



Peer Review on “The efficient transposition, implementation and enforcement of EU OSH legislation”

Host Country Discussion Paper - Denmark

“Getting in Tune” – transposition, implementation, enforcement and orchestration of OSH legislation in Denmark

Denmark, 19-20 June 2018

DG Employment, Social Affairs and Inclusion



EUROPEAN COMMISSION

Directorate-General for Employment, Social Affairs and Inclusion

Unit B3

Contact: Susanna Ulinski

E-mail: EMPL-B3-Unit@ec.europa.eu

Web site: <http://ec.europa.eu/social/home.jsp?langId=en>

European Commission

B-1049 Brussels

Peer Review on “The efficient transposition, implementation and enforcement of EU OSH legislation”

DG Employment, Social Affairs and Inclusion

Directorate-General for Employment, Social Affairs and Inclusion

Peer Review on “The efficient transposition, implementation and enforcement of EU OSH legislation”

Copenhagen, Denmark, 19-20 June 2018

**Europe Direct is a service to help you find answers
to your questions about the European Union.**

Freephone number (*):

00 800 6 7 8 9 10 11

(*) The information given is free, as are most calls (though some operators, phone boxes or hotels may charge you).

LEGAL NOTICE

The information contained in this publication does not necessarily reflect the official position of the European Commission

© European Union, **2018**

Reproduction is authorised provided the source is acknowledged.

Table of Contents

Executive Summary	1
1 Introduction - OSH in Denmark.....	2
2 Regulation of OSH in Denmark	2
2.1 The Danish OSH policy and legislative context – bodies involved in the regulation of Occupational Safety and Health.....	3
2.2 Social dialogue – the Social Partners and their role in implementation and enforcement.....	4
2.3 Enterprises, companies, institutions and workplaces	5
2.4 The interplay of legislation and social dialogue	6
3 Transposition of EU OSH legislation	6
3.1 Transposition of the Framework Directive.....	6
3.2 Further transposition as 'Incorporation'.....	7
3.3 New trends in transposition and implementation	8
4 Implementation	9
4.1 Overall policies	9
5 Enforcement.....	11
5.1 Control and prosecution	11
5.2 Knowledge transfer and training.....	12
5.3 Incentives	13
6 Difficulties, challenges and constraints.....	13
6.1 Understanding the process from transposition to compliance	13
6.2 The implementation of new rules for manual handling in masonry – a case.14	
6.3 The importance of Social Dialogue – for an efficient transposition, implementation and enforcement of EU OSH legislation	15
6.4 Challenges in transposition, implementation and enforcement for meeting the diversity of the labour market	16
7 Success factors and transferability	17
8 List of references	19

List of Abbreviations

OSH: Occupational Safety and Health

DWEA: Danish Working Environment Authority

OSH-Act: The Working Environment Act issued by the Government in 1975.

DA: Danish Employers Association

LO: The Central Labour Organisation

NRCWE: The National Research Center for the Working Environment

WEO: The Working Environment Organisation

WEC: Working Environment Committee

CC: Cooperation Committee

SWEC: Sectoral Working Environment Councils

WPA: Work Place Assessment (Risk assessment)

Executive Summary

Danish regulation of Occupational Safety and Health (OSH) is based on the Working Environment Act (OSH-Act) from 1975. Transposition of EU Directives and OSH regulation was started in the early 1990s with the transposition of the OSH Framework Directive (89/391). Many provisions of the EU Framework Directive were already included in Danish Regulation and in the specific orders. But one important change came about as a result from the transposition; it was made compulsory for any workplace to perform a risk assessment. In the Danish regulation it was labelled 'Work Place Assessment' (WPA), and it included demands to make an action plan and implement it. Since then, transpositions have been executed as 'incorporation' of EU Directives into Danish regulation. Implementation is a process that includes a strong co-operation between the Danish Working Environment Authority (DWEA) and the Social Partners. A number of tri partite councils and committees lift the responsibility of implementing new regulation and disseminate knowledge and guidelines to companies and institutions. Enforcement includes the three policy instruments: Control and Prosecution, Knowledge Transfer and Training and Incentives. Danish Enforcement includes several means of policy and practice, but it is relying mostly on a balance between control and support. Incentives are only used to a limited degree.

A main challenge to implementation and enforcement is to include a process from legislation to an improved shop-floor practise, and to include more knowledge of this complex process in the planning of implementation and enforcement. Newer Danish implementation research shows that a prerequisite for a better and more successful enforcement is a better coordination between the different stakeholders and actors, known as 'orchestration' of the policy measures. The Social Partners plays a major part in implementation and enforcement in the Danish Model but the way they are able to have an impact on the practical implementation, is through co-operation with the Danish Working Environment Authority.

Other apparent challenges include the problem of reaching out to small and medium sized companies, to embrace new company structures and meet the changes in working conditions and employment relations in a rapidly changing 'world of work'. Finally, psycho-social health and safety is a major issue in regulation and enforcement. Because psycho-social health and safety is a complex problem it is rather difficult to find generic solutions and prevention strategies, and companies need direct support to implement rules and guidelines. Support systems are however only available from a very multifaceted market of consultants and professionals.

1 Introduction - OSH in Denmark

Denmark has a long tradition for regulation of a protection of the workforce, dating back to the first 'Factory act' on child labour from 1873. Other current milestones are the 'new' Working Environment Act from 1975 (OSH-Act), implementation of the EU Framework Directive in the early 1990s leading to the mandatory Work Place Risk Assessment (WPA), and from 2000 an increasing focus on self-regulation and 'soft' regulation.

Denmark has approximately 300,000 workplaces of which 99% have fewer than 250 employees, however 34% of the 2,700,000 wage earners are employed in the largest 1% companies and 22% are employed in micro-companies with less than 10 employees¹.

Denmark has since 1999 performed systematic surveys to monitor the status of OSH at the company level, carried out by the National Research Centre for the Working Environment (NRCWE). The surveys are structured to prioritise policies and to evaluate whether the goals of the strategic plans are met for the periods in question. Results are obtained from questionnaires sent to worker representatives and management from a stratified selection of companies. These surveys include 10,000 – 15,000 answers (Arbejdstilsynet 2012). The most recent survey monitoring OSH issues and health and safety at the workplace is from 2016². The effort of the companies to develop a good working environment, was monitored in 2014³.

The latter survey concludes that a large number of companies (93%) are performing the mandatory Work Place Assessment. Between 45–58 % of the companies have assessed, handled and prevented problems relating to psycho-social health and safety risks (45%), accidents and safety (54%) and risks related to heavy loads and repetitive work (58%). These results show an unchanging situation in relation to the former survey in 2012. The survey monitoring work and health comprises many specific outcomes. However, the general trend is also a stable situation, with very limited variation from the former surveys.

2 Regulation of OSH in Denmark

In all EU Member States, the labour market is regulated through legislation, enforcement strategies and collective agreements between Social Partners. In the Scandinavian Countries the Social Partners play a significant role in determining wage and working conditions. The Danish labour market is characterised by the so called 'Danish Model', through this the responsibility for regulation of the labour market, is in the hand of the Social Partners. This is done through bargaining, collective agreements and conflict resolution and institutions like the Labour Court, where Social Partners also influence the appointment of judges.

¹ Statistical data are available from Statistics Denmark: <https://www.dst.dk/da/Statistik/emner/erhvervslivet-paa-tvaers/virksomheder-generelt>

² <http://www.arbejdsmiljoforskning.dk/da/arbejdsmiljoedata/arbejdsmiljoe-og-helbred-20>. & Arbejde og helbred, Fakta om Arbejdsmiljø & Helbred 2016. Notat udarbejdet af Det Nationale Forskningscenter for Arbejdsmiljø, NFA.

