European Agency for Safety and Health at Work

Promoting occupational safety and health through the supply chain

Literature Review

European Agency
for Safety and Health
at Work

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Table of Contents

List of figures and tables

Acronyms

BSI	British Standards Institution
CDM	Construction (Design and Management)
COM	Commission of the European Communities; European Commission
CSR	Corporate Social Responsibility
DEMI	Department of Mechanical and Industrial Engineering
BSCI	Business Social Compliance Initiative
ECHA	European Chemicals Agency
ECIF	European Construction Industry Federation
ENWHP	European Network of Workplace Health Promotion
EU-OSHA	European Agency for Safety and Health at Work
EURATEX	European Apparel and Textile Organisation
EU	European Union
EBRD	European Bank for Reconstruction and Development
EFA	European Framework Agreement
EFBWW	European Federation of Building and Woodworkers
EMAS	Eco-Management and Audit Scheme
ETUC	European Trade Union Confederation
ETUF-TCL	European Trade Union Federation - Textiles, Clothing, Leather
FEB	Federation of Enterprises in Belgium
FIOH	Finnish Institute for Occupational Health
GFA	Global Framework Agreement
GRI	Global Reporting Initiative
HAE	Hire Association Europe
HSE	Health and Safety Executive
HSL	Health and Safety Laboratory
HSWA	Health and Safety at Work Act 1974 (United Kingdom)
ICT	Information and Communication Technology
IFA	International Framework Agreement
IFA	Institute for Occupational Safety and Health of the German Social Accident Insurance
ILO	International Labour Organisation
IOSH	Institution for Occupational Safety and Health (United Kingdom)
MNE	Multinational Enterprise
NGO	Non-Governmental Organisation
NHS	National Health Service

OECD	Organisation for Economic Co-operation and Development
OSH	Occupational Safety and Health
OHSAS	Occupational Health and Safety Assessment Series
PREVENT	Belgian Institute for Occupational Safety and Health
REACH	Registration, Evaluation, Authorisation and restriction of CHemicals
RESPIRO	Responsibility in Procurement
SAI	Social Accountability International
SME	Small and Medium sized Enterprise
SCM	Supply Chain Management
SDS	Safety Data Sheet
SHE	Safety, Health and Environment
SK SCC	Sektorkomittee Sicherheits Certifikat Contraktoren (Germany)
SLCM	Social Life Cycle Assessment
SP	Sustainable Procurement
SRP	Socially Responsible Procurement
SRPP	Socially Responsible Public Procurement
SSCM	Sustainable Supply Chain Management
TNO	Netherlands Organisation for Applied Scientific Research
UEAPME	European Association of Craft, Small and Medium-sized Enterprises
VOC	Volatile Organic Compounds
WHO	World Health Organisation
WB	World Bank

Executive Summary

In today's global and national economies, businesses increasingly rely on the outsourcing of parts of their activities and processes. Companies thus function and compete more and more on a supply-chain level, in specific networks with their suppliers and service providers. This outsourcing trend and growing importance of supply chains has its implications for the working conditions and health and safety of workers of supplier and contracting companies. This report therefore sheds light on occupational safety and health (OSH) within these complex supply chain networks. Based on a literature, policy and case study review it attempts to give an overview of how OSH can be managed and promoted through the supply chain, and which drivers, incentives and instruments exist for companies to encourage good OSH practices among their suppliers and contractors.

The report focuses specifically on two main networks or relationships between companies and the members of their supply chain: the primary network (a company and its suppliers of certain goods and materials) and the secondary network (a company and its contractors and subcontractors providing specific services such as maintenance, construction, cleaning or catering activities). Both networks are affected by stakeholders such as the government, non-governmental organisations (NGOs) and customers. The secondary network has already been explored in previous reports by the European Agency for Safety and Health at Work (EU-OSHA). This is less the case for OSH in relation to the primary supply chain network.

The first section of the report outlines the concept of OSH in the supply chain, explaining what is meant by the terms focal company, supply chain and networks, and the relationships between the different actors in the supply chain, the factors that shape them and their role in promoting OSH amongst the different supply chain actors.

The triggers, strategies and incentives to promote OSH in the primary and secondary supply chain networks are examined and discussed in the next two sections. The relationships between the actors in both networks are explained. The drivers for companies to implement effective and sustainable OSH practices in their suppliers and (sub) contractors are explored, and some of the strategies and instruments that exist to influence the members of the supply chain are listed. The role of the government and policy-makers, both at national and European level, is addressed as well. The literature and policy findings are further supported by specific case studies.

Companies have, with regard to their primary network, different motivations for promoting OSH among their suppliers and/or ensuring that sustainable products are produced and used throughout the supply chain. Research literature suggests that such initiatives have not emerged purely out of market-based business considerations, or from sustainability and corporate social responsibility (CSR) agendas, but through a process in which such approaches are influenced and shaped by external pressures such as legal demands and the concerns of stakeholders, consumer groups and other social pressure groups. Considerable differences can, in this regard, be noticed between sectors and industry types (heavily regulated industries such as the chemical industry act in a different context than, for example, the clothing and textile sector). The size of companies and their supply chain is another important factor (local supply chains of small companies cannot, for example, be compared with large, international supply chains of multinational enterprises). Successful attempts to influence businesses in promoting OSH throughout their supply chains often involve mixed forms of regulation, in which top-down state regulation is combined with market-based measures and initiatives.

Companies apply different strategies and instruments to impose OSH requirements to their suppliers. These actions are often part of a broader sustainable supply-chain management (SSCM) approach, and focus on the selection, auditing, monitoring, and training of the suppliers concerned. Examples are specific procurement strategies (applying OSH standards for selecting suppliers), management standards (such as SA 8000, OSHAS 18001 or ISO 26000); and related

third-party certification; codes of conduct (either individual or joint); International Framework Agreements (transnational agreements negotiated between multinational companies and global union federations); and other industry collaborations and partnerships. The report provides some specific case studies of joint initiatives between companies or sector organisations and governmental bodies, both at international and national level.

There is a lack of research evidence on the effectiveness of the above mentioned arrangements, especially in terms of OSH promotion. Research in the broader domain of sustainability however, indicates that the most successful initiatives comprise a combination of approaches, with commitment strategies and consequent interventions that communicate clear rewards for engaging in environmental and socially responsible behaviour.

Whereas the promotion of OSH in the primary network is mainly voluntary by nature and driven by external pressure, business advantages and sustainability agendas, companies are, for the major part, driven to pay attention to OSH in their secondary network, for example, the contracting chain (involving the client company and its (sub-) contractors), and by requirements set in the national and relevant EU legislation (in particular by the Framework Directive, Construction Sites Directive, and Procurement Directives (for public bodies)).

The involvement of clients and (sub-) contractors in providing adequate OSH for their workers implies careful attention at all stages. It begins at the pre-contract stage with a thorough assessment of (sub-) contractor competence and the selection of safe contractors. It continues throughout the job execution via close cooperation of all parties and appropriate levels of supervision. At contract termination, it ends by reviewing and recording the OSH performance of contractors and sub-contractors.

Safety certification schemes have become important instruments with regard to the promotion of OSH in the contracting chain. They are applied by companies to ensure the performance and competencies of contractors with regard to OSH and environmental issues, and to enable them to provide an answer to the legislative requirements with regard to (sub-) contracting. In many European countries (such as the Netherlands, Belgium, France, Germany, Austria, United Kingdom) and particularly in high-risk sectors, such voluntary contractor safety certification schemes have gained substantial commercial value, as they give access to a certain market. The national governing bodies of the different national schemes are currently examining how a more common, EU approach could be taken. This is necessary as companies within the EU are increasingly confronted with (sub-) contractors from abroad, often certified to another scheme than that recognised in the client's country.

A relatively new, but interesting instrument with regard to the management of (sub-) contracting activities, is the SCP/VCO scheme. This scheme, which originates from the Netherlands, and is also applied in Belgium, allows companies better managing and coordination of SCC/VCA-certified contractors. SCP/VCO is also useful for design, project, coordination and engineering firms that manage SCC/VCA-certified (sub-) contractors.

Apart from procurement strategies and safety certification schemes, the literature addresses several other approaches that can be used to diminish work accidents and ill health in the contracting chain. These approaches focus on issues such as contractual clarification of responsibilities and planning; communication, cooperation and training; joint control procedures; and contractor evaluation.

The conclusions section summarises the main findings and most important messages with regard to the management and promotion of OSH within the primary and secondary supply chain networks. It also provides some recommendations on how companies' initiatives and global, EU and national policy can improve OSH practices in the supply chains.

1. Introduction

In today's global and national economies, businesses increasingly rely on the outsourcing of parts of their activities and processes. Companies function and compete thus more and more on a supply-chain level, in specific networks with their suppliers and service providers. This outsourcing trend and growing importance of supply chains has its implications for the working conditions and health and safety of workers of supplier and contracting companies. Therefore the EU-OSHA (European Agency for Safety and Health at Work) decided to research OSH within supply chains and thus broaden the focus of OSH to more complex networks of companies rather than just on single companies.

There are two main supply chain networks or relationships between companies and the members of their supply chain: the primary network (a company and its suppliers of certain goods and materials) and the secondary network (a company and its contractors and subcontractors providing specific services such as maintenance, construction, cleaning or catering activities.

This report gives an overview, analysis, conclusions and recommendations on how OSH can be promoted through the above-mentioned supply chain networks. The review examines and discusses the drivers and instruments for so-called 'focal' companies to promote OSH practices in those networks. Furthermore, the governmental influence (national and EU) on both networks is investigated. The second network, which describes the relationship between the company and its (sub-) contractors, appeared to be a critical issue for OSH and thus is already well explored in EU-OSHA reports (EU-OSHA; 2000, 2002). Therefore, this report does not aim to be exhaustive in terms of OSH problems and tools, but to give a general overview of the relationships between the actors in the different networks and the framework in which OSH is promoted.

This review is intended as an informative text for business managers, OSH practitioners and policy and decision makers. This is because the academic research related to the topic is published in scientific books and journals that are often less accessible for non-academic OSH professionals and policy makers.

The report is structured in six chapters: The next chapter, chapter 2, outlines the concept of OSH in the supply chain, explaining what is meant by the terms focal company, supply chain and networks, the relationships between the different actors in the supply chain, the factors that shape them and their role in promoting OSH amongst the supply chain members.

Chapters 3 and 4 describe the two networks respectively the focal company and its suppliers (flow of goods and materials) and the focal company and its (sub-) contractors (flow of labour). Definitions related to each network are explained. The relationships between the actors in each network are examined, the drivers for a focal company to seek implementation of sustainable OSH practice in the suppliers and/or (sub-) contractors are explored and some of the strategies and instruments that exist to influence the members of the chain are listed. A comprehensive listing and assessment of the instruments is not intended. The role of government, both national and European is investigated. The literature findings are supported by case studies and snapshot case studies.

Chapter 5 summarises the main findings and most important messages with regard to the promotion of OSH practices in the supply chain. Conclusions are drawn and recommendations are given on how companies' initiatives and global, EU and national policy can improve OSH practices in the supply chains. This chapter ends with the description of 'policy pointers'.

2. Supply chain approach towards OSH

Many OSH challenges require actions well beyond the boundaries of a single company. This is because many companies work in supply chains. A supply chain is most often ruled or governed by one company or organisation, the so called 'focal' company. The focal company forms the centre of the supply chain. It is provided with goods/materials from suppliers and concludes contracts with companies who act as service or production providers. An example is a construction or maintenance project which frequently involves a prime contractor who makes use of sub-contractors (contracting chain). These sub-contractors, in turn, can engage other sub-contractors resulting in a complex chain of companies and responsibilities in order to work safely. Another example is the identification of substances usage throughout the supply chain, or the presence of substances from the Candidate List in products and articles as part of REACH (Registration, Evaluation, Authorisation and restriction of CHemicals). The aforementioned examples show that a single company can take proactive action, but would not be able to 'solve' the OSH problem(s) alone. A simplified supply chain (in blue colour) and the various relationships between a company and its surroundings are presented in Figure 1.

Figure 1: Relationships between a company and its surroundings
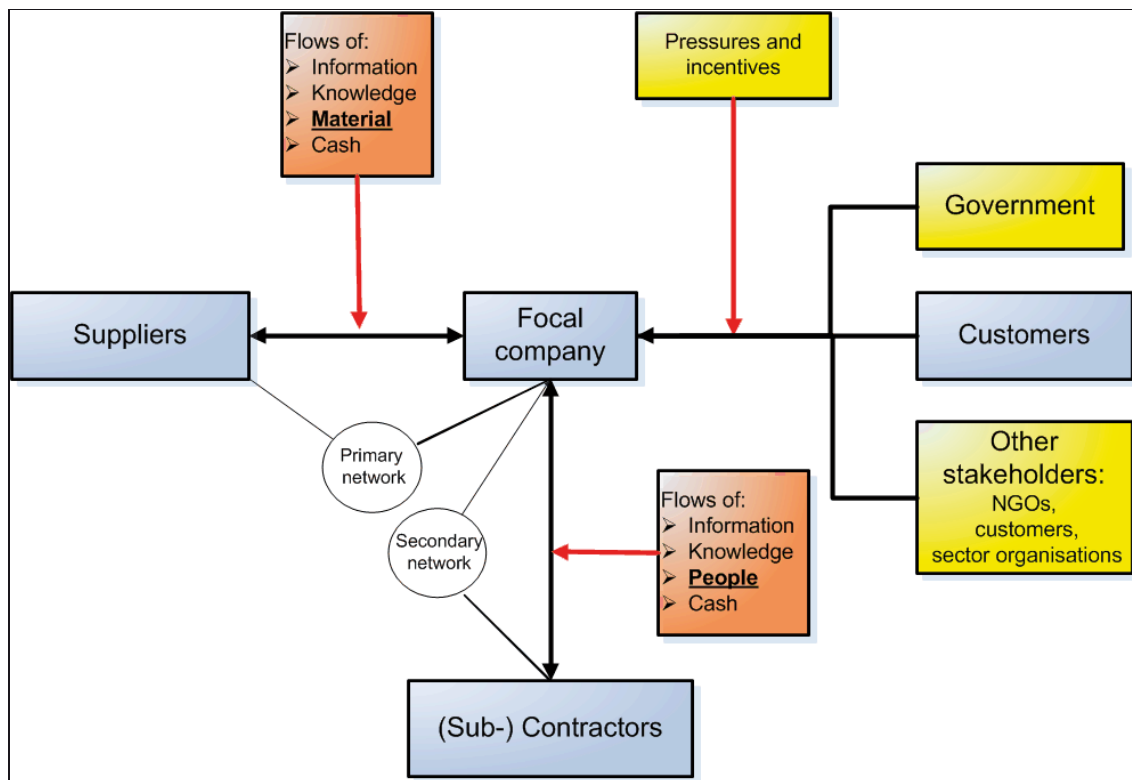
Source: adapted from Seuring & Muller, 2008

Two main types of supply chain networks of organisations have to be considered in terms of OSH (Figure 1):

- **Companies and their suppliers (supply chain) - the primary network**: Within this network there is primarily a flow of goods and materials. Companies are linked through information, knowledge, materials and capital flows. A chain suggests that companies are linked in a straight line. This is often seen as a primary network of companies, in which production, distribution and sales of goods occur. A focal company can use a diversity of instruments to influence the members of its supply chain to apply sustainable OSH practices, such as economic pressure or incentives, or policies to deal with suppliers, retailers and purchasers. This network is further explored in chapter 3 of this report.

- **Companies linked together by contracting bonds (contracting chain) - the secondary or supporting network:** The secondary network comprises a flow of people and their services (contracting and sub-contracting). Companies are linked through information, knowledge, people and capital flows. It is getting more and more common for construction work, maintenance projects and other work (ICT, cleaning, catering) to be performed by contractors. Often this work is of a sporadic nature which implies that employees are needed only temporarily. Specialised companies and their employees are hired to perform the work better, faster and usually cheaper. Not only do employers hire contractors, these contractors can hire sub-contractors and a chain of companies emerges. The work takes place mostly at the premises of the focal company/organisation. This network is further explored in chapter 4 of this report.

Both networks are affected by stakeholders such as the government, non-governmental organisations (NGOs) and customers. The government is an important stakeholder which can bring in regulations, economic incentives and procurement and recognition policies (Figure 1) to ensure primary and secondary networks apply sustainable OSH practices.

As part of the primary and secondary networks, and as a response to pressures and incentives, more and more focal companies are moving to a strategic OSH policy, starting internally (internal policy, operations and culture) and extending it to the whole chain of suppliers, clients, sub-contractors and stakeholders.

3. Focal companies and their suppliers (supply chain): the primary network

This chapter focuses on the relationships between the focal company and its suppliers, the 'primary network' which comprises a flow of goods and materials.

3.1. Definitions and general aspects of OSH in the supply chain

A **supplier** is a party that supplies goods or services. A supplier may be distinguished from a contractor or subcontractor, who commonly adds specialised input to deliverables. The terms '**supply chain**' has been defined by Handfield and Ernest (1999) as encompassing 'all activities associated with the flow and transformation of goods from raw materials stage (extraction), through to the end user, as well as the associated information flows. Material and information flow both up and down the supply chain.' They define **Supply chain management (SCM)** as 'the integration of these activities through improved supply chain relationships to achieve a sustainable competitive advantage'.

Walters (2009) addresses the increased **complexity of supply chains**: 'the supply covers simple transactions between buyers and suppliers as well as complex arrangements in which there may be multiple links in supply chains' (p. 49). For example, a paint supply chain consists of substances manufacturers, paint producers or formulators, and ultimately, application of the paint. These are the links of the supply chain. It is quite possible that this paint supply chain consists of more links, such as the distributor of raw materials to the paint industry. See Figure 1 for the relationships between the companies in the supply chain.

Current business and organisational practices have led to the increased importance of supply chains to business strategy as well as within national and global economies (Walters, 2009). Increasing globalisation and continued outsourcing cause companies to function and compete on a supply chain level. Hence, focal companies of supply chains might be held responsible for the environmental and social performance of their suppliers. **Focal companies**, according to Seuring and Müller (2008) are those companies that usually:

(1) rule or govern the supply chain;

(2) provide the direct contact to the customer; and

(3) design the product or service offered.

This is especially the case for brand-owning companies, as they are likely to come under pressure from stakeholders, such as NGOs (Carter and Jennings, 2002). For example, focal companies such as C&A and H&M were held responsible for occupational health issues at their suppliers in India (Graafland, 2002, Volkskrant, 2010) and Nokia was criticised about the labour conditions in its factories in Asia (Wilde and de Haan, 2006). Generally inhuman working conditions (Graafland, 2002, Preuss, 2001), contaminations of the (local) environment (Seuring, 2001) or use of hazardous substances (Wilde and de Haan, 2006) were frequently mentioned as problems. Therefore, focal companies are taking proactive actions to promote better environmental and social conditions, including OSH performance at their suppliers.

3.2. Triggers to promote OSH in the supply chain

The majority of the literature related to the effects of supply chain management on OSH addresses the different forms of employment, such as the supply of labour through employment agencies, labour leasing, subcontracting or outsourcing (secondary network, Figure 1). There is a

great deal of evidence supporting the view that the business orientations of supply chain businesses in the secondary network (see Chapter 4) lead to adverse health and safety effects (Walters, 2009). However, literature on the primary network shows mainly positive effects of OSH. Walters and James (2009) have reviewed a number of studies where the economic relations involved in the supply chain support improvements in health and safety arrangements. This results from the ability of focal companies to make their suppliers adopt specified policies and practices (Walters, 2009; Walters and James, 2009).

There has been little research undertaken on the impact of focal company initiatives to improve OSH within the supplier organisations of the primary network. Those initiatives can be in generally grouped in market-based (or private), regulatory driven (Walters and James, 2009) and joint governmental/private initiatives.

3.2.1. Market-based or private initiatives

According to Walters and James (2009) these initiatives are usually a consequence of **concerted pressure from the public or from specific interest groups**. The market-based or private attempts are featured most extensively in the **sustainability**[21]**, corporate social responsibility (CSR) and fair-trading agendas** of the focal companies, especially among those engaged in global trading (EU-OSHA, 2004; Walters and James, 2009; Cunningham et al., 2010).

Carter and Easton (2011) have discussed the evolution and future of sustainable supply chain management (SSCM) and concluded that the broad concept of sustainability, and the key interfaces that sustainability has with supply chain management, strongly suggest that sustainability is a licence to do business in the twenty-first century; and supply chain management is an integral component of this licence. The goal of sustainability suggests a continuous search for the right balance between social, environmental and economic performance (Seuring, 2008, Carter and Rogers, 2008, Hutchins and Sutherland, 2008). However, more cultural and ethical elements are being added to the social dimension (Seuring, 2004; Kleindorfer et al., 2005; Linton et al., 2007). For example Hutchins and Sutherland (2008) propose several measures of social sustainability to be incorporated in supply chain decision-making (labour equity, healthcare, safety, and philanthropy) that can help a company establish a comprehensive social footprint.

Although efforts to characterise the social dimension of sustainability have, until recently, been in abeyance, the issues of human health and safety have always been emphasised. Hence, OSH elements are inseparable parts of the sustainability indicators for companies. Tsuda and Takaoka (2006) propose a comprehensive sustainability index, the 'Gross Social Feel-good' (GSF) index, focused on environment, economy, safety, health, comfort and happiness, with an emphasis on the safety, health, and comfort indices. Furthermore, OSH elements are incorporated in the Performance Indicators of the Global Reporting Initiative (GRI)[2] used by the majority of focal companies for sustainability reporting and are a substantial part of the codes of conduct for suppliers. The World Bank (WB) Group's Investment Climate Department has commissioned research to determine the content of CSR codes of conduct in targeted industry sectors. The report shows that OSH issues are of increasing concern of the companies in all sectors (WB, 2003). The inclusion of OSH issues in the codes of conduct of 30 companies involved in International Framework Agreements (IFAs) (see also 3.1.3) have been studied by Tulder et al. (2009) and they found that European firms, culturally more used to stakeholder involvement, are

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[1] The most widely quoted definition of sustainability and sustainable development is that of the Brundtland Commission of the United Nations on March 20, 1987: 'sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs.' At the 2005 World Summit it was noted that this requires the reconciliation of environmental, social and economic demands - the "three pillars" of sustainability.

[2] GRI is the world's most widely used sustainability reporting framework. The GRI sets out principles and indicators that organisations can use to measure and report their economic, environmental and social performance. For further information, see: http://www.globalreporting.org/CurrentPriorities/SupplyChain.

more capable of addressing the safety and health issues in international supply chains than their US and Japanese competitors. The likelihood of codes being implemented seems closely related to the type of corporate CSR approach, namely in-active, re-active, active and pro-active (van Tulder et al., 2009). Walters and James (2009) also argue that focal companies 'can exploit their position to secure compliance from the supplier on a range of issues that are conditional to the terms under which goods or services to the customer are to be supplied and can insist that health and safety and working conditions be included in these terms' (p. 51). This is essentially the approach adopted by the CSR agendas of companies ruling global supply chains and promulgated in the various ethical trading agreements and codes of conduct that have been introduced (Litvin, 2003; Elliot and Freeman, 2003; Walters and James, 2009).

EU-OSHA's report on 'corporate social responsibility and safety and health at work' explores the interactions between CSR and OSH at company and policy level (EU-OSHA, 2004). The authors conclude that health and safety at work is an essential component of CSR. Despite the fact that the report and the presented case studies are not directed to the supply chain, it can be seen that the supply chain actions are part of the companies' CSR agendas. A number of case studies (examples of CSR good practice at companies) offered by the report include mission statements and activities directed to the supply chain (suppliers, sub-contractors, broader stakeholders). Another EU-OSHA report also discusses OSH as an essential component of CSR (Sowden and

business management, mainly at company level, it states that CSR practice and the role of OSH in it are also related to the corporate supply chain.

