications.

The **Central Employer Organisations** are:

- *Svenskt Näringsliv (SN)*, which is the Confederation of Swedish Enterprises bringing together private employers. Its around 60.000 member firms employ some 1.7 employees, which is half of the 70 % working in the private sector. 30.000 of these companies are micro-firms with less than 10 employees with, in all, about 118.000 employees. However, most small (i.e. mainly micro) firms are not organized.
- *Sveriges Kommuner och Landsting (SKL)*, which is the Swedish Association of Local Authorities and Regions.
- *Arbetsgivarverket*, which is the Swedish Agency for Government Employers bringing together all employers in the government sector.

Prevent is a joint body of the private social partners. It is Sweden's leading provider of knowledge and training in the field of occupational health and safety.

1.2.3 Coordination

SWEA has an extensive dialogue with the social partners; mainly around the formulation of the provisions but also, to some extent, on issues such as the implementation of the provisions by SWEA. The social partners are highly organised with some 70 % in the unions and some 90 % of all employees working under a collective agreement (Kjellberg, 2014).

The social partners cooperate on many issues, especially on improving the work environment, which they promote through information, R&D projects and training. This is done by each organization separately but also through joint bodies. Most of this cooperation occurs at the industry level, where there are several joint bodies, often with their own funding mechanisms.

The social partners in the private sector also own an insurance company AFA Insurance (www.afaforsakring.se). Insurance plans are based on collective agreements between Sweden's labour market parties. They insure employees not only within the private sector but also within the public sector. There are Sickness Insurance, Work Injury Insurance, Life Insurance. AFA Insurance also support research project in this area for about 150 million SEK (Swedish crowns) per year.

1.3 LEGAL COVERAGE, OBSERVED DISCREPANCIES AND MORE STRINGENT MEASURES

1.3.1 Observed discrepancies, more stringent and more detailed measures

The following tables describe observed discrepancies between the Directive's requirements and the transposing legislation and cases where the national legislation provides for more stringent, broader or more detailed measures than the Directive's ones. There is one table per directive.

Observed discrepancies between the Directive's requirements and the transposing legislation cover instances where the text of the national transposing legislation is different from the transposed Directive's provisions. This difference could lead to the non-application or partial application of the relevant CPM due to contradiction between the national provision and the corresponding one in the Directive. They are considered for each CPM, scoping requirements and limit values when relevant (tables 1-2 to 1-25).

More stringent provisions set requirements which go beyond the requirements of the Directive e.g. more severe limit values. This review covers systematically the scope and relevant definitions as well as provisions setting limit values.

The identification of more specific requirements is different from more stringent measures, as it relates to the extent to which national law includes more detailed mechanisms for the implementation of the CPMs. In such cases, the main requirements of the Directive are fully and effectively transposed and the Member States have set up more detailed rules on e.g. procedures, responsibilities, etc.

Swedish transposing legislation has introduced many more detailed or more stringent measures or requirements than what is prescribed in the various OSH Directives. Also, two instances of observed discrepancies have been noted, in particular:

- Swedish legislation transposing Directive 90/270/EEC (display screen equipment) has defined more stringently the scope of the legislation, as exclusions are set more broadly: the Swedish provisions do not apply to work done using an oscilloscope or a digital or text presentation display on a measuring instrument, typewriter, cash register, pocket calculator or such like. Nor do they apply to portable systems during brief, non-permanent use at a workplace. On the other hand, some of the Directive's exclusions are not included in the Swedish legislation, such as drivers' cabs or control cabs for vehicles or machinery; computer systems on board a means of transport; and computer systems mainly intended for public use.
- With regard to Directive 91/383/EEC (temporary workers), as the Swedish legislation does not make a distinction by type of employment, protective and preventive services will not be informed about workers with temporary or fixed-duration contracts.

With regard to the Framework Directive scope, the Swedish legislation WEA covers all employees in all sectors, including e.g. police, fire fighters and military personnel. However, the Act also takes into consideration the nature of the work so that, in cases of emergency, risks can be allowed that are otherwise prohibited. The WEA further covers domestic servants and school children. Provisions relating to risk assessment are more detailed. The risks to be taken into account are, as a rule, described in a more specific manner in the Swedish transposing legislation, and the employer must also assess risks after any changes may have affected them. Further, the employer shall immediately carry out the measures which are needed for the prevention of ill-health and accidents at work and to achieve a satisfactory work environment. Where the risks entailed by the work are serious, then there shall be written instructions for the work. Similarly, Sweden has set more detailed requirements in relation to preventive and protective services. The employer shall allocate the tasks in the activity in such a way that one or more managers, supervisors or other employees are tasked with working for the prevention of risks at work and the achievement of a satisfactory working environment. When competence within the employer's own activity is insufficient for systematic work environment management or for work relating to job modification and rehabilitation, the employer shall engage occupational health services or corresponding expert assistance from outside. With regard to information for workers, the employer shall give the employees, safety delegates and pupil safety delegates the possibility of participating in systematic work environment management. In fact, the right for participation of workers and especially their safety representatives is stronger in the WEA than in the Framework Directive. Safety reps shall be appointed by the local unions in all workplaces from 5 employees. However, as micro- or small businesses do not have local unions, these safety representatives are also not elected. Joint work environment committees shall be set up at all

workplaces from 50 employees. Generally, Swedish legislation includes more requirements than the Framework Directives as employers need to integrate OHS within their general management control and their OHS provisions are improved through yearly audits.

More detailed requirements on training of workers are especially noted in relation to Swedish legislation transposing Directives 2009/148/EC (asbestos), 2004/37/EC (carcinogens or mutagens) and 1998/24/EC (chemical agents at work). Especially handling asbestos will require special training as permits are not granted unless this special training has taken place.

More detailed requirements on health surveillance are especially noted in relation to Swedish legislation transposing Directives 2009/148/EC (asbestos), 2004/37/EC (carcinogens or mutagens) and 1998/24/EC (chemical agents at work). Health controls are also required for workers exposed to physical exposures, to vibrations (Directive 2002/44/EC), for normal water-diving but also for smoke- and chemical divers, for working at heights in masts and poles, and for night work. Workers exposed to noise shall also get hearing controls.

With regard to Directive 89/654/EEC (workplace), the scope of the transposing legislation is broader, as it includes all buildings, sheds and adjunct sites used for work.

With regard to Directive 2009/104/EC (work equipment), the Swedish transposing legislation states that risks are again to be assessed if a follow-up shows that actual risks differ from the previous risk assessment, if measures taken haven't been sufficient or when working processes or the operation are changed. The Swedish provisions also require that all necessary prevention is taken after the RA. In relation to training of workers, it is required that the employee shall have documented practical and theoretical competence over the risky equipment before its safe use.

In relation to Directive 89/656/EEC (PPE), the Swedish transposing legislation includes less exclusions than the Directive's. Sweden also sets additional requirements in relation to information for workers.

Directive 1999/92/EC (ATEX) has been further detailed for risk assessment: the RA is reviewed when any changes occur, the content of the RA is more detailed and the persons in charge of the RA must have suitable training and competence.

With regard to Directive 90/269/EEC (manual handling of loads), the Swedish transposing legislation deals with all risks within musculoskeletal ergonomics, all combination of work movements, postures, positions and workloads. Scope of that AFS is hence much broader and handling of loads is just a small section. The Swedish legislation also details that the risks in the RA are to be assessed alone and in combination, with particular notion of their duration, intensity and frequency. More details are further provided in relation to the content of information for workers and the scope of training of workers.

The Swedish legislation sets further details on the risk assessment of Directive 90/270/EEC (display screen equipment), which is to be reviewed one a year. Eyesight tests at regular intervals are also foreseen for all employees who normally work more than one hour per day at display screens.

With regard to Directives 2002/44/EC (vibration) and 2003/10/EC (noise), the Swedish legislation sets additional requirements in relation to risk assessment (practical guidelines, risks to be taken into account, content) and health surveillance. The transposing legislation includes more stringent values for whole-body vibration and peak max, respectively.

Directive 2004/37/EC (carcinogens or mutagens) has been further detailed for risk assessment (risks to be taken into account, content, and the requirement that chemical products and materials shall be chosen so that chemical risks, along with other risks connected to the work in total become as small as

possible), information for workers and health surveillance. The transposing legislation also sets more stringent limit values for benzene, vinyl chloride and wood dust.

With regard to Directive 98/24/EC (chemical agents at work), the Swedish transposing legislation details the risks to be taken into account in the risk assessment, and the written handling and safety instructions.

With regard to Directive 2009/148/EC (asbestos), Sweden has set additional requirements in relation to risk assessment (risks to be taken into account), the scope and content of training of workers (requiring asbestos training certificates and supplementary asbestos training at least every five years), and health surveillance (certificates of medical surveillance are obliged for all persons who take part in the demolition work).

More detailed requirements are also set in the Swedish legislation transposing Directive 2000/54/EC (biological agents). Special procedures are set out for the risk assessment; everyone doing work which can entail risks caused by biological agents in the workplace shall be sufficiently informed of these risks and how to avoid them; and more detail is provided on consultation of workers.

With regard to the scope of Directive 92/57/EEC (temporary or mobile construction sites), the Swedish legislation applies to all project preparation and design of building or civil engineering works in so far as this affects health and safety conditions (the work environment) for the persons doing the work. In relation to information for workers, information concerning the building or civil engineering work, concerning the rules to be applied and concerning health and safety measures taken or planned shall be supplied to the employees. In general, Sweden has regulations in some areas that do not have equivalent provisions in the Directive.

Directives 92/104/EEC (surface and underground mineral-extracting industries) and 92/91/EEC (mineral-extracting industries through drilling), Swedish transposing legislation states that, before rock and mining work commences, an investigation and risk assessment shall be carried out with special regard to geological, rock technical, rock mechanical and other conditions, to the extent necessary for planning of the safe conduct of ongoing work. Documented training also needs to be provided before the use of machines and vehicles used for rock and mining work. In general, Sweden has also issued more detailed regulations on good ventilation, remote control, mine lifts, etc.

The scope of the Swedish legislation transposing Directive 92/29/EEC (medical treatment on board vessels) is broader as a sick bay is stipulated for all ships between 200 and 500 tonnes, as long as this is reasonable considering the ships' construction. A sick bay is mandatory for all ships over 500 tonnes. Ships without a doctor shall allocate medical care to one or more members of the crew, which shall have had medical training. Also the scope in relation to Directive 93/103/EC (work on board fishing vessels) is broader, as the national transposing legislation applies to all fishing vessels which have employers.

The national legislation goes beyond Directive 92/85/EEC (pregnant/breastfeeding workers) by specifying a list of prohibited ergonomic risk exposures and by prohibiting risky psychosocial exposures, as well as underground mining.

Finally, with regard to Directive 94/33/EC (young people at work), the transposing legislation applies to all work done for employers, principals, customers and those responsible for schools who let minors do work for them or study. Provisions relating to risk assessment details that the RA should take into account the individual physical and psychological maturity of the minor when looking at the work-tasks. Also regular medical controls are required. Further, the work of minors should be supervised by a suitable adult person with knowledge of the task.

Table 1- 2 Directive 89/391/EEC (Framework Directive) – Observed discrepancies, more stringent and more detailed requirements

	Main provisions	Observed discrepancies	More detailed or broader requirements, including more stringent
Scope and definitions (Art.1 and 3)	<p>Art.1</p> <p>1. All sectors of activity, both public and private (industrial, agricultural, commercial, administrative, service, educational, cultural, leisure, etc.).</p> <p>2. Not be applicable where characteristics peculiar to certain specific public service activities, such as the armed forces or the police, or to certain specific activities in the civil protection services inevitably conflict with it.</p> <p>Art.3</p> <ul style="list-style-type: none"> • Apply to any person employed by an employer, including trainees and apprentices but excluding domestic servants; • Employer: any natural or legal person who has an employment relationship with the worker and has responsibility for the undertaking and/ or establishment; 	No observed discrepancies have been identified.	<ul style="list-style-type: none"> • Are specific public service activities (such as armed forces or police) included in the scope of the legislation which are not in the Directive? <p>1. WEA covers all employees in all sectors, including e.g. police, fire fighters and military personnel. However, the Act also takes into consideration the nature of the work. In all kinds of emergencies, risks can therefore be allowed that are otherwise prohibited (ch. 2, § 1).</p> <p>2. WEA also covers school children in schools, work in persons' homes and prisoners doing work.</p> <ul style="list-style-type: none"> • Does the legislation include domestic servants in its scope? <p>Yes.</p> <ul style="list-style-type: none"> • Is the definition of employer broader than the Directive's? <p>No.</p> <ul style="list-style-type: none"> • Other additional or more detailed requirements <p>No.</p>
Conducting a risk assessment Art. 6(3), 9(1)(a)	<p>Art.6</p> <ul style="list-style-type: none"> • The employer must, taking into account the nature of the activities of the enterprise and/ or establishment evaluate the risks to the safety and health of workers, inter alia in the choice of work equipment, the chemical substances or preparations used, and the fitting-out of work places. <p>Art.9</p> <ul style="list-style-type: none"> • The employer shall be in possession of an assessment of the risks to safety and health at work, including those facing groups of 	No observed discrepancies have been identified.	<ul style="list-style-type: none"> • Are the risks to be taken into account in the assessment described in a more specific manner than in the Directive? <p>Yes, risk assessment is a general requirement in several material provisions, e.g. on chemical risks (AFS 2011:19) and ergonomic risks (AFS 2012:2).</p> <ul style="list-style-type: none"> • Is the content of the risk assessment more detailed than described in the Directive? <p>No. The WEA mentions psychosocial risks, but so does the FD. And the provisions on SWEM do not specify the RA. However,</p>

	Main provisions	Observed discrepancies	More detailed or broader requirements, including more stringent
	workers exposed to particular risks.		<p>this is by their nature done in provisions on specific types of risks, e.g. those two mentioned above but also AFS 2005:16 on noise.</p> <ul style="list-style-type: none"> • Is a more specific methodology for risk assessment provided in the legislation? <p>No, not in SWEM. But the provisions on various risks often contain RA requirements (on e.g. chemicals and noise). These are more specific on how to measure and assess the risks, through the use of e.g. audiometers and other technical measuring equipment.</p> <ul style="list-style-type: none"> • Are the sources of information and persons in charge of the risk assessment described in the legislation in a more specific manner than in the Directive? <p>No</p> <ul style="list-style-type: none"> • Other additional or more detailed requirements <p>Yes, two:</p> <p><i>The employer must also assess risks when planning changes that may affect the risks at work (SWEM § 8).</i></p> <p><i>The employer shall carry out, immediately or as soon as is practically possible, the measures which are needed for the prevention of ill-health and accidents at work. The employer shall also take other measures as are needed to achieve a satisfactory work environment (SWEM § 10).</i></p>
Ensuring preventive and protective services Art.7(1)	<ul style="list-style-type: none"> • The employer shall designate one or more workers to carry out activities related to the protection and prevention of occupational risks for the undertaking and/ or establishment. 	No observed discrepancies have been identified.	<ul style="list-style-type: none"> • Does the legislation define in more specific terms who shall be designated? <p>Yes: SWEM § 6 states that:</p> <p><i>The employer shall allocate the tasks in the activity in such a way that one or more</i></p>

	Main provisions	Observed discrepancies	More detailed or broader requirements, including more stringent
	<ul style="list-style-type: none"> • Designated workers may not be placed at any disadvantage because of their activities related to the protection and prevention of occupational risks and shall be allowed adequate time to enable them to fulfil their obligations. • If such protective and preventive measures cannot be organized for lack of competent personnel in the undertaking and/ or establishment, the employer shall enlist competent external services or persons. • He shall inform them of the factors known to affect, or suspected of affecting, the safety and health of the workers. • In all cases (internal/external services), they must have the necessary capabilities/ aptitudes and means and must be sufficient in number to deal with the organization of protective and preventive measures. MS must define the necessary capabilities and aptitudes and determine the sufficient number. • The protection from, and prevention of, the health and safety risks shall be the responsibility of one or more workers, of one service or of separate services whether from inside or outside the undertaking and/ or establishment. The worker(s) and/ or agency(-ies) must work together whenever necessary. • MS may define, in the light of the nature of the activities and size of the undertakings, the categories of undertakings in which the employer, provided he is competent, may himself take responsibility. 		<p>managers, supervisors or other employees are tasked with working for the prevention of risks at work and the achievement of a satisfactory working environment.</p> <p>The employer shall see to it that the persons allotted these tasks are sufficient in number and have the authority, the resources and the competence that are needed. In addition, the stipulations in Appendix 1 shall be complied with.</p> <p>The allocation of tasks shall be documented in writing if there are at least ten persons employed in the activity.</p> <p>SWEM appendix 1 further requires:</p> <p>The persons to whom the employer has allotted tasks relating to management of the working environment, as provided in Section 6, shall</p> <ul style="list-style-type: none"> - be given access to summaries as referred to in section 9 of these Provisions and to work injury reports pursuant to the Work Injuries Insurance Act (1976:380), - be given access to information concerning the preventive work environment measures in the activity and concerning measures stipulated by the Swedish Work Environment Authority, and shall - be allowed to convey viewpoints to the employer concerning <ul style="list-style-type: none"> · the selection of other employees with tasks relating to management of the working environment, · the selection of the employees needed to carry out first aid, fire-fighting and evacuation, · the engagement of occupational

	Main provisions	Observed discrepancies	More detailed or broader requirements, including more stringent
			<p>health services or corresponding expert assistance from outside,</p> <ul style="list-style-type: none"> · the structuring of work environment management , · risk assessments, · measures for the prevention of ill-health and accidents, · personal protective equipment which may be needed, · summaries and work injury reports, · the information to which they need access concerning preventive work environment measures in the activity and concerning measures stipulated by the Swedish Work Environment Authority, and · the design of information concerning these matters. <ul style="list-style-type: none"> • Are the conditions for resorting to external services more specifically defined in the legislation? <p>Yes. SWEM Section 12: When competence within the employer's own activity is insufficient for systematic work environment management or for work relating to job modification and rehabilitation, the employer shall engage occupational health services or corresponding expert assistance from outside. When occupational health service or corresponding expert assistance are engaged, they shall be sufficient in scope and shall have sufficient competence and resources for this work. In addition, the stipulations in Appendix 2 shall be complied with, which requires:</p>

	Main provisions	Observed discrepancies	More detailed or broader requirements, including more stringent
			<p>The employer shall see to it that the occupational health services or corresponding outside expert assistance engaged as provided in Section 12</p> <ul style="list-style-type: none"> - receive information concerning the factors affecting or suspected of affecting the employees' health and safety, - have access to information concerning <ul style="list-style-type: none"> · current work environment risks, · preventive measures, and · the measures taken to appoint, train and equip the employees needed to carry out first aid, fire-fighting and evacuation. <p>The information shall concern both the activity as a whole and each individual workplace or each individual job.</p> <ul style="list-style-type: none"> • Are the competences required from workers or external services defined in the legislation? <p>Yes, WEA ch. 3, section 2c: By "occupational health services " is meant an independent expert resource in the domains of the working environment and rehabilitation. Occupational health services shall in particular work for the prevention and elimination of health risks at workplaces, and shall have the competence to identify and describe connections between the working environment, organisation, productivity and health.</p> <ul style="list-style-type: none"> • Are criteria to define the resources (number of persons designated) provided in the legislation? <p>No</p>

	Main provisions	Observed discrepancies	More detailed or broader requirements, including more stringent
			<ul style="list-style-type: none"> Other additional or more detailed requirements No
Information for workers Art.10	<ul style="list-style-type: none"> The employer shall ensure that workers receive all the necessary information concerning the safety and health risks and protective and preventive measures and activities in respect of the establishment and each type of workstation. The employer shall take appropriate measures so that employers of workers from any outside undertakings and/ or establishments engaged in work in his undertaking and/ or establishment receive similar information The employer shall take appropriate measures so that workers with specific functions in protecting the safety and health of workers, or workers' representatives with specific responsibility for the safety and health of workers shall have access to the risk assessment and protective measures, to the list of and reports on occupational accidents and the information yielded by protective and preventive measures, inspection agencies and bodies responsible for safety and health. 	No observed discrepancies have been identified.	<ul style="list-style-type: none"> Does the legislation provide for specific conditions (e.g. size of the establishments) in relation to workers information? No Is the content or form of information to workers further specified? No Are there more detailed requirements relating specifically to one of the individual directives? Yes, on 1998/24 chemical agents and 2004/37 carcinogens, AFS 2011: 19 (§ 13) on chemical risks requires adequate information. See also below on special training requirements (FD Art 12). Other additional or more detailed requirements SWEM, section 7: <i>Where the risks entailed by the work are serious there shall be written instructions for the work.</i> Section 4 states that: <i>The employer shall give the employees, safety delegates and pupil safety delegates the possibility of participating in systematic work environment management.</i> Workers' representatives have special rights in the WEA, also to get information. See below on consultation, FD article 11.
Training of workers Art.12	<ul style="list-style-type: none"> The employer shall ensure that each worker receives adequate safety and health training during working hours, in particular in the form of information and instructions 	No observed discrepancies have been identified.	<ul style="list-style-type: none"> Is more specific information on the scope of training provided in the legislation? No, issues of training and information are handled mainly by the social partners.

	Main provisions	Observed discrepancies	More detailed or broader requirements, including more stringent
	<p>specific to his workstation or job and adapted to any changes in technology or risks and repeated periodically if necessary.</p> <ul style="list-style-type: none"> • The employer shall ensure that workers from outside undertakings and/ or establishments engaged in work in his undertaking and/ or establishment have in fact received appropriate instructions regarding health and safety risks. • Workers' representatives with a specific role in protecting the safety and health of workers shall be entitled to appropriate training during working hours or in accordance with national practice either within or outside the undertaking and/ or the establishment. 		<ul style="list-style-type: none"> • Are there specific requirements as to the competence of trainers provided in the legislation? No • Are there more detailed requirements relating specifically to one of the individual directives? Yes. In relation to Dir. 2009/148 asbestos, Dir. 2004/37 carcinogens and Dir. 1998/24 chemical agents, there are requirements for training in AFS 2005: 18 epoxy (hårdplast; § 6), and 2011:19 chemical risk (§13). AFS 2006: 1 on asbestos is even stricter. To handle asbestos requires permits and those are not granted unless all concerned have special training (§ 14--28). • Other additional or more detailed requirements No
Health surveillance Art.14	<ul style="list-style-type: none"> • The employer shall ensure that workers receive health surveillance appropriate to the health and safety risks they incur at work. • These measures shall be such that each worker, if he so wishes, may receive health surveillance at regular intervals. • Health surveillance may be provided as part of a national health system. 	No observed discrepancies have been identified.	<ul style="list-style-type: none"> • Are there more detailed requirements relating specifically to one of the individual directives? Yes, again asbestos (2009/148) chemical agents (1998/ 24) and carcinogens (2004/37. AFS 2005:6 on medical health controls specifies such controls for work with heavy metals, with epoxy and dust that may cause fibrosis, such as of silica, asbestos and some fibres. Health controls are also required for workers exposed to physical exposures, to vibrations (2002/44), for normal water-diving but also for smoke- and chemical divers, for working at heights in masts and poles, and for night work. Workers exposed to noise shall also get hearing controls according to AFS 2005:16 on noise.

	Main provisions	Observed discrepancies	More detailed or broader requirements, including more stringent
			<ul style="list-style-type: none"> Other additional or more detailed requirements No
Consultation of workers Art.11, 6(3)(c)	<ul style="list-style-type: none"> Employers shall consult workers and/ or their representatives and allow them to take part in discussions on all questions relating to safety and health at work. Workers' representatives with specific responsibility for the safety and health of workers shall have the right to ask the employer to take appropriate measures and to submit proposals to him to that end to mitigate hazards for workers and/ or to remove sources of danger. They shall have adequate time off work, without loss of pay, and the necessary means to enable them to exercise their rights and functions. Workers and/ or their representatives are entitled to appeal to the authority responsible for safety and health protection at work if they consider that the measures taken and the means employed by the employer are inadequate for the purposes of ensuring safety and health at work. Workers' representatives must be given the opportunity to submit their observations during inspection visits by the competent authority. 	No observed discrepancies have been identified.	<ul style="list-style-type: none"> Is balanced⁵ participation reflected in the national legislation? Are specific criteria put in place? Yes. The right for participation of workers and especially their safety representatives are stronger in the WEA than in the FD. WEA ch. 6 mandates a local cooperation on the work environment. To enable this cooperation the union (normally) shall appoint a safety representative in all workplaces from five employees. These reps are given the right to e.g. participate in the planning of a list of changes (i.e. all that may affect the work environment), to be informed of such changes, to be properly trained (a joint duty of the employer and the appointing trade union), to take enough time off (with full pay) for the assignment, to see all relevant document, not to be obstructed or harassed in their duty, to request improvements of the employer, and to call in the labour inspection if the employer does not give a satisfactory answer to such a request. WEA ch. 6 also specifies the organisation, tasks and rights of joint work environment committees, include that safety reps should be included in such committees in workplaces from 50 employees, or less of the employees so request. Joint work environment committees (WEC) shall be set up at all workplaces from 50 employees. But there are no sanctions and at

⁵ This covers balanced representation of groups or workers e.g. workers exposed to particular health or safety risks.

	Main provisions	Observed discrepancies	More detailed or broader requirements, including more stringent
			<p>least older studies found that such committees are often lacking in firms of 50-99 employees or even more (Lund & Gunnarsson, 1987, p. 103).</p> <p>Safety reps (SR) shall be appointed in all workplaces from 5 employees. The reps are appointed by the local unions, i.e. at local-workplace union meeting. Reps are only elected directly by workers when there is no local union, but this is the case nearly only in micro- (and sometimes small)firms, where workers anyhow rarely elect safety reps. A majority of workplaces from 5 to 20-30 employees lack local safety reps (Frick, 2013a, p. 58-61).</p> <p>Regional unions may appoint regional safety representatives (RSR) for all workplaces where there is at least one union member but no joint WEC. In practice, the RSR covers nearly all small workplaces of 5-49 employees (and many with 50-100) plus a large share of those with 1-4 employees. Sweden has approximately 1700 regional safety representatives, who conduct around 60.000 workplace visits per year.</p> <p>However, RSRs may not be appointed for workplaces where the concerned union has no member, which increasingly is the case in micro firms, especially in the service industry. More importantly the funding for the RSR-system only allows the RSR to visit some 10-15 % of 'their' workplaces, even though the unions themselves provide some half of the funding (which has been argued not to be in compliance with the Framework Directive).</p> <p>See Frick, 2013a, on safety reps in Sweden,</p>

	Main provisions	Observed discrepancies	More detailed or broader requirements, including more stringent
			and Frick, 2009, on regional safety reps. <ul style="list-style-type: none"> Are there more detailed requirements relating specifically to one of the individual directives? No <ul style="list-style-type: none"> Other additional or more detailed requirements No
Limit values	N/A	N/A	N/A
Other issues identified	<ul style="list-style-type: none"> E.g. List and reports regarding occupational accidents, emergency measures, adequate controls and supervision, other protective and preventive measures 	No observed discrepancies have been identified.	SWEM requires more than the FD. Notably that employers integrate SWEM with their general management control (§3) set objectives for their WE policies (§ 5) and at least yearly audit and (if needed) improve their SWEM (§ 11). This latter so called secondary learning cycle is in accordance with other quality control management (Dalrymple et al., 1998).

Table 1- 3 Council Directive 89/654/EEC (workplace) - Observed discrepancies, more stringent and more detailed requirements

	Main provisions	Observed discrepancies	More detailed or broader requirements, including more stringent
Scope and definitions Art. 1 and Art. 2	<ul style="list-style-type: none"> The Directive applies to workplaces, but excludes from its scope of application (a) means of transport used outside the undertaking and/or the establishment, or workplaces inside means of transport, (b) temporary or mobile construction sites, (c) extracting industries, (d) fishing boats, and (e) fields, woods and other land forming part of an agricultural or forestry undertaking but situated away from the undertaking's buildings. 'Workplace' means the place intended to 	No observed discrepancies have been identified.	<ul style="list-style-type: none"> Does the transposing legislation cover any of the elements that the Directive expressly excludes⁶? Yes: The provisions (AFS 2009:02) include all buildings, sheds and adjunct sites used for work. <ul style="list-style-type: none"> Is the definition of 'workplace' in national law broader than the required by the Directive? See § 1 above. <ul style="list-style-type: none"> Other additional or more detailed requirements

⁶ Please note that points (b), (c) and (d) are regulated by specific legislation.

	Main provisions	Observed discrepancies	More detailed or broader requirements, including more stringent
	house workstations on the premises of the undertaking and/or establishment and any other place within the area of the undertaking and/or establishment to which the worker has access in the course of his employment.		No
Conducting a risk assessment	N/A	N/A	N/A
Ensuring preventive and protective services	N/A	N/A	N/A
Information for workers Art. 7	<ul style="list-style-type: none"> Workers and/ or their representatives shall be informed of all measures to be taken concerning safety and health at the workplace Framework Directive applies. 	No observed discrepancies have been identified.	<ul style="list-style-type: none"> Does the legislation provide for specific conditions (e.g. size of the establishments) in relation to workers information? No Is the content or form of information to workers further specified? No Other additional or more detailed requirements Requirements on information, training and consultation of workers - also on issues of workplaces - are in WEA and/or in SWEM. See thus answers in table 1.2
Training of workers	N/A	N/A	N/A
Health surveillance	N/A	N/A	N/A
Consultation of workers Art. 8	<ul style="list-style-type: none"> Framework Directive applies. 	No observed discrepancies have been identified.	<ul style="list-style-type: none"> Are there more detailed requirements than in the Framework Directive? No Other additional or more detailed requirements Requirements on information, training and consultation of workers - also on issues of workplaces - are in WEA and/or in SWEM.

	Main provisions	Observed discrepancies	More detailed or broader requirements, including more stringent
			See thus answers in table 1.2
Limit values	N/A	N/A	N/A
Others		No observed discrepancies have been identified.	NIR 2013 states the following: "Sweden has provisions that go beyond the Directive on some points, since they already existed when the Directive was transposed into Swedish law. However, no additional measures have been taken that have not already been reported." ⁷

Table 1- 4 Directive 2009/104/EC (work equipment) - Observed discrepancies, more stringent and more detailed requirements

	Main provisions	Observed discrepancies	More detailed or broader requirements, including more stringent
Scope and definitions Art. 1 and Art. 2(a)	<ul style="list-style-type: none"> The Directive relates to the use of work equipment by workers at work where work equipment is defined as any machine, apparatus, tool or installation used at work. 	No observed discrepancies have been identified.	<ul style="list-style-type: none"> Any additional or more detailed requirements No, same definition as the directive.
Conducting a risk assessment Art. 3 #	<ul style="list-style-type: none"> The employer must take measures to ensure that the work equipment made available to workers is suitable for the work to be carried out or properly adapted for that purpose and may be used by workers without impairment to their safety or health. In selecting the work equipment which he proposes to use, the employer must pay attention to the specific working conditions and characteristics and to the hazards which exist in the undertaking or 	No observed discrepancies have been identified.	<ul style="list-style-type: none"> Are the risks to be taken into account in the assessment described in a more specific manner than in the Directive? No <ul style="list-style-type: none"> Is the content of the risk assessment more detailed than described in the Directive? Yes, risks are again to be assessed if a follow up shows that actual risks differ from the previous assessment, if measures taken haven't been sufficient or when working processes or the operation are changed. ⁸

⁷ National Implementation Report 2013, (EN) p.7

⁸ AFS 2006:4. 4 § *En förnyad undersökning och riskbedömning skall genomföras*

	Main provisions	Observed discrepancies	More detailed or broader requirements, including more stringent
	establishment, in particular at the workplace, for the safety and health of the workers, and any additional hazards posed by the use of the work equipment in question.		The provisions (§ 5) also require that all necessary prevention is taken after the RA. §6 stipulates regular follow ups of the RAs. <ul style="list-style-type: none"> • Is a more specific methodology for risk assessment provided in the legislation? No • Are the sources of information and persons in charge of the risk assessment described in the legislation in a more specific manner than in the Directive? No • Other additional or more detailed requirements No
Ensuring preventive and protective services Art. 5+	N/A	N/A	N/A
Information for workers Art. 8	<ul style="list-style-type: none"> • Framework Directive applies. • Where appropriate, written instructions should be made available to workers on the work equipment used at work, including information on (a) the conditions of use of work equipment; (b) foreseeable abnormal situations; and (c) the conclusions to be drawn from experience, where appropriate, in using work equipment. 	No observed discrepancies have been identified.	<ul style="list-style-type: none"> • Does the legislation provide for specific conditions (e.g. size of the establishments) in relation to workers information? No • Other additional or more detailed requirements No
Training of workers Art. 9	<ul style="list-style-type: none"> • Framework Directive applies. • Workers given the task of using work equipment receive adequate training, including training on any risks which such 	No observed discrepancies have been identified.	<ul style="list-style-type: none"> • Is more specific information on the scope of training provided in the legislation? Section 16 requires that when especially risky equipment is used, the employee - or hired

1. om uppföljningen enligt 6§ visar att befintliga risker inte stämmer med tidigare riskbedömning,
2. om vidtagna åtgärder inte gett förväntat resultat eller
3. vid förändringar i arbetsprocesser eller verksamheten.

	Main provisions	Observed discrepancies	More detailed or broader requirements, including more stringent
	use may entail. Workers specifically designated to carry out repairs, modifications, maintenance or servicing receive adequate specific training.		worker - shall have documented practical and theoretical competence for its safe use. • Are there specific requirements as to the competence of trainers provided in the legislation? No • Other additional or more detailed requirements No
Health surveillance	N/A	N/A	N/A
Consultation of workers Art. 10	• Framework Directive applies.	No observed discrepancies have been identified.	• Is balanced ⁹ participation reflected in the national legislation? Are specific criteria put in place? See table 1.2 on SWEM • Other additional or more detailed requirements No
Limit values	N/A	N/A	N/A
Other issues identified		No observed discrepancies have been identified.	No

*Where appropriate, the existence of the earlier version (89/655/EEC) will be taken into account.

Employers are required to assess possible risks in selecting work equipment.

+ Inspection (and testing) by competent persons.

Table 1- 5 Council Directive 89/656/EEC (PPE) - Observed discrepancies, more stringent and more detailed requirements

	Main provisions	Observed discrepancies	More detailed or broader requirements, including more stringent
Scope and definitions Art. 1 and 2	• The Directive applies to personal protective equipment (PPE) used by workers at work. PPE as defined excludes (a) ordinary working clothes and uniforms not specifically designed to protect the safety	No observed discrepancies have been identified.	• Does the transposing legislation cover PPE used by emergency and rescue services? No • Does the transposing legislation cover any of the other exclusions in the

⁹ This covers balanced representation of groups or workers e.g. workers exposed to particular health or safety risks.

	Main provisions	Observed discrepancies	More detailed or broader requirements, including more stringent
	and health of the worker; (b) equipment used by emergency and rescue services; (c) personal protective equipment worn or used by the military, the police and other public order agencies; (d) personal protective equipment for means of road transport; (e) sports equipment; (f) self-defence or deterrent equipment; (g) portable devices for detecting and signalling risks and nuisances.		<p>Directive?</p> <p>No</p> <ul style="list-style-type: none"> Other additional or more detailed requirements <p>AFS 2001:3 §1: <i>For the purposes of these Provisions, personal protective equipment shall mean all equipment designed to be worn or held by the worker to protect him /her against one or more hazards likely to endanger his/her safety and health at work, and any addition or accessory designed to meet this objective.</i></p> <p><i>The following items of equipment are excluded from the scope of these Provisions:</i></p> <p>(a) <i>Ordinary working clothes and uniforms not specifically designed to protect the safety and health of the worker.</i></p> <p>(b) <i>Self-defence or deterrent equipment.</i></p> <p>(c) <i>Portable devices for detecting and signalling risks and nuisances</i></p>
Conducting a risk assessment Art. 5*	<ul style="list-style-type: none"> Before choosing personal protective equipment, the employer is required to assess whether the personal protective equipment he intends to use satisfies certain requirements. <p>This assessment shall involve (a) an analysis and assessment of risks which cannot be avoided by other means; (b) the definition of the characteristics which personal protective equipment must have in order to be effective against such risks, taking into account any risks which this equipment itself may create; (c) comparison of those characteristics with the characteristics of the personal protective equipment</p>	No observed discrepancies have been identified.	<ul style="list-style-type: none"> Any additional or more detailed requirements <p>Section 5 <i>Collective protection shall have priority over individualised measures of protection. Personal protective equipment shall be used when the risks cannot be avoided or sufficiently limited by technical means of collective protection or by measures, methods or procedures of work organisation.</i></p> <p>The rest of the text on RA is identical to the directive.</p>

	Main provisions	Observed discrepancies	More detailed or broader requirements, including more stringent
	<p>available.</p> <ul style="list-style-type: none"> The assessment shall be reviewed if any changes are made to any of its elements 		
Ensuring preventive and protective services	N/A	N/A	N/A
Information for workers Art. 7	<ul style="list-style-type: none"> Framework Directive applies Workers and/or their representatives shall be informed of all measures to be taken with regard to the health and safety of workers when personal protective equipment is used by workers at work. 	No observed discrepancies have been identified.	<ul style="list-style-type: none"> Are there more detailed requirements than in the Framework Directive? Are there other additional or more detailed requirements <p>Section 10: <i>The employer shall first inform the worker of the risks against which the wearing of the personal protective equipment protects him /her. The employer shall also arrange instruction and practice and, if necessary, demonstrate how the equipment is to be used in order to achieve the protection intended.</i> <i>Appropriate written information concerning each item of personal protective equipment concerned shall be provided and kept available within the undertaking or operation.</i></p>
Training of workers Art. 4(8) and Art. 4(9)	<ul style="list-style-type: none"> The employer shall arrange for training and shall, if appropriate, organize demonstrations in the wearing of personal protective equipment. Personal protective equipment [...] must be used in accordance with instructions. Such instructions must be understandable to the workers. 	No observed discrepancies have been identified.	<ul style="list-style-type: none"> Is more specific information on the scope of training on PPE provided in the legislation? <p>No</p> <ul style="list-style-type: none"> Are there detailed requirements on demonstrations to be organized in the wearing of PPE? <p>No</p> <ul style="list-style-type: none"> Other additional or more detailed requirements <p>No</p>
Health	N/A	N/A	N/A

	Main provisions	Observed discrepancies	More detailed or broader requirements, including more stringent
<i>surveillance #</i>			
<i>Consultation of workers Art. 8</i>	<ul style="list-style-type: none"> Framework Directive applies 	No observed discrepancies have been identified.	<ul style="list-style-type: none"> Are there more detailed requirements than in the Framework Directive? Are there other additional or more detailed requirements No
<i>Limit values</i>	N/A	N/A	N/A
<i>Other issues identified</i>		No observed discrepancies have been identified.	No

* The Directive makes no provision for a risk assessment. The need for the use of PPE is presumably identified in addressing the findings of other risk assessments, relating to the hazard which the PPE is intended to protect against. There is however provision for an assessment of the PPE itself (Article 5) but this is not specifically a risk assessment.
 # Health surveillance is covered by the provisions of those directives covering the risks from which a specific item of PPE is intended to provide protection.

Table 1- 6 Council Directive 92/58/EEC (OSH signs) - Observed discrepancies, more stringent and more detailed requirements

	Main provisions	Observed discrepancies	More detailed or broader requirements, including more stringent
<i>Scope and definitions Art. 1 and 2</i>	<ul style="list-style-type: none"> The Directive applies to safety and/or health signs and excludes from its scope of application signs for placing on the market of dangerous substances and preparations, products and/or equipment and signs used for regulating road, rail, inland waterway, sea or air transport. 	No observed discrepancies have been identified.	<ul style="list-style-type: none"> Any additional or more detailed requirements No. AFS 2008:13 is identical to the directive in its scope.
<i>Conducting a risk assessment</i>	N/A	N/A	N/A
<i>Ensuring preventive and protective services</i>	N/A	N/A	N/A
<i>Information for</i>	<ul style="list-style-type: none"> Framework Directive applies. 	No observed discrepancies have been	<ul style="list-style-type: none"> Are there more detailed requirements

	Main provisions	Observed discrepancies	More detailed or broader requirements, including more stringent
workers Art. 7	<ul style="list-style-type: none"> Workers and/or their representatives shall be informed of all the measures to be taken concerning the safety and/or health signs used at work. 	identified.	<p>than in the Framework Directive?</p> <p>No</p> <ul style="list-style-type: none"> Other additional or more detailed requirements <p>No</p>
Training of workers Art. 7(2)	<ul style="list-style-type: none"> Framework Directive applies. Workers must be given specific directions concerning the safety and/or health signs used at work, in particular the meaning of the signs, especially signs incorporating words, and the general and specific behaviour to be adopted. 	No observed discrepancies have been identified.	<ul style="list-style-type: none"> Are there more detailed requirements than in the Framework Directive? <p>No</p> <ul style="list-style-type: none"> Other additional or more detailed requirements <p>No</p>
Health surveillance	N/A	N/A	N/A
Consultation of workers Art. 8	<ul style="list-style-type: none"> Framework Directive applies. 	No observed discrepancies have been identified.	<ul style="list-style-type: none"> Are there more detailed requirements than in the Framework Directive? <p>No</p> <ul style="list-style-type: none"> Other additional or more detailed requirements <p>No</p>
Limit values	N/A	N/A	N/A
Other issues identified		No observed discrepancies have been identified.	No

Table 1- 7 Directive 1999/92/EC (ATEX) - Observed discrepancies, more stringent and more detailed requirements

	Main provisions	Observed discrepancies	More detailed or broader requirements, including more stringent
Scope and definitions Art. 1 and 2	<ul style="list-style-type: none"> The Directive applies to the protection of workers potentially at risk from explosive atmospheres as defined in Art. 2. It excludes from its scope of application: (a) the areas used directly for and during the medical treatment of patients; (b) the use of appliances burning gaseous fuels; (c) the 	No observed discrepancies have been identified.	<ul style="list-style-type: none"> Does the transposing legislation include¹⁰ : <ul style="list-style-type: none"> areas used directly for and during the medical treatment of patients? the manufacture, handling, use, storage and transport of explosives or chemically unstable substances? <p>No, AFS 2003:3 transposes the directive also in</p>

¹⁰ Please note that points (b),(d) and (e) are regulated by specific legislation.