³ <http://www.arbejdsmiljoforskning.dk/da/arbejdsmiljoedata/virksomhedernes-arbejdsmiljoeindsats-20>

2.1 The Danish OSH policy and legislative context – bodies involved in the regulation of Occupational Safety and Health

Occupational Safety and Health (OSH) is regulated by the Working Environment Act (OSH-Act), issued by the Government in 1975. The Social Partners are involved in the preparation of laws and rules in tripartite settings, as they are in the development of guidelines, tools and instructions aimed at the workplaces. In general, the system works well and the parties complement each other. The Working Environment Authority will act as a control body, which normally is unproblematic. Only in a few cases they have changed proposed guidelines to ensure compliance with EU directives.

The Ministry of Employment (Beskæftigelsesministeriet)⁴ is responsible for regulating the working environment for all work carried out on land. Other ministries hold the responsibility for work at sea and air. The Ministry has competence for legislation and programmes in relation to labour law, safety and health at work and compensation in connection with industrial injuries.

The Danish Working Environment Authority (Arbejdstilsynet, DWEA)⁵ operates under the auspices of the Danish Ministry of Employment. The tasks and responsibilities of DWEA are defined in the Working Environment Act (OSH-Act) of 1975 and specific 'Executive Orders'. DWEA is the authority responsible for controlling that regulation leads to safe working conditions at Danish workplaces. The means for this is drawing up rules on health and safety at work, information about rules and regulation, inspections of companies and enforcement and prosecution if rules are violated or overlooked.

Rules are issued in the form of executive orders supplemented by a number of guidelines that describe how the regulation and legislation are to be interpreted. *The Council of Appeal on Health and Safety at Work*⁶ is a managing authority that deals with Appeals (complaints) against orders issued by DWEA, and it has representation from the Social Partners.

Workers' compensation claims are treated by *The National Board of Industrial Injuries*⁷, an agency of the Ministry of Employment. The Board decides whether an injury or disease qualifies for recognition as an industrial injury, and if compensation should be awarded.

According to an amendment to the Working Environment Act from 2013 (Working environment act – 2), companies that have acquired and uphold a Certificate following the standard of OHSAS 18001 are exempted from the regular inspection by the WEA (OHSAS 18001). Inspections and external control will in these cases be undertaken by a contracted *Certification Bureau*. These Bureaus are international private agencies providing support and audits for a contracted fee. Their main task is done through audits to check compliance with procedures included in the certificate. It is an obligation that all rules and regulations are met and that the company has the ability to continuously improve working conditions.

The National Research Centre for the Working Environment (NRCWE)⁸ is a government research institute under the Ministry of Employment. The centre provides research-based knowledge about occupational safety and health in order to contribute to healthy and stimulating working conditions in accordance with the general policies and priorities. Dissemination of the research performed at NRCWE and international knowledge about working environment is done by *the Working Environment Information Centre*⁹ in order

⁴ <https://www.bm.dk>

⁵ <https://arbejdstilsynet.dk>

⁶ <https://ast.dk/naevn/arbejdsmiljoklagenaevnet>

⁷ <https://www.aes.dk/>

⁸ <http://www.arbejdsmiljoforskning.dk>

⁹ www.arbejdsmiljoviden.dk

to provide new knowledge and products relating to research and good practices in the working environment to managers and employees.

*The Working Environment Research Fund*¹⁰ provides funding for research and development projects with the aim to raise awareness on occupational risks and their consequences, as well as to develop concrete and implementable prevention strategies at company and sectoral level and to prevent and combat labour exclusion due to poor working environment, work related injuries, etc.

Nine *Occupational Health Clinics*¹¹, which are part of the health system, assess the causal links between patient's diseases and working conditions. Employees from companies will in general be referred to an occupational health clinic by their general physician, by their trade union, or independently decide to ask for a consultation. Occupational Health Clinics also perform research in occupational diseases and interventions. They can in relation to research projects be involved in health surveillance, as well as performing a limited number of mandatory health checks (e.g. working with lead, shift work).

2.2 Social dialogue – the Social Partners and their role in implementation and enforcement

For more than 100 years, the Danish Labour Market has been influenced by the tradition of cooperation and social dialogue between Employers and Unions. At a national level, the Employers Association¹² (DA) and the Central Labour Organisation¹³ (LO) agreed on The Basic Agreement (Hovedaftalen) in 1899, which later in the 1950s formed the background for the current 'cooperation agreement' (Samarbejdsaftalen). These national collective agreements serve as a framework for sectoral agreements (Eurofound 2012). Labour conditions are largely negotiated by collective agreements between the Social Partners. Tripartite social dialogue in the field of working environment and working conditions is a well-established element of 'The Danish Society'. The Occupational Safety and Health (OSH) policies and strategies are, in many aspects, developed by Social Partners in dialogue with the DWEA.

*The Working Environment Council*¹⁴ is the highest level tripartite body and comprises representatives from the Social Partners and the DWEA. The council helps to draw up rules and it advises the Minister of Employment on OSH - regulation. *The Working Environment Council* also coordinates all the parties' OSH policy initiatives and plays a central role in designing initiatives for the Danish Parliament.

Most of the negotiations on wages, working time and working conditions occur at the sectoral level. The sectoral agreements are implemented by companies in each sector (Eurofound 2012-1, Eurofound 2012-2).

The Ministry of Employment has further designated a number of *Sectoral Working Environment Councils*¹⁵ (SWEC). In 2018 the number was reduced from ten to the five councils that are active today. Together, these five councils cover the entire labour market, but they are organized in five sector specific councils covering:

- 'Welfare and public administration'
- Industry

¹⁰ <https://arbejdstilsynet.dk/da/om%20arbejdstilsynet/arbejds miljoforskningsfonden>

¹¹ <http://www.arbejds miljoviden.dk/Vaerd-at-vidе-om-arbejds miljо/Intro/Arbejds miljоsystemet/De-arbejds medicinske-klinikker>

¹² www.da.dk

¹³ <https://lo.dk/>

¹⁴ <https://www.amr.dk/>

¹⁵ <http://www.bfa-web.dk/>

- Construction
- Transport, Service and Agriculture
- Finance, Retail and office

Their task is to help find solutions to health and safety problems within specific industries. In each sector, organizations for employees and employers appoint an equal number of members to the council. The focus is to assist individual companies within the sector in resolving working environment issues. This is mainly done through the development and dissemination of information (Pamphlets, videos, webpages etc.) and distributions of guidelines, recommendations, tools and best practice examples.

2.3 Enterprises, companies, institutions and workplaces

The target group for the regulation as such, and for all of the above-mentioned institutions and their efforts, are the workers occupied in workplaces in private companies and public institutions (in this paper we refer to these as 'companies'). And the overall purpose is to prevent accidents and occupational diseases by imposing primary, secondary and tertiary prevention strategies on the policy and practice of managers and employees in all workplaces.

The Working Environment Organisation (WEO) is regarded as the cornerstone of the Danish OSH regulation. All workplaces with 10 workers or more (or five in case of work at temporary or changing workplaces that runs for at least 14 days) are required to establish an internal structure for prevention and protection at work, this is referred to as *the Work Environment Organization (WEO)* (Executive order 1181). Companies with between 10 to 34 employees must have a Working Environment Committee, larger companies with more than 35 must establish an organization comprising committees on more than one level. Smaller workplaces with less than 10 employees, must handle and prevent OSH through cooperation between managers and employees. A revision of the act on WEO in 2010 made it possible for companies to organize the structure the WEO in a flexible manner, and according to the structure of the organization itself. The revision also emphasized the importance of strategic plans for OSH and stated that it is mandatory to execute an annual debate on the state of OSH among managers and employees.

The WEO should consist of at least one employee and at least one supervisor/manager and is responsible for the implementation of the occupational health and safety measures in the companies on the basis of the legal requirements in the Working Environment Act (The OSH-Act). The WEO is responsible for the preparation and completion of the Workplace Risk Assessment as required by Article 6 of the EU Framework Directive (Framework Directive 1989). In Denmark this is referred to as a 'Work Place Assessment' (WPA) and it is mandatory for all workplaces to perform a WPA every third year and keep it in a written form. Despite the name it is in general perceived as a risk assessment that also includes action plans to solve identified risks and implementation plans of prevention strategies.

