



Global container terminals

Arrangements for health, safety
and welfare

Summary report 2016

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In this document, you'll find a summary of the independent study 'Experiences of arrangements for health, safety and welfare in the global container terminal industry', which we jointly commissioned with the International Transport Workers' Federation, from researchers at Cardiff University.



What's the problem?

In recent years, various contributing factors have led to the development of a global network of specialised container terminals operated by both national and global logistics companies. The consequences of this development for workers' experience of safety, health and working conditions in container terminals have rarely been the subject of systematic study.

Together with the International Transport Workers' Federation, we commissioned Professor David Walters and Dr Emma Wadsworth from Cardiff University to look into the issue. In 2012, the authors carried out a preliminary study¹ for the International Transport Workers' Federation on the features of these companies' structure, organisation and operation that influence occupational health and safety (OHS) arrangements and outcomes. This preliminary study provided a starting point for the present research, which focused on the relationship between organisational arrangements for health, safety and welfare in container terminals and their wider national, regulatory, business and labour relations contexts.

The researchers examined health and safety arrangements in container terminals operated by national and global logistics companies in several countries. The aim of the research was to:

- provide a better understanding of workers' experiences of these arrangements in container terminals in different parts of the world
- assess the effectiveness of the arrangements
- examine the wider determinants of both the nature of such experiences and the effectiveness of the arrangements in place to protect health and safety.

The research team examined two main questions:

- what determines the health and safety outcomes and experiences of workers in container terminals?
- what are effective managerial strategies to improve this experience?

What did our researchers do?

The researchers used a mixed-methods approach to analyse case studies of 11 container terminals. These terminals were operated by six large companies in four countries in Europe and the Asia-Pacific region. The research team analysed company documents and carried out interviews with company and terminal

¹ Walters D and Wadsworth E J K. Managing the health and safety of workers in globalised container terminals: a preliminary analysis of the experience of health and safety arrangements and outcomes in container terminals operated by Global Network Terminal Operators. London: International Transport Workers' Federation, 2012.

managers. Interviewees included senior company and terminal managers with responsibility for:

- operations
- health and safety
- advising on these matters at both corporate and terminal levels.

The researchers focused on company strategies on health and safety and the systems in place for its delivery, and sought a detailed account of their operation as perceived by the company and terminal managers. They considered trends in available company data concerning the health and safety outcomes of these arrangements and, as far as it was possible to do so, compared them with the findings of other research on health and safety outcomes in container terminals.

At the same time, workers' experiences of these arrangements for the governance and management of health and safety were investigated using a questionnaire-based worker survey concerning both workers' health and safety and the systems in place to manage their protection. Overall, there were 1,849 dockworker respondents to this survey, with an additional 120 completing a diary of their experiences in relation to selected indicators of health, safety and welfare. The researchers also undertook interviews with workers and their representatives in all the terminals.

In addition, in each country where the terminals were situated, the research team reviewed national regulatory regimes and their provisions, and carried out interviews with regulators and other key informants with particular concerns with OHS in terminals.

In total, the researchers collected and analysed qualitative data from 178 interviews with managers, workers and key informants.

What did our researchers find out?

Company approaches to managing safety

The approaches taken by most of the global and national terminal operators towards the governance and management of health and safety had several common features. They aimed to address risks fairly systematically by carrying out risk assessments and introducing engineering or administrative controls. There were standard operating procedures in place, which took account of safety issues and maintaining safety-critical plant and equipment according to scheduled specifications. Information, informal training, supervision and direct consultation with workers on risk management were provided. More training was provided to new staff, and updated for continuing staff, using both formal and informal arrangements.

In parallel with these routine job safety arrangements, the safety management systems in place in all the terminals aimed to ensure continuous improvement, and

included procedures for collecting and disseminating information on safety issues, monitoring performance, and timely interventions when required. The safety (and environment) departments in all of the terminals serviced these arrangements, and provided advice and training. In some cases, they participated in the surveillance of safety behaviours. Generally, managers in the terminals believed these arrangements to be 'fit for purpose'.