	Main provisions	Observed discrepancies	More detailed or broader requirements, including more stringent
	<p>manufacture, handling, use, storage and transport of explosives or chemically unstable substances; (d) mineral extracting industries; and (e) the use of transport subject to international agreements as specified.</p> <ul style="list-style-type: none"> The Directive applies to the risk from explosive atmospheres, i.e. from mixtures with air, under atmospheric conditions, of flammable substances in the form of gases, vapours, mists or dusts in which, after ignition has occurred, combustion spreads to the entire unburned mixture. 		<p>these exclusions.</p> <ul style="list-style-type: none"> Other additional or more detailed requirements <p>Section 7 stipulates that the RA must be done by a person with suitable training and competence.</p>
<p>Conducting a risk assessment Art. 4(1)</p>	<ul style="list-style-type: none"> The employer shall assess the specific risks arising from explosive atmospheres, taking account at least of: <ul style="list-style-type: none"> the likelihood that explosive atmospheres will occur and their persistence, the likelihood that ignition sources, including electrostatic discharges, will be present and become active and effective, the installations, substances used, processes, and their possible interactions, the scale of the anticipated effects. Explosion risks shall be assessed overall. 	<p>No observed discrepancies have been identified.</p>	<ul style="list-style-type: none"> Is the risk assessment reviewed regularly and in any event when any changes occur in the conditions of the type of work involved? <p>Yes. § 8 requires renewed RA not specified in time but when any condition changes, or after an accident or incident.</p> Are the risks to be taken into account in the assessment described in a more specific manner than in the Directive? <p>No</p> Is the content of the risk assessment more detailed than described in the Directive? <p>Yes. Some more details on the risks to be assessed, but also of how the risks are managed, and risks under both regular production and expected deviations from this. There are also requirements for classifying risk areas in separate zones with different levels of risks (§11).</p> Is a more specific methodology for risk assessment provided in the legislation? <p>No</p> Are the sources of information and persons

	Main provisions	Observed discrepancies	More detailed or broader requirements, including more stringent
			<p>in charge of the risk assessment described in the legislation in a more specific manner than in the Directive?</p> <p>Yes. Those doing the RA must have suitable training and competence (§ 7).</p> <ul style="list-style-type: none"> • Other additional or more detailed requirements <p>No</p>
Ensuring preventive and protective services	N/A	N/A	N/A
Information for workers	N/A	N/A	N/A
Training of workers Annex II, 1.1	<ul style="list-style-type: none"> • The employer must provide those working in places where explosive atmospheres may occur with sufficient and appropriate training with regard to explosion protection. 	No observed discrepancies have been identified.	<ul style="list-style-type: none"> • Is more specific information on the scope of training provided in the legislation? <p>No</p> <ul style="list-style-type: none"> • Other additional or more detailed requirements <p>No</p>
Health surveillance	N/A	N/A	N/A
Consultation of workers	N/A	N/A	N/A
Limit values	N/A	N/A	N/A
Other issues identified		No observed discrepancies have been identified.	According to NIR 2013: "At facilities where there is an explosive atmosphere caused by dust, the explosion safety must be confirmed by an appropriately qualified person. This rule was added to increase the safety level through a requirement that makes an appropriately qualified person responsible for explosion safety." ¹¹

Table 1- 8 Council Directive 90/269/EEC (manual handling of loads) - Observed discrepancies, more stringent and more detailed requirements

¹¹ National Implementation Report 2013, Part A, Section II, (EN) p. 42.

	Main provisions	Observed discrepancies	More detailed or broader requirements, including more stringent
Scope and definitions Art. 1 and 2	<ul style="list-style-type: none"> The Directive relates to the manual handling of loads where there is a risk particularly of back injury to workers where manual handling is defined as any transporting or supporting of a load, by one or more workers, including lifting, putting down, pushing, pulling, carrying or moving of a load which, by reason of its characteristics or of unfavourable ergonomic conditions, involves a risk particularly of back injury to workers. 	<p>No observed discrepancies have been identified.</p>	<p>AFS 2000:1 manual handling directly transposes the directive. The requirements of 2000:1 are integrated in the much broader AFS 2012:2 (<i>belastningsergonomi</i>) on all risks within musculoskeletal ergonomics, all combination of work movements, postures, positions and workloads.</p> <p>AFS 2012:2 requires that workplaces and work tasks shall be organised so as to prevent workloads (etc.) that may cause ill-health or are unnecessarily tiring (§1). Musculoskeletal injuries, musculoskeletal ergonomics, manual handling, repetitive work and movement organs are defined (§ 3).</p>
Conducting a risk assessment Art. 4(a)	<ul style="list-style-type: none"> Wherever the need for manual handling of loads by workers cannot be avoided, the employer shall organize workstations in such a way as to make such handling as safe and healthy as possible and: assess, in advance if possible, the health and safety conditions of the type of work involved, and in particular examine the characteristics of loads, taking account the reference factors provided for in Annex I to the Directive. 	<p>No observed discrepancies have been identified.</p>	<ul style="list-style-type: none"> Is the risk assessment reviewed regularly and in any event when any changes occur in the conditions of the type of work involved? No, as specified in SWEM. Are the risks to be taken into account in the assessment described in a more specific manner than in the Directive, in particular are the reference factors provided in Annex I of the Directive further detailed? Yes. Risks are to be assessed alone and in combination, with particular notion of their duration, intensity and frequency. Optical conditions are also to be assessed (§ 4). Is the content of the risk assessment more detailed than described in the Directive? See above. Is a more specific methodology for risk assessment provided in the legislation? See above Are the sources of information and persons in charge of the risk assessment described in the legislation in a more specific manner

	Main provisions	Observed discrepancies	More detailed or broader requirements, including more stringent
			<p>than in the Directive?</p> <p>No</p> <ul style="list-style-type: none"> • Other additional or more detailed requirements <p>The employer shall arrange work so that employees can influence the organisation and performance of their work tasks in order to get enough variation and recuperation in their movements (§8).</p>
Ensuring preventive and protective services	N/A	N/A	N/A
Information for workers Art. 6	<ul style="list-style-type: none"> • Framework Directive applies • Workers and/or their representatives shall be informed of all measures to be implemented, pursuant to this Directive, with regard to the protection of safety and of health. • Employers must ensure that workers and/or their representatives receive general indications and, where possible, precise information on: <ul style="list-style-type: none"> — the weight of a load, — the centre of gravity of the heaviest side when a package is eccentrically loaded. 	No observed discrepancies have been identified.	<ul style="list-style-type: none"> • Does the legislation provide for specific conditions (e.g. size of the establishments) in relation to workers information? <p>No</p> <ul style="list-style-type: none"> • Is the content or form of information to workers further specified? <p>Yes, §9 also requires information on suitable work position and movements, on how technical support equipment shall be used, on risks of poor ergonomics, and on early signs of musculoskeletal injury.</p> <ul style="list-style-type: none"> • Other additional or more detailed requirements <p>No</p>
Training of workers Art. 6	<ul style="list-style-type: none"> • Framework Directive applies • Employers must ensure that workers receive in addition proper training and information on how to handle loads correctly and the risks they might be open to particularly if these tasks are not performed correctly, having regard to the reference factors provided for in Annex I to the Directive and the risk factors listed in Annex II to the Directive. 	No observed discrepancies have been identified.	<ul style="list-style-type: none"> • Is more specific information on the scope of training provided in the legislation, in particular in relation to the reference and risk factors? <p>Employees shall get instructions and the possibility to train a suitable work technique for the work task (§9).</p> <ul style="list-style-type: none"> • Other additional or more detailed requirements <p>No</p>

	Main provisions	Observed discrepancies	More detailed or broader requirements, including more stringent
Health surveillance	N/A	N/A	N/A
Consultation of workers Art. 7	Framework Directive applies	No observed discrepancies have been identified.	<ul style="list-style-type: none"> • Are there more detailed requirements than in the Framework Directive? No • Other additional or more detailed requirements No
Limit values	N/A	N/A	N/A
Other issues identified		No observed discrepancies have been identified.	According to NIR 2013, "The Swedish Work Environment Authority has imposed requirements on butchery undertakings, since there was a high number of musculoskeletal disorders of the arms, hands and neck among butchers." Also, "the Swedish Work Environment Authority has imposed requirements to restrict repetitive work at cash registers in shops." Finally, "the Swedish Work Environment Authority has imposed requirements, on pain of large fines, for managing a lack of space and the risks to staff health when overcrowding occurs in hospitals." ¹²
Annex I	<p>Reference Factors:</p> <ul style="list-style-type: none"> • The manual handling of a load may present a risk particularly of back injury if it is too heavy or too large; unwieldy or difficult to grasp; unstable or has contents likely to shift; positioned in a manner requiring it to be held or manipulated at a distance from the trunk, or with a bending or twisting of the trunk; likely, because of its contours and/or consistency, to result in injury to workers, particularly in the event of a collision. • A physical effort may present a risk particularly of back injury if it is too strenuous; only achieved by a twisting movement of the trunk; likely to result in a sudden movement of the load; made with the body in an unstable posture. • The characteristics of the work environment may increase a risk particularly of back injury if there is not enough room, in particular vertically, to carry out the activity; the floor is uneven, thus presenting tripping hazards, or is slippery in relation to the worker's footwear; the place of work or the working environment prevents the handling of loads at a safe height or with good posture by the worker; there are variations in the level of the floor or the working surface, requiring the load to be manipulated on different levels; the floor or foot rest is unstable; the temperature, humidity or ventilation is unsuitable. 		

¹² National Implementation Report 2013, Part A, Section II, (EN) p. 15.

	Main provisions	Observed discrepancies	More detailed or broader requirements, including more stringent
	<ul style="list-style-type: none"> The activity may present a risk particularly of back injury if it entails over-frequent or over-prolonged physical effort involving in particular the spine; an insufficient bodily rest or recovery period; excessive lifting, lowering or carrying distances; a rate of work imposed by a process which cannot be altered by the worker. 		
Annex II	Individual Risk Factors The worker may be at risk if he/she is physically unsuited to carry out the task in question; is wearing unsuitable clothing, footwear or other personal effects; does not have adequate or appropriate knowledge or training.		

Table 1- 9 Council Directive 90/270/EEC (display screen equipment) - Observed discrepancies, more stringent and more detailed requirements

	Main provisions	Observed discrepancies	More detailed or broader requirements, including more stringent
Scope and definitions	<ul style="list-style-type: none"> The Directive relates to work with display screen equipment as defined in Article 2, an alphanumeric or graphic display screen, regardless of the display process employed. The Directive does not apply to: <ol style="list-style-type: none"> drivers' cabs or control cabs for vehicles or machinery; computer systems on board a means of transport; computer systems mainly intended for public use; 'portable' systems not in prolonged use at a workstation; calculators, cash registers and any equipment having a small data or measurement display required for direct use of the equipment; typewriters of traditional design, of the type known as 'typewriter with window' 	<p>An observed discrepancy has been identified, as exclusions are more broadly defined in AFS 1998:5, § 1:</p> <p><i>The Provisions do not apply to work done using an oscilloscope or a digital or text presentation display on a measuring instrument, typewriter, cash register, pocket calculator or such like. Nor do they apply to portable systems during brief, non-permanent use at a workplace. Section 6 does not apply to persons equated with employees under Chap. 1, Section 3 of the Work Environment Act.</i></p>	<ul style="list-style-type: none"> Does the transposing legislation cover any of the elements that the Directive expressly excludes? Yes. AFS 1998:5, § 1 applies to: drivers' cabs or control cabs for vehicles or machinery; computer systems on board a means of transport; computer systems mainly intended for public use. Is the definition of 'display screen equipment' in national law broader than required by the Directive? No. <i>These Provisions apply to work done using a display screen with appurtenant equipment. The term "computer display screen" denotes an alphanumeric or graphic display screen, regardless of how the image is produced.</i> Other additional or more detailed requirements No
Conducting a risk assessment Art.3	<ul style="list-style-type: none"> Employers must perform an analysis of workstations in order to evaluate the safety and health conditions to which they give rise for their workers, particularly as regards possible risks to eyesight, physical problems and problems of mental stress. 	No observed discrepancies have been identified.	<ul style="list-style-type: none"> Is the risk assessment reviewed regularly and in any event when any changes occur in the conditions of the type of work involved? Yes, once per year, as required in SWEM. Are the risks to be taken into account in the

	Main provisions	Observed discrepancies	More detailed or broader requirements, including more stringent
	<ul style="list-style-type: none"> Employers must take appropriate measures to remedy the risks found, on the basis of the evaluation of the safety and health conditions, taking account of the additional and/or combined effects of the risks so found. 		<p>assessment described in a more specific manner than in the Directive?</p> <p>Yes, risks § 2-5 describe risks of screen and keyboard, of lighting and visual conditions. of work postures and working movements. § 7-10 describes requirements - and hence possible risks - of arrangement and organisation of display screen work, of emissions, and of software and systems.</p> <ul style="list-style-type: none"> Is the content of the risk assessment more detailed than described in the Directive? <p>See above.</p> <ul style="list-style-type: none"> Is a more specific methodology for risk assessment provided in the legislation? <p>No.</p> <ul style="list-style-type: none"> Are the sources of information and persons in charge of the risk assessment described in the legislation in a more specific manner than in the Directive? <p>No</p> <ul style="list-style-type: none"> Other additional or more detailed requirements <p>No</p>
Ensuring preventive and protective services	N/A	N/A	N/A
Information for workers Art. 6	<ul style="list-style-type: none"> Framework Directive applies. Workers shall receive information on all aspects of safety and health relating to their workstation, in particular information on such measures applicable to workstations as are implemented under Articles 3 (analysis of workstations), 7 (daily work routine) and 9 (protection of workers' eyes and eyesight). 	No observed discrepancies have been identified.	<ul style="list-style-type: none"> Is the content or form of information to workers further specified? <p>No</p> <ul style="list-style-type: none"> Other additional or more detailed requirements <p>No</p>
Training of	<ul style="list-style-type: none"> Framework Directive applies. 	No observed discrepancies have been	<ul style="list-style-type: none"> Is more specific information on the scope

	Main provisions	Observed discrepancies	More detailed or broader requirements, including more stringent
workers Art. 6	<ul style="list-style-type: none"> • Every worker shall receive training in use of the workstation before commencing work with display screen equipment and whenever the organization of the workstation is substantially modified. 	identified.	<p>of training provided in the legislation?</p> <p>No</p> <ul style="list-style-type: none"> • Is the notion of 'substantially modified' further specified? <p>No</p> <ul style="list-style-type: none"> • Other additional or more detailed requirements <p>No</p>
Health surveillance Art. 9*	<ul style="list-style-type: none"> • Workers shall be entitled to an appropriate eye and eyesight test carried out by a person with the necessary capabilities: <ul style="list-style-type: none"> — before commencing display screen work, at regular intervals thereafter, and — if they experience visual difficulties which may be due to display screen work. • Workers shall be entitled to an ophthalmological examination if the results such test show that this is necessary. • If the results of the test or of the examination show that it is necessary and if normal corrective appliances cannot be used, workers must be provided with special corrective appliances appropriate for the work concerned. • In no circumstances these measure may involve workers in additional financial cost. • Protection of workers' eyes and eyesight may be provided as part of a national health system. 	No observed discrepancies have been identified.	<ul style="list-style-type: none"> • Are the conditions in which eye and eye sight test is required more specifically described in the legislation? <p>Yes, §6 also requires eyesight tests for all who normally work more than one hour per day at display screens.</p> <ul style="list-style-type: none"> • Is the periodicity of eye and eye sight test provided in national law? <p>§6 requires test at regular intervals [the meaning of which is not specified], when the employee reports sight-problems and when conditions have changed.</p> <ul style="list-style-type: none"> • Other additional or more detailed requirements <p>No</p>
Consultation of workers Art. 8	<ul style="list-style-type: none"> • Framework Directive applies. 	No observed discrepancies have been identified.	<ul style="list-style-type: none"> • Are there more detailed requirements than in the Framework Directive? <p>No</p> <ul style="list-style-type: none"> • Other additional or more detailed requirements <p>No</p>
Limit values	N/A	N/A	N/A
Other issues		No observed discrepancies have been	No

	Main provisions	Observed discrepancies	More detailed or broader requirements, including more stringent
<i>identified</i>		identified.	

* The primary purpose of this requirement is to identify users who have deficiencies in their eyesight which require correction to enable them to carry out their work with DSE without risk to their health.

Table 1- 10 Directive 2002/44/EC (vibration) - Observed discrepancies, more stringent and more detailed requirements

	Main provisions	Observed discrepancies	More detailed or broader requirements, including more stringent
<i>Scope and definitions Art 1(2) and Art 2</i>	<ul style="list-style-type: none"> This Directive shall apply to activities in which workers are or are likely to be exposed to risks from mechanical vibration during their work. hand-arm vibration': the mechanical vibration that, when transmitted to the human hand-arm system, entails risks to the health and safety of workers, in particular vascular, bone or joint, neurological or muscular disorders; 'whole-body vibration': the mechanical vibration that, when transmitted to the whole body, entails risks to the health and safety of workers, in particular lower-back morbidity and trauma of the spine. 	No observed discrepancies have been identified.	<ul style="list-style-type: none"> Any additional or more detailed requirements <p>AFS 2005:15 is very broad. The provisions apply to operations where somebody can be exposed to vibrations in her/his work (§ 1).</p>
<i>Conducting a risk assessment Art.4</i>	<ul style="list-style-type: none"> The employer shall assess and, if necessary, measure the levels of mechanical vibrations to which workers are exposed. The data obtained shall be preserved in a suitable form to permit consultation at a later stage. The employer shall give particular attention to: <ul style="list-style-type: none"> - the level, type and duration of exposure, including any exposure to intermittent vibration or repeated shocks; - the exposure limit values and the exposure action values - any effects concerning the health and 	No observed discrepancies have been identified.	<ul style="list-style-type: none"> Does the national legislation require employers to submit risk assessment to national authorities whether on request or automatically? <p>No. The RA is not automatically to be submitted but it shall be documented (§ 4-7). According to the WEA, labour inspectors may see all relevant documents.</p> <ul style="list-style-type: none"> Does the national legislation require that practical guidelines for the determination and assessment of risk must be developed? <p>Yes, there are guiding appendices on 1.</p>

	Main provisions	Observed discrepancies	More detailed or broader requirements, including more stringent
	<p>safety of workers at particularly sensitive risk</p> <ul style="list-style-type: none"> - any indirect effects on worker safety resulting from interactions between mechanical vibration and the workplace or other work equipment - information provided by the manufacturers of work equipment - the existence of replacement equipment designed to reduce the levels of exposure to mechanical vibration - the extension of exposure to whole-body vibration beyond normal - working hours under the employer's responsibility - specific working conditions such as low temperatures - appropriate information obtained from health surveillance, including published information, as far as possible • The employer must be in possession of the risk assessment • The risk assessment shall be recorded on a suitable medium; it may include a justification by the employer that the nature and extent of the risks related to mechanical vibration make a further detailed risk assessment unnecessary. • The risk assessment shall be kept up-to-date on a regular basis, particularly in case of significant changes. 		<p>hand-arm vibration, and 2. whole-body vibration</p> <ul style="list-style-type: none"> • Are the risks to be taken into account in the assessment described in a more specific manner than in the Directive? <p>Yes, in appendices 1 and 2 of one and a half page each, adding several details to what is specified in the directive e.g. a formula on how to calculate the daily vibration exposure when the workday is not eight hours.</p> <ul style="list-style-type: none"> • Is the content of the risk assessment more detailed than described in the Directive? <p>Yes appendices 1 and 2 add e.g. details on how to combine measures of vibrations from different machines used during the same day.</p> <ul style="list-style-type: none"> • Is a more specific methodology for risk assessment provided in the legislation? <p>No</p> <ul style="list-style-type: none"> • Are the sources of information and persons in charge of the risk assessment described in the legislation in a more specific manner than in the Directive? <p>No</p> <ul style="list-style-type: none"> • Other additional or more detailed requirements <p>The provisions are accompanied with extensive general advice on the implementation of AFS 2005:15.</p>
Ensuring preventive and protective services	N/A	N/A	N/A
Information for workers	<ul style="list-style-type: none"> • Exposed workers and/or their representatives must receive information 	No observed discrepancies have been identified.	<ul style="list-style-type: none"> • Does the legislation provide for specific conditions (e.g. size of the establishments)

	Main provisions	Observed discrepancies	More detailed or broader requirements, including more stringent
Art. 6	<p>and training on the outcome of the risk assessment in particular:</p> <ul style="list-style-type: none"> - measures taken to eliminate or reduce to a minimum the risks from mechanical vibration; - the exposure limit values and the exposure action values - the results of the assessment and measurement and the potential injury arising from the work equipment in use; - why and how to detect and report signs of injury; - circumstances in which workers are entitled to health surveillance - safe working practices to minimise exposure. 		<p>in relation to workers information?</p> <p>No</p> <ul style="list-style-type: none"> • Is the content or form of information to workers further specified? <p>No</p> <ul style="list-style-type: none"> • Other additional or more detailed requirements <p>No</p>
Training of workers Art. 6	Same as above	No observed discrepancies have been identified.	<ul style="list-style-type: none"> • Is more specific information on the scope of training provided in the legislation? <p>No</p> <ul style="list-style-type: none"> • Are there specific requirements as to the competence of trainers provided in the legislation? <p>No</p> <ul style="list-style-type: none"> • Other additional or more detailed requirements <p>No</p>
Health surveillance Art. 8	<ul style="list-style-type: none"> • Health surveillance of workers measures with reference to the risk assessment outcome where it indicates a risk to their health. • Health surveillance is intended to prevent and diagnose rapidly any disorder linked with exposure to mechanical vibration. Such surveillance shall be appropriate where: <ul style="list-style-type: none"> - workers' exposure to vibration is such that a link can be established with an identifiable 	No observed discrepancies have been identified.	<ul style="list-style-type: none"> • Does the national legislation require health surveillance prior to exposure to vibration? <p>No</p> <ul style="list-style-type: none"> • Does the national legislation oblige employers to set health surveillance requirements after the end of exposure? <p>No. § 12 only requires health surveillance after the end of exposure for those employees exposed to vibrations that exceed values in</p>

	Main provisions	Observed discrepancies	More detailed or broader requirements, including more stringent
	<p>illness or harmful effects on health,</p> <ul style="list-style-type: none"> - it is probable that the illness or the effects occur in a worker's particular working conditions, and - there are tested techniques for the detection of the illness or the harmful effects on health. • Workers exposed to mechanical vibration in excess of the values shall be entitled to appropriate health surveillance. • Individual health records are required and kept up-to-date. • Health records to contain a summary of the results of the health surveillance and kept in a suitable form to permit any later consultation, taking into account any confidentiality. • Where a worker is found to have an identifiable disease or adverse health effect, considered by a doctor or occupational health-care professional to be the result of exposure to mechanical vibration at work: <ul style="list-style-type: none"> - The worker shall be informed of the result which relates to him personally and, in particular, information and advice regarding any health surveillance which he should undergo following the end of exposure; - The employer shall be informed of any significant findings from the health surveillance, taking into account any medical confidentiality. - Arrange continued health surveillance and provide for a review of the health status of any other worker who has been similarly exposed. The competent doctor/authority 		<p>appendix 3, or when there are other reasons to suspect that vibrations may cause harm. This medical control is regulated in AFS 2005:6 Occupational medical supervision.</p> <ul style="list-style-type: none"> • Does the national legislation oblige employers in case where, as a result of health surveillance, a worker is found to have an identifiable disease or adverse health effect which is considered to be the result of exposure to mechanical vibration at work, to review the risk assessment and the measure to eliminate or reduce risk? <p>Yes, in such cases § 13 requires the employer to revise the risk assessment, revise preventive measures, and offer health surveillance also to other employees with similar exposures to vibrations.</p> <ul style="list-style-type: none"> • Are the arrangements for health surveillance records specified in the legislation, in particular in terms of content? <p>Yes, see above.</p> <ul style="list-style-type: none"> • Are the conditions in which health surveillance is required more specifically described in the legislation? <p>Yes, see above</p> <ul style="list-style-type: none"> • Is the periodicity of health surveillance provided in national law? <p>No</p> <ul style="list-style-type: none"> • Other additional or more detailed requirements <p>No</p>

	Main provisions	Observed discrepancies	More detailed or broader requirements, including more stringent
	or occupational health care professional may propose that exposed persons undergo a medical examination.		
Consultation of workers Art. 7	<ul style="list-style-type: none"> • Framework Directive applies 	No observed discrepancies have been identified.	<ul style="list-style-type: none"> • Are there more detailed requirements than in the Framework Directive? No • Other additional or more detailed requirements No
Limit values Art.3	<ul style="list-style-type: none"> • The Directive provides for a set of exposure limit values and exposure action values in respect of the daily vibration exposure levels. • Hand-arm vibration: <ul style="list-style-type: none"> - Daily exposure limit value standardised to an eight-hour reference period: 5 m/s²; - Daily exposure action value standardised to an eight-hour reference period: 2,5 m/s². • For whole-body vibration: <ul style="list-style-type: none"> - Daily exposure limit value standardised to an eight-hour reference period: 1,15 m/s² or, at the MS's choice, a vibration dose value of 21 m/s^{1,75}; - Daily exposure action value standardised to an eight-hour reference period: 0,5 m/s² or, at the MS's choice, a vibration dose value of 9,1 m/s^{1,75}. 	No observed discrepancies have been identified.	<ul style="list-style-type: none"> • Does the transposing legislation set more stringent values? Yes, for whole-body vibration: Daily exposure limit value standardised to an eight-hour reference period: 1,1 m/s² (appendix 3) – instead of 1.15 m/s² <ul style="list-style-type: none"> • Other additional or more detailed requirements No
Other issues identified		No observed discrepancies have been identified.	No

Table 1- 11 Directive 2003/10/EC (noise) - Observed discrepancies, more stringent and more detailed requirements

	Main provisions	Observed discrepancies	More detailed or broader requirements, including more stringent
Scope and definitions	<ul style="list-style-type: none"> • Directive shall apply to activities in which workers are or are likely to be 	No observed discrepancies have been identified.	<ul style="list-style-type: none"> • Any additional or more detailed requirements

	Main provisions	Observed discrepancies	More detailed or broader requirements, including more stringent
Art 1 and Art 2	<p>exposed to risks from noise as a result of their work.</p> <ul style="list-style-type: none"> - daily noise exposure level ($L_{EX,8h}$) (dB(A) re. 20 μPa): time weighted average of the noise exposure levels for a nominal; - weekly noise exposure level ($L_{EX,8h}$): time-weighted average of the daily noise exposure levels for a nominal week of five eight-hour working days as defined by international standard ISO 1999:1990, point 3.6 (note 2). 		<p>AFS 2005:16 noise contains more definitions in § 2, e.g. of 'workplace', of 'noise', of 'impulse top value', of 'toxic substances' and of many more technical and other specifications.</p>
Conducting a risk assessment Art.4	<ul style="list-style-type: none"> • The employer shall assess and, if necessary, measure the levels of noise to which workers are exposed, giving particular attention, to: <ul style="list-style-type: none"> - the level, type and duration of exposure, including any exposure to impulsive noise; - the exposure limit values and the exposure action values; - any effects concerning the health and safety of workers belonging to particularly sensitive risk groups; - as far as technically achievable, any effects on workers' health and safety resulting from interactions between noise and work-related toxic substances, and between noise and vibrations; - any indirect effects resulting from interactions between noise and warning signals or other sounds that need to be observed in order to reduce the risk of accidents; - information on noise emission provided by manufacturers of work equipment in accordance with relevant EU directives; - the existence of alternative work equipment designed to reduce the noise emission; 	<p>No observed discrepancies have been identified.</p>	<ul style="list-style-type: none"> • Does the national legislation require employers to submit risk assessment to national authorities whether on request or automatically? On request only. • Does the national legislation require that practical guidelines for the determination and assessment of risk must be developed? No. • Are the risks/factors to be taken into account in the assessment described in a more specific manner than in the Directive? Yes, section 4 stipulates that work shall be planned so as to reduce noise exposures through eliminating noise at its source. In this, special attention shall be given to: alternative work methods, choice of work equipment, noise-reduction at the source, and design and planning of the workplace. • Is the content of the risk assessment more detailed than described in the Directive? No

	Main provisions	Observed discrepancies	More detailed or broader requirements, including more stringent
	<ul style="list-style-type: none"> - the extension of exposure to noise beyond normal working hours under the employer's responsibility; - appropriate information from health surveillance, including published information, as far as possible; - the availability of hearing protectors with adequate attenuation characteristics. • The employer shall be in possession of the risk assessment. • The risk assessment shall be recorded on a suitable medium, according to national law and practice. • The risk assessment shall be kept up to date on a regular basis, particularly in case of significant changes which could render it out of date, or when the results of health surveillance show it to be necessary. 		<ul style="list-style-type: none"> • Is a more specific methodology for risk assessment provided in the legislation? Yes. Section 6 specifies four methodical aspects to be especially noted in noise measurements. These are: to adapt the measuring methods and equipment to the specific sound conditions, to assure that the methods and equipment can measure the noise parameters in the OELs, to secure that sample studies are representative to an employee's personal exposure, and to take account of normal measurement uncertainty. • Are the sources of information and persons in charge of the risk assessment described in the legislation in a more specific manner than in the Directive? Yes. Measurements are to be done by a competent person (§ 6). • Other additional or more detailed requirements RA of noise must be done regularly and be revised when changes may make the RA inappropriate (§ 7).
Ensuring preventive and protective services Art 4(4)	<ul style="list-style-type: none"> • The assessment and measurement shall be planned and carried out by competent services at suitable intervals 	No observed discrepancies have been identified.	<ul style="list-style-type: none"> • Any additional or more detailed requirements Only § 6 of competent person.
Information for workers Art. 8	<ul style="list-style-type: none"> • Workers exposed at work at or above the lower exposure action values, and/or their representatives, receive information and training relating to risks resulting from exposure concerning, in particular: <ul style="list-style-type: none"> - the nature of such risks; - the measures taken to implement this 	No observed discrepancies have been identified.	<ul style="list-style-type: none"> • Does the legislation provide for specific conditions (e.g. size of the establishments) in relation to workers information? No • Is the content or form of information to workers further specified?

	Main provisions	Observed discrepancies	More detailed or broader requirements, including more stringent
	<p>Directive in order to eliminate or reduce to a minimum the risks from noise,</p> <ul style="list-style-type: none"> - the exposure limit values and the exposure action values - the results of the assessment and measurement together with an explanation of their significance and potential risks - the correct use of hearing protectors - why and how to detect and report signs of hearing damage - the circumstances in which workers are entitled to health surveillance and the purpose of health surveillance - safe working practices to minimise exposure to noise 		<p>No</p> <ul style="list-style-type: none"> • Other additional or more detailed requirements <p>No</p>
Training of workers Art. 8	Same as above	No observed discrepancies have been identified.	<ul style="list-style-type: none"> • Is more specific information on the scope of training provided in the legislation? <p>Same as above</p>
Health surveillance Art. 10	<ul style="list-style-type: none"> • Health surveillance of workers where the results of the assessment/measurement show a risk to their health. • A worker whose exposure exceeds the upper exposure action values shall have the right to have his/her hearing checked by a doctor or by another suitably qualified person under the responsibility of a doctor, • Preventive audiometric testing shall also be available for workers whose exposure exceeds the lower exposure action values, where the risk assessment indicates a risk to health. • The objectives of these checks are to provide early diagnosis of any hearing loss and preserve hearing function. • Individual health records are made and kept up to date. • Health records shall contain a summary of 	No observed discrepancies have been identified.	<ul style="list-style-type: none"> • Does the national legislation require health surveillance prior to exposure to noise? <p>No</p> <ul style="list-style-type: none"> • Does the national legislation oblige employers to set health surveillance requirements after the end of exposure? <p>No. This is only required for employees exposed to noise above the limit values and when the RA otherwise indicates risks for harm (§16).</p> <ul style="list-style-type: none"> • Are the arrangements for health surveillance records specified in the legislation, in particular in terms of content? <p>No</p> <ul style="list-style-type: none"> • Are the conditions in which health surveillance is required more specifically

	Main provisions	Observed discrepancies	More detailed or broader requirements, including more stringent
	<p>the results of the health surveillance carried out.</p> <ul style="list-style-type: none"> • They shall be kept in a suitable form to permit consultation, taking into account any confidentiality. • Copies of the appropriate records shall be supplied to the CA on request. The individual worker shall, at his or her request, have access to health records relating personally to him/her. • Where, as a result of surveillance, a worker is found to have identifiable hearing damage, a doctor, or a specialist if the doctor considers it necessary, shall assess if the damage is likely to be the result of exposure at work. If this is the case: <ul style="list-style-type: none"> - the worker shall be informed by the doctor or other suitably qualified person of the result which relates to him or her personally; <p>The employer shall:</p> <ul style="list-style-type: none"> - review the risk assessment - review the risk mitigation measures taking into account the advice of the occupational healthcare professional or other suitably qualified person or the CA in implementing any measures required to eliminate or reduce risk and, including the possibility of assigning the worker to alternative work where there is no risk of further exposure; and - arrange systematic health surveillance and provide for a review of the health status of any other worker who has been similarly exposed. 		<p>described in the legislation?</p> <p>No</p> <ul style="list-style-type: none"> • Is the periodicity of health surveillance provided in national law? <p>To be adapted to the exposure (§16)</p> <ul style="list-style-type: none"> • Other additional or more detailed requirements <p>§8-9 prescribes measures against excessive noise, and when there are any indications that the conditions are causing hearing impairment, § 4 specifies how measures are to include a broad range of activities to minimize noise: to use alternative work methods that create less noise, to select work equipment with the least noise, to enclose-isolate machines and other sources of noise, to adapt workplaces to reduce noise exposure, to inform and train employees on how to work to minimize the creation of noise, to reduce the spread of noise through e.g. baffles and-or encapsulations, to ensure that regular maintenance of the equipment minimizes the creation of noise, to use work organisation to reduce the time and intensity of noise and adapt the time of work to give enough periods of recuperation from the noise exposure.</p>
Consultation of workers Art. 9	<ul style="list-style-type: none"> • Framework Directive applies 	No observed discrepancies have been identified.	<ul style="list-style-type: none"> • Are there more detailed requirements than in the Framework Directive? <p>Yes, section 15 in AFS 2005: 16 specifies an</p>

	Main provisions	Observed discrepancies	More detailed or broader requirements, including more stringent
			extensive right of consultation. But SWEA's consultation also applies. <ul style="list-style-type: none"> Other additional or more detailed requirements No
Limit values Art.3	<ul style="list-style-type: none"> For the purposes of this Directive the exposure limit values and exposure action values in respect of the daily noise exposure levels and peak sound pressure are fixed at: <ul style="list-style-type: none"> (a) exposure limit values: $L_{EX,8h} = 87$ dB(A) and peak = 200 Pa (1) respectively; (b) upper exposure action values: $L_{EX,8h} 85$ dB(A) and peak = 140 Pa (2) respectively; (c) lower exposure action values: $L_{EX,8h} = 80$ dB(A) and peak = 112 Pa (3) respectively. When applying the exposure limit values, the determination of the worker's effective exposure shall take account of the attenuation provided by the individual hearing protectors worn by the worker. The exposure action values shall not take account of the effect of any such protectors. 	No observed discrepancies have been identified.	<ul style="list-style-type: none"> Does the transposing legislation set more stringent values? Yes, § 3 describes that measures are to be taken at 80 dB and that 85 dB (daily average exposures) is not to be exceeded. Peak max is 135 dB (not 140) and maximal noise according to standard SS-EN 61672-1 is 115 dB. Other additional or more detailed requirements No
Other issues identified		No observed discrepancies have been identified.	No

Table 1- 12 Directive 2004/40/EC (electromagnetic fields) - Observed discrepancies, more stringent and more detailed requirements

	Main provisions	Observed discrepancies	More detailed or broader requirements, including more stringent
Scope and definitions Art 1 and Art 2	<ul style="list-style-type: none"> Directive lays down minimum requirements for the protection of workers from risks from exposure to electromagnetic fields (0 Hz to 300 GHz) during their work. It refers to the risk to the health and safety of workers due to known short-term 	No observed discrepancies have been identified. AFS 1987:2 applies to 3 - 300 GHz. AFS 1987:2 <i>Högfrekventa elektromagnetiska fält</i> . And 1998:5 <i>Arbete vid bildskärm</i> . AFS	<ul style="list-style-type: none"> Does the national legislation cover suggested long-term effects? No Does the national legislation address the risks resulting from contact with live conductors?

	Main provisions	Observed discrepancies	More detailed or broader requirements, including more stringent
	<p>adverse effects in the human body caused by the circulation of induced currents and by energy absorption as well as by contact currents.</p> <ul style="list-style-type: none"> • It does not address suggested long-term effects, nor the risks resulting from contact with live conductors. • electromagnetic fields': static magnetic and time-varying electric, magnetic and electromagnetic fields with frequencies up to 300 GHz; 	<p>1987:2 Högfrekventa elektromagnetiska fält. And 1998:5 Arbete vid bildskärm. These do not fully transpose the requirements of directive 2004/40, but Sweden will transpose the reformulated directive 2013/35/EU.</p>	<p>No</p> <ul style="list-style-type: none"> • Other additional or more detailed requirements <p>No</p>
<p>Conducting a risk assessment Art.4</p>	<ul style="list-style-type: none"> • The employer shall assess and, if necessary, measure and/or calculate the levels of electromagnetic fields to which workers are exposed. • On the basis of this assessment, if the action values are exceeded, s/he shall assess and, if necessary, calculate whether the exposure limit values are exceeded. • Assessment, measurement and/or calculations need not be carried out in workplaces open to the public provided that an evaluation has already been undertaken in accordance with Council Recommendation 1999/519/EC. • The data obtained shall be preserved in a suitable form to permit consultation at a later stage • The employer shall give particular attention, when carrying out the risk assessment, to: <ul style="list-style-type: none"> - level, frequency spectrum, duration and type of exposure; - the exposure limit values and action values; - any effects concerning workers at particular risk; - any indirect effects. • The employer shall be in possession of a risk 	<p>No observed discrepancies have been identified.</p>	<ul style="list-style-type: none"> • Does the national legislation require employers to submit risk assessment to national authorities whether on request or automatically? <p>AFS 1987:2 precede the RA requirements in SWEM. However SWEM stipulates documented RA of all possible risks, incl these. But, RA for electromagnetic fields are only to be submitted after request by SWEA. The RA shall assess exposure as compared to exposure levels specified in the appendix of AFS 1987:2.</p> <ul style="list-style-type: none"> • Are the risks to be taken into account in the assessment described in a more specific manner than in the Directive? <p>No</p> <ul style="list-style-type: none"> • Is the content of the risk assessment more detailed than described in the Directive? <p>No</p> <ul style="list-style-type: none"> • Is a more specific methodology for risk assessment provided in the legislation? <p>No</p> <ul style="list-style-type: none"> • Are the sources of information and persons

	Main provisions	Observed discrepancies	More detailed or broader requirements, including more stringent
	<p>assessment.</p> <ul style="list-style-type: none"> • The risk assessment shall be recorded on a suitable medium. It may include a justification by the employer that the nature and extent of the risks related to electromagnetic fields make a further detailed risk assessment unnecessary. • The risk assessment shall be updated on a regular basis, particularly if there have been significant changes which could render it out of date, or when the results of health surveillance show it to be necessary. 		<p>in charge of the risk assessment described in the legislation in a more specific manner than in the Directive?</p> <p>No</p> <ul style="list-style-type: none"> • Other additional or more detailed requirements <p>The AFS does not list issues to pay attention to in the RA, but stipulates that if there are risks of exceeding the limit values in the appendix, the exposure shall be sufficiently evaluated, and appropriate preventive measures shall be taken (§ 3). Risks for persons with pacemakers – or other metal pieces in the body – are noted (§ 4).</p>
Ensuring preventive and protective services Art 4(4)	<ul style="list-style-type: none"> • Assessment, measurement and/or calculations shall be planned and carried out by competent services or persons at suitable intervals, 	No observed discrepancies have been identified.	<ul style="list-style-type: none"> • Any additional or more detailed requirements <p>No</p> <ul style="list-style-type: none"> • Other additional or more detailed requirements <p>No</p>
Information for workers Art. 6	<p>The employer shall ensure that exposed workers and/or their representatives receive any necessary information/training relating to the outcome of the risk assessment, in particular on:</p> <ul style="list-style-type: none"> - measures taken to implement this Directive; - values and concepts of the exposure limit values and action values and the associated potential risks - the results of the assessment, measurement /calculations of the levels of exposure to electromagnetic fields - how to detect adverse health effects and to report them; - circumstances in which workers are entitled to health surveillance; 	No observed discrepancies have been identified.	<ul style="list-style-type: none"> • Does the legislation provide for specific conditions (e.g. size of the establishments) in relation to workers information? <p>No</p> <ul style="list-style-type: none"> • Is the content or form of information to workers further specified? <p>No</p>

	Main provisions	Observed discrepancies	More detailed or broader requirements, including more stringent
	- safe working practices to minimise risks from exposure		
Training of workers <i>Art. 6</i>	Same as above	No observed discrepancies have been identified.	<ul style="list-style-type: none"> Is more specific information on the scope of training provided in the legislation? No Other additional or more detailed requirements No
Health surveillance <i>Art. 8</i>	<ul style="list-style-type: none"> Framework Directive applies In any event, where exposure above the limit values is detected, a medical examination shall be made available to the worker(s) concerned. If health damage resulting from exposure is detected, the employer must carry out a reassessment of the risks The employer shall take appropriate measures to ensure that the doctor and/or the medical authority responsible for the health surveillance has access to the results of the risk assessment The results of health surveillance shall be preserved in a suitable form to permit consultation at later date, taking account of confidentiality requirements. Individual workers shall, at their request, have access to their own personal health records 	No observed discrepancies have been identified.	<ul style="list-style-type: none"> Does the national legislation require health surveillance prior to exposure to electromagnetic fields? No Does the national legislation oblige employers to set health surveillance requirements after the end of exposure to electromagnetic fields? No Are the arrangements for health surveillance records specified in the legislation? No Are the conditions in which health surveillance is required more specifically described in the legislation? No Is the periodicity of health surveillance provided in national law? No Other additional or more detailed requirements No
Consultation of workers	<ul style="list-style-type: none"> Framework Directive applies 	No observed discrepancies have been identified.	<ul style="list-style-type: none"> Are there more detailed requirements

	Main provisions	Observed discrepancies	More detailed or broader requirements, including more stringent
Art. 7			than in the Framework Directive? No • Other additional or more detailed requirements No
Limit values Art.3	Exposure limit values are as set out in the Annex, Table 1. Action values are as set out in the Annex, Table 2.	No observed discrepancies have been identified.	• Does the transposing legislation set more stringent values? No. • Other additional or more detailed requirements Less specified in the appendix than in the directive.
Other issues identified		No observed discrepancies have been identified.	No

Table 1- 13 Directive 2006/25/EC (artificial optical radiation) - Observed discrepancies, more stringent and more detailed requirements

	Main provisions	Observed discrepancies	More detailed or broader requirements, including more stringent
Scope and definitions Art 1 and Art 2	<ul style="list-style-type: none"> • It lays down minimum requirements for the protection of workers from risks to their health and safety arising or likely to arise from exposure to artificial optical radiation during their work. • It refers to the risk to the health and safety of workers due to adverse effects caused by exposure to artificial optical radiation to the eyes and to the skin. • optical radiation: any electromagnetic radiation in the wavelength range between 100 nm and 1 mm. The spectrum of optical radiation is divided into ultraviolet radiation, visible radiation and infrared radiation: (i) ultraviolet radiation: optical radiation of 	No observed discrepancies have been identified.	<ul style="list-style-type: none"> • Any additional or more detailed requirements No. AFS 2009:7 defines artificial optical radiation as any optical radiation except sunlight (§ 3).