The literature on sustainability, CSR and global supply chains provides more insight into the triggers for sustainable supply chain management (SSCM). Here, the external pressure and incentives set by different groups are discussed in more detail than in the OSH literature. Seuring and Müller (2008), for example, analyse 191 papers on SSCM published between 1994 and 2007 and classify the **pressure and incentives** for sustainability in a supply chain according to:

- legal demands;
- customers' demands;
- response to stakeholders;
- competitive advantages;
- environmental and social pressure groups; and
- reputational loss.

These issues are interrelated and boundaries between them are often hard to ascertain. For example pressure groups can be a 'central trigger', but at the same time companies might fear that customers would boycott their products if social or environmental problems in their supply chain were reported. This would also lead to loss in reputation. Many companies see corporate reputation, brand image and trust as fundamental components of business success (Roberts, 2003). Good reputation increases the length of time that a firm sustains above-average financial returns.

Another aspect of customer demands is related to the implementation of social (for example. SA 8000 and OHSAS 18001) and environmental (for example ISO 14001) management systems and the recent sustainability standard ISO 26000 (see also 3.3). Focal companies are increasingly asking their suppliers to perform according the guidelines set by those standards (Seuring and Müller, 2008). In addition Walters and James (2009) have discussed **profitability and business efficiency** as a driver for focal companies to promote and support health and safety management among their suppliers. Further, Beaumont et al. (1996) suggest that positive effects may also result from customer demands, and that suppliers' improved working practices may lead to better health and safety management for workers as well as increased efficiency and profitability.

3.2.2. Regulatory driven initiatives

Based on a thorough literature review, Walters and James (2009) identified a number of initiatives that had been undertaken both internationally and nationally to improve health and safety in supply chains. They include regulatory initiatives, such as statutory requirements on procurement in some European countries (such as the Belgian policy regarding OSH in procurement, described in an EU-OSHA report (EU-OSHA, 2000, pp. 153–160), Australian provisions in the clothing industry, and the EU's REACH regulatory regime. Walters and James (2009) suggest that particular socioeconomic and regulatory environments have an important bearing on both global and domestic supply chains. In this respect some evidence for the actions of the focal company are found in the literature. For example, positive effects on health and safety are more likely to occur in **heavily regulated sectors** such as the chemicals industry, where rules demand these kinds of intervention on the part of customers and clients, or where there is some obvious business gain to clients from wielding their economic power to improve health and safety (Wright et al., 2005; Walters and James, 2009). Furthermore, James et al. (2007) argue the need for interventions centred in the regulation of the heads of supply chains. Walters and James (2009) conclude that as the 'research on global supply chains and that more generally in governance in the global economy makes plain, successful attempts to influence business approaches to requiring improved labour conditions in their supply chains frequently involve mixed forms of regulation, in which **top-down state regulation** is **mixed with private or market-based measures** that are developed, implemented and monitored through the engagement of businesses, traditional state regulatory inspection, trade unions, consumer groups and other social interest groups, as well as through media attention' (p. 62). They point out that there are similar measures and actions in the product supply chains - especially with regard to hazardous chemicals.

Based on the Walters and James's study in 2009, the EU's REACH regulation can be seen as an example of market regulatory approach to influence conditions of work and labour standards within the supply chains. REACH obliges all the companies in a supply chain to exchange information about substances and mixtures and their safe use. Hazardous substances are used in many workplaces and their risk to health can be minimised if there is effective communication between suppliers and users. Key factors for that are the dependencies of one end of the supply chain on the other end, and the unevenness of the market power wielded at each end. For instance, chemical supply chains are very complex. They may be long chains where there is a risk of the flow of safety information being interrupted. Walters and James (2009) give examples of both close relationships and good communication in the supply chain, such as in the textile industry, but also poor risk communication, for example in areas such as graphic printing, paints, sealants and adhesives. They conclude that unnecessary and risky workplace exposures to hazardous substances still occur 'although technical knowledge exists to minimise [these] the risks…and despite regulatory requirements on suppliers' information and the well-established finding that users, especially those in smaller firms, depend most on this information (Walters and James, 2009; Musu, 2004; ECLIPS, 2004). Nevertheless, good practices do exist and two examples are presented in the boxes below. One example covers the EU's REACH regulation, which serves as a trigger for a focal company to identify and mobilise its supply chain to collect and communicate information on the safe use of chemicals. The other example is related to an EU Life project, intended to provide authorities, industry, trade unions, NGOs and other interested parties with information and tools to facilitate the use of safer alternatives to hazardous chemicals in products and processes, and to motivate industry and third parties to give information on these alternatives within their supply chains.

Effective supply chain communication under REACH: Corus in cooperation with TNO

The new EU chemical regulation REACH came into force on 1 June 2007. It addresses manufacturers, distributors and commercial users of chemicals and next to environmental protection, it particularly concerns OSH issues. REACH specifies the obligations to exchange information about substances or mixtures. These obligations apply to the entire chain. The SDS is the official communication tool for transferring information about chemical substances in the supply chain. The supply chain communication plays a central role both in the success of the REACH registration and later on when companies have to deal with the revised eSDS of which the first are distributed from December 2010.

The project was initiated by Corus (now Tata Steel, a focal company) and was carried out together with the Netherlands Organisation for Applied Scientific Research (TNO). It aimed to develop a plan for chain communication within REACH, which will enable Corus to build up an effective communication structure for, among other things, cases of exposure.

A preliminary investigation of the product chain took place along with interviews with those involved in that chain. These people then simulated a chain in an interactive workshop in which success and failure factors, solutions and actions were examined, with the goal of improving communication.

The project led to elaboration of a plan for effective REACH communication for Corus and its supply chain.

See also case study, Annexes, section 6.1.3

SUBSPORT - Substitution Support Portal

SUBSPORT is a two-year EU Life project, due to end in 2012. It is funded by the LIFE programme of the European Union, The German Federal Institute for Occupational Safety and Health (BAuA) and the Austrian Federal Ministry of Agriculture, Forestry, Environment and Water Management.

SUBSPORT is intended to provide authorities, industry, trade unions, NGOs and other interested parties with information and tools to facilitate the use of safer alternatives to hazardous chemicals, and to motivate industry and third parties to give information on these alternatives within their supply chains.

Substitution aims to eliminate or reduce the risks connected to the use of hazardous substances, by replacing them with less hazardous substances or by other technological or organisational solutions. As the intention of substitution is not to shift risk, all aspects of potential risk have to be assessed and a comparison of level and types of hazard factors is necessary. This makes substitution a complex issue, requiring a range of expertise and tools for assessment and decision making as well as communication throughout the supply chains, plus technical design and cost assessment. There are several legal and (international) frameworks and conventions promoting the use of less hazardous alternatives in order to limit, reduce or cease emissions.

The goal of the SUBSPORT project is to develop an internet portal with information and case studies on safer alternatives. The case study database will provide many examples of successful substitutions of dangerous substances in different sectors and uses, as this can inspire other companies to follow suit. SUBSPORT will also link to other databases with case studies. Companies at any level of the supply chain are therefore able to identify and propose safer alternatives.

SUBSPORT (http://www.subsport.eu) also provides guidance for evaluating substances and managing their substitution, which may be used all along the supply chain. There is, for example, the very useful 'List of Lists' database. This contains 29 lists of substances that are legally or voluntarily restricted or which are recommended for restriction. These lists allow companies to check whether other organisations have concerns about these substances and whether they need to be substituted.

There is a limited amount of literature addressing regulatory driven initiatives by focal companies to improve health and safety in their suppliers. Seuring and Müller (2009) point out that laws are the most frequently mentioned triggers for sustainable supply chain management. They also suggest that all modes of **governmental control,** whether by local municipalities, national or multi-national governments, are of great relevance. Salam (2009) suggests in this regard that the drivers for CSR in purchasing are:

- people-oriented organisational culture,
- top management leadership,
- individual values of purchasing employees,
- employee initiatives,
- government regulations; and
- customer pressure.

Brammer and Walker (2011) investigated how public authorities are applying sustainable procurement (SP) practices internationally. This was done through a questionnaire survey of public procurement professionals in 25 countries. This revealed that environmental issues are commonly part of global SP practices and are not a point of differentiation in countries' regulatory environments. However, a significant variation in other aspects of SP was noticed, such as buying from diverse suppliers, supporting human rights and ensuring safe practices in the supply chain. With regard to OSH, for example, Western Europe, Scandinavia, and the USA and Canada all score significantly lower than the UNITED KINGDOM, i.e. safety issues are less prevalent in public procurement than in the United Kingdom. The authors conclude that where SP policy and legislation exist, they are widely implemented by public bodies. However, where policies are more voluntary, competing necessities and priorities often dominate. For example, the imperative to stimulate competition and efficiency by widely tendering within the EU often competes, or is inconsistent, with the goal of widening participation in SP (Brammer and Walker, 2011, p. 471).

OECD Guidelines for Multinational Enterprises

The Organisation for Economic Co-operation and Development (OECD)[3] has recently published its updated Guidelines for Multinationals (OECD, 2011). These are recommendations addressed by governments to multinational enterprises (MNEs) operating in or from adhering countries. They provide non-binding principles and standards for responsible business conduct in a global context, consistent with applicable laws and internationally recognised standards. The guidelines are the only multilaterally agreed and comprehensive code of responsible business conduct that

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[3] The OECD is a forum where governments work together to address the economic, social and environmental challenges of globalisation. The OECD is also at the forefront of efforts to understand and to help governments respond to new developments and concerns, such as corporate governance, the information economy and the challenges of an ageing population. The Organisation provides a setting where governments can compare policy experiences, seek answers to common problems, identify good practice and work to co-ordinate domestic and international policies. The OECD member countries are: Australia, Austria, Belgium, Canada, Chile, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Israel, Italy, Japan, Korea, Luxembourg, Mexico, the Netherlands, New Zealand, Norway, Poland, Portugal, the Slovak Republic, Slovenia, Spain, Sweden, Switzerland, Turkey, the United Kingdom and the United States. The EU takes part in the work of the OECD.

governments have committed to promoting. They aim to promote positive contributions by MNEs to economic, environmental and social progress worldwide and to minimise the difficulties to which their various operations may give rise.

The Guidelines include the 'Declaration on International Investment and Multinational Enterprises' as adopted on 25 May 2011 by 42 adhering governments and contain, among others, recommendations for responsible business conduct in a global context. These recommendations also cover the topic of employment and industrial relations. In this regard it is mentioned that enterprises should 'take adequate steps to ensure occupational health and safety in their operations' (OECD, 2011, p. 36). It is stated that this reference to OSH implies that MNEs are expected to follow rules and industry norms to minimise the risk of accidents and injury to health. This encourages enterprises to try to improve OSH in all parts of their operation, even when this is not required by the laws of the countries in which they operate. It also encourages enterprises to respect the right of workers to withdraw their labour when it reasonable to believe there is an imminent and serious risk to health or safety. Health and safety concerns are echoed elsewhere in the guidelines, most notably in chapters on Consumer Interests and the Environment (OECD, 2011, p. 40).

The OECD guidelines also mention the following general policy recommendations and relating commentary on MNEs and their supply chains (OECD, 2011, pp. 20 ff.)

Enterprises are encouraged to (...) engage in or support, where appropriate, private or multi-stakeholder initiatives and social dialogue on responsible supply-chain management while ensuring that these initiatives take due account of their social and economic effects on developing countries and of existing internationally recognised standards.

Where enterprises have large numbers of suppliers, they are encouraged to identify general areas where the risk of adverse impacts is most significant and, based on this risk assessment, prioritise suppliers for due diligence.

To avoid causing or contributing to adverse impacts on matters covered by the guidelines through their own activities includes their activities in the supply chain. Relationships in the supply chain take a variety of forms including, for example, franchising, licensing or subcontracting. Entities in the supply chain are often MNEs themselves and, by virtue of this fact, those operating in or from the countries adhering to the declaration are covered by the guidelines.

In the context of its supply chain, if the enterprise identifies a risk of causing an adverse impact, then it should take the necessary steps to cease or prevent that impact.

The guidelines recognise that there are practical limitations on the ability of enterprises to effect change in the behaviour of their suppliers. These are related to product characteristics, the number of suppliers, the structure and complexity of the supply chain, the market position of the enterprise vis-à-vis its suppliers or other entities in the supply chain. However, enterprises can also influence suppliers through contractual arrangements such as management contracts, pre-qualification requirements for potential suppliers, voting trusts, and licence or franchise agreements. Other factors relevant to determining the appropriate response to the identified risks include the severity and probability of adverse impacts and how crucial that supplier is to the enterprise.

'Enterprises may also engage with suppliers and other entities in the supply chain to improve their performance, in co-operation with other stakeholders, including through personnel training and other forms of capacity building, and to support the integration of principles of responsible business conduct compatible with the guidelines into their business practices. Where suppliers have multiple customers and are potentially exposed to conflicting requirements imposed by different buyers, enterprises are encouraged, with due regard to anti-competitive concerns, to participate in industry-wide collaborative efforts with other enterprises with which they share common suppliers to coordinate supply chain policies and risk management strategies, including through information-sharing.'

3.2.3. Joint governmental - private initiatives

There are case studies in the literature that provide evidence for **partnership and dependence on international organisations,** such as the International Labour Organization (ILO), the World Health Organisation (WHO), the European Bank for Reconstruction and Development (EBRD) and the World Bank (WB), that have positive effects on the implementation of sustainability and hence on OSH. According to Walters (2009), 'ethical trading partnerships' are further supported by various international bodies such as the ILO, WHO, donor agencies and NGOs and associated governmental bodies. These partnerships can, for example, be alignments of mutual interests among trades unions, non-governmental organisations, labour inspectors, consumer and community action groups and others seeking to represent the interests of exploited workers, in negotiation and consultation with representatives of focal companies. They are also found in flagship partnerships such as that discussed in the box below, between the multi-national car manufacturer Volkswagen AG, the ILO and the German aid agency GTZ (Kristjansdottir, 2007; Koplin, Seuring and Mesterharm, 2007; Fromman, 2008; Walters, 2009).

Better health and safety for suppliers: A partnership project between Volkswagen AG, ILO and GTZ

According to Volkswagen, OSH policy needs a holistic approach and should relate to the entire value creation chain. Therefore, one of Volkswagen's major goals of the project was to improve OSH knowledge overall and to identify best practices through project activities and the social partner network.

The project involved selected Volkswagen suppliers in Brazil, Mexico and South Africa, with OSH inspections performed in their workplaces. Based on these, several recommendations were made with checklists drawn up for a second inspection up to six months later. A report on the inspections and any improvements was then written. This was done with the idea that all the best practices and solutions found would be collected and developed for an online network, which could then provide the necessary information on health and safety for the countries and enterprises involved. The ultimate goal of the project was the development of international guidelines for OSH and supply chain management.

See also case study, Annexes, section 6.1.1

The partnership between Volkswagen AG, ILO and GTZ is an example of an initiative taken by a particular focal company. There are also broader initiatives by international governmental organisations and bodies, aimed to enforce businesses to adopt sustainable and socially responsible policies. Examples are the United Nations Global Compact (UNGC), the European Alliance for Corporate Social Responsibility and CSR Europe.

The UNGC is an international initiative, launched by the United Nations (UN) in 2000. It is both a policy platform and a practical framework for companies that are committed to sustainability and responsible business practices. As a multi-stakeholder leadership initiative, it seeks to align business operations and strategies with ten universally accepted principles in the areas of human rights, labour, environment and anti-corruption and to catalyse actions in support of broader UN goals. With more than 8,000 signatories in more than 135 countries, it is the world's largest voluntary corporate responsibility initiative.

The European Alliance for CSR is an open partnership for enterprises. It was launched in 2006 as a joint initiative of the European Commission and the business community. The European Commission has chosen three organisations to coordinate and facilitate the Alliance, namely BusinessEurope (the Confederation of European Business), UEAPME (the European Association of Craft, Small and Medium-sized Enterprises), and CSR Europe. The latter is the leading European business network for CSR with around 70 multinational corporations and 29 national partner organisations as members.

Information on Sustainable Supply Chains on the Worldwide Web

In 2010, the Sustainable Supply Chains website (http://supply-chain.unglobalcompact.org/) was launched by the UN Global Compact Office in collaboration with CSR Europe. The purpose of this website is to help practitioners to find relevant information to assist them in the process of embedding sustainability issues (human rights, labour, environment and anti-corruption) into supply chains.

The website presents information about initiatives (such as programmes, codes, standards, networks), and resources and tools which companies can use to improve their supply chain sustainability and implement sustainable supply chain programmes. There are also case examples on how companies have developed sustainable supply chain programmes.

This UNGC website was built on the existing 'Portal for Responsible Supply Chain Management' (http://www.csr-supplychain.org), which was created by CSR Europe, the Business Social Compliance Initiative (BSCI) and the Hellenic Network for CSR. The Portal, supported by Hewlett-Packard, L'Oreal, Titan and Volkswagen, was the result of a two-year European CSR 'Laboratory for Responsible Supply Chain Management', in support to the European Alliance for CSR.

Apart from partnerships, platforms and other initiatives at international level, there are other initiatives at national level which have an impact on OSH in the supply chain. An example of a governmental initiative in collaboration with sector organisations is the Dutch VASt Programme, which aims to reinforce the OSH policy related to dangerous substances (see Box).

VASt Programme - Reinforcing the working conditions policy on dangerous substances

Research shows that employers and employees in small and medium-sized enterprises (SMEs) are mostly unaware of the risks related to working with hazardous substances. When companies are willing to take preventive measures with regard to dangerous substances, this is however often not done at the source of exposure due to a lack of knowledge. Although the Safety Data Sheet (SDS) is the most important source to get information on specific substances, the quality of the SDSs appears often to be poor, and downstream users often encounter difficulties understanding the content of a SDS or even do not consult these sheets.

The four-year 'VASt programme' (Versterking Arbeidsomstandighedenbeleid Stoffen'; 'Reinforcing the Working Conditions Policy on Dangerous Substances') was launched between in 2003 by the Dutch Ministry of Social Affairs and Employment to assist SMEs in reinforcing the working conditions policy on hazardous substances. The aim of the programme was to work together with the industry to strengthen the health policy on chemicals in various high risk production chains and branches in order to anchor the chain responsibility and build a stronger knowledge infrastructure on the handling of chemicals. The following supply chains were part of the VASt

programme: the asbestos removal chain, the metal-working fluids chain, the ship and yacht building chain, and the dental products chain.

The main part of the VASt programme was directed at sectors and product chains, which were each challenged to draw up and implement an action plan. Each plan contained improvement activities regarding:

- substances, exposure, and measures;
- communication in the supply chain; and
- the knowledge infrastructure.

In addition, the government provided the companies with various instruments, such as the Stoffenmanager (www.stoffenmanager.nl) [4] , PIMEX (PIcture MIxed EXposure) and AWARE (Adequate Warning and Air REquirement).

See also case study, Annexes, section 6.1.2.

3.3. Strategies and instruments to promote OSH in the supply chain

A focal company can use a diversity of instruments to influence the members of its supply chain to apply sustainability practice and hence OSH standards. Looking at both OSH and sustainable supply chain management (SSCM) literature and based on the discussed triggers, two main strategies of focal companies to implement sustainability (and OSH) in their supply chain can be identified (Seuring and Müller, 2008; Walters and James, 2011). The first one is labelled as **'supplier management for risks and performance'**. A major fear of companies following such a strategy is a loss of reputation if related problems are raised. Therefore, additional environmental and social criteria are taken up to complement economically based supplier evaluation. Environmental and social standards play a central role in enabling this. The second strategy is called **'supply chain management for sustainable products'**. These are product-related initiatives undertaken by individual companies or trade/industry bodies. This strategy usually defines and implements standards for the environmental and social performance of products throughout the supply chain. Those two strategies are not mutually exclusive and are, in many cases, interrelated (Seuring and Müller, 2008).

3.3.1. Supplier's management for preventing risks and assuring performance

Barriers and supporting factors

Based on an extensive literature review, Seuring and Müller (2008) summarised the most frequently mentioned **barriers** and **supporting factors** for implementing sustainable supply chains. These barriers are: **higher costs, coordination effort and complexity, and insufficient or missing communication in the supply chain**. The main **supporting factor** clearly related to this is **communication**, while **monitoring, evaluation, reporting and sanctions** are the ones more often quoted. Other supporting factors mentioned in the literature are **management systems, training education of purchasing employees and suppliers, and integration into the corporate policy**. According to Seuring and Müller (2008) this implies higher costs, although joint efforts of all supply chain partners can help to control costs.

Purchaser procurement strategies

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[4] The Stoffenmanager is a web-based tool for risk and exposure assessment that supports companies in the safe handling of hazardous substances. For more information see https://www.stoffenmanager.nl/

Procurement strategies according to Walters and James (2009) allow purchasers in powerful market positions to influence improvement in health and safety management among suppliers. This is in cases where health and safety standards are used as the basis for selecting suppliers, and sometimes for imposing those standards on selected suppliers. However, Walters and James (2009) pointed out that there is limited evidence of such influence in the literature and little in the way of evaluation, and the cases that have been provided of good practice are mainly related to the secondary network (see also 4.3.1.). Some literature draws attention to the importance of tight control, including regular audit and inspection (James and Lloyd, 2008; Walters and James, 2011)

In the sustainability and SCM literature, procurement strategies are also mentioned in terms of extending goals for purchasing staff to environmental and social criteria and training of purchasers (Seuring and Müller, 2008). The purchasing or sourcing functions inside focal companies is the key actor to search for, evaluate and monitor suppliers. In this regard, environmental and social standards provide a means for efficient supplier evaluation within the supply chain. However, Meehan and Bryde (2011) performed a survey of sustainable procurement practices in 44 English-based United Kingdom Housing Associations, who are responsible for the provision of social housing. They conclude that although the organisations surveyed aimed to have sustainable procurement, and were also under external and internal pressure to do this, it did not lead to the widespread establishment of sustainable procurement Therefore, effective policies and practice must be in place in order to influence suppliers to implement sustainability practices. An important role in this is played not only by educating and training purchasing staff, but also measures related to suppliers, such as:

- **requiring a management system or code of conduct);**
- **signing declarations for compliance with the company standards;**
- **self-assessment by the suppliers,**
- **inspections, auditing, monitoring;**
- **training; and**
- **collaboration with suppliers.**

Based on a literature review, Seuring and Müller (2008) suggest that proactive measures such as **communication and the training of purchasing staff and supplier staff** should lead to improvements in the supply relations as well as performance on both sides. The authors also conclude that it is valid to give purchasing staff goals which recognise environmental and social issues.

Koplin, Seuring and Mesterharm (2007) address the following four issues for a purchasing structure (compared with SSMC for Volkswagen):

Normative requirements: it is necessary to have a clear understanding of what sustainable development means for the company (mission statement). Furthermore, the company must comply with all environmental and social standards before passing them on to its suppliers. These standards can be put in a code of conduct for suppliers.

Early detection of supply-related risks: this can be seen as a radar function, identifying environmental and social risks and weak points at suppliers, using such tools as:

- internet inquiries;
- expert panels;
- media and specialised journalism screening;
- contact to watchdog organisations;
- noting legal drafts; and
- regular dialogues with NGOs.

Operational implementation of supply processes: this is normally done by addressing the product, not the suppliers' production process. The most important step is to account for

sustainability aspects when placing contracts with suppliers. The process covers three main steps:

- environmental and social information is sampled in terms of information from business partners;
- this information is the basis for evaluating suppliers regarding to what degree they comply with a company's code of conduct;
- supported by plausibility checks from the quality assurance department, the supplier statements are analysed to ensure their validity. These criteria might have a prohibitive impact on the sourcing decision, meaning that a supplier that does not fulfil required environmental and social standards will not be awarded a sourcing contract.

Supplier monitoring and development: along with the plausibility check, it is important for a company to create control mechanisms for inspections. Examples include supporting suppliers with information using an online supplier platform, technical support and training for suppliers in the form of workshops and seminars. This assists in spreading sustainability and deepens the co-operation between a company and its business partners.