Among the drivers of corporate approaches to health and safety taken by the companies studied, two were particularly influential: a high-profile, boardroom-level commitment to 'zero harm'; and a strong behaviour-oriented approach to the operation of terminal-level arrangements.

These drivers were transposed into operational practice through a mix of:

- attention to an organisational 'vision' of achieving high performance and continuous improvement in health and safety outcomes
- improvements in organisational safety culture, health and safety competencies
- the training and skills of personnel
- measurable performance targets for health and safety.

At the same time, notions of accountability for health and safety were instilled among workers and managers alike.

Equally influential were the effects of international and national voluntary standards on OHS management, which helped to stimulate and support the adoption of a similar management systems approach to health and safety by all the companies studied. As is often the case with behaviour-based systems for health and safety,² institutional arrangements for representation and consultation with workers on their health and safety were largely ignored or marginalised. The survey data demonstrated that 70 per cent of respondents globally had no health and safety representative or had difficulty accessing one. Also, despite an acknowledgement that recent trends in the development of terminal work open the way for employment of an increased proportion of women, there was little evidence of strategies or action on OHS management in place to support the likely needs created by this change.

Workers' experiences

The survey of workers' experiences indicated considerably higher levels of work-related harm than measured by company data, and substantial dissatisfaction with the nature and operation of arrangements for managing health and safety. There was an equally strong sense that the health and safety effects associated with the

² Frick K. Worker influence on voluntary OHS management systems – a review of its ends and means. *Safety Science* 2011; 49 (7): 974–987.

structure, organisation and pace of work in the terminals were missed by the systems in place for monitoring health and safety performance.

Key points emerged from a detailed analysis of the health and safety experiences of workers globally. In relation to safety:

- 70 per cent of the respondents to the survey felt their safety was at high risk
- 40 per cent felt these risks were ineffectively managed
- one third reported they had experienced some kind of injury at work in the previous year.

In relation to health:

- 60 per cent of respondents felt they were at high risk of experiencing work-related harm to their health
- 48 per cent felt these risks were ineffectively managed
- levels of respondents reporting stress, mental fatigue and work-related illnesses were especially high (60 per cent, 65 per cent and 41 per cent respectively).

Overall, the survey findings showed that:

- workers experience a higher incidence of harm to their health and safety than recorded by company reporting procedures
- many of the more commonly experienced effects of the work involved in terminal operations on workers' health were not addressed adequately by the arrangements for health and safety management
- welfare arrangements did not adequately provide for workers' needs.

Both the survey and interviews with workers and their representatives indicate that, in terminals in more advanced economies – where both regulatory requirements and trade union workplace organisation were better developed – consultative arrangements required by law were generally in place, but arrangements seldom went beyond such requirements.

The survey findings were corroborated by data from interviews in which worker participants expressed concerns about their safety, health and welfare, and suggested that arrangements for managing health and safety at their workplaces only partially addressed their concerns.

Comparisons with survey data from other sources suggest that respondents' experiences were worse than the average for other sectors. Furthermore, there was a strong association between these negative health, safety and welfare effects and measures of poor work organisation, high work intensity and poor OHS management

arrangements. These results were not uniform across all jobs, employment arrangements or geographical locations, and the survey clearly identified a sub-group of respondents as being at particular risk. These were found among the indirectly employed workers doing jobs combining quayside and driving work in terminals situated in one of the areas in the Asia-Pacific region that was included in the study.

Overall

In short, the survey of workers' experiences of arrangements for managing their health, safety and welfare portrayed a rather different perception of the effectiveness of these arrangements to that presented by both corporate and terminal-level managers and advisers with responsibility for OHS. The dominant approaches to health and safety management used by the container terminal companies studied were elaborate, behaviourally focused occupational safety management systems in which there was only limited worker involvement or feedback loops. These are incomplete models, even in terms of addressing routine injury, but are particularly so in that they allow only low engagement with preventive occupational health matters and are relatively unresponsive to the consequences of significant changes in technology and work organisation in this respect. As well as the influence of the business model discussed in the following section, these approaches also contribute to a major disconnect/cognitive dissonance observed between management and worker perceptions concerning the effectiveness of actions on OHS.