Social dialogue at enterprise level

The employee representation and involvement at the company level in the WEO is mandatory by the OSH-Act for all companies with more than 10 employees. Additionally, but as a part of an agreement between the Social Partners, employees in medium and large sized companies will often be represented by their Shop Steward in the Cooperation Committee (CC) which is a kind of a Works Council (Samarbejdsaftalen 2006) comprising management (often HR manager) and Shop Stewards for each category of staff. In the public sector, the WEO and the CC are integrated and called Employee Involvement Committees (MED-udvalg). The employee representatives are elected, as either shop steward or safety representative.

Access to OSH expertise

A mandatory external Occupational Health Service was launched in 1980, but ceased to exist by deregulation in 2001 (Kabel et al 2007). Since this deregulation, professional support and expertise for companies is available only through private consulting companies operating in the private market, with a wide range of competences and qualities. A smaller part of the private consultants are authorized by the DWEA and may advise companies when DWEA provides consultancy notices (Executive order 65). A newer trend is that the Social Partners include funding of professional support bodies in the collective agreements. This exists within construction and in the municipalities.

2.4 The interplay of legislation and social dialogue

Collective Agreements cover the employees and companies which are members of a Union and an Employers Association. In Denmark the level of unionization is rather high with almost 70% of the working population being member of a union, as well on the private labour market as in the public sector. Almost half of all employers are members of an Employers association. In the public sector all employers are organized in three organizations: Municipalities, Regions and State (Benchmarking Working Europe 2017).

Working conditions for Employees, who are not covered by an agreement, are regulated through two laws: The Salaried Employees Act (Funktionærloven) and the 'Act on Holidays' (Ferielloven). No agreement can comprise conditions poorer than these acts. EU Directives are also often included in the collective agreements even though all employees are covered through complementary acts.

However, local agreements can include elements of the working environment, especially issues relating to Psychosocial health and safety. This relates to the fact that the implementation on company level often involves both the WEO and the CC. (Works Council).

The Danish labour market and the OSH of all employees are regulated and supported in a division between: a) regulation of OSH through law, controlled and enforced by the DWEA; b) wages and working conditions defined and regulated by the social partner through collective agreements and negotiations; and c) treatment and health promotion which is provided by the health sector. There are however some 'grey zones': the DWEA is also covering control of social dumping and smoking restrictions. The DWEA is restricted from controlling issues of psychosocial health and safety relating to the ability of managements to lead and distribute work, issues that are the responsibility of the Social Partners and are often treated in the Works Councils.

3 Transposition of EU OSH legislation

The Danish Working Environment Act was launched in 1975 as a single framework regulation covering all employed workers and all occupational health and safety hazards and appropriate means of prevention. It has been amended extensively since then. In the recent decades primarily through transposition of EU-Directives.

3.1 Transposition of the Framework Directive

In 1994 an amendment to the Working Environment Act was made to implement the EU Framework Directive (89/391). In general, the Danish regulation was found to comply with the directive, apart from the demand for the performance of company level risk assessment (Milieu Ltd. Brussels 2013). A further amendment in 1997 stated that a WPA must be written. However, the methodology and tools were free for any company to define (Arbejdspladsvurdering 2016).

The EU Evaluation of the Practical Implementation of the EU Occupational Safety and Health (OSH) Directives in EU (Commission staff working document 2017) outlined the important 'Common Processes and Mechanisms' that is defined in the Directive, and thus should be reflected in national regulations. According to the evaluation, the Danish regulation complied in the following way:

- *Preventive and protective services* – From 1980 until 2003 it was mandatory for a large part of the labour market to affiliate with an authorised Occupational Health Service, and it was expected that the coverage would reach all workplaces within a reasonable timeframe. After the repeal of this demand in 2003, professional support is limited to the companies own competence with a possible and voluntary support from the private market of consultants.
- *Information to workers* - Workers in all companies must, according to the OSH-Act, be informed about documented risks, when such are stated in safety manuals, health information etc. The employers hold an obligation to inform workers; in practice information is gathered and disseminated by the members in Safety Committees or in Small enterprises directly by the employer.
- *Training of workers* - The OSH-Act provides the Safety Committees and The Safety representatives to train and instruct colleagues, and thus make sure that they have sufficient knowledge to perform their work safely. In relation to some hazardous materials (i.e. asbestos and epoxy resins) and hazardous work tasks (i.e. operating a forklift) special training for the workers is mandatory.
- *Workers consultation* - It is a mandatory task for the Safety Committees, or at Small Enterprises the manager, to consult workers on health and safety issues and include their knowledge and experience.
- *Health Surveillance* - There is no general demand for, or provision of, Health Surveillance in Denmark. All Danish employees do, however, have access to see their own general physician as a part of the public health system. If a disease is considered to be caused or worsened by occupational conditions the physician must refer to an occupational doctor at the Occupational Health Clinics and ensure proper action. Health surveillance is required for workers handling high risk substances.

3.2 Further transposition as 'Incorporation'

Since the implementation of the Framework Directive in 1994, Directives from EU have been incorporated in Danish regulation as a standard procedure by the DWEA. In most cases it has been a matter of technical adjustments of the Danish law, as EU Directives not often add new provisions to existing regulation. This is for example the case in relation to the specification of rules on noise reduction and disorders from exposure to vibrations (Commission Staff Working Document 2017). Because the Danish Act is also a framework Act, according to law professionals from DWEA, the transposition has been straightforward (Personal interview DWEA).

EU Directives have been transposed to Danish regulation as an ongoing 'incorporation process'. Adjustment has been made occasionally, as was the case when the Work Place Assessment rules were enhanced in line with a judgement (C-5/00 - from the European Court from 7 February 2002) stating that a risk assessment needs to be written (and the employer shall involve the work environment organisation or the workers in planning, organising, implementing and following up the workplace assessment). This happened after a long dispute between the Social Partners on the relevance of a written WPA.

With the Mandatory Occupational Health Service phased out in 2003 – the management and the WEO is given the responsibility to seek professional support if not available inhouse.

In general, new regulation on OSH has been incorporated from EU Directives. In a few cases transposition of EU Directives has led to new regulations to be included in the Danish framework law. An example is the 2013/35/EU of 26 June 2013 on Electromagnetic fields, this was not covered by Danish regulation (Bekendtgørelse 35).

The Evaluation report from EU 2015 concludes that *"In general, Denmark has transposed OSH-related EU Directives in an efficient way with no cases of observed discrepancies and relatively few cases where the Danish legislation sets more stringent or broader requirements"* (EU Evaluation 2013).

3.3 New trends in transposition and implementation

An inter-ministerial Implementation Committee of eight ministers was established in 2015. The Committee meets every month to discuss transposition of EU legislation across all areas. The aim is to ensure a more systematic and uniform approach to implementing EU corporate legislation to avoid unnecessary administrative burdens that will harm competitiveness of Danish companies. The aim is also to ensure transparency and to strengthen the political involvement during the implementation process. (Folketingstidende 2016-17).

An advisory body to the Danish Government called 'The Implementation Council'¹⁶ meets every three months to discuss the transposition of EU legislation in Denmark. The aim is to ensure that Denmark does not create *unnecessary* administrative burdens and place Danish businesses at a competitive disadvantage. The Implementation Committee receives recommendations put forward by the Implementation Council which has an advisory role vis-à-vis the Committee and is made up of organisations representing businesses, consumers and trade unions (Folketingstidende 2016-17). The council can perform 'neighbour check' to assess how other countries are implementing EU directives. One neighbour check has been performed focussing on rules regulating working with chemical agents.¹⁷ From this check a number of deregulations has been proposed and are expected to relieve companies from administrative burdens. Rules on muscle-skeletal disorders have been scrutinised by the DWEA, who found that the Danish regulation was in line with EU Directives.¹⁸

¹⁶ <https://star.dk/om-styrelsen/raad/implementeringsraadet>

¹⁷ <https://star.dk/om-styrelsen/raad/implementeringsraadet/om-implementeringsraadet>: Mere enkle arbejdsmiljøregler om kemi 24-02-2016 BM

¹⁸ <https://star.dk/om-styrelsen/raad/implementeringsraadet/om-implementeringsraadet>: Håndhævelse af arbejdsmiljøregler om muskel- og skeletbesvær 13-05-2016

4 Implementation

Denmark has a long tradition of developing and implementing overall policies on OSH. The latest OSH strategy, elaborated by the Ministry of Employment, dates from 2012 and runs until 2020 and is entitled "Strategy for the improvement of the working environment up to 2020" (Arbejdstilsynet 2010). It continues the work of former strategies and focuses on three priority areas: (1) Serious accidents; (2) Psychological health and safety and (3) Muscular-skeletal overload and disorders. The enforcement Strategy of the DWEA contributes to the main OSH Strategy and aims at reducing Muscle-Skeletal disorders, accidents and mental health problems caused by high workloads, bullying or harassment.

