

The role and effects of representing miners in arrangements for safety and health in coal mining:

a global study

Report submitted to the IOSH Research Committee

Volume 2: Case studies in five countries

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1 Introduction

In this Volume, we have presented detailed accounts of the case studies on worker representation and consultation in coal mining in the countries we studied. There were five countries included in the study, deliberately selected to reflect differences in economic and regulatory contexts, as well as, for the majority, their significance in coal production globally. They were Australia, Canada, India, Indonesia and South Africa, and our analysis of the operation and contexts of arrangements for worker representation and consultation in each of them appears in the following five chapters, arranged in this order.

The coal mines in which our participants were active broadly represent the range of private/public ownership, types of mining, and the size of mines in the formal sector that were typical of the countries included. At the same time, they were fairly typical of that of coal mining globally, although, as we made clear in Chapter 5 of Volume 1, we did not seek to study a 'representative sample' of mines in the scientific sense. This is a qualitative case-study based research project in which we are primarily concerned with understanding the processes and contexts of the operation of worker representation and consultation, rather than surveying such practice in a quantitative manner.

We have approached each country case study in essentially the same way. We had established an interest in a comparative examination of practice on worker representation in a range of countries following our detailed exploration of these practices and their effectiveness in Queensland, Australia (Walters et al, 2016a, b, and c). As we have detailed in Chapter 5 of Volume 1, our approach involved firstly exploring the feasibility of undertaking qualitative research in each country. We did this through exploring contacts within the country, mostly in the trade union, regulatory and research communities to which we were provided access by gatekeepers, either at the global level or in other countries. At the same time as developing these intra-country networks of key informants, we also undertook a preliminary review of the literature on OSH in coal mining and its contexts globally, including those concerning labour relations, regulation, business practices and economic significance. In the light of these activities we were able to arrive at a set of countries in which the conditions, contexts and practices of worker representation and consultation on OSH met our scientific requirements and where at the same time it seemed that it would be both practicable and possible to visit the country and obtain samples of safety and health representatives, trade union officers and officials, regulatory agency and other key informants who were willing to participate in the study and share their experiences with us. It was also important during this process to ascertain that it would be possible for those informants to participate in confidence and without any risk to their current positions or livelihoods. This often involved consultation over possible venues in which we could conduct and record our qualitative interviews and group discussions.

The fieldwork in the five countries thus selected was further supported by review of publicly available documentary sources and those additionally made available by trade unions and regulators while the researchers were in the country. While as much

preparation as possible was undertaken before country visits, some of the issues identified during the fieldwork in each country required further exploration in the relevant literature in the analysis that followed the fieldwork. Each field visit was approximately ten days in duration. In some cases, fieldwork was undertaken in more than one stage, but in all cases, as detailed in Chapter 5 of Volume 1, the principal researcher made at least one visit to each country accompanied by one of the partner researchers, who usually undertook some independent study in the field either prior to this visit or following it.

Although there is some variation in the order in which we have organised them, in each of the following chapters we have broadly followed the same structure for the presentation of our findings and their analysis. The early sections of each chapter outline the main features of the structure, organisation and operation of coal mining in the country. This includes something of the composition and economic position of the industry, its origins, history, development, size, employment and labour relations profiles and the key economic, social and environmental concerns of the industry at the present time. They say something of the methods we used to investigate our interest in worker representation and consultation in coal mining in the country. But since the details of the methods used overall are presented in Chapter 5 of the first Volume of this report, what is included in the chapters in this Volume is restricted to details that were particular to each country. The chapters also provide an account of the safety and health performance of the industry, and the main approaches to regulating the management of safety and health in coal mining in the country, along with a profile of the labour relations contexts in which this occurs. This then allows us to say something of the history and present position of measures requiring or supporting the representation and consultation of mine workers on matters concerning their safety, health and welfare in the coal mines of the country. These national features and the contexts in which they occur are quite different in the range of countries studied. We think that our analysis demonstrates that such differences have important implications for the practice of worker representation and consultation in different countries and we have therefore felt obliged to describe them in sufficient detail to enable us to substantiate our later analysis, as well as the comparative analysis undertaken in Volume 1.

Following this detail of the contexts that frame representation and consultation on safety and health, in the remaining sections of each chapter we analyse the data we have gathered from our field studies. In each case the organising principles we have adopted have been based around an investigation of the operation of elements of the statutory framework of functions and rights of collective representation and consultation that are in common in most of the countries we have studied and found at a global level in ILO Convention 155 generally and in Convention 176 specifically in relation to mining. Of course, one of our more obvious findings is that such functions and rights are not found to the same degree everywhere, and this is one reason for the national differences we have observed in the operation of representation and consultation on safety and health in coal mining. But as we show in the following chapters, it is only one of several such reasons. This is not particularly surprising or unusual and, indeed, it might be

anticipated from the detailed review of the wider literature that is presented in Chapter 2 of Volume 1.

In brief, research on worker representation and consultation on safety and health in other sectors points to the presence of several important additional determinants of practice on representation and consultation, as well as to wider factors involved in the structure and organisation of work and employment within organisations, and the influence on them and on labour relations, of corporate strategies concerning production and profitability. We have, therefore, taken this into account in organising the reports of our national case studies. In most cases we begin the analysis of our empirical findings by basing it around elements of the regulatory steer, including how representative arrangements were made in the mines in which our participants were active, as well as who the representatives were and how they went about undertaking their representative and consultative activities. We further examine how they were supported or constrained in this respect by mine managers and the support they perceived themselves to receive from trade union organisation, within and outside the mine, and from regulatory inspectors. But while we have identified many elements of what determines the nature and effectiveness of representation and consultation of mine workers on OSH in this way, in each national case study we have also tried to look beyond these proximal elements of support and constraint, to the wider contexts with which representative and consultative arrangements are framed, and we have examined these in each of the following chapters.

The national cases are presented alphabetically by country in the chapters that follow. No particular order of effectiveness or success of worker representation and consultation should be read into this sequence. However, it is perhaps fortunate that this places Australia first, since as we discuss in detail in Volume 1, we have shown in previous work that arrangements for worker representation and consultation here are both advanced and effective. Therefore, we might anticipate it would act as a good yardstick against which those in other countries could be compared. And indeed, this has proved to be the case.

As a final note of introduction to the present Volume, we think it perhaps helpful to acknowledge that there is no chapter of conclusions included in this Volume. This is because, were there to be such a chapter, it would by its very nature compare the analyses we have made of the five countries in terms of the effectiveness of their arrangements for representation and consultation of workers on safety and health in coal mining and the contextual determinants that influence this. Since this is the subject and purpose of the analysis in Volume 1, and the last three chapters of that Volume present both this analysis and the conclusions we have drawn from it, further conclusions are redundant here. Instead, readers are urged to consider the two Volumes of this report in tandem. Ideally, we would recommend that perhaps the first five chapters of Volume 1 could be read first, followed by the whole of Volume 2, before returning to the comparative analysis and conclusions that are presented in Volume 1.

2 Australia

2.1 Introduction

Australia is among the world's major coal producing and exporting countries. Coal mining accounts for around 24 per cent of employment and 27 per cent of total revenue for the Australian mining sector as a whole. After Indonesia, it is the second largest coal exporter, mostly to South East Asia for electricity generation. Coal mining on an industrial scale began in the second half of the 19th Century under British colonial rule. Currently it is mainly concentrated in the two eastern states: Queensland (approximately 40 mines) and New South Wales (approximately 48 mines), with some mining in the La Trobe valley in Victoria and a few other coal mines found in Western Australia and Tasmania. Mines are a mixture of open-cut and underground and are operated by a number of the largest global mining companies as well as by Australian mining concerns. According to the Australian Bureau of Statistics in February 2014, the Australian coal mining industry employed around 55,000 workers in full-time direct employment and more than 145,000 people in related employment. From a labour relations perspective, coal miners are comparatively highly organised, mainly belonging to the Mining and Energy Division of the Construction, Forestry, Mining and Energy Union (CFMEU) and, traditionally, the union has been embedded not only in the mines but also in the mining communities in which mines were situated. However, the economic profile of the industry fluctuates quite dramatically and drives to improve the flexibility of the organisation of production in relation to market trends, aided by changes to Australian industrial relations regulation, has meant that from the 1990s onwards mining companies have deployed a host of strategies to exert greater managerial control over work regimes and to disconnect previously tight links between workers, their communities and the union (Bowden, 2003; Waring, 2003).

Generally, coal mining in Australia displays the same risks to miners' safety and health as experienced in coal mining in other developed countries. The most frequent injuries include body stressing and musculoskeletal disorders, injuries arising from slips, trips and falls, being hit by moving objects or machines, and working with high-risk plant. The most frequent causes of serious and fatal risks are fire/explosions; inundation/inrush of water or materials (and drowning from other causes); falls of ground; outbursts of poisonous gas; contact with dangerous machinery or equipment (including transport incidents and pressure vessel explosions); electrocution; falls from height; and entrapment underground or in confined spaces. As elsewhere, fire and explosion have long been the most common sources of mass fatality incidents in Australian coal mines (Quinlan, 2014). Underground coal mining is generally seen as more dangerous than open-cut mining due to the problems of confinement. However, open-cut mining still encounters most of the hazards just mentioned, as well as other hazards such as the failure of dams and, if anything, greater potential for transport incidents involving collisions between vehicles and between vehicles and pedestrians, as well as vehicles slipping off roadways or tipping points (and sometimes falling hundreds of metres in large open-cut pits). Again, as is the case elsewhere, less is reliably understood concerning the extent of the effects of mining work on the health of miners, although it is

acknowledged that mining entails serious risks to health. Dust diseases, including coal workers' pneumoconiosis, were responsible for the deaths of thousands of mine workers in Australia in the late 19th and early 20th century. While these dust hazards have been to a large extent mitigated in Australia, as in other rich countries, a recent development that has caused considerable disquiet has been the notable reappearance of coal workers pneumoconiosis in Queensland — a disease thought to have been more or less eradicated from Australian coal mines for several decades previous to this (see Queensland Parliament, Coal Workers' Pneumoconiosis Select Committee, 2017). Similar disquieting evidence has also emerged recently in mining in the USA. Reflecting imbalances in health and safety more generally, the health effects of mine work are less well recorded than injuries (Quinlan et al, 2010), in part because of increased use of contract workers, together with workforce turnover making it difficult to track the long-term health effects of exposure to harmful substances, long hours and other health hazards (see for example, Stewart et al, 2012).

As a result of the efforts of the industry, its regulators and organised labour, safety and health in Australian coal mines has shown a generally improving trend in injury and fatality rates in recent decades (see Gunningham and Sinclair, 2012), although the stalling of this trend during the last 10 to 15 years has been a cause for some concern.

The Australian Commonwealth Constitution does not provide the federal legislature with legislative power over safety and health issues at work, and so safety and health in coal mining in Australia is regulated at state level, although in recent years there has been some attempt to harmonise safety and health regulatory provisions generally, and in mining in particular. It is widely acknowledged that, generally, regulatory measures in the New South Wales and Queensland mining safety and health legislation, including provisions to support the representation of mine workers in coal mines on matters of their safety and health, are probably among the most developed in the world and as we outlined in the Introduction to Volume 1 of this report, it was largely for this reason that we included Australia in the present study.

This chapter is somewhat different from those on the other countries we have studied. This is because there is substantially greater research and information generally available on approaches to managing safety and health in Australian coal mines, and on the role of arrangements to represent the interests of mine workers in this process, than is the case in any of the other countries included in the study. Moreover, publications arising from a previous study undertaken by the main authors of the present report have been prominent among the recently published literature on worker representation in safety and health. Therefore, without repeating the details of this published work, which focused on experiences in Queensland, we will have cause to refer to it frequently and to outline its main findings in this chapter. As well as this, however, the present research has extended knowledge concerning the experience of worker representation on safety and health in Australia in two main ways: firstly, by presenting new evidence gathered from fieldwork with miners representatives and regulators in New South Wales, and observations of union training of safety representatives; and secondly, from new data gathered from interviews with miners' representatives in Queensland.

Following a brief description of the methods used for the Australian fieldwork, the chapter outlines the key elements of regulatory provisions governing worker representation on safety and health in two Australian jurisdictions, New South Wales and Queensland. This is followed by a review of published research concerning the effectiveness of the practice of worker representation on safety and health in Australian mines, before turning to the evidence from the present study and examining the extent to which this corroborates and adds to existing knowledge. Finally, the chapter provides some reflections on this account of the Australian experience of worker representation on safety and health in practice in the two states studied and identifies the key points to which comparative analysis returned to in Volume 1 of this report.

2.2 Methods

This chapter is based on an analysis of qualitative data obtained during interviews with coal miners' representatives and regulators in two states in Australia: Queensland and New South Wales. As explained in the Introduction, it also draws heavily on previous accounts of the experience of representing coal miners' interests in the processes involved in managing safety and health in Australian coal mines. As we describe in detail in Section 2.3 of this Chapter, there are two types of worker representatives active in Australian coal mines: full-time Industry Safety and Health Representatives; and Site Safety and Health Representatives, who usually undertake their functions through being released with pay from their full-time mining work to do so.

In New South Wales, ten worker safety and health representatives were interviewed. They included two industry level representatives and a mixture of the different types of site safety and health representatives found in this state (electrical, mechanical and general) representing mine workers from both underground and open-cut mines. Observation of trade union training courses for the site safety and health representatives also informed the fieldwork findings. In addition, four representatives of the regulatory inspectorate for New South Wales also participated in the study.

In Queensland, interviews were conducted with six mine level safety and health representatives, three industry level representatives and the district secretary and industrial officer for the trade union at the state level. Interviewers were also able to observe and take part in activities during a trade union training course for the site safety and health representatives.

The subject matter of the interviews was essentially the same as in other countries and addressed the topics covered in Chapter 5 in Volume 1. All the interviews were recorded and transcribed. In certain cases in both states, in order to facilitate detailed discussion of the representatives' shared experience, interviews took the form of discussions between paired respondents and the interviewers. Ethics approval was obtained from the Queensland University of Technology Faculty of Law Research Ethics Advisors and from the Cardiff University School of Social Sciences Research Ethics Committee.

2.3 Safety and health in Australian coal mines and the role of representation — the provisions and the practice: a review of published evidence

Australia is a federal country. For the constitutional reasons outlined above, safety and health in coal mines has been regulated at state level, and there is variation between states – and in particular New South Wales and Queensland – in the nature and detail of their requirements. As is the case in many other countries, historically the regulation of safety and health in mining both developed different content and was administered separately from that which applied to other sectors. This has led to a somewhat complicated national regulatory framework in which, at the state level, not only are there differences between states in the nature of the provisions that apply in mining, but there are also differences in health and safety regulation across industries within states. This is because in New South Wales and Queensland mining safety and health regulation is the responsibility of a separate regulatory administration to that responsible for other sectors, and the content of the regulation itself also differs from that which applies in other sectors. One area in which this is especially so is in the provisions governing the representation and consultation of mine workers on matters of their safety and health. To make matters somewhat more complicated, in recent years, partly as a response to change occurring in the structure and organisation of work and employment, regulatory policy makers have overhauled the regulatory framework in an effort to make it more relevant and effective in the face of this change. At the same time, they have taken the opportunity to go some way to harmonise provisions between different states. This has happened both in the mining industry, and in health and safety in other industries – but in separate processes; although the process to harmonise health and safety regulation generally has also had an impact on New South Wales safety and health regulation because of a closer relationship between mining health and safety regulation and general health and safety regulation in New South Wales than is the case in Queensland. There were already some differences between the provisions on worker representation on safety and health in mining between the two states (as well as between these mining provisions and the regulations that applied in other sectors), and the reactions at both the state and industry levels to the new more harmonised requirements have also been different in the two states, leading to some of the complexities that we outline in the following sections.

Despite these differences, however, it is important to remember — as we discussed in Volume 1 of this report — that in both states the trajectory of the development of measures on worker representation on safety and health was much older, with very different antecedents, and was quite separate from that which developed later and applied to other sectors. This trajectory, following the British mining regulatory tradition on which it appears to have been based, led to the development of a system of worker representation in the coal mines of these states strongly orientated towards supporting the engagement of unionised workers and which gave individual representatives considerable powers. It evolved into the two-tier systems that remain the backbone of the provisions in both states and the framework through which worker representation on safety and health is operationalised uniquely in mining in Australia.

2.3.1 The regulatory requirements

In both Queensland and New South Wales, statutory requirements make provision for health and safety representatives to be appointed in coal mines and detail their functions, qualifications, powers and the support to which they are entitled. The detailed requirements are found in Parts 7 (for site safety and health representatives - SSHRs) and 8 (for industry safety and health representatives - ISHRs) of the *Coal Mining Safety and Health Act 1999* in Queensland and in New South Wales in Part 5 of the *Work Health and Safety (Mines and Petroleum Sites) Act 2013* (NSW), in conjunction with Part 5 of the *Work Health and Safety Act 2011* (NSW). Colloquially, the safety and health representatives in each state have been known as check inspectors or 'checkies' and, in both states, their trade union, the CFMEU, administers the system that supports their operation.

In broad outline, the regulatory provisions of Part 7 of the *Coal Mining Safety and Health Act 1999* in Queensland in relation to SSHRs provide that:

- Up to two SSHRs be elected by and from miners in and for each mine (and those elected must hold specific competencies to be a SSHR).
- SSHRs are entitled to inspect the mine, examine OHS documents, review risk control procedures, detect unsafe practices and conditions and take actions to protect miners, and investigate miners' complaints (sections 99(1), 100).
- The Senior Site Executive (SSE) — the person responsible for safety and health at the mine — must inform SSHRs of work injuries and illnesses, high potential impact incidents (HPIs), changes that affect OHS and visits/actions of the mines inspectorate (MI) (section 106).
- A SSHR must make a written report of an inspection (and provide a copy to the SSE); inform the SSE if the SSHR believes the mines safety and health management system (SHMS) is ineffective; and, if dissatisfied with the SSE's response, the SSHR must inform a mines inspector who must investigate and report (sections 99(4)-(6)).
- A SSHR can order the SSE to stop operations if the SSHR reasonably believes there is a danger to workers; and the SSHR can stop mining operations if the SSHR reasonably believes there is an *immediate* danger – if this is done, the SSHR must give a written report to the SSE (sections 101(1)-(4)).
- The Act specifically requires the SSHR to perform their functions and exercise their powers solely for OHS purposes and for no other purpose (section 95(3)).
- Section 104 prohibits the SSHR from unnecessarily impeding production.

On ISHRs, Part 8 of the same Act provides that:

- After a ballot of coal miners, the CFMEU may appoint up to three qualified persons (who must hold a first or second class or deputy's certificate of competency), as full-time ISHRs for four years.
- In addition to the functions given to SSHRs, an ISHR's functions include participating in investigations of accidents, HPIs and other OHS matters; and helping in initiatives to improve OHS at coal mines (section 118).
- Similarly, an ISHR's powers not only include those given to SSHRs but also the power to make inquiries about OHS operations that affect workers, and to make copies of SHMS documents (section 119).
- An ISHR who believes a mine's SHMS is ineffective must inform the SSE; and if corrective action is not taken, the ISHR must inform the MI (section 121).
- An ISHR can issue a directive to suspend operations in all or part of the mine if the ISHR reasonably believes that the risk is not at an acceptable level (section 167).
- As is the case with SSHRs, ISHRs can only exercise their statutory powers and functions 'for a safety and health purpose' (section 117) and should not 'unnecessarily impede production' (section 120).

In New South Wales, the *Work Health and Safety (Mines and Petroleum Sites) Act 2013* (NSW) Part 5 (which only applies to coal mines, and which operates together with the *Work Health and Safety Act 2011* (NSW) (*WHS Act*)) makes provision for:

- The election of mine safety and health representatives (MHSRs) (who can be either a site safety and health representative – SSHR – or an electrical safety and health representative – ESHR) who have the prescribed 'skills and qualifications' (section 38). Because coal mines also fall under the *WHS Act*, the workers at the mine can also elect health and safety representatives (HSRs) to exercise functions and powers under the *WHS Act*.
- A MSHR has all of the functions of a HSR under the *WHS Act* for a work group at the mine as if the work group comprised all the workers at a mine; but the ESHR can only exercise her functions in relation to electrical installations and equipment (section 42).
- MHSRs to be able to issue provisional improvement notices (PINs) if they find contraventions of the statutory safety and health provisions, but only if the MI has not already decided to issue (or not to issue) a stop order and an ISHR has not already issued (or decided not to issue) a PIN in relation to the same matter (section 43(2)).
- A HSR elected under the *WHS Act* cannot issue a PIN while there is a MSHR of either type for the coal mine; and MHSRs must consult HSRs when issuing a PIN (section 43(1) and (3)).
- A MSHR must within 7 days of inspecting the mine give the mine operator a written report of results of the inspection – and the report must be kept for 12 months (section 46).

- After an inspection, and before leaving the mine, a MSHR must record in the mine record findings of any condition leading to apprehension of danger to the coal mine or to the safety or health of persons employed at the mine (section 47).
- The mine operator of a coal mine must immediately inform and give a copy of the record to the regulator.

These provisions seem somewhat more complicated than those that apply in Queensland because they attempt to take benefit from changes applying to all sectors under the *WHS Act*, while ensuring that the special rights of the mines representatives remained largely intact. The *WHS Act 2011* brought general work health and safety regulation in NSW in line with a *Model Work Health and Safety Act* that has also been adopted by six other Australian jurisdictions, and which, among other things, reformed the older provisions on worker representation on OSH in NSW. In relation to the former, it means that the provisions governing mining regulation on matters such as 'work groups' and 'PINs' are the same as those used for other sectors under the *WHS Act 2011*, while retaining those special measures concerning the election, functions and powers of the MSHR (ISHR and ESHR) that are granted under the mining provisions. In practice, it is rare to find HSRs elected under the *WHS Act* in coal mines, but NSW interviewees repeatedly noted that, unlike Queensland coal mines, OSH committees, instituted under the *WHS Act*, were common in New South Wales coal mines, and ESHRs and SSHRs were usually members of those committees.

In Queensland this complicated relationship between specialised mining health and safety legislation and general health and safety legislation was avoided by keeping OSH regulation in coal mines separate from the work health and safety provisions that apply elsewhere. But arguably this strategy denies miners some benefits that might be said to accrue from the wider reforms – benefits that include PINs, a very flexible sanction, and health and safety committees.

On ISHRs, the *Work Health and Safety (Mines and Petroleum Sites) Act 2013* (NSW) Part 5 (operating in conjunction with Part 5 of the *WHS Act*) provides that:

- The Minister may appoint a person as an ISHR if the person is nominated by the CFMEU, is a *WHS* permit holder and has the qualifications set out in the regulations, and there are fewer than four persons currently appointed as ISHRs (section 28). Part 7 of the *WHS Act* regulates the rights and obligations of trade union officials (*WHS* permit holders) entering workplaces for OSH purposes.
- An ISHR has the functions of a HSR under the *WHS Act 2011* for a work group, as if the work group comprised all workers at all coal mines in the state (section 29). An ISHR has in addition the following functions:
 - to review the content and implementation of the Health and Safety Management System (HSMS) at the mine,
 - to participate in investigations of events, occurrences or notifiable incidents at coal mines,
 - to assist in the training of MSHRs.

- An ISHR has the right to enter a mine to exercise functions at any time after (i) giving reasonable notice to the operator; or (ii) in the event of an incident or any situation involving an imminent, immediate and serious risk to the health or safety of a person; or (iii) to accompany a government official carrying out an inspection.
- An ISHR may give a direction to suspend mining operations if the ISHR is of the opinion that: (a) there has been a failure at the coal mine to comply with the work health and safety laws or the HSMS; and (b) because of that failure there is a danger to the health or safety of workers at the coal mine. The ISHR must notify the regulator before giving the direction, the mine operator must notify the regulator of the direction, and the ISHR must give a copy to the regulator (although a failure to notify the regulator does not invalidate the direction) (section 30).
- A direction ceases to have effect if an inspector attends and assesses the matters; or if it is withdrawn by the ISHR by giving notice to the mine operator.
- An ISHR cannot issue a PIN if the regulator has already issued (or has decided not to issue) a stop work order, or improvement or prohibition notice in relation to the same matter (sections 31 and 90(5) of *WHS Act*); and must give a copy of an issued PIN to the regulator.
- An ISHR may delegate, in writing, her functions under section 30 to a MSHR, who may only exercise delegated functions if (a) she has received required training and (b) the ISHR is not available or it is not practicable for her to attend at short notice (section 32).

2.3.2 The evidence of practice

Until recently, the systems for representing mine workers on safety and health in Australian coal mines were relatively little studied. However, growing concern with the apparent slowing of the trajectory of improvement in safety outcomes (as measured by injury and fatality data), along with the occurrence of multiple fatality incidents and subsequent inquiries in Australia, prompted some research attention on the operation of systems for managing safety in mines — of which the measures on worker representation are one part. Several studies were carried out in the first decade of the current millennium, including a major report into safety management in NSW mines (Shaw et al, 2007) and a detailed comparative study of the same practices in mining companies across three Australian jurisdictions (Gunningham, 2007; Gunningham and Sinclair, 2012). In addition, a degree of international comparison was afforded by a study contrasting the systems for safety management in Australia with those in the United States (Yang, 2012), as well as a more recent study of fatal accidents in mining (Quinlan, 2014). All these studies report favourably on the role of systems for representation of miners' interests in OSH in the various jurisdictions studied and in some cases go so far as to recommend their extension. But none studied them in detail or produced hard evidence of their effectiveness.

More detailed attention was paid to these systems and their effectiveness in a study undertaken in Queensland in 2013 (Walters et al, 2014). Given the direct relevance of

this work to the present study, it is worth elaborating on its findings in some detail. The researchers used a mixed-method approach to their analysis. Specifically, they took advantage of the statutory requirement that regulatory inspectors and industry and site representatives make written reports of their inspections, to examine the contents of some 1165 of these inspection reports from 12 open-cut and seven underground mines between 1995 and 2013 that were held by CFMEU. They consisted of a mixture of reports of inspections undertaken by ISHRs (47%), SSHRs (4%) and MI (Mines Inspectorate) inspectors (52%). In addition, the researchers undertook detailed qualitative interviews with 18 SSHRs, three current and two past ISHRs and with a senior regulatory inspector, along with observations of training events for the SSHRs and a wide-ranging review of the literature. Using data gathered from all these sources, their analysis showed overall that both the site and industry representatives made a strong and positive contribution towards effective approaches to safety and health in Queensland coal mines and that they did so in several main ways in fulfilment of their statutory functions and powers.

Firstly, the vast majority of the site inspection reports (94%), regardless of whether they were undertaken by the health and safety representatives or the MI, referred to inspection of at least one fatal risk. Machinery, fire or explosion and rock fall were most commonly reported and interviews suggested representatives were aware of the potentially serious nature of the hazards they were there to prevent:

Because it frightens you at 2 o'clock in the morning when you get a call, you think what's going on, this is bad. And to wake up out of a sleep, you know, my worst fear is a fatality, you know, and ... I don't want that to occur.... because I haven't been able to stop it

Industry representative, quoted in Walters et al, 2016a

Secondly, the analysis of documented inspections showed that review of SHMSs featured prominently in industry representatives' site visits. Just over half their inspections (54%) referred to examining documentary material (risk assessments, records, etc.). It also showed similar patterns of documentary inspection between industry representatives and the mines inspectorate and that they both focused more on health and safety management system documentation than did the site representatives. At the same time, almost all mines inspection reports (96%) referred to the inspection of something physical (work areas, equipment, etc.), but reference only to physical inspection was most common among the SSHR reports, reflecting their preference, clearly demonstrated in the interviews, for a 'hands-on' health and safety role, again as Walters et al (2016a) show with quotes from their interviews with representatives. For example:

Interviewer: *And what sort of routine would you have in inspecting?*

Respondent: *Well normally you do an inspection and you take notes and then if you find that something has caught your eye or ear, that looks out of place or not quite right, well you go back after your inspection and you do a revision of what procedures are in place for that area, whether it's to do with traffic control or what jobs guys are doing or conditions, lighting, all that sort of thing.*

Site representative, quoted in Walters et al, 2016a

The researchers suggested that such differences were best explained by the different roles played by the two types of representative. The ISHRs had a wider role in reviewing OSH management determined by their jurisdiction and position external to the mines they visited. As interviews with both them and the site representatives make clear, industry representatives often visited mines in response to requests for support from the site representatives. Inspection records also showed that the balance between examining physical features, documents or both had changed significantly over time with reference to both physical and documentary inspection increasing during the period from 1999 to 2008. The researchers concluded that this change reflected the effects of the 1999 Act, which emphasised OSH management.

HPIs were another recurring theme in representatives' reports. The researchers saw this as further evidence of the representatives' engagement with serious OSH issues in the mines, since HPIs are widely seen as indices of increasing importance in health and safety practice – especially in high-risk industries. They are incidents judged to have a high potential to lead to serious harm, even if no harm actually occurred. The risk-based coal mining regulation implemented in Queensland reflects this increased significance. Not surprisingly, therefore, they featured increasingly in representatives' reports, with fatal risks being the main focus of the industry representatives' references to HPIs.

Turning to the representatives' use of their statutory powers in relation to deficiencies in safety management systems, as well as their powers to order work cessation, the researchers examined both the documentary evidence of their use as well as questioning interviewees concerning their experiences in this respect. Cases where the SHMS was found to be inadequate and in which the ISHR served a formal notice featured in 5% of their reports, applying to around half of the mines covered. Documentary analysis showed that industry representatives rarely required the stoppage of work: only 24 ISHR reports referred to the suspension of operations. Suspension of all operations, as opposed to those confined to particular areas or using specific equipment, was even rarer and only six the 24 ISHR suspension reports referred to this. In suspending operations either completely or partially, all but one of the reports referred to at least one fatal risk. Only three of the SSHR reports referred to suspending operations. They all addressed a potentially fatal risk. The researchers also noted that, while appeals against such notices were rare, most suspension notices were upheld following these appeals, or the mines inspectorate issued a directive under section 166 of the Act in their place, which requires remedial action but allows the process in question to continue while such action is taken. Representatives do not have

this latter power. Had such a course of action been available to them, the representatives pointed out they would have taken it themselves.

Several points emerge from these findings. First, they indicate that when formal notifications were used, they were almost always used to address significant OSH risks, including inadequacies in emergency response procedures and equipment, ventilation, gas monitoring, machinery hazards and so on. Further, they were generally used to identify the link between the risks posed by these failings and the health and safety management system in place. That is, they used identification of specific risks as symptomatic evidence of inadequacies in the management systems that should ameliorate and control them. This kind of feedback constitutes a procedure widely accepted as good practice in OSH management and risk prevention. Therefore, documentary evidence supported the conclusion that representatives used their formal powers to suspend operations responsibly and in relation to serious OSH management systems' failings. Moreover, there was no evidence in the documentation that referral of these matters to the mines inspectorate resulted in any substantial change in the actions taken. That is, the documentary evidence again points to the representatives behaving responsibly in relation to the use of their powers.

This was also clear from the responses of the representatives themselves. In interviews with the researchers they indicated they used these powers when there was no other recourse – often in situations where they had previously engaged with management concerning specific risks but found the response had failed to remedy the situation:

Look, as to our powers and functions to stop stuff, we will give the mine the option first. So we will go up and say we believe this is unacceptable, you need to do this, this and that and then we will go and see them or document it, send them an e-mail and then they usually, 99.9% of the time, say yeah we will fix this...., we will be happy with that and we will check up on them and see that they are doing it or if they don't then we will just stop it.

Site representative, quoted in Walters et al, 2016a

On other occasions, they were used when representatives believed there was an immediate risk of serious harm if the process or operation continued:

Yes, we don't take it lightly. ... It has got to be a high-risk area and a high-risk task, like if it is strata. If you are working a high-risk area, if you are going backwards and forwards, if you are going past something like a rib that is not bolted well, you get clobbered with it and that is the end of you, you know, so that is high risk.

Site representative, quoted in Walters et al, 2016a

It was further clear from the interviews that the representatives were acutely aware of the strictures placed on their powers to serve notices or suspend operations by the regulatory requirements on them not to 'perform a function or exercise a power ... for a purpose other than a safety or health purpose' or 'unnecessarily impede production'. At

the same time, possessing these powers considerably strengthened perception of their own legitimacy, a perception reinforced by positive feedback from colleagues:

I see the workforce gains a fair bit of confidence from what we do, if we're happy or if we consider it safe, they accept, that yeah, we've got the risk as low as is reasonably achievable, if we're not confident or happy with what's been decided or the controls, they know we've got the power to go further.

Site representative, quoted in Walters et al, 2016a

Possessing such powers also enhanced their confidence that they would be taken seriously by senior managers in their pursuit of actions that were at least initially always intended as consultative and cooperative. There are parallels between these findings and studies of the powers of health and safety representatives to stop dangerous work in other industries and countries. For example, in Sweden, where health and safety representatives have a similar power to order the suspension of work, researchers found it used very sparingly but nevertheless greatly valued by representatives, for the legitimacy and for the respect that it conferred on their role (Frick, 2009; also EU-OSHA, 2017). Similarly, in Australia an ACTU (Australian Council of Trade Unions, 2005) survey of health and safety representatives reported the sparing but effective use of this power, with only 11% of respondents reporting having issued a provisional improvement or default notice, but 91% believing it was effective in resolving the issue. The survey further reported that 21% had directed that unsafe work cease and 88% said that this had resolved the issue. The 2014 study in Queensland suggested that mining representatives used their powers just as effectively, but if anything, even more sparingly than elsewhere in Australia.

In short then, recent detailed research on the system for worker health and safety representation in Queensland coal mines suggests that the statutory measures were being implemented effectively and the two levels of representation, at site and industry level, worked well together in providing the necessary trade union organisation and support to help make representation effective. However, the research also demonstrated that the system was not used without contention and that to make their presence effective, the representatives used strategies that were deeply embedded within those of their trade union organisation at mine, state and national levels in their relations with the management of the mining companies in which they operated.

In two further accounts (Walters et al, 2016b and c), the same researchers analysed these approaches from a labour relations perspective and argued that the hostile labour relations that characterised the contexts in which the representatives operate caused representatives to place a strong reliance on regulation in support of their actions. While previous scholars, such as Gunningham and Sinclair (2012), conclude that the hostile labour relations in Australian mining lead to mistrust between managers and union representatives which undermines participative engagement in OSH management, thus stalling progress on OSH, Walters et al (2016b and c) suggest such an interpretation rather misses the point. Instead, they argue that their findings indicate that although hostile relations and limited trust between workers and their representatives and

managers were evident in the coal mines they studied, seen from a pluralist perspective, representatives worked quite successfully within these contexts to give voice to their constituents' OSH interests. By careful use of their statutory powers, they were able to identify and request corrections to address fatal risks; to review and suggest modifications to OSH management systems; and occasionally to order the stoppage of work in situations where consultative approaches had failed or serious and immediate risks were evident. These authors claim that the representatives' actions, therefore, could not be explained by arguments concerning the 'limitations of trust' in achieving effective co-operation in jointly managing OSH because such arguments assume an identity of interest, which was not supported by workers' experience of their employers, their corporate values or their means of implementing them in the coal mines of Queensland. Instead, they suggest that, in fact, the strategies of representation on OSH observed in these mines are better understood as expressions of organised resistance to the experience of unsafe and unhealthy work that occur in labour relations contexts in which corporate values promoting production and profit are perceived by mine workers to have been prioritised by the mine ownership at the expense of the safety, health and well-being of mine workers.