This said, it is clear that, in at least some of the terminal operating organisations studied, there is evidence of awareness in corporate OHS advice and governance of the limited value of prevention strategies based solely on the reduction of routine injuries, and more attention being paid to strategies that take account, for example, of low-frequency, high-impact incidents and integrated prevention strategies included in design/engineering, maintenance, risk assessment, TARPs (trigger action response plans) and so on. These are relatively recent and, as yet, incomplete initiatives, and they would benefit from further development and greater engagement with systems for worker representation and preventive occupational health measures, both of which, as previously pointed out, are underdeveloped in most terminals and for which support from corporate rhetoric concerning the focus on 'zero harm' does not appear especially helpful.

While OHS arrangements in the terminals were significantly influenced by the national economic and regulatory contexts in which they were situated, the practice of regulatory inspection was itself either underdeveloped (significantly so in poorer countries in the study) or suggested by terminal workers to be less in evidence than previously in some richer countries in the study. This suggestion, which was to a large extent substantiated in interviews with regulatory agency personnel as well as by national enforcement data, is of some concern. Up to the present time, such inspection had clearly been an important part of the influence on compliance with

national OHS requirements in the terminals situated in these countries. Its reduction in relation to these workplaces, where substantial and serious OHS risks still exist, is disturbing.

What does this research mean?

The conclusion from the analysis indicates that even where the conditions of context were found to be at their most conducive, there remains significant scope for improvement, particularly in relation to the management of workers' health and welfare, alongside their safety, and the more effective involvement of workers and their representatives in the arrangements in place to achieve this. In these scenarios, both company strategies for OHS governance and the surveillance of the ensuing arrangements for their delivery need to continue to be a priority in the support of safe and healthy work for all terminal workers.

Business efficiencies associated with container terminal operation mean that success in this highly competitive industry is determined by the speed and cost-efficiencies associated with cargo handling and throughput at terminals that, in turn, drive trends both in operational efficiency (including automation, manning levels, shift patterns and so on) and in corporate preferences for contracting-out labour. From the results of the survey of workers' OHS experiences, it seems clear that it was the consequences of these practices which lay at the heart of both the dissonance between the workers' experiences and managers' perceptions of the effectiveness of their health and safety arrangements, as well as differences observed in OHS experiences in terminals located in different parts of the world.

Since it seems likely that the prominent trends in business and organisational practices are set to continue, it's important that companies are aware of their consequences and able to take the necessary steps to minimise their negative effects on health, safety and welfare experiences.

One strategy that might enable more preventive measures to be enacted would be through ensuring more robust feedback from workers concerning the effects of work organisation. There is a wealth of research pointing to the positive role of institutional arrangements for worker representation on health and safety in contributing to achieving this. In this study, the terminals in which such arrangements were least implemented were the ones in which the negative effects of these trends in business and organisational practice were most highly developed.

Companies might also consider more systematic control in relation to the management of health and safety arrangements by contractors. While some good practices were identified among the terminals studied, overall there was inconsistency in the approaches enacted by different terminals. Again, current research suggests that buyers in close and collaborative supply relations with their

supplying contractors – such as were the relations typically found in container terminals – are in a strong position to influence the presence of OHS arrangements among contractors during the procurement process. Such buyers are also well placed to influence and improve the operation of these arrangements in the actual work carried out by contractors on-site. In this respect, there was considerable room for better information sharing globally within and between terminals and the organisations running them.

Contexts and recommendations

Whether companies are global or national, their corporate strategies on health, safety and welfare in the container terminals for which they are responsible are implemented in very different national contexts. These contexts moderate both the nature and operation of corporate approaches. This is particularly so in relation to the effects of wider economic, regulatory and labour relations systems on the approaches taken by terminal operating companies to managing safety, health and welfare, and workers' consequent experiences of those approaches and their outcomes.