	Main provisions	Observed discrepancies	More detailed or broader requirements, including more stringent
	<p>wavelength range between 100 nm and 400 nm. The ultraviolet region is divided into UVA (315-400 nm), UVB (280-315 nm) and UVC (100-280 nm);</p> <p>(ii) visible radiation: optical radiation of wavelength range between 380 nm and 780 nm;</p> <p>(iii) infrared radiation: optical radiation of wavelength range between 780 nm and 1 mm. The infrared region is divided into IRA (780-1 400 nm), IRB (1 400-3 000 nm) and IRC (3 000 nm-1 mm);</p>		
<p>Conducting a risk assessment Art.4</p>	<ul style="list-style-type: none"> • The employer shall assess and, if necessary, measure and/or calculate the levels of exposure to optical radiation to which workers are likely to be exposed • The data obtained shall be preserved in a suitable form to permit their consultation at a later stage. • The employer shall give particular attention, when carrying out the risk assessment, to the following: <ul style="list-style-type: none"> - the level, wavelength range and duration of exposure; - the exposure limit values - any effects concerning the health and safety of workers belonging to particularly sensitive risk groups; - any possible effects resulting from workplace interactions between optical radiation and photosensitising chemical substances; - any indirect effects e.g. temporary blinding, explosion or fire; - the existence of replacement equipment designed to reduce the levels of exposure to artificial optical radiation; 	<p>No observed discrepancies have been identified.</p>	<ul style="list-style-type: none"> • Does the national legislation require employers to submit risk assessment to national authorities whether on request or automatically? <p>No. RA is required (§ 7) but it is to be included in the general RA according to SWEM. To be shown to labour inspectors on request.</p> <ul style="list-style-type: none"> • Are the risks to be taken into account in the assessment described in a more specific manner than in the Directive? <p>Yes. § 5 on RA follows the directive but also adds 'information from producers', and 'artificial sources that can cause harm similar to those from laser radiation of type 3B or 4'.</p> <p>The employers shall also assess indirect risks, especially from formation of gases, smoke, explosion, and fire.</p> <ul style="list-style-type: none"> • Is the content of the risk assessment more detailed than described in the Directive? <p>See above.</p> <ul style="list-style-type: none"> • Is a more specific methodology for risk assessment provided in the legislation? <p>No</p> <ul style="list-style-type: none"> • Are the sources of information and persons in charge of the risk assessment described

	Main provisions	Observed discrepancies	More detailed or broader requirements, including more stringent
	<ul style="list-style-type: none"> - appropriate information obtained from health surveillance, including published information, as far as possible; - multiple sources of exposure; - a classification applied to a laser as defined in accordance with the relevant IEC standard and, in relation to any artificial source likely to cause damage similar to that of a laser of class 3B or 4, any similar classification; 		<p>in the legislation in a more specific manner than in the Directive?</p> <p>No</p> <ul style="list-style-type: none"> • Other additional or more detailed requirements <p>No</p>
Ensuring preventive and protective services Art 4(2)	<ul style="list-style-type: none"> • The assessment, measurement and/or calculations referred to in paragraph 1 shall be planned and carried out by competent services or persons at suitable intervals 	No observed discrepancies have been identified.	<ul style="list-style-type: none"> • Any additional or more detailed requirements <p>No</p>
Information for workers Art. 6	<ul style="list-style-type: none"> • The employer shall ensure that workers exposed to risks from artificial optical radiation at work and/or their representatives receive necessary information and training relating to the outcome of the risk assessment in particular: <ul style="list-style-type: none"> - measures taken to implement this Directive; - the exposure limit values and the associated potential risks; - the results of the assessment, measurement and/or calculations with an explanation of their significance and potential risks; - how to detect adverse health effects of exposure and how to report them - circumstances in which workers are entitled to health surveillance; - safe working practices to minimise risks from exposure; - proper use of appropriate personal protective equipment 	No observed discrepancies have been identified.	<ul style="list-style-type: none"> • Does the legislation provide for specific conditions (e.g. size of the establishments) in relation to workers information? <p>No</p> <ul style="list-style-type: none"> • Is the content or form of information to workers further specified? <p>No</p> <ul style="list-style-type: none"> • Other additional or more detailed requirements <p>No.</p>
Training of workers	Same as above	No observed discrepancies have been identified.	<ul style="list-style-type: none"> • Is more specific information on the scope of training provided in the legislation?

	Main provisions	Observed discrepancies	More detailed or broader requirements, including more stringent
Art. 6			<p>No</p> <ul style="list-style-type: none"> • Are there specific requirements as to the competence of trainers provided in the legislation? <p>No</p> <ul style="list-style-type: none"> • Other additional or more detailed requirements <p>No</p>
Health surveillance Art. 8	<ul style="list-style-type: none"> • Health surveillance is carried out by a doctor, an occupational health professional or a medical authority responsible for health surveillance • Individual health records are made and kept up to date. • Health records shall contain a summary of the results of the health surveillance and be kept in a suitable form to permit later consultation, taking into account any confidentiality. • Copies of the appropriate records shall be supplied to the competent authority on request, taking into account any confidentiality. • Doctor, the occupational health professional or the medical authority responsible for the health surveillance, has access to the results of the risk assessment where such results may be relevant to the health surveillance. • Individual workers shall, at their request, have access to their own personal health records • When exposure above limit values is detected, a medical examination shall be made available to the worker(s) concerned. • In both cases, when limit values are 	No observed discrepancies have been identified.	<ul style="list-style-type: none"> • Does the national legislation require health surveillance prior to exposure to artificial optical radiation? <p>No</p> <ul style="list-style-type: none"> • Does the national legislation oblige employers to set health surveillance requirements after the end of exposure to artificial optical radiation? <p>No</p> <ul style="list-style-type: none"> • Are the arrangements for health surveillance records specified in the legislation? <p>No. This is only required if exposure exceeds the limit values of a health control indicates harm caused by artificial optical radiation. Then the medical control is to be done according to the general provisions of occupational medical control AFS 2005:6.</p> <ul style="list-style-type: none"> • Are the conditions in which health surveillance is required more specifically described in the legislation? <p>No</p> <ul style="list-style-type: none"> • Is the periodicity of health surveillance provided in national law? <p>No</p> <ul style="list-style-type: none"> • Other additional or more detailed requirements <p>No</p>

	Main provisions	Observed discrepancies	More detailed or broader requirements, including more stringent
	<p>exceeded or adverse health effects (incl. diseases) are identified:</p> <ul style="list-style-type: none"> - the worker shall be informed of the result which relates to him personally and receive information and advice regarding any health surveillance which he should undergo following the end of exposure; - the employer shall be informed of any significant findings of the health surveillance, taking into account any medical confidentiality; - the employer shall: <ul style="list-style-type: none"> o review the risk assessment o review the measures taken to eliminate or reduce risks o take into account the health professional advice in implementing such measures o arrange continued health surveillance and provide for a review of the health status of any other worker who has been similarly exposed. In such cases, the competent health professional may propose that the exposed persons undergo a medical examination. 		
Consultation of workers Art. 7	<ul style="list-style-type: none"> • Framework Directive applies 	No observed discrepancies have been identified.	<ul style="list-style-type: none"> • Are there more detailed requirements than in the Framework Directive? No • Other additional or more detailed requirements No
Limit values Art.3	<ul style="list-style-type: none"> • Exposure limit values for non-coherent radiation, other than that emitted by natural sources of optical radiation, are set out in Annex I. • Exposure limit values for laser radiation are set out in Annex II. 	No observed discrepancies have been identified.	<ul style="list-style-type: none"> • Does the transposing legislation set more stringent values? No • Other additional or more detailed requirements No
Other issues		No observed discrepancies have been	No

	Main provisions	Observed discrepancies	More detailed or broader requirements, including more stringent
identified		identified.	

Table 1- 14 Directive 2004/37/EC (carcinogens or mutagens) - Observed discrepancies, more stringent and more detailed requirements

	Main provisions	Observed discrepancies	More detailed or broader requirements, including more stringent
Scope and definitions Art 3(1) read in conjunction with Art 2	<ul style="list-style-type: none"> This Directive shall apply to activities in which workers are or are likely to be exposed to carcinogens or mutagens as a result of their work Carcinogens Substance category 1 or 2 carcinogens Annex VI to Directive 67/548/EEC Mutagens: Substance category 1 or 2 mutagens Annex VI to Directive 67/548/EEC 	<ul style="list-style-type: none"> Does the national legislation apply the carcinogen and mutagen classification according to the CLP Regulation (EC) 1272/2008? Yes. Directive 2004/37/EC is together with 98/24/EC included in AFS 2011:19 chemical risks, with specific requirements on carcinogens, mutagens and reprotoxic substances. It also requires compliance with REACH. This AFS is complemented by AFS 2011:18 Occupational exposure limit values 	<ul style="list-style-type: none"> Does the transposing legislation also cover reprotoxic substances (1A and 1B)? Yes Other additional or more detailed requirements No
Conducting a risk assessment Art. 3	<ul style="list-style-type: none"> nature, degree and duration of workers' exposure shall be determined in order to make it possible to assess any risk to the workers' health or safety and to lay down the measures to be taken. The assessment shall be renewed regularly and in any event when any change occurs 	No observed discrepancies have been identified.	<ul style="list-style-type: none"> Does the transposing legislation oblige employers to supply the authorities with information automatically and not on request? No. AFS 2011:19 chemical agents, section 45-48 contains prohibitions and requirements of permits.¹³

¹³ **Section 45** A chemical substance which belongs to group A [=cancerogens] in Appendix 1 or a chemical product which contains an additive of such a substance may not be handled, with the exception of the situations described in Sections 46 and 48 in these Provisions. The same applies for chemical products which contain such a substance as contamination at a level of 0.1 weight per cent or more. Regarding Erionite, however, the level of 1 weight per cent or more applies.

Breaches of this provision may result in fines, see Section 52.

Section 46 A chemical substance or product referred to in Section 45 may be handled following permission from the Swedish Work Environment Authority

1. when researching a carcinogenic substance's effects,
2. when developing analysis methods for a substance belonging to group A as well as
3. in other activities where there are special reasons for handling such a substance.

Section 47 A chemical substance which belongs to group B in Appendix 1, or a chemical product which contains such a substance at a level of 1 weight per cent or more, may not be handled without permission from the Swedish Work Environment Authority.

Offences against this provision will entail a penalty of SEK 50, 000, see Section 52.

Section 48 Permission in accordance with Sections 46 and 47 is not needed when stock-keeping for sales or transport of unopened original packaging.

	Main provisions	Observed discrepancies	More detailed or broader requirements, including more stringent
	<p>in the conditions which may affect workers' exposure to carcinogens or mutagens.</p> <ul style="list-style-type: none"> • The employer shall supply the authorities at their request with the information used for making the assessment. • When assessing the risk, account shall be taken of all other routes of exposure, such as absorption into and/or through the skin. 		<ul style="list-style-type: none"> • Are the risks to be taken into account in the assessment described in a more specific manner than in the Directives? Yes, Sections 5-9 are detailed on the RA of all chemical hazards. Sections 38-44 specify the RA and prevention of carcinogens¹⁴, mutagens and reprotoxic substances. • Is the content of the risk assessment more detailed than described in the Directives? Yes, §40 requires e.g. that the risk assessment shall document in which specific places these substances may be placed and which measures shall be takes so that only those persons that have to be in these places have access to them, and which measures are necessary so to secure as small exposure as possible, in which situation PPEs are required and how to monitor the handling and functioning of the equipments, processes and ventilation in order to detect any aberrations that can result in increased risks as soon as possible. • Is a more specific methodology for risk assessment provided in the legislation? No

¹⁴ **Investigation regarding the possibility of replacing a product**

Section 39 A chemical product in accordance with Section 38, first para-graph can only be handled if there is a documented investigation indicating that it is not technically possible to replace the product by using other chemical products which present a lower risk of ill-health and accidents.

The requirement does not apply to chemical products used for engine operation or heating or stored for such use.

Documentation of the risk assessment

Section 40 When the results of the investigation and risk assessment for handling of such chemical products and for the activities described in Section 38 are documented in accordance with Section 10, the following information shall be stated with particular clarity.

1. Within which places and spaces chemical substances which are carcinogenic, mutagenic and toxic to reproduction may occur and what measures shall be taken so that only persons needed for the work can access them.
2. The protective measures necessary for ensuring exposure is minimal.
3. In which situations personal protective equipment is necessary.
4. How the handling of and functions of the equipment, processes or ventilation shall be supervised in order to facilitate early detection of deviations which may entail an increased risk.

	Main provisions	Observed discrepancies	More detailed or broader requirements, including more stringent
			<ul style="list-style-type: none"> • Are the sources of information and persons in charge of the risk assessment described in the legislation in a more specific manner than in the Directives? <p>Yes, reference is made to AFS 2011:18 Occupational exposure limit values</p> <ul style="list-style-type: none"> • Other additional or more detailed requirements <p>§14-16 specifies preventive measures based on the prevention hierarchy, with e.g. 15.1: <i>Chemical products and materials shall be chosen so that chemical risks, along with other risks connected to the work in total become as small as possible.</i></p>
Ensuring preventive and protective services	N/A	N/A	N/A
Information for workers Art.12	<p>Appropriate measure to ensure that:</p> <ul style="list-style-type: none"> • Workers and/or any workers' representatives in the undertaking can check that this Directive is applied or can be involved in its application in particular for: <ul style="list-style-type: none"> - the consequences for workers' safety and health of the selection, wearing and use of protective clothing and equipment, without prejudice to the employer's responsibility for determining the effectiveness of protective clothing and equipment; - the measures in case of foreseeable exposure • Workers and/or their representatives are informed as quickly as possible of abnormal exposures including foreseeable ones or the cause and of the measures 	No observed discrepancies have been identified.	<ul style="list-style-type: none"> • Does the Directive set additional information requirements, including on: <ul style="list-style-type: none"> - relevant activities and industrial processes, including reasons why carcinogens mutagens and reprotoxins are used; - quantities of substances and preparations manufactured or used that contain CMR - numbers of workers exposed - replacement by another product - negative impacts on fertility <p>Yes, Section 11: <i>The handling and safety instructions as well as other routines needed for the activity conducted at the workplace shall be determined. They shall be in writing, unless it is a matter of simple handling where the risks can easily be realized.</i></p> <ul style="list-style-type: none"> • Does the legislation provide for specific conditions in relation (e.g. size of the

	Main provisions	Observed discrepancies	More detailed or broader requirements, including more stringent
	<p>taken or to be taken to rectify the situation</p> <ul style="list-style-type: none"> • The employer keeps an up-to-date list of the workers engaged in the activities in respect of which the results of the assessment reveals a risk to workers and indicating if available their exposure • Doctors and/or competent authorities have access to this list. • Each worker has access to the information about him • Workers and/or workers representatives have access to anonymous collective information 		<p>establishments) to workers information? No</p> <ul style="list-style-type: none"> • Is the content or form of information to workers further specified? See above • Other additional or more detailed requirements Workers' safety representatives have a right to participate in all SWEM, including preventing chemical risks. They therefore have a right to be given all relevant information, including RA documents.
Training of workers Art.11	<ul style="list-style-type: none"> • Sufficient and appropriate training on the basis of all available information on: <ul style="list-style-type: none"> ◦ Potential risks to health including the additional risks due to tobacco consumption ◦ Precautions to be taken to prevent exposure 	No observed discrepancies have been identified.	<ul style="list-style-type: none"> • Is more specific information on the scope of training provided in the legislation? No • Are there specific requirements as to the competence of trainers provided in the legislation? No • Other additional or more detailed requirements No
Health surveillance Art.14	<ul style="list-style-type: none"> • Health surveillance prior exposure and at regular intervals thereafter • If a workers suffer from an abnormality suspected to be the result of exposure the doctor or relevant authority may require other workers who have been similarly exposed to undergo health surveillance. In that even a reassessment of the risk must be carried out. • Medical records must be kept and doctors must propose any protective or preventive measures to be taken in respect of any individual worker. • Advice must be given to workers on health 	No observed discrepancies have been identified.	<ul style="list-style-type: none"> • Does the national legislation set health surveillance requirements after the end of exposure? No, but AFS 2011:19 on chemical hazards section 41 requires employers to keep a register of employees who have worked with these extra hazardous chemical products, with name, work task, which chemical hazards and levels of exposure. Also AFS 2005.6 on Medical check-ups in working life, has specific requirements on such checks for those who work with lead or cadmium. Sections 12 to 26 require e.g. that such controls shall have intervals of at

	Main provisions	Observed discrepancies	More detailed or broader requirements, including more stringent
	<p>surveillance after the end of exposure</p> <ul style="list-style-type: none"> Workers have access to the result of health surveillance that concern them Workers/employers may request a review of the results of the health surveillance 		<p>most 36 months, and that they shall measure lead/cadmium in urine and in blood.</p> <ul style="list-style-type: none"> Are the arrangements for health surveillance records specified in the legislation? <p>See above</p> <ul style="list-style-type: none"> Are the conditions in which health surveillance is required more specifically described in the legislation? <p>See above</p> <ul style="list-style-type: none"> Is the periodicity of health surveillance provided in national law? <p>No</p> <ul style="list-style-type: none"> Other additional or more detailed requirements <p>No</p>
Consultation of workers Art.13	<ul style="list-style-type: none"> Framework Directive applies 	No observed discrepancies have been identified.	<ul style="list-style-type: none"> Are there more detailed requirements than in the Framework Directive? <p>Not in AFS 2011:19 but in WEA, ch. 6.</p> <ul style="list-style-type: none"> Other additional or more detailed requirements <p>No</p>
Limit values Art 16 and Annex III	<ul style="list-style-type: none"> Limit values on Benzene, Vinyl chloride monomer, hardwood dusts 	No observed discrepancies have been identified.	<ul style="list-style-type: none"> Does the transposing legislation set more stringent limit values? <p>Yes. Benzene is 0,5 ppm and 1,5 mg. Vinyl chloride is 1 ppm and 2,5 mg. Wood dust 2 mg/m²-</p> <ul style="list-style-type: none"> Does the legislation set binding limit values on other carcinogens and mutagens (e.g. refractory ceramic fibres and its compound)? <p>Yes, AFS 2011: 18 on OELs list very many more such substances than in the directive, e.g. Acetaldehyd, Acetamid, 2-Acetamidfluoren, Akrylamid, Akrylnitril, 4-Aminodifenyl, Anilin, Arsenic, Auramin</p>

	Main provisions	Observed discrepancies	More detailed or broader requirements, including more stringent
			and Bensalchloride. • Other additional or more detailed requirements No
Other issues identified		No observed discrepancies have been identified.	No

Table 1- 15 Council Directive 98/24/EC (chemical agents at work) - Observed discrepancies, more stringent and more detailed requirements

	Main provisions	Observed discrepancies	More detailed or broader requirements, including more stringent
Scope and definitions Art. 1 and 2	<ul style="list-style-type: none"> The requirements of this Directive apply where hazardous chemical agents are present or may be present at the workplace, without prejudice to the provisions for chemical agents to which measures for radiation protection apply pursuant to Directives adopted under the Treaty establishing the European Atomic Energy Community. Chemical agent is defined as any chemical element or compound, on its own or admixed, as it occurs in the natural state or as produced, used or released, including release as waste, by any work activity, whether or not produced intentionally and whether or not placed on the market. Hazardous chemical agent is defined as <ul style="list-style-type: none"> -any chemical agent which meets the criteria for classification as a dangerous substance according to the criteria in Annex VI to Directive 67/548/EEC, whether or not that substance is classified under that Directive, other than those substances which only meet the criteria for classification as dangerous for the 	No observed discrepancies have been identified.	<ul style="list-style-type: none"> Is the scope broader than the directive's for: <ul style="list-style-type: none"> - Chemical agent? - Hazardous chemical agent? No <ul style="list-style-type: none"> Other additional or more detailed requirements. Not a broader scope but formulated slightly differently. AFS 2011:19 chemical hazards in the work environment, regulates all chemicals as potential hazards, with special requirements for carcinogens, mutagens and reprotoxic substances. The latter are listed as such in AFS 2011:18 occupational exposure limit values.

	Main provisions	Observed discrepancies	More detailed or broader requirements, including more stringent
	<p>environment;</p> <p>-any chemical agent which meets the criteria for classification as a dangerous preparation within the meaning of Directive 88/379/EEC, whether or not that preparation is classified under that Directive, other than those preparations which only meet the criteria for classification as dangerous for the environment;</p> <p>-any chemical agent which, whilst not meeting the criteria for classification as dangerous in accordance with (i) and (ii), may, because of its physico-chemical, chemical or toxicological properties and the way it is used or is present in the workplace, present a risk to the safety and health of workers, including any chemical agent assigned an occupational exposure limit value under Article 3 of the Directive.</p>		
<p>Conducting a risk assessment Art. 4(1), (2) and (4)</p>	<ul style="list-style-type: none"> The Directive requires a risk assessment to be carried out by employers which must determine whether any hazardous chemical agents are present at the workplace. If so they should assess them taking into account, inter alia, their hazardous properties; level, type and duration of exposure; the circumstances of work involving such agents; occupational 	<p>No observed discrepancies have been identified.</p>	<ul style="list-style-type: none"> Does the national legislation require employers to submit risk assessment to national authorities whether on request or automatically? <p>On request</p> <ul style="list-style-type: none"> Are the risks to be taken into account in the assessment described in a more specific manner than in the Directive? <p>Yes, sections 5-9 are more detailed¹⁵.</p>

¹⁵ **Section 5** The risk of chemical hazards causing ill-health and accidents in the activity shall be investigated and assessed in accordance with Sections 6-9 as often as the conditions of the activity demands it.

Furthermore, such an investigation and risk assessment shall always be conducted when the activity is temporarily or permanently changed or if it can be expected that the result of the risk assessment will be affected due to new information.

The air shall be examined and assessed every time work is to be commenced in a cistern, well, silo, loading space or similar. If it is not obvious that the air is safe, the air's content of oxygen and substances hazardous to health shall be measured and the risk of explosion shall be assessed by measuring the percentage of flammable gases and fumes.

Work may not commence before an investigation and risk assessment have been conducted and necessary measures have been taken in order to prevent ill-health and accidents at work.

	Main provisions	Observed discrepancies	More detailed or broader requirements, including more stringent
	exposure limit values or biological limit values; effect of preventive measures		<ul style="list-style-type: none"> • Is the content of the risk assessment more detailed than described in the Directive?

Section 6 The chemical hazards which can be expected to occur in the activity shall be identified and registered. The chemical hazards shall be given a name which, for hazardous chemical products, may not differ from the name used when labelling in accordance with Section 19. Date when the information was registered shall be stated, and for each chemical hazard, the following shall be stated

1. type of hazard,
2. in which location it is stored and normally used,
3. if an occupational exposure limit value exists and
4. what other special rules may apply for the chemical hazard.

Such chemical hazards which are chemical products and which are handled or sold in closed packaging may be brought together and registered under a common name if the assessment of risks in the handling in accordance with Section 8 can be made jointly for these products.

Section 7 The additional information regarding the registered chemical hazards needed to make the assessment in accordance with Section 8 shall be produced. The following documents shall always be available.

1. Safety data sheets for chemical products as well as other information regarding risks and protective measures which the supplier shall provide. If however the quantities handled are so small that it is not probable that ill-health or accidents can occur, the information in the supplier's labelling is sufficient.
2. A document with the health and safety information needed for the hazardous chemical products manufactured at the workplace or brought into the country by the activity. The documentation need not be produced if the chemical product is manufactured or used on a small scale at a laboratory for own use.

Section 8 An assessment shall be made if and when measures are necessary for limiting the risk of a chemical hazard causing ill-health or accidents in the activity through

1. harmful exposure via inhalation,
2. harmful exposure via skin contact, splashing in the eyes or ingestion through the mouth,
3. formation of inflammable air mixtures or fire hazards caused by other reasons, as well as
4. personal injury due to reactive, explosive or destructive properties.

The following factors, inter alia, shall be observed during the assessment.

1. How the hazardous properties of the chemical hazard may be expressed in the manner in which it occurs in the activity.
2. The nature, level and duration of the exposure to the chemical hazard where it occurs.
3. Any interacting effects with other chemical hazards or with other work environment factors in the workplace.
4. Possible reactions together with other chemical hazards or material occurring in the workplace.
5. Conditions of work which may affect the risk, including the effect of taken and planned protective measures.
6. Experiences of ill-health, accidents or incidents in the activity, at contingency exercises in accordance with Section 12, last paragraph, as well as experiences from medical controls.

The assessment shall lead to a decision regarding which measures shall be taken in order to limit the risks.

Section 9 For chemical hazards included in Appendix 1, the Swedish Work Environment Authority's Provisions (AFS 2011:18) on Occupational Exposure Limit Values, it shall be determined during the assessment in accordance with Section 8 whether the content in the air of each substance is acceptable considering the limit value. The assessment and reasons for this shall be documented.

During the assessment, consideration shall be taken to the content of all chemical substances in the inhalation air which can entail ill-health or accidents, to how physically strenuous the work is and to the fact that certain substances can be absorbed by the skin.

Measuring of air contaminants in the breathing zone shall be conducted unless it can be clarified in another way, which measures are necessary for the exposure to be acceptable considering the limit value.

If measurement is not needed in accordance with the exemptions in the third paragraph or Section 50, second paragraph, the reasons for this shall be documented.

	Main provisions	Observed discrepancies	More detailed or broader requirements, including more stringent
	<p>taken or to be taken; conclusions to be drawn from any health surveillance.</p> <ul style="list-style-type: none"> In case of activities involving exposure to several agents, the risk must be assessed taking into account all chemical agents in combination. The risk assessment must be documented. The employer must be in possession of the risk assessment. 		<p>See footnote.</p> <ul style="list-style-type: none"> Is a more specific methodology for risk assessment provided in the legislation? No Are the sources of information and persons in charge of the risk assessment described in the legislation in a more specific manner than in the Directive? See footnote Other additional or more detailed requirements No
Ensuring preventive and protective services	N/A	N/A	N/A
Information for workers Art.8	<ul style="list-style-type: none"> The employer must ensure that workers are provided with: <ul style="list-style-type: none"> Data obtained from the risk assessments Information on the hazardous chemical agents occurring in the workplace (e.g. relevant occupational exposure limit values) Training and information on appropriate precautions and actions to be taken Safety data sheet 	No observed discrepancies have been identified.	<ul style="list-style-type: none"> Does the transposing legislation set any additional information requirements? Yes, Section 11: <i>The handling and safety instructions as well as other routines needed for the activity conducted at the workplace shall be determined. They shall be in writing, unless it is a matter of simple handling where the risks can easily be realized.</i> Does the legislation provide for specific conditions (e.g. size of the establishments) in relation to workers information? No Is the content or form of information to workers further specified? See Section 11. Other additional or more detailed requirements No
Training of workers Art.8	<ul style="list-style-type: none"> The employer must ensure that workers are provided with: 	No observed discrepancies have been identified.	<ul style="list-style-type: none"> Is more specific information on the scope of training provided in the legislation?

	Main provisions	Observed discrepancies	More detailed or broader requirements, including more stringent
	<ul style="list-style-type: none"> o Training and information on appropriate precautions and actions to be taken 		<p>No</p> <ul style="list-style-type: none"> • Are there specific requirements as to the competence of trainers provided in the legislation? <p>No</p> <ul style="list-style-type: none"> • Other additional or more detailed requirements <p>No</p>
Health surveillance Art.10	<ul style="list-style-type: none"> • The employer shall provide health surveillance of workers for whom the results of the assessment of the hazardous chemical agents reveal a risk to health. • Individual health and exposure records shall be made and kept up-to-date and contain a summary of the results of health surveillance and of any monitoring data representative of the exposure of the individual. • Copies must be supplied on request to the authorities 	No observed discrepancies have been identified.	<ul style="list-style-type: none"> • Does the transposing legislation require health surveillance to be provided for other workers than those for which the assessment of the hazardous chemical agents revealed a risk to health? <p>No</p> <ul style="list-style-type: none"> • Does the transposing legislation oblige employers to supply the authorities with information automatically and not on request? <p>No</p> <ul style="list-style-type: none"> • Are the arrangements for health surveillance records specified in the legislation? <p>Yes, in AFS 2005:6 Medical controls in working life</p> <ul style="list-style-type: none"> • Are the conditions in which health surveillance is required more specifically described in the legislation? <p>No</p> <ul style="list-style-type: none"> • Is the periodicity of health surveillance provided in national law? <p>No</p> <ul style="list-style-type: none"> • Other additional or more detailed requirements <p>No</p>
Consultation of workers Art.11	<ul style="list-style-type: none"> • Framework Directive applies 	No observed discrepancies have been identified.	<ul style="list-style-type: none"> • Are there more detailed requirements than in the Framework Directive? <p>Yes, as specified in SWEA</p>

	Main provisions	Observed discrepancies	More detailed or broader requirements, including more stringent
			<ul style="list-style-type: none"> Other additional or more detailed requirements No
Limit values Art 3 and 6(4) and (5)	<ul style="list-style-type: none"> Exposure limit values and biological limit values 	No observed discrepancies have been identified.	<ul style="list-style-type: none"> Does the transposing legislation set more stringent limit values? AFS 2011:18 occupational exposure limit values contains such for numerous chemicals. For inhalable lead dust the LLV is 0,1 mg/m2. Other additional or more detailed requirements No
Other issues identified		No observed discrepancies have been identified.	No

Table 1- 16 Directive 2009/148/EC (asbestos) - Observed discrepancies, more stringent and more detailed requirements

	Main provisions	Observed discrepancies	More detailed or broader requirements, including more stringent
Scope and definitions Art.1 and 2	<p>The Directive covers health and safety risks arising or likely to arise from exposure to asbestos at work where asbestos is defined as any one of six fibrous silicates:</p> <ul style="list-style-type: none"> -asbestos actinolite, CAS No 77536-66-4 (1); -asbestos grunerite (amosite), CAS No 12172-73-5 (1); -asbestos anthophyllite, CAS No 77536-67-5 (1) -chrysotile, CAS No 12001-29-5 (1); -crocidolite, CAS No 12001-28-4 (1); -asbestos tremolite, CAS No 77536-68-6 (1). 	No observed discrepancies have been identified.	<ul style="list-style-type: none"> Any additional or more detailed requirements No
Conducting a risk assessment Art.3(2)	<ul style="list-style-type: none"> In the case of activity likely to involve a risk of exposure to dust arising from asbestos or materials containing asbestos, this risk must be assessed to determine the nature and degree of the workers' exposure. 	No observed discrepancies have been identified.	<ul style="list-style-type: none"> Are the risks to be taken into account in the assessment described in a more specific manner than in the Directive? The use and handling of new asbestos is prohibited. The provisions AFS 2006:1 regulates handling etc. of existing asbestos or

	Main provisions	Observed discrepancies	More detailed or broader requirements, including more stringent
			<p>materials containing asbestos. Such handling - e.g. for removal-demolition of materials with more than 1 % asbestos content – requires permits from SWEA, according to sections 9-18. These specify required conditions for and details in applications for a permits. In practice asbestos is mainly handled in demolition, where applications e.g. shall contain certificate of appropriate training, medical controls and opinion by RSR or local SR.</p> <ul style="list-style-type: none"> • Is the content of the risk assessment more detailed than described in the Directive? No • Is a more specific methodology for risk assessment provided in the legislation? No • Are the sources of information and persons in charge of the risk assessment described in the legislation in a more specific manner than in the Directive? No • Other additional or more detailed requirements Detailed requirements of prevention, in sections 23-27, e.g. such a careful planning of all work to minimize exposures to asbestos dust, which shall take into account the possibility of unforeseen exposure to asbestos, and that cabins of machines/vehicles used shall have a separate supply of fresh air.
Ensuring preventive and protective services Art.7(4)	<ul style="list-style-type: none"> • Sampling shall be carried out by suitably qualified personnel. The samples taken shall be subsequently analysed, in laboratories equipped for fibre counting. 	No observed discrepancies have been identified.	<ul style="list-style-type: none"> • Any additional or more detailed requirements No

	Main provisions	Observed discrepancies	More detailed or broader requirements, including more stringent
Information for workers Art.4(4) Art.17	<ul style="list-style-type: none"> • Art.4(4): Workers must have access to the documents used in the documentation system • Art.17: Workers must receive adequate information on: <ul style="list-style-type: none"> - potential risks to health from exposure to dust arising from asbestos or materials containing asbestos; - existence of statutory limit values and the need for the atmosphere to be monitored; - hygiene requirements, including the need to refrain from smoking; - precautions to be taken as regards the wearing and use of protective equipment and clothing; - special precautions designed to minimise exposure to asbestos. • Workers must have access to the results of asbestos-in-air concentration measurements and can be given explanations of the significance of those results. if the results exceed the limit value, the workers concerned are informed as quickly as possible of the fact and the reasons for it and the workers are consulted on the measures to be taken or, in an emergency, are informed of the measures which have been taken. 	No observed discrepancies have been identified.	<ul style="list-style-type: none"> • Does the transposing legislation set any additional information requirements? Section 22 requires written instructions. • Does the legislation provide for specific conditions (e.g. size of the establishments) in relation to workers information? No • Is the content or form of information to workers further specified No • Other additional or more detailed requirements No
Training of workers Art.14	<ul style="list-style-type: none"> • Appropriate training must be given for all workers who are, or are likely to be, exposed to dust from asbestos or materials containing asbestos. Such training must be provided at regular intervals and at no cost to the workers. • The content of the training must be easily understandable for workers. It must enable them to acquire the necessary knowledge 	No observed discrepancies have been identified.	<ul style="list-style-type: none"> • Is more specific information on the scope of training provided in the legislation? Section 16.2 requires: <i>asbestos training certificates for the persons who are to direct the work and the persons who are to participate in the work.</i> • Are there specific requirements as to the competence of trainers provided in the legislation?

	Main provisions	Observed discrepancies	More detailed or broader requirements, including more stringent
	<p>and skills in terms of prevention and safety, particularly as regards:</p> <ul style="list-style-type: none"> - properties of asbestos and its effects on health; - types of products or materials likely to contain asbestos; - operations that could result in asbestos exposure and the importance of preventive controls to minimise exposure; - safe work practices, controls and protective equipment; - appropriate role, choice, selection, limitations and proper use of respiratory equipment; - emergency procedures; - decontamination procedures; - waste disposal; - medical surveillance requirements 		<p>No</p> <ul style="list-style-type: none"> • Are there more detailed requirements on the content of training than in the Directive? <p>Yes, Section 36: <i>The person directing and the person carrying out work on the demolition of a building, part of a building, a technical device or part of such a device containing material which includes more than 1 per cent asbestos by weight shall have undergone special asbestos training which at least includes sections dealing with the properties of asbestos, its effects on health, its occurrence, safety precautions, emergency measures, management of personal protective equipment, working methods, control measures, waste measurement, decontamination measures, stipulations concerning medical surveillance, and demolition techniques with practical exercises.</i></p> <p><i>Thereafter the persons referred to in the foregoing shall, at intervals of not more than five years, undergo supplementary asbestos training consisting of revision and updating on the state of knowledge. The employer shall see to it that the employees have completed these training programmes.</i></p> <ul style="list-style-type: none"> • Are there more detailed requirements on the regularity of training than in the Directive? <p>See above</p> <ul style="list-style-type: none"> • Other additional or more detailed requirements <p>No</p>

	Main provisions	Observed discrepancies	More detailed or broader requirements, including more stringent
<p>Health surveillance Art.18</p>	<ul style="list-style-type: none"> • Assessment of each worker's health must be available prior to the beginning of exposure to dust arising from asbestos or materials containing asbestos at the place of work. It must include a specific examination of the chest. • A new assessment must be available at least once every 3 years for as long as exposure continues. • Individual health record to be established for each worker • The doctor or responsible authority shall advise on individual protective/preventive measures to be taken or determine such measures, including where appropriate the withdrawal of the worker from all exposure to asbestos. • Information and advice must be given to workers on any assessment of their health which they may undergo following the end of exposure. • The doctor may indicate that medical surveillance must continue after the end of exposure for as long as he/she considers it necessary to safeguard the health • The worker concerned or the employer may request a review of the assessments • These measures do not apply if worker exposure is sporadic and of low intensity, and is clear from the results of the risk assessment that the exposure limit for asbestos will not be exceeded (See Article 3(3)) 	<p>No observed discrepancies have been identified.</p>	<ul style="list-style-type: none"> • Do these health surveillance requirements also apply if worker exposure is sporadic and of low intensity, and is clear from the results of the risk assessment that the exposure limit for asbestos will not be exceeded? Yes, section 16.3 requires: <i>Certificates of medical surveillance as referred to in Section 49 (certificates of fitness for duty) for the persons who are to take part in the demolition work.</i> And section 49 stipulates: <i>The employer shall arrange for the medical examination, in accordance with the Provisions of the Work Environment Authority (AFS 2005:6) on Medical Surveillance in Working Life, of employees who are or will be employed on any of the following types of work.</i> <ol style="list-style-type: none"> 1. Work requiring permission under Section 10 or 11, when the permit so specifies. 2. Work requiring permission under Section 12. 3. Work, other than referred to in points 1 and 2, which can entail more than 50 hours' exposure per calendar year to dust containing asbestos. <i>The employer shall keep an exposure register, as provided in the Provisions of the Work Environment Authority (AFS 2005:6) on Medical Surveillance in Working Life, of the employees coming under the stipulations of subsection one.</i> • Does the national legislation oblige worker to continue medical surveillance after exposure to asbestos?

	Main provisions	Observed discrepancies	More detailed or broader requirements, including more stringent
			<p>No</p> <ul style="list-style-type: none"> • Are the arrangements for health surveillance records specified in the legislation? <p>See above</p> <ul style="list-style-type: none"> • Are the conditions in which health surveillance is required more specifically described in the legislation? <p>No</p> <ul style="list-style-type: none"> • Is the periodicity of health surveillance provided in national law? <p>No</p> <ul style="list-style-type: none"> • Other additional or more detailed requirements <p>Medical controls – incl. for work with asbestos - are specified in AFS 2005:6 medical controls in working life.</p>
Consultation of workers Art.3(5) and 7(3) and 12	<ul style="list-style-type: none"> • Art.3(5): risk assessment is subject to worker consultation • Art.7(3): sampling is carried out after worker consultation • Art.12: workers must be consulted on measures to be taken in case of activities such as demolition, asbestos removal work, repairing and maintenance where it is foreseeable that the limit values will be exceeded, before the activities start. 	No observed discrepancies have been identified.	<ul style="list-style-type: none"> • Does the national legislation set additional worker consultation requirements? <p>No</p> <ul style="list-style-type: none"> • Are more specific criteria put in place? <p>No</p> <ul style="list-style-type: none"> • Other additional or more detailed requirements <p>RSR or SR must be consulted (§ 16), as part of the application to handle asbestos (mainly demolition). Otherwise as in WEA.</p>
Limit values Art.8	<ul style="list-style-type: none"> • Employers shall ensure that no worker is exposed to an airborne concentration of asbestos in excess of 0,1 fibres per cm³ as an 8-hour time-weighted average (TWA). 	No observed discrepancies have been identified.	<ul style="list-style-type: none"> • Does the transposing legislation set more stringent limit values? <p>No</p> <ul style="list-style-type: none"> • Other additional or more detailed requirements <p>No</p>
Other issues identified		No observed discrepancies have been identified.	No

Table 1- 17 Directive 2000/54/EC (biological agents) - Observed discrepancies, more stringent and more detailed requirements

	Main provisions	Observed discrepancies	More detailed or broader requirements, including more stringent
Scope and definitions Art. 1 and 2	<ul style="list-style-type: none"> The Directive covers risks, arising or likely to arise from exposure to biological agents at work. 'biological agents': micro-organisms, including those which have been genetically modified, cell cultures and human endoparasites, which may be able to provoke any infection, allergy or toxicity; 	No observed discrepancies have been identified.	<ul style="list-style-type: none"> Is the scope of the national legislation broader than the Directive? No. AFS 2005:1 (updated in 2012:7) 'Microbiological Work Environment Risks – Infection, Toxigenic Effect, Hypersensitivity' transposes the directive. Other additional or more detailed requirements No
Conducting a risk assessment Art. 3, 7(1)	<ul style="list-style-type: none"> The nature, degree and duration of workers' exposure must be determined. In the case of activities involving exposure to several groups of biological agents, the risk shall be assessed on the basis of the danger presented by all hazardous agents present. The assessment must be renewed regularly and in any event when any change occurs in the conditions which may affect workers' exposure The employer must supply the CAs, at their request, with the information used for 	No observed discrepancies have been identified.	<ul style="list-style-type: none"> Does the national legislation require employers to submit risk assessment to national authorities automatically? No Does the national legislation require that practical guidelines for the determination and assessment of risk must be developed? No Are the risks to be taken into account in the assessment described in a more specific manner than in the Directive? Yes, Appendix 1 prescribes procedures¹⁶

¹⁶ **Risk assessment procedure under Section 4**

The risk assessment involves systematically identifying risk sources and judging the likelihood of the work, and where relevant particular work operations, entailing, by reason of biological agents, a risk to health or safety, and judging the potential gravity of the consequences.