These are important ways of framing and understanding worker representation on safety and health which may have wider salience in helping to explain experiences elsewhere. We will have cause to return to them when comparing experiences of representation and consultation in coal mines of different countries. With these findings in mind, the aims of the further research conducted in the present study were twofold. First, to further explore what is perceived to support or hinder the experience of representation on OSH in Queensland coal mines and inquire whether there have been developments since the previous study that might affect its conclusions. Second, to extend the research to embrace experiences of representation on safety and health and their contexts in the coal mines of New South Wales, where the regulatory framework and arrangements for representation are somewhat different to those in Queensland, in order to add further understandings of what supports or constrains effective action in relation to worker representation on safety and health in Australian coal mines.

2.4 New evidence on the supports and constraints of effectiveness of worker representation on safety and health in Australian coal mines

This section reports findings from both Queensland and New South Wales on the experience of both site and industry level representatives in representing the interests of mine workers on safety and health in coal mining, based on the fieldwork conducted in 2016. It serves to augment and underline the discussion outlined in the last section in relation to previous research and adds new information, especially concerning the effects of the slightly different statutory approaches to supporting representation on OSH in the coal mines of the two states. It begins with the representatives and their accounts of representation under the statutory provisions, focusing on the way in which they go about undertaking inspections, investigations and making representations to managers about their concerns or those of other mine workers, and it explores the supports and constraints on their role. It goes on to examine the ways in which they use

the powers granted to them under the regulatory provisions to order the cessation of dangerous work and to review and if necessary require changes to the systems for safety management, before discussing the contexts in which the representatives operate and indicating what the research adds to what is already known concerning the effects of these contexts on the operation and effectiveness of the arrangements for representing mine workers on safety and health in Australian coal mines.

2.4.1 The representatives

In both Queensland and New South Wales, the representatives interviewed shared similar features to those mentioned in previous studies. That is, the mine level health and safety representatives were all experienced miners, mostly in the age range between 35 and 45, many having worked in both underground and open-cut mines, and the majority had not held other union positions before becoming health and safety representatives. They ranged from experienced representatives who had held the position for a good number of years to those who were more recently elected. All had some experience of training, although this was more extensive among the experienced representatives from Queensland. Their motives for becoming health and safety representatives were similar to those identified in previous studies, that is, there was a shared sense of their wanting to contribute to the prevention of injuries, fatalities and work related ill-health which many had witnessed occurring to their colleagues in the mines where they had worked. Others said they were already known to be willing to engage with supervisors and managers on matters that concerned them or their workmates, prompting their colleagues to put them forward. They were also all committed to the position of being a health and safety representative, regarding it as being a long-term engagement. Indeed, several pointed out that they were far more likely to be in this position for a lot longer than the senior managers to whom they made representations in the mines where they worked. They had all been elected into their roles by their fellow mine workers.

The industry level representatives were also experienced miners. They were all men in the same age range as the site representatives and usually had held other representative positions in their trade union before becoming an ISHR. There were requirements concerning their qualifications — in Queensland they needed to have been deputies or the equivalent, while in NSW they were required to possess 'qualifications set out in the regulations' (currently the qualifications to be a deputy or open cut examiner, and the completion of accredited training (regulation 168(1)). Some of the ISHRs had held office for a considerable time and were experienced not only in addressing OSH matters in support of the SSHRs but also in liaising with the mines inspectorate and sitting on various industry level regulatory and policy-making committees. In Queensland, the three current ISHRs (based in Brisbane, Rockhampton and Mackay) shared between them their responsibilities for the mines across the state, while in NSW two of the four ISHRs took responsibilities for the mines in the northern part of the state and the other two dealt with the mines in the southern part. These positions were regarded as senior and important appointments by the miners' trade union, something that was also illustrated by the fact that former ISHRs had continued

their trade union roles subsequently and been elected into key senior roles within the trade union hierarchy.

There were some differences in the two states. As outlined in the previous section, the NSW legislation distinguishes between two types of mine safety and health representatives (MSHRs) — electrical (ESHR) and other site health and safety representatives (SSHR). In a few coal mines there is also a third type of representative — mechanical safety and health representatives — which are the result of agreements between the mining company and the union.¹ As one of the New South Wales ISHRs remarked:

...with the new types of equipment [found in some coal mines], the management at these site believe [that a specialist mechanical] HSR is of benefit, they have to have trade certificate. ... My thoughts are if you have department mechanical inspectors and mechanical engineers ... in legislation why would you not have mechanical safety and health representatives?

It was not entirely clear what were the origins of these state differences, but the regulatory inspectors who were interviewed in the study believed it may have been a legacy of the former public ownership of mines in the state, whereas those in Queensland had always been privately owned.

A further complication in NSW was that the implementation of current regulatory arrangements on representation in health and safety was relatively recent and, as outlined in the previous section, the current arrangements included changes brought about by the implementation of the more general provisions on the election and functions of work health and safety representatives under the *WHS Act* and consequent changes to those that applied specifically to mine workers in order that both systems could operate in relation to coal mines without detriment to one another. One consequence of this was that health and safety representatives appointed under the separate provisions might operate alongside each other in the same mine. It was clear from the interviews that the NSW MHSRs appointed under the mining provisions were aware of the situations thus created but none seemed unduly bothered by this or possible complications it might imply in practice. In contrast, in Queensland things were more straightforward as there was only one type of mine level representative and they assumed responsibility for representing their fellow mine workers on all matters of safety and health.

¹ Although it was beyond our present brief to explore the historical antecedents of these different types of representative, it seems, as with history of worker inspectors more generally discussed in Volume 1, their origins may also be linked to trade union demands. For example, the position of electrical check inspector in NSW was influenced by a specific campaign by the then Electrical Trades Union, which was supported by the CFMEU. It may have also been influenced by the Appin colliery (Illawarra) disaster in 1979, where the likely cause of the explosion that killed 13 miners was found to be an inadequately sealed fuse box. At a more general level this is also an interesting example of an initiative of a non-skilled workers' union being taken up by craft unions and the spread of this model of worker representation on safety to other trade unions in coal mines.

2.4.2 Undertaking representative functions on safety and health in coal mines

Walters et al (2014, 2016a and b) provide a detailed account of the everyday activities of both the ISHRs and the SSHRs in the Queensland mines. As outlined in the previous sections, for the ISHRs these included undertaking regular and reported inspections of the mines, carrying out investigations of the complaints of fellow miners, representing their interests on safety and health in discussions with supervisors, managers and with the senior mine management, keeping the union branch informed of safety and health matters at the mine, as well as using their special powers in relation to the review of systems for managing safety and health in their mines and ordering the cessation of processes and activities they regarded as of imminent and serious danger to the safety or health of their fellow mine workers. These are addressed in separate sub-sections below. In addition to undertaking these activities, the previous research also demonstrated that the mine level representatives made considerable efforts to engage with the concerns of their fellow workers, often outside their normal working hours, as well as using their spare time to keep themselves informed of safety and health requirements in the law and from other sources, and attending annual training courses to meet and learn from other representatives and from the ISHRs and other speakers at such events. Although the labour relations scenarios in which they performed these functions were frequently quite hostile, the researchers judged the representatives to be conducting these functions efficiently and effectively. The ISHRs were seen to be providing the mine level SSHRs with considerable support, both in relation to advice and intervention on their behalf, as well as conducting statutory inspections and using their powers to review safety management and stop dangerous work proportionately to the seriousness of the risks involved.

The testimony of the SSHRs interviewed in the present study in Queensland reinforced these findings. The labour relations climate had not changed significantly in the period since the previous study, but the representatives were nevertheless able to report that they conducted a similar range of inspections, investigations and representations to management as detailed in the previous study in Queensland, and paid respect to the strong support they felt they received from the ISHRs in terms of advice, intervention and training. The ISHRs also reported a continuation of the kinds of activities and relations with mine managers and the regulatory inspectors as detailed previously, with perhaps the main difference being their engagement with current concerns around the re-emergence of coal workers' pneumoconiosis in some of the Queensland mines and the various issues surrounding this development, which we discuss below.

Perhaps not surprisingly, there were far more similarities than differences in the findings on the ways in which representatives went about their activities in the two states. In NSW, the mine level representatives reported engaging with the same kinds of inspections, investigations and representations as in Queensland, with broadly the same experiences of varied but often limited co-operation from supervisory and middle management in the mines. Although there was a further specialised division between electrical, mechanical and (in some cases) general mine representatives in NSW, this did not seem to affect the overall performance or activities of the representatives, other

than having an influence on the nature of the risks they investigated. They generally regarded themselves as being effective in their actions, and the similarity with the Queensland experience would tend to suggest they probably were correct in this assessment. But they pointed to some challenges. For example, some of the representatives drew attention to the tendency for middle level mine managers to move around a lot, which made forming consistent working relations at this level quite difficult in some mines. In some of the regions, where the mines were situated quite close together, they said, 'everyone knows each other', and 'people don't move around a lot'. In these situations they indicated that consultation worked well because of longstanding relationships and trust. But in other mines, middle managers were frequently relocated and, although well educated, they often had little practical experience. This, combined with unfamiliarity with the details of the mines in which the representatives worked, made for considerable challenges. One New South Wales ISHR explained that the most common issue representatives faced in New South Wales coal mines was that:

A lot of the problems that come up in our areas are probably due to lack of consultation. ... A lot of processes and management plans are developed by middle management who just go and do it and try to implement the plan and then usually it falls over and then there's a dispute. The legislation says "when developing", or "when identifying it", but they usually get through most of the process and then say "have a read of this." ... [A] lot of the issues could have been resolved by good consultation, good communication, a collaborative approach, I suppose...

The representatives also pointed to the tendency of such managers to develop their OSH plans through discussing them with people of their choice rather than through consulting mine level representatives and ISHRs, and this gave rise to disputes. This experience that was also reported in the present and previous study in Queensland, where it was further linked to the mining companies' preferences for behaviour-based safety management systems and deliberate attempts to marginalise representatives through discussing safety management procedures with individual mine workers of their choice rather than by following agreed consultative procedures.

2.4.3 The use of statutory powers to review safety and health management

As is usual in regulated (or enforced) self-regulation, the wider provisions in which the measures on worker representation are embedded in both NSW and Queensland, place considerable emphasis on the role of systematic approaches to managing safety and health in mines. The rights of representatives to seek information and make interventions are constituted with reference to these systems for managing safety and health. As the previous Queensland study also noted, in practice this meant that both site and industry representatives were increasingly required to be conversant with and contribute to 'paperwork' in relation to these systems, as well as to have a practical understanding of the ways in which specific safety failures in plant, processes, or activity could be understood in terms of what they indicated about the wider system in place to manage safety and health. More specifically, in each case the regulatory

requirements provided entitlements to review OSH management systems and to report any failures found.

As already mentioned above, ISHRs inspected documents relating to safety management with more or less the same frequency as did regulatory inspectors, but the SSHRs did so to a lesser extent, expressing a preference for taking a more 'hands-on' approach, while the ISHRs acknowledged dealing with the management systems. In the present study, the interviews reflected similar differences, although these were perhaps somewhat more pronounced in NSW than in Queensland. For example, one New South Wales ISHR remarked that:

It has made it much more difficult for us when they moved away from prescriptive legislation ...to the overarching health and safety management system ... It is more difficult for us because we have to basically know that or work off that – we can't just say you have got to do that because the legislation says so. So it's a lot harder for us know, because our main role is to review the health and safety management system and its implementation, so it's a lot more difficult.

The NSW mine level representatives reported some difficulties with the demands on their knowledge resulting from the greater attention being paid to safety and health management systems approaches in the mines, which caused mine managers to often ask the representatives about changes that might be required to be made to procedures. The ISHRs said that while the mine level representatives were 'great on the floor', they sometimes found such discussion with managers about these changes in safety management procedures to be quite demanding and said they 'need to consult ISHRs about these issues'. The ISHRs also thought that the mine level representatives would benefit from further and ongoing OSH training and education on these matters. The ISHRs themselves acknowledged that the demands of process standards legislation required them to know more, read more, and spend more time on consultation and reviewing SHMSs, leaving them less time for inspections of the physical safety and health issues in the different mines in their jurisdiction, although it was indicated that they still tried to undertake two such inspections per week, and a very minimum of one per fortnight.

2.4.4 The use of statutory powers to require the cessation of dangerous operations

Here too, the representatives' appreciation of the value of their powers to stop dangerous work remained much the same as found in the previous study in Queensland. That is, subject to the differences between NSW and Queensland discussed in the following paragraph, both types of representative in both states reported that the powers were important in conferring both legitimacy and respect for their role. They therefore took them very seriously and used them carefully and sparingly, often finding alternatives to their use through efforts to achieve more effective consultation with managers. They were in no doubt that the mining companies would dispute their use if they found an opportunity to do so and they would be prepared to

take such action through the courts if they believed there was a case for questioning the appropriateness of the representatives' actions. They were therefore very careful indeed to ensure that they remained as far as possible within the bounds conferred by the regulatory measures, and the evidence that their actions requiring the cessation of dangerous operations were normally upheld by the mines inspectorate, continues to suggest that they were successful in this. At the same time, both levels of representative made it quite clear that if they judged a situation to warrant it they would have no hesitation in using their powers to require the cessation of a dangerous activity or process or withdrawal from the scene of a structural risk, even if this required halting production at the mine. But in practice they found such occurrences to be normally quite rare. Generally these approaches were endorsed and supported by the testimony of the regulatory inspectors in both this and the previous study. They talked about the importance of 'the checkies focusing on safety' and often judged their worth by the extent to which they believed individual representatives were able to do this. They said that the ISHRs were good at sticking to safety issues and being able to distinguish them from issues that were 'really industrial'.

As is evident from the outline of the regulatory provisions in Section 2.3.1, the situation in the two states was somewhat different. One key reason for the difference in approach lies with the regulatory provisions governing the powers given to mine-level safety and health representatives in each state. As discussed earlier in this report, in NSW, both ISHRs and MHSRs could issue provisional improvement notices (PINs) under the WHS Act. ISHRs also had the power (under section 30 of the *Work Health and Safety (Mines and Petroleum Sites) Act 2013*) to give a direction to suspend mining operations. They could delegate this power to a mine level representative (SSHR or ESHR), but they may only exercise this delegated power if (a) the SSHR or ESHR had completed the required training and (b) the ISHR was either not available or it was not practicable for them to attend at short notice (section 32). Thus there was quite a strong emphasis on the exercise by the ISHR of the section 30 power to suspend operations and in practice, according to the interviewees in the present study, this is what took place. The ISHRs reported that in practice they did not delegate the section 30 power to suspend operations and, what is more, they strongly discouraged SSHRs and ESHRs from issuing PINs. The rationale put forward by the mine level representatives when they were asked about what happened in practice was also that by relying on the ISHRs to undertake enforcement action they were making themselves less vulnerable to any punitive actions that might be taken against them by their employer either now or in the future. As one mine level representative put it:

For us to issue notices puts us under the spotlight. The legislation is there but for us to use those powers we tend to ask the Industry guys. What normally happens is that they would issue the notice.

Electrical Safety and Health Representative, NSW

The ISHRs further suggested that because SSHRs were employed in mines – rather than acting on behalf of the trade union from outside the mine – they were far more vulnerable to the risk of reprisal from the mine management or the mining company.

The strategy they therefore advocated for the mine level representatives was for them to raise issues and consult directly with management, but to take issues to the ISHRs if the management did not respond favorably. In this way they would not put their present or future employment prospects at the mine at risk. This said, it was also fairly clear from the interviews with the ISHRs and the Mines Inspectorate that the ISHRs only rarely found the need to exercise their powers to direct suspensions or issue PINs. Indeed, they reported that:

99 percent of issues are resolved through consultation.

ISHR, NSW

Overall then, both types of representatives in both States were well aware of the contentious and serious nature of their powers to stop dangerous work, and of the objections to these powers from the mining companies. As a result, they used them strategically and sparingly, normally preferring to find solutions through consultation or negotiation with managers rather than resorting to these formal and legally supported actions. Nevertheless, they were at the same time strongly convinced of the importance of their possession of such powers and the seriousness of the message this conveyed both to their fellow-mine workers and the mine management.

As already noted, the powers of the representatives in Queensland are bounded by their use only 'for a safety and health purpose' (section 117) and not to 'unnecessarily impede production'. There is no equivalent provision in the New South Wales legislation, but in practice, both industry level and mine level representatives in New South Wales were also very careful not to involve themselves in 'industrial issues.' Qualitative evidence in both this and the previous study showed that representatives at both site and industry levels demonstrated a clear awareness of these strictures to their powers and were very careful indeed not to stray beyond their boundaries in order to ensure their actions were effective, and if necessary they would be supported by the regulator and they would avoid any possibility of the ever-present threat of serious reprisals being enacted by the mining companies. Of course, this was not always straightforward, particularly as structural and organisational issues of work and employment themselves often serve to blur these boundaries. As the ISHR in NSW put it:

... that is our hardest role — trying to separate industrial from safety.

A significant finding of the present research, which confirms that suggested in the previous study, was that the way in which representatives were able to address this challenge was through co-operation with other representatives at branch or, in the case of the ISHRs, even at industry level. And where there was doubt about the boundaries between safety and industrial issues, they would be addressed collaboratively with other union officers taking on the suspected 'industrial' elements.

The regulatory inspectors who participated in the present study were obviously also aware of these caveats. And as pointed out above, they were content with the ways in

which the ISHRs' use of their powers reflected a desire to stay within these parameters. Indeed, the balance between safety and production was an issue of wider interest to them and from their testimony it would seem they were far more concerned by the potential for production to overwhelm concerns about safety in the mine than they were about representatives straying beyond the limits of the regulatory caveats on their scope for action. The inspectors discussed the balance between production and safety in the mines and linked shifts in this balance to the fears of managers and workers alike in relation to wider corporate strategies concerning the future of particular mines. To illustrate this point the NSW inspectors gave one example of a mine under scrutiny for its production where they claimed that, as a result of the threat from the corporate level concerning the possible closure of the mine, managers and workers alike prioritised production over safety in their efforts to try to keep the mine open.

2.4.5 Contexts, supports and constraints

Observers of the Australian coal mining industry have for many years characterised both its economic situation and labour relations as volatile and subject to strong influences from fluctuations in the price and production of coal. The business practices of the mine operators have reflected these patterns and have focused extensively on strategies to increase flexibility while reducing labour costs. The mine workers, aided by a strong social cohesion that was supported by close links between the mines as places of employment and the closely-knit communities that grew around them have, as in mining communities in other industrialised countries, over time developed strong trade union organisation and are therefore well-organised and resistant to many of the changes in employment sought by the mining companies. Most observers agree that these tensions have led to embedded conflict in the industrial relations of the industry in which notions of 'trust and co-operation' often associated with the practice of participative arrangements for OSH in other sectors, are rather less obviously present in mining in Australia. As Walters et al (2016a:14) have observed in published accounts based on the original Queensland study:

In such situations, exemplified by the Queensland mines we studied, the strategies adopted by workers' representatives are more appropriately understood as efforts to resist the perceived harmful effects of corporate power than they are examples of worker-management co-operation. Our evidence indicates that far from being unsustainable, these strategies contribute to 'getting things done' to improve OHS.

The present study confirmed this to be the case – not only in the Queensland mines but in the NSW coalfield too, in which, by using essentially the same approaches, the miners' representatives were able to address OSH issues that were of concern to them and which both they, and the regulatory inspectors who observed them, regarded as effective.

The previous Queensland study noted that, to be effective, there were two elements that the representatives thought to be especially important. The first was organised trade union support for their actions, which took several forms, but had at its core the relationship between the two types of health and safety representatives — the ISHR and the SSHR. The second was their strategic use of the regulatory framework for safety and health in the mines, in which, as discussed above, both types of representatives took great care to ensure that their actions were firmly rooted, and could not be perceived to stray into areas that might be regarded as ‘industrial’ or be seen to be unnecessarily ‘impeding production’.

A similar conclusion emerged from the present study. The most obvious support for the mine level safety and health representatives in both states was their relationship with the ISHRs. As in the previous study in Queensland, without exception the mine-level participants from both states talked positively about the role of the industry level representatives, both in relation to their interventions in issues at the mines in which the representatives worked and held office and more widely, in relation, for example, to their availability and provision of advice, information and training for the representatives.

Training itself was probably the most frequently mentioned form of support for the autonomous activities of the mine level representatives in both states. Mine level representatives attributed both their knowledge, confidence and their sense of the legitimacy of their role to the training they had received, and especially to that training delivered by the trade union, and most often by the ISHRs themselves. While the arrangements in each state were somewhat different, appreciation of its role was shared among all the mine level representatives who took part in the study.

In Queensland, the main training provision for the mine level representatives was a week-long annual conference which the ISHRs were centrally involved in delivering. But they not only played a major part in organising and delivering the conference, they also used it as an informal way of better getting to know the SSHRs and their issues, and to enable SSHRs to get to know each other better, and to discuss issues of common concern. There were two training conferences each year, run separately for underground and open-cast mines, and each for a week. All the SSHRs interviewed regarded them positively. They especially spoke about how, as a new representative, attending the conference provided them with knowledge, skills, contacts and confidence to undertake the tasks in their new role in their mines. They went on to say how it provided a continuing source of help, even when they became far more experienced representatives. As well as training them to better understand and use the legislation and regulations, and hearing from inspectors and other experts on technical and other matters, they also valued the conferences for the opportunity they offered to learn from each other about the experiences of SSHRs in other mines.

In addition to the Annual Conference – for which the SSHRs were generally able to receive appropriate time off to attend — some of the representatives also attended an annual event organised by the regulator, in which there was a mixed audience of representatives, managers and other participants with an interest in mining. Generally,

the representatives who had attended these events were also fairly positive about their experience. Others had attended training provided by or on behalf of their employer, usually dealing with specific technical aspects of the operation of the mine or its specialised equipment, while some had also been trained in mine rescue and other safety related activities. These latter experiences were ad hoc and not systematic, with the extent of experience of them varying considerably between representatives. But for all of the representatives interviewed, the week-long Conference organised by their trade union was the training provision that was found most useful. Indeed, the experience of the training conference was so positive that the SSHRs were frequently vocal in expressing a wish for more of the same kind of training to be provided.

In NSW the training of the mine level representatives was organised rather differently. The main regular training course for mine level representatives was provided through the Mines Department and consisted of a five-day basic training course for new representatives (recently extended from a previous four day course), which was supplemented by six-monthly training days run by the ISHRs for the mine-level representatives and an annual one day refresher course organised by the Mines Department. There had been previous criticism of the delivery of training provided through the Mines Department and the recent revisions to the provision had been undertaken to address this criticism. Overall, however, responsibility for the content and quality of the training remained with the state regulatory body and the training that was provided by the trade union through the meetings between the ISHR and the mine-level representatives remained separate. This was a difference between practices in the two states and, from the perspective of the representatives themselves, it was quite clear that the NSW representatives would have preferred to be the recipients of arrangements for training that were more like those provided in Queensland — that is, with greater trade union provision. The mine management generally supported release from normal work to attend training, although in NSW it was suggested that management in several of the mines in which representatives were employed could be resistant to representatives attending OSH seminars and ongoing training, especially seminars and training conducted by the union.

Of course, the training helped to reinforce the way in which the representatives went about conducting their activities. It was especially influential in informing the approaches they used to persuade managers of their responsibilities to take remedial actions. Here, as we have noted in both states, as far as it was possible for them to do so, the representatives stayed within the boundaries of regulatory provisions when making representations – thus, avoiding accusations of mixing ‘safety’ with ‘industrial’ matters. This applied at both site and industry level. Especially in Queensland, the SSHRs were inculcated in the detailed provisions of the *Coal Mining Safety and Health Act 1999* and the regulations made thereunder – indeed they referred to the compendium volume containing these provisions as ‘the Bible’ and the more they had been able to familiarise themselves with its content, the more confident they felt in making representations to managers in their role as health and safety representatives. Situating these practices in relation to the previous literature on ways in which worker representatives undertake their roles, Walters et al 2016a argue, with reference the studies of Hall et al (2006 and

2016), that these practices were examples of 'knowledge activism' practiced by the representatives in the Queensland coal mines. The ISHRs reinforced this understanding by following the provisions closely themselves, making frequent reference to them and encouraging the SSHRs to do likewise. In NSW, mine level representatives on the whole appeared somewhat less confident than their counterparts in Queensland, and expressed slightly more uncertainty in relation to their activities, in combination with expressing a strong desire for further training. This said, if anything, in NSW the site level representatives were even more dependent on the support of the industry representatives, not least because in NSW the site level representatives did not use sanctions to stop unsafe practices or to issue PINs to require them to be remedied, but deferred to the ISHRs on these matters. This meant that, while they were in some ways less likely to run into serious conflicts directly with managers over their activities, they were more dependent on the support from ISHRs who dealt with these matters on their behalf.

Conflict arising from situations in which the representatives might be accused of impeding production was avoided in a similar way, through rigorous adherence to the statutory provisions. In addition, when issues of safety and health overlapped with those of work organisation perceived to involve matters of labour relations, representatives addressed them through collaboration with other representatives at the workplace whose brief encompassed these 'industrial' or 'compensation' matters. That is, the representatives functioned not as individuals operating within the safety organisation of the mines, but rather as trade union representatives responsible for safety and health, operating as part of the trade union organisation inside and outside the mine. Moreover, the wider union organisation at both workplace and state level supported this, as the testimony of mine level and industry representatives, as well as that of union officials interviewed during both studies, made clear. Indeed, researchers concluded that a proper appreciation of this structured and comprehensive integration of safety and health matters into union affairs was a key element to understanding the strategy and success of the trade union representatives in 'getting things done' on safety and health in the Australian coal mines.

A further potential source of support was from the regulatory inspectorate and there were somewhat mixed views concerning the extent and availability of this support from the mine level representatives. In keeping with the findings of the previous study, mine level representatives interviewed in the present study reported a range of experiences in relation to being contacted by inspectors during their visits to the mines, being involved with the actual inspection carried out on site and being consulted subsequently. In some cases, representatives reported experience of engagement with all of these activities, while others spoke about not being told about the visit either in advance or when it took place — often resulting in them not being present during the visit. However, most of the representatives indicated they were informed about the outcomes of such visits. They also indicated some variation overall in the attitudes of the regulatory inspectors to their role, pointing out that some inspectors appeared to actively appreciate and support their involvement in safety and health matters at the mines, while others were less inclined to offer such support. Inspectors in turn

suggested there was variation between the representatives themselves as to the extent they were likely to engage with inspectors. They said that some tended to take the lead from the inspector and adopted an attitude of 'not speaking until spoken to'. They further suggested that the ability of some representatives to grasp complex issues was sometimes limited.

There was, therefore, significant variation between mines, companies and individuals in the extent of contact between mine-level representatives and inspectors. The senior NSW inspector interviewed in the present study, as well as his equivalent in Queensland who was interviewed in the previous study, both confirmed that in the past there had been considerable discretion available to inspectors in their relations with the representatives, which they acknowledged had probably resulted in variation in their practice, but they both stressed that their present policy required inspectors to seek engagement with the safety and health representatives, and inspectors were expected to communicate with the representatives during visits to each mine. However, they further pointed out that, because of shift patterns and the location of site visits, this was not always possible. Nevertheless, there appeared to be a clear intent at the senior level within the inspectorate to encourage engagement of inspectors with representatives. In NSW, the senior inspector indicated greater cohesion was now more likely as new inspection strategies recently introduced would lead to less individual inspector discretion. He suggested that, because there was now a strong emphasis on targeted interventions and team inspections in which it was necessary to involve the site safety representatives, this would serve to:

....shake up inspectors who for their own reasons do not consult the checkies. Senior Mine Inspector, NSW

There was greater consistency in the views of the ISHRs concerning their experience of the regulatory inspectorate in the two states. While they too had experienced a range of behaviours from inspectors, they were all quite positive about their current relations with the regulatory inspectorate. Both the Queensland ISHRs and the NSW ISHRs reported having generally good collaboration between ISHRs and the mines inspectorate, indicating that they often undertook joint inspections and shared reports. This was confirmed from the perspective of the NSW regulatory inspectorate, who claimed to have a significant relationship with the ISHRs, seeing them in the main as co-operative, well informed and committed. They were strongly supportive of the ISHRs and spoke positively concerning their co-operation with the ISHRs, as well as generally favourably concerning the role of the mine level representatives — as indeed had the senior inspector from Queensland who participated in the previous study. Indeed, the NSW inspectors suggested they were on first name terms with ISHRs and confirmed that, although they also carried out separate inspections, they were often involved in joint incident investigations. They were aware of the various roles the ISHRs played in relation to the training and support of the mine level representatives and attached considerable value to these activities. They all felt that the ISHRs in New South Wales were responsible in their use of PINS and their entitlements to stop dangerous processes. They confirmed that the site representatives in New South Wales did not

issue PINs but passed them to the ISHRs to issue, and suggested this was because the site representatives 'hadn't done the training'. They also confirmed that, as far as they were aware, the ISHRs issued very few such notices, but also pointed out that they would not necessarily know about them because they were only officially informed of them when they had been appealed.

2.4.6 Some emergent issues and challenges

The above account of present and recent practice in the operation of arrangements for worker representation on safety and health in Australian coal mines indicates the influence of the regulatory system in the two states and the ways in which representatives are supported by their trade union and by regulatory inspectors in 'getting things done' within these arrangements. Relative to the experiences reported in the other countries studied during the conduct of the present research, it is a comparatively positive story. But this does not mean that worker representation on safety and health in Australian mines is not without its challenges or that the contexts in which it takes place are by any means entirely supportive of its operation.

2.4.6.1 *Labour relations and business contexts*

As we will have cause to reflect on further later in this report, the nature of the regulatory system in place and the strategies that determine the operation of the arrangements for representation on safety and health for which it provides, are strongly influenced by the labour relations contexts in which coal mining in Australia has developed and which characterise its present organisation and cooperation. As we have already pointed out, these relations are largely characterised by conflict rather than by co-operation, and on-going tensions between capital and labour in the sector continue to determine what is possible to achieve through the autonomous representation of workers' interests on safety and health. In this scenario, capital, through the corporate strategies of some of the largest and most powerful mining companies in the world, has sought to increase managerial control over production. The effects of this on arrangements and outcomes in relation to safety and health have been felt in two main ways: first, in terms of the indirect consequences for safety and health of the structural and organisational changes to work and employment that have been introduced by mining companies in order to improve production and business efficiency; and second, in terms of the strategies that have been applied directly to managing safety and health in ways that fit with wider corporate aims to increase managerial controls more generally. Both present significant challenges to the scope and operation of arrangements for worker representation on safety and health, as was evident in the accounts of representatives in both the present and previous study. We outline just a few of these challenges, but the consequences of both corporate business strategy and the wider climate of hostility in labour relations in the industry needs to be also borne in mind, since it is a powerful contextual determinant of the nature and extent both of the challenges and the means and extent of their possible mitigation in efforts to achieve effective worker representation on safety and health.

2.4.6.2 *The structural and organisational changes of work and employment in the sector*

The mining industry in Australia has for several decades favoured employment policies that have encouraged greater use of contractors as well as the use of fly-in-fly-out forms of employment related mobility for mine workers. While these strategies have been, to some extent, driven by corporate interests in improving flexibility and cost efficiency, as other researchers have pointed out, in combination with a neo-liberal wider political climate, they have also assisted in the reduction of trade union density and influence in the industry (Bowden and Barry, 2015). This has had a number of effects. As is commonly the case, unionisation among the contractor labour force is much lower than among the directly employed workers. Fly-in-fly out (and drive-in-drive out) arrangements are less developed in Queensland and NSW than in mining in other parts of Australia, but they are nevertheless both present and increasing, especially in Queensland. They have served to both disconnect work in mining from traditional mining communities that grew up around the coal mines in the past, as well as to encourage the use of shift patterns that are known to contribute to work intensification and increased fatigue among miners. All these changes serve to both increase and complicate the risks to safety and health for the workers concerned, while at the same time making it much more difficult for trade union safety and health representatives to be elected and to effectively represent the health and safety interests of a growing proportion of mine workers.

While the Mining and Energy Division of the CFMEU remains comparatively strong and the main trade union in coal mining in Australia, levels of trade union density are declining in the industry and competition from potentially rival unions is also increasing. At the mine level, aside from these challenges and those posed by changes in the structure and organisation of employment, several managerial approaches also serve to undermine the role of worker representation on OSH. For example, as indicated above, a recurrent theme in the testimony of representatives in both the present and previous study concerned ways in which corporate organisational strategies encouraged movement among senior managers, resulting in regular turnover of those responsible for OSH. Representatives in both states at mine and industry levels talked of the amount of effort expended in establishing working relations with these senior managers and their frustration with having to repeat this process regularly because of the turnover of the persons in this role. Indeed, on average it appeared that the miners' representatives held office far longer than their managerial interlocutors did, making them a great deal more familiar with the everyday issues of safety and health in the mines than were the senior managers who held the main legal responsibility of these matters.

2.4.6.3 *Safety management systems*

The second major challenge to representative participation on OSH, to which attention was repeatedly drawn by the representatives who participated in both studies, was corporate strategies to increase managerial control over safety and health in the mines through the adoption of behaviour-based systems (BBS) for organising safety. Such systems were seen by the representatives as problematic because they generally served to both marginalise the role of arrangements for representative participation and at the same time to place pressure on representatives to participate in these arrangements along lines determined by the safety management of the mines – thus, acting as the ‘eyes and ears’ of management rather than as autonomous representation of miners’ interests. Since a common element of the BBS approach involves the monitoring of compliance with rules concerning workers’ safety behaviour, it is not surprising that representatives resisted being cast in this role. But they also said that there were times when they might be excluded from consultation on matters of detailed risk assessment or in relation to the introduction of new procedures on which there was some expectation of consultation, when managers adopted strategies of consulting with workers of their own choice rather than with trade union representatives, as part of their BBS approach. Moreover, they suggested that a further managerial emphasis in these systems was on auditing and paper compliance at the expense of detailed, ‘hands-on’ understandings of the underlying issues that led to injuries and ill-health in the mines, and here again they suggested the usefulness of their role was marginalised by the adherence to the BBS approach.

2.5 Conclusions

In keeping with the findings of previous research on the operation of arrangements for worker representation on safety and health in Queensland coal mines, it is clear from the present research that the system for representation of the safety and health of mine workers continues to make a significant contribution to prevention systems in coal mines; and SSHRs and ISHRs have played a substantial part in this achievement. But the present research also extends these conclusions to the operation of these arrangements in NSW coal mines. Although we found some slight differences in the regulatory requirements and consequent practices between the two states, the systems are similar in their essentials. Our analysis of the qualitative data gathered in the present study on their operation strongly suggests that the same contribution to prevention is being made in NSW as that evidenced by the more in-depth qualitative and quantitative knowledge available through the combination of the present and previous research in Queensland. In both cases, this is structured by constraints and opportunities embedded in the regulatory, political and economic context in which representation occurs. Such a conclusion is further supported by other previous research that looked, albeit in a more limited way, at practices concerning worker representation in the coal mines of NSW. For example, as we indicated in Section 2.3, in the large study of OSH practice in NSW mines undertaken by Shaw et al (2007), as well as in the work of Gunningham and Sinclair on mining more generally in Australia,

the importance of the arrangements for the representation of mine workers' OSH interests were identified.

In combination, present and previous studies show that, in both states, representatives focus on acknowledged serious risks; they review safety and health management systems and relate the details of incidents and investigations to weaknesses in these systems, and recommend remedial changes to them; and they are aware of the significance of the powers to stop work and use them sparingly and normally only when there is no other recourse. In NSW, only the industry-wide representatives exercise these powers, but in both states all representatives ensure that when they are used, it is in accordance with the requirements of the law and only, as legislated in Queensland, to 'perform a function or exercise a power for a ... safety or health purpose' in ways that do not 'unnecessarily impede production'. And again in both states, the view of representatives, which is to a large extent shared by the regulatory inspectorate, is that the possession of these powers, along with positive support from their fellow mine workers, strengthens their legitimacy, and enhances confidence that they will be taken seriously by senior managers.