Analysis clearly shows that where these contexts provide only a weak influence on the autonomy of company OHS practice, that is, where OHS is 'loosely regulated' – in the words of some global company managers – workers report more negative experiences than where these factors are more strongly in evidence. For example, where the outsourcing of labour is the economic 'norm', where regulatory frameworks and enforcement practices are not strong, and where labour relations histories have resulted in a weaker voice for labour, workers' experiences of health, safety and welfare arrangements are generally poorer than in contexts where the development and influence of such factors are stronger.

In addition, where these combine with weaker national external supports for OHS generally (in terms, for example, of compensation, insurance and welfare systems), then workers' experiences are poorest. Such findings are in accord with those of socio-legal scholars who argue that the institutional (including regulatory) contexts within which modern global business operates are important determinants of both management practices and workers' welfare.³ And, as other writers make clear,⁴ such contexts are critical in initiatives to influence the extent of compliance with labour standards.

³ Weil D. The fissured workplace: why work became so bad for so many and what can be done to improve it. Boston: Harvard University Press, 2014; Short J L and Toffel M W. Making self-regulation more than merely symbolic: the critical role of the legal environment. *Administrative Science Quarterly* 2010; 55 (3): 361–396.

⁴ Locke R, Rissing B and Timea P. Complements or substitutes? Private codes, state regulation and the enforcement of labour standards in global supply chains. *British Journal of Industrial Relations* 2013; 51 (3): 519–552.

The important message the research delivers demonstrates the impact of context. It suggests that without strong and effectively enforced regulation, and economic and labour relations allowing workers an effective voice, terminal operating companies will tend to favour productivity over the effective management of safety and, in particular, health and welfare. These operators, especially those working at a global level, have the capacity to put effective OHS strategies in place, but they generally do so only when the contexts in which their business units are situated oblige them to.

There are a number of recommendations included in the full report of this study. They address issues of policy and practice on the governance and operation of arrangements to manage health, safety and welfare at work that will help support improvements in the relevance, operation and outcomes of present arrangements for OHS in container terminals. They call upon those responsible for corporate and terminal-level health and safety arrangements to review these provisions and address the gaps summarised here and detailed in the main report. They are also made with regard to the tripartite nature of the interest in OHS container terminals globally. That is, while many of the recommendations are addressed to corporate and terminal-level OSH management, others are aimed at regulatory policy and practice and warrant review here too, especially where a reduction in regulatory presence may be a consequence of cuts in public spending and reorganised compliance strategies.

As the representation of organised labour represents the third element of the tripartite interest in health, safety and welfare of terminal workers, all of the recommendations made in the report have implications for the strategies and policies of trade unions that represent the interests of workers at both corporate and terminal levels.

Don't forget

As with any study of this kind, there are many areas of coverage in which further work would be beneficial, such as more robust analysis of OHS outcomes. This requires better records and better data collection than were available to the research team. Studying the influence of context on experience is acknowledged to be difficult. The researchers tried to do so and consider that the results are sufficiently robust to provide indications of these effects, although here too, better data and more robust analysis would be beneficial in future studies.

Finally, the arrangements the research team explored and the situations in which they occur are not static. Change and the pace of change in the industry imply the need for further and continuing study of its effects and of the effectiveness of the means to improve OHS arrangements and provide workers with safe and healthy work.

Our summary gives you all the major findings of the independent project report by Cardiff University. If you want to read about the study in more depth, you can download the full report from [iosh.com/research](https://www.iosh.com/research).

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IOSH
The Grange
Highfield Drive
Wigston
Leicestershire
LE18 1NN
UK
+44 (0)116 350 0700
www.iosh.com

 twitter.com/IOSH_tweets
 facebook.com/IOSHofficial
 linkedin.com/company/iosh
 youtube.com/IOSHchannel
 instagram.com/ioshofficial
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