A. Risk identification

- (1) Are there conditions favouring the unwanted growth of biological agents?
- (2) Is the work of a kind in which ill-health or accidents connected with biological agents are a common occurrence?
- (3) Do biological agents occur in large quantities, high concentrations and/or particular agents?
- (4) Do certain work operations entail a greater likelihood of exposure and/or particular risks?
- (5) Is there a risk of prolonged or frequent exposure in the workplace?
- (6) Does ill-health which may conceivably be due to exposure to biological agents occur in the workplace?
- (7) Can many employees be affected?
- (8) Are there employees needing special consideration?

B. The nature of the exposure

When the nature of the exposure is going to be established, available information concerning all known or possibly occurring biological agents shall be taken into account. This includes:

- (1) concerning infectious agents, as far as possible

	Main provisions	Observed discrepancies	More detailed or broader requirements, including more stringent
	<p>making the assessment.</p> <ul style="list-style-type: none"> • The assessment is conducted on the basis of all available information: <ul style="list-style-type: none"> - classification of biological agents which are or may be a hazard to human health - recommendations from a CA which indicate that the biological agent should be controlled to protect workers' health when workers are or may be exposed to such a biological agent as a result of their work - information on diseases which may be contracted as a result of the work of the workers - potential allergenic or toxigenic effects as a result of the work of the workers; - knowledge of a disease from which a worker is found to be suffering and which has a direct connection with his work 		<ul style="list-style-type: none"> • Is the content of the risk assessment more detailed than described in the Directive? Yes, see footnote. • Is a more specific methodology for risk assessment provided in the legislation? No • Are the sources of information and persons in charge of the risk assessment described in the legislation in a more specific manner than in the Directive? No • Other additional or more detailed requirements Section 4 requires that <i>The employer shall have access to the competence needed for the assessment of risks.' But full competence is already required in SWEM.</i>

(a) infective dose and other factors affecting the likelihood of the agents causing infection,

(b) infection paths

(c) the severity of the disease,

(d) the possibility of disease prevention,

(e) the possibility of treatment, and

(f) classification as per the criteria in App. 2 a,

(2) other available knowledge concerning ill-health which may be caused by biological agents occurring, including the triggering of hypersensitivity and toxigenic effects,

(3) the resistance of the biological agents occurring to dehydration, heat, disinfectants etc., and

(4) information concerning work injuries which may be connected with biological agents occurring.

C. Measurement/determination by sampling and analysis

Where necessary and technically possible, measurement/determination shall be conducted by means of sampling and analysis of biological agents to establish the nature and degree of exposure.

In the event of

measurement/determination, it shall be ensured:

(1) that the party planning and conducting sampling and analysis of biological agents has sufficient knowledge for the purpose,

(2) that the purpose of sampling and analysis, including the use to be made of the results, has been ascertained,

(3) that sampling is planned in association with the employer and safety delegate, or, failing a safety delegate, the employees affected,

(4) that the sampling is representative of normal conditions and/or particular situations,

(5) that sampling and analysis are performed using a method and equipment appropriate to the purpose, and

(6) that sampling and analysis are documented in such a way as to facilitate replication and comparison with other measurements/determinations.

	Main provisions	Observed discrepancies	More detailed or broader requirements, including more stringent
	<ul style="list-style-type: none"> • Where the assessment reveals risk to workers' health or safety, employers shall, when requested, make available to the CA appropriate information on: <ul style="list-style-type: none"> - the results of the assessment; - the activities in which workers have been exposed or may have been exposed; - the number of workers exposed; - the name and capabilities of the person responsible for OSH, - the protective and preventive measures taken; - an emergency plan for the protection of workers from exposure to a group 3 or 4 biological agent which might result from a loss of physical containment. 		
Ensuring preventive and protective services	N/A	N/A	N/A
Information for workers Art.10	<ul style="list-style-type: none"> • Employers shall provide written instructions and, if appropriate, display notices which shall, include the procedure to follow in the case of: <ul style="list-style-type: none"> - a serious accident or incident involving the handling of a biological agent; - handling a group 4 biological agent. • Employers shall inform the workers of any accident/incident which may have resulted in the release of a biological agent and could cause severe human infection and/or illness. • Employers shall inform the workers as quickly as possible when a serious accident or incident occurs, of its causes and the remedial measures taken or to be taken. • Each worker shall have access to the 	No observed discrepancies have been identified.	<ul style="list-style-type: none"> • Does the information to be provided to the CAs need to be available to the workers independently of their request? No • Does the legislation provide for specific conditions (e.g. size of the establishments) in relation to workers information? No • Is the content or form of information to workers further specified? Yes. Section 14: <i>Everyone doing work which can entail risks caused by biological agents in the workplace shall be sufficiently informed of these risks and how to avoid them.</i> Section 15: <i>The employer shall see to it that the employees have received handling</i>

	Main provisions	Observed discrepancies	More detailed or broader requirements, including more stringent
	<p>information on the list of exposed workers which relates to him personally.</p> <ul style="list-style-type: none"> Workers or their representatives shall have access to anonymous collective information. Employers shall provide workers and/or their representatives, at their request, with the information for CAs (see Article 7) 		<p>and safety instructions on how the work is to be done with adequate safety. The employer shall ascertain that the instructions have been properly understood by all concerned and are complied with. The instructions shall also include measures needed for the protection of others than those to whom the instructions are addressed.</p> <p>Instructions shall be repeated when necessary and reviewed jointly by employer and employees in order to adapt them to new or changed conditions. If shortcomings are observed, the instructions shall be amended.</p> <p>Handling and safety instructions shall be in writing for the use of infectious agents and otherwise when necessary for the prevention of ill-health or accidents. The instructions shall always include the measures to be taken in the event of unwanted events.</p> <ul style="list-style-type: none"> Other additional or more detailed requirements <p>No</p>
<p>Training of workers Art.9</p>	<ul style="list-style-type: none"> Workers receive training concerning: <ul style="list-style-type: none"> - potential risks to health; - precautions to be taken to prevent exposure; - hygiene requirements; - wearing and use of protective equipment and clothing; - steps to be taken in case of incidents and to prevent them. Training shall be: <ul style="list-style-type: none"> - given at the beginning of work involving contact with biological agents, 	<p>No observed discrepancies have been identified.</p>	<ul style="list-style-type: none"> Is more specific information on the scope of training provided in the legislation? <p>No</p> <ul style="list-style-type: none"> Are there specific requirements as to the competence of trainers provided in the legislation? <p>No</p> <ul style="list-style-type: none"> Other additional or more detailed requirements <p>No</p>

	Main provisions	Observed discrepancies	More detailed or broader requirements, including more stringent
	- adapted to new or changed risks, and repeated periodically if necessary		
Health surveillance Art.14	<ul style="list-style-type: none"> • Each worker can undergo, if appropriate, relevant health surveillance prior to exposure and at regular intervals • When necessary, effective vaccines should be made available for workers who are not already immune to the biological agent to which they are exposed. • A worker is found to be suffering from an infection and/or illness which is suspected to result from exposure, the doctor or responsible authority shall offer such surveillance to other workers similarly exposed. In that event, a reassessment of the risk of exposure shall be carried out • In cases where health surveillance is carried out, an individual medical record shall be kept for at least 10 years following the end of exposure. • In the special cases of infection [referred to in Article 11(2) second subparagraph], an individual medical record shall be kept for an appropriately longer time up to 40 years following the last known exposure. • The doctor or responsible authority shall propose protective or preventive measures in respect of any individual worker. • Information and advice must be given to workers on health surveillance they may undergo after the end of exposure. • Workers shall have access to the results of the health surveillance which concern them, and they or the employer may request a review of these results. • All cases of diseases or death identified from occupational exposure to biological 	No observed discrepancies have been identified.	<ul style="list-style-type: none"> • Does the national legislation set more stringent requirements on health surveillance (e.g. individual medical records must be kept more than 10 years)? No. See AFS 2005:6 Medical check-ups in working life, that also can apply to these risks • Are the arrangements for health surveillance records specified in the legislation? No • Are the conditions in which health surveillance is required more specifically described in the legislation? No • Is the periodicity of health surveillance provided in national law? No • Other additional or more detailed requirements No

	Main provisions	Observed discrepancies	More detailed or broader requirements, including more stringent
	agents shall be notified to the CA		
Consultation of workers Art.12	<ul style="list-style-type: none"> Framework Directive applies 	No observed discrepancies have been identified.	<ul style="list-style-type: none"> Are there more detailed requirements than in the Framework Directive? Yes there are on every WE issue, as regulated in WEA and in SWEM. These requirements are mainly specified in WEA ch. 6, as described above.
Limit values	N/A	N/A	N/A
Other issues identified		No observed discrepancies have been identified.	No

Table 1- 18 Council Directive 92/57/EEC (temporary or mobile construction sites) - Observed discrepancies, more stringent and more detailed requirements

	Main provisions	Observed discrepancies	More detailed or broader requirements, including more stringent
Scope and definitions Art. 1, 2 and 10(1) and (2)	<ul style="list-style-type: none"> The Directive applies to the health and safety of workers at temporary or mobile construction sites, i.e. any construction site at which building or civil engineering works are carried out (a non-exhaustive list of works is provided in Annex I). It does not apply to drilling and extractive industries*. 	No observed discrepancies have been identified.	<p>Transposed by AFS 1999:3 (updated in 2009) Building and civil engineering work. The provisions:</p> <p><i>"also apply to project preparation and design of building or civil engineering work in so far as this affects health and safety conditions (the work environment) for the persons doing the work" (section 1).</i></p> <p>AFS has many requirements not included in 92/57/EC. E.g. sections 19-44 cover:</p> <p><i>"Planning and setting up of a place or area for building or civil engineering work."</i></p> <p>Sections 72-100 cover work and conditions considered to be extra risky.</p>
Conducting a risk assessment	N/A	N/A	N/A
Ensuring preventive and protective services	N/A	N/A	N/A
Information for	<ul style="list-style-type: none"> Framework Directive applies. 	No observed discrepancies have been	<ul style="list-style-type: none"> Does the legislation provide for specific

	Main provisions	Observed discrepancies	More detailed or broader requirements, including more stringent
workers Art.11	<ul style="list-style-type: none"> Workers and/or their representatives must be informed of all the measures to be taken concerning their safety and health on the construction site. The information must be comprehensible to the workers concerned. 	identified.	<p>conditions (e.g. size of the establishments) in relation to workers information?</p> <p>No</p> <ul style="list-style-type: none"> Is the content or form of information to workers further specified? <p>Yes, section 48:</p> <p><i>Information concerning the building or civil engineering work, concerning the rules to be applied and concerning health and safety measures (work environment) taken or planned shall be supplied to the employees.</i></p> <p><i>Information concerning the safe conduct of the work shall be supplied to the employees to the extent necessary.</i></p> <p><i>Information and instructions shall be comprehensible to the employees concerned.</i></p> <p>NIR 2013 further specifies: "Among other things, there is a mandatory introductory meeting at the construction site, or employees are otherwise provided with information before the construction starts. Other than this Section 48, there are no provisions concerning how this is to be done."¹⁷</p> <ul style="list-style-type: none"> Other additional or more detailed requirements <p>No</p>
Training of workers	N/A	N/A	NIR 2013 specifies: "Some additional measures have been taken. One of them is that we introduced a requirement into the Swedish construction rules to the effect that construction health and safety coordinators

¹⁷ National Implementation Report 2013, Part A, Section II, (EN) p. 18

	Main provisions	Observed discrepancies	More detailed or broader requirements, including more stringent
			must have the training, skills and experience needed for the project in question." ¹⁸
Health surveillance	N/A	N/A	N/A
Consultation of workers Art. 12	<ul style="list-style-type: none"> • Framework Directive applies. • The consultation of workers must be coordinated, whenever necessary, between workers and/or workers' representatives carrying out their activities at the workplace, having regard to the degree of risk and the size of the work site. 	No observed discrepancies have been identified.	<ul style="list-style-type: none"> • Are specific criteria put in place for coordination of workers consultation e.g. based on the size of the work site? As always, there should be a SR from 5 employees at the worksite, or fewer if the workers so require. In practice, most sites are small and lack local SRs. Instead consultation works through RSRs (Frick, 2009). • Other additional or more detailed requirements <p>No</p>
Limit values	N/A	N/A	N/A
Other issues identified		No observed discrepancies have been identified.	<p>Section 7:</p> <p><i>The party commissioning a building or civil engineering work shall, prior to the commencement of the work, tender prior notice to the Work Environment Authority concerning construction sites</i></p> <ul style="list-style-type: none"> • Where work is expected to last for more than 30 working days and where more than 20 persons will on any occasion be employed simultaneously or • Where the total number of person-days is expected to exceed 500. <p><i>Prior notice shall contain particulars as set forth in App. 1. A copy of the prior notice shall be clearly displayed at the construction site and, if necessary, the notice shall be regularly updated. The party commissioning building or civil engineering work is responsible for this being done.</i></p>

¹⁸ National Implementaiton Report 2013, Part A, Section II, (EN) p. 27.

	Main provisions	Observed discrepancies	More detailed or broader requirements, including more stringent
			<p>NIR 2013 adds that Sweden has regulations in some areas that do not have equivalents in the Directive¹⁹:</p> <ul style="list-style-type: none"> - How work equipment and methods are to be selected, considering the risks of accidents or musculoskeletal disorders to workers and the risk of exposure to noise, vibrations or harmful substances; - Protruding objects (e.g. concrete-reinforcing bars) must have protection so that they do not cause injuries and nobody can fall onto them; - Special provisions for transportation using cranes and similar devices on the site, in order to prevent the guard rail from being removed or collapse risks from arising; - More detailed provisions for demolition; - More detailed provisions for work on roads and tracks in relation to how the work area is to be sealed off to traffic; - More detailed provisions for roof work.

* The Council Decision 74/326/EEC, to which the Directive refers for a definition of "drilling and extracting industries" has been repealed by the Council Decision setting up an Advisory Committee on Safety and Health at Work.

Table 1- 19 Council Directive 92/104/EEC (surface and underground mineral-extracting industries) - Observed discrepancies, more stringent and more detailed requirements

	Main provisions	Observed discrepancies	More detailed or broader requirements, including more stringent
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¹⁹ National Implementation Report 2013, Part A, Section II, (EN) p. 27-28.

	Main provisions	Observed discrepancies	More detailed or broader requirements, including more stringent
Scope and definitions Art. 1 and 2	The Directive applies to surface and underground mineral-extracting industries (excluding extraction by drilling which is subject to a separate directive).	No observed discrepancies have been identified.	The provisions of AFS 2010:1 apply to rock and mining work, also extraction by drilling (92/91/EEC).
Conducting a risk assessment Art. 3.2	The employer shall ensure that a document concerning safety and health and covering the relevant requirements on risk assessment of the Framework Directive is drawn up and kept up to date. The safety and health document shall demonstrate in particular that the risks to which workers at the workplace are exposed have been determined and assessed.	No observed discrepancies have been identified.	<ul style="list-style-type: none"> Does the national legislation require employers to submit risk assessment to national authorities whether on request or automatically? <p>On request.</p> <ul style="list-style-type: none"> Are the risks to be taken into account in the assessment described in a more specific manner than in the Directive? <p>Yes. Section 3: <i>Before rock and mining work commences, an investigation and risk assessment shall be carried out with special regard to geological, rock technical, rock mechanical and other conditions, to the extent necessary for planning of the safe conduct of ongoing work. The risk assessment shall be in writing.</i> <i>In underground areas with high rock tensions the investigation and risk assessment shall also include an analysis of the rock tensions, with the aim of devising a basis for planning an appropriate profile and size of the gallery, the tunnel or other rock area.</i></p> <ul style="list-style-type: none"> Is the content of the risk assessment more detailed than described in the Directive? <p>See above.</p> <ul style="list-style-type: none"> Is a more specific methodology for risk assessment provided in the legislation? <p>No</p> <ul style="list-style-type: none"> Are the sources of information and persons in charge of the risk assessment described in the legislation in a more specific manner

	Main provisions	Observed discrepancies	More detailed or broader requirements, including more stringent than in the Directive?
			<p>than in the Directive?</p> <p>No</p> <ul style="list-style-type: none"> Does the national legislation include more specific information on the content of the 'health and safety document' as provided for by the Directive for the part related to the risk assessment? <p>No</p> <ul style="list-style-type: none"> Other additional or more detailed requirements <p>AFS 2010:1 also contains requirements on Ventilation, Remote control (of equipment), Vehicles, Haul routes and tipping areas, in section 10-25, on Radon (section 27-28), and Mine winders (section 51).</p>
Ensuring internal and/or external preventive and protective services	N/A	N/A	N/A
Information for workers Art. 7	<ul style="list-style-type: none"> Framework Directive applies Workers and/or their representatives shall be informed of all measures to be taken concerning safety and health at workplaces, and in particular of those relating to the implementation of Articles 3 (general obligations), 4 (protection from fire, explosions and health-endangering atmospheres), 5 (Escape and rescue facilities) and 6 (communication, warning and alarm systems). The information must be comprehensible to the workers concerned. 	No observed discrepancies have been identified.	<ul style="list-style-type: none"> Does the legislation provide for specific conditions (e.g. size of the establishments) in relation to workers information? <p>No</p> <ul style="list-style-type: none"> Is the content or form of information to workers further specified? <p>No</p> <ul style="list-style-type: none"> Other additional or more detailed requirements <p>No</p>
Training of workers Art. 10, Parts 1.5	<ul style="list-style-type: none"> Workers must be given the necessary information, instructions, training and re-training to ensure their health and safety. 	No observed discrepancies have been identified.	<ul style="list-style-type: none"> Is more specific information on the scope of training provided in the legislation? <p>Yes. Section 20:</p>

	Main provisions	Observed discrepancies	More detailed or broader requirements, including more stringent
and 1.6 (Annex)	<ul style="list-style-type: none"> The employer must ensure that workers receive comprehensible instructions so as not to endanger their safety and health or those of other workers. 		<p><i>Operators of machines and vehicles used for rock and mining work shall have the requisite training for the task of using the machines and vehicles in such environments. The training shall be documented. Otherwise the general requirements in WEA and SWEM apply.</i></p> <ul style="list-style-type: none"> Are there specific requirements as to the competence of trainers provided in the legislation? <p>No</p> <ul style="list-style-type: none"> Other additional or more detailed requirements <p>No</p>
Health surveillance Art. 8	<ul style="list-style-type: none"> To ensure that workers receive health surveillance appropriate to the health and safety risks they incur at work, measures shall be introduced in accordance with national law and/or practices. The measures shall be such that each worker shall be entitled to, or shall undergo, health surveillance before being assigned to duties related to the activities covered by the Directive and subsequently at regular intervals. Health surveillance may be provided as part of a national health system. 	No observed discrepancies have been identified.	<ul style="list-style-type: none"> Does the transposing legislation require health surveillance if workers experience health problems that can be attributed to the performance of the activities covered by the Directive? <p>No</p> <ul style="list-style-type: none"> Are the arrangements for health surveillance records specified in the legislation? <p>Yes, the guidance of AFS 2001:1 mentions that the provisions on quartz (common in Swedish rock), noise and vibrations are relevant in mining and require health surveillance records.</p> <ul style="list-style-type: none"> Are the conditions in which health surveillance is required more specifically described in the legislation? <p>No</p> <ul style="list-style-type: none"> Is the periodicity of health surveillance provided in national law? <p>No</p> <ul style="list-style-type: none"> Other additional or more detailed requirements

	Main provisions	Observed discrepancies	More detailed or broader requirements, including more stringent
			No
Consultation of workers <i>Art. 9</i>	<ul style="list-style-type: none"> • Framework Directive applies 	No observed discrepancies have been identified.	<ul style="list-style-type: none"> • Are there more detailed requirements than in the Framework Directive? Yes, in SWEA ch. 6. See above. • Other additional or more detailed requirements
Limit values	N/A	N/A	N/A
Other issues identified		No observed discrepancies have been identified.	<p>Sweden has issued more detailed regulations inter alia on the following:</p> <ul style="list-style-type: none"> - good ventilation; - remote control; - vehicles; - transport routes and tipping areas; - radon; - mine lifts <p>These regulations were enacted in AFS 2010:1, 'Rock and Mining Work', which also implemented the specific Directive (91/104/EEC).²⁰</p>

Table 1- 20 Council Directive 92/91/EEC (mineral-extracting industries through drilling) - Observed discrepancies, more stringent and more detailed requirements

	Main provisions	Observed discrepancies	More detailed or broader requirements, including more stringent
Scope and definitions <i>Art. 1 and 2</i>	<ul style="list-style-type: none"> • The Directive applies to the safety and health protection of workers in mineral extracting industries; i.e. industries practising extraction of minerals through drilling by boreholes, prospection with a view to such extraction and/or preparation of extracted materials for sale, excluding activities of processing the materials extracted. 	No observed discrepancies have been identified.	The provisions of AFS 2010:1 apply to rock and mining work (92/104/EEC), including extraction by drilling (92/91/EEC).
Conducting a risk assessment	<ul style="list-style-type: none"> • A 'safety and health document', covering the relevant requirements of the Framework 	No observed discrepancies have been identified.	<ul style="list-style-type: none"> • Does the national legislation require

²⁰ National Implementation Report 2013, (EN) p. 32.

	Main provisions	Observed discrepancies	More detailed or broader requirements, including more stringent
Art.3(2)	Directive is drawn up and kept up to date. It shall demonstrate in particular that the risks incurred by the workers at the work place have been determined and assessed.		<p>employers to submit risk assessment to national authorities whether on request or automatically?</p> <p>On request.</p> <ul style="list-style-type: none"> Are the risks to be taken into account in the assessment described in a more specific manner than in the Directive? <p>No.</p> <ul style="list-style-type: none"> Is the content of the risk assessment more detailed than described in the Directive? <p>No</p> <ul style="list-style-type: none"> Is a more specific methodology for risk assessment provided in the legislation? <p>No</p> <ul style="list-style-type: none"> Are the sources of information and persons in charge of the risk assessment described in the legislation in a more specific manner than in the Directive? <p>No.</p> <ul style="list-style-type: none"> Does the national legislation include more specific information on the content of the 'health and safety document' as provided for by the Directive for the part related to the risk assessment? <p>Yes, see table 1-19.</p> <ul style="list-style-type: none"> Other additional or more detailed requirements <p>No</p>
Ensuring preventive and protective services	N/A	N/A	N/A
Information for	<ul style="list-style-type: none"> Framework Directive applies 	No observed discrepancies have been	<ul style="list-style-type: none"> Does the legislation provide for specific

	Main provisions	Observed discrepancies	More detailed or broader requirements, including more stringent
workers Art. 7	<ul style="list-style-type: none"> Workers and/or their representatives shall be informed of all measures to be taken concerning safety and health at workplaces, and in particular those relating to the implementation of Articles 3 (general obligations), 4 (protection from fire, explosions and health-endangering atmospheres), 5 (Escape and rescue facilities) and 6 (communication, warning and alarm systems). The information must be comprehensible to the workers concerned. 	identified.	<p>conditions (e.g. size of the establishments) in relation to workers information?</p> <p>No</p> <ul style="list-style-type: none"> Is the content or form of information to workers further specified? <p>No</p> <ul style="list-style-type: none"> Other additional or more detailed requirements <p>No</p>
Training of workers Art. 10 (Annex Part A 2.5)	<ul style="list-style-type: none"> Workers must be given the necessary information, instructions, training and retraining to ensure their health and safety. The employer must ensure that workers receive comprehensible instructions so as not to endanger their safety and health or those of other workers. 	No observed discrepancies have been identified.	<ul style="list-style-type: none"> Is more specific information on the scope of training provided in the legislation? <p>No</p> <ul style="list-style-type: none"> Are there specific requirements as to the competence of trainers provided in the legislation? <p>No</p> <ul style="list-style-type: none"> Other additional or more detailed requirements <p>No</p>
Health surveillance Art. 8	<ul style="list-style-type: none"> To ensure that workers receive health surveillance appropriate to the health and safety risks they incur at work, measures shall be introduced in accordance with national law and/or practices. The measures shall be such that each worker shall be entitled to, or shall undergo, health surveillance before being assigned to duties related to the activities covered by the Directive and subsequently at regular intervals. Health surveillance may be provided as part of a national health system 	No observed discrepancies have been identified.	<ul style="list-style-type: none"> Does the transposing legislation require health surveillance if workers experience health problems that can be attributed to the performance of the activities covered by the Directive? <p>See table 1-19 on health surveillance.</p> <ul style="list-style-type: none"> Are the arrangements for health surveillance records specified in the legislation? <p>No</p> <ul style="list-style-type: none"> Are the conditions in which health surveillance is required more specifically

	Main provisions	Observed discrepancies	More detailed or broader requirements, including more stringent described in the legislation?
			<p>No</p> <ul style="list-style-type: none"> Is the periodicity of health surveillance provided in national law? <p>No</p> <ul style="list-style-type: none"> Other additional or more detailed requirements <p>No</p>
Consultation of workers Art. 9	<ul style="list-style-type: none"> Framework Directive applies 	No observed discrepancies have been identified.	<ul style="list-style-type: none"> Are there more detailed requirements than in the Framework Directive? <p>No.</p> <ul style="list-style-type: none"> Other additional or more detailed requirements <p>No</p>
Limit values	N/A	N/A	N/A
Other issues identified		No observed discrepancies have been identified.	<p>Sweden has issued more detailed regulations inter alia on the following:</p> <ul style="list-style-type: none"> – good ventilation; – remote control; – vehicles; – transport routes and tipping areas; – radon; – mine lifts <p>These regulations were enacted in AFS 2010:1, 'Rock and Mining Work', which also implemented the specific Directive (91/104/EEC).²¹</p>

Table 1- 21 Council Directive 92/29/EEC (medical treatment on board vessels) - Observed discrepancies, more stringent and more detailed requirements

²¹ National Implementation Report 2013, Part A, Section II, (EN) p. 32.

	Main provisions	Observed discrepancies	More detailed or broader requirements, including more stringent
Scope and definitions Art. 1 and 2(a) and(b), Art 2(3) and (4)	<ul style="list-style-type: none"> The Directive applies to workers on board a vessel, i.e. any vessel flying the flag of a MS or registered under the plenary jurisdiction of a MS, seagoing or estuary-fishing, publicly or privately owned, excluding inland navigation vessels, warships, pleasure boats used for non-commercial purposes and not manned by professional crews and tugs operating in harbour areas. It applies to workers, excluding port pilots and shore personnel carrying out work on board a vessel at the quayside. Vessels of more than 500 gross registered tonnes with a crew of 15 or more workers and engaged in voyage of more than three days are required to have a sick bay. Vessels with a crew of 100 or more workers and engaged in international voyage of more than 3 days are required to have a doctor responsible for medical care on board. 	No observed discrepancies have been identified.	<ul style="list-style-type: none"> Does the national legislation require a sick bay for vessels board under conditions that go beyond the conditions set by the directive? Yes SJÖFS 2000:21 on medical care and pharmacy on board, chapter 4, section 1, stipulates a sick bay for ships between 200-500 tonnes, if this is reasonable considering the ships' construction. A sick bay is always required for ships from 500 tonnes. Does the national legislation require having a doctor responsible for medical care on board under conditions that go beyond the conditions set by the directive? No Other additional or more detailed requirements Ch. 2, section 5 stipulates that ships without doctor shall allocate medical care to one or more members of the crew that shall have medical training.
Conducting a risk assessment	N/A	N/A	N/A
Ensuring preventive and protective services	N/A	N/A	N/A
Information for workers Art. 5	<ul style="list-style-type: none"> Each Member State shall take the measures necessary to ensure that: <ol style="list-style-type: none"> medical supplies are accompanied by one or more guides to their use, including instructions for use of at least the antidotes required in Annex II section III; all persons receiving professional 	No observed discrepancies have been identified.	<ul style="list-style-type: none"> Does the national legislation set additional information requirements? No Does the legislation provide for specific conditions (e.g. size of the establishments) in relation to workers information? No Is the content or form of information to

	Main provisions	Observed discrepancies	More detailed or broader requirements, including more stringent
	<p>maritime training and intending to work on board ship have been given basic training in the medical and emergency measures to be taken immediately in the event of an accident or serious medical emergency;</p> <p>3. the captain and any worker or workers to whom he delegates the use of the medical supplies pursuant to Article 4 (1) (b) have received special training updated periodically, at least every five years, taking into account the specific risks and needs connected with the different categories of vessel and in accordance with the general guidelines set out in Annex V</p>		<p>workers further specified?</p> <p>No</p> <ul style="list-style-type: none"> • Other additional or more detailed requirements <p>No</p>
<p>Training of workers Art. 5</p>	<ul style="list-style-type: none"> • Each Member State shall take the measures necessary to ensure that: <ul style="list-style-type: none"> 1. medical supplies are accompanied by one or more guides to their use, including instructions for use of at least the antidotes required in Annex II section III; 2. all persons receiving professional maritime training and intending to work on board ship have been given basic training in the medical and emergency measures to be taken immediately in the event of an accident or serious medical emergency; <p>the captain and any worker or workers to whom he delegates the use of the medical supplies pursuant to Article 4 (1) (b) have received special training updated</p>	<p>No observed discrepancies have been identified.</p>	<ul style="list-style-type: none"> • Is more specific information on the scope of training provided in the legislation (general training for persons likely to command a vessel)? <p>No</p> <ul style="list-style-type: none"> • Are there specific requirements as to the competence of trainers provided in the legislation? <p>No</p> <ul style="list-style-type: none"> • Other additional or more detailed requirements <p>No</p>

	Main provisions	Observed discrepancies	More detailed or broader requirements, including more stringent
	periodically, at least every five years, taking into account the specific risks and needs connected with the different categories of vessel and in accordance with the general guidelines set out in Annex V		
Health surveillance	N/A	N/A	N/A
Consultation of workers	N/A	N/A	N/A
Limit values	N/A	N/A	N/A
Other issues identified	-	No observed discrepancies have been identified.	No

Table 1- 22 Council Directive 93/103/EC (work on board fishing vessels) - Observed discrepancies, more stringent and more detailed requirements

	Main provisions	Observed discrepancies	More detailed or broader requirements, including more stringent
Scope and definitions Art. 1 and 2(b) and(c)	<ul style="list-style-type: none"> The Directive applies to any new or existing fishing vessels with a length between perpendiculars of 15 meters or over (which on or after 23 November 1995 furthermore satisfied the conditions specified therein) or with a length of 18 metres or over respectively. 	No observed discrepancies have been identified.	<ul style="list-style-type: none"> Does the national legislation apply the requirement of the Directive to other fishing vessels than the ones covered by the Directive? Yes, to all with employers Other additional or more detailed requirements Several, as 93/103 is transposed through all of the seafaring regulations and the general work environment regulations.
Conducting a risk assessment	N/A	N/A	N/A
Ensuring preventive and protective services	N/A	N/A	N/A
Information for workers Art.8	<ul style="list-style-type: none"> The framework Directive applies. The information must be comprehensible to the workers concerned. 	No observed discrepancies have been identified.	<ul style="list-style-type: none"> Does the national legislation set additional information requirements? Yes. SWEA and SWEM set high standards for this.

	Main provisions	Observed discrepancies	More detailed or broader requirements, including more stringent
			<ul style="list-style-type: none"> Does the legislation provide for specific conditions (e.g. size of the establishments) in relation to workers information? No Is the content or form of information to workers further specified? As specified in several seafaring and work environment regulations. Other additional or more detailed requirements No
Training of workers <i>Art.9 Art.10</i>	<p>Art.9</p> <ul style="list-style-type: none"> Workers shall be given suitable training, in particular in the form of precise, comprehensible instructions, on safety and health on board vessels and on accident prevention The training shall cover in particular firefighting, the use of life-saving and survival equipment and, for the workers concerned, the use of fishing gear and hauling equipment and the use of various types of signs including hand signals Such training shall be subject to the necessary updating where this is required by changes in the activities on board <p>Art.10</p> <ul style="list-style-type: none"> Any person likely to command a vessel shall be given detailed training on: <ul style="list-style-type: none"> - the prevention of occupational illness and accidents on board and the steps to be taken in event of accident; - stability and maintenance of the vessel under all foreseeable conditions of loading and during fishing operations; - radio navigation and communication, including procedures. 	No observed discrepancies have been identified.	<ul style="list-style-type: none"> Is more specific information on the scope of training provided in the legislation (general training for person likely to command a vessel)? As specified in several seafaring and work environment regulations. Are there specific requirements as to the competence of trainers provided in the legislation? Only in a few work environment provisions, that might possible also be applicable to fishing vessels, such as asbestos. Other additional or more detailed requirements No

	Main provisions	Observed discrepancies	More detailed or broader requirements, including more stringent
Health surveillance	N/A	N/A	N/A
Consultation of workers Art.11	<ul style="list-style-type: none"> The framework Directive applies 	No observed discrepancies have been identified.	<ul style="list-style-type: none"> Are there more detailed requirements than in the Framework Directive? Yes, in SWEA and SWEM Other additional or more detailed requirements No
Limit values	N/A	N/A	N/A
Other issues identified		No observed discrepancies have been identified.	No

Table 1- 23 Council Directive 92/85/EEC (pregnant/breastfeeding workers) - Observed discrepancies, more stringent and more detailed requirements

	Main provisions	Observed discrepancies	More detailed or broader requirements, including more stringent
Scope and definitions Art. 1 and 2	<p>The Directive applies to pregnant workers and workers who have recently given birth or who are breastfeeding.</p> <ul style="list-style-type: none"> <i>pregnant worker</i> shall mean a pregnant worker who informs her employer of her condition, in accordance with national legislation and/or national practice; <i>worker who has recently given birth</i> shall mean a worker who has recently given birth within the meaning of national legislation and/ or national practice and who informs her employer of her condition, in accordance with that legislation and/or practice; <i>worker who is breastfeeding</i> shall mean a worker who is breastfeeding within the meaning of national legislation and/or national practice and who informs her employer of her condition, in accordance with that legislation and/or practice. 	No observed discrepancies have been identified.	<ul style="list-style-type: none"> Any additional or more detailed requirements AFS 2007:5 <i>Gravida och ammande arbetstagare</i> (pregnant and breastfeeding employees) also applies to those who have given birth within 14 weeks.
Conducting a	For all activities liable to involve a specific risk	No observed discrepancies have been	<ul style="list-style-type: none"> Does the national legislation go beyond

	Main provisions	Observed discrepancies	More detailed or broader requirements, including more stringent
risk assessment Art. 4	<p>of exposure to the agents, processes or working conditions of which a non-exhaustive list is given in Annex I, the employer shall assess the nature, degree and duration of exposure, in the undertaking and/or establishment concerned in order to:</p> <ul style="list-style-type: none"> - assess any risks to the safety or health and any possible effect on the pregnancy or breastfeeding of workers - decide what measures should be taken 	identified.	<p>the Directive by prohibiting exposure of agent listed in Annex I without carrying out a risk assessment?</p> <p>Yes the AFS specifies A (g) movements more as a list of prohibited ergonomic risk exposures. It also prohibits risky psychosocial exposures, as well as underground mining.</p> <ul style="list-style-type: none"> • Does the national legislation require employers to submit risk assessment to national authorities whether on request or automatically? <p>On request only.</p> <ul style="list-style-type: none"> • Are the risks to be taken into account in the assessment described in a more specific manner than in the Directive? <p>See above on the appendix of AFS 2007:5.</p> <ul style="list-style-type: none"> • Is the content of the risk assessment more detailed than described in the Directive? <p>Section 4 requires that the RA takes into account the type, the degree and the duration of the risk exposure.</p> <ul style="list-style-type: none"> • Is a more specific methodology for risk assessment provided in the legislation? <p>No</p> <ul style="list-style-type: none"> • Are the sources of information and persons in charge of the risk assessment described in the legislation in a more specific manner than in the Directive? <p>No</p> <ul style="list-style-type: none"> • Other additional or more detailed requirements <p>No</p>
Ensuring preventive and protective services	N/A	N/A	N/A
Information for	Pregnant workers, workers who have recently	No observed discrepancies have been	• Does the legislation provide for specific

	Main provisions	Observed discrepancies	More detailed or broader requirements, including more stringent
workers Art.4(2)	given birth, workers who are breastfeeding in the undertaking and/or establishment concerned shall be informed of the results of the assessment and of all measures to be taken concerning health and safety at work.	identified.	conditions (e.g. size of the establishments) in relation to workers information? No • Is the content or form of information to workers further specified? No • Other additional or more detailed requirements No
Training of workers	N/A	N/A	N/A
Health surveillance	N/A	N/A	N/A
Consultation of workers	N/A	N/A	N/A
Limit values Art. 6	N/A	N/A	N/A
Other issues identified		No observed discrepancies have been identified.	No

Table 1- 24 Council Directive 91/383/EEC (temporary workers) - Observed discrepancies, more stringent and more detailed requirements

	Main provisions	Observed discrepancies	More detailed or broader requirements, including more stringent
Scope and definitions Art 3(1) read in conjunction with Art 2	<ul style="list-style-type: none"> • This Directive shall apply to: <ul style="list-style-type: none"> ○ employment relationships governed by a fixed-duration contract of employment concluded directly between the employer and the worker, where the end of the contract is established by objective conditions such as: reaching a specific date, completing a specific task or the occurrence of a specific event; ○ temporary employment relationships between a temporary employment business which is the employer and the worker, where the latter is assigned to work 	<p>No observed discrepancies have been identified.</p> <p><i>Sweden's work environment legislation makes no difference in employer duties and responsibilities by type of employment. Temporary workers are thus fully covered through WEA and all specifying provisions issued by SWEA under mandate in the WEA. Still, the accompanying guidance on SWEM mentions that temporary employees (as well as trainees, apprentices, probationers and project tams) are also employees under the</i></p>	<ul style="list-style-type: none"> • Any additional or more detailed requirements <p>No</p>

	Main provisions	Observed discrepancies	More detailed or broader requirements, including more stringent
	for and under the control of an undertaking and/or establishment making use of his services.	WEA.	
Conducting a risk assessment	N/A	N/A	N/A
Ensuring preventive and protective services Art. 6	<ul style="list-style-type: none"> Protective and prevention services are to be informed about the assignment of workers with temporary or fixed-duration contracts 	Observed discrepancy as the Swedish legislation does not make a distinction by type of employment and protective and preventive services hence do not need to be informed about workers with temporary or fixed-duration contracts.	<ul style="list-style-type: none"> Does the legislation define in more specific terms information to be provided to such services? No. As mentioned, all regulations apply equally to temporarily employed.
Information for workers Art.3 (and 7)	<ul style="list-style-type: none"> In addition to the general requirements with regard to workers' information, temporary workers shall be informed of special occupational qualifications or skills or special medical surveillance and about increased risks that the job may entail. 	No observed discrepancies have been identified.	<ul style="list-style-type: none"> Does the legislation provide for specific conditions (e.g. size of the establishments) in relation to workers information? No. All regulations apply equally to temporarily employed. Is the content or form of information to workers further specified? No. All regulations apply equally to temporarily employed. Other additional or more detailed requirements No. All regulations apply equally to temporarily employed.
Training of workers Art.4	<ul style="list-style-type: none"> In addition to the general requirements regarding training, each temporary worker must receive sufficient training appropriate to the particular characteristics of the job, account being taken of his qualifications and experience. 	No observed discrepancies have been identified.	<ul style="list-style-type: none"> Is more specific information on the scope of training provided in the legislation? No. All regulations apply equally to temporarily employed. Other additional or more detailed requirements No. All regulations apply equally to temporarily employed.
Health surveillance Art.5(2)	<ul style="list-style-type: none"> Workers who are used for particularly dangerous work which requires special medical surveillance must be provided with appropriate special medical surveillance. 	No observed discrepancies have been identified.	<ul style="list-style-type: none"> Does the transposing legislation require medical surveillance for all types of temporary workers? No. All regulations apply equally to temporarily employed. Are the arrangements for health