The very strong evidence emerging from the studies, then, suggests that the preconditions for the effectiveness of the system for worker representation in coal mines are not hugely different from those that research has shown to be influential elsewhere. That is, a strong regulatory steer, combined with support from trade unions and others in the form of information and training for representatives, along with branch level support and prioritisation of safety and health issues, are all instrumental in enhancing the effectiveness of the actions of health and safety representatives. The missing element from this list, and which is usually cited as being important among the supports for the effective operation of systems for worker representation on safety and health in most other sectors, is 'management commitment to participative approaches to arrangements for safety and health'. It was amply evident that the representatives who took part in the present study did not feel that the management of the coal mines in either state were supportive of their involvement in safety and health matters. They shared this view in common with findings from previous studies, which have caused some researchers to identify a 'lack of trust' (Gunningham and Sinclair, 2012) between representatives and managers as a significant limitation on co-operative approaches to safety and health in Australian coal mines. We have argued that the conflict is endemic in the wider labour relations in the Australian mining industry, causing representatives to adopt strategies that are not necessarily based on co-operation in order to be effective in representing the interests of coal miners (Walters et al 2016a, b and c). What is especially significant about this argument is its claim that, through strategic and skilled use of the regulatory steer and with strong support from the trade union at branch, state and national levels, the two-tier system of representation that exists in both Queensland and NSW *is* able to provide effective representation of miners' interests in safety and health — despite the hostile labour relations scenario in which it is embedded. The evidence from the present study would seem to support this argument.

However, despite the relative effectiveness of the arrangements for representation and their contribution to supporting positive OSH outcomes, there are nevertheless indications that in general the situation in relation to safety and health in Australian mines remains far from perfect. The general rate of improvement in injuries and fatalities in the mines has slowed considerably in recent decades and stimulated both concern and several major studies of the industry to ascertain ways in which performance might be improved (see for example Gunningham and Sinclair, referred to previously). Generally in these accounts, conflict and lack of trust between trade unions and mine management are identified as impediments to further progress in improving OSH, and certainly such conflict remains present in the sector. Also, the re-emergence of cases of coal-workers' pneumoconiosis in Queensland is a further indication that all may not be well in matters of preventive occupational health practice in the industry. Our research demonstrates that representatives, by deliberately staying within a strict interpretation of both the regulatory framework governing their activities and that which identifies safety standards required in the mines, and combining this with an embedding of their activities within those of the wider trade union organisation within the mine, are effective in representing mine workers and making a contribution to improved OSH practice. But this also means that, to an extent, issues that are framed by regulation determine their activities. Therefore, it is possible that they may be less effective in relation to addressing new and emergent risks within the mines. It may also be the case that the adherence to matters identified in regulation may create an unintended bias and cause their actions to focus more on safety than on health issues, since the former are often more tangible and more in evidence both in regulatory standards and in workplace safety management practices. We have been unable to explore these matters in either the present or previous study and they may warrant further study.

Overall then, it would seem that, while the operation of the system for representing mine workers in these two Australian states is broadly successful, it is not without challenges. Mostly, these are presented by corporate business strategies to increase flexibility in coal production while at the same increasing control over the processes involved, including those concerning the organisation of employment and work. These promote the use of contractors and work and shift patterns which, in combination, contribute to the fissuring and fracturing of institutions of both management and labour relations. This has helped bring about the adoption of management practices in which increased use of auditing, accountability and paper trails are manifest. Taking account of the wider contexts provided by these developments suggests that, in the case of safety management, the increased use of behaviour-based safety systems could be regarded not only as a corporate effort to comply with regulatory responsibilities, but also as an example of efforts to retain control of safety matters in the operation of the mines in which their wider corporate business and employment aims have led to increased fragmentation of management systems, including those addressing safety. Whatever their origins and influences, such systems offer little support for the autonomous role of worker representation and, coupled with the climate of hostile labour relations fostered by the wider corporate strategies, present serious challenges for effective worker representation on safety and health.

At the present time there is strong evidence that, despite the difficult climate in which it takes place, trade union representation on safety and health in Australian coal mines remains effective. Our evidence suggests that, seen from a pluralist perspective, representatives are working within a difficult climate to give voice to their constituents' OSH interests. However, it is clear that the basis for this effectiveness lies in the combination of judicious use of regulatory provisions and the embedded nature of representation on health and safety in the wider trade union representation in the mines. This is not straightforward. Corporate confidence in its power to overcome resistance from organised labour nowadays has resulted in greater control of the agenda than was the case when the current arrangements originated. The continuing erosion of the presence and power of this wider trade union organisation, alongside corporate efforts to manipulate the meaning of 'participation' in OSH to one more suited to corporate interests, is likely to continue to cause problems for these approaches to representation on safety and health in the mines in the future.

3 Canada

3.1 Introduction

Mining falls under provincial jurisdiction in Canada, where the largest number of currently active coal mines are situated in British Columbia (B.C.), the westernmost province. To a lesser extent, coal mining continues in the neighbouring province of Alberta, and it was an important industry in Nova Scotia for 280 years. The Springhill mining disaster and the Westray mining tragedy both occurred in that province, the latter in 1992. The last of Nova Scotia's coal mines, the Prince Colliery mine, closed down in 2002, and no further coal mining took place there until early 2017, when the Donkin mine reopened.² However, at the time of our study, British Columbia and Alberta were the only provinces where coal mines were in operation and therefore we chose to focus our empirical field studies on worker representation and consultation in coal mining in British Columbia, where its presence was greatest.

3.2 Methods for data collection and analysis

The Canadian study is informed by a classic legal analysis of the regulatory frameworks governing worker representation in the coal mining industry from 1911 until 2017. We also consulted a selection of government documents produced during the 19th, 20th and 21st centuries, including annual reports of the B.C. Ministry of Mines dating back to 1874,³ although we did not do an exhaustive analysis of this documentation. Other documentary materials included collective agreements provided to us by key informants or downloaded from the website of the Labour Relations Board of British Columbia, newsletters from unions and industry, and other publicly available documentation. A literature review of publications and studies of working conditions in coal mines in the province of B.C. failed to identify studies looking specifically at worker representation on safety and health in coal mines. However, as is apparent from the review of the literature presented in Chapter 2 of Volume 1 of this report, studies of worker representation and consultation in other sectors in Canada are prominent in the literature and their relevant content is referred to there.

We conducted interviews with eight key informants, including a representative of the OSH regulator; representatives of the B.C. Federation of Labour; labour representatives from the regional office of a national union responsible for health and safety in mines for the western region of Canada; local safety representatives and union presidents; and health and safety co-chairs from two trade union federations representing three different local unions working in three active coal mines in B.C. The interviews took place between September 29th and October 14th 2016, by telephone, skype or in person,

²<http://www.cbc.ca/news/canada/nova-scotia/donkin-coal-mining-cape-breton-geoff-maclellan-minister-market-1.4005826>

³<http://www.empr.gov.bc.ca/MINING/GEOSCIENCE/PUBLICATIONSCATALOGUE/ANNUALREPORTS/Pages/AnnualReports.aspx>

during a site visit to Vancouver and the Elk Valley. Ethics approval was obtained from the Office of Research Ethics and Integrity of the University of Ottawa and from the Cardiff University School of Social Sciences Research Ethics Committee. All interviews were audio-recorded and analysed by at least two team members.

3.3 The context of worker representation

This section outlines something of the contextual background to worker representation on safety and health in Canadian mines, including its political and social context, as well as the nature of the industry and its safety and health outcomes.

3.3.1 Political and labour relations contexts

At the time of our study, British Columbia had 4.6 million inhabitants, representing 13% of the Canadian population. It is a large province, 844,735 million square kilometres, that is not densely populated, with only 4.8 people/km². It is a province that has been politically polarised for decades. At the time of our study, the Liberal party, which is closely linked to business interests, had been in power for over 15 years. The New Democratic Party (NDP), historically linked to unions in that province, was the primary opposition party. Elections held on May 9th 2017 led to a minority Liberal government that fell shortly afterwards, and was replaced at the end of June 2017 by the NDP, which was able to hold power with support from the Green Party.

Although the labour relations system in Canada is similar to that of the United States, unionisation rates are higher in Canada. In 2014, the unionisation rate overall was 28.8%; 27.2% for men and 30.5% for women.⁴ While these figures are down considerably as compared to the 37.6% unionisation in 1981, they are still far higher than the 10.7% rate in the United States in 2016.⁵ Statistics Canada reports that decline in union density is explained in large part by decline in the private sector, while public sector jobs continue to be unionised. British Columbia, where mining and forestry are key sectors, has seen a continuing decline in union density. As reported by Statistics Canada:

From 1981 to 2012, unionization declined in all provinces, but the largest declines took place in British Columbia, -13 percentage points, and New Brunswick, -11 percentage points. While most provincial declines took place in the 1980s and 1990s, the decline in British Columbia continued into the 2000s. [In Canada] within goods-producing industries, three sectors saw even larger declines in unionization rates (from 1999-2012): manufacturing, - 7 percentage points; utilities -5 percentage points; and forestry, fishing, mining, oil and gas, -5 percentage points.⁶

⁴ Statistics Canada, <http://www.statcan.gc.ca/pub/11-630-x/11-630-x2015005-eng.htm>

⁵ Bureau of Labor Statistics, <https://www.bls.gov/news.release/union2.nr0.htm>

⁶ <http://www.statcan.gc.ca/pub/75-006-x/2013001/article/11878-eng.pdf>

The industrial relations system in Canada, like the system in the United States (Adams, 1993), is based on the Wagner model, in which separate union accreditation is granted for each enterprise, and within each enterprise several bargaining units may be identified by the Labour Relations Board for the purpose of accreditation. To obtain certification, a union must show that 50%+1 of the eligible members of an appropriate bargaining unit have signed up for membership of the union. Once the union is accredited, all members of the bargaining unit are deemed to be unionised, and are covered by the terms of the collective agreement, whether or not they are members of the union. Under the Rand formula, the employer must deduct union fees from the wages of all workers covered by the bargaining unit. In Canada, each bargaining unit is a 'local' union (known as union 'locals'), that may or may not be affiliated with a national or international union. In coal mining in British Columbia, the workforce in most coal mines is unionised and of those, most locals are affiliated with the United Steelworkers, the largest international union operating in Canada.⁷ Some locals are represented by the International Union of Operating Engineers. Both the United Steelworkers of Canada and the International Union of Operating Engineers are affiliated to the British Columbia Federation of Labour, which provides services and training to affiliates.

3.3.2 Nature of the industry

In 2016, 2920 workers were employed in coal mines, down from 3600 workers in 2015.⁸ Average earnings for workers in the B.C. mineral exploration and mining industry continue to decline from a high of \$120,900 in 2014, and in 2016 were at \$112,500.⁹ In 2016, Teck owned 5 of the 10 B.C. coal mines (Ministry of Energy and Mines, 2017a), four of which were unionised. All were surface mines. The other 5 mines were not actively producing coal in 2016, with the exception of the Brule mine, which produced less than 100,000 tons of coal, as compared to the Teck mines that collectively produced 26 million tons of coal (Ministry of Energy and Mines, 2017a).

Coal production is a significant source of revenue in British Columbia, representing 46% of all mineral revenue in the province in 2016 (Ministry of Energy and Mines, 2017a). PWC (2017) report that:

⁷ <http://thecanadianencyclopedia.ca/en/article/united-steelworkers/>

⁸ <http://www2.gov.bc.ca/gov/content/industry/mineral-exploration-mining/further-information/statistics/employment>

⁹ <http://www2.gov.bc.ca/gov/content/industry/mineral-exploration-mining/further-information/statistics/employment>

Gross mining revenue rose to \$8.7 billion in 2016 from \$7.7 billion, driven by higher revenue at Teck's BC coal mines as well as Imperial Metals' Red Chris and Mount Polley operations. ... Cash flow from operations, another key measure of the industry's health, was \$2.6 billion in 2016, up over \$900 million from \$1.7 billion in 2015. Operating cash flows increased at Copper Mountain, Teck Coal's BC mines, Imperial's Red Chris and Mount Polley operations ... All in all, it was a positive year for the BC mining industry, admittedly largely driven by coking coal's strong performance which has seen mines re-open during the year. This is great news for the impacted local communities. ...When you dive deeper into the numbers it is once again apparent that coal operations have had a very strong year. The increase in cash flow from coal operations alone account for \$0.8 billion of the increase.

3.3.3 Health and safety performance

The British Columbia government boasts that '*mining is one of British Columbia's safest heavy industries*'¹⁰ and the Coal Association of Canada also claims that '*coal mining is one of Canada's safest major industries*'.¹¹ Yet environmental disasters attributed to non-compliance with regulatory measures designed to protect the environment have led to an enquiry of the Auditor General and have resulted in an increase in penalties for health and safety failures,¹² in response to a scathing report by the Auditor General following an environmental disaster at Mount Polley copper and gold mine (Auditor General of British Columbia, 2016).

3.4 Historical overview

The participation of worker representatives in the prevention process was prescribed in legislation as early as 1911 in the Coal Mines Regulation Act,¹³ although interviews in 2016 show that there is no memory of these powers in the contemporary labour movement. Rule 37 of the 1911 statute provided the following:

¹⁰ <http://www2.gov.bc.ca/gov/content/industry/mineral-exploration-mining/health-safety>

¹¹ <http://www.coal.ca/safety/>

¹² <https://www.theglobeandmail.com/news/british-columbia/bc-brings-in-new-mining-oversight-rules-after-tailings-pond-collapse/article28913377/>. The article is referring to the introduction of administrative penalties for failure to comply with the legislation, which includes OSH violations.

¹³ Coal Mines Regulation Act, 1911 King George V, 2nd session, 12th Parliament of British Columbia, c.33, s. 37

The persons employed in a mine may from time to time appoint one or two of their number to inspect the mine at their own cost, and the persons so appointed shall be allowed, once or oftener in every shift, day, week or month, accompanied, if the owner, agent, or manager of the mine thinks fit, by himself or one or more officers of the mine, to go to every part of the mine, and to inspect the shafts, levels, planes, working places, return airways, ventilating apparatus, old workings, and machinery, and shall be afforded by the owner, agent, and manager, and all persons in the mine, every facility for the purpose of such inspection and shall make a true report of the result of such inspection; and such report shall be recorded in a book to be kept at the mine for the purpose and shall be signed by the persons who made the same. And if the report states the existence or apprehended existence of any danger, the person or persons making the inspection shall forthwith cause a true copy of the report to be sent to the Inspector of the district. Provided, always that where the miners in any mine fail to appoint two of their number to inspect the mine, the Chief Inspector shall select from the men, in alphabetical order where possible, two competent miners, who shall comply with the provisions of the section, and the said owner, agent or manager may withhold from the wages of the underground employees a sufficient sum pro rata to remunerate the persons making such examination.

We found little information regarding the actual application of this provision. Early judgements relating to coal mining in British Columbia focussed on the hiring of 'Chinamen', a practice denounced by some individuals and prohibited by provincial legislation, although federal legislation, which governed 'aliens and naturalized subjects', was silent with regard to work of aliens in coal mines. In 1899, the Privy Council of the UK accepted the colliery's argument that the British Columbia legislation that prohibited hiring of 'Chinamen' was beyond the powers of the provincial legislature, and upheld the right of the colliery to hire foreigners.¹⁴

The annual reports of the inspectorate provide information as to accident/fatality rates per ton of coal mined, details as to the racial composition and compensation, by race, of the workforce, but little information regarding worker representation. There are nonetheless occasional comments on the importance of promoting a safety agenda in the workforce. For example, the report from 1914 (Minister of Mines, 1915) states:

¹⁴ Union Colliery Company of British Columbia, Limited and others v John Bryden [1899] UKPC 58, [1899] AC 580 (28 July 1899), P.C. (on appeal from British Columbia). It is of note that the Miners & Mine Labourers Protective Association of British Columbia was a party to this case, supporting the position that 'Chinamen' could not be legally engaged in coal mining in the province. See Union Colliery Company of British Columbia v. The Attorney General of British Columbia and Others, (1897) XXVII Supreme Court of Canada 637, at 639.

Some means must be found for educating the mine-worker to protect himself and to impress upon him that the 'safety first' movement is essential to such protection, and cannot be successful unless he becomes an active worker in the movement ... Perhaps the formation of a safety committee from the workmen, who would periodically meet with the officials of the mine, forming a sort of advisory board on questions relating to discipline and safety, when suggestions for coping with dangers, known and prospective, might be discussed.

The report goes on to state that:

There are many obstacles to overcome in the work, not the least of which is the widely taught doctrine that there is not, and never can be, anything in common between the employer and employee but surely any movement having in view the conservation of the lives and limbs of our great industrial army, whether employed in the mines or elsewhere, should present some neutral ground where the employer and employee could meet in common and co-operate for the general welfare of all.

There was a strike mentioned in that report, called by the United Mine Workers of America (p. K441), but the report provides no details as to the issues at stake. The report makes no mention of the worker-inspection process that was introduced in the mining legislation in 1911.

Several of our informants were second or third generation miners and, themselves, had decades of experience in mines. One spoke of the poor OSH conditions to which his father's generation was exposed, with no respiratory protection provided and no miners' health and safety representatives. Although there was a safety plan, there was no safety. The union in one mine had been in place since 1971. As one informant noted, as late as 1992 workers were striking to obtain a 15-minute lunch break in a 12 hour shift. In the 1990s, the mine at one point turned off the water injection mechanism on the drills, that was designed to reduce dust, and it took the union, fighting with the ministry and management, seven years to get the water injection system back. As our informant put it:

That's the attitude we had 20 years ago.

However, as we explore in the following section, in the 1970s, the Royal Commission on Health and Safety in Mines (also known as the Ham Commission, after its chairman), which was set up following public concerns over cancer among uranium miners in Ontario, led to the introduction of a system that emphasised 'internal responsibility' and a joint approach to managing OSH in many provinces and sectors including coal mining. This became the approach adopted for coal mining in British Columbia and remains so. It places strong emphasis on the role of the joint occupational safety and health committee in arrangements for representation and consultation.

3.4.1 Contemporary regulatory framework and context

Although Canada has not ratified ILO Convention 176, in interviews union officials from the Steelworkers of British Columbia indicated that they had played a key role in the negotiation of that convention. And, as we note in Chapter 4 of Volume 1, the model adopted for worker representation and consultation in Convention 176 bears a strong resemblance to the Canadian model as proposed by the Ham Commission in Ontario (1976), which introduced the 'internal responsibility system' subsequently adopted by most Canadian regulators.

In British Columbia, there is a separate occupational health and safety regulatory regime for mines, distinct from that applicable to all other sectors, a particularity that differs from regimes currently in force in other Canadian provinces. The current regulator for both workers' compensation and occupational health and safety in British Columbia is WorkSafe B.C. That organisation remains responsible for compensation payable for injury or disease sustained by miners, but their prevention mandate does not include prevention in mines, which falls under the jurisdiction of the Chief Inspector of Mines, and the Ministry of Energy and Mines. In 1997, the Royal Commission on Workers' Compensation in British Columbia entertained the possibility of integrating mining into the general regulatory framework, the Workers' Compensation Act, which includes the preventive occupational health and safety provisions as well as the provisions governing workers' compensation. The inclusion of mining within the purview of this general occupational health and safety legislation was supported by the labour movement but resisted by industry. As noted by a government consultant:

it was virtually unanimous among the mining fraternity, government and industry that cooperation among all persons in the workplace produced a safer working environment. Fines would not improve safety. Fines are not what drives a company to do something. Labour was the sole opposition to this thinking

Armstrong, 1997:26

Organised labour continues to support the inclusion of mining within the mandate of Worksafe B.C., but this has yet to come to pass. As two informants phrased it:

We view the Ministry of Mines like the fox guarding the hen house

The biggest hold back is the regulation by the province, it's way out-dated and the regulators don't have the powers to enforce the code

At the time of our interviews, the Health, Safety and Reclamation Code for Mines in British Columbia¹⁵ governed the health and safety of miners. On February 28th 2017, a revised Health, Safety and Reclamation Code for Mines in British Columbia was published by the Ministry of Energy and Mines (2017b). This revision did not affect the

¹⁵ Adopted under the authority of the Mines Act, R.S.B.C. 1996, c. 293; the code in force at the time of our interviews was the version adopted in 2008.

provisions governing worker representation, and the worker representation provisions were still in force at the time of writing.

The reform of 2017 was designed to respond to the recommendations of the Independent Expert Engineering Panel's investigation of 2014 relating to an environmental disaster caused by the failure of a tailings storage facility at the Mount Polley mine. The Auditor General's report described this failure in detail (Auditor General of British Columbia, 2016) and went so far as to recommend that the Government of British Columbia:

create an integrated and independent compliance and enforcement unit for mining activities, with a mandate to ensure the protection of the environment. Given that the Ministry of Energy and Mines (MEM) is at risk of regulatory capture, primarily because MEM's mandate includes a responsibility to both promote and regulate mining, our expectation is that this new unit would not reside within this ministry.

These were strong words coming from the Government's own Auditor General and the latest version of the regulatory framework does indeed provide for an 'Independent Tailings Review Board'. The Auditor General did not address occupational health and safety in her report, and no recommendations were made with regard to the health and safety of the workforce. No changes were made with regard to the independence of the current regulator responsible for occupational health and safety, the Ministry of Energy and Mines and the Chief Inspector of Mines, although it is unclear why the risk of 'regulatory capture' identified by the Auditor General would not also apply with regard to the occupational health and safety mandate of the same regulator. Although the primary reforms introduced in 2017 targeted environmental issues, the Chief Inspector of Mines was granted new powers to impose administrative penalties for violations of the Act or the Code, including violations in matters relating to OSH (Ministry of Energy and Mines, 2017b).

3.4.2 Current model of worker representation: the legal requirements

Unlike Australia, the current model of worker representation in British Columbia's coal mines does not focus specifically upon the role of representatives. Rather, and in keeping with the recommendations of the Ham Committee mentioned previously, in medium size and large mines, it is focused on the role of joint safety and health committees (OHSC), which among other things are mandated to inspect the mine on a monthly basis and to meet after the inspection. Small mines (9-19 employees) are required to choose a worker health and safety representative who has the same duties and functions as an OHSC.

More specifically, in a mine where 20 or more workers are regularly employed, the Code requires the creation of an OHSC representing labour and management. This is provided for in section 32 of the Code:

- 32 (1) Each manager must ensure that an occupational health and safety committee is established in accordance with the regulations or the code.
- (2) A manager must allow committee members to participate in inspections, investigations and meetings of the committee under this Act, and that participation must be considered as time worked.

Smaller mines may also be required to have a committee if ordered to do so by an inspector. The committee is mandated to inspect on a monthly basis and to meet after the inspection; and it is required to keep minutes, although we were not provided with any documentation of this by the unions we consulted. The co-chairs or their designates are also required to participate in the investigation of 'reportable occurrences', a list of which can be found in section 1.7.1 of the Code. The co-chairs must be informed no later than 4 hours after an event causing injuries which require medical aid. Provisions require everyone working at the mine, including the manager, to fully cooperate with the OHSC. Members of the committee have the right to training three times per year, and the committee will receive a written preventative training programme specifically addressing musculoskeletal disorders. The OHSC is mandated to review and comment upon the health and safety programme developed by the manager as described in section 1.6.9. Section 1.6.10 requires that the elected OHSC representatives be given 'reasonable time to carry out their duties as prescribed in the code' — time that is counted as time worked.

Smaller mines (9-19 workers, or smaller if the inspector so requires) are required to choose a worker health and safety representative who has the same duties and functions as an OHSC (section 1.6.11). Micro-mines (5 or fewer workers on shift or fewer than 9 workers employed) are required to hold crew safety meetings at the beginning of operations and at least monthly thereafter, and minutes of these meetings must be provided to the inspector on request (section 1.6.12).

In addition, on arrival at the mine regulatory inspectors must request that the manager arrange for the worker co-chair or designate and the management co-chair or designate each to appoint a representative to accompany the inspector on his or her inspection (Section 15(2) of the Mines Act). If this is not possible, the inspector may perform the inspection without either or both management and worker representatives, but on completion of the inspection they are required to meet with or otherwise communicate with each co-chair or each designate of a co-chair to discuss the findings and their occupational, health and safety concerns, if any (section 15(3) of the Mines Act). They are also required to complete an inspection report within 7 days and promptly provide the mine manager, the occupational health and safety committee and local union with a copy of the inspection report (section 15(4) of the Mines Act).

Finally, in Canada there is an important individual right to refuse dangerous work in section 1.10 of the Code (see further discussion below). Workers must report matters to their supervisors who must forthwith investigate the matter and ensure that any hazardous condition is remedied without delay. If there is disagreement over the danger, subsequent investigation must include representation for the worker from a

worker representative or designate of the OHSC if available, or designated by the local union.

3.5 Findings

In this section, the findings of the field studies conducted in British Columbia are presented.

3.5.1 Collective agreements

We were told that health and safety in coal mines in British Columbia was governed by three competing 'regulatory' frameworks: the legal provisions included in the Mines Act and the Health, Safety and Reclamation Code for Mines in British Columbia; behaviour-based safety systems favoured by industry; and collective agreement provisions designed to ensure the application of the legislation but also to improve upon regulatory protections. As one trade union informant suggested, these are competing norms.

Informants representing labour told us that they negotiate to include the regulatory protections of the Code within collective agreements so as to have a more robust and rapid enforcement mechanism, as violations of a collective agreement may be the object of a grievance to be resolved by binding arbitration. This suggests that regulatory enforcement of these provisions is weak. This strategy includes provisions regarding employees' right to refuse unsafe work, which, as noted above, is explicitly enacted in section 1.10 of the Code, but also was reproduced in the collective agreements we analysed.¹⁶ This approach to the content of the collective agreements was also the one recommended to union locals by the Provincial office of the United Steelworkers. The language of the regulation is stronger than that found in other provinces, such as Ontario, where workers *may* refuse unsafe work. The B.C. formulation appears to *oblige* workers to refuse unsafe work.¹⁷ This may be a double-edged sword, in that one informant told us that management tried to blame a worker in a fatality inquiry because he had not exercised his right to refuse dangerous work.

Collective agreements also include provisions governing worker participation in health and safety. Some informants suggested that they feared erosion of the legislation, citing the example erosion of health and safety standards on the federal level under the Conservative government and therefore emphasised their support for a trade union strategy to strengthen these provisions through their inclusion in their collective agreements. In recent negotiations, for example, participants indicated that one union had a 'massive' list of health and safety clauses on the table; most of these demands did not end up in the final agreement, but one clause, on participation in all

¹⁶ For example, provisions governing the right to refuse unsafe work in a collective agreement we accessed stated: 'In accordance with the BC Health, Safety and Reclamation Code (Section 1.10 Employee's Right to Refuse Work) a person shall not carry out any work or operate any equipment, tool, or appliance if he has a reasonable cause to believe that to do so would create an undue hazard to the health or safety of any person.' Similar language was found in a second collective agreement also we accessed.

¹⁷ See S. 1.10 of the Code

investigations, not just dangerous occurrences, was included. Practices varied however and other participants told us that another union still relied on the mechanisms provided in the Code rather than the collective agreement when the protections were in both, but used the collective agreement to broaden the powers of the safety chairman, for example by requiring they be informed of 'any serious incident' and not just 'dangerous occurrences' as provided for in the Code. In one mine, the union negotiated a clause under which the company provides the union with \$25,000 a month to allow the union to do their training and investigation of health and safety issues autonomously. Under the agreement, the company also pays for the arbitration process.

Although the system overall strongly emphasised the role of the joint OSH committee, a further use of collective agreements seems to be to extend arrangements for representation to include the election or selection by the local trade union of further worker representatives on safety and health. These representatives were not members of the joint health and safety committee but, in all other respects, acted as representatives of miners on matters of their safety and health. Because of the limited number of mines and trade union locals that participated in the study, it was not entirely clear how widespread or varied this practice was, but it certainly occurred. One trade union local president told us, for example, how he selected 20 representatives who were not members of the joint OSH committee and trained them to act as safety representatives. He also reported how the collective agreement specified a sum of \$25,000 per month to support the activities and training of *all* the representatives. In another collective agreement the wording referred to inspection and investigative activities of trade union 'safety representatives' and it was unclear from this agreement whether all, or only some, were members of the joint OSH committee. Moreover, when they were discussing the activities of worker representation on safety and health in interviews, trade union respondents often used terms such as 'safety representative' and 'safety delegate' interchangeably to refer to 'worker members of the joint OSH committee' (as defined in the regulatory terminology), as well as to the activities of representatives who did not appear to be committee members. We have therefore followed this practice in the rest of this chapter, except where it is obvious which type of representative is being discussed.

Workers, including safety representatives and members of the OSH committees, are legally protected from reprisals or discrimination by reason of their compliance with the Mines Act, the regulations made under the Act, and the Code (section 14, Mines Act), although the effectiveness of these provisions has varied over time. Protections that exist in the law are also found in collective agreements, and the arbitration remedies are preferred to a complaints-based process founded on the legislation. The unions that prefer arbitration in these cases fund fifty percent of the cost of enforcement of provisions of the collective agreement.

Overall, despite the higher costs to the unions, they favoured using collective bargaining, rather than the Act and the Code, to obtain OSH protections, preferring the enforcement mechanisms provided in collective agreements, as they felt they had greater control on arbitration processes than in the other two frameworks.

3.5.2 Perceptions of the regulatory frameworks and the enforcement of OSH provisions

The Chief Inspector of Mines has jurisdiction for the enforcement of the Mines Act (and Code) and has held such jurisdiction since 1876. At the time of our study, the inspectorate (appointed under section 5 of the Act) had 100 staff. One informant, who had been with the inspectorate for over twenty years, confirmed that the number of inspections had declined during the course of his tenure: from an average of one inspection a month of each mine in 1995, they inspected twice a year in 2016. One union (using information received from several locals) has done a study of inspections by the office of the Chief Inspector of Mines, going back to 1992, and found that inspections were down 75% (a result not dissimilar to the information provided to us by a spokesperson for the Inspectorate). The report was said to be in the hands of the official opposition at the time of our study, and subsequently the party in power from June 2017.

Inspectors conduct inspections after all fatalities or serious accidents, following a worker complaint and after some dangerous occurrences as defined in section 1.7.3 of the Code. The mine manager is required to carry out investigations of dangerous occurrences, but the inspectorate will assist the manager in conducting an investigation if the inspectorate has concerns; this happens particularly in the smaller mines. The inspectorate claimed to write lots of orders, although one informant from labour suggested that this was done to bolster the inspectorate's statistical portrait rather than to implement significant changes in the workplace, and that the orders were often related to very minor issues. An inspectorate representative confirmed that budgets had been reduced in the last two decades while the mandate was broadened to include not only OSH and environmental issues but also relations with First Nations. Regulatory review is now 'quadpartite': management, union, inspectorate and First Nations. Essentially the Inspectorate is required to do more with less, which is necessarily reflected in their performance in the execution of their OSH mandate. Mine managers also face contemporary challenges. According to a spokesperson for the Inspectorate:

There is lots of pressure to make short term decisions for mine managers, the mines have to be very competitive in the context of globalisation which is the biggest challenge for health and safety in coal mines in 2016.

The inspectorate is developing risk matrices to prioritise inspections given limited resources. As noted above, the Code requires the inspector to ask to be accompanied by a representative of labour, either a representative of the union or a worker member of the OSH committee. An informant from the inspectorate told us that it occasionally happens that a labour representative might feel intimidated by the process and in those cases the inspector meets the worker representative off the mine site.

The inspectorate's separate role from that of WorkSafe B.C. is seen as an advantage by the inspectorate because it allows for specialisation in mining, and thus permits an institutional development of mining expertise and relations with mining stakeholders. But

others argue that this separation and other factors leaves the inspectorate at risk of regulatory capture.

Industry pays for mine inspection fees,¹⁸ and as previously noted, a recent report of the Auditor General of British Columbia made allegations of regulatory capture with regard to the Inspectorate of Mines, in the context of its role in ensuring compliance with provisions relating to environmental protection (Auditor General of British Columbia, 2016).

All informants from organised labour said they had little confidence in the Inspectorate. One stated that 'inspectors are bought and paid for', and explained that they warned the employer when they were planning to inspect. Inspectors are often ex-mine managers and one informant with several decades of experience stated that when inspectors had been called in by the union he:

[doesn't] recall a happy ending.

The company that owned and operated most of the mines in which our informants were active was said to be an important contributor to the Liberal Party of British Columbia, suggesting a further possibility of regulatory capture. One informant from organised labour described it as 'self-regulation'. Another described the whole system as 'corrupt', explaining that:

corporations can bend the safety rules and the Ministry looks the other way and you as a safety activist try to hold the company accountable [and you get sued for slander by the corporation in Court].

Local government in the mining areas was also perceived to be biased in favour of the mines, and attempts to obtain the support of the local government for union initiatives in health and safety were unsuccessful.

Several of our interviewees from organised labour suggested that the office of the Chief Inspector of Mines was weak, had insufficient resources and power to enforce the legislation, and was intimidated by industry; several inspectors were said to have had direct links to industry. Another local union spokesperson suggested that 'the ministry likes the mines to look after the stuff themselves', saying they can give their opinion on the interpretation of the Act. Complaints, according to this informant, are required to be in writing and he had only seen this twice in his twelve years as co-chair of the health and safety committee and he was dissatisfied with the way it was handled. The perception was that:

The ministry likes the mines to look after stuff themselves. The ministry can only give you their interpretation, the Act is written in a way so everyone can have their interpretation.

¹⁸ <http://www2.gov.bc.ca/gov/content/taxes/natural-resource-taxes/mining/mine-inspection-fee/mineral-coal-mines>

A spokesperson for the provincial level of the union stated that the behaviour-based safety (BBS) systems allowed employers to ignore both collective agreements and the Act and Code, the traditional function of regulation by the state being usurped by these BBS systems in a way that led to marginalisation of the contribution of labour to the prevention and management of OSH issues. However, a local union spokesperson did not find that it undermined the work of health and safety committees, but nevertheless still had little faith in its usefulness.

3.5.3 Occupational health and safety committees and union involvement

Several elements of the practice of representation and consultation on OSH that are provided for in the regulatory framework were discussed by all of our participants. Generally, the importance of collective agreements was paramount in these discussions and their role in providing the fine details governing practice was repeatedly emphasised. A spokesperson for the inspectorate confirmed that unionised mines often had collective agreements that provide better support for worker interventions in OSH matters, such as provisions ensuring that a full-time position is funded for a worker representative focused on OSH issues. Because collective agreements vary between mines, some health and safety committees appointed more worker representatives than others. As noted previously, some but not necessarily all of these were also worker members of the joint OSH committee.

Unionised mines were generally perceived by the inspectorate to be better organised, while smaller mines were perceived to be more problematic:

Mines that have unions, because of collective agreements, there is better agreement around training, better adherence to provisions on health and safety committees and management is held to a higher level...In general when there is a union and a collective agreement things run more smoothly for us [the inspectorate].

3.5.3.1 Appointment of health and safety representatives and members of the OHSC

Generally, trade union representatives expressed satisfaction with the arrangements for the appointment of worker members to the OHSC and their role in its activities. There were minor variations in the way representatives were appointed and trained to act and as already mentioned, the details of collective agreements were responsible for this. In the mine, in which, for example, the union president named the health and safety committee members and approved the twenty safety representatives, he said he made sure he got the 'right people'. In his view, they needed to have at least a couple of years of mining experience. He explained that:

people can get belligerent at times when management is not listening...