RESPIRO - Responsibility in Procurement

RESPIRO stands for 'Responsibility in Procurement' and was a project by EUROCITIES and ICLEI (Local Governments for Sustainability). The project focused particularly on two sectors, the textiles and clothing sector and the construction sector, and therefore collaborated with the European social partners from these sectors (respectively EURATEX and ETUF-TCL for the textiles and clothing sector, and ECIF and EFBWW for construction). The project was co-funded by the Directorate General Employment, Social Affairs and Equal Opportunities of the European Commission, and concluded at the end of 2007.

The aim of the RESPIRO project was to facilitate and promote an exchange of experiences regarding the inclusion of social and ethical requirements into procurement actions both between public and private sector purchasers and their potential suppliers.

The project included the drafting of two guides: respectively the 'RESPIRO Guide on Socially Responsible Procurement of Textiles and Clothing' (EUROCITIES, 2007) and the 'RESPIRO Guide on Socially Responsible Procurement of Building Construction Works' (ICLEI, 2007).

For the textiles and clothing industry, Socially Responsible Procurement (SRP) covers also OSH issues, such as the elimination of toxic substances used during the cultivation of fibres as well as for dyeing processes which pose threats not only to the health and safety of workers but also to those who wear these garments. The RESPIRO Guide addresses the fact that technical specifications could specify standards relating to the prohibition of toxic chemicals in the production process (such as azoic dyes, formaldehyde) as well as the provision of a safe and healthy working environment including personal protection measures and training in OSH. In terms of verification, environmental certifications such as the European eco-label for textiles[5] or the OekoTex label[6] or equivalents could be referred to as examples of certification schemes for products manufactured without use of the abovementioned chemicals and respecting health and safety standards.

More information at: http://www.respiro-project.eu.

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[5] European eco-label for textiles:http://ec.europa.eu/environment/ecolabel/ecolabelled_products/categories/textiles_en.htm
[6] Oekotex100 and Oekotex1000: http://www.oekotex.com.

Public authorities are major consumers in Europe, spending up to 17% of the EU's gross domestic product (COM, 2010, p. 5). They therefore play a leverage role through their procurement activities in stimulating sustainability and social responsibility in the private sector. By procuring in a wise, sustainable and social responsible way, public bodies can thus give incentives to companies, particularly SMEs, to pay more attention to OSH.
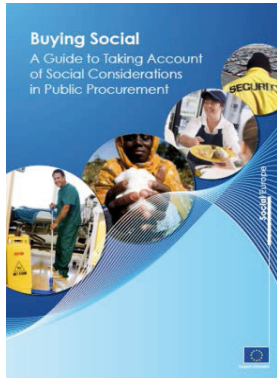
Public procurement in the EU is directed by national policies, within an overarching EU legal framework. This legal framework in the EU is provided by the so called Procurement Directives such as Directives 2004/17/EC (EU, 2004a) and 2004/18/EC (EU, 2004b), and is designed to open up the EU's public procurement market to competition, eliminating 'buy national' policies and promoting the free movement of goods and services (Brammer and Walker, 2011, p. 457). The directives specifically mention ways of including social considerations into technical specifications, selection criteria, award criteria, and contract performance conditions.

The European Commission (COM, 2010) recently published 'Buying Social - A Guide to Taking Account of Social Considerations in Public Procurement' to raise contracting authorities' awareness of the potential benefits of social responsible public procurement and to explain in a practical way the opportunities offered by the existing EU legal framework for public bodies to take into account social considerations in their public procurement - thus paying attention not only to price but also to the best value for money.

CARPE - Cities as Responsible Purchasers in Europe

The CARPE project ran between 2004–2005, and was co-funded by the Directorate General Employment, Social Affairs and Equal Opportunities of the European Commission. It brought together 12 EUROCITIES members (Paris, Stockholm, Seville, Brussels Capital Region, Lyon, Nantes, Bilbao, Bonn, Vienna, Barcelona, Urban Community of Lille, Oslo) in exploring opportunities for adopting social and environmental criteria in their procurement practices.

The 'CARPE Guide to Responsible Procurement' (EUROCITIES, 2005, pp. 33-36) addresses, amongst other issues, how working conditions can be safeguarded through public contracts:

- technical specifications can detail health and safety standards to be fulfilled by the contract;

- purchasing authorities can use selection criteria, to filter out companies that do not comply with legislation concerning protection of employees;

- assessing (using the award criteria) the quality of contract delivery, which often is closely linked to staff motivation and working conditions;

- in the contract performance conditions, buying authorities can underline the supplier's obligation to adhere to social standards.

More information at: http://www.eurocities.eu/carpe-net.

Management standards

Management systems can be related to the minimum performance required and can play an important role in the suppliers' evaluation. Examples of management systems are:

- ISO 14001 and the EU Eco-Management and Audit Scheme (EMAS) for environment;

- Social Accountability 8000 (SA 8000) for working conditions and human rights[7];
- Occupational Health and Safety Assessment Series (OHSAS) 18001 for health and safety; and
- ISO 26000 for social responsibility.

The standards are voluntary and compliance is granted by certification by an independent third party, i.e. a neutral certification body. The certification requires a public description of behaviour and management systems. Once certified, firms are monitored to ensure that they live up to the stated norms. Only ISO 26000 is not a management system standard. It is not intended or appropriate for certification purposes or regulatory or contractual use. It addresses seven core subjects of social responsibility (which it defines) and one of its potential benefits is improved relationships with stakeholders, customers and suppliers who view the organisation more positively as a result of its dedication to behave in a socially responsible manner.[8] Seuring and Müller (2008) point out that existing literature on sustainable supply chain management mainly focuses on environmental management systems, namely ISO 14001.

Zwetsloot et al. (2011a) address some advantages of third party certification within the supply chain, for both suppliers and purchasers. When suppliers are audited and certified by an independent certification body, they do not have to be audited separately by each of their customers, reducing the number of inspections and related costs. A certificate also expresses 'justified confidence' by the certification body in the supplier and is, in this regard, commercially/marketing-wise important. Customers can, by purchasing certified products or services, demonstrate they fulfil 'their duties of care', protecting themselves against possible liability in case of incidents or accidents (Zwetsloot et al., 2011a, pp. 996-997).

Based on four case studies of European SMEs (three Italian and one Dutch company) which have relationships with suppliers in developing countries and apply SA 8000 certification, Ciliberti et al. (2009) demonstrate that SA 8000 can reduce transaction costs (for example, searching, negotiating and monitoring become simpler when companies deal with certified partners) and facilitate communication and coordination between immediate partners in a supply chain, particularly when the most powerful one imposes SA 8000 certification. However, indirect coordination further up and down the supply chain (for example with second or third-tier partners) appeared to be less easily influenced. The authors conclude that, apart from the ethical advantages, managerial and economic benefits can be gained from a CSR approach (for example, by means of an instrument like SA 8000).

There are also some British Standards applicable to supply chains, such as BS 8903 and BS 11000.[9] BS 8903 (2010) - Principle and Framework for Procuring Sustainably - is a 'daughter' standard of BS 8900 (Guidance for managing sustainable development) and provides guidance and practical information on how to adopt and implement SP principles across an organisation and its supply chains (see also Berry, 2011). The BS 11000-1 (2010) standard on collaborative business relationships provides a strategic framework for dealing with external relationships and managing them in an effective way. The standard covers issues like partner selection, working together, value creation and relationship maturity.

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[7] The SA 8000 standard defines eight principles in relation to working conditions and human rights: child labour, forced labour, health and safety, freedom of association and the right to collective bargaining, discrimination, disciplinary practices, working hours, and compensation. A ninth issue covers the establishment of a social management system (Ciliberti, 2009). For more information, see Social Accountability International (SAI), http://www.sa-intl.org/.

[8] For more information, see ISO, http://www.iso.org/iso/iso_catalogue/management_and_leadership_standards/ social_responsibility/ sr_discovering_iso26000.htm

[9] For more information, see British Standards Institution (BSI): http://www.bsigroup.com/.

Codes of conducts

For many companies, a supplier code of conduct is a natural extension of corporate values statements and seen as an affirmation of existing expectations rather than a new set of requirements (UNGC, 2010). Most codes require 'safe and healthy working environments', but they also increasingly provide more detailed health and safety standards (WB, 2003). Codes of conduct are critical to establishing and managing expectations for both customers and suppliers. They create a shared foundation for sustainability and CSR issues, from which supply management professionals, suppliers and other actors can act accordingly.

Codes of conduct are voluntary instruments that offer guidelines, goals and objectives. The codes are not legally binding and often have neither enforcement mechanisms nor recognised bodies that control, mediate and/or evaluate fulfilment of the objectives (Eurofound, 2008). However, other sources such as the World Bank Report 'Company Codes of Conduct and International Standards: An Analytical Comparison' state that companies increasingly develop the compliance and monitoring schemes used to implement and enforce those codes once they have been established. The World Bank estimates that there are more than 1,000 codes developed by individual multinational firms on a voluntary basis, depending on firms' business needs (WB, 2003).

Codes on the corporate level of MNEs are initiated in order to fill the regulatory and legislative gap that exists between the countries in which they operate. These codes can be internal. However, the strategic need for formulation and implementation of external codes of conduct becomes greater when companies are sourcing out activities or using suppliers in developing countries. Extrinsic motivations for companies are also gaining importance, such as the risk of reputation damage triggered by critical NGOs (van Tulder et al., 2009

Codes can be classified and scored along two dimensions: specificity and compliance (Kolk and van Tulder, 2002). The **specificity** of a code indicates:

- how many issues it covers;
- how focused it is;
- the extent to which it refers to international standards and guidelines; and
- to what extent aspects of the code are measured.

The **compliance** of codes is generally enhanced by clear monitoring systems, combined with an independent monitoring agency and the possibility of sanctions. The higher the scores on both dimensions, the higher the implementation likelihood of the code. Mamic (2005) collected data from 22 multinational companies and 74 of their suppliers to gain insights into how codes of conduct are implemented in the footwear, apparel and retail industry. Based on this and other examples, Seuring and Müller (2008) conclude that comprehensive supplier audits are required.

Companies develop codes of conduct individually or make use of partnering by so called 'joint codes of conduct' (Handfield et al., 1997; Seuring and Müller, 2008). The latter are designed to minimise the burden on suppliers by reducing the number of standards with which they must demonstrate compliance. They are also intended to streamline the process of conducting joint audits of suppliers and to reduce the effort required of companies to design their own codes. However, there is a risk that joint codes might not meet specific sustainability concerns of the company (UNGC, 2010). Typical examples of 'joint codes of conduct' are the Electronic Industry Citizenship Coalition (EICC) Code of Conduct and the Global Social Compliance Programme (UNGC, 2010).

International Framework Agreements (IFAs)

International Framework Agreements, also called Global Framework Agreements (GFAs), are transnational agreements negotiated between multinational companies and global union federations [10] (see Robinson, 2010; Stevis, 2010). Although IFAs are not very concrete in comparison to national collective agreements, they are much more detailed than codes of conduct (see above) with regard to working hours, working conditions and OSH. (ETUC, 2010). Whereas codes of conduct focus on defining, monitoring and enforcing internal rules of behaviour related to CSR, IFAs aim more at regulating labour relations in MNEs (Schömann, 2008).

A study by the European Trade Union Confederation (ETUC, 2010) analysed 72 IFAs with the specific aim of investigating OSH and environment clauses incorporated in these framework agreements. Some 64 of the agreements were signed after 2000, with 57 from companies which have headquarters in the EU. This reflects the European tradition of good labour relations, creating a favourable context for the acceptance of IFAs. The European study revealed that OSH issues hold a prominent position in most framework agreements: OSH is mentioned in 58 of the 72 IFAs (general reference to OSH without any detailed provisions), and 49 include specific OSH clauses (a section included in the text which contains specific details). These OSH clauses appear particularly in sectors where exposure to health and safety risks are more apparent, such as construction, mining, the metal industry and chemical sector. Some of the IFAs state clear objectives with regard to OSH; with seven of them specifically including a reference to a zero accident vision.

As for the supply chain, IFAs can cover an extension of the labour standards for suppliers and sub-contractors of multinational companies. Practically all IFAs explicitly indicate that the norms they contain apply to the whole group (including suppliers and sub-contractors), which is much more than the extension of commitments to the supply chain incorporated in codes of conduct (Schömann, 2008). However, ETUC's study (2010) revealed that only five agreements have included a specific clause on how the companies concerned will promote OSH policy among the workers from the supply chain. These five companies are EDF, IKEA, Inditex, Italcementi and Rhodia. According to the study, some of the commitments of these IFAs have already been implemented in practice (ETUC, 2010). Framework agreements are thus instruments which can promote a convergence of OSH policies of multinationals, their subsidiaries and their supply and subcontracting chain.

Based on an investigation of the local implementation of a (globally negotiated) international framework agreement in the subcontracting chain of a multinational in the construction sector, Davies et al. (2011) argue that OSH standards (such as OHSAS 18001) and contractor certification schemes (see section 4.1.3) have a greater impact on sub-contractor compliance in comparison to the IFA concerned. This is due to the absence of means and resources to audit and reinforce the effective implementation of the IFA in local subcontracting chains.

Industry collaborations

Industry collaboration and multi-stakeholder partnerships are instruments used by MNEs to address supply chain sustainability objectives, particularly for issues that are too challenging and complex to tackle alone. In addition, collaboration can increase the impact and overall efficiency of a company's supply chain sustainability efforts by extending resources, reducing duplication and avoiding conflicting messages. Examples of industry collaborations are (UNGC, 2010):

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[10] A global union federation is an international federation of national and regional trade unions organising in specific industry sectors (Stevis, 2010). Examples are: Building and Wood Workers' International (BWI), International Federation of Chemical, Energy, Mine and General Workers' Unions (ICEM), International Metalworkers' Federation (IMF), Union Network International (UNI) and Industrial Workers of the World (IWW).

- **AIM-Progress -** a forum of consumer goods companies assembled to enable and promote responsible sourcing practices and sustainable production systems. It is a global initiative supported and sponsored by Association des Industries de Marque (AIM) in Europe and the Grocery Manufacturers Association (GMA) in North America. Its key objectives include development of a forum to exchange views regarding responsible sourcing practices, and common evaluation methods to decrease duplicative auditing.
- **Apparel, Mills and Sundries Working Group -** a working group of apparel and retail companies and their suppliers that collaborate to address sustainability issues at the mills and sundry supplier level. The group is focused on implementation of its joint code of conduct through supplier evaluation and training.
- **Business Social Compliance Initiative (BSCI) -** a platform for retail, brand, importing and trading companies dedicated to the improvement of working conditions in their supply chain worldwide. The organisation has created a code of conduct and implements the BSCI Code through a combination of external monitoring and collaborative capacity building activities.
- **BSR's Beyond Monitoring Working Group -** a collaboration of leading companies from many industries who embrace a vision of supply chain sustainability that is driven by internal alignment, supplier ownership, worker empowerment, and public policy engagement. Together these companies explore next generation supply chain sustainability approaches to improve their individual companies' programmes.
- **Electronics Industry Citizenship Coalition (EICC) -** promotes an industry code of conduct and shared implementation resources for global electronics supply chains to improve working and environmental conditions. The EICC conducts joint audits; provides tools to audit compliance with the code; offers resources for training for procurement and suppliers; and helps companies report progress. EICC membership is available to electronic manufacturers, software firms, ICT firms, and manufacturing service providers, including contracted firms that design, manufacture, or provide electronic goods, and as such covers the vast majority of the electronics supply chain.
- **Ethical Trading Initiative -** an alliance of companies, trade union organisations, and NGOs that are committed to working together to identify and promote good practice in labour code implementation, including monitoring and verifying compliance with code provisions.
- **The Global e-Sustainability Initiative (GeSI) -** brings together leading ICT companies - including telecommunication service providers and manufacturers as well as industry associations - and NGOs committed with achieving sustainability objectives through innovative technology.
- **Global Social Compliance Programme (GSCP) -** a business-driven programme for companies whose vision is to harmonise existing efforts in order to deliver a shared, global and sustainable approach for the continuous improvement of working and environmental conditions across categories and sectors in the global supply chain. The GSCP offers a global platform to promote knowledge exchange and best practices.
- **Fair Labour Association -** a collaborative effort to improve working conditions in factories around the world. Participating companies commit to the FLA code, and the group has created a practical monitoring, remediation and verification process to achieve those standards.
- **ICTI-Care -** a toy industry's ethical manufacturing programme aimed at ensuring safe and humane workplace environments for toy factory workers worldwide. To achieve these goals, the group provides education, training, and a unified monitoring programme.
- **Social Accountability International (SAI) -** a multi-stakeholder, multinational, multi-industry organisation of business, labour and NGOs whose mission is to advance the human rights of

workers around the world. It carries this out through training, capacity building, and the **SA8000** workplace standard (see above).

▪ **Joint Initiative on Corporate Accountability and Workers' Rights -** a programme to bring together key organisations, involved in different aspects of code implementation and/or enforcement. Each of the partner organisations (Clean Clothes Campaign, Ethical Trading Initiative, Fair Labour Association, Fair Wear Foundation, Social Accountability International and Workers Rights Consortium) is involved in the global effort to improve working conditions in global supply chains. There is a strong belief that codes of conduct can make an effective and credible contribution to this effort, only if their implementation involves a broad range of stakeholders, including governments, trade unions, employers' associations and civil society. More information at: http://www.jo-in.org.

TOSCA

TOSCA, which stands for 'Towards sustainable supply chains through a common approach for company strategic work and daily operations', is a European initiative aiming to show how companies can work towards sustainable development, within the company and in its supply chain. The project/framework is part of the EU Life + Programme and funded by AkzoNobel, SCA Hygiene Products AB and Chalmers University of Technology. The TOSCA partners are members of the Swedish Life Cycle Center - CPM.

The TOSCA website (http://www.tosca-life.info) gives information, guidance and examples on working with sustainability in different parts of the supply chain.

3.3.2. Supply chain management for sustainable products

Sustainable production

According to Seuring and Müller (2008) the term 'sustainable products' is used to cover all kinds of products that have or aim to have an improved environmental and social quality, which can be related back to the implementation of environmental and social standards. The ultimate aim is to satisfy customers and gain a competitive advantage in the market. Walters and James (2009, 2011) provide a number of examples where individual companies or industry bodies have undertaken product-related initiatives to support better management of OSH. One example is the hiring tool trade in construction that, under the stimulus of regulatory requirements and the threat of litigation, has begun to emphasise the safety benefits of their equipment as a marketing strategy.[11] They are also well placed to influence the introduction of safety design improvements by the manufacturers of the equipment they purchase to hire out, since they occupy an important intermediate position between manufacturer and end-user in the supply chain and are particularly concerned with discharging their own responsibilities for safety in this respect (Walters and James, 2009, 2011).

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[11] See also Hire Association Europe (HAE): http://www.hae.org.uk.

Specifying product-related requirements usually demands the application of life-cycle assessment methods, which leads to the establishment of life-cycle management. Here again the focal company requests it from suppliers, but cooperation and even considerable investments of suppliers in this product-based sustainability is important. A good example is the supply of organic cotton (Seuring, 2004; Seuring and Müller, 2008)

In recent years decision-makers from several areas have shown increasing interest in the inclusion of social aspects into the environmental life cycle assessment of products and systems; the so called Social Life Cycle Assessment (SLCA). The question, however, is whether this method is applied by companies. Jorgensen et al. (2009) argue that the application of SLCA may only be possible for companies in a very limited life-cycle perspective. A full analysis of the life cycle may be impossible for most companies, as the data collection is very time and resource consuming. This deviates from the original thought behind the SLCA tools as being holistic decision tools. The major problem was having enough data to perform assessments. The use of SLCA by companies was therefore mostly limited to first-tier suppliers and generally seen as part of external product marketing and less as internal sustainability management. Additionally, within companies a shift in focus was seen between that part of the life cycle, which was more focused on the total production site of the supplier, and the part which was more focused on the product itself.

Trade/industry initiatives

A typical example of industry initiative is the Responsible Care and Product Stewardship programme, which concerns the sound management of safety, health and environmental effects of products and is promoted by the chemical industry (Walters and James, 2009, 2011; EU-OSHA, 2010). This cooperation between dealers and users is intended to offer an early warning system for safety, health or environmental risks relating to a product, allowing problems to be tackled in a timely manner. Walters and James (2009) point out that these programmes aim to increase the trust between suppliers and customers and confidence throughout the whole product chain, as well as acting as an impetus for continuous innovation that will enable the incorporation of regulatory and market developments. Collaborative types of arrangements are most likely to exist where a good deal of mutual dependency and risk sharing exists, and where power is relatively evenly distributed. However, there is limited evaluation of these programmes and the existing evaluations show that they are successful within the industry itself, but there remains uncertainty concerning their reach, for example, to users outside the tight relationships within the industry.

3.3.3. Engaging with suppliers

Both strategies discussed above make use of different instruments to engage with suppliers. The UNGC guidance for supply-chain sustainability (UNGC, 2010) presents the use of some of the already discussed instruments in relation to the extent of suppliers' engagement (See Figure 2)

Figure 2: Instruments for engaging with suppliers on sustainability
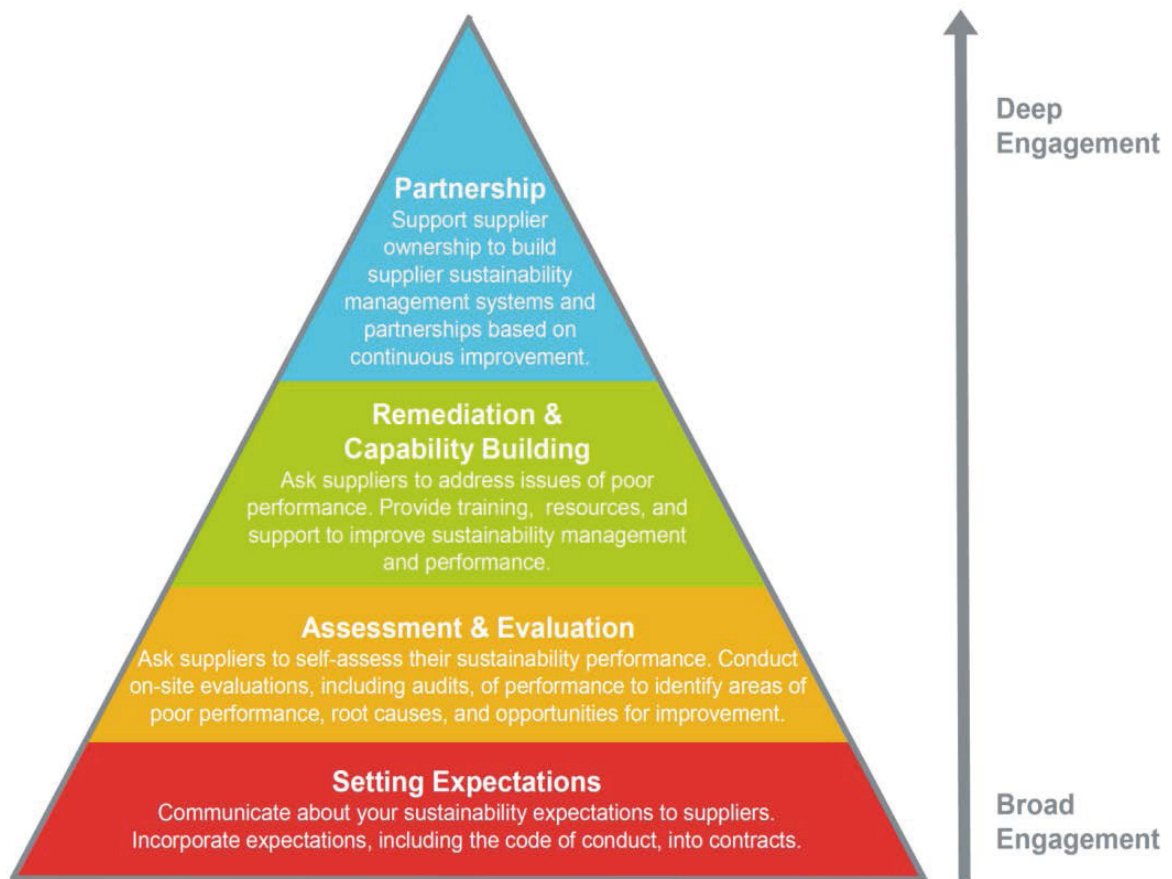
Source: BSR, 2010, p.3; UNGC, 2010, p.33.