	Main provisions	Observed discrepancies	More detailed or broader requirements, including more stringent
			<p>surveillance records specified in the legislation?</p> <p>No. All regulations apply equally to temporarily employed.</p> <ul style="list-style-type: none"> • Are the conditions in which health surveillance is required more specifically described in the legislation? <p>No. All regulations apply equally to temporarily employed.</p> <ul style="list-style-type: none"> • Is the periodicity of health surveillance provided in national law? <p>No. All regulations apply equally to temporarily employed.</p> <ul style="list-style-type: none"> • Other additional or more detailed requirements <p>No. All regulations apply equally to temporarily employed.</p>
Consultation of workers	N/A	N/A	N/A
Limit values	N/A	N/A	N/A
Other issues identified		No observed discrepancies have been identified.	No

Table 1- 25 Council Directive 94/33/EC (young people at work) - Observed discrepancies, more stringent and more detailed requirements

	Main provisions	Observed discrepancies	More detailed or broader requirements, including more stringent
Scope and definitions Art. 2(1) in conjunction with Art. 3 Art. 2(2)	<ul style="list-style-type: none"> • The Directive applies to any person under 18 years of age (defined as a 'young person') having an employment contract or an employment relationship. • It provides for the optional exclusion of occasional or short-term work in domestic service in a private household or of work not considered to be harmful, damaging or dangerous to young people in a family 	No observed discrepancies have been identified.	<ul style="list-style-type: none"> • Does the transposing legislation cover occasional or short-term work in domestic service in a private household or work not considered to be harmful, damaging or dangerous to young people in a family undertaking? <p>Yes, AFS 2012:3 on work of minors (under 18) applies to all work done for employers, principals, customers and those responsible for schools who let minors do work for them</p>

	Main provisions	Observed discrepancies	More detailed or broader requirements, including more stringent
	undertaking.		or study (section 2). The WEA also applies to education in schools. <ul style="list-style-type: none"> Other additional or more detailed requirements No
Conducting a risk assessment Art. 6(2)	<ul style="list-style-type: none"> The employer shall implement the measures necessary to protect the safety and health of young people on the basis of an assessment of the hazards to young people in connection with their work. <p>The assessment must be made before young people begin work and when there is any major change in working conditions and must pay particular attention to the following points:</p> <p>(a) the fitting-out and layout of the workplace and the workstation;</p> <p>(b) the nature, degree and duration of exposure to physical, biological and chemical agents;</p> <p>(c) the form, range and use of work equipment, in particular agents, machines, apparatus and devices, and the way in which they are handled;</p> <p>(d) the arrangement of work processes and operations and the way in which these are combined (organization of work);</p> <p>(e) the level of training and instruction given to young people.</p> <ul style="list-style-type: none"> Where this assessment shows that there is a risk to the safety, the physical or mental health or development of young people, an appropriate free assessment and monitoring of their health shall be provided at regular intervals without prejudice to Directive 89/391/EEC. 	No observed discrepancies have been identified.	<ul style="list-style-type: none"> Does the transposing legislation provide for a risk assessment to be conducted on a regular basis (i.e. every year) independently of any major change in working conditions? <p>Yes, section 4 specifies the general RA requirement in the SWEM-provisions (AFS 2001:1), e.g. to take into consideration the individual physical and psychological maturity of the minor, and if the work-task requires to assume much responsibility or is physically or mentally demanding.</p> <ul style="list-style-type: none"> Does the national legislation require employers to submit risk assessment to national authorities whether on request or automatically? <p>On request.</p> <ul style="list-style-type: none"> Are the risks to be taken into account in the assessment described in a more specific manner than in the Directive? <p>Yes. Section 4 requires that the RA takes into account the physical and psychological maturity of the minor, and also if the work requires much responsibility of or is physically or psychologically hard for the minor.</p> <ul style="list-style-type: none"> Is the content of the risk assessment more detailed than described in the Directive? <p>See above.</p> <ul style="list-style-type: none"> Is a more specific methodology for risk assessment provided in the legislation? <p>No</p> <ul style="list-style-type: none"> Are the sources of information and persons

	Main provisions	Observed discrepancies	More detailed or broader requirements, including more stringent
	<ul style="list-style-type: none"> The free health assessment and monitoring may form part of a national health system. 		<p>in charge of the risk assessment described in the legislation in a more specific manner than in the Directive?</p> <p>No</p> <ul style="list-style-type: none"> Other additional or more detailed requirements <p>No</p>
Ensuring preventive and protective services Art. 6(4)	<ul style="list-style-type: none"> The employer shall involve the protective and preventive services referred to in Article 7 of Directive 89/391/EEC in the planning, implementation and monitoring of the safety and health conditions applicable to young people. 	No observed discrepancies have been identified.	<ul style="list-style-type: none"> Does the national legislation set any specific/detailed rules on the way and extent of the involvement of protective and preventive services in the planning, implementation and monitoring of the safety and health conditions applicable to young people? <p>Yes, section 5 requires regular medical controls.</p> <ul style="list-style-type: none"> Other additional or more detailed requirements <p>No</p>
Information for workers Art. 6(3)	<ul style="list-style-type: none"> The employer shall inform young people of possible risks and of all measures adopted concerning their safety and health. Furthermore, he shall inform the legal representatives of children of possible risks and of all measures adopted concerning children's safety and health. 	No observed discrepancies have been identified.	<ul style="list-style-type: none"> Is the content or form of information to young workers/legal representatives of children further specified? <p>No, not more specified, but if there is a SR s/he shall also be informed.</p> <ul style="list-style-type: none"> Other additional or more detailed requirements <p>No</p>
Training workers of Art.6 (2)	<ul style="list-style-type: none"> The employer shall implement the measures necessary to protect the safety and health of young people on the basis of an assessment of the hazards to young people in connection with their work. <p>The assessment must be made before young people begin work and when there is any major change in working conditions and must pay particular attention to the following</p>	No observed discrepancies have been identified.	<ul style="list-style-type: none"> Does the transposing legislation provide for mandatory training of young workers (according to the Directive, the level of training given must be taken into account in assessing any hazards although there is no explicit requirement to provide any such training)? <p>Section 10 requires A. adequate introduction and information; B. routines for this; C. That work of minors is supervised by a suitable</p>

	Main provisions	Observed discrepancies	More detailed or broader requirements, including more stringent
	<p>points:</p> <p>(e) the level of training and instruction given to young people. *</p>		<p>adult person with knowledge of the work.</p> <ul style="list-style-type: none"> Is more specific information on the scope of training provided in the legislation in relation to young workers? <p>See above</p> <ul style="list-style-type: none"> Other additional or more detailed requirements <p>No</p>
Health surveillance Art. 6(2) and 9(3)	<ul style="list-style-type: none"> Where the assessment shows that there is a risk to the safety, the physical or mental health or development of young people, an appropriate free assessment and monitoring of their health shall be provided at regular intervals without prejudice to Directive 89/391/EEC. The free health assessment and monitoring may form part of a national health system. <p>Prior to any assignment to night work and at regular intervals thereafter, adolescents shall be entitled to a free assessment of their health and capacities, unless the work they do during the period during which work is prohibited is of an exceptional nature.</p>	No observed discrepancies have been identified.	<ul style="list-style-type: none"> Besides night work and cases where an assessment of the hazards to young people in connection with their work was shown that there is a risk to the safety, the physical or mental health or development of young people, does the transposing legislation provide for a free health assessment of young workers in other circumstances? <p>Yes, section 5 requires such health assessments not only if the assessment has indicated risks, but also if this is needed as a basis for/part of the risk assessment.</p> <ul style="list-style-type: none"> Are the arrangements for health surveillance records specified in the legislation? <p>No.</p> <ul style="list-style-type: none"> Are the conditions in which health surveillance is required more specifically described in the legislation? <p>No</p> <ul style="list-style-type: none"> Is the periodicity of health surveillance provided in national law? <p>This is to be adapted to the nature of the risks and the individual minor's maturity and health status (section 5).</p> <ul style="list-style-type: none"> Other additional or more detailed requirements <p>None.</p>
Consultation of	N/A	N/A	N/A

	Main provisions	Observed discrepancies	More detailed or broader requirements, including more stringent
<i>workers</i>			
<i>Limit values</i>	N/A	N/A	N/A
<i>Other issues identified</i>		No observed discrepancies have been identified.	No

* The level of training given must be taken into account in assessing any hazards although there is no explicit requirement to provide any such training.

1.3.2 Options

This sub-section considers the options provided by the directives to the Member States to exercise their legislative powers beyond what is strictly required by the Directives. In this case, Member States can ultimately set more stringent measures than those required by the Directive. The analysis here reviews whether these options have been used, contributing to the identification of more stringent measures.

Sweden has not made use of any of the options considered.

Table 1- 26 Options

Directive	Y/N	Legal references and brief description
Directive 2000/54/EC on biological agents - Annex I	N	No specifying list of activities in AFS 2005:1 (updated in 2012:7).
Directive 91/383/EEC on temporary workers - Art. 5(1)	N	Temporary workers are regarded as other workers, and thus included in the transposition of all OSH Directives.
Directive 91/383/EEC on temporary workers - Art. 5(3)	N	Idem
Directive 91/383/EEC on temporary workers - Art. 7(2) second indent	N	Idem

1.4 INTERACTIONS

This section aims at identifying synergies provided in the national legislation for the transposition of CPMs across Directives.

In Sweden, WEA and SWEM mainly regulate, through general provisions, the risk assessment, the information for and training of workers, and the consultation of workers. These general provisions are at times supplemented by more specific AFS. Preventive and protective services are mainly being dealt with by the employer and he will need to make sure that the necessary competence is available. Finally, medical check-ups are generally regulated in AFS 2005:6, which also includes some more specificities for certain types of works and risks.

The results of the analysis are presented in table 1-27 below.

Table 1- 27 Interactions between CPMs across OSH Directives

	<i>Risk assessment</i>	<i>Preventive and protective services</i>	<i>Information for workers</i>	<i>Training of workers</i>	<i>Health surveillance</i>	<i>Consultation of workers</i>
Directive 89/391/EEC (Framework Directive)	SWEM, section 8	WEA, ch. 3, section 2b SWEM, section 12 and appendix 2	WEA, ch. 3, section 3 SWEM, section 7	WEA, ch. 3, section 3 SWEM, section 7	AFS 2005:6 ²²	WEA, ch. 6 SWEM, section 4
Council Directive 89/654/EEC (workplace)	/	/	WEA, ch. 3, section 3 SWEM, section 7	/	/	WEA, ch. 6 SWEM, section 4
Directive 2009/104/EC (work equipment)	AFS 2006:4, Sections 3 and 4	/	/	AFS 2006:4, Section 16	/	WEA, ch. 6 SWEM, section 4
Council Directive 89/656/EEC (PPE)	Sections 5-9 AFS 2001:3	-	WEA, ch. 3, section 3 SWEM, section 7 AFS 2001:3, section 10	/	/	WEA, ch. 6 SWEM, section 4
Council Directive 92/58/EEC (OSH signs)	/	/	/	/	/	WEA, ch. 6 SWEM, section 4
Directive 1999/92/EC (ATEX)	AFS 2003:3, sections 5 and 7-9 on RA and section 11-15 on classification in risk zones	/	/	AFS 2003:3, Section 6 on adequate training if staying in risk zone or doing explosive type of work	/	WEA, ch. 6 SWEM, section 4
Council Directive 90/269/EEC	AFS 2012:2,	/	AFS 2012:2, Section 9	/	/	/

²² The Provisions on Medical Controls in working life (*föreskrifter om medicinska kontroller i arbetslivet*, AFS 2005:06) regulate all aspects of health surveillance/medical controls for risks at work, with special sections on e.g. cadmium and lead. Some other provisions (on e.g. minors at work) complement this with special requirements of such controls.

	<i>Risk assessment</i>	<i>Preventive and protective services</i>	<i>Information for workers</i>	<i>Training of workers</i>	<i>Health surveillance</i>	<i>Consultation of workers</i>
(manual handling of loads)	section 4 + appendix					
Council Directive 90/270/EEC (display screen equipment)	/	/	/	/	AFS 1998:5, section 6	/
Directive 2002/44/EC (vibration)	AFS 2005:13, sections 4-7	/	AFS 2005:13, Section 11	AFS 2005:13, Section 11	AFS 2005:13, Sections 12-13	/
Directive 2003/10/EC (noise)	AFS 2005:16, sections 5-7	AFS 2005:16, Section 6	AFS 2005:16, Section 14	AFS 2005:16, Section 14	AFS 2005:16, Sections 16-18	/
Directive 2004/40/EC (electromagnetic fields)	N/A ²³	N/A	N/A	N/A	N/A	N/A
Directive 2006/25/EC (artificial optical radiation)	AFS 2009:7, sections 7-8	/	AFS 2009:7, Sections 7 and 11	AFS 2009:7, Sections 7 and 11	AFS 2009:7, Sections 12-13	/
Directive 2004/37/EC (carcinogens or mutagens)	AFS 2011:19, sections 38-40	/	AFS 2011:19, Section 10	AFS 2011:19, Section 11	AFS 2011:19, Section 41	/
Council Directive 98/24/EC (chemical agents at work)	AFS 2011:19, sections 5-10	/	AFS 2011:19, Section 10	AFS 2011:19, Section 11	/	/
Directive 2009/148/EC (asbestos)	AFS 2006:1 sections 9-18	/	AFS 2006:1, Section 22	AFS 2006:1, Sections 16.2 and 19 and Section 36	AFS 2006:1, Sections 16.3 and 19 AFS 2005:6	AFS 2006:1, Section 16 WEA
Directive 2000/54/EC (biological agents)	AFS 2005:1, sections 4-5	/	AFS 2005:1, Sections 14-15	AFS 2005:1, section 14	AFS 2005:1, Section 17	/
Council Directive 92/57/EEC (temporary or mobile construction sites)	AFS 1999:3, Sections 5-5b and sections 8+12	/	AFS 1999:3, Section 48	/	AFS 1999:3, Section 12	/

²³ N/A refers to “not applicable because the Directive has not been transposed in national legislation”. The acronym of N/A will be used consistently throughout the remainder of the tables.

	<i>Risk assessment</i>	<i>Preventive and protective services</i>	<i>Information for workers</i>	<i>Training of workers</i>	<i>Health surveillance</i>	<i>Consultation of workers</i>
Council Directive 92/104/EEC (surface and underground mineral-extracting industries)	AFS 2010:1, section 3	/	/	/	AFS 2005:6, section 35	/
Council Directive 92/91/EEC (mineral-extracting industries through drilling)	AFS 2010:1, section 3	/	/	/	AFS 2005:6, section 35	/
Council Directive 92/29/EEC (medical treatment on board vessels)	/	/	/	/	/	/
Council Directive 93/103/EC (work on board fishing vessels)	/	/	/	/	/	/
Council Directive 92/85/EEC (pregnant/breastfeeding workers)	AFS 2007:5, section 4	/	AFS 2007:5, section 5	/	/	AFS 2007:5, section 2 WEA
Council Directive 91/383/EEC (temporary workers)	WEA	/	/	/	/	/
Council Directive 94/33/EC (young people at work)	AFS 2012:3, section 4	/	AFS 2012:3, section 10 and section 7	AFS 2012:3, section 10	AFS 2012:3, section 5	AFS 2012:3, section 4
Conclusions on interactions between Directives	RA is a general strategy in Swedish OHS regulations. A general stipulation in SWEM plus specification in a growing rate of provisions.	Swedish OHS regulations mainly leave it to the employer how to get the necessary competence, internal or external OHS services. But a few provisions regulate	WEA and SWEM mainly regulate adequate information and training but this is also specified in some other provisions.	WEA and SWEM mainly regulate adequate information and training but this is also specified in some other provisions.	See on preventive and protective services. But some provisions stipulate medical check-ups and other such controls. These are in general regulated in AFS 2005:6 on	WEA and SWEM mainly regulate consultation but this is also specified in some other provisions.

	<i>Risk assessment</i>	<i>Preventive and protective services</i>	<i>Information for workers</i>	<i>Training of workers</i>	<i>Health surveillance</i>	<i>Consultation of workers</i>
		competence etc.			Medical check-up that also specifically prescribe these for some types of works and risks.	

2 MAPPING QUESTION 2: GAPS IN CONTENT OR TIME

This section aims at determining whether the Member State has applied or used derogations and transitional periods when provided for by the Directives. Provisions setting options are covered under MQ1, in section 1.3.

2.1 TRANSITIONAL PERIODS

Transitional periods: these are periods of time where a derogation applies with extended deadlines for the implementation of particular provisions of the Directives. It is noteworthy that most of the transitional periods are not applicable anymore as the dates by which provisions in question had to be implemented at latest have already passed. However, these periods should be taken into consideration to explain delays in implementation of certain Directives.

Such transitional periods can be found in eight Directives as listed below. Because Sweden has regulated the specific risks before the nine Directives were issued, there were no transitional periods to be applied. The only exception is Directive 2002/44/EC (vibration), where Sweden has applied and respected the transitional period related to whole-body vibration.

Table 2- 1 Transitional Periods²⁴

<i>Directive</i>	<i>Transitional periods applied</i>	<i>Transitional period respected</i>	<i>Date of end of application of the transitional period</i>
Directive 92/91/EC (mineral-extracting industries through drilling)	No ²⁵	-	-
Directive 92/104/EC (surface and underground mineral extracting industries)	No ²⁶	-	-
Directive 93/103/EC (work on board fishing vessels)	No	-	-
Directive 2002/44/EC (vibration)	Yes (for whole-body vibrations only)	Yes	1 July 2007
Directive 2003/10/EC (noise)	No	-	-
Directive 2009/104/EC (work equipment)	No	-	-
Directive 1999/92/EC (ATEX) Art. 9	No	-	-
Directive 90/270/EC (display screen equipment) Art. 5	No	-	-

2.2 DEROGATIONS

Derogations: these are provisions, which explicitly permit Member States to derogate from certain requirements contained in the Directive. All derogations are accompanied by conditions which need to

²⁴ Sweden had regulated these issues-risks-jobs (long) before the nine directives were issued. However, to give a certain answer if Sweden's earlier provisions transposed all requirements of the directives (which is highly likely) would require work in the archive of SWEA to compare Sweden's provisions at the time of each directive with what the directive requires.

²⁵ Before the present provisions AFS 2010:1, the Directives 92/91/EC and 92/104/EC were transposed in AFS 1987:17, 1994:33, 1997:3 and 2003:2.

²⁶ Idem.

be fulfilled before and/or after derogation is permitted. The following table shows which derogations have been used and whether or not the conditions attached are adequately reflected in the transposing legislation.

Swedish transposing legislation reflects only a small part of the derogations and, as a rule, the conditions attached to them. The derogations which have been used are: the derogation from the requirement to receive a prior authorisation for the employment of children for the purposes of performance of children in cultural and similar activities and the derogation from the prohibition of employment of young people for certain works (both in Directive 94/33/EC on the protection of young people at work); the authorisation for adolescents to work in specific areas of activity during the period in which night work is prohibited (also in Directive 94/33/EC on the protection of young people at work); the derogations from prohibition of the use of certain chemical agents and activities involving chemical agents (Directive 98/24/EC on chemical agents at work); and the derogation from the obligation to comply with exposure limit values in the case of sea and air transport (Directive 2002/44/EC on vibration).

Table 2- 2 Derogations

Directive	Article	Use of derogation	Y/N	Explanation	Conditions reflected	Y/N	Explanation
Directive 89/656/EEC on personal protective equipment	Art.4.6, second indent	Member States' legislation may allow for contribution of workers towards the costs of some personal protective equipment.	N	Sweden has not made use of this derogation	The derogation applies in circumstances where use of the equipment is not exclusive to the workplace	N	Sweden has not made use of this derogation
Directive 92/57/EEC on temporary or mobile construction sites	Art. 3.2	Derogation from the obligation to draw up a health and safety plan	N	Sweden has not made use of this derogation	The derogation does not cover work involving particular risks as listed in Annex II.	N	Sweden has not made use of this derogation
					The derogation does not cover work for which prior notice is required pursuant to paragraph 3 of this Article.	N	Sweden has not made use of this derogation
Directive 92/58/EEC on safety and/or health signs at work	Art. 6.2.	Derogation from the application of Annex VIII, section 2	N	Sweden has not made use of this derogation	Alternative measures guaranteeing the same level of protection laid down.	N	Sweden has not made use of this derogation
		Derogation from the application of Annex IX, section 3	N	Sweden has not made use of this derogation	Alternative measures guaranteeing the same level of protection laid down	N	Sweden has not made use of this derogation
Directive 92/85/EEC on breastfeeding workers	Art.11.4	Member States may make entitlement to benefits conditional	N	Sweden has not made use of this derogation	The worker concerned shall fulfil the conditions of eligibility for such benefits laid down under national legislation.	N	Sweden has not made use of this derogation
					These conditions may under no circumstances provide for periods of previous employment in excess of 12 months immediately prior to the presumed date of	N	Sweden has not made use of this derogation

Directive	Article	Use of derogation	Y/N	Explanation	Conditions reflected	Y/N	Explanation
Directive 94/33/EC on the protection of young people at work					confinement.		
	Art.5.3	Derogation from the requirement to receive a prior authorisation for the employment of children for the purposes of performance of children in cultural and similar activities	Y	AFS 2012:3 minors' work environment, section 2 applies to work or school education. The guidance to section 2 clarifies that leisure or hobby activities are excluded. There is no age limit to this clarification.	In the case of children of at least 13 years of age, Member States may authorize, by legislative or regulatory provision, in accordance with conditions which they shall determine, the employment of children for the purposes of performance in cultural, artistic, sports or advertising activities.	Y	Permit for such work has to be asked by SWEA, with a detailed description of the intended work and how it will not interfere with school work or risk the health of the minor.
	Art. 7.3.	Derogation from the prohibition of employment of young people for works listed in Article 7.2 in the case of adolescents	Y	As listed in appendix 1: work tasks are permitted if they are part of training in an adapted training-locality or are part of a supervised practice. They are also permitted if the task is done by someone with secondary education with training for the task.	Derogations indispensable for their vocational training	Y	As listed in appendix 1. See the adjunct description.
					Protection of their safety and health is ensured by the fact that the work is performed under the supervision of a competent person within the meaning of Article 7 of Directive 89/391/EEC	Y	As listed in appendix 1. See the adjunct description.
					Protection afforded by Framework Directive is guaranteed	Y	As listed in appendix 1. See the adjunct description
	Art. 8.5	Derogations from limits on the working hours of children specified in Article 8.1.(a).	N	Sweden has not made use of this derogation	Derogation is justified by way of exception	N	Sweden has not made use of this derogation
					Or Derogation is used because objective grounds are provided	N	Sweden has not made use of this derogation
					Member States shall, by legislative or regulatory provision, determine the conditions, limits and procedure for	N	Sweden has not made use of this derogation

Directive	Article	Use of derogation	Y/N	Explanation	Conditions reflected	Y/N	Explanation
					implementing such derogations.		
	Art.9.2	Article 9 (2) a Member States may, by legislative or regulatory provision, authorize work by adolescents in specific areas of activity during the period in which night work is prohibited as referred to in paragraph 1 (b).	Y	Section 17: SWEA may permit exceptions to the working time (sections 16 and 19-21) for cultural rehearsals and performances and for sports and advertising events.	Work by adolescents in specific areas of activity	Y	See adjunct description.
					Supervision of the adolescent by an adult where such supervision is necessary for the adolescent's protection.	Y	See adjunct description.
					Work shall continue to be prohibited between midnight and 4 a.m.	Y	Work is prohibited between 24h and 5 a.m. (section 16).
		Article 9 (2) b second indent Derogation from prohibition of night work for adolescents for:	N	Sweden has not made use of this derogation	Objective grounds for so doing	N	Sweden has not made use of this derogation
		— work performed in the shipping or fisheries sectors;			and provided that adolescents are allowed suitable compensatory rest time	N	Sweden has not made use of this derogation
		— work performed in the context of the armed forces or the police;			and that the objectives set out in Article 1 are not called into question:	N	Sweden has not made use of this derogation
		— work performed in hospitals or similar establishments;					
		— cultural, artistic, sports or advertising activities.					
	Art.10.3	Derogation from the minimum rest periods for interruption in the case of activities	N	Sweden has not made use of this derogation			

Directive	Article	Use of derogation	Y/N	Explanation	Conditions reflected	Y/N	Explanation
		involving periods of work that are split up over the day or are of short duration.					
	Art. 10.4	Derogations from rest periods in respect of adolescents for (a) work performed in the shipping or fisheries sectors; (b) work performed in the context of the armed forces or the police; (c) work performed in hospitals or similar establishments; (d) work performed in agriculture; (e) work performed in the tourism industry or in the hotel, restaurant and café sector; (f) activities involving periods of work split up over the day.	N	Sweden has not made use of this derogation	Objective grounds are provided and provided that they are granted appropriate compensatory rest time and that the objectives set out in Article 1 are not called into question	N	Sweden has not made use of this derogation
	Art. 13	Member States may, by legislative or regulatory provision, authorize derogations from Article 8 (2), Article 9 (1) (b), Article 10 (1) (b) and, in the case of adolescents, Article 12, for work under	N	Sweden has not made use of this derogation	Work is of a temporary nature and must be performed immediately	N	Sweden has not made use of this derogation
					Adult workers are not available	N	Sweden has not made use of this derogation
					Adolescents are allowed equivalent compensatory rest time within the following three weeks.	N	Sweden has not made use of this derogation

Directive	Article	Use of derogation	Y/N	Explanation	Conditions reflected	Y/N	Explanation
		force majeure					
Directive 98/24/EC on chemical agents at work	Art. 9.2 and 9.3	Derogations from prohibition of the use of certain chemical agents and activities involving chemical agents in the following circumstances: - for the sole purpose of scientific research and testing, including analysis, - for activities intended to eliminate chemical agents that are present in the form of by-products or waste products, - for the production of the chemical agents referred to in paragraph 1 for use as intermediates, and for such use.	Y	AFS 2011:19: Sections 46-48 on exceptions by permits from SWEA. Applications to SWEA should include SR comment. Permits to handle such substances can be given for research on cancerogenic effects, for the Development of methods for analysis, if there are special reasons. Application must specify how substances are to be handled and the preventive measures to be taken.	Exposure of workers to chemical agents must be prevented, via single closed systems, from which the chemical agents may be removed only to the extent necessary to monitor the process or service the system.	N	/
					Member States may provide for systems of individual authorisations.	Y	See adjunct description.
					The competent authority shall request the employer to submit the information listed in Article 9.3.	Y	See adjunct description.
Directive 2002/44/EC on vibration	Art. 10.1	Derogation from the obligation to comply with exposure limit values in the case of sea and air transport,	Y	AFS 2005: 15, section 9 permits a derogation in air transport and armed forces if not possible to comply with OELs. There is no further explanation of this derogation.	In duly justified circumstances with respect to whole-body vibration where, given the state of the art and the specific characteristics of workplaces, it is not possible to comply with the exposure limit value despite the technical and/or organisation measures taken.	Y	See adjunct description.
					The derogation must be	Y	See adjunct description.

Directive	Article	Use of derogation	Y/N	Explanation	Conditions reflected	Y/N	Explanation
					accompanied by conditions which guarantee that the resulting risks are reduced to a minimum and that the workers concerned are subject to increased health surveillance, and must be reviewed every four years and withdrawn as soon as the justifying circumstances no longer obtain. (Art.10.3)		
	Art.10.2	Derogation from the obligation to comply with exposure limit values in a case where the exposure of a worker to mechanical vibration is usually below the exposure action values but varies markedly from time to time and may occasionally exceed the exposure limit value	N	Sweden has not made use of this derogation	The exposure value averaged over 40 hours must be less than the exposure limit value and	N	Sweden has not made use of this derogation
					There must be evidence to show that the risks from the pattern of exposure to the work are lower than those from exposure at the exposure limit value	N	Sweden has not made use of this derogation
					The derogation must be accompanied by conditions which guarantee that the resulting risks are reduced to a minimum and that the workers concerned are subject to increased health surveillance, and must be reviewed every four years and withdrawn as soon as the justifying circumstances no longer obtain. (Art.10.3)	N	Sweden has not made use of this derogation
Directive	Art.11.1	Derogations from the	N	Sweden has not made use	Guarantee, taking into	N	Sweden has not made use of

Directive	Article	Use of derogation	Y/N	Explanation	Conditions reflected	Y/N	Explanation
2003/10/EC on noise	and 11.2	provisions of Articles 6 (1)(a) and (b) and 7.in exceptional situations where, because of the nature of the work, the full and proper use of individual hearing protectors would be likely to cause greater risk to health or safety than not using such protectors		of this derogation	account the special circumstances, that the resulting risks are reduced to a minimum and that the workers concerned are subject to increased health surveillance.		this derogation
					Review every four years and withdrawn as soon as the justifying circumstances no longer obtain.	N	Sweden has not made use of this derogation
Directive 2004/40/EC on electromagnetic fields	Art.4.6	The risk assessment may include a justification by the employer that the nature and extent of the risks related to electromagnetic fields make a further detailed risk assessment unnecessary.	N/A	N/A			

3 MAPPING QUESTION 3: LEVEL OF COMPLIANCE BY DIFFERENT STAKEHOLDERS

The question consists of two separate, but intertwined questions: the degree of compliance and approaches to compliance.

3.1 DEGREE OF COMPLIANCE

The question aims to ascertain the extent to which establishments in Member States comply with the key requirements of the 24 OSH Directives and to what extent differences exist between public/private sector; different sizes of establishments: micro/SMEs/large enterprises and different sectors of economic activity.

The results are summarized in tables 3.1 and 3.2. Table 3.1 outlines the range of compliance with the common processes and mechanisms (CPMs) **across all 24 OSH Directives**. Table 3.2 complements the previous table by addressing the level of compliance with the CPMs at the **level of individual Directives**. As regards **key requirements** which do not constitute CPMs, a detailed overview is provided in Table 3.3.

The following indicators are used for estimating the degree of compliance :

- | | |
|-------------------------------------|-----------------------|
| (5) very high degree of compliance: | indicators above 80% |
| (4) high degree of compliance: | indicators 60-79% |
| (3) medium degree of compliance: | indicators 40-59% |
| (2) low degree of compliance: | indicators 20-39% |
| (1) very low degree of compliance: | indicators below 20%. |

The percentages are intended as approximate guides, not exact values.

The methodology and the data sources for the compliance assessments in MQ 3 are based on the large research review of how Swedish employers implement the provision on Systematic Work Environment Management (SWEM, Sweden's transposition of the Framework directive). The review was ordered and the results were published by the Swedish Work Environment Authority (SWEA) as their reports AV 2013: 11 and AV 2013: 12 (Frick & Johanson, 2013, and Frick, 2013b).

It would have been an advantage for the comparability in this evaluation of implementation of the EU-directives if the CSR on Sweden had used the same methodology and data-sources as in the CSRs of most (all?) other member states. However, Frick (2013b) and Frick & Johanson, (2013) include an extensive methodological critique of why manager surveys on work environment management (WEM, e.g. SWEM in Sweden) – such as ESENER (EU-OSHA, 2010) by EU-OSHA, and Prevent (2014) in Sweden – grossly exaggerate the compliance of all employers. In short, such surveys:

a. Only cover some of the employers, as (most of) the very dominating micro-firms are excluded. ESENER has a limit of 10 employees. This excludes the 85 per cent of Sweden's employers that tend to have the least capability and competence to manage their work environments. The Swedish Prevent manager-survey starts from 5 employees, but still cover only 36 per cent of all employers.

b. The response rate is at best around 50 per cent but mostly (much) lower. Surveys are usually more responded to by those interested and active in the subject. This creates a bias, which is large with such low response rates.

c. They are managers' self-reports on their compliance, not objective assessments. Even managers who reflect on what they actually do, usually have insufficient knowledge of what the regulations require

(Frick & Johanson, 2013), which makes them unaware of some requirements that they should also have complied with.

d. The survey questions vary but are often quite general, e.g. 'do you conduct risk assessments'?. "Yes" gives no information if all risks are assessed nor of the quality of the assessments (Frick, 2013b). The surveys results are hence poor answers to MQ 3's question: if all risks are always assessed.

e. ESENER is large and carefully crafted, but several Swedish SWEM surveys – such as Prevent – also have other methodological problems, e.g. a small sample with an unknown selection (see Frick, 2013b, and Frick & Johanson, 2013; and also the attached memo on methodology).

In the research review of SWEM's implementation in Sweden, we therefore agreed with SWEA to discard the surveys and instead rely on a large literature search of qualitative studies, as these give more insight in actual SWEM-practices. After sifting through some 700 studies, around 270 studies were used, of which several in turn were earlier research reviews and many were reports from labour inspection campaigns. With a normal variation, the overall results of these studies were remarkable consistent (for an English report, see Frick, 2014). The answers to table 3-1 in MQ 3 are therefore mainly based on this research review. In table 3- 2, the results from this SWEM review have been combined with and modified by the interviews of the stakeholders.

It is, finally, important to note that it would be incorrect and unfair to compare Sweden's compliance rate in MQ 3 to rates assessed in other member states based on ESENER data or other employer-manager surveys. The limited amount of reliable international comparative data instead indicate that Swedish employers have an unusually good work environment management and hence have one of the best compliances with the EU-directives.

From the available data, it follows that small firms mostly try to handle risks. However, they usually lack the required knowledge, systematic RAs and information and training of employees, which results in less good prevention. This goes for nearly all of the provisions-directives. As small firms are 95 % of all employers, the assessment of overall compliance is consistently low. Also, although the overwhelming majority of employers tries to comply with the CPMs, they hardly ever fully comply, bringing the compliance rates to low or even very low. For example, few employers comply fully, but the majority of large private and public employers (who employ some 3/4 of employees) have documented RAs that cover most technical risks, i.e. for accidents, noise, chemical and vibrations. Their RAs usually also include micro-ergonomics of e.g. lifting equipment and work position. But the RAs are much poorer for organizational risks, for stress, threats and violence, harassments and macro-ergonomic risks. Also public employers have documented RAs. As other large employers, many public employers have employee surveys also on psychosocial risks. However, the difference between fairly often assessing these risks (though mostly not with the necessary depth as a basis for preventive measures) and much less preventive measures against such risks is especially notable in public employers. Finally, many managers with tasks in SWEM are given some training, but the case studies indicate that few of them get full competence (as SWEM requires) of all potential risks.

Table 3- 1 Degree of compliance: Common processes and mechanisms (across Directives)

Common Processes and mechanisms (across Directives)	Criteria/indicator to guide the assessment	Assessment of the degree of compliance	An explanation of how the assessment was made (including references to data sources when available)	Differences which exist between the different types of sectors, size of establishment (micro/SMEs/large) and sectors of economic activity and the rationale
Risk assessment	% of establishments which perform regular ²⁷ risk assessment	(1) Very low degree of compliance.	<p>As the micro and small firms – with their shortcomings in SWEM – dominate, the assessment can only be a low compliance (1) of risk assessments as required by the Framework Directive, i.e. full assessment of all types of risks and their causes. However, it is important to note</p> <p>A. That the 4 per cent larger employers employ a large majority of all employees. So counted as % of all employees, the compliance rate would be much higher.</p> <p>B. That very many employers comply partly – sometimes much, though still not fully – with the required RA. They assess some or many risks, and do so fairly well. But there is also a very low degree of compliance with the duty to manage risks, assessed or not. The gap between assessing many but managing fewer risks is notable for public employers (Frick, 2013b. ch. 5-7).</p> <p>See Frick & Johanson, 2013, ch. 4, for a RA overview. See RA by industries, sectors and sizes in Frick, 2013b. Both are based on some 270 reports on various aspects of OHS management, supported by statistics on risks and work related ill-health. Surveys to employers-managers (e.g. AV, 2013; and ESENER, 2010) report much higher</p>	<p>Of Sweden's 370.000 employers, most lack RAs as required by the FD, i.e. full assessment of all types of risks and their causes. Still, many employers comply partly with the required RA. They assess some risks, and do so fairly well. But there is also a very low degree of compliance with the duty to manage risks, assessed or not. The gap between assessing many but managing fewer risks is notable for public employers (Frick, 2013b. ch. 5-7).</p> <p>The research review (Frick & Johanson, 2013; Frick, 2013b, p. 61-62) also reported on SWEM in small firms. The conclusion is that of the 350.000 small firms (1-49 employees) in Sweden only few have a RA as required in SWEM. As for all groups of employers, there are individual differences, but in general the level of compliance with the RA (and other) stipulation in SWEM strongly correlates to firm size.</p>

²⁷ Is the risk assessment reviewed regularly and in any event when any changes occur in the conditions which may affect workers exposure?

Common Processes and mechanisms (across Directives)	Criteria/indicator to guide the assessment	Assessment of the degree of compliance	An explanation of how the assessment was made (including references to data sources when available)	Differences which exist between the different types of sectors, size of establishment (micro/SMEs/large) and sectors of economic activity and the rationale
			<p>compliance with the RA and other SWEM-requirements. However, these studies are self-reports that employers have documents they call 'Risk assessment', but these 'RAs' rarely comply with SWEM's RA requirements (Frick, 2013b, p. 7).</p> <p>Yet, it should also be noted that:</p> <ol style="list-style-type: none"> 1. The SWEM-reform has resulted in a slowly improving RA, as compared to managers' earlier passive role to wait for requirements by safety reps or inspectors. 2. Compliance with the RA requirement is gradual (even if only full compliance is legal compliance). Few employers comply fully, but the overwhelming majority of large private and public employers (who employ some 3/4 of employees) have documented RAs that cover most technical risks, i.e. for accidents, noise, chemical and vibrations. Their RAs usually also include micro-ergonomics of e.g. lifting equipment and work position. But the RAs are much poorer for organizational risks, for stress, threats and violence, harassments and macro-ergonomic risks. Frick & Johanson, 2013, ch. 4; Frick, 2013b, ch. 4. 3. Small firms have also improved. Many with 20-49 employees have started RAs, mainly of technical risks but rarely of organizational ones. (Frick, 2013b, ch. 10). 4. Public employers have documented RAs. As other large employers, many public employers have employee surveys also on 	<p>Employers with 20-49 employees, especially manufacturing ones, have much better (but thus rarely full) compliance, than those with 1-4 employees. And some large employers, especially in manufacturing, have a very high level of compliance (though even these rarely comply fully with the provisions). For example, a large manufacturer is known for high WE ambition and advanced WE management system. Yet even their SWEM missed risks in some maintenance jobs. Thus not a full compliance with SWEM's RA (Frick, 2013b, p. 23). See small firms in Frick, 2013b, ch. 10, and manufacturing in ch. 4.</p>

Common Processes and mechanisms (across Directives)	Criteria/indicator to guide the assessment	Assessment of the degree of compliance	An explanation of how the assessment was made (including references to data sources when available)	Differences which exist between the different types of sectors, size of establishment (micro/SMEs/large) and sectors of economic activity and the rationale
			<p>psychosocial risks. However, the difference between fairly often assessing these risks (though mostly not with the necessary depth as a basis for preventive measures) and much less preventive measures against such risks is especially notable in public employers. (Frick, <i>ibid</i>).</p> <p>The interviews (especially with a senior labour inspectors) indicate that small firms mostly try to handle risks. However, they usually lack the required knowledge, systematic RAs and information and training of employees, which results in less good prevention. This goes for nearly all of the provisions-directives. As small firms are 96 % of all employers, the assessment of overall compliance is consistently low.</p> <p>Of Sweden's some 370 000 employers, 85 per cent are micro firms (1-9 employees) and another 11 per cent are small firms (10-49). Only 4 per cent are thus medium or large firms (of which some half are public employers). Many studies consistently demonstrate that small and especially micro firms rarely organize much of a systematic work environment management, (SWEM, Sweden's transposition of 89/391/EC), including irregular risk assessments done with little competence.</p> <p>I also interpret "establishments" in MQ 3 as 'firms', i.e. employers. To instead interpret 'establishments' as 'workplaces' would only make some difference in the compliance</p>	

Common Processes and mechanisms (across Directives)	Criteria/indicator to guide the assessment	Assessment of the degree of compliance	An explanation of how the assessment was made (including references to data sources when available)	Differences which exist between the different types of sectors, size of establishment (micro/SMEs/large) and sectors of economic activity and the rationale																														
			assessments, as small and micro firm would still make up some 70 per cent of all.																															
		According to ESENER1 data: 84.08% of workplaces are regularly checked for health and safety as part of RA	The ESENER1 survey suggests that most of the workplaces (84.08%) are regularly checked for health and safety as part of a risk assessment or similar measure.	<p>The ESENER survey²⁸ shows the following differences according to enterprise size and sectors:</p> <p>Company Size</p> <table border="1"> <thead> <tr> <th></th> <th>Yes</th> <th>No</th> </tr> </thead> <tbody> <tr> <td>10 to 19 employees</td> <td>77.05 %</td> <td>21.5 %</td> </tr> <tr> <td>20 to 49 employees</td> <td>88.31 %</td> <td>10.65 %</td> </tr> <tr> <td>50 to 249 employees</td> <td>94.94 %</td> <td>4.46 %</td> </tr> <tr> <td>250 to 499 employees</td> <td>94.99 %</td> <td>3.47 %</td> </tr> <tr> <td>500 or more employees</td> <td>98.86 %</td> <td>0 %</td> </tr> </tbody> </table> <p>Sector Type</p> <table border="1"> <thead> <tr> <th></th> <th>Yes</th> <th>No</th> </tr> </thead> <tbody> <tr> <td>Production sector</td> <td>89.36 %</td> <td>10.12 %</td> </tr> <tr> <td>Private Services</td> <td>80.55 %</td> <td>17.73 %</td> </tr> <tr> <td>Public Services</td> <td>86.28 %</td> <td>11.38 %</td> </tr> </tbody> </table>		Yes	No	10 to 19 employees	77.05 %	21.5 %	20 to 49 employees	88.31 %	10.65 %	50 to 249 employees	94.94 %	4.46 %	250 to 499 employees	94.99 %	3.47 %	500 or more employees	98.86 %	0 %		Yes	No	Production sector	89.36 %	10.12 %	Private Services	80.55 %	17.73 %	Public Services	86.28 %	11.38 %
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²⁸ ESENER1, question MM161

Common Processes and mechanisms (across Directives)	Criteria/indicator to guide the assessment	Assessment of the degree of compliance	An explanation of how the assessment was made (including references to data sources when available)	Differences which exist between the different types of sectors, size of establishment (micro/SMEs/large) and sectors of economic activity and the rationale
Ensuring protective and preventive services	% of establishments having ensured protective and preventive services ²⁹	(1) Very low degree of compliance.	<p>Nearly all employers lack some competence in their own managers ('designated workers') or in the OHS they enlist to help them. Most large employers have managers with some training and enlist OHS partly also to improve prevention (though mostly for health care). Large employers in technical industries may have a high internal and enlisted OHS competence. But even these rarely have full competence on stress and other organizational risks.</p> <p>Frick & Johanson, 2013 (p. 40; more in detail by industry in 10 chapters in Frick, 2013b) therefore looked at competencies, time, funding and authority of managers in SWEM, and at the enlisting of OHS service. The conclusion was that many managers with tasks in SWEM are given some training, but the case studies indicated that few of them get full competence (as SWEM requires) of all potential risks. The review of the enlisting of OHS services was limited to the manufacturing industry (Frick, 2013b, p. 26) and to small firms (Frick, 2013b, p. 65-66). This indicated that some large firms with generally good SWEM – and more competence among their managers – are the ones that used OHS services' experts the most. Small firms – which are the large majority of all</p>	As mentioned, small firms (95 % of all employers) mostly lack internal competence and seldom enlist external competence of OHS services (SOU 2011:63, p. 28; Frick et al., 2005, p. 428). On the other hand, large employers (especially technical industries with work environment traditions) have more competence among their designated workers (=managers) and also use OHS services more to assist them in improved prevention (though, again, rarely with a full compliance with SWEM's competence requirements).