He said he weeded out those that want to 'get back at the company' or who he thought were too aggressive, claiming that 'lesson one' was to have a relationship with management. He trained the representatives to not have an adversarial relationship with a foreman and said most foremen were more responsive to a non-adversarial approach, although some were not. He argued that it was important to look for social skills in safety representatives, suggesting he had learned from his own experience that 'yelling and screaming is not effective'. Occasionally he had to:

pull a safety rep off the job because they do not meet expectations.

In the same mine, the union president reviewed every safety investigation report and if the representative of the union 'had not asked questions' he would want to know why. In their training, the representatives were taught that they were 'equal to management', that they had to 'take off' their 'worker hat' and put on their 'union hat' when investigating, and that the union representatives in health and safety were the 'on site police'.

In a second mine, the union co-chair of health and safety was elected, and then named people as health and safety representatives and ensured the quality of their work. For every crew supervisor in this mine, the union could name a health and safety representative. There was thus a pool of 33 health and safety representatives and they nominated their committee representatives and an alternate. The co-chair of the committee attended all the meetings, and the company funded the union co-chair to spend one day a week managing the documentation and structuring a system that allowed the union co-chair to track the safety system. This local union had developed data mining systems, using information obtained from health and safety representatives and committees, to construct a portrait of hazards in the mine. The expertise in health and safety was clearly felt to be in the hands of the union, and supervisors had been trained in mine rescue by the union, the credibility of the union health and safety director having led the company to invite him to share his expertise with supervisors.

Despite this, however, we were nonetheless told that it was hard to get people to be health and safety representatives, so they made sure those who did participate in health and safety activity were well supported by the union (including being paid through union dues for activities the company did not pay for).

There were fewer worker health and safety representatives in the third mine, and some crews did not have them at all. In that mine, the worker committee members were, elected once a year, rather than named by the union. In general, the safety representatives were said to be well treated by miners, but treatment by managers was mixed. If an incident occurred or there was a concern, they determined what was wrong, but it was up to the union shop stewards to determine how to fix it. Shop stewards could take over the functions of a worker representative if no worker OSH Committee member was available. In this mine, all the worker OSH representatives were trained off site by

the labour co-chair of the health and safety committee. The management also provided them with training on accident and plant investigation and the labour co-chair trained them for 3.5 hours 'on how to keep out of trouble' (for example, how to follow such procedures as those requiring them not to leave their normal work without the supervisor's knowledge).

3.5.3.2 The role of the OHSC

The interviewees from organised labour all spoke enthusiastically about the role of labour in joint occupational health and safety committees. However, several also mentioned that the introduction of behaviour-based safety systems had reduced the efficacy of the health and safety committees and undermined the role of organised labour in OHS committees, some suggesting that BBS systems were being used by management to resist the application of OHSC provisions in the collective agreements. Each local union has an OHSC, required both by the Code and by the collective agreements in place in each mine. The union representatives stated that labour appointed members on these committees played an active role and participated in inspections.

In discussing the importance of labour's active participation in health and safety, one interviewee explained that labour appointed representatives were in the best position to ensure that a worker working unsafely did not continue to do so:

We would take workers who were no good and make them go away, get a job where they weren't dangerous to themselves or to others.

Other informants from labour emphasised that the relationship with management regarding health and safety was the most positive aspect of the relationship the union had with the employer. Some described practices that showed constructive collaboration between union and management in prevention and training related to health and safety, although they said they still had problems with front line supervisors, who were said to be poorly trained and to sometimes lack interpersonal skills.

Joint occupational health and safety committees also have the authority to provide oversight on work done by contractors and their employees, including those who are not unionised. According to a spokesperson from the provincial headquarters of one union, the mine inspector tried to maintain that a separate OHSC should exist for contractors but the union insisted, successfully, on one OHSC committee per mine. Those committees have jurisdiction on contractors, including the self-employed. Worker OHS representatives may shut down the contractors if things are dangerous, and this does not create a political problem for the union, as it is not their members whose work is shut down. If contractors behave dangerously, the representatives raise this at OHSC meetings and request that management eliminate the contractors.

In the second mine, the worker committee members ensured that department audits were done with their participation, and these were compiled and presented to the

OHSC. A representative of workers was always present at investigations and they were the 'eyes and ears' of the union. When dangerous occurrences happened, the safety representatives made sure that the report was filed.

In the third, mine worker OSH representatives dealt with day-to-day concerns brought to their attention by a member of the crew, and were more likely to speak up if something was not right than would be the worker. They could talk to the supervisor or the general foreman. The joint OHS committee became involved if the matter was not resolved and they involved the superintendent. Monthly meetings of the OHSC were preceded by a tour of the mine by the members, each looking at one of the three departments into which it was organised. It was said that sometimes there was a love/hate relationship between worker members of the committees and management. The worker representatives responsible for health and safety and the shop stewards did each other's jobs; some worked well together, others did not. The co-chair of the OHSC in the third mine felt things had improved because of the OHSC and that it was safer now than it had been five years previously. They felt that they were having an effect.

A co-chair from one of the mines told us that when a worker OSH representative sees something dangerous:

if it's in our face we have to say something

Safety representatives therefore investigate, alongside the OSHC members but formal intervention is undertaken by the Committee. He added that, discretely, some managers tell the health and safety representatives they are doing a good job, but request that they do not tell anybody they have said that or they will lose their job.

In the second mine, the committee had monthly meetings of about 3 hours. Aside from this, the members each knew different areas of the mine, and they took part in monthly safety tours with the management, in which a worker OSH committee representative and a management member all participated. Each month they covered the whole mine, a job done with diligence by both the worker committee members and the company, unless any proposed changes would cost a lot of money. And informants felt things were 'a little bit better' than they used to be. They write things down and give the list to the foreman, and the next month they check to see what has been done. Although there was no formal, independent inspection by the worker representatives:

The union guy can go out there and do a safety investigation on our own time
[during the paid time off paid for by the union to do health and safety work].

However, some labour informants were sceptical as to the powers of the committees:

they sit there and accomplish some things as long as it doesn't cost too much money.

The Code was not necessarily applied, and some of our informants were more adamant than others as to possible concessions that could or should be made by union representatives sitting on the committees. One then went on to add:

I'm not saying that OSH on the mine site is totally bad...the workers do have enough power to get the health and safety things resolved. Today it is a lot easier because the company pays more attention because they have more accountability because of C-45 [Criminal Code provisions on corporate criminal liability]¹⁹

There was thus a general feeling among these participants that things were improving. They suggested, for example, that in the past, there had been reprisals and discriminatory actions taken against union representatives who dealt with OSH, but this is no longer the case.

We were told that conflicts with management often arose at the level of the front line supervisor. There were conflicts of values; management's interest in safety was regarded as active insofar as it 'affects their bottom line'. There was felt to be a huge amount of pressure on workers, as well as competition between workers, including tracking productivity through technological tools (GPS), and trade union representatives further suggested that:

Often the union can't do anything about a problem until somebody gets hurt.

When committees existed in unorganised mines, they were said by union participants who we interviewed to be less effective, a sentiment that was shared by the representative of the regulatory inspectorate interviewed, and fatalities were also said to be higher in the unorganised mines than in those that are unionised.

3.5.3.3 *The importance of training*

All the participants in the study were in strong agreement concerning the importance of training for worker representatives for health and safety including committee members, and the trade union locals played an important role in its provision. In the second mine, for example, the union provided training to the members of the health and safety committee and to any other union representatives dealing with safety and health, including training on investigations. The union trained their worker representatives and made sure they trained younger representatives to take over. Their sources of information included training materials provided by the Steelworkers, the B.C. Federation of Labour, and the Canadian Labour Congress, which held annual conferences, workshops etc. The local union funded training for the labour co-chair of the health and safety committee to ensure s/he received the same certification required of management vis-à-vis by the employer, accreditation of safety technologists provided

¹⁹ Federal legislation passed in 2003 to amend the Federal Criminal Code to ensure that corporations and senior officers can be prosecuted for crimes under the Code.

by Applied Science and Technologists & Technicians of B.C.,²⁰ and the co-chair in turn provided training to other unions. They also ensured there was training on the provisions in the legislation on their rights so that workers felt confident that they would not be disciplined for raising issues.

In the third mine, the co-chair provided them with training off site on 'do's and don'ts', and management provided training on accident prevention. Information about the regulatory provisions came from the Code, the Canadian Standards Association etc., and the informant found the Ministry helpful if they had a question about the meaning of the Code. The general safety representatives dealt with the Code, but it was usually at the OHSC level that the Code was applied more fully. They were also informed about issues of occupational health from the loss prevention department, the Ministry, and there was ergonomic training provided (seemingly from the company), as well as the Internet.

Knowing 'who the co-chair is, and what their role is,' were suggested by the inspectorate as examples of smoother functioning in unionised mines. It was further suggested by the inspectorate that, in these situations, the worker representatives were better trained, knowing more concerning rights to refuse unsafe work, for example. Its spokesperson also confirmed that when a mine is not unionised there is sometimes a concern that worker health and safety representatives feel they are at risk of losing their jobs, and in those cases, the Inspectorate speaks with them off site.

A union representative suggested that during periods of collective bargaining it was more difficult to get release time for health and safety representatives, suggesting a strategy on the part of management. While the Inspectorate suggested it was possible for unions to, on occasion, use OSH issues to leverage other demands in the context of collective bargaining (negotiation or interpretation thereof), although this did not happen during the site inspections:

It's quite frustrating for a regulator. It doesn't happen a lot but it does happen.

3.5.3.4 Wider union involvement in OSH

Representation of workers on OSH did not only take place at the level of the mines but also at area and provincial levels too. At the area level, for example, several respondents referred to the activities of the Coal Miners' Health and Safety Coalition, which was an area association in which several mine locals were involved. This body was acknowledged to also be involved in training and information co-ordinating activities for locals of the different mines in the area. While at the provincial level, since 1992 there had been periodic Code reviews, and worker representatives also participated in regulatory reviews. This included development of threshold limit values, for example. Two union representatives are named by the Minister after consultation with the B.C. Federation of Labour and the unions present in the mines. Some informants suggested that the different representatives of organised labour on this review committee do not

²⁰ ASTTC BC: <https://asttbc.org/>

always see eye to eye. There are also two employer and two First Nations representatives, as well as the representatives of the Inspectorate. The Code is subordinate legislation that can be adopted by Order in Council of the Cabinet, without submission to the Legislature.

3.5.4 Challenges for the representational model

Participants gave many examples of individual struggles to overcome resistance from supervisors, to ensure adequate time and facilities to receive training and to carry out representational activities in practice, as well as to receive information on matters affecting OSH in good time and to get things done in good time following representations. However, there were also several themes in common across all of the mines in which our participants were active. These are outlined below.

3.5.4.1 *Hiring practices, unions and OSH*

We were told by our informants that nowadays:

the employers have a permanent strategy based on high turnover

This was seen as placing 'extreme pressure on the workers', with the hiring of frontline managers who were from a 'social Stone Age'.

Informants felt that the older supervisors had been much better skilled in communicating with the workforce, but the new management strategy had led to the:

liquidating of any foremen who had relationships with their crews.

They suggested that nowadays churning of management who have better relations with the workforce, or their intimidation so that they do what they are told, was the new norm in human resource management practice in the mines in which our participants tried to ensure effective worker representation and consultation on OSH. Such a 'turnover model' of hiring, which also involved the recruitment of workers from low paying jobs workers, was regarded as undermining union strategies for prevention because recruits were said to be reluctant to make trouble with management.

Union activists also reported that the employers favoured hiring from outside the traditional mining area in which the mines were situated and in which there was a substantial degree of social cohesion based around several generations of work in the mines. It was suggested that nowadays they sometimes recruited workers from several hundred kilometres away. Such practices had even led union representatives to recommend that new candidates from the area who wished to work in the local mines should rent a post-office box in a city hundreds of kilometres away to have a better chance of being hired. This culture of high turnover and lack of social relations with managers, combined with a more insecure workforce, was seen to present significant obstacles for mobilising worker engagement with OSH issues.

3.5.4.2 Behaviour-based safety systems

A recurrent theme in the testimony of the representatives concerned the presence of behaviour-based systems for safety in the mines in which they were active, as well as other managerial strategies for improving performance based around achieving behavioural changes in the workforce. Most larger corporations had similar behaviour-based safety systems in place. A spokesperson for the inspectorate said that these systems worked better in the larger mines than in the small mines. However, he was also guarded in his comments about their effectiveness, saying:

I do hear that sometimes they don't walk the talk... If you don't get support from the top ...then those things inevitably fail. The mine manager needs to be supported ... I've seen some things that make me wonder.

However, interviewees from organised labour were unanimous in criticising the behaviour-based safety systems put in place in the large coal mines. For many of our informants, these systems were seen to undermine the role of health and safety committees. They were said to have been used to justify mandatory random drug testing and fuelled worker-blaming practices. One respondent suggested that the 'courageous safety leadership programme', as the BBS system was titled in some mines, was 'trying to steal the backbone of the union' as workers were interested in unions because of their interest in their own security. Another union local told us that the company was revising the programme but had refused to involve the OHSC in the revision, so the union did not support it.

Union representation at the provincial level suggested that unions did not participate in the systems but they would 'go for the breakfast', further suggesting they passively listened to the pitch being made. As one informant described the situation, the union had observed that while the company CEO participated in the introductory lecture on courageous safety leadership, upper management did not buy into the discourse that health and safety was the first priority. A spokesperson for another union local argued that it may be supported by the CEO but the supervisors and foremen did not buy into it. Several informants said it created confusion, by bringing in a new set of norms that were neither in the legislation nor in the collective agreement. As one co-chair of a health and safety committee put it:

It creates confusion because the guys upstairs might believe in it but when you get down on the bottom the supervisors don't practice it and sometimes the general foremen don't practice it. ... the supervisors will tell you 'there's no such thing.

One local union spokesperson explained that, since the introduction of federal criminal legislation ensuring that corporations and senior officers could be prosecuted for crimes (C-45), companies had changed, and it was in this context that they introduced the 'courageous safety leadership' programme. As he put it:

We call it 'courageous safety bullshit'.

He explained that workers were expected to be courageous safety leaders and, if they were not, they were held accountable, but management was not held accountable. For example, workers were accused of not getting enough sleep, when long shifts or the practice of recruiting workers from a great distance to the mine made it difficult, if not impossible, to get enough sleep. In the words of one informant:

[we call them] blame the worker programmes...the corporation never takes one iota of responsibility.

More generally, contrasting values in relation to production and safety were also highlighted in relation to these and other programmes based on behaviour changing strategies. One practice that was pointed out to have been associated with the BBS system in one mine was originally called 'the bottom four programme'. It no longer had the same name, however, because the union, using its newsletter and other mechanisms, showed why it should be rejected. Yet our informants indicated that it still existed, although it had been rebranded. The programme required identification of the bottom four individuals on each unit (based on speed of production, for example), who were then provided with coaching to speed up production, regardless of their actual speed. The union argued that 'there will always be a bottom four'. We were given an example in which a fatality was avoided because of the vigilance of a worker who had been labelled as one of the 'bottom four' in his category, suggesting that vigilance was not compatible with maximisation of production speed. In that case, the union sent out congratulations to the vigilant worker in its newsletter; but management did not noticeably applaud the worker, according to our informant.

3.5.4.3 *Health and safety and contractors*

Again, the issue of outsourcing and OSH was a common concern among the participants. Contractors and their workers were a presence in all of the mines studied. From a regulatory perspective, the general manager of the mine was responsible for the health and safety of contractors, although contractors sometimes had their own health and safety managers on site. Union representatives we spoke to told us that the OSH committee of the mine included the protection of contractors' OSH and there were no separate committees for the contractors. Sometimes the union denounced dangerous practices of contractors and stopped work if it was unsafe. In one mine, the union had an eight-month strike to reduce the number of contractors. This was only partially successful, perhaps because it coincided with a downturn in the industry. It was hard for contractors to unionise, and the mining company that operated the mines was said to intimidate those who signed cards. One informant said that contract labour was less well trained and less aware of health and safety issues. In the third mine, the OHSC was also responsible for contractors and was involved if there was a dangerous occurrence involving contractors. It was said that here the OHSC had a love/hate relationship with the contractors because the contractors did not want to have their practices interfered with by the committee.

3.5.5 Examples of effective strategies to address the challenges

Some of the approaches to addressing the challenges outlined in the previous section were particularly innovative. In one of the union locals, there had been concern that various managerial practices such as their hiring strategies, the use of BBS systems, and the prevalence of contractors, had contributed to apathy towards OSH among the workforce. It was hard to organise those workers who lived outside the region, and even the local workers did not have time for meetings because of long shifts. The activists in the union local had taken a number of organising actions in their efforts to mobilise workers' engagement around representation and consultation on OSH. They started by ensuring access for all the safety and health representatives, and then recruited workers through these representatives. They conveyed a message encouraging workers to 'talk to your supervisor, talk to your safety rep'. And they actively sought to remove the political content from their messages, arguing that:

[whether you are] pro-union or anti-union, you are interested in the facts about your safety.

Participants from this union local suggested they had:

successfully used this strategy to change policy on significant health and safety issues.

One example of the techniques they had used to regain the initiative on OSH was to develop a text alert system on health and safety, a strategy with which they promoted interest in occupational health and safety issues and ensured that the union was seen to be proactive in health and safety. Messages were sent to workers' phones, timed to be received a few minutes before the bus arrived to take men up to the mine. In this way, 40-50 miners would look at their phones at the same time and learn of incidents that jeopardised the health of miners in their mine on the previous shift. Thus, miners were fully informed as to what was going on by the next shift. Management at first tried to undermine the system, but the union then used text alerts to inform miners that management was failing to comply with the legislation, and this seemed to deter management's attempts to prevent the new OSH communication mechanism. Now even the managers of other mines and members of the inspectorate subscribe to the text alert, and there is interest from local management, who sometimes ask if the union can send out information on their behalf. Health and safety now belongs to the union, a form of resistance to the message from the BBS system used in the mines.

Among the messages the texts focus on is the right to refuse unsafe work, how it could have been used and how to use it in future. In the union representatives' view, although the Inspectorate in B.C. had the authority to review the decision of the mine manager on the right to refuse, this happened rarely and did not seem to play an important role in determining legitimacy of work refusals, leaving it to the mine manager to have the last word. Representatives suggested that raising awareness through the text messages had also become a training tool for mobilisation around this issue of the right to refuse.

The use of the text alerts also allowed mobilisation of the workers to demand safety training for underground rescue – something that had been successfully achieved. As one informant told us:

It's wiped out [the behaviour-based safety system, the title of which is] still written on the side of the bus ... It's good union building

The text alert system has superseded the behaviour-based safety system the company tried to put in place. And interviewees also suggested that, through the practice of area and provincial communication, this strategy was spreading to other Steelworkers' local unions.

The same local union also produced podcasts on political issues of importance to the union and these were followed by a lot of their members, as well as being accessible to the public²¹.

Another example of a successful strategy involved the role of the union in addressing a major incident that could have led to the closure of part of the mine, a solution that both workers and management sought to avoid. Although the collective right to refuse is not in the legislation, informants told us of one incident where many workers were reticent to go into an area of the mine after a critical near miss (a highwall failure) and the union collaborated with management to find a technological solution to the safety concern which allowed the workers to work safely. Because the union and the employer were both trying to find a way to make the work safe, the closure of that part of the mine was avoided. In this case the union supported the company in telling the miners to go back to work, and they were credible in the eyes of the miners because of their history of standing up to the company.

3.6 Conclusions

Compared with the other countries in this study, the numbers of workers employed in the mines of British Columbia and the output of coal they contribute are all quite small. Canada as a whole is not a major coal producer on the same scale as Australia, India, Indonesia or South Africa. However, it does have several features which make it a relevant and significant inclusion in the present study.

Firstly, regulation concerning worker representation and consultation on OSH in Canada is almost as old as it is in the UK and in Australia, and as we discuss in Chapter 3 of Volume 1, it seems to be drawn from the same origins. However, unlike developments in Australia outlined in the previous chapter (and also discussed in Chapter 3 of Volume 1), it appears to have taken a different direction sometime in the mid-20th century and was eventually superseded by the present provisions that implement arrangements resulting from the Ham inquiry that led to the introduction of internal responsibility in

²¹ Steel Megaphone Podcasts: for description:

https://us.ivoox.com/en/ep-23-steel-megaphone-take-over-audios-mp3_rf_11408359_1.html?utm_expId=113438436-40.gUPDUg6WTJSAI0nGhGrIGA.0&utm_referrer=https%3A%2F%2Fwww.google.co.uk%2F

many sectors and provinces. It is not clear why this occurred, but its result is a strong emphasis on the role of the joint occupational safety and health committee in arrangements for representation and consultation in the coal mines of B.C.

Secondly, we have seen how the Canadian system of labour relations exerts a strong influence on the practice of representation and consultation on safety and health in the mines studied. The role of collective bargaining agreements is central in this process and much of the achievements of the representatives we interviewed were embedded in the provisions of these agreements rather than driven by the regulatory provisions in the Code or support from the Mines Inspectorate. This said, many of the supports for the success of representatives in 'getting things done' identified in the previous chapter on Australia were important here too. This was especially the case with regard to trade union training and information provision in equipping representatives with the requisite competency and confidence to act effectively as representatives. It was also true of the way in which representatives sought to balance technical and political strategies in making their representations to mine management. In this respect, they appeared to be behaving very much in the mould of 'knowledge activists' as described by Hall et al (2006), while at the same time adopting tactical approaches to representation situated strategically somewhere on the continuum between conflict and consensus identified by Walters and Frick (2000), or as others have put it, alternating between 'boxing and dancing' in their approach to management (Forseth et al, 2009).

At first sight, a significant difference between the system present in Australia and that experienced in B.C. was the apparent absence of more than one level of representation in the latter case, whereas in Australia the two-tier form of representation was shown to have significant benefits. However, closer scrutiny revealed that, in practice, thanks to the role of the collective bargaining agreements in the mines, the systems were not entirely different. The union co-chairs of the mine OSH committees, as well as the presidents of the union locals, were often full-time positions occupied by very experienced trade union representatives who played very similar roles to those identified for the industry level representatives in Australia in providing support to site level representatives.

There was also a familiar divide between the pluralist thinking of the representatives and the unitary frames used by corporate management in conceptualising implementation of their approaches to OSH. Representatives of labour who were interviewed suggested that true collaboration between labour and management (as opposed to formal procedures without real management support) would go far in addressing occupational health and safety challenges. In response to our question as to how things could be made better, two interviewees responded:

Working together as a union and a company we could succeed, but management doesn't want to do that.

Management has to believe in what they're trying to sell ... When the supervisor knows something's wrong, why does it take the workers to have to shut it down? Where's the leadership?

This was echoed in other interviews. It was said that:

The [supervisors] have their blinders on until a worker has an accident.

Here again we find echoes of the pluralism evident in the experiences detailed in the previous chapter on Australia. These include a strong sense of the dissonance that exists between corporate approaches to safety and productivity in coal mining, in which supervisors are confronted with intractable paradoxes between corporate production requirements and the attitudes and expectations of trade union representatives.

We find further significant reasons for the inclusion of Canada in the study in the challenges that participants identified as confronting effective representation. Again, similarities between these and those in Australia suggest the presence of global issues. Outsourcing, anti-collectivist human resource management strategies and BBS systems were especially prominent and were all repeatedly discussed by our participants as serious problems, as indeed they were in the previous chapter. Through this comparison, therefore, we already begin to see a number of common threads in the approach to representation and consultation strategies for safety and health in coal mining in advanced market economies, as well as in what drives and determines their effectiveness or otherwise.

4 India

4.1 Introduction

India is a major coal producing country, the third largest in the world after China and the USA. The first records of coal mining in India date from 1774 when John Sumner and Suetonius Grant Heatly of the East India Company commenced commercial exploitation in the Raniganj coalfield along the western bank of the Damodar river (Lahiri-Dutt, 2001).

Unlike several of the other large coal-producing countries in this study, most of its coal production is for domestic use. Coal is the main energy source in India, meeting just over half (52%) of primary commercial energy needs (compared with 29% world over) and fuelling around two thirds of India's power generation. Also unlike the other countries in this study, in the formal sector, coal mining is a nationalised industry and mines are owned and operated by Coal India Limited, a state-controlled coal mining company that is also the world's largest producing company (Coal India Ltd, 2006). Its operations are divided geographically into nine separate, but fully owned, subsidiary 'companies'.

Indian coal mines employ a comparatively large workforce, with a strong presence of trade union organisation among those directly employed (but less so among workers employed by contractors). There are numerous trade unions involved in organising in mines. They frequently also have a wider presence at regional and national levels, with membership and influence in sectors outside coal mining. Like elsewhere in India, trade union membership in coal mining is somewhat volatile, strongly associated with the positions of political parties, and there are often substantial shifts in membership patterns in line with the fortunes of these parties in wider society. Despite these changing patterns, in the subsidiary of Coal India Ltd (CIL) where most of the fieldwork for the present study was undertaken, union membership was almost 100% among company employees.

This said, it also needs to be made clear that in addition to the nationalised industry there are several other significant ways in which coal mining forms part of the economy and a focus for labour. Indeed, as Lahiri-Dutt (2017) argues, while CIL is undoubtedly the primary actor in coal production in India, contributing around 81 per cent of total output, it is not the only source of coal or of the work involved in its production. She suggests that in fact there are several 'coal economies' operating in parallel in India. To obtain a full picture of the relationship between coal mining and the safety, health and well-being of workers involved in its production, it is necessary to also have some awareness of these additional 'economies' and the inter-linkages between them. Firstly, it is important to understand that the production of 'national coal' by CIL involves the use of a substantial number of private contractors and their workers, many of which may be undocumented. Secondly, there have been shifts towards privatisation of the industry since the change in economic policy from 1991 that promoted a more liberalised market economy. This has resulted in mining concessions to private companies to mine coal

required for power generation, the so-called ‘captive private production’ of coal (Lahiri-Dutt et al, 2014) that is responsible for around 6.5 per cent of coal production according to official estimates (Economic Times, 2015). A third ‘coal economy’ identified by Lahiri-Dutt (2017) is the ‘subsistence coal’ that is produced by innumerable artisanal, small-scale mines run on common or privately-owned land often bordering formal mines. This economy forms an important element of the livelihood of the villagers involved and, while technically illegal, it is a part of the informal economy that characterises work in India more generally. The experiences of safety and health in these other ‘coal economies’ are beyond the reach of the present study, and remain largely invisible in official reports on OSH in the industry, but their effects on the nationalised formal mining on which this chapter is based and on the safety and health of the workers involved cannot be ignored. We will therefore have reason to return to them in subsequent sections.

Arrangements for worker representation on OSH are defined by statute. The provisions are found in Section 29 of Chapter IV B of the Mines Rules 1955, in which the owner, agent or manager of mines where 500 or more persons are ordinarily employed is required ‘to designate three suitably qualified employees of the mine in consultation with the registered trade union’²² as technical experts to carry out inspection of the mine on behalf of the workers employed therein’ (Mines Rules Chapter IV B, 29-Q). In addition, for every mine in which more than a hundred persons are ordinarily employed, the owner, agent or manager is required to constitute a safety committee for promoting safety in the mine (Mines Rules Chapter IV B, 29, T-W). Its membership must include not only workmen’s inspectors in mines where they are present, but also ‘five workmen nominated by the workmen of the mine’ in accordance with the procedure prescribed — which is the same as that for workmen’s inspectors and requires consultation with trade unions at the mine.

This chapter examines the operation of these arrangements for safety and health along with wider approaches to the representation of workers’ interests in their safety in Indian coal mines. It focuses on qualitative data obtained in the course of fieldwork in two of the geographically determined subsidiary companies of Coal India Limited. In subsequent sections, we will present an analysis of this material obtained from visits to several mines in these regions as well as from interviews with trade union and regulatory agencies in the regions and more widely in India. We will situate our findings in relation to analysis in the research literature on OSH and on worker representation in coal mining in India. Before doing so, however, it is necessary to present something of the features of coal mining, and health and safety, as well as on the nature of the institutions and practices for worker representation, in India, to help to contextualise findings from the present study. It is also important to describe the methods used in the

²² Section 29Q — 1 (a) of the Mines Rules specifies 3 workmen’s inspectors should be designated ‘in consultation with the registered trade union in the mine and where there is more than one registered trade union, the union recognised as per procedure in practice, or the most representative union as per the membership records available at that point in time and if there are no trade unions, in consultation with the elected representative of the workmen’ (29Q — 1 (a)).

collection and analysis of the qualitative data on which the findings in this chapter are based. We begin with the background.

4.2 Coal mining and health and safety in India

In this section we first outline some of the key features of the formal coal mining industry in India in terms of its structure, ownership and labour force, before examining arrangements and outcomes in relation to safety and health in the industry. Our primary interest lies in the role of worker representation on OSH and we therefore focus on what the literature has to say concerning the operation of arrangements to facilitate representation and the factors that influence it.

4.2.1 The organisation of the formal coal mining sector

There are something in the region of 560 coal mines in operation in the formal mining sector in India, the large majority of which are operated by Coal India Ltd. Since nationalisation in the 1970s, CIL has grown considerably and in the fiscal year of 2016/2017, the company had an average of 313,829 workers directly employed in around 430 coal mines, of which in 2016 175 were open-cast, 227 underground and 28 mixed mines. The directly employed workforce has fallen in number since the beginning of the millennium. At the end of the 1990s it was something in the order of half a million employees. At the same time, coal production has increased considerably, from approximately 260 million metric tonnes in 2002/2003 to 495 million metric tonnes in 2014/2015. Coal production from open-cast mines is proportionally much greater than that from underground mines, and the trend in recent years has been towards further investment in these mines while still maintaining production in many of the much older and less profitable underground mines. Despite the dominance of the nationalised company in coal production in India, there is also a growing presence of privately owned mines and indications that the Indian Government is encouraging private investment in coal mining as a means to increase production efficiency. As outlined in the Introduction, privatisation of two types has been supported. Labour has been increasingly outsourced and machinery hired from private parties on a contract basis, with as much as 50 per cent of workers involved in coal production now employed under such arrangements. Coal block allocation to private companies engaged in power generation has also occurred where it has been stipulated that it is for power generation for their own use only and surplus has to be sold back to the CIL Companies and not for profit on the open market. These mines are widely regarded as unfettered by historical legacies in relation to their production methods. They are almost all open-cast mines, situated near to the power generation facilities to which they supply coal, with a large ecological footprint, and high production yields, often through using modern technology, as well as a large proportion of their workers employed by contractors.

Contractors, therefore, nowadays play a significant role in the companies operated by CIL where they perform many production related tasks. However, their employees are not part of the formal employment acknowledged by CIL. Accurate figures are not available, but it is commonly accepted that these workers represent a substantial

additional part of the mining labour force in the nationalised mines, with estimates suggesting there may be as many as 200,000 such workers in CIL mines. Trade unions claim they constitute around half of the true total labour force active in CIL mines and that this proportion is increasing.

In colonial times, coal mining in India was highly labour intensive and its labour force largely drawn from the areas in which the mines were situated or sourced from among groups of migrant labourers often from the same locations (Simmons, 1976). Miners, therefore, often came from poor rural populations with low levels of education and health status. The legacy of this historical development is still evident today. In the present study, it could be seen in the domicile of many miners and their families in communities originally purposefully developed to house miners in close proximity to the pithead. It was further evident in the low educational levels of many of the miners, in the anecdotal accounts of the poor health status of individuals frequently reported during interviews with representatives, as well as in the often highly segmented and limited range of the manual labour these miners were required to perform. A further relevant point explored in previous studies by researchers such as Lahiri-Dutt and her colleagues (2014; 2017), concerns the style of management adopted within CIL, which they argue allows continuation of many of the older relations of production that may help determine the tasks miners are expected to perform, albeit 'within an additional formal central edifice of management' (Lahiri-Dutt, 2017:95), within the nationalised mines. We observed other instances of this legacy, such as the expectation that family members would be recruited to replace a worker who had suffered a fatal injury or one that was sufficiently serious to prevent them from working. These influences are even more prevalent among the contractor labour force, where a spectrum of employment practices is found. At one end of this spectrum, contractors have formal employment arrangements for their workers not dissimilar to those of CIL, but, at the other, workers are recruited from among local displaced communities or from among migrant communities, as informal sector workers with no written job contract, and low wages are paid weekly or even daily. This kind of labour supply chain can have several layers and a number of actors involved, including local administrators and the political leaders of local or migrant communities, as well as the contractor/sub-contractor and the management of the CIL mine. Not surprisingly, this level of complexity in the labour supply chain often acts to distance the labourers at the end of it from the benefits of regulation intended to protect employment rights and safeguard working conditions, as well as those of safety and health.

4.2.2 Representation of labour

As noted above, the most immediately striking feature of trade unionism in India is the close links between unions and political parties. Describing the development of trade unionism in India, most writers account for this feature as largely a product of the struggle against colonialism. Such 'political trade unionism' also helps account for the complex structure of the Indian trade union movement, with its comparatively large number of peak union federations (there are 17 central trade union organisations) that are the product of various politically driven splits and re-combinations. It further

accounts for the locus and mode of action often favoured by unions in which the strategies of industrial action are often aimed at mobilising political action to achieve desired outcomes. However, such a picture is also recognised to be over-simplistic. In parallel, and partly as a reaction to political unionism, there has also been growth in non-politically affiliated trade union organisation and action that operates independently of political parties, resulting in the formation of enterprise-based trade unions whose organising efforts have concentrated on representing workers and engaging with their employers over matters of labour relations while eschewing an overtly 'party political' dimension to their strategy. This means that, while political unionism has tended to promote greater centralisation of actions at state or industry levels, forms of enterprise unionism work largely in the opposite direction. These broad features of trade unionism are obviously also determined by the nature of the political economy and in India this too has been subject to major change — from colonialism, through a period of a controlled economy with peculiarly Indian features, to the liberalisation of the economy that began in the 1990s and which continues to the present time. Each phase has created very different conditions influencing the nature of trade unionism and the development of strategies on representation. But the current scenario is coloured by this legacy, while at the same time strongly affected by the same range of pressures and rapid changes that emerge from the conduct of business in neo-liberal and globalised economies.

All these elements were clearly in evidence in the nature of trade union organisation in the coal mines in the present study. Arguably, they also affected the approach to representing workers on safety and health and its outcomes. As already indicated, union membership among the directly employed workforce was unusually high at more or less 100 per cent. The main unions involved with organising the miners were the CMU (INTUC), CMSI (CITU), CMS (AITUC), and KKSC (INTTUC), all of which were politically affiliated trade unions and also organised in a range of sectors other than coal mining. In addition, there were the KMC (HMS) and the KSC (BRD). Currently, the KKSC (INTTUC) has the highest levels of membership, but this is not necessarily a permanent situation, since it reflects mainly national and regional situations in party politics and the practice of substantial proportions of members of trade unions changing their affiliations in accordance with change in the political power of the parties to which the unions were affiliated. There was little information on the nature or extent of unionisation among contract workers, but the consensus from interviews with the representatives of the unions organising the directly employed workers, as well as with government inspectors and mine managers, was that this was considerably lower than that among the directly employed workforce. This impression was supported by the literature (see for example, Banerjee, 2006; Shyam Sundar, 2005 and 2008; Visser, 2003).