4.1 Overall policies

In the mid-1990s the DWEA launched a plan for what was termed 'a clean work environment 2005' (Arbejdstilsynet 1995). The plan was made up by seven visions for the work environment on the major risk factors such as 'no fatal accidents 2005', 'no hearing losses 2005', and 'no muscle skeletal disorder 2005'. The plan did not include application of any particular policy instruments to reach these ambitious goals, and the Social Partners and other work environment stakeholders were not directly involved. However, an important part of the plan was the initiation of a surveillance programme where DWEA started monitoring the development of the work environment (Arbejdstilsynet 2004, Arbejdstilsynet 2005).

This plan was followed by a 2010 plan. The Social Partners were this time involved through The Work Environment Council. One important feature of this development was a still stronger consensus on the need to reach the goals and to document it, which were changed from the utopian situation of no fatal accidents to a reduction of typically 10–20% within the 5-year span. The goals influenced the debate about expected progress and the need to implement new initiatives.

4.1.1 The Government strategy for a better work environment 2020

A new course was set with the next plan, when the 2020 strategy was launched in 2011 (Arbejdstilsynet 2010). The policy was referred to as a strategy rather than a plan. The same type of goals was included, but with a stronger priority since only three goals were included: a) 25% reduction of serious accidents; b) 20% reduction in psychological overload; and c) 20% reduction in overload of musculoskeletal strains. Another new element was the inclusion of 19 activities, to secure the accomplishment of the goals. The most important of these activities were: a) risk-based inspections by the DWEA; b) changes in practices regarding the issuing of fines; c) more dialogue between DWEA and companies; d) more focus on the psychological work environment; and e) support to small enterprises. The strategy also had a focus on coordination between different authorities doing inspections and included a targeted monitoring of the development of the work environment regarding the three general goals.

The strategy was initiated by DWEA and the Social Partners in the Work Environment Council, and subsequently approved by the Parliament. The Social Partners obviously had an element of co-ownership to the plan. The 2020 Plan defined the targets for the OSH regulation, but contrary to the former plans it also included applied policy instruments, such as more focused inspection and information. However, even though the targets include numerical changes in resulting health conditions, it is difficult to foresee if workplaces would change priority to OSH as an outcome of the strategy. The reduction of psychosocial overload, which is a key goal, is expected to be achieved by broad information on how important the psychological work environment is and dissemination of general tools to strengthen efforts in this area.

A built-in midterm evaluation resulted in a new political agreement about reinforcing the strategic plan in 2015, which added 15 new activities (Beskæftigelsesministeriet,

2015). The most important activity was strengthening the risk-based inspection and an increase in fines to companies that do not comply with regulations. Another amendment is a better coordination of the activities carried out by DWEA and the Sector Work Environment Councils (SWEC). This is an interesting innovation¹⁹ as DWEA committed itself to coordinate enforcement activities with other relevant stakeholders. Consequently, campaigns and focus on particular risks have to be planned jointly. DWEA inspectors carry information material from the SWEC, the SWEC prepare forthcoming material bearing in mind that it can be used by inspectors, and Social Partners to inform their members about planned DWEA inspection activities. Researchers have seen this as an attempt to move the Danish work environment policy towards a governance model with increasing orchestration as a strategic means to better achieve the aim of the regulation (Hasle et al 2017).

A Midterm Evaluation of the development from 2011 to 2014 of the three main targets, presented in 2017, documented that not all the targets were being approached. Serious work-related accidents had been reduced by 18% and considered satisfactory in relation to the 25% target. However, the targets of a 20% reduction in psychological overload and a 20% reduction in overload of musculoskeletal strains were not achieved. On the contrary psychological overload increased, as the number of persons responding to the strain index for psychological overload was increased from 14.5% of the workforce to 16.9%, an increase of 16.8%. The same tendency is seen in relation to the number of persons responding to the index for overload of musculoskeletal strains, which has increased from 9.7% to 11.1% (NRCWE 2017). The Minister of Employment has in 2017/18 tasked an 'experts committee' to propose a revision of the system that will provide a stronger impact. The committee is due to report this work in the autumn of 2018.

4.1.2 Implementation support from professional expertise

From 1980 until 2003 many companies were affiliated with an Occupational Health Service and thus had access to support and consultancy on OSH problems and prevention. When this 'actor of implementation' was eliminated, access to external expertise was not a part of the implementation strategy anymore. Companies were left to buy support from private consultants (Limborg & Pedersen 2008). However, one possibility remains that the DWEA, as one of their means, can impose a demand for the use of external expertise, if they find that a company or institution lacks the right internal expertise to address the issues. The lack of easy access to professional support and a wish to avoid orders from DWEA, may have triggered a rather new and spreading tendency among large and medium sized companies to include OSH professionals in their staff (Seim & Limborg 2016).

19

5 Enforcement

The Danish approach to enforcement is based on three policy instruments: sticks, carrots and sermons. The metaphors illustrate three ways to motivate companies to give priority to OSH and to comply with regulation: through force (inspection and prosecution), through benefits (incentives), or through knowledge transfer (information and training). This is based upon a taxonomy proposed by Vedung (1998) who argues that these three types of instruments comprise all possible enforcement instruments. The power to enforce is given by the asymmetrical relationship between the regulator and the receiver of the regulation. The regulating parties have either: 1) power to establish the legal standards, control and prosecution, 2) the ability to reallocate resources from the 'unworthy' to the 'worthy', or 3) resources to launch information campaigns, which range from those who have knowledge and insight to the beneficiaries who lack this knowledge. It follows this very basic taxonomy that the instruments can be designed and combined in many ways. Danish regulation has a strong priority of sticks and sermons rather than carrots.

5.1 Control and prosecution

The DWEA is responsible for the control of workplaces. Their methods include a range of inspections and fines; requests for improvements, for new procedures and structures or general recommendations. These methods are referred to as 'reactions'. The control is undertaken by DWEA-inspectors, currently the DWEA employs around 300 Inspectors²⁰ to cover a labour market of 2.7 million employees. The DWEA carries out different types of inspections to supervise whether Acts and rules are observed. The objective is to provide companies with adequate support to manage and prevent risks in the workplace. The DWEA can impose different forms of sanctions i.e. improvement notices, legal charges, administrative fines and guidelines. The chosen 'reactions' depend on the working environment standards of the company and the efforts made to improve risks.

In 2004, it was decided to screen all companies within a seven-year period from 2005 to 2011 and the plan was to continue screening of each company periodically every three years. If the screening indicated that a company had significant problems with the working environment, a more detailed inspection was performed.

This strategy was changed in 2011 where the 2020 plan indicated that screening of companies should follow a two-track risk-based inspection effort. One track involves companies and institutions selected for inspections on the basis of an identification of companies / sectors that are expected to have the greatest risk of problems with the working environment, based upon the national surveys performed by the NRCWE. The other track involves other companies selected for inspections based on former inspections. Companies that are proven to have significant work environment problems will receive more inspections during the current plan period from 2012 to 2019. Companies are notified - up to three months ahead of a Risk – Based Inspection - that it will happen, but not exactly when. If 'reactions' are given, a 're-inspection' will take place within a year. However, this might focus on other problems and the ability of the company to control and handle OSH in general.