Further, the UNGC guidance (2010) suggests that suppliers are often more motivated by incentives than by penalties. Examples of incentives for suppliers include:

- reducing the number of audits conducted;
- establishing a preferred supplier programme;
- increasing business;
- providing recognition and awards;
- allowing participation in strategic buyer/supplier planning meetings;
- sharing costs for sustainability improvements; and
- providing assistance for capability building.

The ultimate goal of engaging with suppliers should be the suppliers' integration of the value, impact and return on investment of responsible labour and environmental conditions into their mission, strategy and decision-making.

The same document (UNGC, 2010) outlines the roles of focal companies and their suppliers.

Focal companies should:

- share relevant business information with suppliers;
- build long-term relationships;
- create incentives for sustainability;
- expect improvements to sustainability management systems;
- encourage and reward transparency; and

- be sensitive to how their own business practices may impact suppliers' ability to meet sustainability expectations.

Suppliers should:

- demonstrate personal executive commitment;
- incorporate sustainability into strategic planning and evaluation;
- demonstrate continuous improvement; and
- proactively communicate CSR challenges and progress to companies.

The recently published Guidelines for Multinationals (OECD, 2011) also gives recommendations on how MNEs can best engage with suppliers (See Box OECD Guidelines for Multinational Enterprises)

4. Companies linked together by contracting: the secondary or supporting network

## 4.1. Definitions and general aspects of OSH in the contracting chain

Nowadays companies and organisations, while playing their role as 'host companies' or 'clients', tend to carry out only core functions, outsourcing subsidiary or specialised functions like cleaning, maintenance, construction, waste disposal or catering to other companies - the 'contractors'. Usually the definition of this kind of relationship is designated as 'outsourcing'. This is very common in several industries, such as construction, chemical, transport, or energy.

Contractors are external companies, organisations or individuals having a contractual relationship with the client. They can act as either production suppliers or service providers. Therefore, contractors are not employees of the client company, and they can involve other companies - the 'sub-contractors' - to assist them in fulfilling the contract. A chain of suppliers and (sub-) contractors is formed, as represented in Figure 3 where:

- Client (or host company) - is the company (any employer in the public or private sector) that outsources the task. The work is usually done at the client site;
- Contractor (and workers) - is the company that signs the contract with the client for providing goods or services and who is not an employee of the client;
- Sub-contractor (and workers) - is a third company contracted by the contractor, for example for specialised or minor ancillary works.

The complex chain of organisations leads to complex forms of communication.

Figure 3: The contracting chain (Nunes, 2012)
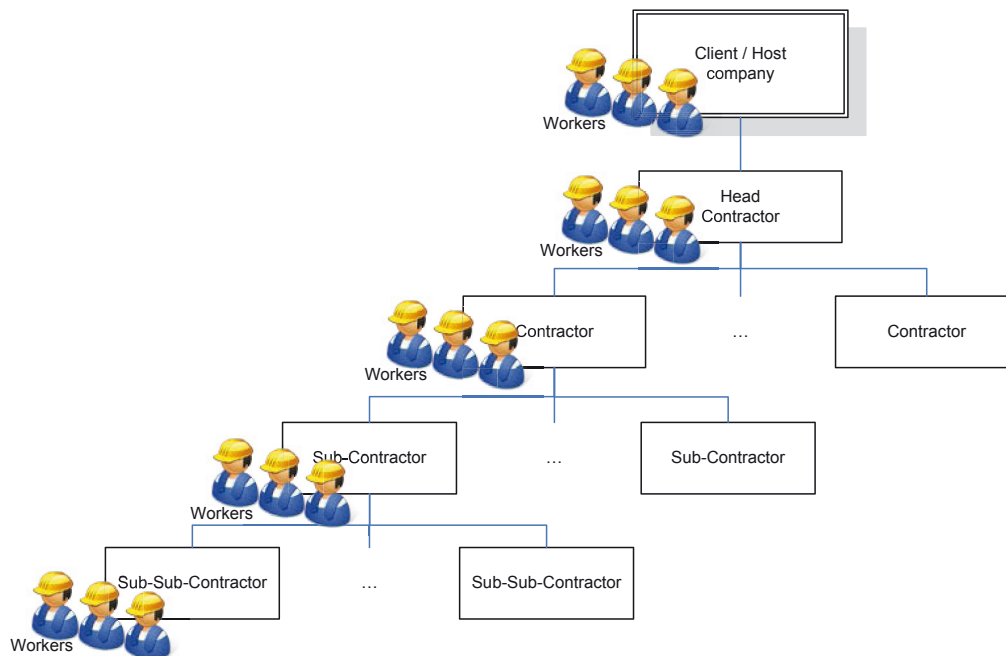
The changes in work and employment, observed in recent decades in organisations from the public and private sector, is due to the great control that a market has over companies. Therefore

companies tend to improve their market position, seeking opportunities for increasing profitability and enhancing flexibility in their responsiveness to market changes (Walters and James, 2009).

Outsourcing is an efficient solution for short-term projects where employees are only temporarily needed, and also when specialised work is required. The specialised contractors typically are engaged to perform the work better, faster, and usually cheaper (Zwanikken et al., 2008).

Outsourcing of cleaning services

Cleaning is a generic job carried out in all industry groups and all workplaces, outside and inside, including public areas. Cleaning is one task that is mainly contracted out. The cleaning industry is dominated by small businesses, most of which employ fewer than 10 workers.

The working patterns of the cleaning sector tend to increase risks to worker health and safety, namely:

- the workforce in this sector tends to be employed on a part-time and temporary contracts basis and are often doing more than one job, is female-dominated, and with a high proportion of migrant workers and workers from ethnic minorities;
- cleaning is often done outside normal working hours, frequently in the early morning, evening or night.

Besides this, cleaning workers have a poor perception about safety issues that can affect their jobs. This problem sometimes is common also for managers of cleaning services and clients.

Clients of cleaning companies appear to base their business decisions on price alone, without taking into account issues such as safety and health requirements, quality criteria, or even the security or trustworthiness of a contractor. Therefore there is heavy pressure on cleaning companies to cut costs. This can result in an inadequate investment in training and other management activities essential for worker protection. A good procurement practice that benefits all (client companies, cleaning enterprises, and workers) should be applied considering value for money instead of monetary aspects only.

Where cleaning work is contracted out, there can be additional difficulties as the client company and the cleaning company need to liaise and share knowledge to ensure that risks are identified and eliminated or controlled. Therefore:

- cleaning services should be selected on the basis of value, not price;
- there should be a switch to daytime cleaning;
- the companies should value the cleaners and the work they do;
- cleaning should be seen as an essential task which can expose workers to particular hazards and risks;
- risks to cleaners should be assessed and preventive measures implemented;
- knowledge should be shared between the client, the cleaning contractor and the workers.

It is desirable that clients and service providers coordinate their efforts in the area of OSH to improve conditions for cleaners. Responsibilities have to be clear, risk assessments should be carried out and information shared as required by national legislation derived from European directives.

For more information on OSH in the cleaning sector, see the EU-OSHA publication 'Preventing harm to cleaning workers' (EU-OSHA, 2009).

Outsourcing maintenance activities

Maintenance refers to a set of activities that are typically outsourced to companies or individuals. Maintenance is a generic term for a variety of tasks in all sectors and all kinds of working environments. The wide range of corrective and preventive maintenance activities include inspection, testing, measurement, adjustment, repair, upkeep, fault detection, replacement of parts, servicing, lubrication, painting, rebuilding and cleaning. Thus maintenance tasks can be performed by distinct trades people, such as mechanics, electricians, car mechanics, electronics engineers, building caretakers or office workers. Of course the type of maintenance differs depending on the sector in which the maintenance task is performed. Consequently, the hazards to which maintenance workers are exposed vary depending on the task and the sector where the maintenance activity is performed. Thus different types of hazards include:

- **physical hazards** (such as noise from maintenance activities of roads, tunnels or car mechanics; hand-arm vibrations in consequence of hand-held power tools; whole-body vibration derived form activities like driving tractors, fork-lift trucks, lorries or buses; or uncomfortable environmental conditions, for instance extreme temperatures, high humidity);
- **ergonomic related hazards** (such as manual handling of heavy parts of machines, repetitive movements due to turning many screws, dealing with parts out of the easy reach area, working below knee height);
- **chemical hazards** (such as in electric arc welding, waste treatment plants, exposure to asbestos during demolition of buildings);
- **biological hazards** (the exposure can occur in different sectors, such as food production, agriculture, health care, veterinary work, waste water and solid waste treatment plants;
- **psychosocial hazards** (such as stress due to time pressure, working alone, shift work, insufficient knowledge or insufficient training).

Maintenance work can also imply the exposure of workers of the focal company to the hazards that emerge in consequence of maintenance tasks.

Therefore, performing risk assessments of maintenance operations is essential. Otherwise serious and deadly accidents or health problems, affecting not only maintenance workers but also the general public, can happen. This is an especially difficult task because of the various uncertainties of those work processes, such as being called unexpectedly to repair broken down machines or discovering unforeseen causes of a machine breakdown. Thus, it is good practice to involve the maintenance workers in the process of risk assessment, since their input is valuable in identifying hazardous situations and helping to find the most effective and suitable safety measures to control risks. Therefore, it is advisable that the focal company and (sub)-contractors, combine efforts to find and implement the best practices to ensure the reliability and safety of maintenance operations. In order to prevent and control maintenance-related occupational risks it is desirable to address them in the design phase of equipments, machinery, buildings or work environments.

For more information on OSH in maintenance, see the EU-OSHA publication 'Safe maintenance in practice' (EU-OSHA, 2010).

Notwithstanding the fact that outsourcing offers the opportunity of shifting manufacturing activities to more specialised producers and to transfer work to an environment in which relevant work-related risks are better understood and better controlled (James et al., 2007; Walters and James, 2009), several studies suggest that outsourcing also creates vulnerabilities (HSE, 2005; Zwanikken et al., 2008; Walters and James, 2009). Such vulnerabilities can be:

- fragmented employment relationships, due to diffuse and/or unclear overall management control and responsibilities;

- differences in culture and language (with a possible difference in risk perception and a risk of communication problems);
- lower levels of supervision and training for sub-contracted workers than for directly employed workers, resulting in dangerously poor levels of communication between client managers and contracted personnel;
- high work intensity (due to variations in staff level and workload, multitasking, increased hours of work and unpaid overtime);
- decline in the proportion of the workforce in full-time permanent employment and increased part-time (temporary, fixed-term or leased) work; and
- growing use of (multi-tiered) sub-contractors and agency workers.

IWalter and James (2009) conclude that outsourcing is related to a significant rise in 'non-permanent' labour, particularly in the form of self-employment and temporary work and a reduction of employment in large companies, as well as a growth of employment in small and medium-sized enterprises. SMEs often possess less adequate and sophisticated systems of risk management, and the associated commercial contracts can limit the ability of those contractors to invest in preventive health and safety measures (Walters and James, 2009). Also, in small companies job insecurity is high, workers are poorly paid, have low access to training, and scant control over working time, which in turn contributes to a lack of knowledge and awareness regarding safety issues and complaints (Walters and James, 2009).

The problems regarding the safety performance of contractors may be aggravated by a lack of skilled and experienced labour, by the low profile of the small enterprises involved and by the low frequency with which they are inspected, leading to less secure and also more likely to be illegal employment, where workers have limited access to trade unions and other forms of collective representation; organisations that can promote better health and safety and more adequate risk management systems (Walters and James, 2009).

Since contractors perform their job in the client's facilities, they can be exposed to unknown hazards, like biological agents, chemical products, asbestos or noise. Conversely, workers of the client company can also be exposed to hazardous situations derived from the work performed by contractors. These situations are mainly caused by activities not familiar to company workers or by activities that are performed unexpectedly. Prevention requires that such hazardous working conditions are identified and controlled before the scheduling and execution of the contracted tasks.

Besides this, it is also advisable to conduct risk assessments jointly by client and contractor (EU-OSHA, 2000; HSE, 2002a). Promoting and ensuring workers' safety and health in this complex chain of organisations is vital.

Injury rates correlate negatively with both workplace and establishment size. Thus a shift towards smaller companies and organisations is likely to be associated with a rise in their 'riskiness' (Walters and James, 2009).

Literature reveals many examples of injuries or disasters in different occupational sectors resulting from inadequate management and control of (sub-) contracted workforce and their interaction with clients' employees. Thus, for instance, an investigation by the French National Assembly into the explosion at the AZF chemical factory in Toulouse, in September 2001 which killed 30 people (13 of whom were sub-contracted workers), determined that a critical factor was the contractor's poor safety management (Loos and Deaut, 2002).

As to health problems, an increased incidence of heart disease, burnout and depression in workers is referred to by Kivimaki et al. (2009, cited in Walters and James, 2009). The root causes for most OSH incidents in relation to the contracting chain are related to:

- misunderstanding and insufficient information sharing;
- lack of common understanding and agreement on what has to be done;
- lack of common understanding and agreement on how something is going to be done;
- confusion over who is in charge and what are the different responsibilities;
- ineffective planning and implementation of safety measures;
- insufficient workforce training;
- selection of inadequate (sub-) contractors ;
- poor safety records.

According to HSE (2004) and Zwetsloot et al. (2007, cited in Zwanikken et al., 2008), the large number of stakeholders and their diversity appears to badly affect the attention paid to safety.

Regarding occupational safety in construction projects, as cited in Zwanikken et al. (2008) tasks delegated to contractors and sub-contractors are typically of high risk, and in many cases, contractors do the hard physical and dirty labour in relatively poor labour circumstances (Amerongen (2007), cited in Zwanikken et al, 2008), and the workload of (sub-) contractors is generally high, since they have to achieve high quality results in a limited amount of time for a limited amount of money (Goudswaard (2002), cited in Zwanikken et al, 2008).

Despite these obligations and recommendations many negative consequences of outsourcing persist, affecting the health and safety of supply chain workers. These effects and how to counter them is discussed in the literature. Some of the discussion regarding these effects will be presented in the next sections.

4.2. Triggers to promote OSH in contracting chains

The main triggers to promote OSH in contracting chains are, in general, existing regulations and/or certain private/market-based initiatives. There exists however no clear evidence on which trigger has the biggest impact. Some results of the European Survey of Enterprises on New and Emerging Risks (ESENER) on the drivers (and barriers) for OSH management might, in this regard, be interesting to mention.[12] It should, however, be noted that these ESENER outcomes are on OSH management in general, and not specifically on focal companies and their contracting chain. Six potential drivers for OSH management were explored by ESENER (EU-OSHA, 2010, p. 51 ff.). See

Table 1.

Table 1: Percentage of establishments in EU-27 that address OSH due to the following major reasons

Fulfilment of legal obligations	91%
Requests from employees or their representatives	76%
Requirements from clients or concern about the organisation's reputation	67%

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[12] ESENER is EU-OSHA's Europe-wide establishment survey asking managers and workers' health and safety representatives about how health and safety risks are managed at their workplace, with a particular focus on the newer 'psychosocial risks', such as work-related stress, violence and harassment. The survey aims to assist workplaces across Europe to deal more effectively with health and safety and to promote the health and well-being of employees. To this end it provides policy makers with cross-nationally comparable information relevant for the design and implementation of new policies in this field. The survey, which involves approximately 36,000 interviews and covers 31 countries, has the support of governments and social partners at European level. For EU-OSHA, this project represents one of its most important initiatives to date and is expected to provide valuable information for use over several years. More information at: http://esener.eu

Fulfilment of legal obligations	91%
Staff retention and absence management	59%
Pressure from the labour inspectorate	57%
Economic or performance-related reasons	52%

Source: EU-OSHA, 2010, p. 51

The results clearly identified 'fulfilment of legal obligation' as the most important driver - not only because of its high overall prevalence (91%) but also because this is the case in all countries. Fulfilment of legal obligation and requests from employees appear to increase with company size, while this is not the case for the remaining drivers. 67% of the establishments pointed out that 'requirements from clients or concerns about the organisation's reputation' were a major reason for addressing OSH. This impetus, which is linked to the supply/contracting chain, appeared to be particularly important in medium sized enterprises (20-49 workers), in hotels and restaurants and in the construction sectors, especially in Turkey, Romania, Portugal and Finland.

4.2.1. Regulatory framework

Attention for OSH matters in contracting chains is to some extent set out in the European OSH legislative framework and relating national legislation. In the European Union, the Framework Directive (Council Directive 89/391/EEC of 12 June 1989) (EU, 1989) obliges employers, within the context of their general obligations, to take the necessary measures for the safety and health protection of workers, including prevention of occupational risks. Generally, in order to perform a risk assessment the focal company should take into account the nature of the activities to be performed in his company (§3 Article 6). However, the legal OSH framework regarding working with contractors is not clearly defined and regulated. Some implications can, however, be derived from the Framework Directive (EU, 1989), namely:

- 'Cooperation between client and contractor is needed in order to avoid putting their workers in hazardous situations. To accomplish such a goal both employers (client and contractor) shall inform one another and their respective workers and/ or workers' representatives of the hazardous situations they are exposed to. They shall also coordinate their actions in matters of protection and prevention of occupational risks' (§4 Article 6).
- 'The client shall also provide the contractor with adequate information and appropriate instructions regarding safety and health risks and safety measures during their activities in his undertaking' (§2 Article 10 and §2 Article 12).

A brief evaluation of the national OSH legislative framework in the United Kingdom and its impact on the supply chain is given by Walters and James (2011). In the United Kingdom, Section 3 of the Health and Safety at Work Act 1974 (HSWA) imposes 'a general duty on duty-holders to conduct their undertakings in such a way as to ensure, so far as reasonably practicably, that persons not in their employment are not exposed to risks to their health and safety' (Walters and James, 2011, p. 2). Walters and James (Walters and James, 2011) question, mainly based on an earlier analysis by James et al. (2007), how far the implicit impositions of the HSWA effectively extend to outsourced work ('off-site'). Despite this lack of regulatory clarity, the authors notice that, at the policy level in the United Kingdom, both government and Health and Safety Executive (HSE) address the important role of supply chain management in OSH in the British economy.

The EU Framework Directive was complemented by individual directives on the implementation of minimum safety and health requirements, addressing different types of risk exposures. For instance, the Council Directive 92/57/EEC of 24 June 1992 that addresses the minimum safety and health requirements at temporary or mobile construction sites (or, in short, the 'Construction Sites Directive'), establishes that the client or project supervisor shall appoint one or more coordinators for safety and health matters for any construction site on which more than one contractor is present. Temporary or mobile construction sites means any construction site at which building or civil engineering works are carried out, which include repair and maintenance activities. Based on the need to reinforce the implementation of the Construction Sites Directive 92/57/EEC, addressed by the Community strategy 2007-2012 on health and safety at work (COM, 2007) and the Commission communication on the practical implementation of the Health and Safety at Work Directives 92/57/EEC and 92/58/EEC (COM, 2008)[13], the European Commission (COM, 2011) recently published a non-binding good practice guide providing explanation, good practice suggestions and information for all stakeholders involved in construction projects, including clients, project supervisors, coordinators for safety and health matters at the preparation and execution stages, and (sub-) contractors .

Chapter 3 has already highlighted the important role of public authorities in giving incentives to companies with regard to socially responsible and OSH management, by means of their procurement approach. As public purchasers command a large share of the market (such as in construction), their impact on their (sub-) contractingchain is significant. The legal basis for public procurement at EU level is provided by the Procurement Directives, namely Directives 2004/17/EC (EU, 2004a) and 2004/18/EC (EU, 2004b).

4.2.2. Market-based or private initiatives

Initiatives to promote OSH in contracting chains can also be triggered by private initiatives, both at industry and company level.

The most important initiatives in this regard are specific safety certification schemes, which are applied to ensure the competencies and performance of contracting companies and the people working for them with regard to OSH (and environmental issues) (see also Walters and James; 2009, 2011). These schemes are developed in a business-to-business environment and are thus non-mandatory (private). In many European countries, these certification schemes have important commercial value, as they give access to a certain market (especially in high risk sectors). Examples of certification systems for contracting companies are presented below (chapter 4.3.2).

Some companies are realising the importance of working with (sub-) contractors to pursue better OSH conditions and are putting in practice their own initiatives.

For example, Hewlett Packard (HP, 2003) follows a policy of commitment to collaborate closely with their partners. This means setting expectations regarding specific requirements and best management practices, and, also recommending the adoption of policies that promote, for instance, safe manufacturing processes, safe and healthy working environment for their employees, and sound labour and human rights practices.

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[13] This Communication by the European Commission stresses amongst others the importance of collaboration between the different parties at construction sites: "Strong collaboration throughout the supply chain reflects the fact that effectively planned, managed and coordinated construction projects are more likely to be healthy and safe. They are also more likely to reap commercial benefits in terms of less time lost through days off work, less waste and less chance of failing to come in on budget. Everyone in the supply chain — clients and contractors alike — should remember this and act accordingly. Given the difficulties in reaching enterprises that are furthest along the chain from the main contractor, subcontracting remains an issue to be dealt with in depth. It also affects the enforcement of health and safety provisions." (COM, 2008, p. 7).

4.3.   Instruments and strategies to promote OSH in contracting chains

The involvement of clients and (sub-) contractors in providing an adequate OSH for their workers implies a careful attention at all phases of the interaction between the entities. It begins at the pre-contract stage with a thorough assessment of (sub-) contractor competence. It continues throughout the job execution via close cooperation of all parties and appropriate levels of supervision. At contract termination, it ends by reviewing and recording the OSH performance of contractors and sub-contractors.

Research literature discusses several approaches oriented to provide an adequate OSH in the contracting chain, through a comprehensive combination of the efforts of all parties involved, which can lead to better solutions that ensure reliable and safe outsourced tasks.

Some of these approaches, either instruments or strategies, are presented below.

4.3.1. Purchaser procurement strategies

In this strategy OSH requirements are used as a basis for selecting 'safe contractors'. The engagement of skilled, competent and knowledgeable contractors contribute to ensure high OSH performance (Walters and James, 2011; Zwanikken et al., 2008; NHS, 2011; HSE, 2002a). Maintaining records of the contract activity, and deciding if the contractors should go on an approved list for future contracts can help to achieve this goal (NHS, 2011). In order to assess whether a contractor is competent the following criteria can be used (NHS, 2011):

- evidence of experience in the same type of work;
- references from previous clients which are checkable;
- accident/ill-health statistics;
- evidence of qualifications;
- skills and ongoing training;
- evidence of health and safety training;
- risk assessments and method statements for the work to be carried out; and
- a statement of their criteria for selecting sub-contractors.

The same should be done to select 'safe sub-contractors', also the imposition of requirements relating to the general management of OSH, which include the carrying out of risk assessments and communication within multi-contractor/sub-contractor work sites (Walters and James, 2011).

The importance of applying a sound procurement strategy is addressed in the Construction Sites Directive 92/57/EEC (see above, 4.1.2). The directive and related guidance (COM, 2011) stress the fact that clients (purchasers) can have a significant influence on OSH when selecting the stakeholders. By using 'best value for money' rather than 'lowest price', clients can, for example, set a budget for OSH, related to the cost of the project (COM, 2011, p. 37).

An analysis of procurement strategies in the United Kingdom construction industry revealed the national regulatory framework, provided by the CDM Regulations 2007, not being entirely successful (Walters and James, 2009, 2011). A survey, for example, demonstrated that although clients in the public sector appear to be familiar with setting contractual requirements on OSH in the procurement of services, they invest comparatively far less effort in monitoring compliance or undertaking a post-completion review of such arrangements (HSE, 2007, cited in Walters and James, 2009, 2011).