4.2.3 Safety and health

Labour conditions in coal mines were increasingly acknowledged to be poor prior to nationalisation, with high rates of work-related injury, disease and premature death among miners. Indeed, these poor conditions and their outcomes are among the reasons frequently given for the Coal Mines (Nationalisation) Act 1973, where nationalisation of privately owned mines was seen as a means to improve them. While there is evidence of improved injury and fatality rates after nationalisation, it is also acknowledged by the industry and its regulators that work in coal mines remains highly dangerous. Lack of investment in coal mines is often cited as one of the main reasons for continuing comparatively high casualty rates.

Coal workers' pneumoconiosis, noise-induced hearing loss, musculoskeletal diseases and vibration related conditions are among the commonly reported health related issues in Indian coal mines, along with the problem of comparatively high levels of sudden deaths attributed to cardiovascular diseases among miners in underground mines which it is claimed may be the result of difficult and arduous working conditions (Sishodiya and Guha, 2013). Although safety performance has shown improvement, the reduction in fatality and serious injury rates has not been substantial during the last two decades.

The regulatory authority for safety and health in mines in India (the Directorate General for Mines Safety, (DGMS)) has identified the main hazards responsible for fatalities and serious injuries as being explosions, roof and side falls, in-shaft hazards, water inundation and fire hazards, with roof and side fall accidents being recognised as particularly significant and leading causes of fatalities in the Indian context (DGMS, 2005). According to one leading Indian authority on safety in coal mining, at the start of the present millennium, on average around 175 miners were killed in mine accidents each year, with about 800 being seriously injured (Kejriwal, 2002:19). There is some debate concerning the extent to which the official figures underestimate the true extent of harm resulting from work in coal mines in India — even in the nationalised mines of Coal India Ltd. While the official view of both DGMS and CIL is that there is evidence of a steadily improving downward trend in both fatalities and serious injuries, others dispute this and claim that the official figures grossly misrepresent the true extent of harm.

Indian research on accident causation in mines has recommended better workplace design, improving organisational effectiveness towards safety, and increasing awareness of hazards and their elimination and avoidance, as well as pointing out the importance of engineering and managerial safety measures, including better communication between managers and workers (Maiti et al, 2009). However, many recent studies focus on improving safety behaviour among workers and, while acknowledging that the pre-conditions for unsafe acts include unsafe leadership and organisational influences, they have argued that the unsafe acts of the worker are the most critical human factor and should be controlled on a priority basis (Verma and Chaudari, 2017). None of these studies appear to have addressed in any detail the contribution of arrangements for worker representation to the prevention of injury and ill-

health in Indian mines, although there have been repeated exhortations from national level tripartite bodies concerning the improvement of these arrangements (see Kejriwal, 2002 below).

While high risks and poor outcomes are traditionally associated with underground mining, this does not mean that open-cast surface mining is without risks and studies show that serious injuries and fatalities are frequent. Indeed, according to Kejriwal (2002:83):

The death rate for coal mines per thousand persons employed in open-cast workings is higher than for those employed in underground workings.

Accidents during surface transport by heavy machinery in open-cast mines are among the key reasons attributed to the continuation of the comparatively poor OSH record of the sector, although side falls and falls of persons in these mines also contribute. Health and environmental effects of dust generation from open-cast mining are further areas of significant concern, with researchers pointing to the effects of the huge amounts of dust thus generated and the need for appropriate and effective controls (Ghose, 2007).

4.2.4 Health and safety organisation and the role of worker representation

Legislation on safety and health in coal mines in India dates from the first Mines Act in 1901, through a series of subsequent measures, leading to the Mines Act 1952, the Mine Rules 1955, the Coal Mine Regulation 1957, and several other statutes dealing with more specific issues such as mines rescue, electrical safety, explosives, training, child care facilities and compensation, which provide the current regulatory framework.²³ The Directorate General of Mines Safety under the Ministry of Labour & Employment (MOL&E) is entrusted with the administration of these measures. It also has its origins in a mines inspectorate dating from the early 20th century when an Office for Mines Inspection was established in Calcutta in 1902, later developing through a series of expansionary changes to its present regional structure with its headquarters located at Dhanbad in Bihar. Its functions include those of the development of legislative requirements and safety standards, enforcement of mines legislation through mines inspection and investigations, as well as the approval of safety equipment, undertaking research and providing information. It is also responsible for supporting the participatory elements of the safety organisation within and surrounding mines; that is, including not only those at mine level but also tripartite committees at area level, those at company level and the standing Committee on Safety in Coal Mines of the Ministry, as well as the national CIL Safety Board.

In keeping with safety legislation of the period, the measures of the 1952 Act and the regulations and rules made under it are prescriptive in character, addressing a wide

²³ These include: The Mines Rescue Rules -1985; The Electricity Act 2003; The Mines Vocational Training Rules 1966; Central Electricity Authority (measures related to safety & supply) Regulations 2010; Indian Explosive Act 1884; The Explosive Rules 2008; Indian Boiler Act 1923; Mines Maternity Benefit Act & Rules 1963; The Workmen Compensation Act 2009; and The Factories Act 1948 Chapters III & IV.

range of matters relating to safety, health, hygiene, sanitation, working time, hours of work, first aid and so on; dealing with the duties of owners, agents and managers in relation to these matters, as well as with the organisation of safety and health arrangements in mines, including those for worker participation; and the powers of inspection, the nature of offences, penalties and the Courts. But, despite the prescriptive focus of the legislation, recent pronouncements from the DGMS make it clear that what the regulator currently envisages as the way forward to improve OSH outcomes in coal mines includes adoption of more process-based strategies, placing a strong emphasis on risk assessment and the introduction of systematic approaches to OSH management in coal mines.

The DGSM Strategic Plan for 2011-2016 identified the introduction of risk analysis and safety management systems among its key objectives. However, beyond its identification as a research and development project during this period, this focus has not led to any significant independently documented accounts of progress in implementation and operation of these approaches in coal mines. However, recent Annual Reports of the Coal Ministry (2016 and 2017) recount that a multidisciplinary Internal Safety Organisation (ISO) has been put in place in every subsidiary of CIL to monitor the implementation of CIL's safety policy. The policy foregrounds a more process-oriented means of meeting OSH requirements in which a risk assessment based approach is adopted. These reports describe how the company has commissioned the Australian Safety in Mines Testing and Research Station (SIMTARS) – a specialised mines safety unit of the Queensland Government – to provide training for executive staff of CIL on the preparation of safety management plans based on a risk assessment approach, with the aim of upgrading the knowledge and skills of mine level executives as well as members of mine safety committees to identify the hazards and evaluate the associated risks in their mines so they can prepare Safety Management Plans (SMPs) based on risk assessment in each CIL mine. The 2015-2016 report states that, as a result, on the basis of this training, risk assessment based SMPs were prepared for all mines operated by CIL and under review by SIMTARS accredited executives of CIL for further improvement. At the same time control measures proposed in the risk assessment based SMPs were being implemented. In addition, risk assessment based site specific Standard Operating Procedures (SOP) were in preparation. They were to be implemented for various mining and allied operations. The 2015-2016 Annual Report also indicates that internal safety audits were conducted in all subsidiaries of CIL.

The 2016-2017 Report updates progress on these issues, stating that the training in risk assessment for mine and area level executives holding responsibilities for safety, along with that of members of safety committees within mines, was continuing, safety management plans based on risk assessments were now prepared for all CIL mines and the control measures they identified were in the process of implementation. Both Reports claim that regular inspections are undertaken by workmen's inspectors in mines where they are appointed, along with monthly inspections by the members of the safety committees in these mines, and periodic inspections by members of both the area and

subsidiary company level safety committees, as is indicated in Table 4.1, taken from the 2016-2017 Annual Report.

Table 4.1 *Inspection and monitoring in CIL operated mines according to the Ministry for Coal Annual Report 2016-2017 (Coal Ministry of India, 2017:94)*

Level	Monitored By
Mine level	1. Workman inspectors: as per Mines Rule-1955. 2. Pit safety committee: constituted as per Mines Rule-1955.
Area level	1. Bipartite/tripartite committee meeting. 2. Safety officers' coordination meeting.
Subsidiary HQ level	1. Bipartite/tripartite committee. 2. Area safety officers' coordination meeting. 3. Inspection by ISO Officials.
CIL HQ: Corporate Level	1. CIL Safety Board. 2. CMDs meet. 3. Co-ordination meeting with ISOs. 4. NDPC meeting.
Ministry of Coal (MOC) / Other Ministerial Level	1. Standing committee on Safety in coal mines. 2. National conference on safety in mines. 3. Various Parliamentary Standing Committees.

Therefore, worker participation through structures established by legislative provisions in these approaches to safety management in mines is claimed to be in place at all levels in the mining operations of CIL. These provisions were additions to the Mines Rules 1955, which, as Kejriwal (2002:341-377) has described, emerged following recommendations made by the Conferences on Safety in Mines held periodically in India and regarded by the DGSM and the Ministry as important institutions of tripartite discussion in the industry. Briefly, the first of these Conferences, held in 1958, called for co-operation between workmen, their representatives and management in ensuring effective compliance with safety measures and for the right of workmen to have mines inspected by their chosen representatives. It also called for the establishment of pit safety committees in all large coal mines. Subsequent Conferences appear to have been silent on the development of these or further measures to represent mine workers' interests on OSH until 1980. Then the Fifth Conference made recommendations that the Mines Act be amended to give statutory backing for Pit Safety Committees and Workmen's Inspectors, who it further recommended should be ex-officio members of the Safety Committees to improve liaison between them. In 1986, the Sixth Safety Conference recommended that there should be suitable organisation for the training of Workmen's Inspectors and for members of the Pit Safety Committees. The Eighth Safety Conference, held in 1993, specified that members of Safety Committees should be given training of one week in duration, according to a syllabus drawn up by the mining company to reflect local conditions and work practices. It recommended that training for existing Safety Committee members be completed within a year of the

Conference and from there on all new members of Safety Committees receive a similar level of training within the first six months of their membership. The same report further recommended provision should be made for senior trade union officials to attend meetings of Pit Safety Committees at least once a year to help review recommendations made during the year and their implementation, as well as to review the main features of the reports of Workmen's Inspectors. It also recommended the establishment of area level meetings for the same purpose. The Ninth Conference, held in 2000, reviewed the status of the implementation of recommendations of previous conferences and called for means to increase the effectiveness of workers' participation in safety management through the appointment of Workmen's Inspectors in all mines where a hundred or more workers were employed — including in privately owned and open-cast mines — and for the establishment of sectional or departmental safety committees to operate under the aegis of the main mine Safety Committee in large mines. It indicated that the period of membership on a safety committee should normally last for two years and that arrangements were required to train the trainers of the members of safety committees. Similar recommendations appear in the records of the 10th Safety Conference held in 2007. By the time of the 11th Conference in 2013, interest in the implementation of safety management systems appears to have replaced direct references to participative arrangements.

From the published accounts of the expectations of the DGSM, it also appears that the institutions and arrangements for representative participation in OSH are regarded as among the central elements of the desired approach to systematic OSH management. For example, in its presentations it highlights the statutory provisions on worker representation and indicates: 'workers' participation in safety management is an important tool to develop awareness and self-initiatives in eliminating the risk of accidents and dangers to health and hygiene of workers'. It suggests that it was 'with this objective in view the provisions of Safety Committees and Workmen's Inspectors were made in the Mines Rules' and claims that 'the functioning of such institutions is being activated by DGMS during the course of their inspections', that 'meetings and workshops are being organised at unit level, area level and company level and tripartite safety committees are functional at company level' (DGSM 2017).

Evidence of the effects of all these initiatives was sought in the mines and among the participants interviewed in the present study and findings are reported in a following section. First, the methods used in the investigation are outlined.

4.3 Methods

As in all the other countries in which the arrangements for and outcomes of representing miners on safety and health have been investigated, in this qualitative study research methods involved firstly an extensive review of the literature on arrangements for OSH and their outcomes for coal miners, as well as on the industry more widely in India, and especially on the practice and institutions of labour relations. Central to this inquiry was the search for published information pertinent to the experience of representing coal miners on matters of safety and health. As the previous section demonstrates, while there is material describing these arrangements, as well as exhortations on their use, the review was unable to discover any substantial previous study of their operation and outcomes or what influenced them. Therefore, the field studies represent a first attempt in the research literature to evaluate these practices and, although the limited resources available mean that their findings cannot be claimed to be more than indicative in nature, they nevertheless shed light on some of the main challenges confronting representative participation on OSH in the industry.

The fieldwork involved the qualitative investigation of the experiences of miners, their representatives, senior trade union officials and regulatory inspectors, mainly in one of the subsidiary companies of CIL, with a smaller number of interviews with miners and their representatives in a second subsidiary company that was located in the region next to the one in which the main fieldwork was conducted. The companies operated both medium and large-scale open-cast and underground coal mines. They ranged in size from those employing several hundred workers to those with between 1500 to 2000 directly employed workers. The distinctive feature of coal mining in the formal sector in the region in which both the subsidiary companies operated was its longevity and the large proportion of older underground mines that were still operational. Participants in the study were representative of this range of employment in terms of both size and type of mine, although the majority came from underground mines, including, among them, some from the older mines.

In keeping with practice in the research conducted in other countries in the study, the focus of qualitative data collection was on the experience of representatives, miners and regulatory officials and efforts were made to ensure that the data were collected in confidence and without the involvement or scrutiny of managers or supervisors. No formal requests were made to interview representatives of the companies concerned, and access to all interviewees was facilitated by the trade unions in the company. However, managers' awareness of the presence of researchers was inevitable at some of the company's mines and it meant that, while the researchers were allowed to conduct interviews without interference or scrutiny from managers, a few additional interviews were conducted with senior managers and supervisors at their request.

Interviews were undertaken during two fieldwork periods, each of a week's duration. The first was a scoping visit undertaken by one researcher who is fluent in Hindi and Bengali and it involved observation underground as well as visits to miners' dwellings and social spaces in the mining villages proximal to the mines visited. The researcher

also interviewed regulatory officials during this visit. The second period of fieldwork allowed some follow-up visits to the same mines where more in-depth interviews were undertaken. In addition, visits were made to several other mines and the domiciles and villages of the miners in which further in-depth interviews were carried out, as well as interviews with senior regulatory officials, senior trade union officials who took part in joint arrangements for OSH at company and CIL levels, and one interview with a senior manager. Altogether, interviews were undertaken in mines and mining communities at 11 different locations in the areas in which the two mining companies were operating.

In total, interviews were undertaken with 11 miners, including several mine *sidars* (miners with some supervisory responsibilities), 22 elected representatives, who included members of joint safety and health committees within the mines visited, other representatives who sat on the joint or tripartite committees at area and subsidiary company levels, and one senior union official who was involved with the joint arrangements at CIL level. In addition, during the visits to the mines, five workmen's inspectors were interviewed. They included individuals with inspection responsibilities for mining, mechanical or electrical safety. Two senior regulatory officials were interviewed, including the Director General of the region in which the subsidiary company that was the main focus for the study was located. Finally, as mentioned above, one of the area General Managers of the company was also interviewed. During both field visits, nearly all interviews were undertaken in Hindi or Bengali, except those with the senior regulator during the second visit, which was undertaken mostly in English. Where both interviewers were present, as was the case during the second fieldwork period, interpretation between English and Hindi/Bengali and vice versa was undertaken by one of the interviewers to enhance understandings between both interviewers and the interviewees. Generally, interviews were undertaken in small groups (normally between 2 to 4 participants) and organised in the form of discussions around the topics covered in the interview schedule, which covered the same areas as in all other countries of the study but was adapted to the circumstances found in India. The presence of two interviewers facilitated detailed note-taking, as many of the interviewees were reluctant to speak freely if audio recording was suggested. Also, where two interviewers were involved, field notes were written up jointly immediately following each field visit.

4.4 Evidence of practice — findings on the experience of worker representation on health and safety in Indian coal mines

In this section, the findings from the qualitative field studies are presented. The section begins with a brief account of the main elements of the experience of safety and health in the mines as related by miners and their representatives during discussions with researchers. As already noted in the Methods section (4.3), these discussions took place on at various locations including spaces in the administrative blocks of the coal mines, roadside food and drink stalls, communal meeting places in the villages where many miners and their families lived adjacent to the mines, as well as on premises away from the mines that were used by trade unions. Managers and supervisory staff were not present at any of these venues and, once assured of the confidentiality of the interview, participants talked freely and often volubly of their experiences and those of their fellow workers. Following this account of perceptions of the representatives concerning the hazards of the coal mines where they work, we turn to their impressions of their experiences as representatives for safety and health in these mines. In our analysis of these experiences, we pay particular attention to the operation of the arrangements for representative participation in the mines and, in particular, the support the representatives receive from managers and fellow workers to undertake their inspection and investigative activities, to raise matters of concern with mine managers, and to influence arrangements for safety and health in the mines, and we consider what are the significant determinants of their role in these respects. While our main focus is on the nature of workplace representative participation, we also take account of its wider contexts in the industry, including that of the operation of bi and tripartite arrangements at area and company levels.

4.4.1 Representatives' experiences of safety and health in the mines

The accounts provided by members of the mine safety committees of their experiences in the coal mines of the subsidiary companies of CIL, visited during the fieldwork, spoke graphically of conditions in the mines and their effects on the safety, health and welfare of the miners working there. They reported first hand experiences of the expected range of mine hazards and risks, such as dusty or gassy mines, water ingress, problems with roof support and shaft maintenance, risk of rock falls, heat stress and thermal discomfort generally, poor medical facilities both for prevention and emergency treatment, and inadequate and insanitary welfare provision. And in terms of health outcomes, interviewees spoke not only of the high risk of serious and fatal injuries, but also of the prevalence of respiratory ill-health and musculoskeletal disorders, and the spread of infection and eye problems were prominent and frequently mentioned. These are, of course, among the well-known risks and health and safety outcomes associated with coal mining and, as documented in the previous section, they are all known risks in Indian mines. However, the extent of their occurrence and the perception by the representatives of the limited support available for their prevention was surprising.

For example, in relation to the risks associated with the physical structure of the mine, safety committee members in one mine talked about their experience of the risk of

flooding which they felt was heightened by the mine management's obsessions with productivity. A representative said:

Our miners have worked with water over their heads (in the upper compartment) – something no one should have to because it is clearly unsafe. But the management pushed us to carry on as that got their high yield in a short span of time.

Ventilation was also seen as a significant problem in this mine, where it was said to fail regularly or work at sub optimal levels, resulting, among other things, in miners being obliged to undertake work in very hot and uncomfortable conditions. Safety committee members in other mines complained that their management routinely cut corners with regard to safety issues involving roof support. They suggested supports were being spaced further apart than the recommended practice for safety. They also complained of there being only a single roadway accessing the mine rather than the recommended provision of additional routes. The trade union representatives who sat on tripartite committees at area and company levels spoke of inadequate arrangements for standard preventive requirements, such as poor ventilation, poor arrangements for monitoring dust and gas levels, as well as inadequate arrangement for the maintenance of physical safety of the mine (roadways, roof support, and dust suppression) and suggested that they were widespread in the mines in the region operated by their employer.

Representatives at all levels pointed to limited medical facilities, inspections and interventions in the mines. This they regarded as largely the result of under-resourcing of medical support, and a reduction in the number of doctors available to the collieries. They said that from formerly having one doctor in each colliery, at present s/he was shared between roughly three collieries. This meant that in the case of an emergency or an urgent medical need the workers may not be able to access medical attention. The shortage of medical personnel also meant there were increasingly limited capacities to undertake the required medical examinations both to certify fitness to work and to diagnose work-related ill health. Company medical officers carry out periodic medical examinations (PME) in the dispensary adjacent to each colliery, but despite advancement in health sciences, the facilities in these dispensaries were said to be in a worse state than they were in the 1980s. One representative summed up the situation by saying:

*In this set up even a blind person would be certified with perfect vision...
Here the doctors get instruction to provide certificate stating fully fit for duty.
We can see that even a worker who is clearly suffering from breathing difficulty or another with lower back problem get certified as fit.*

According to representatives, reporting limited and inaccurate data on miners' health and failure to diagnose lung disease, meant there was a significant gap between reported ill health and the reality of the burden of disease in the mines. They gave many examples of miners who experienced poor respiratory health, while the records of diagnosis of diseases such as pneumoconiosis was low. They suggested this was

possibly even more so the case in relation to musculoskeletal disorders (MSD). They further pointed out that such workers who suffered from undiagnosed health conditions were in their view more prone to work-related injuries. One representative suggested:

You should go in and check out the sorry state of affairs... people have TB but the doctors can't catch the disease. They have raised blood pressure, but the machine at the dispensary always shows the right numbers. Some can't even see well but the doctor gives them a Fitness Certificate... it is as if that the whole system is put in place to offer us no support but follow the management's systems.

They expressed concerns about limited facilities for medical support in the case of treatment and emergencies, including absence of stretchers and ambulances creating potentially serious problems of transporting injured workers to hospitals for treatment. One said:

There is no stretcher anywhere in the mine I work. How quickly can one be brought up? One needs to pray to the Gods if anything happens.

He went on to add that even when an injured or sick worker is brought to the dispensary of the colliery, the provisions in the dispensary are sparse. There were few medicines and even fewer instruments and appliances. He said:

You go to the doctor and say you got headache and a colleague goes there and complains about loose motion we both get the same white coloured tablet. We go there with any bruises or cuts again there is just one red coloured ointment. It's ridiculous.

These complaints were echoed more generally by the representatives who were active in committees and consultations with the company managers at area and company level in the CIL subsidiary company that was the main focus for the research. They said that in the company generally, there were unacceptably high levels of lung disease, physical injuries, fatalities and other health conditions such as MSDs and visual impairment. They suggested that these were the results of working in dusty and gassy mines in which there were poor facilities to safeguard miners' health and safety. They also complained about poor arrangements for welfare, including inadequate drinking facilities both above ground and in the mines, and lack of toilet facilities leading miners to openly defecate in the mines and to drink from sources of contaminated water inside the mines. In the context of the federal government's drive for improving the national standard of hygiene, one representative pointed out:

It shows that in the current nationwide initiative of Swachh Bharat (Hygienic India) this particular [mining] community is neglected. No one pays attention to our needs, as it seems that we are not normal citizens of this country. Just because we work in the mines it does not mean that we have to suffer from such poor levels of hygiene.

These sentiments received some corroboration from senior regulatory officials who acknowledged the serious lack of occupational health doctors in the Zone of the DGMS in which the CIL subsidiary operated. As a result, the DGMS was not able to comment on the quality of medical attention that the management was offering as it did not have the expertise to conduct checks.

Complaints of poor hygiene standards and welfare facilities were indeed also frequent among the miners we interviewed. They commented that, while the management was keen on checking that the workers were wearing the recommended PPE, such as helmets and footwear, they seemed oblivious to the inadequate provisions for miners' welfare, such as the availability of clean drinking water and toilet facilities in the mine. One worker added:

We have no choice but to shit and pee in the mine... I take water down to work in a plastic bottle but we mostly drink from a tub with stale water.

The representatives also spoke of concerns about wider issues of welfare, such as arrangement for living accommodation, air pollution and hygiene standards, as well as the lack of educational facilities or recreational centres in the area for their children. One said:

It is a constant struggle to find clean water. We boil water especially in the monsoon time there is always stomach bugs... and look around you for the amount of dusty and polluted air.

Overall then, conditions of health, safety and welfare in the mines were deemed to be poor, with company provision for them widely regarded as inadequate and a strong consensus among representatives at all levels that the mine management was failing to sufficiently prioritise the necessary support for improving the situation. In this climate, we turn next to the testimony of the representatives concerning their own engagement with the operation and monitoring of these arrangements.

4.4.2 Arrangements for representing workers' interests in the mines

It can be seen from the outline provided above that the regulatory provisions for worker representation in Indian coal mines are both detailed and extensive. The requirements are similar in style and content to those found in most of the other countries in this study. Their inclusion of the appointment of workmen's inspectors resonates with the historical approach to the representation of miners' interests on safety and health in the UK, while the three types of OHS representatives echoes the similar division in found in coal mines in NSW in Australia. At the same time, the parallel focus on the role of trade union representatives in joint safety and health committees seems to echo the approach largely emphasised in Canada. In this section, we examine first the role of the workmen's inspectors, and secondly the involvement of trade union representatives in the joint structures in place at various levels in the CIL organisation.

It was evident from interviews at all levels that the provisions had been enacted in a more or less similar way in the mines and at the area and company level in both the regions that were studied. In all the mines that were visited, structures for representation and consultation along the lines of those outlined in Table 4.1 were in place. Similarly, at area and CIL subsidiary company levels, the accounts of representatives, managers and regulators suggested that arrangements were in place in keeping with those that could be anticipated from Table 4.1. That is, at mine level, workmen's inspectors had been selected and trade union representatives sat on the joint safety committees set up in these mines, while at area and subsidiary company levels there were also joint and tripartite structures in place on which trade union representatives held positions. However, there were some key departures from the detail of the regulatory provisions, which were important, as we indicate in what follows.

4.4.2.1 Workmen's inspectors — ambivalence and action

In all the mines visited the three types of workmen's inspectors (mining, mechanical and electrical) had been selected and appointed by the management with no evidence that the trade unions had been involved in any way in their selection or its approval, contrary to the wording of the Mines Rules 1955. The response of workmen's inspectors to questions on how they had come to take up their role was always that managers got in touch with them and proposed that they do so. Normally it was expected they would be experienced senior miners, yet seniority alone was not the main factor that decided the appointment. They said that, while they had to possess a good degree of knowledge about the mine operation and 'the necessary certificates', above all, they had to be someone the managers could trust in this position. The trade union representatives who were members of the safety committees in the mines and at other levels seemed to accept this situation and regard the inspectors as occupying a position akin to a sympathetic safety officer at the mine.

Once appointed, the inspectors normally held positions for periods of five years in the Safety Departments of the mines, and took responsibility for the delivery of operations that were formally under the control of the safety management. Although they said they were not paid any extra for taking on this role, they nevertheless regarded the position as privileged. At the end of the period of appointment the inspector was meant to return to their previous job, but some of the inspectors interviewed explained that they had been reappointed for more than one term, because it was hard to find other suitable candidates in their mines. For several of the inspectors, their role was not a full-time one and they were required to return to their previous job for a proportion of their time — usually for one or two days a week. These proportions appeared to vary between mines. None of the workmen's inspectors played a role on area level committees.

In their safety related activities, the workmen's inspectors followed the administrative procedures adopted in the mine for reporting incidents and undertaking inspections, using forms designed by the management of the mine for these purposes. They suggested, for example, that while the different workmen's inspectors in the mines had different sets of responsibilities, for mining, mechanical or electrical safety, when

undertaking their inspections of the mine, they completed the same form (known as the U Form) detailing their observations during their routine inspections that they undertook jointly with managers. They suggested that, following its completion, this form would be countersigned by the safety manager. However, during interviews with some of the workmen's inspectors it became clear that a more common practice was for these forms to be in fact completed by the safety manager and periodically checked by the DGMS Inspector when visiting the mine.

The inspectors did not appear to be involved with formal procedures of risk assessment; indeed their responses in interviews indicated they were unfamiliar with this terminology. Nevertheless, the practices they described concerning how they went about 'checking safety issues in the mine' implied their engagement in a chain of operations in which risks were identified, assessed and actions taken that were deemed appropriate. They explained how workers with some supervisory responsibilities, such as the mine *sirdars*, acted to identify risks and communicated this information to the workmen's inspectors, who in turn communicated it to the safety managers. Within this process, a form of evaluation was undertaken and appropriate actions decided. If a situation was thus identified that required a higher level of decision making, the workmen's inspectors indicated they could communicate this to higher-up management, although it was not entirely clear how they went about doing so in practice, or how frequently.

Most of the workmen's inspectors considered their role to include discharging a supervisory function in relation to the operation of the safety arrangements in place in the mines. When one of the researchers accompanied an inspector on a visit underground, it was clear that the inspector was regarded in this way by the miners they encountered. Since these arrangements strongly emphasised behavioural aspects of safety, such as wearing personal protective equipment, following safe work procedures and thereby adhering to what the company had determined to be safe working practices, the workmen's inspectors spent a substantial amount of their time policing the behaviour of the fellow mine workers. The extent to which they emphasised this aspect of their task varied. One of the workmen's inspectors said for example:

Half the time I am throwing people out of the mine because they are drunk. Some come in slippers and flip flops... sometime the chaps are sitting down and doing the minimum work, then I go chasing after them. I am like their supervisor.

Alcohol abuse in this mine was an issue, as indeed it is recognised to be elsewhere in mining in India (see for example Kunar et al, 2008). It particularly exercised this workmen's inspector. He claimed that in his experience at least 10% of the workforce at any given time was operating under the influence of excessive alcohol consumption and he said:

I don't need machines to determine whether one is drunk or not, I can just look at the eyes of the workers and identify the drunkards from the rest. One in ten turn out to be so.

But he did not suggest there were any preventive practices in place to combat alcohol abuse. His main focus was on identifying affected workers, saying that with experience it was obvious which workers were 'under the influence'. He went on to indicate that he felt responsible for the safety of the workers in the mine and suggested that he was tasked with ensuring discipline in safety and production in the mine, saying:

I am the real person in charge of the mines... the management relies on me. I have to report to the management but also the worker report to me even for minor issues....so I have a big responsibility

However, while their understanding of their supervisory role was much in evidence in the responses of all the workmen's inspectors, at the same time, they were all trade union members and they all also saw their role as providing a conduit for the safety and health concerns of their fellow mine workers. In this respect, they suggested they were neutral 'go-betweens' in relations between workers and their managers. One of them said:

Maintaining a balance between the workers and managers is my responsibility and it is not easy.

Another said he viewed his position as a great responsibility with little reward. He was in his first term of office as a workmen's inspector and less experienced than some of the other inspectors who were interviewed. This may help explain why, despite having received some training in his role, he was nevertheless worried that if any mishap were to occur in his mine he might be held liable, and he asked the researchers:

Please could you tell us whether I will go to jail if there is an accident or a fatality in the mine...? I worry about it a lot and think that even if I don't have any fault I may be dragged in the business and eventually end up in jail. Perhaps you know the answer to this question?

Generally, the workmen's inspectors who were interviewed appeared more confident than this. They took part in safety committee meetings and their role seemed well respected by the other miners. Indeed, in one group discussion the miners suggested that the workmen's inspectors in their mine were their main source of support and suggested that, while they were not fully a worker, they were not really a manager either. They sat somewhere in the middle. At this point the workman's inspector also pointed out that they were situated between the miners and their management, with responsibilities to both. They felt that they had the overall yet implicit responsibility to pull together the various forces, some of which were opposing at times. As one of them commented to the researcher who accompanied him on a visit inside the mine:

Workers are complaining types but some of the concerns you can already feel. See your face is already covered with coal dust. There is a lot of dust... there is also the concern of roof support – there is lack of number of support... see we can't stop production so what we do is space out the supports, but that's not always a good practice.

Another said during a discussion with the researchers and other mine workers that he felt a burden of responsibility on his shoulders as the workers relied on him to ensure protection of their safety while the managers mainly paid attention to production speed. He was aware that on many occasions these positions were opposing in their nature and challenging for his role.

The workmen's inspectors said they had all received varying amounts of training during their term of office, mostly concerning technical aspects of safety in the mines. None of it had prepared them for the potential role conflict inherent in their position.

These perceptions of their role were also reflected in comments from the Mines Inspectorate regulatory inspector concerning the relations of regulatory inspectors with the workmen's inspectors. The senior Mines Inspector who was interviewed made a strong distinction between the relations of the mines inspectors with 'trade union representatives' and those with the workmen's inspectors. In the case of the former, he was unenthusiastic concerning their contribution to safety matters in the mines and, as we will see later, he was quite negative concerning the role of trade unions more generally in this respect. On workmen's inspectors, however, he acknowledged their experience and aptitude in dealing with safety issues within mines and endorsed their role in this respect. He further indicated that mines inspectors sought to involve them in investigations of accidents, although he was less sure of how regularly the mines inspectors involved them during other visits they made to the mines.

Thus, the workmen's inspectors generally demonstrated an awareness of the ambivalence of their role which was seen as separate and distinct from that of the trade union safety organisation at the mine, yet not entirely part of the management organisation either. It therefore obliged them to place reliance upon their personal abilities to achieve an acceptable balance between the opposing tensions that this somewhat ambivalent position created. They achieved this balance in their activities by stressing the 'neutrality' of their position, while on the one hand functioning as the 'eyes and ears' of the safety management in the mine, bringing to their role a mixture of observation that was responsive to workers' concerns with and the supervision of their safety behaviour, while all the time having regard to managerial concerns about production.

4.4.2.2 *Trade union representation in the safety organisation of the mine and beyond*

At the mine level, representatives for safety and health were selected by the trade unions in the mine. There was no election for the position; the representatives were selected by the trade union leaders at the mine. A similar process occurred in relation to selection to serve on Area level committees, where one representative would be selected by each trade union in the Area to represent the mine workers. There was no prerequisite for the Area representative to have served as a mine representative prior to selection. All the mines in which the representatives who took part in the research were employed had functioning safety and health committees of which the representatives were members. These joint arrangements at mine level were supported by further joint and tripartite safety committees operating at area level and at the headquarters of the CIL subsidiary company, where there was further trade union representation, reflecting the structure outlined in Table 4.1. There was consensus among the representatives interviewed concerning their roles in relation to the mine level committee, along with varying degrees of understanding among them concerning what went on at the Area and subsidiary company levels in terms of the operation of the arrangements for representation.

Generally, the safety committee in each mine of the CIL subsidiary company that was the main focus of the research, met once a month. In a few mines, however, representatives indicated that, while a monthly meeting was the ideal, the meetings were not infrequently postponed and in practice probably took place less often than every month. The committee membership included the head of the mine safety department, superintendents from each department, the workmen's inspectors and one trade union representative for safety and health from each of the trade unions at the mine. In addition, it was responsible for carrying out regular joint inspections of the mine. Generally, this joint inspection was undertaken prior to the formal safety committee meeting, so that committee members could discuss the findings of the inspection at the meeting. In the second CIL subsidiary company, situated in a region adjacent to the first and where several interviews with union representatives were also undertaken, a similar pattern was observed; that is, there was a joint safety committee in each mine and it met monthly, following a joint inspection. There were also some differences, however, in this company. The mine safety committees generally had a greater presence of managers and management appointees among their members than was the case in the first subsidiary company. It also appeared to hold to a somewhat more rigidly planned timetable for meetings than was the case in first subsidiary company, where arrangements had appeared somewhat looser.

At the Area level, in the CIL subsidiary company in which most of the fieldwork took place, the safety committee consisted of an Area Safety Officer, the General Manager of the Area and one safety representative from each of the trade unions represented in that Area. Meetings were tripartite when they were also attended by representation from DGSM, but the latter did not attend every meeting. The number of collieries in each area varied somewhat. There were seldom fewer than four or five mines in an Area,

with considerably more in some cases — for example, one Area where interviews were conducted had eleven mines. In this subsidiary company, representatives said that Area level meetings took place monthly, and mines took it in turn to host them. Like the mine level safety committee meetings, the Area level ones followed a joint inspection – in this case of the host mine. In the second subsidiary company, a similar pattern of Area level safety committee meetings was organised.

During the inspections that preceded the meetings of the safety committees, the representatives, along with the management members of the committee, appeared to follow standardised inspection routines. These involved visual checks, for example, of the physical safety of access and egress along the roadways to the coalface and in the areas in which coal extraction occurred, with the physical stability of the roof and sidewalls being a particular concern. They also reported inspecting the mechanical and electrical equipment in use in the mine and making note of electrical and mechanical failures that were observed during inspections. They further checked matters such as the operation of the ventilation systems and procedures and practices in the storage and use of explosives. To undertake these inspections they used checklists, which were prepared by the safety management department and used throughout the Company. The workers' representatives had no direct input into their design or content. Thus, it seemed the inspections were routine and focused on issues mainly concerned with the physical safety of the mine. Concerning health issues in the mine, the representatives were well aware of these issues as is clear from Section 4.4.1, but they did not appear to form part of routine inspection. Nor did procedures for formal risk assessment appear to play a part in the perceptions of representatives concerning the inspection procedure. However, in undertaking their visual inspections the committee members were clearly monitoring and assessing the presence of workplace risks.