²⁹ Article 7 in 89/391/EC does NOT only mention protective services (OHS services in SWEM). It also requires designated workers (in practice mainly managers). Only if the designated workers lack competence, is the employer required to enlist special OHS services. The FD's combined requirements on this are transposed in SWEM (AFS 2001:1, section 12).

Common Processes and mechanisms (across Directives)	Criteria/indicator to guide the assessment	Assessment of the degree of compliance	An explanation of how the assessment was made (including references to data sources when available)	Differences which exist between the different types of sectors, size of establishment (micro/SMEs/large) and sectors of economic activity and the rationale
			<p>employers – on the other hand mostly lack risk awareness and internal competence and rarely enlist such support from OHS services. There are indications that public employers (all are large) nearly always enlist OHS services, but mainly for various health care and rarely to assist them to improve their RAs or other compliance with SWEM (Frick, 2013c). In general Swedish OHS services mainly provide health care and are less enlisted to fill the gap in employers'-managers' competence on SWEM and other prevention (SOU 2011:63; p. 28; Frick et al., 2005, p. 428).</p>	

Common Processes and mechanisms (across Directives)	Criteria/indicator to guide the assessment	Assessment of the degree of compliance	An explanation of how the assessment was made (including references to data sources when available)	Differences which exist between the different types of sectors, size of establishment (micro/SMEs/large) and sectors of economic activity and the rationale
		According to ESENER1: 51.61% – 80.68%	ESENER1 2009 asks about different forms of service ³⁰ . Occupational Health Physician, 80.68%; Safety specialist, 56.15%; Psychologist 64.88%; Ergonomist, 68%; Health & Safety Consultant, 51.61%.	Data based on company size showed a general trend for greater usage in larger companies. For sectors there was a general pattern of more use of each speciality within public services, while the use of these specialties in the production sector had generally less use of each speciality overall.
Information for workers	% of establishment which provide information to workers.	No reliable data are available. But probably (1) to (2) very low to low degree of compliance.	As 95% of all employers are small (1-49 employees) any overall assessment is by definition based on the poor OHS management in these, least competent, employers. There is limited information on how workers are informed in the 270 case and other studies reviewed in Frick, 2013b. There are also few survey answers on this, and those which do exist are exaggerated as it concerns self-reported compliance. In all, the indication is that some – sometimes fairly	Frick, 2013b, ch. 10 describes an improving SWEM by firm size, i.e. poor SWEM in small firms and especially micro ones. Small firms' owners-managers exaggerate their own WE knowledge while they underestimate the risks. From this follows that information to and training of workers probably very often is not sufficient. However, it should be noted

³⁰ <https://osha.europa.eu/sub/esener/en/front-page/106/005> (MM150).

Common Processes and mechanisms (across Directives)	Criteria/indicator to guide the assessment	Assessment of the degree of compliance	An explanation of how the assessment was made (including references to data sources when available)	Differences which exist between the different types of sectors, size of establishment (micro/SMEs/large) and sectors of economic activity and the rationale
			<p>much, but rarely full – information is normal by larger employers. There are however many examples of lack of information also by these larger employers (Frick, 2013b). And some 95% of all employers have 1-49 employees. Most of these employers also seem to give little or no information to their workers on risks (Frick, 2013b. section 10.3).</p> <p><i>The interviews (especially with a senior labour inspector) indicate that small firms mostly try to handle risks. However, they usually lack the required knowledge, systematic RAs and information and training of employees, which results in less good prevention. This goes for nearly all of the provisions-directives. As small firms are 95 % of all employers, the assessment of overall compliance is consistently low.</i></p>	<p>that the minority of large employers (but with a clear majority of all working) do much more on information as on training and health surveillance. Data is limited but as case studies sometimes indicate poor information also in larger employers (Frick, 2013b) compliance is perhaps 3 to 4.</p>
Training of workers	% of establishment which provide training to workers.	No reliable data are available. But probably a (1) to (2) a low to very low degree of compliance.	<p>There is a limited information on this in the 270 case and other studies reviewed in Frick, 2013b. There are also few survey answers on this, and those which are available are exaggerated due to their self-reported compliance. All in all, the indication is that some – sometimes fairly much, but rarely full – training is normal by larger employers. However, some 95% of all employers have 1-49 employees. Most of these employers also seem to give little or no training to their workers on risks (Frick, 2013b. section 10.3).</p>	<p>See above. I.e., again large employers - private and public - probably give much better training to the workers (perhaps 3 to 4).</p> <p>The interviews (especially with a senior labour inspector) indicate that small firms mostly try to handle risks. However, they usually lack the required knowledge, systematic RAs and information and training of employees, which results in less good prevention. This goes for</p>

Common Processes and mechanisms (across Directives)	Criteria/indicator to guide the assessment	Assessment of the degree of compliance	An explanation of how the assessment was made (including references to data sources when available)	Differences which exist between the different types of sectors, size of establishment (micro/SMEs/large) and sectors of economic activity and the rationale
				nearly all of the provisions-directives. As small firms are 95 % of all employers, the assessment of overall compliance is consistently low.
Making available health surveillance	% of establishments which provide health surveillance to workers.	Not enough data to make an assessment.	Health surveillance is not a general requirement in SWEM. Medical controls/check-ups are required only for special work with higher risks (AFS 2005:6 <i>Medicinska kontroller</i>). There are no reliable data, or even assessments, on the compliance with these provisions (i.e. AFS 2005:6). However, an interviewed union representative finds that the medical health surveillance in practice mostly is watered down to general health profiles of the examined workers. But an interviewed employer representative finds that it is difficult to measure/asses the causes of risks and/or the level of injuries in the prescribed health surveillances (AFS 2005:6) and that the EU Directives too often require such health surveillance without clear motivation. A report (AV rapport 2011:13) also indicated poor compliance with the duty for health surveillance of workers exposed to vibrations.	As discussed above, larger employers are most likely complying better (or much better) than small ones. But there is not enough data to assess the level of their compliance.

Common Processes and mechanisms (across Directives)	Criteria/indicator to guide the assessment	Assessment of the degree of compliance	An explanation of how the assessment was made (including references to data sources when available)	Differences which exist between the different types of sectors, size of establishment (micro/SMEs/large) and sectors of economic activity and the rationale																														
		According to ESENER1 data: health of workers is monitored in 53.65% of the workplaces	The ESENER1 survey suggests that the health of workers is monitored in most of the workplaces (53.65%).	<p>The ESENER survey³¹ shows the following differences according to enterprise size and sectors:</p> <table border="1"> <thead> <tr> <th>Company size</th> <th>Yes</th> <th>No</th> </tr> </thead> <tbody> <tr> <td>10-19</td> <td>51.45%</td> <td>47.99%</td> </tr> <tr> <td>20-49</td> <td>54.99%</td> <td>44.78%</td> </tr> <tr> <td>50-249</td> <td>57.89%</td> <td>40.84%</td> </tr> <tr> <td>250-499</td> <td>49.66%</td> <td>47.62%</td> </tr> <tr> <td>500+</td> <td>50.3%</td> <td>48.1 %</td> </tr> </tbody> </table> <table border="1"> <thead> <tr> <th>Sector type</th> <th>Yes</th> <th>No</th> </tr> </thead> <tbody> <tr> <td>Production</td> <td>77.03%</td> <td>22.55%</td> </tr> <tr> <td>Private</td> <td>58.4 %</td> <td>40.58%</td> </tr> <tr> <td>Public</td> <td>30.75%</td> <td>69.18%</td> </tr> </tbody> </table>	Company size	Yes	No	10-19	51.45%	47.99%	20-49	54.99%	44.78%	50-249	57.89%	40.84%	250-499	49.66%	47.62%	500+	50.3%	48.1 %	Sector type	Yes	No	Production	77.03%	22.55%	Private	58.4 %	40.58%	Public	30.75%	69.18%
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³¹ ESENER1, question MM154

Common Processes and mechanisms (across Directives)	Criteria/indicator to guide the assessment	Assessment of the degree of compliance	An explanation of how the assessment was made (including references to data sources when available)	Differences which exist between the different types of sectors, size of establishment (micro/SMEs/large) and sectors of economic activity and the rationale
Consultation of workers	<p>% of establishments with appointed worker rep</p> <p>% of establishments which consult workers on risk assessment</p> <p>% of establishments which consult workers on measures</p>	Limited data	<p>The questions are ambiguous in relation to the Swedish reality. Hence either at best a high compliance (4) or a low level (2). (4) if you include the fairly encompassing but very thin system of regional safety reps and if you accept as compliance that small firms seldom consult the RSR but the RSRs instead visit and advice the small firms at best once per five to eight years. If compliance is more, the answer is (2), a low level of compliance.</p> <p>A fourth of all workplaces with at least 5 employees seems to have elected SRs (Frick, 2013a; p. 58-61, more in detail Frick et al 2005, p. 418-19). Around half of workplaces with at least 50 employees may have joint WECs, but this is an old and now very uncertain figure (Lundh & Gunnarsson, 1987, p. 103).</p> <p>A % per question is impossible to provide, partly because it is not clear what is exactly meant by 'consult workers'. Do you mean consult on a few, on many, on most or on all OHS issues? Ideally, legally it should be on ALL issues, but reality is much more relative. Instead we can give the overview below: Worker consultation in small firms (95 % of employers) is often poor. Many of those with 5 employees lack SRs, and where there are SRs these are far from fully consulted (Frick, 2013b, p. 67). RSRs make up for some of the problems in consultation, as they cover 80-90 % of the small firms. However, the RSRs can</p>	<p>There are major differences by size of workplaces and employers, as described in the column at the left. In small firms compliance is very low (Frick et al, 2005, p. 418-19; Frick, 2013b, p. 67), although it is improved through the system of regional safety reps (Frick, 2009). Worker consultation in the public sector is complying at a very high degree (i.e. 5, see Frick, 2013b., ch. 5-7). Safety reps and joint WECs exist in nearly all workplaces where they should be and they are mostly regularly consulted. Although there are relatively fewer safety reps in large private firms (Frick et al, 2005, p. 418-19) they too have an extensive consultation, but as this sometimes is lacking (Frick, 2013b, ch 2-4 and 8-9), an assessment of 4 is probably most correct for these firms.</p>

Common Processes and mechanisms (across Directives)	Criteria/indicator to guide the assessment	Assessment of the degree of compliance	An explanation of how the assessment was made (including references to data sources when available)	Differences which exist between the different types of sectors, size of establishment (micro/SMEs/large) and sectors of economic activity and the rationale
			<p>only visit each firm once every five years. This still results in many WE improvements, but it does not provide an ongoing consultation of workers (Frick, 2009, p. 157).</p> <p>Figures on numbers of WEC are old. After the work environment reforms of the 1970s, the figure had grown to some 10 000 in 1978. (Lundh & Gunnarsson, 1987, p. 103). There are no indications that the numbers of WECs has either grown or shrunk much since then (see Frick, 2013a, on worker participation). On the one hand the labour market has grown considerably since 1978, but on the other hand, through economic restructuring including fracturing of and outsourcing from large firms, this growth has nearly only been in small firms, thus without WECs. There presently are some 20 000 workplaces with at least 50 employees (SCB, 2012, p. 24). If both these and the numbers of WECs are assumed to be the same now as in 1978, half of the workplaces that should have (from 50 employees) have and half lack joint WECs.</p>	

Common Processes and mechanisms (across Directives)	Criteria/indicator to guide the assessment	Assessment of the degree of compliance	An explanation of how the assessment was made (including references to data sources when available)	Differences which exist between the different types of sectors, size of establishment (micro/SMEs/large) and sectors of economic activity and the rationale
		According to ESENER1 data: 39.76% -80.07% ³² have some form of representation/consultation	ESENER1 2009 asked separately about different forms of consultation. ³³ Companies were least likely to have a health and safety committee and most likely to have a health and safety representative. The categories are not mutually exclusive. - Trade union representative – 73.29% (production sector: 74.9%; private services: 63.46%; public services: 88.01%) - Health and safety representative: 80.07% (production sector: 85.36%; private services: 72.29%; public services: 89.09%) - Health and safety committee: 39.76% (production sector: 41.03%; private services: 35.2%; public services: 46.24%)	The data showed an increasing trend for all questions with company size. Overall, the production and public sectors were more likely to have each of the forms of consultation/representation and equally produced similar percentages across each form..

Table 3- 2 Degree of compliance: Common processes and mechanisms (individual Directives)

³² Values as reported by ESENER MM 351-355-358.

³³ https://osha.europa.eu/sub/esener/en/front-page/219/005?group_by=sec3

Common Processes and mechanisms (individual Directives)	Criteria/indicator to guide the assessment	Directive nr.	Assessment of the degree of compliance	The rationale upon which the assessment has been made (including references to data sources when available)	Differences which exist between the different types of sectors, size of establishment (micro/SMEs/large) and sectors of economic activity and the rationale
Risk assessment	% of establishments which perform regular ³⁴ risk assessment	2009/104 Work equipment	Limited data but probably (1) to (2) very low to low level	<p>There is no exact information available on common processes and mechanisms per directive. To ask for assessments of these in the interviews was not possible. The assessment in table 3- 2 instead combines the mentioned research overview of SWEM with the interviewees' assessments of compliance as a whole for each of the provisions (that transpose the directives).</p> <p>As the Work Equipment Directive mainly involves technical risks, the risks are better assessed and managed than organizational ones (Frick & Johanson, 2013, p 41-41). But as 95 % of all firms are small, the average total compliance is thus probably very low to low.</p> <p>The interviews (especially with a senior labour inspector) indicate that small firms often try to handle risks. However, they usually lack the required knowledge, systematic RAs and information and training of employees, which results in less</p>	Probably major differences by employer size, with higher compliance rates by large employers (Frick, 2013b, ch. 4). Large manufacturers may be better than public large employers in RA of work equipment though both are (much) better than small firms (Frick, 2013b. ch. 4 and 5-7 as compared to ch. 10). This report indicates a compliance of 4-5 for large private firms and 3-4 for the public sector.

³⁴ Is the risk assessment reviewed regularly and in any event when any changes occur in the conditions which may affect workers exposure?

Common Processes and mechanisms (individual Directives)	Criteria/indicator to guide the assessment	Directive nr.	Assessment of the degree of compliance	The rationale upon which the assessment has been made (including references to data sources when available)	Differences which exist between the different types of sectors, size of establishment (micro/SMEs/large) and sectors of economic activity and the rationale
				good prevention. This goes for nearly all of the provisions-directives. As small firms are 95 % of all employers, the assessment of overall compliance is consistently low.	
		89/656 PPE	Limited data but probably (1) to (2) very low to low level	AFS 2001:3 section 5 requires the RA to start by assessing the possibility for upstream prevention. This is rare in the majority of small employers (Frick, 2013b, ch. 10). However, albeit rarely with upstream RA, many to most small firms still provide PPEs for their workers, although not always all types or always the right sort of PPE. Thus although full (=legal) compliance is rare, some compliance is common also in small firms.	Probably major differences by employer size, with higher compliance by large employers than by small ones (Frick, 2013b, ch. 10). Large manufacturers may be better than public (always large) employers in RA of work equipment though both are (much) better than small firms (Frick, 2013b. ch. 4 versus 5-7).
		1999/92 ATEX	Lack of data but probably (3) medium degree of compliance to (4) good degree of compliance	ATEX applies to a limited number of employers, and these are less dominated by small firms. This makes for a better RA compliance (Frick, 2013b, ch. 10). But the RA stipulations – e.g. in different risk zones – are challenging (sections 7-8 and 11-15). This makes for a lower degree of full compliance.	As always there is less compliance in small companies and much less in micro firms. Nevertheless, ATEX applies mainly to more specialised - and thus rarely very small - firms.

Common Processes and mechanisms (individual Directives)	Criteria/indicator to guide the assessment	Directive nr.	Assessment of the degree of compliance	The rationale upon which the assessment has been made (including references to data sources when available)	Differences which exist between the different types of sectors, size of establishment (micro/SMEs/large) and sectors of economic activity and the rationale
		90/269 Manual handling	Lack of data but probably (1) very low degree	AFS 2012:2 applies also to many small firms and its section 4 stipulates a very thorough RA. Hence Frick, 2013b, ch. 10 on poor SWEM in small firms makes it likely that they also have an insufficient RA of manual handling, i.e. a very low compliance. See also table 3- 3 below on manual handling.	See the column on the left on small firms. Large employers in manufacturing but also some in retail and construction may comply much better. Yet RA requirements are high so even their compliance is probably not better than medium(Frick, 2013b. ch. 2-4).
		2002/44 Vibration	Limited data but probably (1) very low degree	AFS 2005:15 applies also to many small firms and section 4-7 stipulate a very thorough RA. Hence Frick, 2013b, ch. 10 on poor SWEM in small firms indicate a very low degree. The lack of proper RA of vibrations is also indicated by AV rapport 2011:13.	See column on the left on small firms. Large employers in manufacturing and in construction may comply much better. Yet, RA requirements are high so even their compliance is probably not better than medium(Frick, 2013b. ch. 2 and 4). See also table 3- 3 below on vibrations.
		2003/10 Noise	Lack of data but probably a (2) low to (1) very low degree	AFS 2005:16, section 4 requires upstream prevention that thus shall also be taken into account in the RA. Given the low general RA compliance, especially in the 95 % small firms (Frick, 2013b, ch. 10) such advance RA of noise is probably rare.	See column on the left on small firms. Large employers in manufacturing and in construction may comply much better. Yet, RA requirements are high so even their compliance is probably not better than medium to high (Frick, 2013b. ch. 2 and 4).
		2004/37 Carcinogens	Lack of data	Section 38-44 in AFS 2011:19 stipulates a very strict RA of	

Common Processes and mechanisms (individual Directives)	Criteria/indicator to guide the assessment	Directive nr.	Assessment of the degree of compliance	The rationale upon which the assessment has been made (including references to data sources when available)	Differences which exist between the different types of sectors, size of establishment (micro/SMEs/large) and sectors of economic activity and the rationale
		or mutagens		chemicals which are carcinogenic, mutagenic or toxic to reproduction. However as the use of such chemicals is restricted but not clearly known – especially in small firms with poorer SWEM – it is impossible to estimate compliance.	
		98/24 chemical agents	Lack of data	See above on carcinogens	
		2009/148 Asbestos	Lack of data	Labour inspectors regularly report violations when firms remove asbestos, including lack of proper RA. However, there are no data on how relatively common the non-compliance is.	
		92/57 construction sites	(1) to (2) very low to low compliance	Frick, 2013b, ch. 2.	Frick, 2013b, ch. 2, found poor SWEM, including lack of RA, in the majority of small construction firms. Larger (from 50 employers onwards) have a much better (medium to high degree) compliance while a few very large construction firms have a very high degree of compliance with SWEM and with the special construction provisions, including RA. However, the industry is extra dominated by many small firms, with an estimated low to very

Common Processes and mechanisms (individual Directives)	Criteria/indicator to guide the assessment	Directive nr.	Assessment of the degree of compliance	The rationale upon which the assessment has been made (including references to data sources when available)	Differences which exist between the different types of sectors, size of establishment (micro/SMEs/large) and sectors of economic activity and the rationale
					low compliance. See also table 3- 3.
Ensuring protective and preventive services	% of establishments having ensured protective and preventive services.	Lack of data			
Information for workers	% of establishments which provide information to workers.	Lack of data		The interviews (especially with a senior labour inspector) indicate that small firms often try to handle risk. However, they usually lack the required knowledge, systematic RAs and information and training of employees, which results in less good prevention. This goes for nearly all of the provisions-directives. As small firms are 95 % of all employers, the assessment of overall compliance is consistently low.	
Training of workers	% of establishment which provide training to workers.	Lack of data		The interviews (especially with a senior labour inspector) indicate that small firms often try to handle risks. However, they usually lack the required knowledge, systematic RAs and information and training of employees, which results in less good prevention. This goes for nearly all of the provisions-directives. As small firms are 95 % of all employers, the assessment of overall compliance is consistently low.	
Making available	% of establishments which	90/270	Lack of data	AFS 1998:5, sections 12-136	

Common Processes and mechanisms (individual Directives)	Criteria/indicator to guide the assessment	Directive nr.	Assessment of the degree of compliance	The rationale upon which the assessment has been made (including references to data sources when available)	Differences which exist between the different types of sectors, size of establishment (micro/SMEs/large) and sectors of economic activity and the rationale
health surveillance	provide health surveillance to workers	display screens		require medical check ups. No clear data on how this is complied with. However, the interviews indicate that compliance is probably good for the traditional screens but much less is known of compliance for the new movable screens (smartphones etc). See table 3- 3 below.	
		2002/44 vibration	Limited data but probably a low level of compliance (2)	AFS 2005:15, section 6 requires eyesight tests and sections 16-18 requires hearing controls. A report (AV rapport 2011:13) indicates that firms using handheld vibrating tools rarely hire medical controls from the OHS services. See also table 3-3 below on vibrations.	
Consultation of workers	% of establishments with appointed worker rep % of establishments which consult workers on risk assessment % of establishments which consult workers on measures	89/391 FD	Limited data but probably (2) low compliance with appointment of SR. See table 3-1 above.	There are some 100 000 SRs, but these cover clearly less than half of the around 140 000 workplaces with at least 5 employees, i.e. those that shall appoint SRs (Frick, 2013a, p. 58-60; and SCB, 2014). However, WEA mandates that SRs are to be appointed but this is a right for employees, not a duty for employers (but these are forbidden to in any way obstruct the appointment or the activity of appointed reps, See WEA, ch. 6).	

Common Processes and mechanisms (individual Directives)	Criteria/indicator to guide the assessment	Directive nr.	Assessment of the degree of compliance	The rationale upon which the assessment has been made (including references to data sources when available)	Differences which exist between the different types of sectors, size of establishment (micro/SMEs/large) and sectors of economic activity and the rationale
				However, the RSRs cover a large majority of the small firms (Frick, 2009; table 3.1 above). See also table 3.2 on joint WEC. These too are mandated in the WEA - from 50 employees – but there are no sanctions as employees cannot be enforced to appoint-elect representatives to the WECs.	

Table 3- 3 Degree of compliance: Key requirements

Directive	Key requirement (Directive specific)	Estimate of degree of compliance	An explanation of how the assessment was made (including references to data sources when available)	Differences which exist between the different types of sectors, size of establishment (micro/SMEs/large) and sectors of economic activity and the rationale for those differences
89/391/EEC (Framework Directive)	Controls and supervision, Art. 4(2)	Limited data but probably a (2) low compliance	A. See Frick, 2011a; and Frick & Johanson, 2013, p. 71, which indicate that SWEA's supervision of SWEM may have a limited scope. B. A much reduced quantity of supervision since 2006, see table 5.2.	The cut by 1/3 of SWEA's budget from 2006 to 2009 has reduced the supervision of all employers, of which small and especially micro-firms are 96 %. The much reduced construction supervision has resulted in increased non-compliance by the dominating majority of micro firms, as estimated by large construction firms' CEOs (Frick, 2013b, p. 13-16).
	Responsibility of the employer Art. 5(1)	Limited data but probably 2 to 3 (low to medium compliance)	The large work environment surveys (AV, 2012) demonstrate that various occupational health and safety risks are widespread in most jobs, and thus are not prevented by the employers.	1. Small firms prevent less work environment risks than larger employers (Frick, 2013b, ch. 10). As small firms are 95 % of all employers the total estimate becomes low. However, larger employers – especially, but not only, in

Directive	Key requirement (Directive specific)	Estimate of degree of compliance	An explanation of how the assessment was made (including references to data sources when available)	Differences which exist between the different types of sectors, size of establishment (micro/SMEs/large) and sectors of economic activity and the rationale for those differences
				manufacturing – act much more responsibly (Frick, 2013b) and they employ some 3/4 of all. 2. Public sector employers often have a poor prevention of psychosocial risks, such as stress (Frick, 2013b, ch. 5-7).
	Measures necessary for the safety and health protection, Art. 6(1) and 6(2)	Limited data but probably 2 to 3 (low to medium compliance)	See above	See above
	Employer cooperation, Art. 6(4)	Not enough data for a quantitative assessment	1. Frick, 2013b, p 13-14, found shortcomings in the implementation of SWEM in construction, especially of the dominating numbers of small sub(and sub-sub-sub)-contractors. 2. Frick, 2013b, p. 72 found shortcomings in the coordination between employers for hired labour.	
	Reporting of occupational accidents, Art. 9(1)(d)	Limited data but probably 2 to 3 (low to medium compliance) .	Sundström-Frisk & Weiner (2005) compared reported occupational accidents and diseases to the large workforce survey on work related ill-health and found that some 60 % of the accidents (including sickness absence) were not reported. However, increased information from SWEA in combination with new web-based forms to report accidents may well have raised the reporting rate.	As all OHS management improves by size of the employer, it is very likely that large employers also are better than small ones in reporting accidents (and occupational diseases).
	Workers may not be placed in disadvantage, Art. 11(4)	(5) very high compliance. Or (1) very low compliance. See adjunct comments	Very high compliance as safety representatives and other representatives in joint work environment committees rarely, if ever, lose economically for performing these assignments. PPEs are also (nearly) always paid by the employer. There is an ongoing case if work-clothes for home care should be regarded as PPEs, and thus should be paid by the employers, or not. The case concerns a large group of employees, but the	Very low compliance as trade unions pay some 45 % of the costs for the activities of their members' safety representatives (RSRs; see AV, 2104-04-29; Lindh, 2002). The WEA ch. 6 states that: a. Unions may appoint regional safety representatives for workplace without a joint work environment committee and

Directive	Key requirement (Directive specific)	Estimate of degree of compliance	An explanation of how the assessment was made (including references to data sources when available)	Differences which exist between the different types of sectors, size of establishment (micro/SMEs/large) and sectors of economic activity and the rationale for those differences
			overall picture is still that PPEs are free.	<p>where there is at least one union member (section 8).</p> <p>b. Safety representatives shall perform their assignments on paid time, i.e. without being placed in disadvantage (sections 5 and 10).</p> <p>c. Safety reps may use the time deemed necessary to perform their assignment (section 5).</p> <p>Unlike local safety reps, RSRs's activities are not paid by the employers (i.e. the small firms they support) but through a government subsidy to the unions that then reimburse the RSRs. Despite that the unions - i.e. the unions' member through their fees – pay 45 % themselves, the RSRs can only visit 'their' small firms once every 8-10 years (AV, 2014-04-29). The total safety rep activity in small firms (under 50 employees) is also only some third per employee compared to rep activity in larger firms/employers (Frick & al, 2005). The unions therefore find that Sweden is not complying with the prohibition to place worker under disadvantage (Lindh, 2002). And as this disadvantage concerns small firms that are some 95% of all employers, the overall estimate becomes (1) very low compliance. However, this argument has not been tried in court. Hence the double assessment of (5) and-or (1)</p>
89/654/EEC (workplace)	Minimum safety and health	Not enough - and partly	Interview data (=assessments) on all the directives refer to compliance with the total transposing provisions, but	Compliance may perhaps be 2 as 95% are small firms, that are estimated to have

Directive	Key requirement (Directive specific)	Estimate of degree of compliance	An explanation of how the assessment was made (including references to data sources when available)	Differences which exist between the different types of sectors, size of establishment (micro/SMEs/large) and sectors of economic activity and the rationale for those differences
	requirements, Arts. 3, 4 and 5; Annex I and II	conflicting data for a quantitative assessment.	<p>rarely to each of the provisions' sections, i.e. the separate requirements.</p> <p>There are only some assessments by the interviewees. On the positive side are:</p> <p>Large employers generally comply well (employers C, D and E).</p> <p>Also, an inspector said the following: "Most workplaces comply fairly well, especially new ones. When an employer would move into older premises there may be some problems in that the ventilation isn't enough for their activity for the number of employees working there. Special process ventilation, for e.g. welding, has clearly improved and SWEA now rarely have to require improvements".</p> <p>Yet, according to an inspector and an employer, even the large ones may have problems to comply with section 9 on daylight.</p> <p>Large employers may sometimes also not comply fully with the requirements of ventilation (according to employer). Construction sites are temporary workplaces where there often is insufficient light (according to trade union).</p>	less good localities than larger ones (according to trade union, employer and inspector). Although many small firms have improved (such as garages), others (e.g. laundries) still have many risks in their workplaces (trade union A).
2009/104/EC (work equipment)	General obligations, Art. 3(1)	Not enough data for a quantitative assessment	<p>Following some interview assessments:</p> <p>"The most difficult sections (15 and 16) in the provisions are not noticed and known, and thus not implemented enough. They require that only trained employees may use equipment with special risks. However, this general description applies to most machines, e.g. pillar drills and lathes. There are masses of such machines and not enough awareness of the now more strict safety requirements. There is thus still unsafe use, although it is improving as the rules are getting more known. Thus in all my assessment of compliance is 3 but 1 in small firms" (employer).</p>	According to the employer interview, the total compliance would be 1. Even if larger firms comply at 3, small firms are 95% of all employers so their 1 dominates the total assessment. Yet it is very likely that larger employers comply with most of the requirements-sections of the provisions.

Directive	Key requirement (Directive specific)	Estimate of degree of compliance	An explanation of how the assessment was made (including references to data sources when available)	Differences which exist between the different types of sectors, size of establishment (micro/SMEs/large) and sectors of economic activity and the rationale for those differences
			<p>"SWEA found several deficiencies when they had supervision projects on machines" (inspector). "One of the many cases of small firms (say up to 10-15 employees) know and do clearly less than larger ones. Small firms often try to do it right, but still miss risks and prevention due to lack of knowledge and risk awareness and of systematic RAs" (inspector)</p>	
89/656/EEC (personal protective equipment)	General provisions, Art. 4(1)	Not enough data for a quantitative assessment	<p>Following some interview assessments: "Say 70 % of the workers get what they need but some 30% have employers who want to save money on too little and too cheap PPEs. This is also caused by ignorance. Especially small firms are approached by sales persons for PPEs without enough competence and what specific PPE is required for each type of job and risk. This results in problems with e.g. improper gloves for chemical work and respiratory masks" (trade union). "The guys generally get the right things [PPEs] but filters may be wrong for the respirators, and protective clothes against fire risks is not always provided" (trade union). "PPEs are provided and also the right types, e.g. the right filter etc, but they are often not used or not properly used. But employer compliance is 5" (employer). "There is a frequent lack of proper knowledge of how to use and not the least of how to maintain PPEs. PPEs are thus generally used when they should, but not always as they should. i.e. with the right types of filters etc. Small firms can only trust the information and advice they get from their suppliers, and this is not always sufficient" (employer). "Compliance has improved in general. However, the labour inspectors may sometimes see improper use of PPEs when handling chemicals. Again a difference between large and small firms. SWEA also insists that employees in the large and expanding home care must</p>	As (nearly) always. Small firms are assessed to comply less, or much less, than larger employers. And small firms are 95 % of all employers (but employ some 1/4 of all working force)

Directive	Key requirement (Directive specific)	Estimate of degree of compliance	An explanation of how the assessment was made (including references to data sources when available)	Differences which exist between the different types of sectors, size of establishment (micro/SMEs/large) and sectors of economic activity and the rationale for those differences
			have special work clothes as they frequently work with e.g. feces, though SWEA does not say who should pay for these clothes, the employer or the employee [which is presently a major contested issue between unions and employers]" (inspector).	
92/58/EEC (OSH signs)	Minimum requirements for OSH signs, Arts. 3(1), 4 and 5 and Annexes I-IX	Limited data but probably 4 to 5 (high to very high compliance)	<p>According to interview assessments:</p> <p>"Signs are usually OK. The rules are clear and (when you know the rules) it is easy to see if e.g. fire exits are properly signed or not. Small firms very often lack this knowledge but they are checked by the union appointed regional safety reps, who nearly always see and ask for improvement if the signs are not OK" (trade union).</p> <p>"Signs are mostly OK but not always. E.g. negligence of signs of emergency exits and fire equipment in ongoing construction sites" (trade union).</p> <p>"Signs are OK. The rules are simple and clear and non-compliance is easily seen, and e.g. safety reps then complain and the right signs get posted" (employer).</p> <p>"Hard to know but probably OK. Perhaps firms may forget to change the signs when they change in their premises. There may also sometimes be problems in proper marking of various tubes in some industries" (employer).</p> <p>"There is sometimes a lack of knowledge of the provisions. Small firms often don't know if they have the right signs. I have seen small ones with old signs that do not comply with the provisions but still give the right function" (employer).</p>	
1999/92/EC (ATEX)	Measures to prevent and protect against explosions, Arts. 3, 5, 7 and Annex II	Conflicting data that indicate either 3 medium or 5 very high compliance.	<p>According to some interview assessments:</p> <p>Medium compliance (3) is indicated by:</p> <p>"There is some lack of knowledge of the regulation and of safety against explosion. The labour inspectors have issued improvement requests also against larger firms after explosions. Small firms are probably worse"</p>	

Directive	Key requirement (Directive specific)	Estimate of degree of compliance	An explanation of how the assessment was made (including references to data sources when available)	Differences which exist between the different types of sectors, size of establishment (micro/SMEs/large) and sectors of economic activity and the rationale for those differences
			<p>(inspector). Very high compliance is indicated by the social partners: "ATEX applies to rather few firms that know the risks and generally comply well with the rules" (trade union). "The social partners seem to agree on a high safety as part of a general quality control" (trade union). "Firms used to apply paint by spraying but now this is rare. Instead they use powder or water based paints. But when necessary, they use the proper safety, e.g. in electrical equipment. Thus a compliance of 5" (employer). "There e.g. risks of wood dust in the forest industry. What is required is continuous cleaning and a sufficient humidity. Sawmills now usually have sprinklers plus firewalls. Fire protection is also an insurance requirement (employer).</p>	
90/269/EEC (manual handling of loads)	Avoidance of (hazardous) manual handling, Art. 3(1)	Limited data but probably 2 to 3 (low to medium compliance)	<p>The interview assessments of these complex provisions indicate widespread ergonomic problems, i.e. non-compliance: "There is much less of the old heavy lifting, but now there are other widespread MSD-risks. Laundries are again a problem with their common tasks of frequently lifting and sorting clothing with arms held high. Lean production is also a very common trend. It is too often implemented in forms that increase the risks for short cycles of repetitive movements and with reduced or no recovery pauses. Now men in the union report as many MSD injuries as the women who formerly reported clearly more such injuries" (trade union). "In their report for 2013, the regional safety reps emphasized MSD and bullying as the major problems in small firms (trade union). "White-collar MSD-injuries are mainly of necks and shoulders. We used to have many repetitive and controlled jobs, such as in call centres, but most jobs</p>	This directive/provisions is an exception as there are no indications that small firms are worse than larger employers. The problems instead seem to vary with the industry and type of production.