Apart from this discussion, there is some evidence of the positive impact of procurement strategies on OSH, particularly in large-scale construction projects. For example, during the building of the land works supporting the land/sea link between Denmark and Sweden in the

1990s, evidence showed that initiatives on OSH requirements in procurement helped to reduce the incidence of occupational accidents (EU-OSHA, 2000, pp. 82–88). Walters and James (2009, 2011) cite other examples from France (construction of a new industrial plant by Renault), the United Kingdom (construction of a terminal at Heathrow Airport), and Australia (construction projects for the Olympics in Sydney 2000). The fact that major attention is paid to procurement strategies in these and other large-scale construction projects, is mainly due to the risk of reputational damage and to the close scrutiny by labour inspectors at such projects. The evidence for the positive impact from the procurement of (sub-) contractors in small construction projects is less apparent (Walters and James, 2009, 2011).

Social Responsible Procurement of building construction works

European public and private sector purchasers are considerable purchasers of building construction works. Local authorities spend approximately 40% of their procurement budgets on construction. Given that the sector is one of Europe's largest industrial employers, it has far-reaching social responsibilities. The opportunities to make a significant impact on the supply chain in terms of fostering more socially responsible behaviour and practices are considerable, for example, by. going beyond the minimum requirements of the law for the improvement of health and safety standards.

With this in mind, the RESPIRO framework ('Responsibility in Procurement'; see also 3.3.1) has drafted a guide on SRP of construction workers (ICLEI, 2007). SRP in construction includes the following issues: OSH, CSR (voluntary), trade ethics (supply chain and respecting the conventions of the ILO), supplier diversity (social economy), healthy buildings (for all users), and a life-cycle approach.

More information at: http://www.respiro-project.eu.

4.3.2. Safety certification schemes for contractors

Schemes for organisations

There are specific safety certification schemes for contracting companies in several EU countries. Under these, it is the responsibility of private (non-mandatory), third-party certification regimes to evaluate, certify and ensure the performance and competencies of contractors, and those working for them (sub-contractors), with regard to OSH (and environmental issues).

The first safety contractor certification scheme, the VCA system ('Veiligheid (Gezondheid Milieu) Checklist Aannemers'; or, in English: the SCC or 'Safety (Health Environment) Checklist (or Certificate) Contractors'), was developed in the Dutch (petro) chemical industry in 1994. A detailed description of this SCC/VCA scheme and its role in OSH procurement is given in two previous EU-OSHA reports (2000, pp. 118-127; 2002, pp. 30-32).[14] The SCC scheme has a checklist that must be completed, in order to investigate contractors' critical points (criteria) for safety, health and environmentally-friendly working practices. If the contractor meets the required standards, an SCC certificate may be obtained. An important element of the SCC scheme is the requirement to demonstrate clearly that employees have received an obligatory OSH training.[15] Clients ('principals') and engineering contractors can demand the SCC scheme/certificate from their (sub-) contractors, which will have to introduce the SCC scheme in order to get work from these prospective clients. Thus, despite the fact that SCC is a voluntary scheme, companies may

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[14] See also VCA, http://www.vca.nl/.
[15] All workers need to pass an examination after a two-day OSH training course. Over a million workers in the Netherlands have passed this exam and own thus an individual certificate. Supervisors have to pass an additional exam (which more than 200,000 supervisors passed) (taken from Zwetsloot et al., 2011a).

feel indirectly forced to apply for the certificate in order to be able to operate. The SCC scheme is, apart from the (petro) chemical industry, currently mainly used for contractor safety management in many sectors with high-risk working environments such as the steel, iron and non-iron producing industries, power plants, manufacturing, railways, and the offshore and dredging industry. The focus is on high or increased risk activities by contractors such as construction, welding, piping, (industrial) cleaning, maintenance, drilling, and excavation.

The SCC system is managed by an independent foundation, the Foundation Cooperation for Safety (in Dutch: 'Stichting Samenwerken voor Veiligheid', SSVV), with representatives from all parties and several sectors involved in the SCC system. A Central Committee of Experts operates on behalf of the foundation as the executive body, managing the scheme and monitoring the quality. There are 34 certification bodies on the Dutch market, all accredited by the Dutch Accreditation Board, and more than 9000 companies in the Netherlands are SCC certified (Zwetsloot et al., 2011a). The decrease of the periodically evaluated accident figures, which the certified companies and certification bodies are obliged to report, suggest that improvements in OSH have been made since the introduction of the SCC scheme, with a 20% reduction of lost time incidents every three years, over a period of more than a decade) (Zandvoort, 2004, 2007, cited in Zwetsloot et al., 2011a). Despite these positive results, Zwetsloot et al. (2011a) report some persistent problems with the auditing quality by certain certification bodies. As some contractors are only interested in the certificate because it gives them access to the market, they try to obtain the SCC certificate as cheaply as possible, which leads to competition among certain certifiers who focus purely on this demand.

Since its development in the Netherlands in 1994, the SCC scheme has been introduced in other Member States such as Belgium, Germany, Austria and Switzerland.

In Belgium, the Act on Well-being at Work of 4 August 1996 stipulates that clients are bound to exclude unsafe (sub-) contractors (Art. 9, §2, 1°) (Prevent-UGA, 2008). However, the Act does not specify how this should be done. It is obvious that the client should do this as early as possible, by asking specific information in the procurement phase and/or including specific requirements in the tender. Another option is to require a specific label certificate, such as SCC/VCA and BeSaCC. Besides the SCC/VCA scheme, BeSaCC is a second safety certification scheme for contractors that is applied in Belgium. BeSaCC stands for 'Belgian Safety Criteria for Contractors' and was initiated by the Federation of Belgium Enterprises ('Féderation des Entreprises de Belgique'/'Verbond van Belgische Ondernemingen', FEB/VBO) to extend the SCC certification to more sectors. BeSaCC is aimed at smaller contractors and sub-contractors who carry out minor risk activities, such as cleaning, painting and building maintenance, construction in non-production environments, and gardening services. Within the BeSaCC scheme, companies who demonstrate that they are able to meet the set criteria can obtain attestation. This can also be regarded as a first step towards SCC. Both systems are thus complementary and are managed by the same national governing body, vzw BeSaCC-VCA.[16]

The SCC scheme is also applied in Germany and German speaking countries such as Austria and Switzerland. SCC stands here for 'Sicherheits-Certifikat-Contraktoren' (SCC).

In Germany, the national accreditation body DAkkS (Deutsche Akkreditierungsstelle GmbH) and its Sektorkomittee Sicherheits Certifikat Contraktoren (SK SCC) have, since 2010, managed the SCC related accreditation standards and the accreditation of certification bodies.[17] The German Society for Petroleum and Coal Science and Technology, DGMK (Deutsche Wissenschaftliche Gesellschaft für Erdöl, Erdgas und Kohle e.V), acts as a 'norm setter' and is responsible for the SCC-related normative documents (Normative SCC-Regelwerk Version 2011).[18] In Austria, the

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[16] For more information on both schemes in Belgium, see vzw BeSaCC-VCA, http://www.besacc-vca.be/.
[17] DAkks - Deutsche Akkreditierungsstelle GmbH, http://www.dakks.de.
[18] DGMK - Deutsche Wissenschaftliche Gesellschaft für Erdöl, Erdgas und Kohle e.V., http://www.dgmk.de/scc/.

SCC scheme is managed by the Arbeitskreis SCC (SK-SCC) of the Fachverband der Mineralölindustrie Österreichs (FVMI).[19]

In France, a scheme similar to SCC is used. It is based on the corporate safety improvement manual MASE[20] (Manuel d'Amélioration Sécurité des Entreprises) which is a reference system for safety, health and environmental (SHE) management. It defines the minimum measures required for a (contractor) company to be able to establish an efficient OSH management system. The current MASE reference system is the result of a joint approach in 2007 between two management system standards, namely MASE (Association MASE National) and 'DT 78' of the French Union of Chemical Industries (Union des Industries Chimiques, UIC) (see also MASE-UIC, 2009).[21] An example of the MASE certification process by a French waste processing centre of SITA France, in La Penne sur Huveaune (near Marseille), is presented in a previous EU-OSHA report (2010, pp. 102-107).[22]

A wide range of contractor certification schemes exist in the United Kingdom construction industry (Walters and James, 2009, 2011) and many are listed in a 2006 HSE report. Among them are:

- the Construction Accredited Partnering Scheme (CAPS);
- the Contractors' Health and Safety Assessment Scheme (CHAS);
- Constructionline;
- CORGI;
- EXOR;
- Contractor Assessment Tool (CAT);
- LINK-UP (railway industry);
- Major Contractor's Group (MCG);
- Sub Contractor Assessment;
- National Electricity Registration Scheme (NERS);
- NHBC Scheme;
- OCR 1322;
- Safe Contractor;
- SHEQual; and
- TrustMark.

Most of these examples (HSE, 2006) are restricted to the construction industry, while for example Safe Contractor and CHAS (see also EU-OSHA, 2002, pp. 27-29)[23] are applied in other sectors as well. Based on the conclusions from this HSE publication (2006) and two other reports, Walters and James (2009, 2011) conclude that the United Kingdom system of contractor safety certification is too fragmented and that a standardisation of existing schemes is required in order to attain the same results as in continental European countries (see above).

Towards a common EU SCC approach

As described above, several voluntary contractor SHE certification schemes have been set up by national and/or regional industry associations within the EU. Although these schemes are not entirely the same and may differ in their procedures and technical specifications, they are all based on a 'from business for business' approach and share the same objectives, for example, facilitating the selection of safe contractors and ensuring safe work practices of these contractors

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[19] Arbeidskreis SCC, http://www.scc-austria.at.
[20] MASE National, http://www.mase.com.fr.
[21] The common MASE-UIC manual can be downloaded in English at:
http://www.mase.com.fr/index.php?option=com_docmanandtask=doc_downloadandgid=7andItemid=99999999
[22] See also EU-OSHA, http://osha.europa.eu/data/case-studies/the-safety-management-system-in-a-waste-management-centre-at-sita-sud/sita-sud.pdf.
[23] CHAS - Contractors' Health and Safety Assessment Scheme, http://www.chas.gov.uk.

at the client's site through improved cooperation, coordination and communication. Due to industrial globalisation and the unification of the European market, with free movement of labour and services, companies within the EU are increasingly confronted with (sub-) contractors from abroad, often certified to another scheme than the one(s) recognised in the client's country. This underlines the need to abandon the traditional country-centred contractor certification approach, and to develop a common (EU) approach which would be favourable for both clients and (sub-) contractors.

There is already a European platform (association) of the governing bodies from the SCC and/or MASE schemes in the Netherlands, Belgium, France, Germany and Austria (see above). This platform examines how it could further improve the collaboration and considers in this respect the development of an international, harmonised concept (standard) with regard to the management of SHE issues between principal companies and their (chain of) contractors. The main objective of this approach would be to establish criteria for mutual recognition of the different national contractor certification systems. These criteria should be quite detailed (allowing no, or a very limited, margin for interpretation), and at least encompass elements like the required skills and training of workers and supervisors involved, the use of key performance indicators, and the relevant elements of (SHE) managements systems (Interview with BeSaCC-VCA, member of European platform, 2011).

Schemes for individuals

Apart from certification schemes for contracting companies, there also exist individual certification schemes - so called safety passport schemes. These are simple schemes of controlling access to work sites, ensuring that only workers with sufficient competence in OSH are allowed to work. These passport schemes help promote good practices and can help reduce work-related accidents and ill health. This system is especially useful for workers and contractors who work in more than one industry or firm. It is of increasing importance that employers and companies, who hire contractors, should establish OSH competence among their workforce (HSE, 2003, 2006).

Safety, Health and Environment Passport (SHE Passport)

A multinational company with several industrial sites in Portugal has prepared a Safety, Health and Environment Card (SHE Card) in order to ensure that all contractors working on the sites are 'certified' regarding SHE matters (Nunes, 2012). There is also a central database shared by the sites, which contains records on contractors and workers who have the SHE Card. A worker 'certified' by one site is automatically 'certified' to the other company sites thus avoiding repetition of training.

See also case study, Annexes, section 6.2.1.

Just like the schemes for organisations, there are several passport type schemes in the United Kingdom (see HSE, 2006). The two main schemes in the construction industry are the Client Contractor National Safety Group (CCNSG) Safety Passport scheme (see also EU-OSHA, 2002, pp. 23-26) and the Construction Skills Certification Scheme (CSCS) (HSE, 2006; Walters and James, 2009).

A national safety passport system exists within the SCC framework in the Netherlands and Belgium (see above). The SCC scheme obliges workers of SCC certified contractor companies to undertake safety training, with an exam. If they pass, they get an individual SCC certificate. To ease the verification of personnel competencies, a uniform Benelux personal safety logbook - a national safety passport - has been introduced. This passport contains information on relevant

(safety) training and work experience, and medical examination/follow-up. An employee's market value may increase significantly when having an SCC certificate and national safety passport (EU-OSHA, 2000, 2002).

Certification schemes related to SCC/VCA: SCT/VCU and SCP/VCO[24]

Although SCC stands for Safety (Health and Environmental) Checklist Contractors, the system has a much wider scope. The SCC/VCA checklist has been supplemented by a **'Safety and Health Checklist Temporary Employment Agencies and Intermediaries' (SCT)** (in Dutch: Veiligheid en Gezondheid Checklist Uitzendorganisaties or VCU). The SCT scheme is derived from and based on the SCC system. The SCT procedure, designed for the certification of the safety management systems of temporary employment agencies and intermediaries, is intended for the secondment of personnel to clients stipulating an SCC certification and companies with and SCC certification. The SCT checklist is owned and managed by the Foundation Cooperation for Safety (SSVV).

Apart from the SCC/VCA and SCT/VCU schemes, another checklist was recently introduced: the **'Safety Checklist Principals' (SCP)** (in Dutch: 'Veiligheid Checklist Opdrachtgevers', VCO) (see Box).

Safety Checklist Principals (SCP/VCO)

While SCC/VCA is designed for contractors who need to perform hazardous work for a principal, SCP/VCO is intended for the principals themselves (or the parties representing them). In practice, and especially in the case of temporary and mobile construction sites, principals often do not fully succeed in setting up good local organisation with clear rules for contractors and associated monitoring on site. This is also true of the design, project, coordination and engineering firms that manage SCC/VCA-certified (sub-) contractors . SCP/VCO provides a solution to this problem: through the implementation of a system that meets the SCP/VCO requirements, the correct context and conditions are created for the SCC/VCA-certified contractors to work in a safe, healthy and environmentally conscious manner. SCP/VCO is an extension of SCC/VCA, and is thus a tool for creating good relationships and coordination between principals and their SCC/VCA-certified contractors. In this way it is possible to achieve optimal results together in terms of safety, health and environment, and incidents and accidents can be minimised.

Like SCC/VCA, SCP/VCO originates from the Netherlands, and is also managed by the Dutch Foundation for Cooperation for Safety (SSVV). In the Netherlands there are now 15 SCP/VCO-certified companies. In Belgium, SCP/VCO certification is monitored and discussed by the Executive Committee of the non-profit organisation BeSaCC-VCA. Belgacom is the first and at present the only Belgian company to hold a SCP/VCO certificate (see also case study 'Contractor safety at Belgacom: VCO hand in hand with VCA', section 6.2.2).

SCP/VCO has a structure similar to that of SCC/VCA, and is thus also based on a checklist. There are a total of 12 chapters, with 14 questions which must be answered positively in order for a certification audit to be successful. There are also 39 additional questions. The certification must be done by an external body.

The 12 chapters of the VCO/SCP Checklist are:[25]

- **Chapter 1 - Policy and culture**: The implementation of an explicit policy focused on continual improvement of SHE and a culture within which this is feasible.

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[24] Based on: SSVV, http://www.ssvv.nl.
[25] SSVV, Available in English at: http://www.vca.nl/content.aspx?guid=B1405B3E-D00D-466F-85AC-BED86BD6BC25.

- **Chapter 2 - Organisation and regulations**: Support for the SHE policy of third parties by means of regulations and organisational measures.
- **Chapter 3 - Risk inventory and evaluation (RIE)**: An inventory and evaluation of the risks required for the implementation of adequate control measures relating to: the installation and the workplace where third parties will carry out their work; and the work to be carried out by third parties.
- **Chapter 4 - Admission policy**: Admission to the principal's site is restricted to those companies and their employees who are familiar with the SHE regulations and instructions on the principal's site and who comply with the SCC/SCT requirements imposed on the performance of high-risk work.
- **Chapter 5 - Information and instructions**: The provision of SHE knowledge and information to employees of third parties required for their work.
- **Chapter 6 - SHE communications and consultations**: Regular communications to and consultations with third parties relating to progress and developments in SHE issues.
- **Chapter 7 - The workplace**: A safe workplace during the commencement, performance, and conclusion of the work.
- **Chapter 8 - Inspections and observations**: The retention/improvement of an appropriate SHE level relating to the conduct of third parties, their working environment, and the tools and equipment they use.
- **Chapter 9 - Company emergency plan**: Are a plan or plans, personnel and equipment available for the implementation of an effective response to a threatened emergency?
- **Chapter 10 - Notification, registration, and investigation of incidents**: The investigation of incidents/accidents for the subsequent implementation of the appropriate preventive measures.
- **Chapter 11 - Management and coordination of third parties involved in major projects and major maintenance work so as to prevent SHE incidents**: The control of the risks associated with major projects.
- **Chapter 12 - Evaluation of the SHE performance of third parties**: The periodic evaluation of the SHE performance of both third parties and the principal so as to determine and implement (and supervise the implementation of) any improvement measures that may be required.

There are two levels of certification: one-year certification, obtained by complying with all the compulsory questions, and three-year certification, for which all the compulsory questions have to be positively answered and at least 20 (out of 39) of the additional questions. To receive re-certification after three years, positive answers to 24 of the additional questions are needed.

The certification cycle begins with an initial audit. There is another audit after one year, and again, after two years. These two interim audits together cover all the questions, so that the entire SCP/VCO range is reviewed. In the third year, a re-certification audit (repeat audit) is carried out, during which all the SCP/VCO questions are checked.

See also case study 'Contractor safety at Belgacom: VCO hand in hand with VCA' (Annexes, section 6.2.2).

4.3.3. Other approaches and points of attention

Besides purchaser procurement strategies and safety certification schemes the literature addresses several other approaches that can be used to obtain safer and healthier workplaces in outsourcing, thus contributing to fewer accidents and diseases related to work. These approaches focus their attention on issues such as:

Contractual clarification of responsibilities and planning

A clear definition of responsibilities from the early stages of the contract is necessary, since all involved entities have legal obligations under health and safety laws (HSE, 2002a; NHS, 2011; COM, 2011). In any case, OSH requires a detailed planning of contracted work. The contract should contain information on:

- potential hazards;
- measures that have been taken to eliminate or limit them;
- precautions that still need to be taken; and
- a description of safe behaviours (Zwanikken et al., 2008; NHS, 2011; COM, 2011).

An efficient planning of this process, including the preparation, execution phase and evaluation phase was developed, for instance, in a major overhaul of a conventional thermal power station in Belgium, (EU-OSHA, 2010).[26]

A committment to OSH matters at all levels is important to ensure safe working and respect for the terms of contracts (Zwanikken et al., 2008).

Communication, cooperation and training

Continued cooperation between client and (sub-) contractorhelps to implement a joint safety and cooperation culture (Zwanikken et al., 2008).

One form of cooperation to ensure high OSH levels is information sharing among all partners involved, before work starts, and while it is in progress (for example, safety performance indicators). This helps to ensure that risks are identified and eliminated or controlled (Walters and James, 2011; Winkler, 2006, cited in Zwanikken et al., 2008; HSE, 2002b; EU, 1989; NHS, 2011; COM, 2011). For instance, ConstructionOnline (http://www.constructiononline.co.uk) is an example of a British internet site developed specifically to improve teamwork and communication in the construction community. By using it contractors, sub-contractors, co-workers, clients, and others can share plans, project documents, change orders, estimates or schedules.
Another example comes from the contractor SPIE Belgium, where the improved communication within the company and between it and its client Total Refinery Antwerp helped modify risky working practices.[27]

Client companies should inform their workers about the presence of (sub-) contractors and the tasks they are performing. They should also inform the (sub-) contractorworkers about their own safety procedures, as well as any risks related to the task, and about any preventive measures in place. In fact, cooperation between client and (sub-) contractors improves common knowledge, awareness and understanding of activities, responsibilities and risks (Zwanikken et al.,2008; NHS, 2011; HSE, 2002b; COM, 2011).

Belgian and Polish workers join forces for asbestos removal in the Brussels Finance Tower

In December 2003 Asbestos Removal, a subsidiary company of Hertel Services, was asked to remove the asbestos in the Brussels Finance Tower. Because of the Belgian labour shortage it was decided to outsource part of the job to Hertel Services Poland. As the Polish company had no experience of asbestos removal, a special course was translated into Polish and a Polish pulmonary physician and trainer underwent a 'train-the-trainer' course to enable them to instruct the Polish workers. An interpreter was used by the Polish employees and the Flemish coordinators to enable efficient communication on all issues.

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[26] See also EU-OSHA, http://osha.europa.eu/data/case-studies/overhaul-of-thermal-power-station/Electrabel.pdf.
[27] See also EU-OSHA, http://osha.europa.eu/data/case-studies/leadership-and-safety-culture-at-spie-belgium/Leadership_and_Safety_Culture_at_Spie_Belgium.pdf

The full case study is published in the EU-OSHA report 'Workforce diversity and risk assessment: Ensuring everyone is covered' (EU-OSHA, 2009, pp. 72-74).

In many large companies, particularly those with high risks, employees and (sub-) contractors are obliged to engage in brief, company-specific, safety training and to pass a short test before entering the site to start their activities. These trainings are mostly by means of a short film or an e-learning application. In order to prevent long waiting times, some enterprises also offer web-based applications which allow (sub-) contractors to register their workers in advance.

Therefore, training and education on OSH issues aligns standards and procedures among client and contractors, harmonising safety culture and improving OSH performance (Zwanikken et al., 2008; HSE, 2002b; HSE, 2002a).

Joint control procedures

The adoption of the same standards and procedures among client and (sub)-contractors improves OSH performance (EU, 1989; HSE, 2002b; HSE, 2002a; Riedijk, 2001; Goudswaard, 2002, cited in Zwanikken et al., 2008). For instance, a 'permit-to-work', is a widespread, formal written procedure used by client companies to control the performance of potentially hazardous tasks (such as boarding vessels or welding) by (sub-) contractors .

The volume of the tasks to control must be kept manageable. For instance, in large construction projects dividing the project up helps to enforce OSH requirements (Frijters, 2005, cited in Zwanikken et al., 2008).

Complementing control procedures with safety inspections (such as an investigation of all injuries, near misses and cases of ill health) contributes to improving OSH performance (Amerongen, 2007, cited in Zwanikken et al., 2008).

Contractor evaluation

Systematic evaluation of contractors can lead to better OSH performance. Contractors can be evaluated through a system based on a set of predefined criteria, which don't necessarily have to be purely focused on OSH matters. The evaluation could also, for example, include the quality of delivered service, These criteria could be entered on a checklist. The timing and frequency of evaluation can depend on the type of agreement the contractor concerned. For long-term contracts, the evaluation should be done periodically. For one-off contracts, such as new construction projects, an evaluation is necessary at the end of the contract. Based on such an evaluation system, contractors can be classified in predefined categories, with these categories used as a basis for incentives. Contractor companies with good evaluation scores, can for example, be rewarded by accepting that their future tenders could be a bit more expensive than those of contractors with lower evaluation scores.

5. Conclusions and recommendations

5.1. Conclusions

5.1.1. Supply chain approach to OSH

In today's global and national economies, businesses increasingly outsource parts of their activities and processes. Companies function and compete thus more and more on a supply chain level, in specific networks with their suppliers and service providers. This trend, and the growing importance of supply chains have implications for the working conditions and health and safety of workers of both the supplier and the contracting companies.

There are two main supply chain networks or relationships between companies and the members of their supply chain: the primary network (or supply chain) - a company and its suppliers of certain goods and materials, and the secondary network (or contracting chain) - a company and its contractors and subcontractors providing specific services such as maintenance, construction, cleaning or catering. Both networks are affected by stakeholders such as the government, non-governmental organisations (NGOs) and customers. The role of the government, both at national and European level, is of great importance for influencing both networks to apply OSH practices.