The impact of control and prosecution of workers' health has been an issue for many years, as it is very difficult to assess a direct effect on the workforce. A newer substantial review found evidence of a positive impact in terms of reducing accidents and compliance with legislation, when control is followed by deterrence through penalties (Tompa et al 2016).

²⁰ <https://arbejdstilsynet.dk/da/statistik>

A Danish evaluation of the effects of 'risk-based inspection in the medium term' concluded that a majority of companies addressed workplace problems within a year when presented with an order from DWEA (Aldrich et al 2016). The evaluation identified the importance of mechanisms leading to compliance from companies. Firstly, the inspection visit motivates companies to address the issues and secondly a vast majority recognises the authority of the DWEA. The ability to solve problems is enhanced through a good dialogue with the inspectors and the durability of the implementation depends on the level of social dialogue in the company.

Among the Social Partners three important questions concerning inspection strategy has been suggested: a) What is the best balance between control/prosecution and self-regulation, b) Which inspection methods are most effective, and c) Is it possible to identify the most relevant target group for control measures to utilise resources in the best way?

Employers' Associations favour far more self-regulation than inspection, either through certification or by mitigating control on companies who are expected to have a good OSH. Opposite to this view, Labour Unions argue that more control and deterrence is needed.

This has led to a strategic approach to divide companies in three groups defined by their attitude to develop a good working environment:

- 'those who can and will',
- 'those who will - but cannot',
- 'those who neither will nor can'.

The idea behind this theoretical model is to prioritise controls on the third group, develop support programs for the second group, while for the first group there is no need for action. It has, however, proven to be very difficult to assess which group companies belong to. Nevertheless, in 2012 DWEA developed the inspection strategy referred to as Risk Based Inspection (RBI). The RBI targeted companies where the most serious problems are expected to be, based upon statistics and inspections' history. Thus, focusing on high risk sectors and high-risk companies.

During inspections it is checked whether companies comply with regulations, and the severity of non-conformity. The date of the visit by the inspectors is unannounced, but the company is notified four months in advance that a visit will take place.

5.2 Knowledge transfer and training

The task of enhancing knowledge and the ability to perform self-control and problem solving at the company level, is mainly undertaken by the Social Partners but under supervised by DWEA.

Five sector specific councils are developing, producing, and disseminating numerous information materials on all types of problems. Many in the form of practical tools for prevention at the company level, and utilising various types of media like pamphlets, videos, web pages, apps etc. Evaluations have assessed the quality of the materials as high, the distribution as wide but the impact as relatively low (Oxford Research 2014). The international review by Tompa et al. 2016 finds moderate evidence that awareness campaigns improves compliance.

The Social Partners also define the level and content of a mandatory training programme aimed at the members of the Working Environment Committee. Currently it is three days as start-up followed by 1½ day brush up each year.

5.3 Incentives

Incentives in terms of financial benefits for compliance with OSH regulation have been used occasionally in relation to specific programmes. From 2007 to 2015 the so called "Prevention fund" supported company-initiated development projects. Later it focused more on SMEs through several prevention packages that could be given as support to small companies in certain risk-based sectors, if relevant. The package comprises economical coverage of the time spent, guide material and, in some cases, support from consultants. Even so, the programme was not widely disseminated (Kvorning et al 2016 – 2).

Connecting the insurance premiums to OSH standards, as it is known in other countries, has not found political support in Denmark.

6 Difficulties, challenges and constraints

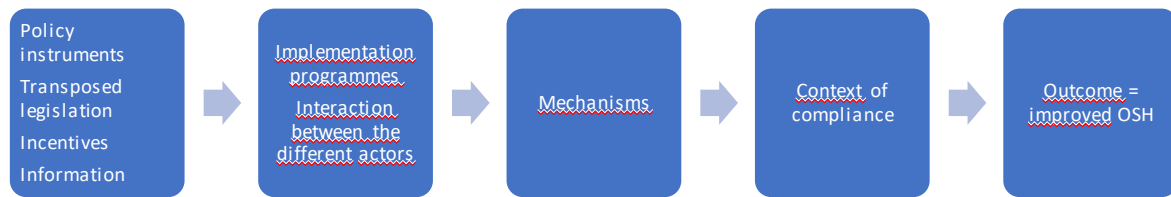
Transposition is a political process which can be handled as a simple administrative task or it can lead to more thorough revision of regulation. The process of implementation is allocated to DWEA and the Social Partners and the relevant bodies in which they are represented. Enforcement is the most complex process including a line of interacting activities carried out by several actors and institutions. The main challenges relate to understanding 'the roadmap' bringing regulation to preventive practice on workplace level, and to create synergy among the involved actors to make this process come to act. Synergy and interaction between DWEA and the Social Partners is especially important to the Danish model. Finally, is the changing world of work posing challenges to regulation developed for a more traditionally industrialized labour market.

6.1 Understanding the process from transposition to compliance

The road from EU Directives over transposition, implementation and enforcement to actual improvements of the working environment and eventually improved health and reductions in accidents and work-related diseases, is very complex. It is not linear and it is difficult to uncover causal links. There is, however, a growing political interest in achieving a better understanding of 'what works' by evaluating the results of regulation in the form of improved ability to prevent problems and control risks at the workplace level.

Intervention studies aim to provide evidence for an effect of specific regulation, but they have their limitations since it is not possible to have control groups with no regulation. Newer research is therefore challenging the demand for evidence of the complex relation between regulation and improvements at workplace level (Hasle et al 2017). Research based upon 'Realistic Evaluation' (Pawson 2006, Pawson & Tilley 1997, Hasle et al 2012) has been proposed as a theoretical impetus for a different and better understanding of 'what works'. Rather than looking for statistical evidence, Realistic Evaluation looks for 'regularities' in similar storylines of the process from regulation, enforcement and dissemination to changes in the capacity of the workplaces to prevent and handle OSH problems. The core of such studies is to identify and generalise what 'mechanisms' bring development from one step to the next, as illustrated in figure 1.

Figure 1. The complex road map from Policy to improved OSH



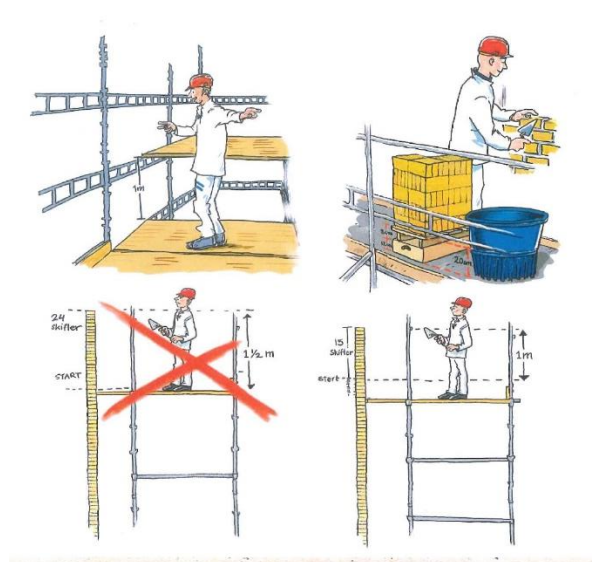
The 'road map' for this process understands regulation as a point of departure for a possible improvement of OSH at the workplace level. Regulation will firstly be transposed into a combination of guidelines, control strategies, incentives and methodology offered to companies through information, web-pages, training and seminars and other kinds of implementation programmes, involving a wide-ranging group of stakeholders. If these strategies eventually will lead to improved OSH conditions at company level, certain mechanisms such as management motivation, cost-benefit analysis, skilled consultants, or a well-functioning WEO have played an important role in bringing the process ahead. Whether the mechanisms are catalysts or barriers will again depend on the context. Some mechanisms work for small companies and others in large, some are relevant in certain sectors but not in others.