There did not appear to be a great deal of opportunity for consultations with individual mine workers during these joint inspections, but it was obvious from their testimony that the representatives found time on more informal occasions to discuss concerns with fellow mine workers. They also spoke of being able to meet each other and to discuss health and safety issues and the representational strategies within each union. However, such meetings seem to have taken place in their own time and there did not appear to be any provision of facility time to undertake them. In terms of inter-trade union communication, the representatives interviewed at mine, area and company levels were insistent that the different trade unions representing the mine workers could work together on safety and health matters and they did not regard their separateness as trade unions as a hindrance to this. They said it was much easier for them to agree a united position on OSH than was sometimes the case on other issues, such as those of pay and conditions, where there was sometimes inter-union rivalry. As one representative put it:

When it comes to life we stand together – because we know that otherwise the managers will divide us, and rule.

Despite this display of inter-union solidarity on matters of safety and health, it was equally clear from the interviews overall that the representatives believed the effectiveness of the joint health and safety structures at both mine and Area levels, and their role within them, was limited to addressing fairly easy and inexpensive issues. They repeatedly suggested that, in practice, they were unable to prevent managers from systematically avoiding discussion and decision taking involving bigger and more serious matters of safety and health in safety committee meetings, especially when remedial actions on such matters at the mines might involve significant financial outlay. As one of the trade union members of a mine safety committee said:

The inexpensive and cheaper solutions are taken care of without much hassle but the major issues are deliberately overlooked

While another observed:

We go to these [safety committee] meetings fully knowing that nothing drastic is going to happen... The management takes care of the detail.

There was a view repeated in interviews with representatives who sat on safety committees in different mines that the agenda of the meetings was controlled by the managers and minutes of the meetings, which were prepared by managers, often did not record the discussion of more serious matters even when such discussion may have occurred. They claimed that the records of the meetings limited themselves to lightweight matters, which usually could be addressed with little interference with production and for relatively little cost. As one of the members mentioned:

Meeting takes place as normal. But we don't get to prepare the minutes, they [the management] do. So, a number of points get left out, or, are sometime said in a toned down version. They will always leave out points, which are difficult and expensive but include low cost and those which can be easily addressed.

Overall then, the strong impression arising from interviews and group discussions with trade union representatives who were members of mine level safety committees was that, while these committees were indicative of the presence of formal consultative procedures for safety and health, they did not function as effective conduits for the representation of the serious safety and health concerns of the mine workers or in ways in which the representatives felt there was a good chance of the representations they made influencing outcomes. However, there was also no sign of other effective means of representation. Unlike the provisions for worker representation found in other jurisdictions, the Mines Rules are silent on the functions of the worker representatives who are members of safety committees in relation to undertaking, for example, investigations independent of the safety committee, or receiving and investigating complaints on safety and health from mine workers, or investigating accidents and incidents that have occurred to mine workers. They do not invest representatives with powers to stop processes they believe to be seriously and imminently dangerous, nor

do they allow them to instruct workers to remove themselves from the vicinity of such processes. Moreover, they do not place any requirements on employers to provide representatives with information or training to enable them to perform their functions more effectively. As a consequence, while there was little doubt that the representatives communicated informally with their fellow mine workers on OSH matters frequently, they did not necessarily result in information directly resulting from these exchanges coming to the attention of the safety committee. One reason they gave for this was:

Workers are worried about their names reaching the management, so they often choose not to mention their concerns

As well as acknowledging the significant limitations of their influence, some of the representatives also expressed concerns about their vulnerability to reprisals from managers if they persisted in expressing concerns about OSH that these managers found unwelcome and suggested they had little protection against victimisation. One representative said:

I was suspended for four days once because I spoke out about the concerns. This is how they [management] undermine our value. But I do not fear being victimised as that is the only way ahead.

Many of the experiences that the trade union members of the safety committees and the workmen's inspectors who participated in the study provided were related against the backdrop of what appeared to be overtly behaviour-based arrangements for organising safety within the mines. While both types of representative were involved with routine checks of the mechanical and physical work environment in the mines where they worked, their impressions of the general arrangements made for mine safety by the mine management were replete with examples of attempts to influence the safety behaviour of mine workers. As already mentioned, they included, for example, the checks that the workmen's inspectors regularly performed on the wearing of personal protective equipment, the mine workers following managerially determined safe procedures and the influence of alcohol or drugs. As one member of a mine safety committee put it:

All that our workers are told include: you must wear proper shoes, you must not drink, you must not sleep in the tunnel...

While at the same time, he and other members of safety committees repeatedly complained that the mine management appeared oblivious to the need for basic welfare facilities such as clean drinking water and adequate toilets for the mine workers, or health issues such as musculoskeletal disorders and impaired respiratory health that were commonplace among them and clearly the result of their work in the mines.

4.4.2.3 *Relations with the regulatory inspectorate*

Another matter on which there was relative unanimity concerned the role of the regulatory inspectorate. The trade union representatives who were members of the mine level safety committees were quite adamant that they had no access to the DGMS inspectors. They said that when the mine inspector visited he spoke only to the managers and not to any of the workers. They felt there was little support for their concerns from the DGMS and explained that, in their view, the inspectors were only interested in the physical deficiencies of the mine and not in matters that concerned the miners' health or welfare. They further claimed that in their experience the regulatory inspectors had a close association with the mines' management and showed very little interest in the concerns of the workers as highlighted by the representatives. One said:

We feel that the whole time the DGMS inspectors take no interest in the safety of the workers. Then, when something serious happens, such as someone dies, the duty officer in DGMS feels kind of happy. This is hard for me to understand. But we think that because they will have to conduct an inquiry over a death there is opportunity for the inspector to make some money.

The last sentence of this quote is also interesting because the senior regulatory official made a similar accusation of corruption when he was interviewed, except this time the accusation was levelled at the representatives of trade unions. During his interview, he claimed that the trade union leaders actively sought to obstruct the work of the DGMS inspectors who were called to the scene of serious or fatal accidents because they were trying to ensure that they would obtain a share of the benefits that might accrue to the victim's dependants in the event of a fatality.

As we previously noted, there was a different relationship between the DGMS and the workmen's inspectors. Here, the workmen's inspectors would in theory accompany the DGMS inspector when the latter visited a mine either for a routine inspection or as the result of an accident. But in routine inspections the workmen's inspectors often missed out on the opportunity to accompany the DGMS inspector primarily because on two days in a week they were required to work as regular workers and could not undertake functions as workmen's inspectors. They suggested that more often than not the DGMS inspectors inspected the mines on these days. In the case of accidents, however, there was a statutory requirement that the DGMS involve the workmen's inspector and so they were required to accompany the DGMS official at the investigation during which they said they shared their own findings, which they would have prepared prior to the arrival of the DGMS, with the DGMS.

4.4.2.4 *Support*

A consistent feature that emerged from interviews and discussions with the representatives who were members of either mine or area safety committees, was the absence of any formal arrangements for training to support them in these roles. The union representatives did not get any specific training other than what every member of the workforce received. That is, along with other mine workers, they had all participated in a two-month period of 'vocational training' at the start of their employment in the mine and some had experienced further updating of this training while in service.

Many recognised the weakness of their position in this respect. They frequently contrasted their experience with that of the safety management in the company and said that the company had invested heavily in their own management staff by even sending them abroad for professional training on safety matters. Faced with the absence of any formal provision for their training, they were not completely supine, however, and some representatives talked of opportunities to share knowledge and experience on OSH issues when they attended local conferences organised by the political parties to which their unions were affiliated. While there would be many other non-OSH matters discussed at these events, it was nevertheless possible for representatives to use them to share their OSH concerns with each other. However, for the majority of the representatives, in the absence of any formal training, the capacity to address matters of OSH effectively rested on their ability to make sense of their experience and to use it strategically to influence and achieve improvement in OSH in the mines. They acknowledged that their experience as individual miners was often limited to the narrow range of tasks that their normal job entailed and they had little knowledge of many of other elements in the operation of the mine, including those in which there were important implications for safety and health. They said that, without training, it was difficult for them to build and use the knowledge and skills necessary to effectively represent the interests of their fellow miners on many OSH matters and they felt this was a serious limitation to their capacity to be effective as representatives.

When asked about the one single thing that would make their role more effective, they consistently stated it would be some provision for their training. Similarly, they said that they had no resources for information about hazards and risks or other issues with which they dealt as worker representatives for safety and health, other than that gained from experience and from sharing understandings between one another and fellow mine workers. On this, the representatives gave some indication that there were informal supportive relations between the different levels of representation — that is, between the mine, Area and Company. Representatives who were active at Area and Company level, who said they had access to all the mines in the Area or the company, confirmed they could use this facility to support the mine level representatives when necessary. But here again the strong impression conveyed was that the practice of this kind of support did not occur very often.

The one senior trade union official who participated in the study and who was active in the joint arrangements for safety and health at the national level within CIL, confirmed

the statement made by the CIL that there were regular meetings of the CIL Safety Board, and endorsed its further claim that there were systems in place that allowed monitoring of recommendations/suggestions made during these meetings. He also talked about the presence of a network of representatives from mine to national levels in his trade union and the potential for sharing information between them. He said he was personally well informed on safety matters in the mines because of this network and suggested that the structure for representation on safety committees at different levels worked well. He indicated that communication between union representatives at different levels could take place through social media technology, such as WhatsApp, and by email, and he claimed there were systems in place for such communication within the trade unions. But he did not provide details of how they operated in practice and he admitted that, while such a system was potentially useful, at present not all trade union representatives were able to take advantage of it. He said:

I use WhatsApp a lot and ask all my reps to do so. We are all the time communicating with area and company level reps but not all reps are used to this yet. So, the use is still not uniformly applicable.

Indeed, the strong impression he gave was that it was some considerable way off from being 'uniformly applicable'. This senior full-time trade union official also suggested that, in the absence of adequate training, the trade union representatives who were members of joint safety committees at the mine level were in highly disadvantageous positions when making representations to managers because they did not know in sufficient detail about safety and health issues that might affect miners. And in this respect, he further confirmed the views previously expressed by the representatives at the mine level, suggesting that in practice worker members of safety committees often had very limited experience of the broad range of risks and hazards in the mine because, in their own mining work, they had only performed a narrow range of tasks. He also said that the problem was not restricted to mine level representatives, however, because trade union officials who were active in arrangements for joint consultation at higher levels within CIL, themselves often had little or no experience of actually working in the mine. In his view, therefore, serious attention to training for trade union representatives was required at both ends of the system for joint consultation on safety and health in place in CIL.

The position of the workmen's inspectors was somewhat different. As indicated above, they received training on various technical matters of safety that was provided through both the company and the DGMS. Although, as already noted, such training did not prepare them for the potential role conflict that would appear to be inherent in their task.

4.4.2.5 *Dealing with contractors*

The trade union members of mine and area safety committees reported special problems faced by the contract workers who they said increasingly comprised the workforce in open-cut mines and who faced risks from a combination of poor conditions of employment and vulnerability to dismissal. They indicated this was particularly problematic in providing representation on health and safety matters, in contrast to matters of pay where they felt trade unions were able to provide some level of representational support for contract workers as well as those who were directly employed. But for health and safety, they suggested that representation of their problems risked exposing contract workers to accusations of poor work performance or excessive demands, leading to dismissal without redress. One of the interviewees said:

The contract workers can't be seen to demonstrate, complain or even show any form of dissent especially with our help. If they are found with us they would lose their jobs the very next day. We can help them in some areas but not on health and safety.

The senior union representative who sat on the CIL Safety Board essentially confirmed this experience, saying:

We have now moved on to a new phase in which CIL has started going down the road of outsourcing therefore the use of several levels of contractors is increasing and this is undermining the achievements of health and safety. It is because of the privatisation of the operations that the contractors and the workforces were not effectively aligned with the structures of joint consultation. This is because the contractors are not regulated or managed. Also, this undermined employment security, making them unable to speak up on health and safety issues by those suffering.

He went on to suggest that outsourcing was particularly prevalent in newer mines where the companies were able to have greater flexibility in the way they organised the development of the mine and it was in these situations, mainly in the open-cut mines, where the outsourcing was most established. He further suggested that mechanisation brought with it outsourcing because the introduction of new machinery by contractors also meant that they supplied the labour to operate it. In this way, the use of contract labour was also increasing in underground mines. Where such outsourcing of labour was already established, he indicated that the intention of local level trade union strategies was to try to include representations of the concerns of the contract workers with those of directly employed workers, but he echoed the experiences of the trade union members of the mine and area committees in acknowledging how difficult this often proved in practice.

The senior official of the Mines Inspectorate also indicated concern with the health and safety practices of contractors, saying that contract workers were underprivileged and overworked and, in his view, they routinely worked for 12 hours or more every day. He

suggested that decisions taken by the management of the mines concerning the awarding of contract for work in the mines were made largely on the basis of price. He went on to suggest that, while in theory procurement requirements should specify the arrangements made by contractors on health and safety matters as part of the written terms of the contract, in practice they were seldom adhered to. Apart from inspection by mines inspectors, who could ask to see the terms of the contract before undertaking an inspection of work undertaken by contractors, he was unaware of arrangements that the mine management made to monitor contractors' practices on safety and health in relation to the terms of the contract. Generally, he declared himself to be unhappy with the practices involved with the monitoring of contractual requirements for safety and health, but seemed to regard the range of problems encountered to be endemic to the practices of contracting and subcontracting and largely unresponsive to intervention.

It was recognised by the representatives that not all contractors provided such poor conditions for their workers and some (although probably a minority) were understood to provide better arrangements for employment than others. However, the general trend of outsourcing created concerns regarding the increasing proportion of poorly managed operations with only limited concern or focus on worker's health, safety or welfare. The senior union representative interviewed indicated that trade unions had deployed various strategies to resist or influence the direction of CIL's policies in relation to outsourcing and use of contractors. These included organising demonstrations and strikes, as well as raising political awareness at the highest levels, all of which were continuing. However, he acknowledged that the increased use of contractors was a trend that was unlikely to be reversed and suggested that consequently unions now also organised many 'behind the scenes' activities that were intended to mitigate some of its worst effects of the conditions of employment for mine workers and to slow the pace of outsourcing. He said:

Outsourcing is the main cause for all evils in the mines. After nationalisation, we started moving in the right direction but not anymore. Since the private workers came in together with the push to increase production we have seen more accidents...

While awareness of the challenges posed by the contractor workforce for representing the OSH interests and concerns of all mine workers were recognised by virtually all the trade union representatives in the study, as well as by the mines inspectorate, there were few, if any, examples of effective strategies to represent these workers on matters of their safety and health. In this respect, as Lahiri-Dutt (2017) has argued, the multiplicity of forms that the large 'shadow economy' embedded largely unrecognised within the formal economy of CIL, creates major challenges for the forms of representation that are institutionalised within CIL and lie largely beyond its reach.

4.4.3 Wider contexts

There are a number of wider aspects of work in coal mines in India that are germane to the present inquiry. Firstly, it is important to remind ourselves that the research conducted here is limited to the formal sector in mining and to experiences in the nationalised portion of the industry which, although it represents by far the largest producer of coal and employer of mine workers in India, is not the *only* producer or employer involved. As the writers already referred to in this chapter have pointed out, interconnections between CIL and the other 'coal economies' in India are an important influence on what occurs both in policy and practice within and around CIL. The discourse on the business of mining in India since the liberalising of the economy in the early 1990s has, for example, included considerable attention to perceived linkages between productivity and privatisation. This has taken various forms, including debate on what constitutes a productive mine, contrasts between open-cast and underground mines and between private and nationalised operations, as well as around business strategies on the use of private operators in publicly owned industry. In addition, a substantial discussion continues around what constitute socially responsible employment strategies in coal-based communities and how the productivity of coal mining can be adequately measured. Some of the consequences of these wider discourses were clearly felt by the participants in the present study and informed both their understandings and approaches to what they deemed to be influential in determining arrangements for safety and health in the coal mines, as well as what they considered possible to achieve in relation to these matters and under what conditions.

For example, the relationship between work and domicile clearly had a strong influence on the miners' feelings about what they were prepared to accept in terms of the safety conditions in the mine. During interviews and group discussions with the trade union members of safety committees, they frequently made reference to the many ways in which mine managers stressed their concerns about the profitability of the mines and their operating costs when they discussed possible OSH improvements. This acted to ensure that the representatives were always mindful of the consequences of reporting unsafe practices, which could result in threats of closure of a mine by the Company and also by the mines inspectorate. They frequently acknowledged their need to compromise on such matters because of this. This was because they said that, although their jobs were supposedly secure within the subsidiary company of the nationalised industry, to keep them if production in the mine in which they were employed ceased, they would be required to relocate to a different mine as directed by the Company and as one representative pointed out:

No one would like to move out of their homes – no one wants to see their mine close down. We can't say we won't move... this is the rule if a mine closes we have to relocate to another mine. It is not easy to move family.

The representatives were also of the view that the DGMS was itself complicit in prioritising production and keeping mines open even if this meant ignoring, delaying or compromising safety issues. Links between productivity and threats of mine closure

were major issues, especially prominent and longstanding in the region in which the CIL subsidiary company was situated, and therefore they were a pervasive presence in the discourse on safety at all levels in the organisation of the formal coal mining sector and its regulation.

The union representatives did not feel they had statutory power to directly influence the production from the mine. That is, they did not have the power to stop operations they regarded as dangerous within the mines. They identified the Director General of Mine Safety as the person who held this responsibility. As one mine worker put it:

We are ordinary pawns in the big game... we have no power.

While they made representations to the managers, as we have indicated, they felt their direct line of communication with the inspectors of the DGMS was weak or even non-existent. Representatives at the company level were able to hold dialogue with the DGMS, but at the mine level representatives generally did not feel they had such powers, and even if they were able or willing to communicate with the DGMS or its inspectors, they did not see this as a particularly effective way of getting things done. One representative pointed out:

DGMS have the main responsibility. The main thing is we can only make suggestion and have no power. Our power is only possible by bringing our members together.

This they did through their trade union organisation. But in ways very different to the approaches to collective bargaining and handling disputes around safety found in several of the other countries in the study.

As observers of industrial relations and trade union actions in India make clear, relations between organised labour and capital are characterised by conflict, which is endemic in many parts of the Indian economy. And it further needs to be borne in mind that the formal economy (of which the mines in the present study are a part), in which trade unions have negotiated collective agreements and where union representatives are recognised and given certain statutory roles and rights, is only one part of the economy overall. Even here, as Lahiri-Dutt (2017) has explained, within the formal part of the coal economy represented by CIL there are actually several economies in operation. These include both a privatised one dominated by contractors, over which formal arrangements for worker representation have little influence, and an informal one in which they have even less traction. In practice, therefore, there are complex inter-linkages between the formal and informal economy within coal mining and the strategies of resistance taken by mine workers and their communities are largely determined by the realities of this social and economic environment.

This helps explain why industrial actions orchestrated by trade unions often take the form of expressions of conflict that are shared with the wider community and with which this community and its political institutions become involved. At the same time, it is

important to bear in mind that the political affiliations and relations of Indian trade unions also have a strong bearing on the kind of industrial action in which they engage. Such actions in relation to safety issues were reported in the interviews with union representatives, managers and regulatory inspectors in the present study. In these situations, as is the case in other sectors in India, the preferred course of trade union action involved organised mass demonstrations around the mines, in which the local community and its political actors were frequently mobilised and issues of conflict originating within mines became actions of resistance for communities as a whole. Such actions seemed to register most with both employers and the DGMS. Through the means of mass demonstrations around the mines rather than in the form of industrial disputes more recognisable in western models of industrial conflict, trade unions occasionally sought to address what they regarded as otherwise intractable problems of safety and health within the mines. This approach appeared to be quite effective in gaining wider political and media attention and, through this, to also influence wider public opinion. It was thus, to a degree, both respected and feared by representatives of mine management and the DGMS alike. However, for the most part, this level of action seemed quite far removed from the everyday roles of the trade union members of safety committees or the workmen's inspectors. Such disassociation also possibly contributed to the general feelings of powerlessness conveyed by the trade union members of safety committees in relation to their influence on the everyday affairs of safety and health within the mines.

Occasionally the trade union safety committee members could furnish an example of collective action in which they had threatened to withdraw their labour over health and safety issues. For instance, in one large mine they reported that their serious concern over inadequate ventilation in the mine had led them to threaten to strike. A threat which they said had been successful, in as much as it caused the line managers to act. They said:

We gave 48 hours' notice to the Manager to get the ventilation sorted. They responded positively and the things were sorted and we did not have to strike. I am known for successfully marshalling my members and getting things done.

This incident had clearly provided the representatives with some degree of encouragement. They felt that it demonstrated the support they had received from their fellow workers in taking this action and it had shown them that, in these circumstances, they had been successful in persuading the management to make a serious response to their concerns. But it was exceptional. In short, while collective actions on safety and health may have occasionally featured in the power relations between employers and trade union organisations in the mines of the CIL, and led to public manifestations of conflict in which the local communities became involved, in the main, there was no obvious connection between such relations and the everyday roles of either the trade union members of mine safety committees or the workmen's inspectors. Nor, for most of these individuals, did the possibility of its occurrence seem to feature as a condition or a support for their role either in their own eyes or those of their managers.

4.5 Conclusions

Several features of the arrangements for representative participation of mine workers in safety and health matters in the formal coal economy of India emerge strongly from this study.

The first is that these arrangements take two distinct forms. While the statutory measures of the Mines Rules made under the Mines Act 1952 provide for both workmen's inspectors and worker members of the mines safety and health committees to be appointed 'in consultation with the registered trade union', in practice only the safety committee members seem to be appointed in this way. The management had appointed all the workmen's inspectors who participated in this study without any obvious input from the trade unions in this process. Subsequent to their appointment, these inspectors were incorporated in the arrangements for safety made by the mine management and functioned as part of these arrangements. This did not necessarily mean that the inspectors regarded themselves as wholly there to deliver managerially determined tasks. Nor did it mean they did not act on behalf of their fellow mine workers in addressing their concerns. However, when they did so, it was not as worker representatives acting on behalf of their trade union and the workers it organised, but as individuals who were part of the Internal Safety Organisation in the mines. As such, their knowledge and skills were supported with technical training and they were recognised by their fellow mine workers as possessing a degree of individual authority on safety matters within the mine. And, according to the senior official of the DGSM, regulatory inspectors also consulted them when they undertook inspections of the mine.

In contrast, worker safety committee members were selected by the trade unions at the mine. Although the safety committee was also part of the Internal Safety Organisation of the mine, the trade union selected safety representatives remained outside and independent of the managerial arrangements for OSH, and were conscious of their roles as trade union representatives. This was a pattern that was repeated in the joint arrangements made at Area and CIL subsidiary company levels too. However, despite the repeated recommendations of the Safety Conferences on Mining, these representatives said they received no training on safety matters, their engagement with procedures of representation was largely limited to the inspection activities of the safety committee and they acknowledged that their capacity to influence arrangements and outcomes in relation to safety and health at the mines was, in practice, very limited indeed. Apart from their routine engagement with the joint inspection activities of the safety committees, the representatives did not appear to receive facility time or information to enable them to carry out safety related investigations independently, to investigate mine workers' complaints or to make representations on their behalf to their employer. They had no powers to stop processes or require mine workers to withdraw from work they perceived to be seriously and imminently dangerous, nor did they appear to be 'consulted in good time' in relation to the safety or health related elements of management planning or the introduction of new plant or procedures at the mine.

As such, and in line with the representatives' own assessment of the situation, while these safety committee members were engaged in a limited way with the formal process of consultation on safety and health matters in the mines, such engagement had little chance of seriously influencing outcomes. Thus, the representatives make only a very limited contribution to improving the safety, health and well-being of mine workers and indicated with their own testimonies that they felt, for the most part, powerless to counter implementation and operation of managerial prerogatives on safety or health matters when they perceived them to be against the best interest of the mine workers. There were occasional exceptions to this pattern, such as when a group of trade union members of a safety committee in one mine recounted how their threat of strike action over a ventilation issue in the mine had resulted in remedial actions being taken by the mine management. But in the main, although many of the representatives demonstrated both awareness of the poor OSH conditions in the mines and a political understanding of the reasons for them, they lacked both the knowledge and position within the institutional arrangements for safety in the mines to be able to act effectively in turning their awareness of OSH problems into actions with significant outcomes.

There seems to have been a combination of reasons for this. The statutory measures make provision for the selection of both workmen's inspectors and trade union appointed members of safety committees, but they provide relatively little detail concerning their functions. They therefore did not act as an independent or authoritative guide on these matters of detail. Secondly, the absence of any experience of independent training for their role seriously disadvantaged the trade union members of the committee, and provided them with no support to enable them to confidently undertake functions other than those determined by the mine management. In the case of the workmen's inspectors, while they received some training, the absence of any trade union involvement in this and in both their selection and the determination of their roles, meant that the mine management was effectively given a free hand in these matters, ensuring that the workmen's inspectors were incorporated into the institutional arrangements it made for safety at the mines of CIL. As such, while as individuals many workmen's inspectors remained sympathetic towards the mine workers, they had no chance of acting autonomously on their behalf, but could only function through the delivery of the arrangements made by their employer for safety management, in which they played a minor supervisory role.

The larger canvas on which the statutory arrangements for joint consultation on safety and health in the mines of CIL were operationalised also bears responsibility for determining their outcomes in practice. Several elements are especially relevant. To begin with there was the nature of the mines in the subsidiary companies where the field research was undertaken, and the health and safety conditions within them. Many of the mines were comparatively old; many were underground, labour intensive and minimally mechanised. OSH conditions in these mines were acknowledged to be poor. But set against this was the parallel acknowledgement that, by CIL standards, the mines were uneconomic in terms of their productivity and therefore significant investment to improve OSH conditions in these mines was regarded as difficult to justify. This had been the situation for a long time and was grudgingly accepted by the mine workers and

their trade unions, while senior managers portrayed themselves as providing a service to social welfare as much as running a profitable business.

Within this setting, the nature of industrial relations practice did not encourage or support the development of the role of trade union appointees to safety committees or that of autonomous and worker orientated actions for the workmen's inspectors. Firstly, relations between trade unions and the employers in the mines of the subsidiary of CIL that was the site of the field research were typical of those described as dominant in India more widely. Thus, as Shyam Sundar (2008) has described:

Conflict with employers is still the dominant union strategy in India An adversarial stance has however always been the defining principle of industrial relations in India. Employers and unions have never learned to compromise or accommodate one another

But unlike the conflicted labour relations, which in other countries serve as a backdrop to the successful use of the statutory provisions on worker representation by mine level union representatives in bringing about the improvements in safety matters they desired, this seems to have only rarely occurred in the examples of the mines we studied in India. While politicised awareness of conflict between labour and capital on matters of safety simmered in the discourse between the trade union representatives, it seldom formulated itself in terms of successful concrete actions, which led to tangible improvements on these matters. What happened instead was largely either the marginalisation of representation into the minor routines of safety committees dominated by managerial interests, or the incorporation of arrangements intended to represent the interests of mine workers into elements of the safety management system that was the responsibility of the management of the mine and its control. Escalation of disputed safety matters into actions aimed at mobilising mass support from within the wider communities in which the mines were situated did take place occasionally. Unfortunately, the disputed matters that led to such mass action were generally the all too visible results of single or multiple fatalities or serious injuries in the mines. As such, the walkouts, strikes and demonstrations that resulted may have drawn attention to the consequences of the poor OSH conditions in the coal mines and been inconvenient for the image of both CIL and the DGMS, as well as possibly ensuring better chances of adequate compensation for victims and their dependants. But by their nature they were rather too late to prevent the incidents to which they were a reaction.

In this respect, therefore, it is difficult to escape the conclusion that the capacity of the trade union representatives on joint safety committees, as well as that of the workmen's inspectors, to represent the interests of mine workers in improving their safety and health in the coal mines we studied in India was very limited. For the most part, it failed in the realisation of its potential contribute to preventive actions that significantly improve the protection of the safety and health of mine workers.

5 Indonesia

5.1 Introduction

Indonesia is one of the world's largest exporters of thermal coal, and especially for use in coal fired power generation, with production increasing year on year over the last decade. The industry includes both large and small-scale formal operations as well as a substantial informal sector of small operators. This study, because it is focused on systems for representing workers' interests in their safety and health, has focused on the formal sector and on larger mines, since it is here that structures and practices to represent workers in relation to arrangements for safety and health are most likely to be present.

Despite the size and significance of the coal mining industry in Indonesia, documentary evidence on both the nature and outcomes of arrangements to protect the safety and health of its workers is scarce. Even more scarce is reliable information concerning the role of formal representation of workers' interests in these matters. Allowing for this, and for the major challenges confronting the accurate reporting of OSH outcomes, it seems that larger operators have systems in place to manage safety and health in their coal mines, in compliance with regulatory provisions. Arrangements for investigating and reporting injuries and incidents may be part of these systems, but arrangements for consultation with workers and their representatives on OSH are not necessarily also included.

Indonesia is a relatively young democracy. The concept of free trade unions and collective bargaining re-emerged in 1998, following a long period of repressive authoritarian rule in which the early post-independence trade union movement and commitment to a pluralist system of employment relations was suppressed and replaced with a system of state sanctioned trade union and employer organisations that acted as passive agents of a system dominated by the state (Ford, 2009). Economic problems resulting from the Asian Financial Crisis of the late 1990s led to the collapse of this authoritarian state and the subsequent transition to democracy, during which the foundations of the present trade union organisation and systems for employment relations were laid. The current structures for worker representation on health and safety in all industries, including coal mining, can be traced to these developments. However, they have also evolved further during the last 20 years, often in complex ways affected by both the nature of Indonesian society and its economy, as well as by the attempts of the state to lead a transition towards legitimisation within system for employment relations that is applied in the fairly narrow segment of the Indonesian economy represented by the formal sector (Ford and Sirait, 2016). This segment includes larger mining concerns but very little of small-scale mining.

In this chapter, we first outline the methods used to gather data. Next, we describe, in a little more detail the available information on the contexts of worker representation on safety and health, providing something of the background to our study of current practice. This is followed by the analysis of our findings, based on information gained

from interviews with key informants among national level trade unions, regulators, international bodies and local researchers as well as interviews with the representatives of mine workers from coal mines in East Kalimantan. The chapter closes with a discussion of the key emergent issues and how they are situated both within the context of the Indonesian economy, but also in relation to global influences.

5.2 Methods

As in the other countries we have studied, our analysis of the experience of worker representation on OSH in Indonesian coal mines was informed by a review of the literature and the regulatory framework governing the current arrangements for representation, their origins, development and effectiveness. The extent of the literature on these arrangements and their outcomes was very limited indeed and there were no reliable studies documenting their effects on health and safety management or performance in Indonesian mines. The regulatory framework itself is quite complex and, although its general provisions are reasonably well documented, more specific measures in relation to worker representation and consultation on OSH in mining are both comparatively limited and further qualified by the overlap of generic and specific requirements, making it difficult to discern their impact. There is little in the way of documentation with which to trace the development of the present arrangements for mining or their relationship with either the policies and aspirations of the trade unions or with international influences, such as those of ILO Conventions (which in the case of mining have largely not been ratified by the Indonesian Government). However, it was fairly clear that the requirements of ILO conventions in relation to labour relations and health and safety more generally, have been significant influences.

Fieldwork in Indonesia took place over a period of two weeks in February 2017, but correspondence with Indonesian sources both in arranging and following up the fieldwork took place over a longer period of several months. As we explain in the following section, the current structure and organisation of Indonesian trade unions is both relatively recent and quite complex. In relation to worker representation on safety and health in coal mines, the study focused on the experiences of members of the three recognised national unions in private sector mining that appeared most prominent and which were also members of the global union federation (GUF) IndustriAll. Contact with the national leadership of the mining sections of these trade unions was made with assistance from IndustriALL. Interviews with national level representatives were undertaken at their offices in Jakarta. The same participants made arrangements for the researchers to meet union representatives with safety and health functions at mine level, and also helped with arrangements for the researchers to meet with government inspectors and Indonesian academic researchers with interests in OSH, again in Jakarta. Although the national union leadership was based in Jakarta, the mine level representatives were employed in mines in quite remote parts of East Kalimantan, located at considerable distance both from Jakarta and from sizeable urban settlements in the region. Normal access to the mines was by long road, or road and sea, journeys through tropical rainforest, or by aircraft used for this purpose by the mining companies. Authorisation and co-operation of the mining companies was required to make visits to

individual mines. The practicalities of conducting such visits to several mines, as well as the requirement for independence and anonymity of the research participants, therefore determined that the fieldwork be organised through holding a workshop at a location that representatives from different mines could conveniently reach. Consequently, the researchers, accompanied by the national leaders of two of the three mining union federations, flew to a large town nearest to the mines and interviews were conducted with mine level union representatives during a two-day meeting in a hotel with the necessary facilities.

Altogether some 12 mine level union representatives from four different mines in the region made the journey and took part in a workshop, interviews and group discussions on their role in health and safety in the mines where they were representatives. They were all employed in large open-cast mines. The two national union officials also participated in these meetings, acting as interpreters when required.

In addition, further interviews were conducted in Jakarta with several representatives of the Ministry of Mining, including active mines inspectors and the deputy chief mines inspector, and with researchers at the University of Indonesia.

The same generic interview guide used in other countries again formed the basis for the questions posed in all the interviews (see Chapter 5, Volume 1). It was adapted to fit the Indonesian context, and further adapted to account for the different interview participants as well as for the different form and structure used for the interviews (whether they were one to one or group interviews), so as to draw out the different experiences of the interviewees in relation to the issues covered. Each interview lasted for a minimum of one hour, the group interviews/discussions taking considerably longer — between 2 to 3 hours. In these latter cases, representatives from different mines, occupying different positions in the structures of representation present in mine-working, were deliberately mixed in the interview groups in order to identify common points and points of comparison and contrast between them, which were then drawn out and explored in discussion within the group. This was found to be an effective means of enriching the data collected. All the interviews were recorded and transcribed for purposes of analysis.

5.3 The contexts of worker representation on safety and health in Indonesian coal mines – a review of the literature supplemented by information from key informants

In the following review, we first outline some of the features of the coal mining industry in Indonesia, before giving a brief account of what is known of safety and health practices and outcomes in the industry. The review then explores something of the regulatory support for the role of worker representation and consultation on these issues. Going beyond the relatively limited provisions found in the regulatory framework, it also examines the nature of institutional support for worker representation, by exploring the development and role of trade unions on health and safety in mining. It concludes with the key issues that emerge from the exploration of current knowledge on these matters that could usefully be explored through further research in the field. Because the literature addressing several of these issues in Indonesia is scant, the review has been supplemented in places with material drawn from the interviews with the key informants who took part in the study at the national level, particularly the trade union leaders, government officials and academic researchers who were interviewed in Jakarta.

5.3.1 The Indonesian coal mining industry

As noted in the Introduction, coal production for export is a major industry in Indonesia and the country is one of the world's largest producers and exporters of coal. Indeed, since 2005, when it overtook Australia, the country has been the world's leading exporter of thermal coal, with much of its exports going to China, India, Japan and South Korea.