The secondary network has already been explored in previous reports by EU-OSHA as it has long been considered critical for OSH. This is less the case for OSH in relation to the primary supply chain network, which is a role that has been neglected, with little to be found on it in the relevant scientific literature.

The nature of the primary and secondary network is different, as well as the relationships among their actors. While in the primary network there is a flow of goods and materials, the secondary network comprises a flow of people and their services (for example, contracting and sub-contracting). Whereas European and national legislation with binding subsequence regulates OSH practices between a company and its (sub-) contactors (the secondary network) the relationship between a focal company and its suppliers (the primary network) is mainly voluntary and driven by external pressure, business advantages and sustainability agendas.

5.1.2. Primary network

▪ Companies' motivation to promote OSH through the supply chain

The triggers, mentioned in the literature, for a focal company to take actions for promoting and supporting improvement in OSH in the supply chain are:

- sustainability and corporate social responsibility agendas;
- legal demands;
- customers' demands;
- response to stakeholders;
- environmental and social pressure groups and reputational loss; and
- competitive advantages, profitability and business efficiency.

OSH is an integral component of the social dimension of sustainability and CSR and, as such, is increasingly promoted and imposed by focal companies among their suppliers. Environmental and social (including OSH) issues increasingly occur on the public agenda, which provides triggers as well as opportunities for focal companies to include them in managing the supply chain. External pressure factors are:

- legal demands;

- customers' demands;
- responses to stakeholders; and
- environmental and social pressure groups and reputational loss.

Internal pressure factors are competitive advantages, profitability and business efficiency as they directly affect business success. However, these triggers are all interrelated and boundaries between them are often hard to ascertain.

No one trigger can be singled out as the main motivation for a focal company to promote OSH among its suppliers. Nevertheless, a distinction should be made, based on the types of sector or industry concerned as heavily regulated industries such as the chemical industry are quite different to, for example, the clothing and textile sector. The size of the company and its supply chain are also important; local supply chains of small companies and organisations cannot be compared with the large, international supply chains of multinational enterprises. With regard to the latter, the OECD (2011) recently published its 'Guidelines for Multinational Enterprises', based on the 'Declaration on International Investment and Multinational Enterprises' adopted on 25 May 2011 by 42 governments. These guidelines are the only multilaterally agreed and comprehensive code of responsible business conduct that governments have committed to promote, and its aims, among others, are to regulate as far as possible unsafe and/or unhealthy practices in multinationals' supply chains.

The literature suggests that many supply chain initiatives have emerged, not just out of market-based business considerations, but through a process whereby such considerations are mediated and shaped by external pressures from social, political and regulatory sources (Walters and James, 2009). Successful attempts to influence business approaches to improve OSH in the supply chains frequently involve mixed forms of regulation, in which top-down state regulation is mixed with market-based measures (such as REACH) that are developed, implemented and monitored through the engagement of businesses, traditional state regulatory inspection, trade unions, consumer groups and other social interest groups, as well as through media attention (Walters and James, 2009).

- ### *Strategies and instruments to promote OSH through the supply chain*

Two main strategies for focal companies to implement sustainability, and therefore OSH, in their supply chains were identified in the literature: 'supplier management for risks and performance' and 'supply chain management for sustainable products'. Within the first one, companies are driven by the fear of loss of reputation if related problems are raised. Therefore, they add environmental and social criteria to the basic economic evaluation of a supplier. Nationally accepted environmental and social standards play a central role in enabling this. The second strategy encompasses product related initiatives undertaken by individual companies or trade/industry bodies. This usually involves defining and implementing lifecycle based standards for the environmental and social performance of products throughout the supply chain. Those two strategies are not mutually exclusive and are, in many cases, interrelated.

Focal companies promote OSH by obliging suppliers to take care of their staff. There are different ways of doing this, including:

- setting expectations (declarations, code of conduct);
- monitoring and auditing;
- correcting faults or deficiencies;
- enhancing necessary knowledge; and
- the development of partnerships.

There is not enough literature on any formal comprehensive evaluation of the ways these measures have been used, especially in terms of OSH promotion/improvements, in order to

check how successful they are. Nevertheless, research indicates that the most successful initiatives comprise a combination of approaches, with commitment strategies and consequent interventions that communicate clear rewards for engaging in environmental and socially responsible behaviour. The literature also suggests that a common feature in the positive examples of approaches of focal companies in improving OSH in the supply chain, is that they incorporate clear and fairly extensive arrangements relating to the auditing and monitoring of suppliers or, in the case of upward supply chains, involving the provision of hazardous substances and buyer compliance with prescribed standards (Walters and James, 2009). Based on the revised literature and published case studies it can be concluded that this can be extended to further partnering where joint process improvements are conducted (Handfield et al., 1997; Seuring and Müller, 2008). An effective policy and practice must be in place in order to influence suppliers to implement sustainability practices. In this respect, measures related to the education and training of the purchasing staff as wells as measures against suppliers play an important role.

Public authorities play an important role in procurement activities and, by extension, OSH as they are major consumers in Europe. By procuring products and services in a socially responsible and sustainable way, public bodies are able to give OSH-related incentives to companies. This is in general regulated by the Procurement Directives, which are transposed in national policies. Research shows, however, that within the EU there are significant differences in the application of sustainable procurement practices (Brammer and Walker, 2011). The European Commission recently published a guide on taking social considerations into account in public procurement (COM, 2011).

The most frequently mentioned barriers to implementing sustainable (including OSH) supply chains are higher costs, coordination effort and complexity, and poor (or no) communication in the supply chain.

The main supporting factors are:

- good communication;
- monitoring;
- evaluation;
- reporting;
- sanctions
- management systems;
- training and education of purchasing employees and suppliers; and
- integration of these measures into corporate policy.

These factors imply higher costs which, however, can be controlled by the joint efforts of all supply chain partners.

5.1.3. Secondary network

▪ Companies' motivation to promote OSH through the contracting chain

The European Survey of Enterprises on New and Emerging Risks (ESENER) revealed that 90% of companies (which responded) in the EU consider legal obligation the most important driver for OSH. Although there is no clear research evidence on what most motivates employers to pay attention to OSH in the contracting chain (the secondary network), these ESENER results suggest that companies are mostly driven by national and relevant EU legislation (particularly the Framework Directive, Construction Sites Directive, and Procurement Directives for public bodies). Moreover, 67% of the EU companies which responded added that another major reason to promote OSH were 'requirements from clients or concerns about the organisation's reputation'.

The Construction Sites Directive and related guidance (COM, 2011) for example, underline the importance of applying a sound procurement strategy, and the fact that clients (purchasers) can significantly influence OSH when selecting contractors.

Reputational risk is, according to ESENER, another driver for OSH in the contracting chain. This appears to be especially the case for enterprises and projects with high visibility (such as big construction projects). Companies operating in traditionally high-risk sectors, such as the petrochemical industry, pay more attention towards OSH in their contracting chain as unsafe practices can have serious consequences – not only for the contractors concerned but also for the company's own staff and the environment. For this reason, the petrochemical industry developed specific safety certification schemes, such as VCA/SCC. These non-mandatory schemes are applied to ensure the competencies and performance of contracting companies and the people working for them with regard to OSH and environmental issues. In many European countries and particularly in high risk sectors, these certification schemes have gained substantial commercial value, as they give access to a certain market.

▪ *Strategies and instruments to promote OSH through the contracting chain*

The involvement of clients and (sub-) contractors in providing adequate OSH to their workers implies careful attention at all phases of the interaction between the entities. It begins at the pre-contract stage with a thorough assessment of (sub-) contractor competence and selection of safe contractors. It continues throughout the job execution via close cooperation of all parties and appropriate levels of supervision. At contract termination, it ends by reviewing and recording the OSH performance of contractors and sub-contractors.

Safety certification schemes have become important to the promotion of OSH in the contracting chain. They are applied by companies to ensure the performance and competencies of contractors with regard to OSH and environmental issues, and enable them to provide an answer to the legislative requirements with regard to (sub-) contracting. These schemes have demonstrated their value: An evaluation of the SCC/VCA scheme in the Netherlands shows, for example, a decrease of the periodically evaluated accident figures, which suggests an improvement in OSH. It should, however, be noted that the added value with regard to OSH is, for many (sub-) contracting companies, of less importance than the commercial value of such certificates.

A relatively new, but interesting instrument with regard to the management of (sub-) contracting activities, is the SCP/VCO scheme. This scheme, which originates from the Netherlands and is also applied in Belgium, allows better management and coordination of SCC/VCA-certified contractors. SCP/VCO is also useful for design, project, coordination and engineering firms that manage SCC/VCA-certified (sub-) contractors.

Besides purchaser procurement strategies and safety certification schemes the literature addresses several other approaches that can be used to obtain safer and healthier workplaces in outsourcing, thus contributing to fewer work-related accidents and diseases. These approaches focus on issues such as contractual clarification of responsibilities and planning; communication, cooperation and training; joint control procedures; and contractor evaluation.

Some key success factors in the prevention of risks in outsourced activities result from the combined efforts of all parties concerned (client company, (sub-) contractors , workers) and can lead to the best way of ensuring the adequate performance and safety of outsourced tasks, namely: an effective communication structure covering all parties concerned, in order to share knowledge ensuring that risks are identified and eliminated or controlled; the contract should contain information on the potential hazards, the measures that have been taken to eliminate or

limit them, those precautions that still need to be taken, and safe behaviour; the client should inform their workers about the presence of contractors and the tasks they are performing; and the client should inform the contractor workers about their own safety procedures, as well as any risks related to the task and preventive measures that have been taken.

5.2. Recommendations

In relation to primary network the following recommendations can be made:

- Health and safety should be part of a company's code of conduct for its suppliers and part of a company's sustainability criteria. OSH should be included as a critical piece in any sustainability effort of companies.
- By harnessing the momentum of the pressure for sustainability, policy makers and OSH practitioners may achieve sustainable improvements in worker safety and health.
- Policy makers need to consider development of regulations that will stimulate appropriate responses on the part of both focal companies within supply chains and relevant trade and industry bodies. They also need to address how to best utilise the cooperation of other bodies, such as those outside the narrow business interests represented within the supply chains themselves (Walters and James, 2011).
- In order to enforce OSH regulations and put them into practice in an effective way, particularly with regard to SMEs, additional non-regulatory guidance and support is required. The Dutch VASt programme is a good example of a successful joint approach between the government and industry, in which the OSH policy on chemicals in various high risk production chains (such as those concerning asbestos removal, metal-working fluid, ship and yacht building, and dental products) is intensified in order to anchor responsibility and build a stronger infrastructure of the knowledge regarding the handling of chemicals.
- Public authorities are key to raising awareness of OSH-related matters as they can procure suppliers and contractors in a socially responsible way. The procurement of public bodies is regulated by the Procurement Directives and their related national legislation, and is further supported by a recent EC guide to raise authorities' awareness of the potential benefits of socially responsible public procurement. In reality, however, the procurement process is often mainly driven by price, and not by OSH. National governments should therefore increase their efforts to stimulate, incentivise and enforce socially responsible procurement by public authorities.
- Despite there being some information on 'OSH in a supply chain', more research, more evaluation and more understanding of this specific issue is required.

There are also some recommendations related to the secondary network:

- Outsourcing should be based on a strong relationship between client and (sub-) contractors supported by information and communication.
- Companies should select 'safe contractors' based on a sound procurement strategy that considers best value rather than lowest price.
- The client company, (sub-) contractors and workers should combine efforts in order to find the best solutions to ensure an adequate performance and safety of outsourced tasks.
- The outsourcing contract should contain information on the potential hazards and the measures that have been taken to eliminate or limit them.
- Third-party certification should be used in order to evaluate, certify and ensure the performance and competencies of individuals (workers) or companies (contractors, and those working for them (sub-contractors), with regard to OSH (and environmental issues).

- (sub-) contractors should be trained in OSH issues to align procedures, harmonise their safety culture with clients and improve OSH performance.
- Companies should implement control procedures.
- Public authorities, as already mentioned, are in an important position to stimulate OSH in cleaning, maintenance services and construction works. National governments should therefore increase their efforts to stimulate, incentivise and enforce socially responsible procurement by public authorities.

- Policy makers need to consider how best to develop and enforce regulatory strategies that stimulate appropriate responses on OSH issues, both from client companies and (sub-) contractors.

6. Annexes

6.1. Case studies primary network

6.1.1. Better health and safety for suppliers: Volkswagen AG, ILO and GTZ

Initiator:

Volkswagen AG (focal company) in partnership with ILO and GTZ

Countries:

Germany, Brazil, Mexico and South Africa

Sector:

Automotive industry

Aim:

The partners' common goal was to establish a health and safety culture at work by means of improving labour standards. One of the reasons Volkswagen chose to address this issue was that the company wanted to strengthen their policy in Health Protection, Promotion and Occupational Safety with its extensive programme including the company's participation in the Global Compact, the Social Charter and the Group Guidelines. It is Volkswagen's opinion that the OSH policy needs a holistic approach. The idea should not stop at the gates of the company itself, it should relate to the entire value creation chain. Therefore one of Volkswagen's major aims of the project is to improve the overall OSH knowledge and to identify best practices through project activities and the social partner network.

Activities:

The project involved selected Volkswagen suppliers in Brazil, Mexico and South Africa. Initial audits were performed on OSH in their workplace. Based on the findings of these, several recommendations were used to generate a checklist for a second review (conducted up to six months after the initial audit). A report then documented the audit findings, including any improvements that have been made. When all the suppliers have been assessed, best practices and solutions found across all project countries will be developed and collected into an online network. This network will provide the necessary information on health and safety for the countries and enterprises involved. The ultimate goal of the project is the development of an international guideline for OSH and supply chain management. The aim is to provide expert knowledge by developing an information and consultation network. The network will provide information about best practices and lessons learned and can be accessed by those who require advice on problems regarding OSH.

Results:

When this case study was developed the first audit and part of the second audits had been finalised. Based on its conclusions, lessons learned and recommendations for good OSH in the supply chain have been drawn up.

6.1.2. VASt Programme-Reinforcing the working conditions policy on dangerous substances

Country of origin:

The Netherlands

Sector:

Number of sectors and supply chains, e.g. asbestos removal chain, metal-working fluids chain, ship and yacht building chain, dental products chain

Keywords:

Dangerous substances, evaluation, national programme, sector organisations, SME, Stoffenmanager

Organisations involved

Dutch Ministry of Social Affairs and Employment

Case study is based on:

Hollander, A., Visser, R., Jongen, M., Occupational health and safety prevention programmes in the Netherlands: the VASt programme, TNO Quality of Working Life, 18 pp. Unpublished/In press.

Hollander, A., The VAST Programme – A practical example how to improve the handling of chemicals in SMEs, Presentation at the EU-OSHA seminar 'Chemical substances at work: facing up to the challenges', 2009. Available at: http://osha.europa.eu/en/seminars/chemical-substances-at-work-facing-up-to-the-challenges/speech-venues/speeches/the-vast-programme-2013-a-practical-example-how-to-improve-the-handling-of-chemicals-in-smes.

Description of the case

Introduction

Between 2003-2007, the Dutch Ministry of Social Affairs and Employment carried out the 'VASt programme' (in Dutch: Versterking Arbeidsomstandighedenbeleid Stoffen; 'Reinforcing the Working Conditions Policy on Dangerous Substances'). This programme was to assist small and medium-sized enterprises (SMEs) in reinforcing the working conditions policy on hazardous substances.

One of the main reasons for this initiative was that employers and employees in SMEs were (are) mostly unaware of the risks related to working with hazardous substances (EU-OSHA, 2009). Often, if companies are willing to take preventive measures with regard to dangerous substances, this is, due to a lack of knowledge, not done at the source of exposure. Research shows that, if preventive measures are taken, only half of them are appropriate (Walters, 2008). Although the Safety Data Sheet (SDS) is the most important source to get information on specific substances, the quality of the SDSs appears often to be poor. Users from other companies, if they even consult these sheets, often encounter difficulties understanding the content..

Based on these and other reasons, the Dutch authorities decided to tackle this issue by giving more attention to the effective implementation of the existing OSH regulations in companies - especially in SMEs. It was recognised that a reorientation of prevention strategies through non-regulatory guidance and support was needed, which resulted in the VASt programme. The need for non-regulatory governmental initiatives is in line with findings from six European countries (Walters, 2008).

Aims

The aim of the programme was to work together with the industry to strengthen the health policy on hazardous substances in order to anchor the chain responsibility and build a stronger knowledge infrastructure regarding the handling of chemicals.

Initially, the programme's budget was EUR 10 million. Due to increased interest in the programme, the budget was increased to EUR 12 million. The programme was mainly aimed at
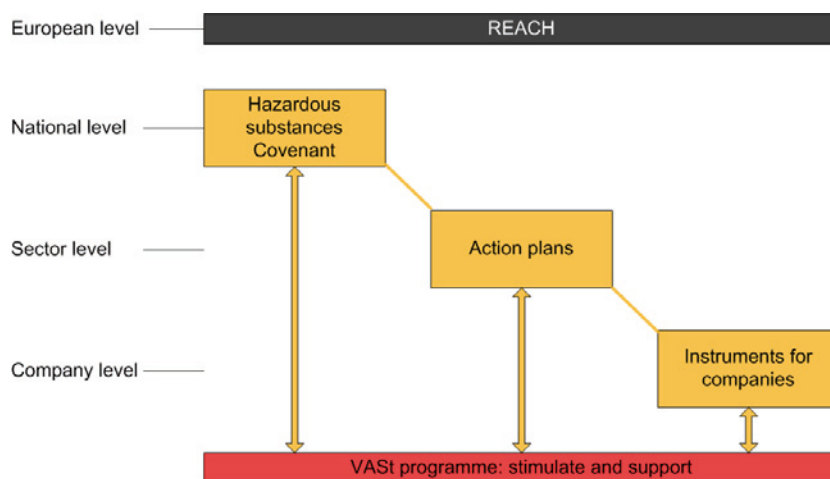
25 high-risk sectors and product chains, which were invited to draw up and implement an action plan.

Industry sectors and product chains were able to obtain financial support for action plans that were linked to the VASt programme, and aimed at improvements. In addition, projects were carried out to provide the industry with effective tools to assess and control exposure to dangerous substances.

The VASt programme covered four levels: European, national, chain/sector and company, and linked them together (see Figure 1).

▪ The working conditions at the company level had to be structurally improved from the national level via the chain and sector approach.

▪ At national level the Hazardous Substance Covenant was initiated. The Confederation of the Dutch Industry and Employers, the Confederation of SMEs and the government signed the covenant. The aim was to improve the communication on risks of working with hazardous substances and to stimulate and support the work performed at sector and company level.

▪ A connection with a fourth level was made in 2005 by REACH (Registration, Evaluation, Authorisation and Restriction of Chemicals) (European Commission, undated).

Figure 1: The VASt programme stimulated and supported companies through four levels, which it linked: European, national, chain/sector and company

What was done, and how?

The main part of the VASt programme was directed to sectors and product chains, which were challenged to draw up and implement an **action plan**. Each action plan contained improvement activities regarding:

▪ substances, exposure, and measures;
▪ communication in the supply chain; and
▪ the knowledge infrastructure.

The government also supplied the companies with various instruments, like the Stoffenmanager, PIMEX and AWARE.

- The '**Stoffenmanager**' (www.stoffenmanager.nl) is a web-based risk assessment tool and was initially developed to assist SMEs in prioritising and controlling the risks of handling hazardous substances in the workplace. Stoffenmanager is open source (and therefore free) software. It was developed during the time of the VASt programme and is now a generic tool for use in all kinds of companies. It is available in English and Dutch.

- **PIMEX** (PIcture MIxed EXposure)is a video exposure monitoring method (Rosen et al.; 2005). As part of the VASt programme PIMEX was further developed for risk communication. PIMEX has been used to train workers in the proper use of personal protective equipment and control measurements, but also in order to extend the knowledge of chemical risks and to motivate workers and management to use safe working procedures, to make evaluations and to visualise methods for good practice..

- **AWARE** (Adequate Warning and Air REquirement) is a coding system for products containing volatile organic compounds (VOC), a tool for product manufacturers to support risk assessment and product innovation. It can also be used to inform end-users about the potential health risks of hazardous products. A higher AWARE score indicates a higher risk.

The following supply chains were part of the VASt programme:

- asbestos removal:
- metal-working fluids;
- ship and yacht building; and
- dental products

What was achieved?

In order to evaluate the result of the VASt programme, quantitative as well as qualitative methods were used. The final evaluation was performed in the autumn of 2007, four years after the programme officially started during the European Week for Safety and Health at Work 2003 'Dangerous substances, handle with care' (EU-OSHA, 2003).

The qualitative study (Bureau Bartels, 2008) consisted of desk research and interviews with key players, sector representatives and persons active in the VASt action plans.

The quantitative study was carried out by means of a telephone questionnaire among a sample of companyies' own representatives for occupational health using hazardous substances. At the end of 2004 the baseline study (Vonk and Engelen, 2005) was performed. A follow-up study, using the 2004 questionnaire with some minor changes, was performed in 2007 (Visser et al., 2007). The questionnaire was completed by the company's own OSH representative.

The evaluation showed that 24 action plans were performed, many more than the 13 that were initially anticipated. The potential reach of the action plans was estimated at 183,500 companies, covering about two million workers (about one quarter of the companies and working population of the Netherlands). Most of the sectors (80%) were satisfied with the way they performed their action plan.

Positive points were that useful instruments were developed, that there was a good collaboration between the relevant actors and a willingness to participate on the part of the companies. Additionally, more information on hazardous substances became available within the sectors and innovative measures were taken to reduce the risks.

Negative points included the time frame in which the action plan had to be performed. This meant a lot of sectors had less time for the actual implementation of the plans within the companies. Furthermore, it was often difficult to reach both the companies within the sector, and the suppliers of chemicals as part of supply chain activities.

The quantitative study showed that 15% of all companies working with hazardous substances were active in some way in the VASt programme or were using its instruments. Six indicators were selected from the questionnaire to describe the existence of a policy on working with hazardous substances within companies.

Three of these six indicators developed positively during the VASt period.

The number of companies having a sector-specific risk assessment tool for substances doubled from 7% in 2004 to 15% in 2007. This increase applied to SMEs as well as among large companies.

The number of companies not receiving safety data sheets decreased from 35% in 2004 to 25% in 2007.

The number of companies giving their employees instruction or information on working safely with hazardous substances increased from 54% in 2004 to 59% in 2007. This increase was most visible in SMEs, but is still behind the larger companies.

Two indicators did not change:

- The assistance of the sector organisations on hazardous substances was 55% in 2004 and 53% in 2007.
- The number of companies that performed an exposure assessment did not change. This indicator is relevant because it indicates how well risk assessments are being performed as part of their legal obligations.

The VASt programme contributed mostly to opening up the available information and knowledge on working safely with hazardous substances, aiming especially at SMEs. According to the sector organisation VASt also increased awareness, however this was predominately apparent in the companies directly involved in executing the action plans.

The implementation of the instruments and measures started only at the end of the programme and is, according to the sector organisations, continuing. A good example was the increasing number of Stoffenmanager users, with 10,000 users at the end of 2009.

Success factors and drawbacks

The VASt programme mostly stimulated the **larger companies**, which were active in developing instruments and attending workshops and other activities. In a way, these companies set a new and higher standard for all companies in the sectors, which was followed by the smaller companies.

The use of sector organisations in order to reach the companies revealed some major drawbacks. Some of these organisations were small and did not have any specific knowledge on hazardous substances. Additionally, on average 1 in 6 companies is not a member of the sector organisation, and for small companies (1–10 employees) this ratio increases to 1 in 5.. In order to reach these SMEs it is important to use other means, such as the Stoffenmanager, the action plan approach and the use of industrial companies as intermediates.

The cooperation between sectors within a supply chain took more time than expected. The supply chain is a major source of knowledge on substances. Difficulties on supply chain communication are also to be expected during the implementation of REACH (Hollander et al. 2008). As part of the VASt programme a study was performed (Marquart et al., 2005) in order to address this topic. As a result, sector organisation at the beginning of the supply chain, like the distributors of chemicals and paints, were helped by the VASt programme in preparing for REACH. The quantitative study showed that, of the companies active in the VASt programme, 42% knew REACH (compared to 6% of the non-active companies) and 16% were already preparing for REACH.