A current analysis of specific OSH programmes (Hasle et al 2017), embraces four programmes: 'The Government strategy for a better work environment 2020', 'Prevention Packages' (a support scheme that offers tools, process support and financial support to implement prevention in practise), a 'Strategy to reduce accidents' in the construction sector and 'A support scheme aimed at networks of SME's', has proposed a 'new' way to analyse and to understand the mechanisms that lead from regulation to practice. The Realistic Evaluation approach reveals how these interventions and policy measures should be understood in relation to the context in which it is performed. The results of this kind of evaluation adds to a growing understanding of why some measures are successful in some cases but not in others.

6.2 The implementation of new rules for manual handling in masonry – a case.

An Executive order (Arbejdstilsynet 1992) from 1992 includes a transposition of the EU Directive no. 90/269/EØF. (EF-Tidende, 1990). A specification of this directive led to an agreement between The Danish Construction Association and the relevant Unions on a change of the way bricklaying work is organized and performed. Specifically, it aimed at reducing the span of work during bricklaying. Beforehand a scaffold would traditionally be lifted for each 1.5 meters of work. With the change, the span was reduced to only 1.0 meter as illustrated in Figure 2. This would include a major reduction of work in high or low positions, documented to be harmful and cause low back pain.

Figure 2. Illustration from the guideline for bricklaying on scaffolds.



From the time this agreement was made in 1992 it took ten years before the Labour Inspectors were able to notify construction companies to follow this guideline. Firstly, no Brickworks were able to deliver bricks on a pallet size that would fit 1 meter of bricklaying. It took the Brickworks five years to develop and market this, since they were forced to change their production process to provide this new brick-pallet. Construction companies had to invest in new transport trollies and wheelbarrows. Scaffold-companies needed to adjust their Scaffolds and introduce new types of scaffolding, which was a costly procedure for small Bricklayer companies. Builders, architects and project engineers had to be made acquainted with the new regulation to be able to include them in the building plans, the construction companies had to agree not to compete by reducing costs for the new type of scaffolding, etc.

Knowledge, training and guidance on the new rules and procedures were disseminated broadly in the sector by the Working Environment Councils. Thus, what might seem to be a simple rule, developed from research-based knowledge of the muscle-skeletal strain from working in low and high positions and later transferred into an agreement on one-meter lifts, proved to take ten years to be implemented in practise. Today it is regarded common standard among bricklayers.

6.3 The importance of Social Dialogue – for an efficient transposition, implementation and enforcement of EU OSH legislation

An important element in the implementation process in Denmark is the role of the Social Partners. Through the Danish Model they play an important part at all levels. They take active part in the transposition, they organise the major part of the dissemination of information through The Working Environment Council and the Sector Councils, and the Co-operation Agreement forms the framework for co-operation at company level. And they have to be involving, consistent and sturdy all the way as illustrated by the bricklaying case.

Danish OSH regulation and enforcement has the Working Environment Organization as the main target group. Implementation and compliance is totally dependent on the ability and the capacity of the WEO to perform assessments, resolve problems and realise prevention strategies. To understand why regulation will have an impact on some companies but not on others, it is essential to include knowledge of the state of the capacity of the WEO in the companies.

The strong emphasis in Danish OSH regulation on the role of the WEO is challenged by the circumstance that in companies with no or a poor functioning WEO, compliance is likely to be very limited (Hasle et al 2017, Madsen & Hasle 2017). Implementation strategies are lacking means to reach out to companies and especially SMEs. A recent identified trend of an increase of internal expertise by employment of OSH Professional (Seim & Limborg 2016) has yet to be evaluated on a national scale as well as at the sector level. Currently there is very limited knowledge of the number of these experts, the competences they have, the task they perform and need for professional networks, knowledge sharing, education and training. Nevertheless, they are anticipated to be a major factor in the implementation process.

6.4 Challenges in transposition, implementation and enforcement for meeting the diversity of the labour market

As described above, transposition is a process primarily undertaken by the authority (DWEA) and up to now executed as a process to find the legally correct incorporation of Directives into Danish regulation. The challenge for the DWEA is to mediate the Social Partners and develop orders that will be supported from both parts.

Implementation is a task involving the Social Partners in co-operation with DWEA and in particular through the SWECs. The focus has been a very extensive development of guidelines, instructions and broad dissemination. However, the dissemination of knowledge does not by itself change or improve health and safety. Newer research and evaluations of intervention projects have contributed to a broader understanding of what motivates and enables companies to handle and prevent OSH problems (Biron 2012). Authorities and Social Partners need to develop a better understanding of the 'mechanisms' that will motivate businesses and companies to comply with regulation and to give priority to OSH. It is a major challenge to develop a better understanding of the process that leads from regulation to improved working environment at the workplace level. An understanding that would enable the implementation process to be more directly focused and thus achieve the expected changes and improvements in working conditions. Denmark has very detailed and systematic quantitative data on the health condition of workers and on OSH endeavours at the workplace level. This provides a great opportunity to analyse statistical correlations between regulation and outcomes in the form of the health condition of the workforce, accidents, the extent of sick leave etc. However, it is very difficult to substantiate why this development has happened and how further progress should be achieved and what other measures should be enforced.

Enforcement in Denmark is primarily based upon control and prosecution in combination with very broad and substantial dissemination and information activities. This strategy has proven successful in the traditional, well known and well-regulated part of the labour market. But it also has its limitations.

Small and medium sized companies (SMEs)

Denmark has a long tradition of research and practise aimed at improving the working environment in SMEs. An extensive development of methods, tools and outreach programmes (Hasle & Limborg 2006) have provided experiences and strategies to reach this target group. The conclusions of all SME programmes are very similar. SMEs are hard to reach, because they don't relate to written materials. To successfully reach SMEs they must be approached personally. SMEs are not strategic but will act if timely, accurate and targeted support is provided when problems arise. Since most of the Danish labour market is constituted by SMEs there is a great potential in giving priority to this group. The problem is that the implementation strategies that have been proven successful are expensive and the benefits are still difficult to document (Hasle & Limborg 2006).

New types of employment and company structures

In a growing part of the labour market new company structures are emerging. Businesses with untraditionally employment conditions and employment schemes employ people to work by contractual agreements of limited working hours and unclear employment conditions. A development that seems to create a new group of precarious workers. There is, so far, no valid assessment of which consequence this development will have on OSH. It is however obvious that the existing regulation and enforcement mainly is focussed on well-known structures and organisations and they will have great difficulties in reaching this part of the labour market.

Psychological Health and Safety

Another challenge to enforcement is the problem relating to mental illnesses and health. The 'Psychological working environment' as it is called in Danish regulation has had a high focus and priority in the last two decades. The Work and Health Survey from NRCW documents an increase in sick leave related to work related mental illness. Dissemination of knowledge, methods and good practise on prevention of psychological strain and improving well-being has been immense. Legal enforcement has on the other side been limited through an agreement between the Social Partners. Nevertheless, the DWEA has developed very precise and specific tools to perform inspections (Christensen et al 2011, Arbejdstilsynet 2016) and prosecution do take place in case of violation of the rules that protect workers against too much work, sexual harassment or bullying.

7 Success factors and transferability

The Danish approach to the work environment has its foundation in efficient transposition, implementation and enforcement of work environment regulation. A long history has proven that enforcement alone cannot guarantee a safe and healthy work environment. 'Implementation and enforcement' have been expanded into 'governance' in a network where different stakeholders, in particular the Social Partners, play a major role, as do a number of different OSH professionals.

A current focus in the Danish work environment policy is to improve coordination of the many different actors of the 'OSH system'. It is believed that better coordination, interaction and synergy will enhance the effect of the different policies and strategies. This is referred to by the metaphor '*orchestration*' of the policies. 'Orchestration' implies that the stakeholders adjust their policies, programmes and intervention to each other in relation to the target group, timeliness, context, and focus. To achieve this, it is a prerequisite that all stakeholders aim to develop programmes in a more explicit and transparent manner, in order to apply a combination of various policy instruments and create potential synergy effects of these combined measures (Hasle et al. 2017). This concept of policy mix or 'orchestration', as it has been termed in Danish OHS discussions (Kamp & Koch, 1998; Koch, 2002), has not yet been studied thoroughly, and it is yet not clear how this approach should be prioritized and systematically utilised in OHS policy programmes.