Overall, the mining industry contributed 9% of GDP in 2014, with coal mining alone accounting for 1.7% of GDP in 2015. It represents a much larger share of the economies of some of the regions where mining takes place. Indeed, in some of the more remote areas of the country it is the main form of employment and argued by the Ministry of Energy and Mineral Resources to be the principle reason for the economic development of such areas. Coal reserves are found mainly on the islands of Sumatra, Java, Kalimantan, Sulawesi and Papua, but the most significant are to be found in South Sumatra, and South and East Kalimantan. Almost half of Indonesian coal production comes from East Kalimantan.

Most of the mines are open-cast. Both private sector and state-owned enterprises are active in the industry. Since the coal mining sector was reopened for foreign investment in the early 1990s, the private sector has included both Indonesian and global interests. There are a number of large Indonesian mining companies, as well as some foreign ones with mining interests in Indonesia, while other foreign companies operate as contractors in the industry, being especially involved in the construction of mines. The trade unions that participated in the study and which contributed information outlined in subsequent sections on worker representation and consultation on OSH, were mostly

present in the private sector mines of East Kalimantan. A different trade union, which was not included in the present study, organises workers in the state owned mines.

Indonesian coal prices are highly competitive on international markets, in part because of the proximity of mines to ports. At the same time, coal mining activities are the source of considerable concern in relation to environmental damage and degradation. Ownership in the industry is both private and public. Coal is regarded as crucial for the sustainable economic development of Indonesia and for this reason is the subject of government regulation, which focuses especially on licensing coal mining operations on the one hand and on the other attempting to control production in ways that maximise national financial benefits and their sustainability. There is a regulatory framework in place (currently under the Law on Mineral and Coal Mining 2009), through which the state attempts to control mining by: designating areas in which it is permissible; and implementing a licencing system for owners and operators to conduct mining activities in accordance with specified criteria. Formerly separate approaches for foreign and Indonesian companies were merged by the Law on Mineral and Coal Mining No.4/2009, although in practice there would appear to be a mixture of the old and newer systems in operation. As a result, mining can only be conducted in areas designated by the state as open for mining. These mining areas are referred to in Bahasa Indonesia as *Wilayah Pertambangan* – WP. Various categories of companies may apply for licenses to mine in these WP, including those supported by foreign investment. The industry, therefore, has significant inward foreign investment as well as financing from within Indonesia. Indonesia is rich in coal deposits, but they are often situated quite remotely, so the aim of the state in controlling coal mining activities is to both regulate the economic sustainability of the industry and to protect the environment.

As is the case with mining in many developing economies, the industry is divided into large and small-scale mining sectors. The former has a fairly high profile and is concentrated around the activities of large companies and large mines in which there is often significant foreign investment. The latter covers a plethora of diverse mining activities ranging from smaller companies and mines that form part of the formal sector, to many others that exist outside it. These are obviously far more difficult to both regulate and obtain accurate information about, and are acknowledged to represent a significant challenge in respect of safety and health. There is a plethora of guidelines, Ministerial Decrees, regulations and so on that address specific elements of safety and health for workers in mining. In relation to social security, registered workers, including mine workers, in Indonesia are covered by Law No. 40 on the National Social Security System, 2004 and Law No 24 on Social Security Providers, 2011, and under these arrangements registered workers are covered by the *BPJS (Badan Penyelenggara Jaminan Sosial Tenaga Kerja* — Employment Social Security Provider) in relation to employment and health matters.

The Ministry of Energy and Mineral Resources has an inspectorate charged with the supervision of the operation of the state's regulatory framework for mining, including the inspection of mines to examine compliance with safety and health requirements. According to informants interviewed at the Ministry, there are about 400 mines

regulatory inspectors. Despite this resource, the plethora of regulatory provisions and the arrangements for inspection, their operation in relation to safety and health needs to be seen in the context of the size of the country, and the remoteness of mining activities, as well as the relative disorganisation of the latter. Seen in this light, it is evident then the Ministry has a comparatively weakly resourced regulatory inspectorate. As a result of these challenges, operation is acknowledged to be problematic. In the words of one observer (Purwana, 2013:45):

The control of occupational safety and health in mining is hardly effective. Indonesia faces problems with enforcement of occupational safety and health: few competent inspectors, limited resources to conduct adequate number of inspections, and limited follow-up inspections after the citations or violations. Inspections focus mainly on the formal sector.

The widespread practice of informal mining in Indonesia makes data on most aspects of employment and occupational safety and health somewhat unreliable, since it almost always reports on the formal sector (see for example Hodal, 2012). Employment figures for the industry are also difficult to obtain. In 1999, the ILO estimated that there were around 77,000 small-scale mines in Indonesia in which approximately half a million workers were employed (ILO, 1999). Other sources suggest there are less than a million people employed in mining overall. Because mines are, more often than not, remotely situated, for the miners this normally means that their employment involves travelling to the mines and living in work camps. Shift patterns are known to be intensive, with many miners working long hours in excess of the Ministerial Decrees on working time. National level trade union interviewees reported patterns of 16-hour shifts with two weeks on and one week off as quite normal practice and something that was challenging for the unions to negotiate on. Mine level union representatives also talked about issues of fatigue as being prominent among their concerns about OSH.

The organisation of work and employment in mining involves substantial use of contractors. They are used by the mine operator to undertake support work in relation to mining, logistics, catering, accommodation and so on. But they are also used to undertake mining activities. The trade unions appear to have little to no involvement or influence on the terms of contracts drawn up between mine operators and their contractors, and union representatives at the national level were themselves quite unsure about the details of the arrangements for contracting and subcontracting at the level of the mines. Union representatives at the mines confirmed the multiple presence of both contractors and sub-contractors. They also made clear that, as well as having a presence among the directly employed mine workers, union membership often extended to parts of the contractor workforce. However, the capacity of these membership patterns to influence OSH outcomes for the contractor workforce varied considerably and this situation was made more complicated by the presence of more than one trade union at the mine site — as we discuss further below when we consider the experiences of representation and consultation in the mines.

5.3.2 Safety and health management practices and their outcomes in Indonesian coal mining

Although the regulatory framework for safety and health in Indonesian mines is quite detailed, only two ILO conventions on occupational safety and health in relation to mining have been ratified by Indonesia: No. 045 on Underground Work (Women) of 1950, and No. 120 on Hygiene of 1969. Convention 176 has not been ratified.

There is a sparse literature addressing health and safety practice and its outcomes in Indonesian mines. Such as there is suggests an enormous gap between practices in the informal end of small scale mining which lie well beyond the reach of both public and private regulatory influence, and the approach adopted by larger companies in the formal sector. Here OSH strategies have not been especially concerned with matters of worker representation and consultation, but place a strong emphasis of the delivery of employers' duties to protect workers through OSH management systems (see for example typically: Permana and Drebenstedt, 2014). Indonesia was one of the first countries in South East Asia to introduce regulatory requirements on large organisations to adopt audited OSH management systems. However, it appears from the little published information concerning the operation of such systems and their auditing, that in practice they are dominated by behaviour-based approaches to arrangements for safety and health that pay fairly scant attention to matters of consultation with, and representation of, mine workers, within the conventional labour relations meanings of these terms.

The situation in relation to the evidence of OSH outcomes is similarly obscure. Statistics on occupational injuries and fatalities in Indonesia are compiled from those reported by mining companies to the Department of Manpower and Transmigration, and data based on Workers' Compensation claims. Both are recognised to massively under-report the extent of occupationally related injuries, diseases and fatalities, not only in relation to the informal sector but — for a variety of reasons to do with the nature of reporting requirements, eligibility requirements for compensation, latency periods and so on — in the formal sector too (Markkanen, 2004; Purwana, 2013).

Mining is, nevertheless, categorised as a hazardous occupation and industry. Hazards identified in the industry include the usual problems associated with mining — such as structural failures in the mines, leading to injury and fatalities in rock-falls and landslips (Sasaoka et al, 2015), musculoskeletal disease from heavy work (Widarnko et al, 2015), respiratory problems (Purwana, 2013) and so on. However, these are usually referred to in passing in most accounts of the risks associated with coal mining in Indonesia and little detail of their extent is provided. For example, accounts typically suggest that: both operators and the government ignore health and safety precautions, resulting in extremely unfavorable and hazardous working conditions for the persons engaged in mining and processing activities; accidents are most frequently caused by the absence of adequate roof support to prevent rock falls and landslide; and countless lives have been lost due to landslides and other hazardous practices (Wiriosudarmo, 2001:58). But such accounts provide little if anything either in the way of further substantiated details or of the sources of this information. Ministry of Manpower and Transmigration statistics

on occupational fatalities among registered mine workers suggest lower fatality incidence rates than those reported for transport, agriculture and construction. Nevertheless, safety in coal mining is widely acknowledged as an important concern. There is also concern with occupational health issues, especially with respiratory disease among miners in both underground and open-cast mines (Purwana, 2013).

However, the focus of the critical literature on the hazards of coal mining in Indonesia, like that on mining generally, mostly addresses its environmental and community impact, including the harm that mining in remote rural areas brings to the local population. There is very little literature that examines the risks to the miners themselves or the effective management of such risks. For example, there are concerns expressed in the literature about accidents and diseases in the vicinity of mining activities, including those of the polluting effects of mining activity and the transportation of its products, as well as the hazardous sites that are left when the mining activity moves on. Problems have been identified when mining products are transported to different places and reports on increases of respiratory problems in the vicinity of mines have been related both to the transfer of coal and to pollution from coal dust (Purwana, 2013). A report based on a survey in 2006 revealed high concentrations of coal dust around coal mines in Kalimantan (Sholihah et al, 2008). In 2007, an increase of 9 per cent of respiratory tract diseases was also reported in another coal mining area in Kalimantan (Greenpeace, 2010). This concern with public health has helped fuel calls for greater state control on the impact of mining, but the extent of involvement of trade unions and other groups representing workers in these movements is not documented.

According to the representatives of the national trade unions that were interviewed during the study, one of the key issues for OSH in coal mining for them is that the long-term health effects of mining are unrecognised by the processes in place for monitoring OSH. While fatal accidents are highly visible and fairly accurately reported, at least by larger companies in the formal sector, they suggested that occupational mortality and morbidity resulting from everyday occupational exposures to the chemical and physical hazards of mining is much less so. In their view, a substantial portion of the burden of disease associated with mining is unreported and consequently unacknowledged as problematic by both the industry and its regulators. The trade union representatives further suggested that, because the mining workforce is predominantly young, the occurrence of occupational health effects among these workers is not identified by routine medical surveillance during their employment and often does not make itself known until after they have left the industry. They claimed that their experience as national union officials made them aware that many of the members of their trade union experience such ill-health after retirement (the retirement age for Indonesian miners is 55). They argued that respiratory disease and musculoskeletal disorders are in fact a frequent legacy of work in coal mining and the former especially is often a cause of early death for many ex-miners. They further suggested that one of the abuses of medical surveillance routinely practiced by mining companies is to deny employment to miners who have been ill, have recovered and are attempting to return to work. By using pre-employment medical examinations to declare such workers unfit for work, they not only deny them an opportunity to return to employment, but at the same time avoid both

the need to report any further health problems that these now former workers might experience as a result of their previous employment in the mine, as well as denying them the potential benefits of any compensation.²⁴

The national trade union officials also discussed problems of work organisation and shift patterns that they claimed led to a high incidence of fatigue among mine workers, which in turn contributed to a greater propensity for accidents. This problem of fatigue is also, to some extent, supported by the research literature (see Fletcher, 2010).

5.3.3 The framework and contexts of worker representation on health and safety in Indonesian mines

It could be anticipated that, as in other countries, in Indonesia representation and consultation arrangements on OSH in coal mining would be supported and determined by regulatory provisions framing rights, functions and responsibilities, and by the capacities of the institutional actors involved to use them. Therefore, to help provide the contexts in which workplace practices might be better understood in Indonesia, we next outline the relevant regulatory requirements and their status and significance, and briefly examine the current nature and role of organised labour, both in general and more specifically in coal mining in Indonesia.

5.3.3.1 *The regulatory provisions*

As we have already pointed out, the architecture of the regulatory provisions on occupational health and safety in coal mining in Indonesia is quite detailed. The industry is covered both by requirements on OSH generally, as well as by those developed more specifically for mining. This dual framework includes a body of provisions made under the umbrella of Law No 1/1970, and laws subsequently updating them, concerning occupational safety and health generally, including the provisions requiring audited OSH management systems in larger enterprises, referred to previously. A further body of law that relates specifically to mining, examples of which have already been mentioned, supplements them. While the general provisions apply across most sectors and are administered by the Ministry of Manpower, those relating specifically to mining are administered by the Ministry of Mining and Energy. Law No 1 requires the establishment of health and safety committees in workplaces with 50 or more workers and companies are obliged to register establishment of such committees with the Department of Manpower and Transmigration. However, ILO reports written in the years following democratisation indicated that many companies had not established such committees and, even when they had, according to these reports they often 'do not function properly' (Topobroto, 2002; Markannen, 2004).

In conducting the literature review for the present study, we found no published research concerning the presence, role or effectiveness of either health and safety

²⁴ Indonesian law requires that employees be monitored for the health effects of their employment for up to two years after ending work. During this time the employer may be liable for compensation for work-related conditions diagnosed by physicians, specialised in occupational medicine, working for the social security system. However, trade union officials pointed out that such specialists are in short supply and many workers are thus not monitored.

committees or consultation with workers' representatives in the mining industry. The findings on these matters presented in this chapter are, therefore, drawn from the experiences of participants in the study.

On the question of statutory support for arrangements for joint consultation, the officials of the national union federations representing mine workers explained that, in practice, the situation in relation to OSH in coal mining was somewhat uncertain. While there was general provision requiring joint health and safety committees under Law No 1, ensuring compliance with which was the responsibility of the Ministry of Manpower, the overlap of these general provisions with provisions more specifically aimed at mining, administered by the Ministry of Energy and Mineral Resources, in which there was no such requirement, created a confusing situation. This meant that, in their experience, there was no regulatory pressure on mining companies to set up arrangements for joint consultation in coal mines. Indeed, they suggested that mines regulatory inspectors themselves thought such measures were unnecessary and they said that the inspectors had told them:

There is no need for a committee, we are the provision.

This implies that in practice, where safety committees existed in mines, they were likely to have been established voluntarily by the mining company as part of its arrangements for the management of safety and health at the mine, rather than through any demands made by regulatory inspectors. The national officials further explained that, therefore, even in mines where there were safety committees, the plant union was often unable to ensure that it was represented on the committee. A further problem confronting the trade union membership of safety committees related to the level of educational qualifications required for membership. In order to ensure competency there are requirements under Act No 1 which stipulate educational levels for the membership of health and safety committees that are considerably higher than those possessed by many miners, including those in trade unions who may have been active on OSH issues. Thus, even where there were safety committees in mines, these requirements allowed the mine management further reason for excluding such miners from membership. By way of an example of how the national union supported plant unions, the officials talked of a recent situation in which an accident had occurred at a mine and the plant union had sought advice from the national union on what action it should take. Following inquiry by the national union, it had become clear that, although there was a safety committee at the mine, the plant union had no role in it. The advice of the national union was that the plant union should insist that the committee undertook a full accident investigation, and it should monitor the actions of the committee in this respect, emphasising that there were no existing *joint* procedures for addressing OSH in this mine. In other situations in different mines, the national officials talked about advising plant unions to take up the health and safety grievances of members through its disputes committee, again suggesting that there were no formal *joint* procedures which allowed representation or consultation on OSH matters in these mines. At the national level, the union leaders were well aware of this deficit and it was a prominent reason for

their participation in campaigns to persuade the Indonesian Government to ratify ILO Convention 176.

5.3.3.2 Trade unions in Indonesia and their role in Indonesian coal mining

Trade union structure and organisation in Indonesia is both quite complex and at the same time relatively limited in terms of its workplace presence. In the late 1990s, emerging from the long period of authoritarian rule under the so-called New Order, in which state-sanctioned trade unions and employers' organisations were the only forms of collective organisation allowed, the reform of institutions of collective bargaining was prominent among the processes of democratisation. However, observers of these reforms argue that the new institutions of industrial relations thus established, and the regulatory provisions that allowed the subsequent proliferation of trade unions, were largely brought about under pressure from international scrutiny of processes governing the re-establishment of democracy, rather than through any significant groundswell of worker protest (Ford, 2009). Reforms were therefore strongly influenced by global scrutiny, not only from the global institutions of organised labour, such as the ICFTU and from tripartite bodies such as the ILO, but also by the concerns of global bodies that are influential in supporting the economy, such as the World Bank and the IMF.

There is general consensus that trade unions quickly multiplied in response to the Trade Union Act No 21/2000, which provided for 'free, open, independent, democratic and responsible' trade unions to be established in workplaces in which 10 or more workers are members. Ford and Sirait (2016) indicate that by 2015, seven confederations were registered at the national level. Of these, three are most significant. The Confederation of All-Indonesian Workers Unions (Konfederasi Serikat Pekerja Seluruh Indonesia (KSPSI)) is the largest and is a reformed version of the previously state-sanctioned confederation that dominated union affairs during the New Order. The Confederation of All-Indonesia Prosperous Workers Unions (Konfederasi Serikat Buruh Seluruh Indonesia (KSBSI)) is the second major confederation, which has grown from its origins as the largest and most established alternative union of the New Order period. The third major confederation is the Confederation of Indonesian Workers Unions (Konfederasi Serikat Pekerja Indonesia (KSPI)), which was formed in 2003. But the far more significant multiplication of union structures occurred at enterprise level. Again according to Ford and Sirait (2016), by 2015 there were some 11,852 enterprise unions in the private sector and 170 unions in state-owned enterprises. Many, but not all, of these are federated into the 91 union federations that are registered with the Ministry of Manpower at the national level, some (but again not all) of which are associated with one or other of the main confederations.

The ways in which industrial relations are conducted also changed significantly following democratisation. Under the New Order, collective bargaining was supposedly conducted at the enterprise level and employers were formally required to negotiate with the workplace units of the official union, but in practice they exercised considerable control over these matters. Under the Trade Union Act 21 (2000), wages and OSH were included among the issues on which it empowered unions to engage with employers. Under Law No. 13/2003 on Manpower supplemented by Ministerial Decision No.

48/MEN/IV/2004 on Procedures for Making and Legalising Company Regulations and Collective Labour Agreements, employers and unions in unionised firms are nowadays encouraged (but not obliged) to negotiate collective labour agreements. To avoid confusion created by the possibility of there being many unions in the same worksite, only one collective agreement can be recognised at the company level and this should be renewed every two years. It is generally the one negotiated between the employer and the union with the greatest presence at the workplace. However, while employers now have less control over collective bargaining in unionised workplaces, Ford and Sirait (2016) argue that managerial unilateralism continues to be the dominant mode of employment relations. Union density remains low even in the formal sector, with total membership estimated to be approximately 3.5 million, or around 9% of workers employed in the formal sector (Ford and Sirait, 2016).

At the workplace level, the union branch or local union is the basic unit that undertakes collective bargaining, grievance processing and membership recruitment, usually through the activities of elected workplace representatives (Isaac and Sitalaksmi, 2008). Large branches may have chairpersons, secretaries and treasurers to co-ordinate and lead these activities. Theoretically, worker representatives may receive time and facilities from their employers to conduct these activities. Branch or workplace level union organisation may also be supported by some form of organisation at district level, which in turn might combine to elect individuals to provide further organisation at regional level, from which national officials and an executive board might be elected. This theoretical district and regional organisational structure for national union federations is paralleled by similar structures for the main confederations at these levels. The functions of the national level organisations are to engage with employers and especially with the state in matters of policy and governance. In the case of occupational health and safety, for example, there is a national tripartite advisory body of which representatives of trade unions are members and which advises in relation to regulatory policies and other matters of OSH. The National Tripartite Occupational Safety and Health Council has existed since 1982. Its functions include providing recommendations and advice on OSH to the government; collecting and analysing data on OSH; assisting in supervising provincial OSH councils; and organising training and education programmes. However, one of the problems with the operation of such national advisory committees is that their members, including those belonging to trade unions, often have little or no experience of the realities of working conditions or health and safety in sectors such as mining.

The national union organisation also provides support to workplace unions through offering training and information, including that relating to health and safety. However, in practice for many of the unions that have proliferated in the formal sector, membership is extremely small and does not support the existence of structures beyond the workplace. Or, in other cases, while there may be a 'national federation', the resources of its membership are insufficient to sustain either district or regional organisation of any significance. Which means there is often a substantial gap between the national level representation and organised workers at the level of the establishment.

In relation to private sector coal mines, the three nationally federated trade unions active in the sector and also affiliated to the global federation IndustriALL, are the SPKEP-SPSI, the FSP-KEP and the FPE-KSBSI. All of these unions have members in other sectors, mainly in the chemicals and oil industry, as well as in other forms of mining. In coal mining, they have membership both among the directly employed workers as well as among the workers who are employed by contractors and subcontractors (the latter being especially the case for the FPE). Miners represent something between 10 to 20 per cent of their overall membership. They organise in some large coal mines, but even where they are relatively well-established, normally only a minority of the mine workers in these mines are members. The union leaders interviewed in the present study estimated that between them they probably represented around 10 per cent of Indonesian coal miners. They pointed to further quite developed representation in the state owned mining sector, where miners were represented by a union for workers in state owned enterprises. However, they suggested that elsewhere (i.e. in 90 per cent of the private sector), where representation occurred at all, it was through membership of one of the many small, local, mine level unions whose influence and connections probably did not extend beyond the mine in which their membership was employed. There were also some company unions in coal mining, although the national union leaders claimed their presence was not especially significant.

The union leaders themselves are elected by the Congress of the union and hold office for a period of 5 years before facing re-election. The participants in the present study occupying this role had varied backgrounds. For example, two were qualified in law, one of these had been a union activist when he had been employed in the oil and chemicals sector, and the other had practiced as a lawyer in an NGO before taking on the present office; but none of them had been miners. They commented on the difficulties of organising in the sector, indicating that free trade unionism in Indonesia was still in its infancy. In addition, they acknowledged that low membership levels meant that the union had very limited resources to organise itself nationally, and was often without the necessary financial means to resource activities that would help to build support. They pointed out that miners generally sought support from the trade unions when they were faced with a problem in relation to their employers, whether it concerned wages or safety and health. The trade union strategy in such situations was to suggest to workers that perhaps their first step in addressing their problems might be to join the trade union – then the union would be in a position to help them. It was unclear how successful they had been with this strategy. This said, it was abundantly clear that, while trade unionism in coal mining in Indonesia bore superficial resemblance to that in mining in other countries, there were also some fundamental differences in the drivers behind the patterns of trade union structure and action observed here compared with those elsewhere. These are patterns that have been observed by other writers on Indonesian trade unions and would seem to be grounded both in the very limited extent to which the unions can be said to represent a significant proportion of Indonesian workers, as well as in the origins of this representation which, as Ford (2009) has pointed out, grew in part out of NGO activities during the dictatorship. We will have reason return to these issues when we discuss the findings later in this chapter.

While the rights to form unions and the general mode of their operation are covered by the laws introduced since democratisation, at the level of the mine, the detail of the structure and form of representation depend on the provisions made in the constitution of the relevant trade union. In theory, according to national level trade union informants, this usually meant the election of plant level representation every three years. For the three national federations, at the level of the mine, the institutions of unionised representation were ideally based around a plant level committee, with a chairperson, secretary and several basic functional elements. These included: a) what the national officials referred to as 'industrial relations advocacy'; b) an education and training function; c) a social affairs function; and d) a financial function. Union members responsible for these various tasks together made up the plant level committee. Undertaking such activity was part-time, and the mining companies normally allowed the members involved a limited amount of time off without loss of pay in order to perform these functions. Rarely, the chair or secretary of the committee might perform their role on a full-time basis. The time that was thought to be necessary to conduct these trade union activities was negotiated and agreed in the CBA. Representation on matters of safety and health was, according to the national officials, most likely to be part of the 'industrial relations advocacy' function at the plant level and required a substantial degree of support from them, in the form of information and training, because the plant level union activists were quite inexperienced. They also said that every three months there should be a meeting of the plant union committee with delegates from the departments within the mines to discuss problems at the departmental level. The means of communication of workplace problems would be from the mine workers in each department to union activists within the department who would then bring them to the attention of the plant level union representation through these three-monthly meetings.

Although the trade unions aspired to have district and regional structures, and sometimes succeeded in doing so, their limited resources mean that, in practice, the mining unions were among those unions mentioned above in which such structures were in different stages of development in the various districts or regions. The national organisation had, as a result, seemingly quite tenuous links with the union organisation at the level of some of the mines in which it has membership.

On the detail of actions on safety and health, the national level representatives were less clear about practice. They said, for example, that Collective Bargaining Agreements were re-negotiated every two years, and they claimed that these agreements covered OSH issues as well as pay and other working conditions, but they were unable to give any specific details of what exactly this meant for safety and health. At the same time, they suggested that awareness of occupational safety and health issues was not high among their members and therefore improvements in arrangements for safety and health were not prominent in the demands of the plant union. Indeed, they saw raising awareness of OSH issues in the mines as one of the key roles to be performed by the national trade unions through training programmes and the supply of information.

The national representatives frequently referred to the role of the unions in supporting members at the plant level through providing training — including training on safety and health. Training is organised at the national, district and regional levels. Branches often have their own training programmes to which national officers may be invited to deliver sessions. Resourcing for training comes mostly from the trade union's own funds. They have also received some support from the global federation, IndustriALL, for training activities on particular issues. Delegates attending training do so in their own time and there is no formal system for paid time off from work to take part in training activities. The Ministry of Energy inspectors also provided a limited amount of training on safety and health and, in addition, when negotiating the CBA it was sometimes possible to persuade the mine management to include some provision for training union members on health and safety issues.

5.4 The evidence of practice on worker representation on health and safety in Indonesian coal mines

It might be anticipated that the workplace experience of representation and consultation in Indonesian mines might not follow entirely the same patterns as that found in other countries since, as we have already noted in Section 5.3, the legislative steer that helps determine its form and content elsewhere is largely absent in coal mines in Indonesia. Moreover, the nature and extent of the presence of trade union organisation and power within and around these workplaces, which also helps to shape workplace arrangements in other countries, differs quite substantially from that found elsewhere. The testimony of mine level trade union representatives confirmed that this was indeed the case, as we detail in this section based on interviews and group discussions with a dozen or so such representatives from several different coal mines in East Kalimantan (see Section 5.2).

5.4.1 Reported experience of safety and health in the mines

Despite differences in the structures of representation in the Indonesian mines, most of the hazards and risks to safety and health that the mine level trade union representatives reported in discussions concerning the mines in which they worked were similar to those commonly reported in open-cast mines in other countries. For example, serious incidents involving heavy moving machinery and vehicles were mentioned frequently, as were dangers associated with blasting and falls of rock. Musculoskeletal disorders were said to be frequently experienced among machinery operators and mine workers involved with heavy lifting. Poor seating arrangements in vehicles, both in terms of the provision of adequate safety harnesses etc. and more generally in terms of ergonomic design were reported. Inadequacy in the ergonomic design of much of the rest of the machinery was also cited as the cause of poor health and safety outcomes. While in relation to the physical environment of the mine, exposures to high levels of dust, as the result of inadequate means of dust suppression, especially when conditions were dry, were also frequently mentioned, as were excessive levels of noise and vibration. The adequacy of the mine management's arrangements for monitoring these exposures was also frequently questioned. Less frequently mentioned, but nevertheless important issues when they occurred, included

the hazards associated with loading coal for transportation, including in marine situations. These ranged from further uncontrolled dust exposures to the physical risks involved in working on moving platforms, at heights and with moving machinery and moving loads, as well as the danger from the collapse of ground in the mine. The collapse of manmade structures, such as scaffolding, was also a serious concern for some representatives.

Miners' representatives generally suggested that, while there were safety systems in place in their mines, they tended to focus on rule following and the behaviour of mine workers in wearing PPE, and they frequently failed to adequately address the root causes of many of the risks to both their safety and health, especially when these required engineering or environmental controls.

Perhaps the most frequently discussed issue, however, was fatigue. Participants believed this was a health issue in its own right, as well as one that contributed to poor safety in the mines. The representatives blamed widespread fatigue among mine workers on the organisation of work. They suggested that the use of shift patterns that required long hours of work with insufficient rest breaks was a deliberate strategy to maximise production that had been adopted by the mine operators. Several reported that the plant level union committees, of which they were members, were currently negotiating with the mine managers on working time and shift schedules with the aim of ameliorating fatigue through the redesign of shift patterns to lower the number of hours worked in any one shift and allow more and longer rest breaks. Only one or two representatives reported having so far experienced successful outcomes in these negotiations.

Related issues which some of the representatives raised and suggested contributed to the problem of fatigue, were the travel times and arrangements for travelling to the mines. In addition, participants felt inadequate provision for rest between travelling and beginning a shift was normal practice. They went on to explain that this greatly increased fatigue and significantly multiplied the risk of accidents and incidents, as already fatigued miners were required to perform unfamiliar tasks in unfamiliar surroundings when they started their shifts in this manner. Poor living conditions in some of the work camps in which miners stayed while working, and which some representatives likened to 'barracks', were mentioned by several participants. They indicated that conditions of overcrowding, poor physical design and inadequate nutritional and recreational facilities meant that, for the many miners who were obliged to stay in this type of accommodation, it was 'impossible to get proper rest'. Those representatives who were employed by contractors suggested that these conditions were even poorer in the case of the allocation of accommodation to the contractor workforce.

5.4.2 Arrangements for representing workers' interests in OSH in Indonesian mines

Interviews and group discussions with the dozen or so mine level trade union representatives who were employed either by the main mine operator or by contractors in a selection of mines in East Kalimantan, portrayed a somewhat varied picture of the nature and extent of the arrangements for representation and consultation on safety and health in these mines. The reason for this wide variation, as noted above, seems to have been at least in part determined by the absence of a strong or sufficiently detailed legislative steer defining the form and content such arrangements might take, along with only very limited interest, on the part of the regulatory inspectorate, in the role of representation and consultation in helping improve OSH arrangements and outcomes. Participants indicated that this situation allowed considerable freedom of interpretation of these matters by mine operators and their contractors. Approaches seem to have been driven by company policies and practices concerning OSH arrangements, with the influence of trade union interests being only occasionally felt during the negotiation of collective bargaining agreements.

In practice, therefore, the testimony from the representatives indicated a very mixed experience. None reported formal arrangements to elect health and safety representatives in the mines in which they worked. The most common arrangement was for the workplace union representative who dealt with safety and health matters to be someone who had cause to learn more about safety during the course of their job. Hence, in their role as a trade union representative, this additional knowledge had helped in their assumption of the function of addressing health and safety matters in relation to both the concerns of members and in their dealings with the management of the mines or with its contractors. Such representatives included those who were already employed in the safety department of the mine, or who had become one of the team of miners involved with the regular 'safety patrols' of the mine, or who worked in an administrative capacity in the mine in ways that had brought them into contact with safety matters. Also, occasionally, senior mine level union representatives had acquired knowledge of safety and health issues at the mine through many years of experience. As a result, they also tended to assume responsibility for representation on these matters with members and managers. However, neither of these practices were formalised or systematic, and each seemed to have been determined more by circumstance than design. The remainder of the trade union workplace participants in the study were union representatives who normally had some role in the trade union committee at the mine and who dealt with issues they regarded as concerning health and safety, along with other labour relations issues, as aspects of their representational role. They had no special skills or experience in safety and health matters.

5.4.3 The functions of representation and consultation

Since there was no legislative steer or arrangements granting trade union representatives a formal role in representing workers on health and safety, none of the activities associated with health and safety representation in other countries were formally acknowledged or undertaken in the mines where the participants were employed. Thus, formal joint inspections between union safety representatives and management were not performed, nor were there arrangements allowing representatives time and facilities to undertake independent investigations on health and safety, hear and address complaints from their constituents, or make formal representations on their findings to the management. There were also no formal arrangements reported allowing representatives access to the information or documentation on safety and health that was required to be held by the mine management, or in relation to undertaking either independent or joint investigations of accidents or near misses. And there were no formal arrangements for consultations on plans and developments affecting OSH at the mines or to allow representatives to stop work they regarded as exhibiting serious and imminent risks to the health or safety of the workers involved. In most cases there also appeared to be no formal arrangements in place to ensure adequate trade union representation on joint health and safety committees.

The repeated use of the term 'formal' in the previous paragraph is deliberate. It is not that none of the activities to which it refers ever took place in the mines where the participants worked. While they did not benefit from the presence of formalised procedures, trade union representatives engaged with health and safety matters in various ways. For example, the representatives who indicated they were members of the 'safety patrol' in the mine or who worked in the safety department, took part in workplace inspections, often accompanied by members of management. In so doing, they were able to make observations that could be later followed up on the part of the union, even though they had undertaken the inspection activity primarily as part of their job rather than as the result of a specific arrangement to ensure the regular occurrence of joint inspections involving union representatives and managers. In other cases, it was clear from their testimony that constituents did raise their concerns about OSH with the union representatives and on occasions they had found ways to conduct their own independent investigations of safety issues that had been brought to their attention in this and other ways and, in turn, they had raised their concerns with managers. But here again these tended to be ad hoc activities undertaken unsystematically and without the benefit of any formalised arrangements to support them. As one union representative put it:

The management focus on inspections but the union is not involved. The union doesn't sit together with the management. So they don't talk together. If there is a problem they don't act jointly but they try to solve it by themselves.

Trade union mine level representative, East Kalimantan

This might involve the mine level union committee making representations during the regular meetings to discuss labour relations issues that were held with the mine management in some mines, and in which various matters were aired that could include those dealing with safety or health issues. Or it might be through more ad hoc individual representations made to the relevant supervisory management at the site of the problem. Or it could be that union representatives might raise matters at the safety committee, if such a committee existed at the mine and if there was union representation on it.

Several of the mine level union representatives talked of the experiences in their mine concerning the activities of the safety committee. In most of the large mines it appeared that the mine operator had introduced some sort of 'safety committee', which met at regularly, usually at six-monthly intervals. Its composition appeared to have been determined by the management of the mine and, while it sometimes included mine workers and even trade union representatives, it was clear that normally both the constitution and activities of these committees remained under the control of the mine management. The representatives pointed to the important role of the manager with responsibility for 'technical safety' in the decision-making processes at these committees. Generally, representatives regarded the committees as having a useful function and occasionally one in which they could manage to 'get things done', but they only infrequently saw them as their main route for raising safety and health issues with the management. Their principal approach, in this respect, remained through the union plant level committee, by using procedures it had established (sometimes laid down in a collective bargaining agreement) for airing its concerns with management. The safety committee provided an alternative route to bring safety issues to the management's attention, depending on the circumstances of a particular case. In almost every instance where the representatives reported the presence of a safety committee and talked about its activities, they did so as though these activities were essentially those of managers and they were quite separate from those they discussed as being driven by their own agency. For example, when explaining the control that the mine manager exerted over the contact between union representatives and regulatory inspectors, one senior union mine representative said:

Inspectors sit with the safety committee and with management, but not with the union. They always talk with the management

Thus, clearly associating the safety committee with management and not seeing it as a joint institution in which they shared some degree of co-ownership.

5.4.4 Support for representation

The comparative weaknesses in the arrangements the plant level unions had been able to make for representation and consultation on safety and health were, therefore, determined in part by the absence of a regulatory steer and in part by the dominance of managerial control in relation to safety arrangements in the mines. In the eyes of the participants, this was also influenced by the limited awareness of the potential importance of safety and health matters on the part of both the miners and their representatives more widely, and they spoke about the need for trade union support to improve the situation. This support was seen to potentially take several forms. For example, participants argued that training was important to improve the effectiveness of actions on safety and they were unanimous in their assessment that neither they nor the mine workers they sought to represent had received sufficient training from their employers. They were aware that support from training was theoretically available from several sources, including the employer, their trade union at national and regional levels, as well as from the Ministry of Energy and Mineral Resources. However, they confessed to only limited or in some cases non-existent experience of such training and, as such, they saw increasing the experience of training for both themselves and their members as being something to which they aspired, rather than already experienced.