The evaluation of the VASt programme (Hollander, undated) shows that it is difficult to relate directly the activities performed at the sector level as part of the VASt programme with changes to working conditions at a company level.

The model of the Stoffenmanager can also be used in exposure assessments for REACH and is incorporated in the REACH guidances (ECHA, 2008). Furthermore, the Stoffenmanager was acknowledged by the Dutch Labour Inspectorate in 2008, which means it could be used for the quantitative evaluation of exposure to chemical agents as part of the compulsory risk assessment

(European Commission, 2005). On the whole, the Stoffenmanager is the most successful instrument of the VASt programme.

Without exception all sectors cited the importance of continuing the process and continuing the implementation, which had just begun. However, this will have to be done without further financial support from the government. Most of the sectors have already made plans to continue the process by agreeing on available manpower and allocating financial means. Equally important, the Dutch authorities are continuing the development of instruments such as Stoffenmanager and making all the developed knowledge available through their website, www.arboportaal.nl/stoffencentrum.

Further information

Further information on the VASt Programme can be obtained from:

- AWARE, http://www.arboportaal.nl/onderwerpen/gevaarlijke-stoffen/veilig-werken/aware-tool.html
- Ministerie van Sociale Zaken en Werkgelegenheid (Dutch Ministry of Social Affairs and Employment), Arboportaal, http://www.arboportaal.nl/onderwerpen/gevaarlijke-stoffen/veilig-werken/vast-beleidsprogramma.html
- PIMEX, Wikipedia, http://en.wikipedia.org/wiki/PIMEX
- Stoffenmanager, https://www.stoffenmanager.nl/

Transferability

This Dutch non-regulatory governmental initiative is transferable to other EU Member States and abroad.

References, resources:

- Bureau Bartels, 'Analysis of the results of the VASt programme' (Opbrenstenanalyse VASt-programma) 2008, Amersfoort, Bureau Bartels, (in Dutch). Available from: http://www.rijksoverheid.nl/ministeries/szw/documenten-en-publicaties/kamerstukken/2008/03/14/opbrengstenanalyse-vast-programma-eindrapport.html

- ECHA - European Chemicals Agency, 'Guidance on information requirements and chemical safety assessment. Part D: Exposure Scenario Building, Helsinki, ECHA, 2008. Available in English at: http://echa.europa.eu/documents/10162/13632/information_requirements_part_d_en.pdf

- EU-OSHA - European Agency for Safety and Health at Work, 'European Week for Safety and Health at Work 2003', http://osha.europa.eu/en/campaigns/ew2003

- EU-OSHA - European Agency for Safety and Health at Work, 'Expert forecast on emerging chemical risk related to occupational safety and health', 2009, Luxembourg: Office for Official Publications of the European Communities, 197 pp. Available in English at: http://osha.europa.eu/en/publications/reports/TE3008390ENC_chemical_risks

- European Commission, REACH, information available online at http://ec.europa.eu/environment/chemicals/reach/reach_intro.htm.

- European Commission, 'Practical guidelines of a non-binding nature on the protection of the health and safety of workers from the risks related to chemical agents at work' (Articles 3, 4, 5 and 6, and Annex II, section 1, of Directive 98/24/EC), 2005, Luxembourg. http://osha.europa.eu/data/links/practical-guidelines-of-a-non-binding-nature-on-the-

protection-of-the-health-and-safety-of-workers-from-the-risks-related-to-chemical-agents-at-work

- Hollander, A., 'The VAST Programme – A practical example how to improve the handling of chemicals in SMEs', Presentation at the EU-OSHA seminar 'Chemical substances at work: facing up to the challenges', 2009.

- Rosen, G., Andersson, I., Walsh, P., Clark, A., Säämänen, A., Heinonen, K., Riipinen, H. and Pääkkönen, R., 'A review of video exposure monitoring as an occupational hygiene tool', *Annals of Occupational Hygiene*, 2005, Oxford University Press, Oxford, 49, 3, pp. 201-217.

- Visser, R., Hooftman, W., Könemann, R. and Brouwers, A., VASt Programme final study (Eindmeting VASt), Hoofddorp, TNO, 2007 (in Dutch). Available from: http://www.rijksoverheid.nl/documenten-en-publicaties/kamerstukken/2008/03/14/tno-kwaliteit-van-leven-tno-rapport-eindmeting-vast.html

- Vonk, M. and Engelen, M., VASt Programme base-line study (Programma VASt in bedrijf. Nulmeting), Leiden, Research voor Beleid, 2005 (in Dutch). Available from: http://www.research.nl/nl/Project.aspx?project=B02899

- Walters, D., *Within Reach: Managing Chemical Risks in Small Enterprises*, 2008, Baywood Publishing Company Amityville, New York,:,229pp.

6.1.3. Effective supply chain communication under REACH: Corus and TNO

Initiator:

Corus (focal company) in cooperation with TNO (knowledge organisation)

Country:

The Netherlands

Sector:

Steel sheets with protective oil

Aim:

To develop a plan for chain communication within REACH, which will enable Corus to build up an effective communication structure for, among other things, exposure scenarios.

REACH and OSH:

The EU chemical regulation REACH came into force on 1 June 2007. It addresses manufacturers, distributors and commercial users of chemicals and next to environmental protection, it particularly concerns OSH issues. REACH specifies the obligations to exchange information about substances or mixtures. These obligations apply to the entire chain. The SDS is the official communication tool for transferring information about chemical substances in the supply chain. It contains information that the recipient can use to compile such documents as the RIE (Risk Inventory and Evaluation) in order to comply with the applicable SHE regulations. The supply chain communication plays a central role both in the success of the REACH registration and later on when companies have to deal with the revised eSDS of which the first were distributed in December 2010. An important new legal requirement is that a company has 12 months to comply with the content of the eSDS, but only when it contains a registration number and/or exposure scenario (ES) attachments. This means that each company has to check whether all its own use and known/communicated use in the supply chain is covered; to check whether the onsite use is safe and in line with the prescribed risk management measures in the relevant Exposure

Scenarios and to process the relevant Exposure Scenario data into the companies' product SDSs.

Activities:

The project was initiated by Corus and carried out together with TNO. A preliminary investigation of the product chain took place along with interviews with the players in that chain. Then the chain players undertook a chain simulation: an interactive workshop in which success and failure factors, solutions and actions were examined with the final goal of improving communication along the chain.

Results:

For Corus: Plan for effective REACH chain communication structure.

For TNO: knowledge to be used to develop an approach for downstream use mapping and general structure for supply chain communication within REACH.

6.2. Case studies secondary network

6.2.1. Safety, Health and Environment Passport

A multinational with several industrial sites in Portugal has prepared a Safety, Health and Environment Card (SHE Card) with the objective of ensuring that all contractors working on these sites are 'certified' concerning SHE matters (Nunes, 2012).

Associated with the card is a central database shared by the different industrial sites. This procedure is a simple way to check the validity of the card since the database contains records on contractors and workers who have the SHE Card. One worker 'certified' by one site is automatically 'certified' to the other company sites thus avoiding repetition of training.

This also allows the company to check the validity of training provided, to meet the training needs and to prevent unnecessary repetition of training actions.

Usually contractors are small companies with few workers, some of them immigrants. The aim of issuing the SHE card is that all workers of the hired contractor (regardless of skill level, school degree, professional category or function) acquire an acceptable level of safety, health and environmental knowledge, improving their safety culture and being able to work safely in any undertaking of the company. To receive the SHE Card contractor workers attend induction sessions relevant to the work they will perform. At the end of the each session an evaluation test is applied in order to obtain initial feedback on the success of the training.

Examples of induction session are: Generic presentation about OSH, work in confined spaces, welding, working at heights (over 2 metres), demolition and excavation, electrical work or other risks, some of them considered specific of each particular site.

Apart from being an internal requirement the implementation of SHE Card also contributes to the fulfilment of the company's legal obligations in terms of OSH training.

The SHE Card contributes to the implementation and dissemination of a culture of safety in the company, minimizing the incidents and preventing accidents. The necessary records also contribute to a better control of the periodic training requirements.

Sharing the 'certification' among several company sites contributes to promote transparency of qualifications in OSH.

The SHE Card initiative lasts for three years and over 100 workers from different contractors were involved in it.

Problems faced:

The problems faced were mainly due to:

- high rotation of contractor workers;

- difficulties in planning the induction/training sessions, due to short duration of some contracted tasks;
- poor Portuguese language skills by immigrant workers.

Success factors and transferability of the project:

The result of the SHE Card implementation is an increase in workers awareness of safety, health and environmental matters. One key success factor is related with the tailoring of the programme to the tasks performed by workers.

Special attention should also be given towards avoiding long and complex induction/training sessions in order to keep people motivated to participate in the programme. Nevertheless, risk factors that are specific to particular industrial sites have to be considered.

6.2.2. Contractor safety at Belgacom: VCO hand in hand with VCA

Country of origin:

Belgium

Sector:

Telecommunications

Keywords:

00081C Contracting, 00141D Outsourcing, Certification scheme, procurement, supply chain

Organisations involved

Belgacom, vzw BeSaCC-VCA, SGS

Description of the case

Introduction

The Belgacom Group, based in Brussels, is the largest telecommunications company in Belgium. It is the only Belgian telecom operator offering broadband internet access, television, telephone and wireless service provision. It has leading positions on residential and business markets in the three regions of the country and is also successful abroad. The main legal entity of the Belgacom Group is Belgacom NV/SA which, following integrationwith other firms in 2010, includes the mobile activities of former subsidiary Proximus (Belgacom Mobile) and the ICT services of former subsidiary Telindus (Belgacom ICT). Subsidiaries include Belgacom International Carrier Services, Skynet, Tango, and Scarlet.[28]

Belgacom says it aims to promote a fair, diverse and safe work environment and culture, and has developed a code of conduct structured around what it calls the three Ps (People, Planet, Profit). The statement 'The way we do responsible business', is an expression of its new corporate culture through which all Belgacom employees can share a common approach to working (Belgacom, 2010). The six key priorities of the Belgacom Group with regard to CSR are shown in Table 1.

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[28] Taken from: Wikipedia, http://en.wikipedia.org/wiki/Belgacom.

Table 1: Key CSR priorities of Belgacom (Belgacom, 2010)

CSR delivers shared value for society and for Belgacom		
	Value for society	**Value for Belgacom**
Enhancing access to communications	• More people able to enrich their personal and professional lives via modern technology • Protection of children online	• Increase of our market share • Reduction of commercial and reputational risks related to online privacy and security
Enabling a low-carbon society	• Enhanced resource conservation and energy/CO_2 efficiency	• Cost savings • Mitigation of business risks (introduction of a CO_2 tax for example) • Enhanced business opportunities via green IT solutions
Communicating on electromagnetic fields and health	• Well-informed customers with responsible behaviours.	• Mitigation of health risks on our business and reputation • Enhanced stakeholder trust and reputation
Promoting a positive working culture	• Improved work-life balance for our employees • Economic contribution: EUR 1,107 million	• Improved attraction and retention of our workforce • Reduced absence and illness costs
Developing a responsible supply chain	• Improved social, environmental and ethical standards of our suppliers • Economic contribution: EUR 1,430 million	• Mitigation of risks on our business and reputation • Enhanced relationships with our suppliers
Supporting our communities	• Improved standards of living in the communities we operate in • Economic contribution: EUR 1.7 million	• Enhanced stakeholder trust and reputation

One of its priorities is to develop a responsible supply chain. The procurement policy includes Belgacom's CSR approach and its Code of Ethical Purchasing, which sets out the expectations towards suppliers and is a mandatory component of Belgacom's procurement contracts. The company evaluates the CSR performance of its suppliers, based on the GeSI (Global e-Sustainability Initiative) industry standard and tools (E-Tasc) helping to avoid redundancy for our suppliers and other buyer companies.[29]

Aims

Belgacom employs around 17,000 people. Due to the wide range of positions and jobs within the company, ranging from sales and administrative staff to IT specialists, service technicians and building maintenance personnel (technical, cleaners), and even its own catering department. Belgacom faces a huge variety of health and safety risks in terms of well-being at work. On top of this is the fact that every day, throughout the entire country – and in part on temporary and mobile construction sites – Belgacom works with around 200 contractors and subcontractors. In order to keep everything running properly and avoid incidents as far as possible, Belgacom needs a sound contractor policy that is firmly embedded in the company's general health and safety policy.

What was done, and how?

VCA/SCC

In Belgium, the Act on Well-being at Work of 4 August 1996 stipulates that companies are bound to reject unsafe (sub-) contractors (Prevent-UGA, 2008). However, it does not specify how this should be done. It is obvious that the client should do this as early as possible, for example. by asking for specific information in the procurement phase and/or including specific requirements in the tender. Another option is to require a specific label certificate, such as the VCA system ('Veiligheid (Gezondheid Milieu) Checklist Aannemers'; in English: SCC or 'Safety (Health Environment) Checklist Contractors') and BeSaCC ('Belgian Safety Criteria for Contractors').

The VCA/SCC scheme consists of a checklist that must be answered, in order to investigate contractors' criteria for safety, health and environmentally-friendly working practices. If the contractor company meets the required standards, a VCA/SCC certificate may be obtained. An important element of the VCA/SCC scheme is the requirement to demonstrate clearly that

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[29] For more information, see: Belgacom - Supply Chain Portal, http://www.belgacom-suppliers.be.

employees have received an obligatory OSH training. Clients ('principals') and engineering contractors can demand the SCC scheme/certificate from their (sub-) contractors, who will have to introduce the VCA/SCC scheme in order to operate for the principals. Thus, despite the fact that VCA/SCC is a voluntary scheme, companies may feel indirectly forced to apply for the certificate in order to be able to operate in the market. The VCA/SCC scheme is, apart from the (petro) chemical industry, mainly used for contractor safety management, in many sectors with high-risk working environments such as steel, iron and non-ferro producing industries, power plants, manufacturing, railways, and the offshore and dredging industries. The focus is on high or increased risk activities by contractors such as construction, welding, piping, (industrial) cleaning, maintenance, drilling and excavation..

VCA/SCC for contractors

In order to enforce contractor safety at Belgacom, a decision was made in 2006 to work only with VCA/SCC-certified contractors in case of high-risk activities. Through a survey of the existing contractors an inventory was drawn up of which contractors already possessed a VCA/SCC certificate and which did not. Most of the contractors turned out not to have a VCA/SCC certificate. Consequently all contractors were invited to a meeting to explain the plans to require VCA/SCC certification. Everyone was given a transition period of one year to enable them to obtain the certificate, and to implement a management system that meets VCA/SCC requirements. Since the spring of 2008, Belgacom has therefore only used VCA/SCC-certified contractors.

However, Belgacom's contractor policy involves more than the requirement to be VCA/SCC-certified. Belgacom uses framework contracts. For example, for construction works on the Belgacom network there are currently around 80 contractors who work for Belgacom under such a contract. Before a contractor can start, all team leaders are required to undergo a two-day training programme at Belgacom, which includes a half-day specifically on safety. This programme concludes with a test, and those who pass receive a badge. Belgacom requires at least one man per shift to be a badge-holder. This is closely monitored, and if there is no certified foreman present on a worksite, work is stopped.

Contractors must – in addition to the obligations arising from their own VCA/SCC policy – have a thorough knowledge of the health and safety conditions of the framework contract, and must meet these conditions. This includes performing task risk assessments (which must be included in the documentation submitted to Belgacom), taking the necessary preventive measures (mainly in terms of site design and signage), conducting workplace inspections, training and informing employees through toolbox meetings (with certain toolbox topics specifically laid down by Belgacom), ensuring knowledge of emergency procedures, and reporting, investigating and taking action in the event of incidents and accidents. This last item is probably the most difficult, since contractors are often reluctant to report occurrences for fear of being negatively evaluated by Belgacom.

Within the framework contract, contractors receive a control, which also takes account of safety. This control is performed by the relevant safety coordinators, using checklists. There are three different escalation levels, and if these are exceeded work on a site can be halted.

Belgacom sometimes also uses contractors from other countries. It regularly works, for example, with French contractors or subcontractors near the French border. The VCA/SCC system does not exist in France, and hence in these cases Belgacom recognises the French system MASE (Manuel d'Amélioration Sécurité des Entreprises or corporate safety improvement manual). MASE is a reference system for SHE management. It defines the minimum measures required for a contractor to be able to establish an efficient OSH management system. Although VCA/SCC and MASE are not quite the same, they share the same objectives, such as facilitating the selection of

safe contractors and ensuring safe work practices of these contractors at the client's site, through improved cooperation, coordination and communication.

VCA/SCC at Belgacom

Belgacom also has a number of internal support services which carry out high-risk tasks. About 800– 900 employees are involved in this work. It therefore made sense not only to require VCA/SCC certification from external contractors, but also to require the internal support services to have VCA/SCC certification. Belgacom thus not only makes sure that its contractors are VCA/SCC-certified, but tries to set a good example by making the same effort internally that it requires from its contractors.

Apart from the internal support services, the 'Belgacom Professional Services' department is also VCA/SCC-certified. It concerns 100 employees who deliver ICT services to customers.

Since these services are VCA/SCC-certified, the concerned workers have received VCA/SCC training. These courses are – like all internal and external training within Belgacom – organised by BCU (Belgacom Corporate University). The VCA/SCC courses themselves are, for the most part, given in the traditional manner by a (recognised) external instructor. Some employees have obtained their VCA/SCC diploma using e-learning.

The VCA/SCC certification programme within the support services of Belgacom has been a success. For example, through the obligatory toolbox [30] meetings VCA/SCC has enabled employees to talk not only about safety but also about other issues, such as HR. To raise the profile of VCA/SCC and well-being at work amongst the staff even further, and to get people more motivated, internal VCA/SCC events are organised every year: the 'VCA/SCC Parties' (in dutch: 'De VCA-Feesten'). All 800-900 staff are invited to various sessions. The results from the previous year are surveyed, some items are explained, and the 'VCA/SCC team' is announced. The winners receive flowers and a trophy, and all employees receive a gift. In this way, everyone is thanked for their hard work. Employees are very enthusiastic about these sessions.

VCO/SCP to complete the system

All the work done by contractors on the Belgacom network – the so called 'backbone', which in recent years has shifted from copper to optical fibre – is managed and coordinated by the IDO (Infrastructure Deployment Organisation) department. IDO is thus Belgacom's principal. About 1300 people are employed within the VCO/SCP scope. To ensure that work is carried out in the same manner throughout the whole of Belgium, it is extremely important for contractors to have access to the same procedures, instructions and consultative structures everywhere. It is even possible, for example, for the same contractor to be dealing with different IDO principals at different locations in Belgium. A systematic, structured approach to contractor policy had thus become increasingly necessary, and the newly developed VCO/SCP scheme turned out to offer a solution.

VCO stands for 'Veiligheid Gezondheid and Milieu Checklist Opdrachtgevers' (in English: SCP, 'Safety Health and Environment Checklist Principals'). While VCA/SCC is designed for contractors who need to perform hazardous work for a principal, VCO/SCP is intended for the principals themselves (or the parties representing them). In practice, and especially in the case of temporary and mobile construction sites, principals often do not fully succeed in setting up good local organisation with clear rules for contractors and associated monitoring on site. This is also true of the design, project, coordination and engineering firms that manage VCA/SCC-certified (sub-) contractors. VCO/SCP provides a solution to this problem: through the implementation of a system that meets the VCO/SCP requirements, the correct context and conditions are created for the VCA/SCC-certified contractors to work in a safe, healthy and environmentally conscious

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[30] Regular meetings with workers on specific OSH topics

manner. VCO/SCP is an extension of VCA/SCC, and is thus a tool for creating good relationships and coordination between principals and their VCA/SCC-certified contractors. In this way it is possible to achieve optimal results together in terms of safety, health and environment, so that potential incidents and accidents can be prevented as far as possible.

Like VCA/SCC, VCO/SCP originates from the Netherlands, and is also managed by the Dutch Foundation for Cooperation for Safety (SSVV). In the Netherlands there are now 15 VCO-certified companies. In Belgium, VCO certification is monitored and discussed by the executive committee of the non-profit organisation BeSaCC-VCA. VCO certification has been possible in Belgium since 2008. Belgacom is the first and, at present, the only Belgian company to hold a VCO certificate.

VCO/SCP has a structure similar to that of VCA/SCC, and is thus also based on a checklist. There are 12 chapters, with 14 compulsory questions, which must be answered correctly in order for a certification audit to be successful) and 39 additional questions. The certification must be done by an external body.

The 12 chapters of the VCO/SCP checklist are:31

Chapter 1 - Policy and culture: The implementation of an explicit policy focused on continual improvement of SHE and a culture within which this is feasible.

Chapter 2 - Organisation and regulations: Support for the SHE policy of third parties by means of regulations and organisational measures.

Chapter 3 - Risk inventory and evaluation (RIE): An inventory and evaluation of the risks required for the implementation of adequate control measures relating to:

- the installation and the workplace where third parties will carry out their work; and
- the work to be carried out by third parties.

Chapter 4 - Admission policy: Admission to the principal's site is restricted to those companies and their employees who are familiar with the SHE regulations and instructions on the principal's site and who comply with the SCC/SCT requirements imposed on the performance of high-risk work.

Chapter 5 - Information and instructions: The provision of SHE knowledge and information to employees of third parties required for their work.

Chapter 6 - SHE communications and consultations: Regular communications and consultations with third parties relating to progress and developments in SHE issues.

Chapter 7 - The workplace: A safe workplace during the commencement, performance, and conclusion of the work.

Chapter 8 - Inspections and observations: The retention/improvement of an appropriate SHE level relating to the conduct of third parties, their working environment, and the tools and equipment they use.

Chapter 9 - Company emergency plan: Are a plan or plans, personnel and equipment available for the implementation of an effective response to a threatened emergency?

Chapter 10 - Notification, registration, and investigation of incidents: The investigation of incidents/accidents for the subsequent implementation of the appropriate preventive measures.

Chapter 11 - Management and coordination of third parties involved in major projects and major maintenance work so as to prevent SHE incidents: The control of the risks associated with major projects.

Chapter 12 - Evaluation of the SHE performance of third parties: The periodic evaluation of the SHE performance of both third parties and the principal so as to determine and implement (and supervise the implementation of) any improvement measures that may be required.

There are two levels of certification: one-year certification, obtained by complying with all the compulsory questions, and three-year certification, for which all the compulsory questions have to

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31 SSVV, Available in English at: http://www.vca.nl/content.aspx?guid=B1405B3E-D00D-466F-85AC-BED86BD6BC25

be correctly answered and at least 20 (out of 39) of the additional questions. To receive re-certification after three years, correct answers to 24 (instead of the initial 20) of the additional questions are needed.

The certification cycle begins with an initial audit. After one year, an interim audit is performed. A further interim audit is carried out after two years. These two interim audits together cover all the questions, so that over the two years the entire VCO/SCP range is reviewed. In the third year, a re-certification audit (repeat audit) is carried out, during which all the VCO/SCP questions are checked.

The VCO/SCP trajectory at Belgacom

After the benefits of having a VCO/SCP programme for the IDO department had been realised and appraised by the Corporate Prevention and Protection department, the next step was to convince the management, as the commitment and involvement of those at the top is as crucial to this as it is with any change process. During a staff meeting in 2007 Marc Moris, Director of Corporate Prevention and Protection, was able to persuade Johan Luystermans, Vice President of Infrastructure, to go ahead with a VCO/SCP programme and thus to approach contractor management in an even more systematic manner.

Since VCO/SCP was new in Belgium, consultation was first needed in order to decide what procedure should be followed to achieve VCO/SCP certification. At the end of September 2008 a first preparatory meeting was held with an auditor from the certification body SGS on the proper conduct of the certification process.

In early November 2008, a test audit was then performed for one IDO section, the LPE department (Local Planning and Engineering) the engineering consultancy office for work in the public domain. This test session was necessary in order to check how the compulsory questions were interpreted by this particular auditor.