Orchestration, however, seems to have the potential for improving the efficiency of work environment policy programmes. In the analysis made by Hasle et al. 2017, several elements that will prove important for a more successful implementation and compliance is proposed:

- Orchestration must be based on a platform of regulation. The regulation imposed by the EU and transposed by the national government is a prerequisite for the Social Partners and others to agree on their participation in an orchestrated strategy. The regulation can be seen as the score, and the Labour Inspection might take up the role as the conductor.
- It is not sufficient to simply combine several existing activities in one policy document. An orchestra playing without a score makes noise.

- Orchestrated strategies have to be carefully designed in order to interact in a time sequence, to share objective and reach the planned target group in such a way that the recipients in the companies understand and accept the policy. Simply adding yet another instrument or measure is not enough for securing a successful outcome. In particular, the balance between regulation, voluntary action, economic incentives, information, and cultural-behavioural changes is important.
- Development of shared understanding of goals and instruments among the participating stakeholders is necessary for the subsequent implementation of the programme.
- The overall mechanisms of 'the road from legislation to compliance' must be studied more intensely. There is a need for a better understanding of the mechanisms that leads to compliance in one sector or in some companies but not in others. This calls for better evaluation of the effects of orchestration which must include a better understanding of the context and the active mechanisms.

Orchestration is a new concept in both work environment research and work environment policy. It is therefore also a concept that needs further exploration in several directions. Orchestration seems to be a possible evolution of implementation through networks. Regulation from EU directives to national implementation programmes could benefit from enhanced focus on the role and the inclusion of such networks and their interaction in different countries and different contexts.

Another benefit from the orchestration strategy might be an enhanced focus on the manner in which the companies are able to meet and understand regulation and transfer it to good local practice. Or if we use the metaphor to understand how the audience perceives the music of the orchestra. Policy makers might be unable to realise how their policies ultimately affect the concrete working life. Orchestration puts a demand on the players to develop a mutual understanding of the problems in focus and the possibilities to reach the target groups with instruments that actually are able to improve safety and health. But before the orchestra starts playing they must be sure to get in tune.

8 List of references

- Aldrich Per, 2016, Evalueringen af effekten af det risikobaserede på mellemlang sigt. [PDF] Copenhagen: Arbejdstilsynet. Available at: <https://arbejdstilsynet.dk/.../effekt-af-det-risikobaserede-tilsyn-mellemlangt-sigt.pdf>
- Arbejdspladsvurdering, 2016, Arbejdspladsvurdering (APV): At-vejledning D.1.1-3, Juli 2009 - Opdateret april 2016. Copenhagen: Arbejdstilsynet. Available at: <https://arbejdstilsynet.dk/da/regler/at-vejledninger/a/d-1-1-arbejdspladsvurdering>
- Arbejdstilsynet, 1992: Bekendtgørelse om manuel håndtering - Arbejdstilsynets bekendtgørelse nr. 1164 af 16. december 1992.
- Arbejdstilsynet, 2005, Arbejdsministerens handlingsprogram for et rent arbejdsmiljø 2005 [The ministry of labour's action plan for a safe work environment]. [PDF] Copenhagen: Arbejdstilsynet. Tilgængeligt via: <https://arbejdstilsynet.dk/...handlingsprogrammet/sammendrag%20pdf%20pdf.pdf>
- Arbejdstilsynet, 2003, Overvågning 2001. Udviklings- tendenser i arbejdsmiljøet for de syv visioner i handlingsprogrammet om et rent arbejdsmiljø 2005. [Surveillance 2002. Developmental trends in OHS for the seven visions in the action plan for a safe work environment in 2005]. [PDF] Copenhagen: Arbejdstilsynet. Available at: <https://arbejdstilsynet.dk/da/statistik/overvaagning-af...af...2005.../uddrag-2003>
- Arbejdstilsynet, 2005, Overvågning 2003. Udviklingstendenser i arbejdsmiljøet for de syv visioner i handlingsprogrammet for et rent arbejdsmiljø 2005. [Surveillance 2003. Developmental trends in OHS for the seven visions in the action plan for a safe work environment in 2005]. [PDF] Copenhagen: Arbejdstilsynet. Available at: <https://arbejdstilsynet.dk/~media/AT/at/07...i...2003/Endelig-bilagsdel%20pdf.pdf>
- Arbejdstilsynet, 2003, 2016, At-intern instruks IN-4-1: Arbejdstilsynets tilsyn med psykisk arbejdsmiljø. [PDF] Copenhagen: Arbejdstilsynet. Available at: <https://arbejdstilsynet.dk/.../om%20arbejdstilsynet/interne-instrukser...interne-instrukse...>
- Arbejdstilsynet, 2010, Fagligt grundlag for prioritering af arbejdsmiljøindsatsen - Fremtidens arbejdsmiljø 2020. [PDF] Copenhagen: Arbejdstilsynet. Available at: <https://arbejdstilsynet.dk/~.../Fremtidens...2020/fremtidens-arbejdsmiljoe-2020.pdf>
- Arbejdstilsynet, 2009, Overvågning af arbejdsmiljø og arbejdsmiljøindsats 2006-2010. Afrapportering af mål i "Fremtidens arbejdsmiljø 2010". [PDF] Copenhagen. Available at: <http://arbejdstilsynet.dk/~media/at/at/07-arbejdsmiljoe-i-tal/03-overvaagning/overvaagning-2010/overvaagningsrapportpdf.ashx>
- Arbejdstilsynet, 2010, The Working Environment Act -2: Ministry of Employment Consolidated Act no. 1072 of 7 September 2010 with later amendments. Copenhagen: Arbejdstilsynet.
- BEKENDTGØRELSE 35: Bekendtgørelse om eksponering for elektromagnetiske felter i forbindelse med arbejdet: Europa-Parlamentets og Rådets direktiv 2013/35/EU af 26. juni 2013. Copenhagen: Arbejdstilsynet.

- European Trade Union Institute (ETUI)., 2017. Benchmarking Working Europe 2017: European Trade Union Institute (ETUI), " Benchmarking Working Europe 2017", and Forskningscenter for Arbejdsmarkeds- og Organisationsstudier (FAOS), Sociologisk Institut Københavns Universitet. 2017th edition. Brussels: European Trade Union Institute (ETUI).
- Beskæftigelsesministeriet, 2015, Aftale mellem regeringen (Socialdemokraterne og Det Radikale Venstre), Venstre, Dansk Folkeparti og Det Konservative Folkeparti - En styrket arbejdsmiljøindsats – Alle har ret til et sikkert og sundt arbejdsmiljø. [PDF] Copenhagen: Beskæftigelsesministeriet.
- Biron, Caroline: What works, for whom, in which context? Researching organizational interventions on stress and well being using realistic evaluation principles. In Biron, Caroline, Maria Karanika-Murray and Cary L. Cooper (ed.): Improving Organizational Interventions for Stress and well-Being. Routledge 2012.
- Christensen, H., Momme E., Nielsen, K., Wibroe, L., Limborg, H.J., Hvenegaard, H., 2011. Evaluering af Arbejdstilsynets Særlige tilsynsindsatser. [PDF] Copenhagen: , Grontmij Carl. Available at: Bro.file:///C:/Users/HansJ%C3%B8rgenLimborg/Downloads/EvalueringATindsatserpdf.pdf
- Commission staff working document, 2017, Ex-post evaluation of the European Union occupational safety and health Directives. (REFIT evaluation). Accompanying the document: Communication from the commission to the European Parliament, the council, the European economic and social committee and the committee of the regions. Safer and Healthier Work for All - Modernisation of the EU Occupational Safety and Health Legislation and Policy. [PDF] Brussels: European Commission. Available at: ec.europa.eu/social/BlobServlet?docId=16875&langId=en
- Christiansen, R.H., Nielsen, H. O., 2010. Denmark: EWCO comparative analytical report on Information, consultation and participation of workers concerning health and safety. [PDF]. Copenhagen: EurWork. Available at: <http://www.eurofound.europa.eu/ewco/studies/tn0911028s/dk0911029q.htm>. Tilgået d. 29. Maj 2012.
- EF-Tidende 1990, L 156, s. 9.).
- Eurofound, 2012 -1, European industrial relations observatory online (EIRO). Denmark: Industrial relations profile. Tilgået d. 29. Maj 2012.
- Executive order 1181, 2010, Samarbejde om sikkerhed og sundhed – Bekendtgørelse 1181, 2010, med senere ændringer. Copenhagen: Arbejdstilsynet.
- Executive order 65, 2013, Bekendtgørelse om autorisation af rådgivningsvirksomheder på arbejdsmiljøområdet. Arbejdstilsynets bekendtgørelse nr. 65 af 17. Copenhagen: Arbejdstilsynet.
- Ferieloven: Bekendtgørelse af lov om ferie. Lovbekendtgørelse nr. 202 af 22. februar 2013, med de ændringer, der følger af § 3 i lov nr. 790 af 28. juni 2013, lov nr. 512 af 26. maj 2014, § 7 i lov nr. 720 af 25. juni 2014, § 8 i lov nr. 1286 af 9. december 2014, lov nr. 1368 af 16. december 2014, § 29 i lov nr. 174 af 24. februar 2015, § 2 i lov nr. 685 af 27. maj 2015 og § 6 i lov nr. 1000 af 30. august 2015. Copenhagen: Retsinformation.
- Folketingstidende, 2017, Folketingstidende G. Beskæftigelsesudvalget 2016-17, Redegørelse nr. R – 17, 31/5 2017. Copenhagen: Folketingstidende
- Funktionærloven: Bekendtgørelse af lov om retsforholdet mellem arbejdsgivere og funktionærer. Lov om retsforholdet mellem arbejdsgivere og funktionærer,