Directive	Key requirement (Directive specific)	Estimate of degree of compliance	An explanation of how the assessment was made (including references to data sources when available)	Differences which exist between the different types of sectors, size of establishment (micro/SMEs/large) and sectors of economic activity and the rationale for those differences
			<p>have gotten more flexible. Yet, even these may result in MSDs due to stress and/or the wrong position when working e.g. with lap-tops. Thus in all still widespread MSD-problems" (trade union).</p> <p>"There was an improvement in construction, with lighter and more adapted materials, but now worse again as materials have gotten heavier by e.g. building electrical equipment into the plasterboards. And many jobs in strenuous positions remain, especially working above shoulder levels. Construction workers leave with early retirement around 55-58 years, mainly due to ergonomic injuries" (trade union).</p> <p>"The manual handling directive's requirements are now well complied with through the lighter construction materials. The broader requirement of the Swedish provision - exceeding the directive - of strenuous working positions are more of problem. These are part of the construction process. Jobs in existing buildings are especially difficult as much material handling has had to be done manually. As a result the sickness absence due to MSD is much larger than from accidents" (employer).</p> <p>"The max weights of the directive are usually well complied with. However, the RA of the broader ergonomic provisions is more complex. There is presently a project to try to give employers clearer guidelines and models of how to assess the MSD risks. In practice there are nearly always lifting equipment but when objects are not too heavy this equipment is often not used. However, this problem is getting less, with cheaper, simpler and better lifting equipment. Repetitive work, e.g. along a line, still exist but usually with opportunity to shift between tasks, but some repetitive jobs may still exist also in large firms" (employer).</p> <p>"The part on manual handling is fixed, including through</p>	

Directive	Key requirement (Directive specific)	Estimate of degree of compliance	An explanation of how the assessment was made (including references to data sources when available)	Differences which exist between the different types of sectors, size of establishment (micro/SMEs/large) and sectors of economic activity and the rationale for those differences
			<p>job rotation. However, there remain some problems, e.g. in distribution of goods" (employer).</p> <p>"Difficult provisions to comply with. Easy to mechanize heavy lifting and also to avoid repetitive motions. But now employees get e.g. carpal tunnel injuries from working all day with joy-sticks. There are still heavy jobs in repairs and maintenance, but if it is really heavy then the firms try to do something. A problem is that vehicles are constructed for men. Seat, levers etc may be less fit for the women coming into the industry" (employer).</p> <p>"Ergonomics remains a big issue when you deliver health care and nursing, especially in the lifting of old or frail patients under sometimes less good conditions" (employer).</p> <p>"Ergonomic risks and the provisions are widely known, to watch out for heavy lifting and repetitive motions. Small firms have also heard of this. Still, the labour inspectors regularly issue improvement notices on these provisions (inspector).</p> <p>"This remains a major risk. Some years ago SWEA trained OHS services on ergonomic RAs. After that, the labour inspection found much better such RAs in their supervisions. Heavy lifting is getting less and less, due to both fewer such jobs and to a continued mechanisation. But musculoskeletal risks through stress are widespread, both in manufacturing where fewer workers are to do more, and in many service jobs. Homecare is a large and growing industry with both stress and heavy lifting of persons, often in bad positions. Homecare requires RA (and prevention) in all private homes where care is given but continued work injuries from too heavy lifting etc demonstrates that the RA and measures to reduce ergonomic risks are not good enough. Half of those reporting such injuries in homecare are under 45 years,</p>	

Directive	Key requirement (Directive specific)	Estimate of degree of compliance	An explanation of how the assessment was made (including references to data sources when available)	Differences which exist between the different types of sectors, size of establishment (micro/SMEs/large) and sectors of economic activity and the rationale for those differences
90/270/EEC (Display SE)	Minimum requirements for workstations, Arts. 4 and 5	Limited data but probably around 3 to 4 (medium to high compliance)	<p>which indicates that the problem is serious" (inspector).</p> <p>The interviews indicate good compliance for older stationary display screens but much less attention to the ergonomics of the rapidly spreading movable ones. Hence the overall assessment of 3 to 4:</p> <p>"The display screens are fairly OK to work with, expect perhaps sometimes in garages. The mechanics there have to work with the lap-tops inside small cars, which can be rather difficult" (trade union).</p> <p>"Practically everybody [in white collar jobs] work with computers, but not all know the right of an eyesight examination. There are also problems of lighting and work stations in the more and more common office landscapes. And the new risks of working with the lap-tops, I-pads and smartphones are covered but still poorly described in the provisions and less supervised " (trade union).</p> <p>"Most managers know the ergonomic requirements of working with display screens, though they have often left this much up to the employees themselves. Fancy IT-firms can have employees working along long tables with no ability for ergonomic adaptations" (trade union).</p> <p>"More and more I-pads and smart-phones also for construction workers, which they often have to use in poor ergonomic conditions" (trade union).</p> <p>"The provisions could be abolished and integrated in those on ergonomics (2012:2). The only requirements that are not ergonomical is to have an eye-sight control and (if necessary) to provide spectacles, which are clear and easy to comply with. There are also requirements of the software. The latter are more complicated with e.g. recent examples of software causing work problems within e.g. the police and in the health-care. But software issues can better be settled by the social</p>	

Directive	Key requirement (Directive specific)	Estimate of degree of compliance	An explanation of how the assessment was made (including references to data sources when available)	Differences which exist between the different types of sectors, size of establishment (micro/SMEs/large) and sectors of economic activity and the rationale for those differences
			<p>partners" (employer). "Computers in offices are probably complying well. However, the risks of movable display screens have been little discussed despite that these are becoming more and more common, e.g. in home care but also in many other public jobs" (employer). "The provisions were not written for movable smartphones, i-pads and laptops but the requirements apply equally to these modern display screen works. However, SWEA has not supervised the modern work and don't know the compliance level" (inspector L).</p>	
2002/44/EC (vibration)	Exposure limit values and action values, Art. 3	Limited data but perhaps 3 (medium compliance)?	<p>Only interview assessments. Compliance seems to have improved but problems remain, especially for whole-body vibrations: "Handheld vibrations have been reduced with better tools. They remain a problem for mechanics but less so, e.g. by shifting from air to electric power tools. Vibrating tools have also got better handles and become smaller and fit better for different sized persons. Whole body vibrations remain a problem when driving vehicles on rough floors and even more so on unpaved floors in mines. But, all in all, vibrations have been much reduced in 15-20 years" (trade union). "This is a much too forgotten risk. Partly because there are no OHS services in construction any more that measure vibrations. The unions regularly get reports of vibration injuries. There is a website with vibration data for all risky tools, but employers mostly do not check the site. The site's vibration values are also for new tools but they age rapidly and then vibrate much more. Vehicles have got better chairs and suspension but still have whole body vibration problems when they are driven on rough surfaces" (trade union). "Tools have become better but are still not good, though</p>	

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			<p>they comply with the provisions. I have studied the time used for different jobs and actual work per day is usually short with vibrating tools. Still, floor chiselling can be done for a whole-day while the provisions set a maximum of 20 minutes" (employer).</p> <p>"The hand-arm requirements are acceptable but the action values for full-body vibrations are hard to comply with. Ergonomic truck cabins can still give vibrations over the action value if the trucks are driven on rough ground. And full-body vibrations are difficult to measure for the employer. ... The implementation of the full-body requirements is poor, because the very complex measurements are rare. Hand-held tools are different. The requirements are clear and you can choose machines with low values. Injuries from such machines are therefore very rare." (employer).</p> <p>"These provisions cause big issues in the mines and heavy industry. They are difficult to interpret, i.e. to know how to measure vibrations. But we start to understand better instruments, that e.g. can measure vibrations in a driving cabin over a full day. Though small firms can't handle these requirements. They mostly lack OHS services and if they hire such support, the OHS services rarely have staff capable of measuring vibrations. Full-body vibrations are difficult to comply with. Even with ergonomic driving cabins the values can easily be exceeded when driving on unpaved surfaces" (employer).</p> <p>"Around 2010 3 of SWEA's 10 districts inspected some 6-700 firms on hand-arm vibrations. SWEA had before that trained the OHS services on how to control and measure such vibrations. Afterwards the OHS services got many customer requests for support as SWEA had issued many improvement notices on vibration measurement and medical controls/health surveillance. Employers tend to</p>	

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			buy vibrating tools with a CE-mark and then think everything is fine. Thus a fairly low compliance. SWEA used to issue many improvement notices against full-body vibrations when buses drove over road bumps, but since then most (all?) road bumps have been redesigned to reduce the vibration problem. However, SWEA does not really know the risks, the compliance for full-body vibrations for all drivers of trucks and other machines, often on rough surfaces" (inspector).	
2003/10/EC (noise)	<p>Exposure limit values and action values, Art. 3</p> <p>Measures to avoid and reduce exposure, Arts. 5 and 7</p>	<p>Limited data but perhaps around 3 to 4 (medium to high compliance)?</p>	<p>The interview assessments indicate one the one hand that much noise has been reduced but on the other there seems to be a widespread violation in not wearing hearing protection where noise levels still are too high.</p> <p>"There is still much noise, especially in the heavy industry but also elsewhere, notably in small firms. Yet, large factories have reduced the noise exposures. The union would probably find many unreported hearing injuries, if it looked for them. However, more workers are getting good hearing protectors, with e.g. filters to hear talk etc. Yet, few if any employers know that continuous noise of 70-80 dB results in stress reactions and thus in cardiovascular diseases" (trade union).</p> <p>"Staff in childcare sometimes gets hearing damages and so do some musicians, though measures are being taken to protect both groups" (trade union).</p> <p>"There are few noise measurements in construction sites. Those directly exposed, e.g. while drilling in concrete, use earmuffs but many working close to them don't. Like other carelessness in use of PPEs, the supervisor sometimes orders those exposed to use the earmuffs but often no one says anything. The union informs their members that refusals to use PPEs is a cause for dismissal" (trade union).</p> <p>"Hearing loss has been reduced in construction.</p>	

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			<p>Machines are less noisy though there are more machines. Thus still often too high noise, which means that earmuffs are required. However, the muffs are often not worn, especially by those not working directly with the noisy job" (employer).</p> <p>"The noise problem has been very much reduced. Workers rarely work directly at the machines now so the machines are encapsulated. And where there still is too much noise, employees use ear-muffs, also in small firms" (employer).</p> <p>"A big issue is how to reduce the noise in schools and child care centres, while still making them easy to clean" (employer K).</p>	
2004/40/EC (electromagnetic fields)	<p>Exposure limit values, Art. 3</p> <p>Measures to avoid and reduce exposure, Art. 5</p>	<p>Limited data but probably 5 (very high compliance)</p>	<p>Sweden did not fully transpose 2004/40, but will transpose the new directive 2013/35/EU. The interview assessments concur on a very high compliance, e.g.:</p> <p>"These risks exist mainly in steels works, in welding and in mining, where they are usually measured and managed well enough" (trade union).</p>	
2006/25/EC (artificial optical radiation)	<p>Exposure limit values, Art. 3</p> <p>Measures to avoid and reduce exposure, Art. 5</p>	<p>Very limited data but perhaps 3 (medium compliance)?</p>	<p>Only interview assessments. The trade unions seem to be less concerned than the employer representatives.</p> <p>"The risks exist in welding, in metal cutting and when melting glass, but the employers are few and they measure and manage the risks quite well" (trade union).</p> <p>"Lasers have been regulated in Sweden before and now both IR and UV light is included. These are difficult provisions and the risks are technically hard to measure which requires special competence. The risks exist in e.g. glassworks, foundries, the steel industry and generally in welding. There is a project to create a cheat sheet guidance with curves of permitted exposures at different lengths of time. These are relatively new provisions that are not so well known. This means that some affected</p>	

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			<p>are not complying so well, e.g. small forges. And the glassworks had high IR-values, that can cause eye cataracts. There is thus still a need to spread knowledge, including when to use goggles, and which type of goggles" (employer C).</p> <p>"These are difficult provisions to fully comply with. Hard to know which employees are affected, i.e. where there are risks for hazardous radiation. It is expensive to measure and there is a lack of measuring instruments. We have a project to establish type-values on e.g. radiation from melted steel. But good prevention requires technological development to get workers away from sources of hazardous radiation" (employer).</p> <p>"The most contested issue was the police, who reported many attacks with green lasers. The labour inspection had to insist before the police officers were issued with protective goggles" (inspector)</p>	
2004/37/EC (Carcinogen MD)	Three tiered approach, Arts. 4, 5(2)-5(4)	See 98/24/EC below	See below on 98/24/EC chemical hazards	
98/24/EC (chemical agents at work)	Specific protection and prevention measures, Art. 6	Limited data but probably 2 to 3 (low to medium compliance)	<p>98/24/EC is in Sweden transposed together with 2004/37/EC in the provisions 2011:19 on chemical hazards and 2011:19 OELs. There only one interview assessment on the compliance with these provisions:</p> <p>"Large firms started long ago to check chemicals and sort out the bad and only procure new with risk assessments. But the large majority of smaller firms have much less control of their chemical hazards (including possible carcinogens and/or mutagens). They have insufficient knowledge of PPEs and when, how and which to use. Possible air pollutions are very often not measured when smaller firms use chemicals and too high exposures may be possible. Firms that the labour inspection have ordered to measure do so - and mostly act on the</p>	The interviews consistently indicate more problems in small firms. As these are 95% of all employers the estimate is a low to medium total compliance. Larger firms and public employers probably have a compliance of 4. Though probably not 5, as the interviews indicate some difficulties also for these employers to fully comply.

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			<p>measurements - but most of the non-inspected firms don't" (trade union).</p> <p>"For academic staff the main chemical risks - including from cancerogens and/or mutagens - are in laboratories, where universities may have more problems than large private firms. There are some problems in giving laboratory staff adequate training and information, including in other languages for foreign researchers" (trade union).</p> <p>Imperfect OHS management in university laboratories was also found in a labour inspection report (Frick, 2013b, p. 47-48).</p> <p>"White collar safety reps rarely complain about chemical hazards. Those who work with chemicals seem to do so seriously and professionally, with support from their employers. They tend to handle this more as an environment issue, in which good OHS is a side-effect" (trade union).</p> <p>"There is a growing discipline in handling chemicals in construction companies. However, there are more and more nano in the materials, while glues and organic solvents are still used. To reline old drainpipes with epoxy may quite quickly result in serious allergies. Information and training may be lacking, e.g. that it may be safe to apply a nano-material with a brush but not by spraying" (trade union).</p> <p>"Chemical hazards are much reduced in construction. Cement is chrome-free. Its alkalinity may give skin problems but these occur rarely. Isocyanates may only be used under certain conditions, including training and equipment, which is complied with. Glues are used but rarely thermoplastic ones. When there are solvents there is often good natural or mechanical ventilation. Thus OELs are rarely exceeded and cancerogenic materials</p>	

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			<p>are rarely used and then under good control. Silica dust occur now and then but rarely above the OEL. When necessary, workers are to use respirators, especially when close to newly crushed rock" (employer).</p> <p>"Firms have since long got a good grip of their use of chemicals. Unnecessary ones have been dropped and more risky ones have been changed to less risky. This means rarely using organic solvents, instead water based or powder paints. The great reduction of risky chemicals has been as much an effect of environmental regulations and objectives through e.g. ISO 14 000. However, there is a problem in that REACH and the chemical provisions don't fit well. And the quality of safety data sheets from chemical suppliers – also from large ones – sometimes give employers the wrong information on risks and precautions. Small firms may not organize the management of the chemicals they use, but the total volume of risky chemicals has still gone down very much" (employer).</p> <p>"Small firms' chemical management mainly depends on tin labels, product data sheets and other information they get from their suppliers. The organisation of chemical suppliers in Sweden is training its member firms on how to provide good information to their customers" (employer).</p> <p>"The provisions are very complicated. Even large firms find it hard to understand e.g. how to do the right RAs of chemicals and how to keep the proper registers of employees that may have been exposed to cancerogens, which have to be saved for many years. Small firms, especially, find it difficult that the same chemicals are also regulated by other authorities besides SWEA. Sometimes REACH is not fully compatible with the provisions. Preventive measures can also be difficult and</p>	

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			<p>expensive. Large firms try to continuously reduce exposures, but in some processes require technical development to prevent hazards. And small firms find it more difficult to prevent chemical hazards, e.g. when handling chemical or oil rests" (employer).</p> <p>"As in most things, small firms are less capable to handle chemical hazards. The labour inspection has had several cases where they required improvements" (inspector).</p> <p>"General inspections in manufacturing, schools or wherever chemicals may be used also include how these hazards are handled. And Sweden participated in a SLIC campaign on this. The general inspections and the campaign resulted in improvement notices but not a lot. Thus, as as a whole, a fairly good compliance. Though there is also a difference by size. Small firms have less risk awareness, knowledge, of RA, info and training and prevention - also with regard to chemical hazards" (inspector).</p>	

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2009/148/EC (asbestos)	Exclusion of some work, Art. 3(3)	Limited data but probably around 3 (medium compliance)	<p>Only interview assessments. These indicate on the one hand a strict regulation and a broad awareness of the risks. On the other hand, there are huge profits in not complying with the costly requirements for a safe asbestos sanitation and hence probably much illegal work, i.e. demolition without proper safety and sanitation, often even without a permit, may exist:</p> <p>"A large firm imported Russian machinery that turned out to contain asbestos. The asbestos was detected and the costly machinery could not be used. Imported ready-made batch-rooms from China also contained asbestos. The unions' regional safety rep prohibited their use. This demonstrates failures in the employers' preventive procurement. Large construction firms usually hire special firms for asbestos demolition and sanitation. But these often take illegal short cuts in order to make large profits. A recent supervision campaign on asbestos found faults at some 40 % of the inspected firms" (trade union).</p> <p>"Asbestos remains a risk. All who handle it must be trained and all construction workers should get general information where asbestos may be found. The social partners work on information and training, but sometimes exposures occur due to lack of competence. And illegal demolition occurs as it is so profitable, which often creates risky asbestos dust for all others who work or use the localities" (employer).</p> <p>"The risks are well known and employers often call SWEA for information. Still, this is an industry where it would be strange if there wasn't much illegal work as that is so profitable. With much fewer construction inspectors, it is easier to get away with. And SWEA sometimes have to recall permits for companies to demolish asbestos, as they have been found out to cut corners" (inspector).</p> <p>"There are some 7-800 firms with SWEA-permits for asbestos demolition-removal-sanitation. There is thus a market for legal-safe removal, even though this is quite</p>	Firms with permits for asbestos demolition and sanitation are mainly small, and those doing it without the required permit are all small. Thus small firms probably comply less than larger employers, which try to follow the very strict provisions.
			<p>expensive, not the least as building owners otherwise may face serious problems if faulty sanitation or remaining asbestos is detected. This could result in a prohibition or in staff refusal to use the premises. However, there is also a grey-black sector of small firms doing illegal asbestos removal, but it is very hard for SWEA to estimate how common this is. It probably occur</p>	<i>Country Summary Report for Sweden / 170</i>

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2000/54/EC (biological agents)	Substitution, Art. 5	Not enough data for a quantitative assessment	<p>Only some interview assessments:</p> <p>"These risks are spread in the form of organic cutting and cooling oils for lathes, drills and other common metal processing machines. The oils usually contain biocides and other added substances. These are often spread as oil mist, which is not always taken care of enough through ventilation" (trade union).</p> <p>"Sometimes there is mould when you demolish or renovate buildings but there is little knowledge, RA or prevention against this risk. And when we do jobs in sewage plants, the employers do not assess or prevent the risks but instead vaccinate the workers" (trade union).</p> <p>"The only concerned branch within the construction industry are the specialised sanitation firms. They know what they do and follow the rules" (employer).</p> <p>"Cutting oils are since long organic and their earlier problems" [of microbiological risks] "have mostly been resolved" (employer).</p> <p>"Biocides against mould in organic cutting and cooling oils may pose a risk. Also mould, e.g. in sawmills" (employer).</p>	
92/57/EEC (temporary or mobile construction sites)	Appointment of coordinators, Art. 3	Not enough data for a quantitative assessment	<p>Only interview assessments:</p> <p>"There is a relation between SWEM [transposing 89/391/EC] and the construction provisions. SWEM is fundamental but isn't implemented as well as is needed. The large construction firms aim for a good SWEM but its practice can vary between the [construction] objects. SWEM is very good controlling in [a large firm known for its high OHS ambitions] but the individual project managers are still responsible for the economy and time schedule of his/her construction project, on which s/he is evaluated and not on OHS. This can result in less attention to SWEM, OHS and the construction provisions requirements of coordination, RA and planning. Work</p>	Again much better compliance in large firms than in small ones. It should be noted that, in the construction industry, most of the employment is in small firms.

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			<p>environment plans are required for all risky jobs but these can in practice just be copies of such plans from earlier projects. And large firms outsource many risky jobs to smaller/small firms. The practical responsibility to secure e.g. proper fall protection when working at heights then becomes blurred. However, many small firms have started to take care of their construction workers and, if the CEO is out working himself, he usually also takes care reasonably well of the OHS of his employed mates, even if the formal compliance with SWEM and with the construction provisions usually is less good. In the latter provision, the relation between the responsible coordinator for planning (BAS-P) and the one for doing the construction job (BAS-U) gets blurred as planning and design usually gets on nearly long into the erection of the building. And the coordination between these two different coordinators is not always good. However, the requirement to record the building material that is used is good, as this is important to know when you renovate or demolish the construction. The new [i.e. reformed] construction provisions that require a responsible coordinator for planning and one for doing the construction is very good, but is too poorly complied with. If it was better complied with, including better OHS training of the coordinators, it can get fine [i.e. reduce the risks]. The challenge is to coordinate many firms to create a common good safety culture in every construction project" (trade union).</p> <p>"The provisions on SWEM and on construction work well together. The first regulates the OHS management of each employer and the latter on each construction object. The construction industry has now learned the new provisions' requirements of responsible coordinators, through a training of some 10-15 000 people on mainly</p>	

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			<p>BAS-U but also on BAS-P. SWEM is both simple and difficult. It is the basis for all safety. The term SWEM and the provisions are perhaps less well known but even small firms mainly comply with its requirements through their professional knowledge of what is required of safe construction work. However, the small firms may less comply with the required documentation in SWEM (e.g. a RA) and in the construction provisions on work environment plans for [the common] risk jobs" (employer).</p> <p>" Engineering firms not only hire construction work but also regularly do changes of their own in their localities. But when do the construction provisions apply? There was recently a large court case in which SWEA had a firm prosecuted because the firm had laid out data cables and SWEA found this to be construction work. Thus the firm should have appointed a work environment coordinator. SWEA's standpoint now is that if the work exceeds two days it falls under the construction provisions. This creates a double responsibility between the appointed work environment coordinator and the firm procuring the work. It is also a Swedish over-implementation of the EU-directive to have a work environment coordinator for so small jobs done by yourself in your own premises. But the EU-directive did make it clear that firms that make changes in their premises are also affected. There must be a work environment plan for any of a list of risky construction jobs, including work from 2 meters high. But this list has details that are hard to interpret, e.g. on work from a ladder. There are thus still deficiencies in the compliance by member firms, as the requirements are so stringent that you sometimes nearly have to violate them in order to do the job. This has resulted in mainly working from</p>	

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			<p>scaffolding or skylifts but small firms still often use ladders. In all, the directive and the provisions are OK but smaller jobs should not require a work environment coordinator" (employer).</p> <p>"Many do not know that you must have a BAS also for rather small construction jobs that you do yourself" (employer).</p> <p>"The heavy industry and mines very often also do construction jobs and therefore trin their own BAS-U. Much maintenance falls under the construction provisions. Again, the large firms know the rules and follow them but these are still seen as complicated and there is much discussion on how to do it right ... and often a worry if one really has complied" (employer).</p> <p>"Unfortunately there are few construction supervisions, but SWEA is to recruit and train some new inspectors which gives hope of more supervision of the construction industry. At present this is much too low. The large firms' top management have good OHS knowledge and planning but it gets more and more difficult to implement the provisions in the construction projects, especially with large number of (sub-)subcontractors. SWEA sometimes issues a continuous fine for e.g. 10 000 SEK for each time a worker of a firm is seen without proper fall protection, in order to force the employer to comply. The new system with directly applicable sanction fees for all violations then can be clearly defined and be very applicable to the construction industry where many regulations are issues of black or white. Before, only a small fraction of all detected construction violations that SWEA sent for police investigation and possible prosecution resulted in convictions and sanctions" (inspector).</p> <p>"The construction industry always found it hard to relate their special provisions to the general SWEM-provision on</p>	

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			<p>how to manage the work environment. But large construction firms should be able to integrate-comply with both provisions and the industry has improved. There has been much information on the duty to appoint a work environment coordinator for the planning-design stage and for the construction/building site-stage. It has resulted in improvement. i.e. risk reduction. Small firms mainly use the construction provisions - if they know-use any provisions at all - but don't think much of their SWEM-duties. A special problem is work at height, where SWEA very often finds non-compliance. With new direct sanction fees, from 1/1/2015, every case of non-compliance with protection against fall risks will cost at least 40 000 SEK. Presently SWEA yearly issues some 300 direct prohibitions against unsafe work at heights" (inspector).</p>	
92/104/EEC (surface and underground mineral extracting industries)	Reporting to competent authorities, Art. 3(4)	Little and conflicting data. Probably 5 for the mines, but probably clearly less for smaller firms doing rock-drilling.	<p>This directive is in Sweden combined with 92/91/EEC in provisions on mining and rock-work. There are only interview assessments on the compliance:</p> <p>"There are only two large but quite a number of small employers doing test drilling, normally under tough conditions in the forest. The regulations are not always complied with. But mines generally have an organised OHS management that complies well with the provisions, and they are supported by an active joint OHS body for the industry" (trade union)</p> <p>"Construction firms do many jobs in and for the mines, also underground. But, like the manufacturing industry, the mines have a good OHS management. The six fatal accidents (so far) in constructing a tunnel under Stockholm were not caused by violations of the mining rules but by machinery risks, including through lack of communication and coordination when workers from many countries with different languages work together</p>	

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			(trade union). " Construction firms do much work in mines underground. However, the ventilation is then adapted to reduce diesel fumes which are more than enough to get under the OLV for rock dust. And drilling underground is always with water to also reduce dust levels" (employer). "These provisions do not give the employer any large problems. There is an extensive cooperation between the social partners for a good work environment in the mines, including through a joint committee. The provisions are thus known and well complied with" (employer).	
92/29/EEC (medical treatment on board vessels)	Minimal requirements as regards medical supplies, Art. 2(1)		Safety equipment has been subsidized	
	Minimal requirements as regards watertight medicine chests, Art. 2(2)	Lack of data	Rules on how vessels must be equipped are stated in the regulations issued by the Swedish Maritime Administration. Each regulation may cover a certain equipment category and be applicable to several vessel categories or may cover a certain vessel category and contain rules on several equipment categories.	
	Information and training, Art. 5	High degree of compliance	A requirement of "basic safety training" is included in the national regulation.	
	Inspection (MS level), Art. 6 List of medical supplies, Annexes II and IV	High degree of compliance	The medical manager on board shall annually review the pharmacy ship and the master/captain shall document the review. Every three years the review will be conducted and a certificate issued by a person with pharmaceutical training. Governmental inspectors check that such a certificate is issued.	
93/103/EC (work on board fishing vessels)	Regular checks (MS level), Art. 3(2)	High degree of compliance	In the inspection requirements concerning e.g. hull, machinery, electrical, health and safety must be satisfied before a certificate is issued.	

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	Emergency equipment, Art. 7(c) and (d)	High degree of compliance	Safety equipment has been subsidized. The requirements concerning safety equipment of the directive were broadly implemented in Swedish legislation even before the directive was released.	Small establishments state that they have limited economic resources to fund new technologies and education
	Personal protective equipment; Art. 7(1)(e)	High degree of compliance	Requirements for equipment and training in radio communication were introduced in 2008, with the introduction of GMDSS (Global Maritime Distress and Safety System).	Small establishments state that they have limited economic resources to fund new technologies and education
	Skipper training, Art. 10	High degree of compliance	Navigability licenses are granted by a seaworthiness inspection. In this inspection, requirements concerning e.g. hull, machinery, electrical, health and safety must be satisfied before a certificate is issued.	
92/85/EEC (pregnant/breast-feeding workers)	Three tiered approach, Art. 5	Limited data but probably 5	<p>It should be noted that breastfeeding while working is rarely an issue in Sweden, with the right of a long paid maternity leave. But there are only interview assessments of the pregnancy requirements in the provisions:</p> <p>"Most cases of pregnant women are properly taken care of. They are given safe alternative work and the collective agreement guarantees the same pay, though they may lose extra shift bonuses. However, sometimes the women concerned are dissatisfied with their alternative jobs" (trade union).</p> <p>"Adapted jobs are required also for some groups of women with academic exams, e.g. veterinarians. However, the women concerned and their local trade union may not know sufficiently the provisions and the right to get a less strenuous job. Women also sometimes inform their employer rather late of their pregnancy" (trade union).</p> <p>"Small firms may find it difficult to provide the women with alternative, easier jobs. Some union officers have been involved but then rather as discrimination cases than compliance with the provisions, as the latter are not always known. And with more and more women (and</p>	

Directive	Key requirement (Directive specific)	Estimate of degree of compliance	An explanation of how the assessment was made (including references to data sources when available)	Differences which exist between the different types of sectors, size of establishment (micro/SMEs/large) and sectors of economic activity and the rationale for those differences
			<p>men) on insecure jobs, pregnancy cases are 'resolved' by simply not continuing the employment" (trade union). "The provisions are rarely difficult to implement and compliance should be rated as 5. There are mostly alternative jobs to offer pregnant employees. I haven't heard of small firms having problems with the provisions. If needed, the women get medical check-ups, e.g. against sensibilisation. However, women sometimes don't inform their bosses that they are pregnant out of fear that they will have to quit. If no replacement jobs can be found, the pregnant women will have to take a sick-leave and get the much lower compensation from the sickness insurance" (employer). "Concerned women have called SWEA and asked for help. The inspectors have then talked to the employers to arrange adapted jobs. Though there seems to be much knowledge that you have to take care when you are pregnant" (inspector).</p>	
91/383/EEC (temporary workers)	Responsibility of User undertaking, Art. 8	Not enough data for a quantitative assessment	<p>There are no separate provisions on temporary workers as all OHS regulations apply equally to them. However, some interviews nevertheless indicate problems in the practical compliance: "Although these workers' OHS is equally regulated as all other employees, there is a widespread ignorance among concerned employers - those hiring out (i.e. the formal employers) and the firms hiring in labour - about their responsibilities. Lack of risk assessment and lack of instruction-training for jobs done by hired labour has caused many accidents" (trade union). "The trade unions have a special project on temporary workers, hired or lent in from other firms. The regional safety reps get a special checklist on what to look for, in order to e.g. support the concerned employers on how to do a RA etc" (trade union).</p>	

Directive	Key requirement (Directive specific)	Estimate of degree of compliance	An explanation of how the assessment was made (including references to data sources when available)	Differences which exist between the different types of sectors, size of establishment (micro/SMEs/large) and sectors of economic activity and the rationale for those differences
94/33/EC (young people)	Prohibition of work by children, Art. 4	Limited data but probably 3 to 4.	<p>Only interview assessments:</p> <p>"There are few minors in the union's workplaces (plants, mines, garages, laundries and nearly all other industrial activities). Those which are there, are students in training for these type of jobs, and they work under a collective agreement that includes supervision (also to prevent OHS risks)" (trade union).</p> <p>"Minors are now few and under supervision in construction. Minors are no longer taken in for summer jobs as it requires too much supervision. Minors under construction training are more common but they are always properly supervised, as part of their training" (employer).</p> <p>"This applies to trainees. There is a project on supervising trainees, which varies and could be improved. However, the new provisions on minors regulates the work of these so much that firms avoid e.g. to take in young people under 18 for summer jobs. However, small firms may take in minors and there can be accidents."</p> <p>"Every summer SWEA has a drive of supervising workplaces where there may be minors, but these have not resulted in loads of requirements. The employers seem to understand what they shall do. But there are nowadays few minors working, except as supervised trainees. However, there still are employers who - due to lack of knowledge and lack of management supervision - let minors do risky jobs" (inspector).</p> <p>"SWEA now has few cases. However, every year the authority has a drive towards the municipalities that they must do RA (which they often don't do) of summer jobs they send minors to both within the municipality or to private firms" (inspector).</p>	

3.2 APPROACHES TO COMPLIANCE

The second question complements the first sub-question in that aims to answer the question of to what extent can potential differences in the degrees of compliance observed as between private undertakings and public sector bodies, various sizes of companies, etc. be attributed to different approaches to compliance.

Sweden has incorporated into its OHS legislation the approach of Systematic Work Environment Management and compliance with the applicable OHS requirements is therefore strongly integrated into the Swedish working environment. In general, there are four approaches to compliance to be distinguished: 1) large (primarily manufacturing) corporations have a well-organised SWEM and the line managers are provided with objectives and resources to implement a preventive SWEM; 2) public employers have a formally and very extensively organised SWEM, with especially developed workers' consultation – with the emphasis rather on the reduction of sickness than on the prevention of risks; 3) small firms do not have a real understanding of what SWEM is and generally overestimate their knowledge of the risks, thus giving little attention to risks and prevention; and 4) a last category, mainly SMEs, dealing primarily with technical risks, hereby overlooking organisational risks.

Table 3- 4 Approaches to compliance

Question	Answer	Observed differences which exist between the different types of sectors, size of establishment (micro/SMEs/large) and sectors of economic activity
What approach has been adopted? Is it systematic?	The mandated approach is Systematic Work Environment Management as regulated in SWEA and specified in SWEM. So the question on approaches is one of varying types and levels of compliance with SWEM. The prescribed compliance is thus a - in general - stronger version of 89/391/EC, especially with extensive workers' rights of consultation (mainly through safety reps) and with an added employer duty to set objectives for and to audit and improve her/his SWEM. This was described in general in Frick & Johanson, 2013; and by industry and size of employer in Frick, 2013b. The types of compliance from these reports can be very shortly summarized in four groups: 1. Some large, primarily manufacturing, corporations, but also a few others e.g. in construction and retailing (Frick, 2013b, ch. 2-4). These have a well-organised SWEM, mostly as formalised OHS management systems (like OHSAS 18001 though far from all bother to get such certificates). And their formal SWEM procedures are much – but not fully – supported by how top management provides line managers with objectives and	See adjunct description

Question	Answer	Observed differences which exist between the different types of sectors, size of establishment (micro/SMEs/large) and sectors of economic activity
	<p>resources to implement a preventive SWEM. However, even in these best employers there are regular omissions in their RAs, unclear or narrow objectives, not enough resourcing and poor auditing and improvement of their SWEM. All in all, their "approach 1" results in a very good (but not perfect, not fully complying) SWEM against technical risks and a less efficient one against organisational risks for primarily stress and ergonomic injuries.</p> <p>2. Public employers - with 31 % of the labour market – are nearly all in a special category of compliance (Frick, 2013b, ch. 5-7). These are some 250 government agencies, 20 provinces (mainly health care), and 290 municipalities (who employ the large majority of public employees). Government agencies are very different and so is their OHS management. E.g. the Swedish Defence has a strong safety tradition and tries to broaden this to also cover health at work. Yet there are strong indications that public employers in general have a formally and very extensively organised SWEM, with documented routines for e.g. RA and task allocation. Worker consultation is especially developed in this sector, with e.g. SRs and WECs nearly everywhere where they should be. However, the employers' objectives for this SWEM are less to prevent risks and more to reduce sickness absence (including by laying off long term sick people). Line managers have thus a limited guidance of what SWEM to implement and nearly always have limited resources for this, plus little auditing and improvement of what their SWEM achieves in risk reduction. All in all, this SWEM is fairly effective against technical risks. These are clearly regulated in provisions which makes them visible in the public sectors and line managers mostly get funding to pay for (mostly technical) improvements that are clearly required in the provisions. However, organisation risks for mainly physical and mental work overload are extensive in the public sector. These risks may (or may not) be noted in employee surveys but the too weakly instructed resources and monitored SWEM by line managers is</p>	

Question	Answer	Observed differences which exist between the different types of sectors, size of establishment (micro/SMEs/large) and sectors of economic activity
	<p>quite ineffective to reduce such risks, which mostly would require (often: much) extra funding for more staff.</p> <p>3. Small firms (Frick, 2013b, ch. 10). Very large variation, both individually and between micro (1-9 employees) and those with 30-49 employees. All in all, these firms have little of an organized SWEM. As a whole, small firms have a fairly limited to no understanding of what SWEM is, what it requires and how to implement it (thus how to comply). Especially those from 10-20 employees have started with some proactive RA and also abating many (but far from all) risks noted in the RAs. But nearly all small firms (much) underestimate their work-risks and overestimate their knowledge of these risks, which is linked to little attention to learn more about risks and prevention. The result is a clearly higher relative accident rate and - so far known - also less prevention of long term health risks. Though stress and other psychosocial risks may possibly be less frequent in small firms.</p> <p>4. A mixed middle category with a partly organised SWEM, one that is somewhat effective against some risks (particularly technical ones) but is less effective against or overlooks other risks (notably organisational risk for physical and/or mental overload). Here you find better small firms, most medium sized firms and the less good large firms. Many service and transport firms belong to this group (Frick, 2013b, ch. 8-9).</p>	
<p>What are the key characteristics of the approach?</p>	<p>1. Good to fairly good real quality management of the work environment.</p> <p>2. Politicians delegate the implementation of SWEM to line managers with too little guiding objectives, resources and auditing and improvements in their SWEM. In reality, SWEM is largely delegated away to line managers to handle work risks the best they can within their limited resources (unless a provision clearly mandates extra budget funding to prevent-abate a risk).</p>	/

Question	Answer	Observed differences which exist between the different types of sectors, size of establishment (micro/SMEs/large) and sectors of economic activity
	<p>3. Small firm owner-managers mainly have a personal attitude of handling WE problems as they are noted, which means that many long term risks are overlooked and more acute ones are too often seen only after an accident. A major reason for this poor risk awareness and SWEM-compliance is that small firm owner-managers allocate too little time and attention to work risks and how to abate-prevent these (Frick, 2013b, p. 69-70).</p>	
<p>What are the criteria upon which priorities for compliance measures are set?</p>	<p>As described above, a combination of:</p> <ol style="list-style-type: none"> 1. Genuine improvement objectives - though mainly against technical risks and less against long term disease from e.g. stress. 2. To reduce costs of absenteeism and keep up their reputation for having a dialogue with employees. Public employers also state that they want to become popular to replace the very large groups soon retiring, but have so far not done enough to improve their reputation of having too hard jobs, especially much stress. 3. Small firms' criteria vary very much: Good intentions towards employees are very often obstructed by ignorance and too little priority for SWEM, by these often overworked employers. 	/
<p>Are stakeholders (employees and their representatives) involved in the forming of the compliance approach and its further development?</p>	<ol style="list-style-type: none"> 1. Quite a lot. 2. Very much consultation, but this is still too ineffective against organisational risks. Either these are not much raised in all the meetings - as employees and-or SRs see little hope for improvement - or they are raised but not much happens. 3. Most small firms have good relations with their employees for the simple reason that if you are dissatisfied you leave (it is hard to stay on without a good relation to your boss), which leads to a clearly higher staff turnover. But the formal consultation with SRs is much less developed than mandated by the WEA. See above on the implementation of 89/391. 	/

4 MAPPING QUESTION 4: ACCOMPANYING ACTIONS THAT SUPPORT THE RESPECT OF THE RULE

The following types of accompanying documents/actions relating to OSH legislation are covered:

- Guidance documents (through decisions and other soft measures, guidelines);
- Awareness-raising campaigns;
- Support tools (possibly IT based);
- Financial incentives i.e. tax benefits or possibility to offer reduction of insurance premium to reward organisations for going beyond the legal requirements;
- Education and training actions.

Please note that accompanying measures targeted specifically at SME and micro-enterprises are also covered under Section 7.

Swedish accompanying actions exist in abundance as guidance material, as support tools and as training. These cover all directives (with the exception of the two Fishing Vessels Directives) but information is rarely directly geared towards small firms.

4.1 EXISTING ACCOMPANYING ACTIONS

This sub-section identifies the relevant accompanying documents/actions as described above.

Guidance documents (G): Is very extensive. All provisions transposing the directives are also guidances as they are accompanied with non-binding advice on how to interpret and implement the stipulations. SWEA's website also has extensive information on all risks, industries, job types etc. The authority also has a brochure series (ADI) that covers all the directives, as exemplified in table 4-1. The SP's various websites likewise have many G, especially their joint information and training body Prevent (www.prevent.se).

Awareness-raising campaigns (AR): Is fairly extensive. Such awareness raising campaigns are mostly part of supervision and enforcement campaigns by SWEA towards special sectors, groups or job types. This includes that SWEA participates in SLIC's and EU's campaigns. The authority likewise uses information in and on inspection campaigns to try to influence the concerned industry's non-inspected employers. And, for example, in 2012 SWEA also participated in national campaigns for new entrepreneurs in order to reach (coming) small firms with work environment information (AV, 2013-02-15). The same year, SWEA also had campaigns to reach e.g. minors at temporary summer jobs and temporary foreign, mostly posted, workers (AV, 2013-0-18).

Support tools (IT): Is very extensive. The SPs produce much as individual organisations, but especially through their joint info&training body Prevent. Prevent's website has other S but especially many checklists to assess risks and then specify what must be done, by whom and when: 7 general lists, 110 on separate industries and jobs, and 11 checklists by subjects-risk types. Most S are broad and not specified by risk-directives. They are either general on WE or WE within a particular industries or jobs, e.g. offices. Magazines and newsletter (often web-based) combine functions of guidance and support tools through their description of risks and how to overcome them, often as good examples.

Financial incentives (FI): Have not been used since the 1990s. However, SWEA's information emphasizes the business case that it is profitable to reduce risks and improve worker health.

Education and training actions (ET): Is very extensive. It is arranged mainly by the social partners, by their joint info&training organisation Prevent, by large OHS services and by private consultants. There is much focus on SWEM but there are also courses on specific risks (i.e. directives), e.g. safe (and legal) removal of asbestos. A major part of all the training are courses to the (nearly always union elected) 100 000 safety delegates. SWEA's series, since 2010, of research reviews on what is know of various work environment issues also aim to educate all work life actors (including SWEA) on the types and extent of various risks and of different background conditions for improving the work environment (AV, 2013-02-15).

For each identified document/action, the table indicates:

- The name of the action
- The type of accompanying action: guidance (G)/awareness-raising programme (AR)/support tool (IT) financial incentive (FI)/ education and training actions (ET);
- The entity who initiated it: authorities (A)/social partners (SP);
- The target groups of the action: specific sectors, specific groups, SMEs.

Table 4- 1 Accompanying Actions

Name	Type	Initiated by (and date)	Target groups	Explanation
Directive 89/391/EEC (Framework Directive)				
ADI 575 Riskbedömning vid ändringar i verksamheten	G	SWEA (=A), 2010	All employers	Predicting risks regarding changes in firm operations. Good practice in regards to risk assessment in a changeprocess.
BAM grundutbildning	ET. Basic WE training, with much on SWEM	Prevent (SP), started 1974, but regularly updated content	All employers (=managers) & SRs	Education in developing a better and safer work-space.
Guidance documents from Prevent and SWEA	G			
Various awareness-raising campaigns and other education and training activities	AR + ET		All target groups	
Council Directive 89/654/EEC (workplace)				
ADI 611 eng Good work environments in restaurants	G	SWEA, 2010	Restaurants	Risk assessment at restaurants. Checklist for risk avoidance.
Checklista för skyddsron (Checklist for safety instructions)	IT	Prevent (SP), 2014 (= 6th edition)	All workplaces. Focus much on workplace but also on other risks-directives	Checkform to be filled out when conducting a safety-check on workplaces.
Guidance documents from Prevent and SWEA	G			
Directive 2009/104/EC (work equipment)				
ADI 469 CE-märkning och produktsäkerhet (CE-labeling and safty at productionsite)	G	SWEA, 2009	All employers	Discription on safety-measures which are to be met to get the CE-label on

Name	Type	Initiated by (and date)	Target groups	Explanation
				occupational safety.
Säkerhet vid användning av pressar och gradsaxar (Safety measures when working with pres- and sax machines in the industry)	IT	Prevent SP, 2007	Engineering industry	An outline of safety measures to be taken into account when using pres- and sax machines in the industry
Various kinds of education, courses, etc. on how to handle work equipment (e.g. forklift driver training, training for lifting equipment)	FT		All concerned	
Guidance documents from Prevent and SWEA	G			
Council Directive 89/656/EEC (PPE)				
ADI 038 Prova andningsskyddet	G	SWEA, undated	All who need oxygen masks	Good practice documents on using oxygen masks in the industry
http://www.andningsskydd.nu/	IT	IVL (=consultants) with SP, 2013	All who need oxygen masks	Website on good practice on the usage of oxygen masks in the industry
Guidance documents from Prevent and SWEA	G			
Council Directive 92/58/EEC (OSH signs)				
On signs and signals - SWEA's provisions AFS 2008:13 Skyltar och signaler	G	SWEA	All concerned	Good practice guide on the usage of signals and signs in regards to health and safety in workplaces.
Directive 1999/92/EC (ATEX)				
Working in workplaces with risks of explosion hazard - SWEA's provisions AFS 2003:3 on ATEX Arbete i explosionsfarlig Miljö	G	SWEA	All concerned	Guide to good practice in the avoidance of explosive hazards.
Council Directive 90/269/EEC (manual handling of loads)				
Load Ergonomics - SWEA's provisions AFS 2012:2 Belastningsergonomi	G	SWEA	All concerned	Regulatory assessment in regards to load handling ergonomics. Good practice when handling loads manually.
Checklist Load Ergonomics - SWEA's provisions AFS 2012:2 Checklista Belastningsergonomi	G	SWEA	All concerned	Checklist as riskassessment on Load ergonomics.
Council Directive 90/270/EEC (display screen equipment)				
Working on monitors SWEA's	G	SWEA	All concerned	Good practice

Name	Type	Initiated by (and date)	Target groups	Explanation
provisions AFS 1998:5 – Arbete vid bildskärm				and regulatory assessment of working with monitors to avoid occupational injuries.
Directive 2002/44/EC (vibration)				
Vibrerande verktyg och maskiner (Factsheets on vibration risks from machines in the industry)	G	SP in the construction industry, 2006	Construction and civil engineering work.	Factsheets on common risks when working with vibrating equipment.
Support tools on vibration	IT			
Several awareness-raising campaigns in sectors with risk for vibration exposure	AR			
Directive 2003/10/EC (noise)				
Noise - SWEA's provisions AFS 2005:16 BULLAR	G	SWEA	All concerned	Regulatory assessment in regards to noise in workplaces. Good practices to avoid hearing loss.
Several awareness-raising campaigns in sectors with risk for noise exposure	AR			
Several education and training activities	ET			
Directive 2004/40/EC (electromagnetic fields)				
Eltromagnetic fields - SWEA's provisions AFS 1987:2 Radiovågor, strålning Rakel och hälsan	G	SWEA	All concerned	Expert assessment on the risks from electromagnetic fields.
Directive 2006/25/EC (artificial optical radiation)				
Optical radiation - SWEA's provisions AFS 2009:7 Artificiell optisk strålning	G	SWEA	All concerned	Regulatory assessment on artificial optical radiation and good practice to avoid it.
Directive 2004/37/EC (carcinogens or mutagens)				
Hygienic limits - SWEA's provisions AFS 2011:18 OELs	G	SWEA	All concerned	Assesment on the risks from air pollution and mutagens. Assesment on hygienic limits.
Chemical hazards in the working environment - SWEA's provisions AFS 2011:19	G	SWEA	All concerned	General recommendations on working environments with chemical hazards.
Council Directive 98/24/EC (chemical agents at work)				
Hygienic limits - SWEA's provisions AFS 2011:18 OELs	G	SWEA	All concerned	Assesment on the risks from air pollution and mutagens.