The initial audit was carried out in October 2009. This was a one-day document audit (of procedures, and forms) at the headquarters. A six-day implementation audit was then carried out (in January-February 2010) on location (two days in Flanders, two in Brussels, and two in Wallonia). During this implementation audit, visits were made to 17 out of around 80 contractors. All applicable VCO/SCP questions were checked with the contractors on site. For example, the relevant team leaders were asked about what instructions they receive or do not receive from the company, whether or not they are monitored, whether regular consultation meetings are held with representatives of Belgacom, and so on.

What was achieved?

- Belgacom now works only with VCA/SCC-certified contractors in high-risk activities. Internally, the support services for these activities are also VCA/SCC-certified. Its IDO department is the first in Belgium to have obtained a VCO/SCP certificate.

- Information exchange, training, procedures and instructions, monitoring, coordination and cooperation with contractors, all take place within Belgacom in a systematic and uniform manner.

- Appropriate collaboration between all the parties involved is essential to the achievement of the best result: therefore SCP and SCC in combination, offer the best guarantee.

Success factors and drawbacks

- VCO/SCP and VCA/SCC provide a guarantee that the legal requirements for working with third parties and on temporary and/or mobile construction sites are met.

- Before the introduction of VCO/SCP, IDO staff did not consider safety to be their core business. They simply drew up plans and asked for permission from the owners of the

public domain. Safety was a matter for the contractors, who were VCA/SCC-certified. Thanks to VCO/SCP, things have changed. As a result of the introduction of the VCO/SCP system and the related certification, a genuine cultural change is noticeable as far as safety is concerned. Where there was once a tendency to leave all safety-related matters to the contractor, IDO staff now find it easier to take charge, and an attempt is made to seek out good solutions with the contractors.

- As with other management systems, there is no point in simply having things sorted out on paper. The system must be a living one. According to Marc Moris, Director of Corporate Prevention and Protection, VCA/SCC and VCO/SCP are in this respect much more practical and concrete than systems such as OHSAS 18001. With VCA/SCC and VCO/SCP, the auditor not only checks the documents, but also goes into the field. The auditor asks contractors questions, and checks if the described policy is put into practice through the entire chain. With VCO/SCP, the contractors are also monitored and checks are made to see whether they know the principal's policy, whether they have received sufficient information, whether they are being monitored by the principal, and whether there are enough opportunities for dialogue. Compared with an ISO or OHSAS system, VCA/SCC and VCO/SCP also have some drawbacks, of course: for example, the fact that they are based on a checklist means that they are less flexible in application.

- VCO/SCP and VCA/SCC have made it easier to talk about safety at Belgacom - both internally and with contractors. The two systems complement each other perfectly and have resulted in a better and more efficient contractor policy.

- As a large company, Belgacom regards it as a duty and a social responsibility to give small businesses, which often have limited resources, support and guidance on health and safety. This is achieved through VCA/SCC and VCO/SCP. However, a disadvantage of this is that in the event of problems contractors quickly blame Belgacom, their principal. The company points out that as it gives very detailed procedures and instructions, these could be used against it during any legal proceedings.

Further information

- SSVV - Stichting Samenwerken Voor Veiligheid, http://www.vca.nl / http://www.ssvv.nl
- Belgacom Group, http://www.belgacom.com
- Belgacom - Supply Chain Portal, http://www.belgacom-suppliers.be

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References, resources:

- Belgacom. Annual CSR Report 2010. Available at: http://www.belgacom.com/be-en/annex_investors/Inv_Annual_report_2010.page
- Nunes, I. L. (2012). The nexus between OSH and subcontracting. Work: A Journal of Prevention, Assessment and Rehabilitation 41(supplement 1): 3062-3068.
- Prevent - UGA, 'Focus op werken met derden', Preventie en wetgeving, 2008, 2, 16 pp.

Bibliography

Amerongen, 2007, is cited on Zwanikken, A. L. J., Drupsteen, L., Beek, F. A., Kampen, J. N.& Jongen, M. J. M. (2008). Improving chain management of contractor safety, 4th International Conference Working on Safety, Crete, Greece

Beaumont, P., Hunter, L., Sinclair, D., 'Customer–supplier relations and the diffusion of employee relations changes', Employee Relations, 1996, Emerald Group Publishing, Bingley, Yorkshire, United Kingdom. Vol 18, Issue 1, pp 9–19.

Berry, C., The Sustainable Procurement Guide: Procuring Sustainably Using BS 8903, 2011, British Standards Institution, London,

Brammer, S. and Walker, H., 'Sustainable procurement in the public sector: an international comparative study', International Journal of Operations and Production Management, 2011, Emerald Group Publishing, Bingley, Yorkshire, United Kingdom. 31, 4, pp. 452-476.

BSI - British Standards Institute, BS 11000-1:2010 Collaborative business relationships. A framework specification, 2010, British Standards Institute.

BSI - Britsh Standards Institute, BS 8903:2010 Principles and framework for procuring sustainably. Guide, 2010, British Standards Institute.

BSR - Beyond Monitoring Continuous Improvement Partnership Approach, October 2010, version 1.0. Available at: http://www.bsr.org/reports/BSR_Continuous Improvement Partnership Approach_Final.pdf

Carter, C.R. and Easton P.L., 'Sustainable supply chain management: evolution and future directions', International Journal of Physical Distribution and Logistics Management, 2011, Emerald Group Publishing, Bingley, Yorkshire, United Kingdom 41, 1, pp. 46-62

Carter, C.R., Jennings, M.M., 'Social responsibility and supply chain relationships', Transportation Research Part E: Logistics and Transportation Review, 2002, Elsevier, Amsterdam, 38, 1, pp. 37–52.

Chemical Legislation European Enforcement Network, ECLIPS: European classification and labelling inspections of preparations, including safety data sheets. Final report, 2004. Available at: www.cleeneu.net/projects/ECLIPS_Final_report.pdf.

Ciliberti, F., de Groot, G., de Haan, J. and Pontrandolfo, P., 'Codes to coordinate supply chains: SMEs' experiences with SA 8000', Supply Chain Management: An International Journal, 2009, Emerald Group Publishing, Bingley, Yorkshire, United Kingdom, 14, 2, pp. 117-127.

COM - Commission of the European Communities, Guidance on risk assessment at work, Luxembourg, Office for Official Publications of the European Communities, 1996. Available at: http://osha.europa.eu/en/topics/riskassessment/guidance.pdf

COM - Commission of the European Communities, Improving quality and productivity at work: Community strategy 2007-2012 on health and safety at work, Brussels, 62 final, 2007. Available at: http://eur-lex.europa.eu/LexUriServ/site/en/com/2007/com2007_0062en01.pdf.

COM - Commission of the European Communities, Communication from the Commission to the Council, the European Parliament, the European Economic and Social Committee and the Committee of the Regions on the practical implementation of Health and Safety at Work Directives 92/57/EEC (temporary and mobile sites) and 92/58/EEC (safety signs at work), Brussels, 698 final, 2008. Available in English at: http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2008:0698:FIN:EN:PDF

COM - Commission of the European Communities, Buying Social - A Guide to Taking Account of Social Considerations in Public Procurement, Luxembourg, Publications Office of the European Union, 2010, 49 pp. Available in English at: http://ec.europa.eu/social/BlobServlet?docId=6457&langId=en

COM - Commission of the European Communities, Non-binding guide to good practice for understanding and implementing Directive 92/57/EEC 'Construction sites', Luxembourg,

Publications Office of the European Union, 2011, 195 pp. Available in English at: http://ec.europa.eu/social/BlobServlet?docId=6715&langId=en.

Cunningham, T. R., Galloway-Williams, N., & Geller, E. S. , Protecting the planet and its people: How do interventions to promote environmental sustainability and occupational safety and health overlap? Journal of Safety Research, 2010, 41(5), 407-416.

Davies, S., Hammer, N., Williams, G., Raman, R., Ruppert, C. and Volynets, L., 'Labour Standards and Capacity in Global Subcontracting Chains: Evidence from a Construction MNC', Industrial Relations Journal, 2011, Blackwell Publishing Ltd, Oxford, 42, 2, pp. 124-138.

Elliot, K. and Freeman, R., Can labor standards improve under globalization?. 2003, , Institute for International Economics, Washington, DC

ETUC - European Trade Union Confederation, Sustain labour - International Labour Foundation for Sustainable Development, Environment and occupational health and safety clauses in the International Framework Agreements. A study, 2010, 165 pp. Available in English at: http://www.etuc.org/a/7491.

EU - European Union, Council Directive 92/57/EEC of 24 June 1992 on the implementation of minimum requirements at temporary or mobile constructions sites (eight individual Directive within the meaning of Article 16 (1) of Directive 89/391/EEC), Official Journal of the European Communities, 24 June 1992, No. L245/6

EU - European Union, Council Directive of 12 June 1989 on the introduction of measures to encourage improvements in the safety and health of workers at work (89/391/EEC), Official Journal of the European Communities, 29 June 1989, No. L183.

EU - European Union, Directive 2004/17/EC of the European Parliament and of the Council of 31 March 2004 coordinating the procurement procedures of entities operating in the water, energy, transport and postal services sectors, Official Journal of the European Communities, 30 April 2004a, No. L 134, pp. 1-113.

EU - European Union, Directive 2004/18/EC of the European Parliament and of the Council of 31 March 2004 on the coordination of procedures for the award of public works contracts, public supply contracts and public service contracts, Official Journal of the European Communities, 30 April 2004b, No. L 134, pp. 114-240.

EU-OSHA - European Agency for Safety and Health at Work, Occupational health and safety in marketing and procurement, 2000. Available at: http://osha.europa.eu/en/publications/reports/304

EU-OSHA - European Agency for Safety and Health at Work, Recognition schemes in occupational safety and health, 2002, 81 pp. Available in English at: http://osha.europa.eu/en/publications/reports/308

EU-OSHA - European Agency for Safety and Health at Work, Building in Safety - Prevention of risks in construction - In practice, 2004, 64 pp. Available in English at: http://osha.europa.eu/en/publications/reports/108

EU-OSHA - European Agency for Safety and Health at Work, Workforce diversity and risk assessment: Ensuring everyone is covered, 2009, 115 pp. Available in English at: http://osha.europa.eu/en/publications/reports/TE7809894ENC

EU-OSHA - European Agency for Safety and Health and Work, Preventing harm to cleaning workers, 2009, 225 pp. Available at: http://osha.europa.eu/en/publications/reports/TEWE09006ENC

EU-OSHA - European Agency for Safety and Health at Work, Mainstreaming OSH into business, Luxembourg, 2010. Available at: http://osha.europa.eu/en/publications/reports/mainstreaming_osh_business.

EU-OSHA - European Agency for Safety and Health at Work, Safe maintenance in practice, 2010. Available at: http://osha.europa.eu/en/publications/reports/safe-maintenance-TEWE10003ENC.

EUROCITIES CARPE - Guide to Responsible Procurement. Brussels, 2005, 52 pp. Available in English at: http://www.eurocities.eu/carpe-net/site/IMG/pdf/CARPE_guide_to_responsible_procurement_secondedition.pdf

EUROCITIES, RESPIRO Guide on Socially Responsible Procurement of Textiles and Clothing, Brussels, 2007, 16 pp. Available in English at: http://www.respiro-project.eu/fileadmin/template/projects/respiro/files/RESPIRO_Guides/RESPIRO-Textiles-final-www.pdf.

Eurofound - European Foundation for the Improvement of Living and Working Conditions, Codes of Conduct and International Framework Agreements: New Forms of Governance at Company Level, Dublin, 2008.

Frommann, M., VW/GTZ/ILO project: Global Compact and Safety and Health Culture – OSH and Supply Chain Management- Assessment of project activities July 2004 - June 2008, 2008, Geneva, ILO Safe Work programme, http://www.pbs.plym.ac.uk/somseminarseries/SoM%20Seminar%20Series%20Presentation%2013%20October%202010.pdf

Goudswaard (2002), is cited on Zwanikken, A. L. J., Drupsteen, L., Beek, F. A., Kampen, J. N.& Jongen, M. J. M. (2008). Improving chain management of contractor safety. 4th International Conference Working on Safety, Crete, Greece

Graafland, J.J., 'Sourcing ethics in the textile sector: the case of C & A, Business Ethics: A European Review, 2002, Wiley Online Library 11, 3, pp. 282–94

GRI - Global Reporting Initiative, Website, https://www.globalreporting.org/reporting/report-services/Pages/default.aspx

Handfield, Robert B. and Ernest L. Nichols, Jr., Introduction to Supply Chain Management, 1999, Prentice Hall, Inc., Upper Saddle River, New Jersey

Handfield RB, Walton SV, Seegers LK, Melnyk SA. 'Green' value chain practices in the furniture industry. Journal of Operations Management, 1997;15(4):293–315 [case, environment].HP – Hewlett Packard, Partnering with suppliers for social and environmental performance, available at: http://sysdoc.doors.ch/HP/partnering_with.pdf, 2003

HSE - Health and Safety Executive, Use of Contractors, a Joint Responsibility, HSE, INDG 368, 2002a, HSE Books, Sudbury, Available at http://www.hse.gov.uk/pubns/indg368.pdf.

HSE - Health and Safety Executive, Working Together. Guidance on Health and Safety for Contractors and Suppliers, HSE, INDG268(rev) 2002b, HSE Books, Sudbury, Available at http://www.powys.gov.uk/uploads/media/indg268_en.pdf.

HSE - Health and Safety Executive, Passport Schemes for health, safety and the environment: a good practice guide, HSE, INDG381, 2003, HSE Books, Sudbury. Available at: http://www.hse.gov.uk/pubns/indg381.pdf

HSE - Health and Safety Executive, Health and safety in public sector construction procurement, Research Report 556, 2005, HSE Books, Sudbury. Available in English at: http://www.hse.gov.uk/research/rrpdf/rr556.pdf

HSE - Health and Safety Executive, The role and effectiveness of safety representatives in influencing workplace health and safety, HSE Research Report 363, 2005, HSE Books, Sudbury. Available in English at: http://www.hse.gov.uk/research/rrpdf/rr363.pdf.

HSE - Health and Safety Executive, Developing guidelines for the selection of designers and contractors under the Construction (Design and Management) Regulations 1994, Research Report 422, 2006, HSE Books, Sudbury. Available in English at: http://www.hse.gov.uk/research/rrpdf/rr422.pdf.

HSL - Health and Safety Laboratory, Occupational Health in the Supply Chain: A Literature Review, HSL/2003/06, 55 pp. Available in English at: http://www.hse.gov.uk/research/hsl_pdf/2003/hsl03-06.pdf

HSL - Health and Safety Laboratory, The Impact of Procurement and Contracting Practices on Health and Safety - A Literature Review, HSL report RAS/99/02, 1999. www.hse.gov.uk/research/hsl_pdf/2003/hsl03-06.pdf

ICLEI, RESPIRO Guide on Socially Responsible Procurement of Building Construction Works, Brussels, 2007, 20 pp. Available in English at: http://www.respiro-project.eu/fileadmin/template/ projects/respiro/files/RESPIRO_Guides/RESPIRO_Constr_final_www_en.pdf

James, P., Johnstone, R., Quinlan, M., Walters, D., 'Regulating supply chains to improve health and safety', Industrial Law Journal, 2007, Oxford University Press, Oxford, 36, pp. 163–187.

James, S., and Lloyd, C., 'Too much pressure? Retailer power and occupational health and safety in the food processing industry', Work Employment and Society, 2008, Sage, London, 22, 4, pp. 1-18.

Jorgensen, A., Hauschild, M.Z., Jorgensen, M., Wangel, A., 'Relevance and feasibility of social life cycle assessment from a company perspective', International Journal of Life Cycle Assessment, 2009, Springer, , New York, Heidelberg,,14, pp. 204-214.

Kleindorfer, PR., Singhal, K., Van Wassenhove, LN., 'Sustainable operations management', Production and Operations Management, 2005, Wiley Online Library, 14, 4, 482-492.

Kolk, A., van Tulder, R., 'Child labor and multinational conduct: a comparison of international business and stakeholders codes', Journal of Business Ethics, 2002, Springer, New York, Heidelberg, 36, pp. 291-301.

Koplin, J., Seuring, S., and Mesterharm, M., 'Incorporating sustainability into supply management in the automotive industry - the case of the Volkswagen AG', Journal of Cleaner Production, 2007, Elsevier, Amsterdam, 15, pp. 1053-1062.

Kristjansdottir, M., Better Health and Safety for Suppliers: A partnership project between Volkswagen, ILO and GTZ, 2007, ILO, Geneva, unpublished report.

Linton, JD., Klassen, R., and Jayaraman, V., 'Sustainable supply chains: an introduction', Journal of Operations Management, 2007, Elsevier, Amsterdam, 25, pp. 1075-1082.

Litvin, D., Empires of profit: commerce, conquest and corporate responsibility, 2003, Texere, New York.

Loos, F., and Deaut, J.L., Rapport Fait Au Nom de la Commission D'Enquete sur la Surete des Installations Industrielles et des Centres de Recherche et sur la Proection de Personnes et de L'environnment en cas D'Accident Industriel Majeur. 2002, Assemblée Nationale, Paris.

MASE - UIC, Manuel d'Amélioration Sécurité des Entreprises - English version, 2009, 64 pp. Available in English at: http://www.mase.com.fr/index.php?option=com_docman&task= doc_download& gid=7 &Itemid=99999999.

Meehan, J., and Bryde, D., 'Sustainable procurement practice', Business Strategy and the Environment, 2011, Wiley Online Library, 20, 2, pp. 94-106.

Musu, T., REACHing the workplace. How workers stand to benefit from the new European policy on chemical agents, 2004, TUTB, Brussels. Available at: http://aplicaciones.medioambiente.gov.ar/archivos/web/trabajo/File/Otros%20idiomas/quimicos%20Ing%201.pdf

NHS - National Health Service, Working with Contractors, Scottish Centre for Healthy Working Lives, 2011. Available at: http://www.healthyworkinglives.com/advice/employee-issues/working-with-contractors.aspx.

Nunes, I.L., 'The nexus between OSH and subcontracting', IEA 2012, paper delivered at 18th World Congress on Ergonomics, 2012, Recife, Brasil.

OECD - Organisation for Economic Co-operation and Development, OECD Guidelines for Multinational Enterprises, 2011, OECD Publishing, 89 pp. Available in English at: http://www.oecd.org/dataoecd/43/29/48004323.pdf

Portal for Responsible Supply Chain Management, http://www.csr-supplychain.org/tag/health-safety

Preuss, L., 'In dirty chains? Purchasing and greener manufacturing', Journal of Business Ethics, 2001, Springer, New York, Heidelberg, 34, 3-4, pp. 345-359.

Prevent - UGA, 'Focus op werken met derden', Preventie en wetgeving, 2008, 2, 16 pp.(in Dutch)

Riedjik, 2001, is cited on Zwanikken, A. L. J., Drupsteen, L., Beek, F. A., Kampen, J. N.& Jongen, M. J. M. (2008). Improving chain management of contractor safety. 4th International Conference Working on Safety, Crete, Greece

Roberts, S., Supply chain specific? Understanding the patchy success of ethical sourcing initiatives, Journal of Business Ethics, 2003, Emerald Group Publishing, Bingley, Yorkshire, United Kingdom. 44, pp.159-170.

Robinson, P.K., 'Do Voluntary Labour Initiatives Make a Difference for the Conditions of Workers in Global Supply Chains?', Journal of Industrial Relations, 2010, Sage, London, 52, 5, pp. 561-573.

SAI - Social Accountability International. International Standard Social Accountability 8000, SAI, 2008.

Seuring, S., 'Green supply chain costing – joint cost management in the polyester linings supply chain', Greener Management International, 2001, Greenleaf Publishing, Sheffield, Issue 33, pp. 71-80.

Seuring, S., 'Industrial ecology, life cycles, supply chains – differences and interrelations', Business Strategy and the Environment, 2004, Wiley Online Publishing, 3, 5, pp. 306-319.

Seuring, S., 'Integrated chain management and supply chain management comparative analysis and illustrative cases', Journal of Cleaner Production, 2004, Elsevier, Amsterdam, 12, pp. 1059-1071.

Seuring, S., Sarkis, J., Müller, M., Rao, P., 'Sustainability and supply chain management - An introduction to the special issue', Journal of Cleaner Production, 2008, Elsevier, Amsterdam, 16, pp. 1545-1551.

Seuring, S., and Müller, M., 'From a literature review to a conceptual framework for sustainable supply chain management', Journal of Cleaner Production, 2008, Elsevier, Amsterdam, 16, pp.1699-1710.

Stevis, D., Framework Agreements and Global Social Dialogue: Parameters and Prospects, Employment Working Paper No. 47, 2010, ILO, Geneva.

TOSCA, Available at: http://www.tosca-life.info

Tsuda, M. and Takaoka, M., 'Novel evaluation method for social sustainability affected by using ICT Services', paper presented at International Life Cycle Assessment and Management Conference, Washington, DC, 2006, October 4-6. Available at http://www.sciencedirect.com/science/article/pii/S0959652608001455

UNGC - United Nations Global Compact, 2010, Supply Chain Sustainability A practical guide for continuous improvement available at http://www.unglobalcompact.org/docs/issues_doc/supply_chain/SupplyChainRep_spread.pdf

van Tulder, R., van Wijk, J., Kolk, A., 'From Chain Liability to Chain Responsibility, MNE Approaches to Implement Safety and Health Codes in International Supply Chains', Journal of Business Ethics, 2009, Springer, New York, Heidelberg, 85, 399-412.

VCA, Available at: http://www.vca.nl/

Volkskrant, 'Indiase textielarbeidsters uitgebuit voor C and A en H and M', 2010, Available at: http://www.volkskrant.nl/vk/nl/2664/Nieuws/archief/article/detail/1018683/2010/09/03/Indiase-textielarbeidsters-uitgebuit-voor-C-A-en-H-M.dhtml

Walters, D., 'Supply chains and best practice in the management of health and safety at sea', Seafarers International Research Centre Symposium Proceedings, Cardiff University 2009, pp. 47-74. Available online at
http://www.sirc.cf.ac.uk/uploads/publications/Symposium%2009.pdf

Walters, D. and James, P., 'Understanding the role of supply chains in influencing health and safety at work', 2009, Institution of Occupational Safety and Health, Leicester.

Walters, D. and James, P., 'What motivates employers to establish preventive managenement arrangements within supply chains? Safety Science, 2011, Elsevier, Amsterdam, 49, 7, pp. 974-987.

WB - World Bank, Company Codes of Conduct and International Standards: An Analytical Comparison, 2003, World Bank, Washington, DC. Available online at
http://siteresources.worldbank.org/INTPSD/Resources/CSR/Company_Codes_of_Conduct.pdf

Wilde, J. and de Haan, E., 'Sneak preview, the high cost of calling: critical issues in the mobile phone industry', December 2006, SOMO – Center for research on Multinational Corporations, , Available online at
http://somo.nl/html/paginas/pdf/Mobile_Sneak_Preview.pdf

Wright, M., Marsden, S., Antonelli, A., Norton, J., Norton Doyle, J., Genna, R., Bendiq, M., An evidence-based evaluation of how best to secure compliance with health and safety law - Research Report 334, 2005, HSE Books, Sudbury,

Zwanikken, A.L.J., Drupsteen, L., Beek, F.A., Kampen, J.N., Jongen, M.J.M., 'Improving chain management of contractor safety', 4th International Conference Working on Safety, Crete, Greece, 2008.

Zwetsloot, G.I.J.M., Hale, A., Zwanikken, S., 'Regulatory risk control through mandatory occupational safety and health (OSH) certification and testing regimes (CTRs)', Safety Science, 2011a, Elsevier, Amsterdam 49 (7), pp. 995-1006.

Zwetsloot, G.I.J.M., Hale, A., Zwanikken, S., 'Policy expectations and the use of market mechanisms for regulatory OSH certification and testing regimes', Safety Science, 2011b, Elsevier, Amsterdam 49, pp. 1007-1013.

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