jf. lovbekendtgørelse nr. 81 af 3. februar 2009, med de ændringer, der følger af § 5 i lov nr. 647 af 12. juni 2013, lov nr. 52 af 27. januar 2015, § 14 i lov nr. 1565 af 15. december 2015 og § 8 i lov nr. 285 af 29. marts 2017.
Copenhagen: Retsinformation

- Hasle, P. & Limborg, H.J., 2006, A review of the Literature on Preventive Occupational Health and Safety Activities in Small Enterprises, *Industrial Health* 2006, (6- 12), 44.
- Hasle, P., Limborg, H.J., & Nielsen, K.T., 2014, Working environment interventions - bridging the gap between policy instruments and practice *Safety Science* Feb.2014. Issued as Science Direct. [PDF] Copenhagen: Aalborg Universitet.
- Hasle, P., Limborg, H.J., Grøn, S., & Refslund, B., 2017 Orchestration in Work Environment Policy Programs. *Nordic Journal of working life studies*. Vol 7, No 3.
- Hovedaftalen: Hovedaftalen af 1973 med ændringer pr. 1. marts 1981, 1. marts 1987 og 1. januar 1993. Copenhagen: DA. Available at: <http://www.da.dk/bilag/hovedaftalen.htm>
- Implementation Evaluation, 2015, Evaluation of the Practical Implementation of the EU Occupational Safety and Health (OSH) Directives in EU Member States. Prepared for the Commission by COWI, Milieu and IOM. [PDF] Copenhagen: COWI.
- Kabel, A., Hasle, P., & Limborg, H.J., 2007, Occupational Health Services in Denmark – the rise and fall of a multidisciplinary and preventive approach. In: *Supporting Health at work* (ed.: Peter Westerholm, IOSH Services Limited 2007-08-30
- Kamp, A. & Koch, C., 1998, Arbejdsulykker i dansk industry - nye strukturer, sikkerhedskultur eller ulykkesfugle [Work accidents in Danish manufacturing – new structures, safety culture or jinxes?], Copenhagen: Arbejds miljøfonden.
- Koch, C., 2002, Multiple safety cultures at the construction site in B. O. Uwakweh & I. A.
- Kvorning, L. V., Grøn, S. & Limborg, H. J., 2016-1, Fra arbejdsmiljøindsats til daglig praksis i små virksomheder [From work environment initiatives to daily practices in small companies], *Tidsskrift for Arbejdsliv* 18(1), 52–72.
- Kvorning, L., Grøn, S., & Limborg, H.J. 2016-2. Hvordan bliver en forebyggelsespakke til en gave? - En realistisk evaluering af, hvordan små virksomheder transformerer en arbejdsmiljøindsats til daglig praksis. *Tidsskrift for Arbejdsliv* 2016.1.
- Limborg, H. J. & Grøn, S. 2014a. Networks as a Policy Instrument for Smaller Companies, *Nordic Journal of Working Life Studies* 4(3): 53–55.
- Limborg, H. J. & Grøn, S. 2014b. Research note: Networking among small and medium-sized enterprises - meeting the challenge of promoting safety and health measures, *Journal of Small Enterprise Research* 21(2): 214–222.
- Limborg, H.J., Grøn, S., & Jensen, M.F. 2014. Networking among small and medium-sized enterprises - meeting the challenge of promoting safety and health measures. *Small Enterprise Research Volume 21 Number 2 for 2014*.
- Limborg, H.J. & Petersen, J.V. 2008. Arbejds miljørådgivningens fremtid – set i historisk lys. PAVLA projektet. *TeamArbejdsliv* 2008.

- Madsen, C.U., & Hasle P. 2017. Commitment or Compliance? – Institutional Logics of Work Environment Management –, *Nordic Journal of Working Life Studies*, 7 (2): 17-38.
- Milieu Ltd. Brussels, 2013, Evaluation of the EU Occupational Safety and Health Directives - COUNTRY SUMMARY REPORT FOR DENMARK VC/2013/0049. Brussels: European Commission.
- Minkarah, I.A., 2002. Construction Innovation and Global Competitiveness, 10th International. Ohio: University of Cincinnati.
- DS/OHSAS 18001, 2008, Occupational health and safety management systems – requirements. Copenhagen: Dansk Standard.
- Arbejdstilsynet, 2014, Evaluering af branchearbejdsmiljørådernes formidlingsaktiviteter 2007-2012. Copenhagen: Oxford Research A/S, Kubix, RUC og Luama.
- Pawson, R., 2006. Evidence-based Policy. A Realist Perspective. University of Leeds, UK: Sage Publications.
- Pawson, R., & Tilley, N. 1997. Realistic evaluation. Los Angeles, London, New Delhi, Singapore, Washington DC: Sage Publication.
- Hasle, P., Nielsen, K.T., Limborg H.J., Bramming, P., Seim R., 2012, Evaluering af arbejdsmiljøindsatser - Muligheder og begrænsninger. [PDF] Copenhagen: CAVI.
- Samarbejdsaftalen, 2006, Dansk Arbejdsgiverforening og Landsorganisationen i Danmark: Samarbejdsaftalen. Copenhagen: Samarbejdsnævnet. Available at: <http://www.samarbejdsnaevnet.dk/samarbejdsaftalen/samarbejdsaftalen-af-2006/>.
- Seim, R., & Limborg, H.J., 2016.1, Professionalisering uden profession – udvikling af rollen som arbejdsmiljøprofessionel. *Tidsskrift for Arbejdsliv*.
- Retsinformation, The Working Environment Act, 2017, Beskæftigelsesministeriets lovbekendtgørelse nr. 1084. Copenhagen: Retsinformation.
- Tompa E., Kalcevich C., Foley M., McLeod C., Hogg-Johnson S., Cullen K., et al. 2016. A systematic literature review of the effectiveness of occupational health and safety regulatory enforcement. *Am J Ind Med*. 2016 11/01;59(11):919-33.
- Vedung, E., 1998. Policy instruments: typologies and theories in M.-L. Bemelmans-Videc, R. C. Rist, & E. Vedung (eds.) *Carrots, sticks & sermons - policy instruments and their evaluation*, New Brunswick, NJ: Transaction Publishers, pp. 21–58.



Publications Office