Name	Type	Initiated by (and date)	Target groups	Explanation
				Assesment on hygienic limits.
Chemical hazards in the working environment - SWEA's provisions AFS 2011:19	G	SWEA	All concerned	General recommendations on working environments with chemical hazards.
Directive 2009/148/EC (asbestos)				
Asbestos - SWEA's provisions AFS 2006:1 Asbest	G	SWEA	All concerned	Regulative and good practice in regards to working with asbestos-containing materials.
Directive 2000/54/EC (biological agents)				
Mikrobiologic occupational risks - SWEA's provisions AFS 2005:1 mikrobiologiska arbetsmiljörisker, smitta toxinpåvirkan, överkänslighet	G	SWEA	All concerned	Risk and regulative assesment on the risks of working with toxic microbiological agents.
Council Directive 92/57/EEC (temporary or mobile construction sites)				
Working on construction sites - SWEA's provisions AFS 1998:3 Besiktning av lyftanordningar och visa andra tekniska anordningar	G	SWEA	All concerned	Risk assessment and good practice when working on construction sites.
Council Directive 92/104/EEC (surface and underground mineral-extracting industries)				
Rock and mining - SWEA's provisions AFS 2010:1 Berg- och gruvarbete	G	SWEA	All concerned	Assessment of risks and good practice guide when working on mountain-surfaces and mining instructing industries.
Council Directive 92/91/EEC (mineral-extracting industries through drilling)				
SWEA's provisions AFS 2010:1 Rock and mining	G	SWEA	All concerned	Good practice guide to the mining- and drilling industry. Guidance on safety-measures in different situations.
Council Directive 92/29/EEC (medical treatment on board vessels)				
No specific accompanying action identified	-	-	-	
Council Directive 93/103/EC (work on board fishing vessels)				
No specific accompanying action identified	-	-	-	
Council Directive 92/85/EEC (pregnant/breastfeeding workers)				
Pregnant and breastfeeding - SWEA's provisions AFS 2007:5 Gravida och ammande arbetstagare	G	SWEA	All concerned	Regulation assesment and good practice guide on the topic of pregnant

Name	Type	Initiated by (and date)	Target groups	Explanation
				and breastfeeding workers.
Council Directive 91/383/EEC (temporary workers)				
Posting in Sweden, Foreign employees who work in Sweden for a limited time.	G	SWEA, 2010	Foreign workers	Guide to good practice when hiring foreign workers for a limited time.
Council Directive 94/33/EC (young people at work)				
Good practice to better working conditions for young people at work - ADI 043 Så får barn och ungdomar arbeta	G	SWEA, 2004	All employers, incl during education and in e.g. babysitting	Guide aimed at both youth and adults involved with young people at work. Guides to e.g. risk-assessment.
Guidance documents from Prevent and SWEA	G			

4.2 USE OF ACCOMPANYING ACTIONS

This sub-section assesses to what extent the accompanying actions are actually used by establishments to pursue the objective of protecting health and safety of workers.

There are no data on how establishments use accompanying actions. Indirect indicators are the very extensive downloading of guidance materials and support tools and the number of training courses given. Some examples are listed below:

PREVENT 2013 (Skoglund, 2014; www.prevent.se)

- 505 000 website visits
- 150 000 downloaded materials, mainly checklists
- 92 000 printed materials sold, mainly for training
- 6 000 participations on training courses
- 23 000 participants on web-courses
- 139 000 get the web-magazine 6 times per year

SWEA 2013 (Moström, 2014)

- ADI (advisory brochures) were downloaded in all 45 000 times. ADI 314 (safety delegates) lead with 2 469 downloads, but three brochures on different aspects of SWEM (ADI 379, 575 and 585) were downloaded 5 283 times.
- AFS (the provisions, with advisory guidance) were in all downloaded 165 000 times. The leading provisions were AFS 2009:2 workplace 13 292 times, and 2001:1 SWEM 11 342 times downloaded.

SWEA 2012 (AV, 2013-02-15)

- 2 927 497 website visits, through 1 259 586 unique visitors
- Visits per theme-pages: Ergonomic 37 713; Construction 36 901; Noise 30 548; Young at work 28 256; and Care 24 467 visits.
- During 2012, SWEA e.g. launched a new interactive training in ergonomics and mobile app for measuring noise and an app to measure light ergonomics is being developed.
- SWEA's answering service gave some 46 000 answers to general work environment questions,

- including in seven non-Swedish languages.
- To reach and support small firms, SWEA participated in several activities for those who run or plan to start their own firms. To this end, SWEA also cooperates with other authorities in their work to support and inform small firms.
 - Information to foreign firms and employees was during 2012 improved through various projects, including translation of provisions and information, with e.g. foreign languages on the website, and a campaign to reach foreign employees in restaurants.

4.3 GAPS

This sub-section aims at determining whether there are any information needs that are not met.

It is impossible to exactly determine non-existence, in this case if any information is lacking. However, as described above, Swedish accompanying actions exist in abundance as guidance material, as support tools and as training. These cover all directives, but of course there could be even better information on some aspects. The information is rarely directly geared towards small firms. Instead, the aim is to support compliance also in these firms by providing as clear, simple and concrete information as possible that also is easy to find and access on the net. Most websites - notably by SWEA and by Prevent - are possible to search for subjects-issues-risks and also for industry and/or job types.

5 MAPPING QUESTION 5: ENFORCEMENT

The following section provides information on enforcement of the 24 directives. It describes the structure in place for enforcement.

In Sweden, the only authority in charge of OHS legislation enforcement is SWEA, the Swedish Work Environment Authority. SWEA operates under the Work Environment Act WEA. This enforcement body is competent for all health and safety issues at work and supervises both the private and public sector. With regard to Directives 92/29/EEC (medical treatment on board vessels) and 93/103/EC (work on board fishing vessels), the Swedish Transport Agency supervises all shipping vessels, including working conditions on ships/vessels.

In terms of statistical information on inspections, from 2007 to 2012, the number of inspectors has decreased sharply, from 359 full time inspectors to 250 full time inspectors. As a result, the number of workers per labour inspectors has seen an impressive increase and employers are, on average, inspected once every 17.7 years (being once every 13.5 years in 2007). The sharply decreased budget of SWEA is probably to blame. However, it must be noted that SWEA usually doesn't use the figure of "worker inspected once every X years". Instead, SWEA measures how many establishments are inspected yearly, it reaches 5-7% of all establishments per year. The strategy from SWEA is to implement a risk-based inspection method, which means that inspections are conducted at workplaces with the most serious work environmental risks.

The strategies for inspection are developed in an abundance of documents, which are nearly all written by SWEA. The strategies do not explicitly take into account the size of the companies but SMEs are still very much the focus of SWEA, through dedicated brochures, meetings, etc.

The Swedish legislation sets both criminal and administrative sanctions for non-compliance with OHS requirements. Although a prison sentence up to one year is legally prescribed for violating an injunction, this will only be considered – and then also rarely – in case of an accident. The violation of OHS provisions is therefore nearly always linked to administrative penalties, but these cannot be imposed on governmental employers. Even though the law does not include a maximum amount for these administrative penalties, an established praxis is normally followed. Finally, a violation of the more technical directives can directly be prosecuted.

Structure for enforcement

The table below provides a list of the bodies in charge of enforcement in the Member State, by Directive if applicable.³⁵

Table 5- 1 Enforcement authorities

Name	Type of authority
Directive 89/391/EEC (Framework Directive)	
SWEA	SWEA is an amalgamated authority (in 2001) that has technical experts, issues provisions to specify the WEA (under authority of WEA) and includes the labour inspectors that supervise and promote the compliance with the provisions. WEA - and thus SWEA's work - applies to all employed work. There is only one exception, which is that work on ships is regulated and supervised by

³⁵ On specific measures taken to enforce particular Directives, please see National Implementation Report 2013, Part A, Section I, (EN) p. 10-13.

Name	Type of authority
	Transportstyrelsen. Unlike some other labour inspectorates, SWEA does not regulate and supervise other labour law. SWEA supervises private and public employers, of all sizes and in all industries, except in transportation/ships.
Council Directive 89/654/EEC (workplace)	
SWEA	See Framework Directive
Directive 2009/104/EC (work equipment)	
SWEA	See Framework Directive
Council Directive 89/656/EEC (PPE)	
SWEA	See Framework Directive
Council Directive 92/58/EEC (OSH signs)	
SWEA	See Framework Directive
Directive 1999/92/EC (ATEX)	
SWEA	See Framework Directive
Council Directive 90/269/EEC (manual handling of loads)	
SWEA	See Framework Directive
Council Directive 90/270/EEC (display screen equipment)	
SWEA	See Framework Directive
Directive 2002/44/EC (vibration)	
SWEA	See Framework Directive
Directive 2003/10/EC (noise)	
SWEA	See Framework Directive
Directive 2004/40/EC (electromagnetic fields)	
N/A	N/A
Directive 2006/25/EC (artificial optical radiation)	
SWEA	See Framework Directive
Directive 2004/37/EC (carcinogens or mutagens)	
SWEA	See Framework Directive
Council Directive 98/24/EC (chemical agents at work)	
SWEA	See Framework Directive
Directive 2009/148/EC (asbestos)	
SWEA	See Framework Directive
Directive 2000/54/EC (biological agents)	
SWEA	See Framework Directive
Council Directive 92/57/EEC (temporary or mobile construction sites)	
SWEA	See Framework Directive
Council Directive 92/104/EEC (surface and underground mineral-extracting industries)	
SWEA	See Framework Directive
Council Directive 92/91/EEC (mineral-extracting industries through drilling)	
SWEA	See Framework Directive
Council Directive 92/29/EEC (medical treatment on board vessels)	
Swedish Transport Agency	This agency supervises all shipping, including working conditions on ships/vessels. Those conditions that are of a general nature - such as noise, use of chemicals or manual handling - are regulated through SWEA's provisions, but compliance with the latter provisions is also supervised by the Swedish Transport Agency
Council Directive 93/103/EC (work on board fishing vessels)	
Swedish Transport Agency	See Council Directive 92/29/EEC (medical treatment on board vessels)
Council Directive 92/85/EEC (pregnant/breastfeeding workers)	
SWEA	See Framework Directive
Council Directive 91/383/EEC (temporary workers)	
SWEA	See Framework Directive
Council Directive 94/33/EC (young people at work)	
SWEA	See Framework Directive

In addition, information is provided on any interactions between the enforcement bodies listed above.

SWEA and the Swedish Transport Agency confer on issues of joint interest but there is no overlap in their regulating and inspecting authority and thus formal interaction is not needed.

Inspections

Statistical Information

The table below provides information on the statistical data available in relation to inspections in order to gain an understanding of the level of enforcement activities in the Member State.

Background data: In 2012, Sweden had 370 566 employers with employees, of which 356 368 had less than 50 employees, i.e. 96 per cent were small firms (and some 85 per cent of these small firms were micro-firms). In 2007, there were 350 496 employers, of which 340 535, or 97 % had less than 50 employees (AV, 2013-11-21; Sweden's answer to EU on the directives).

Table 5- 2 Inspections statistical data³⁶

Number of labour inspectors	Number of workers per labour inspector	Number of inspections per 100.000 workers	Frequency of inspections	Comments
Full time equivalents: 2007: 359 2008: 302 2009: 262 2010: 252 2011: 247 2012: 250	2007: 11 010 2008: 13 431 2009: 15 553 2010: 16 053 2011: 16 714 2012: 16 911	2007: 658 2008: 567 2009: 528 2010: 549 2011: 529 2012: 494	Average years between inspections of employers 2007: 13.5 2008: 14.1 2009: 15.5 2010: 15.4 2011: 16.2 2012: 17.7	SWEA deals only with work environment issues (including working time) but no other labour issues, such as contracts, holidays or minimum pay.

Strategies for inspection

The box below provides a short description of the strategic documents for enforcement.

Strategic documents for enforcement (non-exhaustive list)

- AV (2007). *Planerad tillsyn – Arbetsmiljöverket* (Planned supervision) 2007 (3 pages). This is a memorandum on how SWEA's funding cuts by 30 % from 2007 to 2009 (in all a cut of 36 %) affect (i.e. reduces earlier plans) the authority's activity for 2007. Besides a short paragraph on the ongoing work to simplify the regulatory structure, the focus is on supervision. Seven prioritised areas (of industries, job types or risk types) are presented and shortly motivated. These are Engineering industry, Assembly work; Trucks; Window mounting and other construction repair and re-development; Violence and threats in public transports; Health care and nursing; Manual handling.
- AV (2008). *Årsredovisning* (SWEA's yearly report for) 2007 (50 pages). A first part on the

³⁶ Sources : a. NIR 2013 = Arbetsmiljöverket (=SWEA), 2013-11-21 (RS 2013/102390) answer to EU on Sweden's transposal and implementation of the directives, p. 3, Table 1.1. ; b. Arbetsmiljöverkets (=SWEA) yearly activity reports for 2007-2012 (published 2008-2013). ; c. AV, 2013-06-18 Sweden's SLIC-report for 2012.

activities and their results and a second on financial accounting. Six types of activities are presented: Regulation and standards; Supervision; International work; Injury statistics; Information; and Subsidies to the social partners (=mainly handling 100 M SEK to the union appointed RSRs). The supervision activity is presented on seven pages, starting with the supervision's two objectives: to be uniform supervision and to be aimed at workplaces with the largest OHS risks. The report then presents the governments requested feedback on this activity, that SWEA generally describes and comments the supervision, including the authority's market control, and that this includes figures on number of requests in the inspection notices and of injunctions and prohibitions, the main orientation in the inspection notices' requests and number of visited workplaces in all and the revisiting as share of all visits. The improvement requests in the inspection notices shall also be presented as separated on male and female dominated industries. After this introduction, the report presents the supervision as divided in national (25 % of the supervision), regional and mandatory supervision (13 %, = after serious accidents or formal SR complaints to SWEA). All workplaces are ascribed a selection index of 1 - 3, where 1 means the highest risks for injury or ill health. 41 % of the supervised workplaces had index 1. The rate of supervisions that results in inspection notices with requests of improvement is used as an indicator that the supervision reaches the worst workplaces. The objective was 70 % notices with such requests and the result was 69 %. The yearly report on SWEA's supervision then describes various noted problems and activities, cooperation with other government agencies and with regional or chief safety representatives, presents statistics on the supervision (e.g. number of visits, of inspection notices, and of types of requests on the notices, in which SWEM-requests were 40 %). It goes on to present and motivate the nationally prioritised six areas of supervision. As compared to seven areas in the plan of early 2007, the yearly report amalgamates the issues of assembly work and of manual handling. The report on supervision ends with other nationally prioritised supervision (thus not mentioned in the plan for 2007): coordinated supervision of large firms, safer road work, cash handling in public transport, exposure to quartz, Seveso-supervision, cableways, threats and violence in schools, and market control.

- AV (2012-01-02). *Verksamhetsplan* (plan of activity) 2012 (24 pages). This is divided in Introduction, Employees, Process (of planning), Stakeholders, Principal, Strategic planning, Budget frames, Risk analysis (of not achieving the planned objectives) and Assignment. The strategic plan has two pages with 18 nationally and 15 regionally coordinated supervision projects, each with target numbers of 10 700 and 3 369 visits respectively. Apart from EU- and other mandatory projects and market control, the national supervision prioritised: Young at work, Construction, Threats and violence when executing public authority, The labour hire industry and its customers, Measuring vibrations, The work environment and MSD risks of women (two projects), Asbestos, Forestry, Overcrowding in health care (of too many patients).
- AV (2013). *Åresredovisning* (SWEA's yearly report for) 2012 (52 pages). A first part on the activities and their results and a second on financial accounting. After an introductory analysis of labour market and its risks, three types of activities are presented: Regulation, Communication (that SWEA since long sees as a strategic means of increasing compliance) and Supervision (3 pages). The latter presents - and motivates – a selection of nationally coordinated supervision projects: Two projects on the work environment of women, to visualize their different types of jobs and their risks, and to focus on their MSD risks, The labour hire industry and its customers, Threats and violence when executing public authority, and the Pilot project on screening (as a supervision strategy, with a pilot study of the graphical industry). The report on the supervision ends with statistics, on e.g. number of workplace visits, of improvement notices and of injunctions and prohibitions.

The table below presents how priorities are set within strategic documents for inspections in relation to the different topics covered by the OSH Directives.

Comments:

- There are many documents on (aspects of) the strategies for inspection, i.e. especially the priorities of table 5 -3. Nearly all are by SWEA. The government-ministry of labour gives some tasks to the authority – such as a temporary special focus on the work environment risks of women – that affects priorities but in general SWEA defines which sectors, risks etc. to emphasize in each year's inspection.
- Size of companies is rarely a priority in itself, but a consequence of other priorities, e.g. of industries. SMEs are very much in focus for SWEA's extensive information, on the web, as printed brochures and through meetings.
- How to use the resources for enforcement is planned at several levels: Joint (i.e. national priorities; 25 % in 2007), Regional and Mandatory (reactions to accidents and to safety rep's formal appeal to the SWEA; 13 % in 2007) inspections.
- All priorities are set on the basis of a combination of more or less general risk assessments and more concrete results of inspection. And, as mentioned above, 'others' means that some inspections are legally mandated after serious accidents and after safety reps' formal appeals to SWEA.
- As there are so many documents, I have chosen to focus on the plans for and reports of national priorities-activities for 2007 and 2012, i.e. the start and end date of this EU evaluation study.

Table 5- 3 Data on enforcement strategy

<i>Priorities set in terms of</i>			
size of companies targeted	sectors	groups or workers	other criteria
2007	Engineering industry; Redevelopment; Health care and nursing; Traffic safety, Transport; Care in patients' homes		<ul style="list-style-type: none"> • Assembly work; Industrial trucks; Violence and threats in public transport; Manual handling; Violence and threats in exposed industries.
2012	Printing; Construction; Labour hiring; SWEM in manufacturing industry; Forest industry	ESEWomen health risks, especially for MSDs; Foreign employees, i.e. industries with high frequencies of these; Young employees	<ul style="list-style-type: none"> • Psychosocial health risks (the SLIC-campaign; Threats and violence to employees representing public authorities; Asbestos; Vibration (national measuring project).
Priorities set on the basis of			
risk assessment	result of inspections	others	
/	/	/	

Sanctions

The table below presents the type and level of sanctions provided by law for infringements as defined in the national legislation for each of the Directive covered in the study for both criminal and administrative sanctions. Only the maximum sanctions are provided.

Table 5- 4 Result table – type and level of sanctions

Offence under national legislation	Criminal sanctions (and quasi-criminal when relevant) – Types and levels of penalties	Administrative sanctions – Types and levels of penalties
Directive 89/391/EEC (Framework Directive)		
Violation of provisions AFS 2001:1	Prison up to one year ³⁷	SWEA's injunction to implement any stipulation in AFS 2001:1 (and all of SWEA's injunctions and prohibitions to impose compliance) are nearly always linked to administrative penalties. ³⁸ However such penalties could not (during 2007-2012) be imposed on government employers. The SWEA had to refer violations of injunctions (and for other provisions also of prohibitions) as crimes against WEA to the prosecutor, for possible criminal sanctions
	Day fines of max 150 days with sums depending on the convicted's economic situation	
	Corporate fines of at most 10 M SEK. Up to 0,5 M SEK can be imposed by a prosecutor, though this can be contested in court.	
Council Directive 89/654/EEC (workplace)		
Violation of provisions AFS 2000:42	See Framework Directive	See Framework Directive
Directive 2009/104/EC (work equipment)		
Violation of provisions AFS 2006:4	See Framework Directive	See Framework Directive
Council Directive 89/656/EEC (PPE)		
Violation of provisions AFS 2001:3	See Framework Directive	See Framework Directive
Council Directive 92/58/EEC (OSH signs)		
Violation of provisions AFS 2008:13	See Framework Directive	See Framework Directive
Directive 1999/92/EC (ATEX)		
Violation of provisions AFS 2003:3	See Framework Directive	See Framework Directive
	But some stipulations (sections 7,	

³⁷ Possible legal and in reality used sanctions differ very much. Prison up to one year is legally possible for violating an injunction – thus violating a directive - but prison is only considered when there has been an accident (and even then rarely considered) and not for violation provisions transposing directives.

³⁸ Administrative penalties can in theory be for an unlimited sum, and so can criminal day fines. But there are established praxis of how to calculate these sanctions, but penalties of 1 M SEK or more have sometimes been imposed during 2007-2012.

Offence under national legislation	Criminal sanctions (and quasi-criminal when relevant) – Types and levels of penalties	Administrative sanctions – Types and levels of penalties
	8, 13, 16 and 18) are directly punishable, i.e. can be directly referred to the prosecutor without any previous injunction or prohibition from SWEA. The sanctions are then (theoretical maximum) as mentioned under 89/391/EC above.	
Council Directive 90/269/EEC (manual handling of loads)		
Violation of provisions AFS 2000:1 and 2012:2	See Framework Directive	See Framework Directive
Council Directive 90/270/EEC (display screen equipment)		
Violation of provisions AFS 1998:5	See Framework Directive	See Framework Directive
	But some stipulations (section 6) are directly punishable, i.e. can be directly referred to the prosecutor without any previous injunction or prohibition from SWEA. The sanctions are then (theoretical maximum) as mentioned under 89/391/EC above.	
Directive 2002/44/EC (vibration)		
Violation of provisions AFS 2005:15	See Framework Directive	See Framework Directive
Directive 2003/10/EC (noise)		
Violation of provisions AFS 2005:16	See Framework Directive	See Framework Directive
Directive 2004/40/EC (electromagnetic fields)		
Violation of provisions AFS 1987:2 and 1998:5	See Framework Directive	See Framework Directive
Directive 2006/25/EC (artificial optical radiation)		
Violation of provisions AFS 2009:7	See Framework Directive	See Framework Directive
	But some stipulations (sections 10, 17 and 18) are directly punishable, i.e. can be directly referred to the prosecutor without any previous injunction or prohibition from SWEA. The sanctions are then (theoretical maximum) as mentioned under 89/391/EC above.	
Directive 2004/37/EC (carcinogens or mutagens)		
Violation of provisions AFS 2011:18 OEL's and 2011:19 chemical risks	See Framework Directive	See Framework Directive
	But some stipulations (AFS 2011: 19, sections 19, 20, 23 and 45) are directly punishable, i.e. can be directly referred to the prosecutor without any previous injunction or prohibition from SWEA. The sanctions are then (theoretical maximum) as mentioned under 89/391/EC above.	
Council Directive 98/24/EC (chemical agents at work)		
Violation of provisions AFS	See Framework Directive	See Framework Directive

Offence under national legislation	Criminal sanctions (and quasi-criminal when relevant) – Types and levels of penalties	Administrative sanctions – Types and levels of penalties
2011:18 OEL's and 2011:19 chemical risks	But some stipulations (AFS 2011:19, sections 19, 20, 23 and 45) are directly punishable, i.e. can be directly referred to the prosecutor without any previous injunction or prohibition from SWEA. The sanctions are then (theoretical maximum) as mentioned under 89/391/EC above.	
Directive 2009/148/EC (asbestos)		
Violation of provisions AFS 2006:1	See Framework Directive	See Framework Directive
	But some stipulations (sections 3, 6, 10, 11, 12, 33, 36, 49 and 51) are directly punishable, i.e. can be directly referred to the prosecutor without any previous injunction or prohibition from SWEA. The sanctions are then (theoretical maximum) as mentioned under 89/391/EC above.	
Directive 2000/54/EC (biological agents)		
Violation of provisions AFS 2005:1	See Framework Directive	See Framework Directive
	But some stipulations (sections 20, 21, 28, and 29) are directly punishable, i.e. can be directly referred to the prosecutor without any previous injunction or prohibition from SWEA. The sanctions are then (theoretical maximum) as mentioned under 89/391/EC above.	
Council Directive 92/57/EEC (temporary or mobile construction sites)		
Violation of provisions AFS 1999:3	See Framework Directive	See Framework Directive
	But some stipulations (sections 7, 8, 12 and 14) are directly punishable, i.e. can be directly referred to the prosecutor without any previous injunction or prohibition from SWEA. The sanctions are then (theoretical maximum) as mentioned under 89/391/EC above.	
Council Directive 92/104/EEC (surface and underground mineral-extracting industries)		
Violation of provisions AFS 2010:1	See Framework Directive	See Framework Directive
	But some stipulations (sections 27, 28, 51 and 52) are directly punishable, i.e. can be directly referred to the prosecutor without any previous injunction or prohibition from SWEA. The sanctions are then (theoretical maximum) as mentioned under 89/391/EC above.	
Council Directive 92/91/EEC (mineral-extracting industries through drilling)		

Offence under national legislation	Criminal sanctions (and quasi-criminal when relevant) – Types and levels of penalties	Administrative sanctions – Types and levels of penalties
Violation of provisions AFS 2010:1	See Framework Directive	See Framework Directive
	But some stipulations (sections 27, 28, 51 and 52) are directly punishable, i.e. can be directly referred to the prosecutor without any previous injunction or prohibition from SWEA. The sanctions are then (theoretical maximum) as mentioned under 89/391/EC above.	
Council Directive 92/29/EEC (medical treatment on board vessels)		
Violation of provision SJÖFS 2000:21	Violations against the Ship safety Act (SFS 2003:64) and Shipping Act (SFS 1994:1009) ships can be prohibited to sail or injunctions if improvement can be imposed. Violations of both can be attached with administrative penalties or be referred to a prosecutor for criminal sanctions of daily fines, corporate fines or prison up to one year. As for the WEA, see 89/391/EC above.	
Council Directive 93/103/EC (work on board fishing vessels)		
Violations can refer to any of a number of provisions. See table 1	Violations on board against SWEA's work environment provisions see 89/391/EC above but also directives in this table on some provisions-directives that contain directly punishable stipulations. Violations against the Ship safety Act (SFS 2003:64) and Shipping Act (SFS 1994:1009) ships can be prohibited to sail or injunctions if improvement can be imposed. Violations of both can be attached with administrative penalties or be referred to a prosecutor for criminal sanctions of daily fines, corporate fines or prison up to one year. As for the WEA, see 89/391/EC above.	
Council Directive 92/85/EEC (pregnant/breastfeeding workers)		
Violation of provisions AFS 2007:5	See Framework Directive	See Framework Directive
	But some stipulations (sections 7, 8 and 9) are directly punishable, i.e. can be directly referred to the prosecutor without any previous injunction or prohibition from SWEA. The sanctions are then (theoretical maximum) as mentioned under 89/391/EC above.	
Council Directive 91/383/EEC (temporary workers)		
No specific provisions as all regulations apply equally to temporarily employed	See Framework Directive	See Framework Directive

Offence under national legislation	Criminal sanctions (and quasi-criminal when relevant) – Types and levels of penalties	Administrative sanctions – Types and levels of penalties
Council Directive 94/33/EC (young people at work)		
Violation of provisions AFS 2012:3	See Framework Directive	See Framework Directive
	But some stipulations (sections 9, 11, 12, 14, 16, 19, 20, 21, 22 and 23) are directly punishable, i.e. can be directly referred to the prosecutor without any previous injunction or prohibition from SWEA. The sanctions are then (theoretical maximum) as mentioned under 89/391/EC above.	

Enforcement actions

Table 5- 5 Number of infringements and court cases

Total number of infringement which resulted in legal action	<p>In 2012 (2011) SWEA issued 12 306 (13 495) non-binding improvement notices with improvement requests. The authority also issued 332 (295) legally binding injunctions and 835 (647) prohibitions (AV, 2013-06-18).</p> <p>In 2008, 2009 and 2010 SWEA had issued 352, 291 and 312 injunctions, plus 562, 598 and 632 prohibitions.</p> <p>Injunctions and prohibitions are nearly always with attached for non-compliance (SOU, 2011:57, p 93).</p>
Other data on the number of court cases specific to OSH issues in the period 2007-2012	<p>In 2012 (2011) there were 19 (8) judgements with sanction fees, 49 (45) judgements with penalties and 135 (132) judgements with corporate fines, Also 259 (351 in 2011) cases were referred to the public prosecutor (AV, 2013-06-18). Between 2000 and 2010 SWEA referred 261 to 358 cases to the public prosecutors (SOU, 2011:57, p 101).</p>

6 MAPPING QUESTION 6: SPECIFIC GROUPS OF WORKERS

No specific approaches to vulnerable groups are taken in Sweden beyond the requirements set out in the transposed Directives. However, there is some guidance material available that addresses specific vulnerable groups, namely young workers, ageing workers, migrant workers and women. It should be noted that the division “menstrual disorders; menopause” is not made in Sweden.

The table 6-1 below provides an overview of the documents, including legislation, strategies, guidelines, roadmaps or plans, as well as other documents addressing the question of vulnerable groups.

Table 6- 1 Tools addressing risk factors for all vulnerable groups

Document	Target group (if any)	Pregnancy; Breastfeeding	Menstrual disorders; Menopause	Reduced physical capabilities	Additional non-work activities	Part-time jobs; Precarious contract	Natural deterioration of physical and mental capacities	Longer recovery time	Longer exposure to occupational hazards	Increased risk of developing long-term or chronic illnesses or disabilities	Different risks faced by disabled workers	Combined risks of occupational risk factors	Less awareness of the risks amongst new workers	Lack of awareness of long-latency occupational diseases	Work arrangements	Language barriers	Fear of authorities	Lack of OSH training	Lack of familiarity with the working environment
AFS 2007:5 Pregnant and breastfeeding	Women	x																	
AFS 2012:3 Young people at work	Young												x					x	x
AV rapport 2012:16 Syn och belysning för äldre i arbetslivet ³⁹ (Sight and lighting for the	Elderly			x			x												

³⁹ http://www.av.se/dokument/aktuellt/kunskapsoversikt/RAP2012_16.pdf

Document	Target group (if any)	Pregnancy; Breastfeeding	Menstrual disorders; Menopause	Reduced physical capabilities	Additional non-work activities	Part-time jobs; Precarious contract	Natural deterioration of physical and mental capacities	Longer recovery time	Longer exposure to occupational hazards	Increased risk of developing long-term or chronic illnesses or disabilities	Different risks faced by disabled workers	Combined risks of occupational risk factors	Less awareness of the risks amongst new workers	Lack of awareness of long-latency occupational diseases	Work arrangements	Language barriers	Fear of authorities	Lack of OSH training	Lack of familiarity with the working environment
elderly in the workplace)																			
AV rapport 2011:3 Våld och genus i arbetslivet ⁴⁰ (Violence and gender at work), p.21 (although there are no provisions for this group of workers)	Gender																		
AFS 1994:1 Arbetsanpassning och rehabilitering (OHS)	All			x			x	x		x	x				x				
AV Rapport 2012:10 Jobba längre – vad vet vi om äldre i arbetslivet? ⁴¹ (Working longer – what do we know about older people in the workplace?)	Ageing workers			x			x												

⁴⁰ http://www.av.se/dokument/aktuellt/kunskapsoversikt/RAP2011_03.pdf

⁴¹ http://www.av.se/dokument/aktuellt/kunskapsoversikt/RAP2012_10.pdf

Document	Target group (if any)	Pregnancy; Breastfeeding	Menstrual disorders; Menopause	Reduced physical capabilities	Additional non-work activities	Part-time jobs; Precarious contract	Natural deterioration of physical and mental capacities	Longer recovery time	Longer exposure to occupational hazards	Increased risk of developing long-term or chronic illnesses or disabilities	Different risks faced by disabled workers	Combined risks of occupational risk factors	Less awareness of the risks amongst new workers	Lack of awareness of long-latency occupational diseases	Work arrangements	Language barriers	Fear of authorities	Lack of OSH training	Lack of familiarity with the working environment
AV checklista Inhyrning av arbetskraft (not dated) ⁴²	Hiring of labour					x													
AV Rapport 2012:14 Migrantarbete inom den gröna näringen ⁴³ (Migrant work in the green industry)	Migrant workers					x										x	x	x	x
AV (2013-02-15) on SWEA's campaigns and other activities to reach foreign temporary labour	Foreign workers														x	x	x	x	x

⁴² http://www.av.se/dokument/checklistor/checklista_inhyrn.pdf

⁴³ http://www.av.se/dokument/aktuellt/kunskapsversikt/RAP2012_14.pdf

7 MAPPING QUESTION 7: SMEs AND MICRO-ENTERPRISES

This question focuses on the identification of measures adopted by Member States in order to assist SMEs and micro-enterprises in the implementation of OSH requirements. Measures provided by other actors, such as social partners, are not included. The concept of ‘measures’ is considered as covering national legislation and soft measures, i.e. guidance.

Three elements should be checked for each Directive:

- Exemptions: are there thresholds of number of employees to be exempted from certain key requirements? If so, what are the thresholds? To what requirements does it apply?
- Lighter regime: are certain norms/ regulatory standards provided by law differentiated for SMEs?
- Incentives: have financial measures/tax reductions been adopted to support SMEs?

The results are summarised in Table 7-1 and then detailed in Table 7-2. It should be taken into account that the SME measures laid down in the national legislation transposing the Framework Directive are equally applicable to all of the transpositions of the other OSH individual Directives.

In Sweden, the national legislation has barely adopted any measures in order to assist SMEs and micro-enterprises in the implementation of OHS requirements. There are only some exemptions foreseen with regard to the Framework Directive, Directive 92/57/EEC (temporary or mobile construction sites), and Directives 92/29/EEC (medical treatment on board vessels) and 93/103/EC (work on board fishing vessels). In particular, enterprises with less than ten employees are exempted from the obligation to provide written risk assessment documentation. There are no special financial incentives or lighter regulatory norms directed to SMEs and micro-enterprises.

According to NIR 2013, “The Swedish Work Environment Authority website, www.av.se, includes simple information about the content of our regulations, self-assessment, good examples of the usual requirements, and interactive training courses. This is particularly designed to support small and medium-sized enterprises that do not have the resources that large ones have. Some examples of specific measures for some of the Directives are given below.

- Directive 91/383/EEC on workers with a fixed-duration employment relationship

Both through information initiatives and monitoring campaigns. In 2011-12, the Swedish Work Environment Authority carried out a national inspection initiative aimed at temporary employment agencies. The aim was to make both temporary employment agencies and their customers understand that they have their own responsibilities for the work environment of staff that are hired out/in.

- Directive 89/654/EEC concerning the minimum safety and health requirements for the workplace

Work is ongoing to make the regulations easier to understand. A simpler Section 2 notification can be made online. Separate campaigns in various languages, for example in the restaurant industry.

- Directives 92/91/EEC and 92/104/EEC on mineral-extracting industries

Seminars, conferences and trade fairs are organised for small and medium-sized enterprises, where the Swedish Work Environment Authority participated to provide expertise and disseminate information about these Directives. Common training courses for employers and employees have been delivered, and sector-specific training/information material has been produced by, for example, Prevent and GRAMKO (Work Environment Committee for the Mining and Minerals Industry).

- Directive 92/85/EEC on pregnant workers

An investigation has been carried out, proposing that, as of 1 January 2014, sole traders should also be entitled to a pregnancy allowance. Please see AFS 2012:57.

- Directive 94/33/EC on young people

The summer inspection mentioned under point 2 has targeted campsites, youth hostels, leisure and sports facilities, and café and restaurant activities. There are many small and medium-sized enterprises in these sectors. Inspection activities on construction sites started in 2012. The construction sector has suffered many accidents and there are many young people who are active in this sector, not least in upper-secondary school vocational-training programmes for construction. This inspection activity is continuing in 2013.

- Directive 1998/24/EC on chemical agents at work and 2004/37/EC on carcinogens and mutagens

Labour-market players have jointly developed an interactive tool, Prevent's Chemiguide, which is available free of charge on the Internet. It aims to provide small and medium-sized enterprises with information and practical advice about their chemical safety work. The Swedish Work Environment Authority is a member of the reference group for the project.

- Directive 2006/25/EC on artificial optical radiation

A major research project on optical radiation in welding and foundries, financed by AFA Insurance, is being carried out on the initiative of labour-market players. SWEA is part of the steering group.⁴⁴

Table 7- 1 Overview of measures targeting SMEs and micro-enterprises

	Exemptions	Lighter regime	Incentives
Directive 89/391/EEC (FW)	✓	-	-
Directive 89/654/EEC (workplace)	-	-	-
Directive 2009/104/EC (work equipment)	-	-	-
Council Directive 89/656/EEC (PPE)	-	-	-
Council Directive 92/58/EEC (OSH signs)	-	-	-
Directive 1999/92/EC (ATEX)	-	-	-
Council Directive 90/269/EEC (manual handling of loads)	-	-	-
Council Directive 90/270/EEC (display screen equipment)	-	-	-
Directive 2002/44/EC (vibration)	-	-	-
Directive 2003/10/EC (noise)	-	-	-
Directive 2004/40/EC (electromagnetic fields)	N/A	N/A	N/A
Directive 2006/25/EC (artificial optical radiation)	-	-	-
Directive 2004/37/EC (carcinogens or mutagens)	-	-	-
Directive 2009/148/EC (asbestos)	-	-	-
Directive 2000/54/EC (biological agents)	-	-	-

⁴⁴ National Implementation Report 2013, Part A, Section I, 2.7, (EN) p. 20-21.

	Exemptions	Lighter regime	Incentives
Council Directive 92/57/EEC (temporary or mobile construction sites)	✓	-	-
Council Directive 92/104/EEC (surface and underground mineral-extracting industries)	-	-	-
Council Directive 92/91/EEC (mineral-extracting industries through drilling)	-	-	-
Council Directive 92/29/EEC (medical treatment on board vessels)	-	✓	-
Council Directive 93/103/EC (work on board fishing vessels)	-	✓	-
Council Directive 92/85/EEC (pregnant/breastfeeding workers)	-	-	-
Council Directive 91/383/EEC (temporary workers)	-	-	-
Council Directive 94/33/EC (young people at work)	-	-	-
Council Directive 98/24/EC (CAD)	-	-	-

Table 7- 2 Description of measures targeting SMEs and micro-enterprises

	Exemptions	Lighter regime	Incentives
Directive 89/391/EEC (FW)	AFS 2001:1, sections 5, 6 and 11 exempt employers with less than ten employees from written documentation	-	-
Directive 89/654/EEC (workplace)	-	-	-
Directive 2009/104/EC (work equipment)	-	-	-
Council Directive 89/656/EEC (PPE)	-	-	-
Council Directive 92/58/EEC (OSH signs)	-	-	-
Directive 1999/92/EC (ATEX)	-	-	-
Council Directive 90/269/EEC (manual handling of loads)	-	-	-
Council Directive 90/270/EEC (display screen equipment)	-	-	-
Directive 2002/44/EC (vibration)	-	-	-
Directive 2003/10/EC (noise)	-	-	-
Directive 2004/40/EC (electromagnetic fields)	N/A	N/A	N/A
Directive 2006/25/EC (artificial optical radiation)	-	-	-
Directive 2004/37/EC (carcinogens or mutagens)	-	-	-
Directive 2009/148/EC (asbestos)	-	-	-
Directive 2000/54/EC (biological agents)	-	-	-
Council Directive 92/57/EEC (temporary or mobile construction sites)	1. AFS 1999:3, section 2	-	-

	Exemptions	Lighter regime	Incentives
	requires that also self-employed or those working with family members in construction shall comply with several requirements in the WEA. 2. AFS 1999:3, section 7 requires pre-notification to SWEA for construction from specified number of workers and/or workdays. 3. AFS 1999:3, section 8 requires a work environment plan for construction work from certain sizes or for listed extra risky jobs.		
Council Directive 92/104/EEC (surface and underground mineral-extracting industries)			
	-	-	-
Council Directive 92/91/EEC (mineral-extracting industries through drilling)			
	-	-	-
Council Directive 92/29/EEC (medical treatment on board vessels)			
	-	SJÖFS 2000:21, sections 4-6 stipulate separate levels of medical competence on board depending on size of the ship, of the crew and of time away from land.	-
Council Directive 93/103/EC (work on board fishing vessels)			
	-	SJÖFS 2000:21, sections 4-6 stipulate separate levels of medical competence on board depending on size of the ship, of the crew and of time away from land.	-
Council Directive 92/85/EEC (pregnant/breastfeeding workers)			
	-	-	-
Council Directive 91/383/EEC (temporary workers)			
	-	-	-
Council Directive 94/33/EC (young people at work)			
	-	-	-
Council Directive 98/24/EC (CAD)			
	-	-	-

ANNEX I - BIBLIOGRAPHY

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 - C. From an employer organisation.
 - D. From an employer organisation.
 - E. From a trade union.
 - F. From an employer organisation.
 - G. From a trade union.
 - H. From a trade union.
 - I. A senior labour inspector from SWEA.
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 - K. From an employer organisation.
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ANNEX II – STATUS OF THE INTERVIEWS

How many interviews...	... in total		... with national authorities		... with labour inspectorates		... with workers' representatives		... with employers' representatives		... with research institutes, academia, OSH professional bodies, etc.	
	Contacted	Completed	Contacted	Completed	Contacted	Completed	Contacted	Completed	Contacted	Completed	Contacted	Completed
SE	14	13	1	0	2	2	5	5	5	5	1	1

The Swedish expert did not manage to get written comments from the National Authority's (SWEA) OHS-experts on how they perceive the provisions that transpose the directives to be implemented, to be complied with. The expert does have a trustworthy promise from SWEA that such comments will be mailed, but this may still take some time.