In the case of training from their employer, they talked about only very basic and general training being available, except in special cases. They suggested that their demands for the increased provision of more safety-related training frequently appeared on the agenda of the union committee meetings with managers. In these cases, the union made demands concerning the upgrading and increased availability of training to meet certification standards for the operation of plant and equipment (something that was also linked to the potential for the beneficiaries of this training to increase their income by increasing their skills). They argued that such training was also instrumental in improving OSH outcomes. As to training from their trade union, they indicated an awareness of the possibility of receiving training at regional or even national level, but very few of the participants had any experience of actually receiving such training. Nor had many experienced any plant level delivery of training from the union outside the mine, although here again they were aware of the possibility of this. They were unanimous in agreeing that more training on safety and health matters from the union would be beneficial. But it would appear that the resources available to the trade unions at either national or regional levels were likely to seriously limit the extent of such provision in practice.

Interestingly, on several occasions during the group discussions, the representatives referred to the limited awareness and interest of their membership in matters of health and safety. In this respect, some went so far as to see a link between successful union actions in relation to improvements in wages, and actions that might then follow in relation to safety, stating: 'wages and prosperity come first, success with this will help our actions on safety'. However, they were unable to furnish much in the way of hard evidence for this opinion.

The other institutional support for the role of union representation in safety and health arrangements at the mine that was prominent in their view was the collective bargaining agreement (CBA). Not surprisingly perhaps, given everything that has already been said concerning the somewhat limited nature of systematic approaches to worker representation and consultation on safety and health at the mine level, in practice experiences of the role of the CBA in supporting representation on safety and health was also highly varied. At one extreme, for example, one participant in the study, who was a union representative in a large foreign-owned mining concern, was able to claim that there were two chapters in the current CBA between the leading union at the mine and the company in which provision was made for safety and health. These included procedures to ensure that the union leadership was involved in risk assessment and consulted on the planning and operation of arrangements to manage OSH at the mine. There was a commitment made in the CBA to identify and address the main hazards of the mine; specification on the details of arrangements for joint consultation on safety and health between the management and the trade unions; requirements concerning the nature of arrangements for managing safety to be put in place by the main contractors operating in the mine; as well as systems for monitoring the adherence of all the contractors to the delivery of such arrangements; and the role of trade union representatives in these processes. The representative also indicated that the CBA included provisions for training and facilities for union representatives to address safety and health. He further claimed that the CBA made reference to the rights of mine workers to refuse dangerous work, as well as to the rights of union representatives to require its cessation where they identified it as being of serious and imminent risk to the safety and health of operatives. This was the only example of claims as to the existence of such measures that the research was able to discover at the level of any of the mines investigated in Indonesia. The representative who provided this information suggested that the reasons for the strong development of the rights for union engagement in this particular CBA were essentially two fold. First, at the time of the negotiation of the CBA, the company had been well-informed and positive concerning experiences of similar arrangements in its operations elsewhere in the world. Second, it had initially sought to develop its operations in Indonesia at the time of the country's return to democracy, and it had wished to ensure it achieved co-operative arrangements and good labour relations to support its business in Indonesia. Since that time, according to the respondent, the operation of the measures in the CBA were regarded as continuing to contribute to the successful business of the company and therefore there was generally a favourable culture within the company that supported their continuation.

But this case was exceptional and for the majority of the participants a CBA was something to which they aspired and which either did not exist for their union within the mine or, if it did, made no reference in any systematic or detailed way to matters of representation and consultation on OSH. Thus, several representatives claimed that there was a CBA in the process of negotiation at their workplace, but in only a few cases was it finalised and operational. Among these few situations, even fewer participants indicated that the CBA covered matters such as the arrangements for consultation between the management and the union on safety matters, the provision of

training, relations with contractors, and arrangements to inform and involve union representatives in visits from the regulatory inspector.

Aside from trade union and employer support for consultation and representation on OSH, a further main source of support for worker representation and consultation can come from the engagement of the regulatory inspectorate. In many jurisdictions, specific requirements are imposed on employers to inform representatives of the presence of regulatory inspectors in mines. In others, there may be a further right for the representatives to accompany the inspectors during their visit, as well as to be able to make representation to the inspector. Provisions also exist in some jurisdictions that require the inspector to confirm or overrule the actions of representatives in relation to stopping work that is imminently dangerous. But none of these practices seem to have applied in the coal mines we studied:

When inspectors visit, the union is not invited
Mine union representative, East Kalimantan

Research in other countries and in other sectors further shows that when regulatory inspectors see the role of worker representatives as making a positive contribution they can be extremely influential in supporting this role within workplaces, especially during their visits (EU-OSHA, 2017; Walters et al, 2016a and b). However, this does not seem to have been the case in the mines we studied. The plant-level union representatives generally found their experience of the inspectorate to have been fairly unhelpful. The majority reported having very little, if any, contact with the inspectors during their visits to the mines. They said that it was normally the head of technical safety at the mine who contacted the inspector and the union was not involved. It was further suggested that in these circumstances the only chance a union representative might have to become involved with the inspector's visit would be if the representative were a member of the safety department:

They always talk with the management. So if the union representative is in the Safety Department, then they see the inspector
Union representative, East Kalimantan

The main exception to these common experiences was presented by the representative from the foreign-owned company discussed above, where there was a strong CBA that included substantial material addressing OSH. This representative said that, when an inspector visited the mine, the company always invited the union to accompany them during their visit. The union used this opportunity to talk with the inspector and air concerns. He went on to say that the inspectors were generally very supportive and there was a good relationship between them and the trade union at the mine.

A few other representatives also reported some positive aspects of their relations with inspectors. For example, one explained that, while the union representatives were not able to accompany the inspector during the visit, they were informed of the report that was made at its outcome and invited to a meeting with the management and the

inspector in order to discuss the report. Two of the representatives who worked for contractors reported that, while they believed there was some contact between the union for the directly employed workers of the mine operator and the inspector, as the representatives of the workers of contractors they had no contact with the inspector at all.

The further point in common for most representatives who participated in the study was agreement that in the case of fatal or very serious accidents it was likely that the inspector would be obliged to involve the trade union. Indeed, some participants appeared to be only aware of the inspectors in this context:

Inspectors are only coming when there are accidents — especially fatalities
Union representative, East Kalimantan

While the representatives were not normally involved in joint investigations of accidents with the mine management, they nevertheless anticipated that they might receive information from regulatory inspectors visiting the mine to investigate serious and fatal accidents. This was because it was accepted that one of the functions of the plant level union was to represent the interests of any of its members who may have been involved in such incidents.

5.4.5 Interaction with the employers' arrangements for safety and health

The arrangements that the mine management had put in place for the operation of safety and health at all the mines where the participants in the study worked — as described by these participants — appeared to be strongly behaviour-based and to include a substantial level of monitoring of the mine workers' compliance with their requirements. Indeed, when asked about their concerns in relation to safety and health in the mines where they worked and to identify the practices and processes involving safety in which they were most frequently engaged, many of the participants talked about defending their members in disciplinary actions taken against them by the mine management for their apparent failure to follow safety rules. As one representative who worked for a contractor at a mine site said of his members:

They are very afraid because safety means punishment for them
Union representative, contractor, East Kalimantan

A related issue, already alluded to in the previous section, and something in which participants frequently became involved, was defending union members against charges of culpability and blame following accidents. Here, participants suggested that their members feared both dismissal and being held financially accountable for the damage to plant and equipment that may have resulted from such incidents. Indeed, their employers' concerns about the economic costs of accidents and incidents were prominent in the reports of the mine level representatives on many of the aspects of the experience of safety and health in the mines in which they worked and generally pervaded their awareness of this experience.

In some mines, as part of their arrangements for safety, the management had taken further initiatives to encourage the engagement of workers in reporting safety matters. Examples were cited of the appointment of so-called 'safety representatives' by the mine management in some mines, whose functions included 'analysing the hazard potential of work activities and the input from workers on safety'. Mine workers were encouraged by the management in these mines to report safety issues to the 'safety representatives' who in turn would either attempt to resolve them or report them to the safety department.

Generally, these approaches to promoting and policing the safety behaviour of workers that were adopted by the mine management, served to marginalise the role of trade union representation in the systems for safety at the mine. At the same time, they distanced the possibility of the development of arrangements for joint consultation on safety matters between management and unions beyond those laid down in the formal meetings between the union committee and managers concerning labour relations generally at the mine.

5.4.6 Inter-union relations and consultation on safety and health

As we have already made plain, a consequence of the democratisation process in Indonesia has been the presence of a multiplicity of trade unions at the workplace level and the national union officials interviewed in the present study confirmed this to be the case in the mining sector. Plant level trade union participants in the study articulated concerns about the various challenges they felt resulted from this situation. They frequently alluded to the multiple presence of other unions at their worksite, both among the directly employed workforce, as well as among the contractors. Even where they reported favourably concerning their efforts to achieve a united position on safety and health issues in such situations, the presence of multiple unions had clearly made the process of achieving this more complicated than might have been the case where a simpler form of institutional representation had been enabled by statutory means. Subsequent legislative reforms also referred to in Section 5.3, which were designed to achieve more efficient labour relations by giving collective bargaining rights to the majority union at a workplace, did not always appear to have resolved the issues caused by multiple unions at the same mine site. Participants gave examples of situations in which the safety and health issues experienced by the workers of contractors and raised by their trade union were not supported by the union recognised by the mine operator, leading to serious problems in their resolution. In other cases, failure to agree a joint position among the multiple unions within the worksite allowed the mine management opportunities to pursue strategies which participants felt to be damaging.

Generally, the organisation of employment in Indonesian mines, in which the use of significant numbers of contractors and sub-contractors is the norm, added complication to the institutional representation of labour on all matters of industrial relations, including those relating to OSH. But the presence of multiple employers at worksites also had other effects, both on OSH directly, and on the possibilities for representation and consultation on these matters. In some cases, the union representatives who were

employed by contractors, as well as those employed by the mine operator, reported no differences in the experience of arrangements for safety and health between the directly employed workforce and that employed through contractors. In other cases, such as the one case that was reported of provisions in the CBA, which also addressed safety and health procedures for contractors, there was evidence of the mine management recognising the challenge of a multiple employer worksite and making arrangements to meet them, on which representatives reported favourably. Such agreements however were rare and in the majority of cases, representatives reported the usual difficulties arising from the use of multiple contractors on the same worksite. These included poor communication of information on safety and health to the workers of contractors; greater fear and job insecurity among the contractor workforce making them reluctant to speak out on OSH issues; perceptions of 'the policing of the safety behaviour' of the workers of contractors by the main mine operator and sanctions for rule-breaking more punitive than for the employees of the main operator; pressures on contractors to get work done to deadlines leading to workers taking 'safety shortcuts'; weaker union presence among contract workers; poor relations between the unions organising contractor workers and those of the main mine operator, making concerted action on safety and health issues more difficult; and limited contact between workers and their representatives working for contractors and regulatory inspectors except after accidents have already occurred. Not all of these difficulties were present among all contractors, but generally both the union representatives who worked for contractors and those who were employed by the main mine operator each cited experience of at least some of them.

5.5 Conclusions

The present situation of worker representation and consultation on safety and health in Indonesian mines falls some considerable way short of the regulatory ideal, whether it is that of the rather general requirements of ILO Convention 176 or those of detailed regulatory provisions governing the implementation and operation of arrangements of representation and consultation on safety and health in coal mines, such as those of several of the other countries included in the present study. In summary, this review of current practice and its antecedents has found little evidence of the presence of systematic arrangements to facilitate and support the representation of mine workers' safety and health in coal mines. Therefore, the role of representation and consultation, while not entirely absent from some mines, does not appear to have sufficient traction to make the significant contribution to improving arrangements for health and safety in coal mining in Indonesia that research has shown it to have achieved elsewhere.

Nor has the present study found evidence of the provision of support from the regulatory agency for the development of such practices. And while the trade union officials at the national level who participated in the study demonstrated concern about the current situation and a strong desire to bring about changes that would increase the role of trade union representation, they were unable to furnish any significant signs of their success in this respect. Nor did they appear to possess the resources that would be required to provide the significant and substantial support for training, information and intervention on critical issues that mine level union representatives identified as among

their prerequisite needs to achieve the effective development of more systematic approaches to representation and consultation at the level of the mines.

The absence of a regulatory steer, in combination with the relatively complex but nevertheless comparatively weak presence of trade unions, has allowed the companies responsible for mining operations considerable freedom to implement their own arrangements to engage with mine workers on OSH matters. These arrangements, such as they are, focus mostly on behavioural aspects of safety and are reported by the mine worker representatives that took part in the present study to instil considerable insecurity in the labour force of both the main mine operator as well as that of the contractors that operate in considerable numbers in coal mines. Consequently, participants explained that mine workers equate managerial notions of 'safety' in mine work with those of fear, punishment, and pecuniary and job loss. This would seem to be hardly a supportive environment in which to establish a culture of worker representation and consultation on OSH.

While the absence of good data on safety and health outcomes makes it impossible to examine the consequences of this with any degree of reliability, it is evident that the contribution to prevention that has been made possible by practices involving the representation and consultation of workers and the institutions of labour relations has been quite limited. However, despite this, and the generally unsupportive culture in which representation and consultation take place, there are signs that, in some situations in which the known preconditions for its occurrence and effectiveness are present, at least to a limited extent, such representation and consultation do occur and their outcomes are generally seen as beneficial. The example of the foreign mining company in which a CBA included quite well-developed arrangements for the practice of consultation and representation suggests that, in certain circumstances, such approaches are possible in coal mining in Indonesia, and that organisations that are perhaps positively informed by their practices in this respect elsewhere in the world are able to introduce such measures with satisfactory results.

While this was easily the most developed description of a system that included arrangements for representation and joint consultation on safety and health, the accounts given by representatives from some other coal mines also occasionally provided evidence of good practices in this respect. However, in these cases such practices seldom amounted to what might be considered to be systematic approaches to representation and consultation. Instead, more typically they occasionally featured as the subjects of labour relations when trade union plant level organisation included issues of safety and health among those on which it had made reactive representations to management, with some success.

It seems that moving such experiences towards more systematic approaches to representation and consultation in Indonesian coal mines is further hampered, not only by the organisation of work and employment in which mines are multi-employer worksites where quite complex labour supply chains operate, but also by the multiplicity of somewhat ineffective local trade unions that are able to operate in such worksites

under the current statutory arrangements governing labour relations in Indonesia. Attempts made by the state to rationalise practice in relation to these arrangements do not appear to have helped systems for representation on OSH significantly. Moreover, the limited interest displayed in these matters by the Ministry of Mining and Mineral Resources and its Mines Inspectorate, along with the absence of a clearly stated formal regulatory provision, in effect mean that the regulatory steer that has been shown to be effective in supporting arrangements for worker representation and consultation in other countries and sectors, is virtually entirely absent in the case of Indonesia.

6 South Africa

6.1 Introduction

Understanding the present-day practice of worker representation on occupational safety and health (OSH) and its outcomes in South Africa requires some appreciation of the historical contexts that have helped to shape it. This means not only taking account of the development of the mining industry in the country's colonial past, but also the effects of the apartheid regime and the struggle to achieve its overthrow, as well as the process of transformation in South African society that has occurred since. This was the crucible in which modern trade union representation on safety and health in South African mines was formed and from which the leading mine workers' trade union, the National Union of Mineworkers (NUM), came to play a pivotal role in the wider political struggle to create a more democratic society. These latter events are, of course, the substance of relatively recent history. The structure and content of the regulatory provisions for workers' representation on safety and health in coal mining are a direct result of them, but their legacy also has many indirect effects on how arrangements for the representation of mine workers on matters of safety and health are understood and operationalised in practice. Moreover, the story of the present day operation of arrangements that began unfolding at the start of the post-apartheid transformation is far from over. It has been bound up with both the dynamics of this transformation and its widely acknowledged challenges, for the economy and society alike. These remain very much in evidence, and they have resulted, among other things, in further diversity in unionisation and labour relations in the mining industry, which have had implications for worker representation on OSH and were frequently reflected in the testimonies of participants in the present study.

This said, the content of the present chapter is structured along similar lines to that of the other country-based accounts in Volume 2 of the report. It begins with a brief description of the specificities of the methods of data collection employed during the documentary analysis and fieldwork in South Africa, before presenting the main findings of the study. These are organised into an outline of the development and current features of the coal mining industry in the country, its health and safety performance, regulation and labour relations profile; a description of current arrangements for worker representation on safety and health in South African coal mines and their recent development; and key findings from interviews with health and safety and other workplace representatives of mine workers, as well as with trade union regional and national officials and officers, concerning their experiences of current practice on worker representation on health and safety and the supports and barriers to its effectiveness in improving the health and safety of mine workers. The chapter ends with some conclusions concerning key elements of structure, content and context that help to shape the practice and outcomes of worker representation on OSH in coal mining in South Africa.

6.2 Methods of data collection and analysis

The study of the experience of worker representation on OSH in South African mines was informed by a review of the literature and the regulatory framework governing the current arrangements for representation, their origins, development and effectiveness. The extent of the literature on these arrangements and their outcomes was comparatively limited and there appear to be no reliable studies documenting their effects on health and safety performance in South African mines, nor indeed are there many that address their impact on arrangements for managing OSH in the mines. The review of the regulatory framework benefited from the presence of somewhat more documentation. Influences on the development of the present arrangements could be traced from the policies and aspirations of the major trade unions involved, through the reviews and recommendations of Government Commissions, to the present arrangements in the Mine Health and Safety Act, No. 29 of 1996 as amended, while also taking account of international influences such as those of ILO Conventions on these developments and situating them in relation to the parallel development of requirements on the institutions of wider labour relations, such as determined by the Labour Relations Act 1995 (which was amended 2002).

The study concerns arrangements and experiences of the National Union of Mineworkers (NUM) — which remains the major union for black mine workers in coal mines — and in order to gain an indicative sense of what worker representation on OSH looks like in South Africa we have focused on its approach here. Representatives from three of the eleven NUM regions took part in the study and the arrangements for representation were broadly similar in each. There are other trade unions present in coal mining and their approaches to the subject may vary, as we will discuss later.

Interviews with mining union officials were undertaken with the NUM at the national and regional level (10 regional official and mine-based representatives), with Solidarity (2 officials) at the national level, and through correspondence and informal discussion with national officials from the National Union of Metal Workers of South Africa (3 interviews with national level officers and officials responsible for OSH matters). Unfortunately, it was not possible to interview representatives from the Association of Mine workers and Construction Union (AMCU), who were not available at the time of the fieldwork visit. Despite the recent rise of AMCU, the NUM remains the main trade union in coal mining and, for the purposes of the fieldwork, interviews were conducted with its regional and branch representatives as well as with full-time health and safety representatives sourced with the assistance of the NUM from four of its 11 regions, and in every case from branches representing coal miners.

All of the mine level health and safety representatives held office in very large mines — each with on average between 2,000 to 3,000 mine workers. Mostly, the mines were well-established, often originating as underground mines, with the open-cast mining having developed alongside what were originally underground workings. In some mines, both were still active, while in others the predominant form of mining was open-cast.

Ten mine worker trade union representatives with health and safety functions took part in the study. They included:

- Region 1 (Highveld): 3 full-time health and safety representatives, 1 NUM Branch Chair, all from different large coal mines and 1 Regional Secretary (5);
- Region 2 (PWV): 1 regional secretary for safety and health (1);
- Region 3 (KZN): 1 full-time health and safety representative and secretary of the NUM Branch OSH structure; 1 NUM Branch secretary from a smaller mine (1200 mine workers) (2);
- Region 4 (Rustenburg): Chair and Deputy of the NUM Branch OSH structure in one large mine (2).

Therefore, all of the safety and health representatives we interviewed were full-time representatives; that is, they were quite senior and experienced representatives. However, most had been sectional safety and health representatives before this and were able to share these experiences as well as those of being a full-time representative.

In addition, a former Chief Inspector of Mines agreed to be interviewed and there were further discussions and written correspondence between the researchers and representatives of the Chamber of Mines and the Mine Health and Safety Council. The researchers also participated in extensive discussions during a one day symposium organised by the Centre for Sustainability in Mining and Industry at the University of the Witwatersrand and attended by representatives of NUM, Solidarity, NUMSA and UASA, as well as representatives from the Chamber of Mines, the Mine Health and Safety Council, health and safety training organisations, the National Institute of Occupational Health, ILO and local researchers.

Formal interviews were conducted on a one to one basis with national level trade union and other officials, but on a group discussion basis in the case of all the workplace/sectional representatives. The same generic interview guide that had been used in other countries was again used as the basis for the questions posed in all the interviews, but it was adapted to fit the South African context. It was further adapted to account for the different form and structure used for the interviews (whether they were one to one or group interviews), so as to draw out the different experiences of the interviewees in relation to the issues covered. Each interview lasted for a minimum of one hour, with the group interviews/discussions taking considerably longer — between 2 to 3 hours. In these latter cases, representatives from different mines and different regions, occupying different positions in the structures of representation present in mine-working, were deliberately mixed in the interview groups in order to identify common points and points of comparison and contrast between them, which were then drawn out and explored in greater detail in discussion within the group. This was found to be an effective means of enriching the data collected. All the interviews were recorded and transcribed for purposes of analysis.

6.3 The contexts of worker representation on safety and health in South African coal mines

This section first outlines the recent history of the development of provisions for worker representation and consultation on safety and health in South African mines. At first glance, such provisions would seem to have suddenly appeared fully formed in the Mine Health and Safety Act 1996. But this is only a small part of the story. In truth, like most other aspects of current life and work in South Africa, they emerged as part of the process of change characterising the end of apartheid in the early 1990s, and the moves towards a more democratic society. To understand their features and the challenges confronting their operation, it is therefore necessary to take some account of earlier periods in South African history and especially the implications involved in its transformation from the apartheid period to the present. Having touched upon this history, the section then goes on to describe the structure of the current regulatory provisions on worker representation on OSH in coal mining and to examine published knowledge concerning their operation.

6.3.1 The background to current practice on worker representation on health and safety in coal mines

South Africa is a major coal producing economy, possessing the sixth largest coal reserves in the world. Mining generally is a longstanding and important industry in South Africa and is well established as the major industrial support of the South African economy. Large-scale mining began in the mid-19th century following discovery of diamonds and gold (platinum was discovered in the early part of the 20th century). All these materials continue to be mined in a major way, along with many others, making the country the world's largest producer not only of platinum and platinum-related metals, but also of chrome, manganese and vanadium, as well as still being a major producer of the world's gold and diamonds. Coal mining began around the same time and in same area as gold mining, in the Witwatersrand during the second half of the 19th century, with the first coal being extracted in industrial quantities on the Highveld coalfield near present day Johannesburg. Nowadays the major sources of coal and concentration of collieries are in the Mpumalanga area, to the east of Johannesburg, where the main coalfields are found around the towns of Emalahleni, Secunda, Middelburg and Ermelo; with smaller numbers of mines elsewhere in South Africa, for example, in KwaZulu-Natal, Free State, Limpopo and Gauteng.

Demand for coal grew substantially during the industrialisation of the country from the 1940s. Initially, ownership of the sector was mainly in the hands of the old national mining houses. By the 1970s, some of these companies were themselves global in their mining interests; indeed, they include among them the predecessors of two of the world's largest global mining corporations, BHP Billiton and Anglo American. Global companies continue to have a significant place in the industry in South Africa. Over 80 per cent of coal is produced by the five largest mining groups, including Anglo American Coal and Xstrata. Also among them, is Exxaro, South Africa's largest black-controlled mining company. Coal generates by far the largest proportion of South Africa's

electricity, with about half of the coal produced in South African mines contributing to this, and just under a further quarter being used for the production of liquid fuels mainly by Sasol, a South African originated, integrated energy and chemical company. The remaining quarter of coal production is exported.

Coal mining is the third largest form of employment in the South African mining sector, after mining for gold and the platinum group of metals, with some 87,500 workers mining coal. To understand the nature of current employment in South African mines, however, it is necessary to be reminded of the system of organised migratory labour that dominated mining employment from its beginnings in colonial times until the end of the apartheid regime in the 1990s. This system of employment, prevalent throughout mining in South Africa, was significant among the factors responsible for the poor working conditions, the spread of fatal diseases such as silicosis, TB and AIDS, as well as poor health, safety and welfare performance, all of which were widely acknowledged to be associated with mining in the country in former times (see for example, Allen, 2003: 3-75). This said, there is also some evidence to suggest that coal miners were relatively more settled around the mines in which they worked than the predominantly migrant labour used in other mines (Alexander, 2000).

Most observers agree that the activities of the large mining corporations were linked with colonial and, subsequently, apartheid policies through the migrant labour system and each was complicit in the creation of the negative health and social impact of mining (Flynn, 1992). But as many have also argued, this complicity was quite complex, and in the later years of the apartheid regime it also included many actions by the same corporations to improve or alleviate the plight of the migrant miners and the wider health and social consequences of labour migration (Hamann, 2004).

In relation to OSH within coal mines, the distinction between colonial and apartheid times and those of the post-apartheid transition period are stark. In this project, we are primarily concerned with the later period, but once again it is necessary to acknowledge, albeit briefly, the scale of the problem inherited by the emergent democratic South African state in the early 1990s. For example, commenting on injury and fatality data from South African mines, in 1988 researchers noted (Eisner and Leger, 1988:1):

The underground fatality rate for South African coal mining is, on average, eight times that of the UK, four times that of all EEC coal mines taken together, and over double that of the USA. Despite the unreliability of the injury rates, much has been made in South Africa of their rapid decline, an emphasis that appears to be misplaced.

Although health and safety outcomes were somewhat better for coal mining than was the case in relation to gold and platinum mines, an additional element of the experience of injuries and fatalities among coal miners was the high incidence of multiple fatalities resulting from mining disasters, which occurred with a frequency that was far greater than elsewhere in the world. Indeed, as Hermanus (2007) suggests:

The steep peaks that punctuate the downward trend in the fatality rates..... for coal mines, clearly show the effect of mining disasters on fatality rates (sharp reversals in safety performance in years in which disasters occurred).

Many of the multiple fatalities in South African mines were the result of explosions. Indeed, the 1995 Report of the Commission of Inquiry into Mine Safety chaired by Justice Leon revealed a disproportionately high incidence of such explosions in South African coal mines when compared with elsewhere (Leon, 1995).

Under-reporting and misreporting were cited by researchers as the most probable explanations of apparent improvements in injury rates (see for example Eisner and Leger, 1988; Leger, 1991; Hermanus, 2007). Historical performance in relation to work-related ill-health was even more difficult to quantify reliably, partly because the occurrence of lung diseases, such as tuberculosis and silicosis, was massively underreported in official statistics on occupationally related mortality and morbidity among black miners and partly because infectious diseases, like TB, but also conditions including alcoholism, and poor nutrition, hygiene and health associated with the migrant labour system, while clearly a consequence of employment strategies adopted by the mining companies (with the collusion of the state), were either ignored or largely treated as public health issues occurring outside the workplace, rather than as occupational ones.

Based on its review of available evidence, the 1995 Leon Commission concluded that exposure to dust in mining had remained virtually unchanged for 50 years. Moreover, the huge problem of tuberculosis among miners and those with whom they lived in proximity, which was exacerbated by the system for the accommodation and use of migrant labour during these early periods, was not seriously addressed. It has been similarly argued that the concentrated focus of the development of HIV/AIDS in South Africa in the 1980s was to a large extent a consequence of these same migrant employment and accommodation strategies of the mining companies. It has also, however, been argued that the migrant labour system meant that black miners were generally not exposed to mineral dust for long enough periods for significant numbers to contract silicosis, an argument that was overturned when pioneering studies revealed high levels of silicosis in black mining villages (Ehrlich, 2007).

Labour stabilisation, which started in the 1980s and 1990s, was intended to give experienced miners the right of return to their previous job, provided they did so within a specified time. It did not alter the fundamentals of the migrant labour system, but meant that individual miners on average spent a longer time in a particular mine. This, of course, implied more time exposed to the adverse circumstances of living and working in the mines and a greater chance of harm to health and safety if these conditions remained poor, including greater exposure to dust and the risk of silicosis in hard rock mineral mining, as well as tuberculosis among this population²⁵.

²⁵ In coal mines the risk is for pneumoconiosis. There still are new cases being reported coal worker pneumoconiosis being reported (see Mines Health and Safety Inspectorate (2017)).

Overall then, the conditions of work and employment for black miners in South African mines, including coal mines, in the colonial and apartheid periods of South African history were the cause of large scale ill-health among miners and in the communities from which they were drawn, which went largely unrecognised by either the state or the companies involved. At the same time, the safety standards within the mines were poor and lagged far behind those in the mines of advanced market economies. Again, little was done to examine or address these deficits during this period, which meant that, in combination, these problems presented a huge challenge for the development of strategies to effect transformation and improve OSH in the post-apartheid period. Comparison with experience in other countries begs questions concerning the role of trade union representation on safety and health matters during these earlier times. It is well documented that the uncompromising and repressive nature of the apartheid regime allowed little scope for organised black labour either in consultation on OSH matters, or indeed in labour relations more generally. In contrast, white mine workers were organised, and their trade unions were involved in representing their interests on OSH matters, as is evident from their industrial action over excessive silicosis referred to previously.

Here is not the place to detail the rise of trade unionism among black mine workers in South Africa, a subject on which there is now an extensive literature. A couple of important points need, however, to be stressed. Although there had been unsuccessful attempts to establish black mine workers' unions previously, a loosening of legal restrictions on black workers occurred in the 1980s, which itself reflected progress in the broader struggle against apartheid, despite continued hostility from employers and the state. This was especially so after the recommendations of the sixth report of the Wiehahn Commission in 1981, and these developments paved the way for black activists to establish the NUM in the goldfields in 1982. In June 1983 a Memorandum of Agreement was signed between the union and the Gold Producers' Committee of the Chamber of Mines. Though growing in size at this time, the NUM membership was still relatively small and its capacity to engage in successful negotiation with employers was limited to relatively few issues. Occupational health and safety was one of them, however, and later that year, as its influence was spreading in other sectors of the mining industry, the wider implications of this were to become evident. On 12 September 1983 an explosion in the Hlobane Colliery killed 64 mine workers. According to Allen (2003:105-112), this event helped crystallise the NUM's role and profile as a representative organisation concerned with the protecting the safety and health interests of mine workers. In particular, the publicised demands of the nascent NUM following the disaster at Hlobane Colliery drew attention to the right to refuse dangerous work and the right for miners to have their own health and safety representatives. In their proposed 'Bill of Rights' released in a press statement in September 1983, the NUM argued (Allen, 2003:142):

- Mine workers had the right to have their own safety representatives
- They had the right to refuse to work under conditions or practices unsafe, unhealthy or illegal
- They could demand a special government inspection of suspected violations of safety regulations or imminent dangers
- They should be able to review the failure of Government Inspectors to conduct inspections into safety
- They should be able to exercise rights on behalf of the safety and health of others
- They should be able to institute and testify in proceedings without interference or victimisation
- They should be allowed to accompany Government Inspectors during inspections without loss of pay
- They should participate in the development of mining procedure plans
- There should be adequate health and safety training for mine workers
- Mine workers should be protected from discrimination for exercising their statutory rights.

The following ten years saw the growth of the NUM into the main trade union for black mine workers and an organisation at the centre of the ultimately successful struggle to overthrow the repressive apartheid state. During this time its concerns about safety and health and the representation of black miners' interests in these matters remained central to its actions and image as a trade union.

6.3.2 Post-apartheid legislative reform

OSH performance on coal mines improved dramatically during the post-apartheid era in South Africa and today is argued to be on a par with US industry performance. Most fatalities in South African mines nowadays still occur in gold mines (Chamber of Mines of South Africa, 2017).

During the initial period of transition following the overthrow of apartheid in the 1990s, the state adopted a range of strategies to influence mining, leading to the emergence of a sector-wide Mining Charter to redress legacy impacts of the racialised past. The 2002 Charter required mining companies comply with requirements for a percentage of black ownership and develop social and labour plans committed to addressing employment practices and responsibilities concerning social and environmental consequences of the mining operations for which they are granted licenses. These include those relating to the health and safety consequences of the employment strategies adopted by the industry. It further obliged them to report on employment practices with respect to gender and race for all tiers of employees and to help ensure former mine hostels were converted to single room accommodation or family units. They also included the need to make efforts to employ locally and to provide direct benefits to the local economy through sourcing services for the mine through local business and investment in development programmes. Progress against the aims of the Charter has been monitored and periodic revisions of its requirements made in new versions of the sector-

wide milestones adopted against which to measure progress. These have encompassed no new cases of silicosis, getting mining fatality on a par with benchmark countries, reducing noise-induced hearing loss, as well as harmonisation strategies for the control of TB and HIV. OHS milestones have been set as voluntary targets in the sector. The current version of the Mining Charter was adopted in 2017 and milestones for measuring improvement across all these issues set up to 2024. However, the Mining Charter 2017 is not yet agreed by the industry and it is not clear if OHS will form part of it. One of the objections by the Chamber of Mines to putting OHS in the Mining Charter is the implication that the targets that are set would no longer be voluntary

Substantial changes have occurred in the patterns of use of migrant labour in the industry in recent decades (and indeed were already taking place before the end of the apartheid regime), although the legacy of some of these former practices remain in parts of the mining industry. Nowadays more continuous employment is favoured. This has also helped bring about more local employment and a career structure in mining is also feasible for some black miners. However, this has not been a smooth transition and many observers have pointed to both the continuation of the former systems of migratory employment and their effects. For example, while the reliance on single sex hostels to house migrant labour in mines is far less than it once was, such hostels still exist. Moreover, the practices adopted by mining companies as alternatives, such as paying mine workers an allowance to find their own housing, are widely agreed to have contributed to further problems, such as the growth of informal settlements in the vicinity of the mines, with all the attendant social, health and welfare issues arising from the absence of supportive infrastructures in such settlements.

Following the election of the new government in 1994, one of its first actions was to set up the 1995 Leon Commission of Inquiry into Mine Safety already referred to. Its report recommended dedicated legislation to address occupational health and safety in mines, and that mine employers take urgent steps to improve monitoring standards and practice, medical surveillance, and the control of health risks. It called for enabling provisions to help achieve a new approach and led to the introduction of the Mines Health and Safety Act in 1996.

This Act introduced process-based provisions on the *management* of health and safety into the mining industry in South Africa which were in line with both ILO Convention 176 on health and safety in mining that was being drafted around the same time, and ILO Convention 155 on health and safety more generally. This meant, of course, that the provisions were also in line with prevailing trends in health and safety regulation in the advanced market economies of Europe, Canada, Australia and New Zealand. The process-based standards thus introduced required that mining employers bear primary responsibility for a safe and healthy work environment and use risk management approaches to address health and safety hazards. They provided *all* mine workers with rights to participate in health and safety, to receive health and safety information, to receive training and to withdraw from dangerous workplaces. The Act also introduced tripartite institutions charged with responsibilities to develop policy, legislation, regulations and promote a culture of health and safety.

From the perspective of the present study, the main significance of these new provisions is their requirements for worker representation, which we will discuss further below. However, they are significant in several other respects too. Importantly, they are typical of provisions that set the three 'pillars' for the regulation of OSH management, or the 'prevention triangle', with its three vertices requiring: competent employer engagement with responsibility for evaluating and controlling risks; worker representation contributing practical knowhow and monitoring management functions; and state regulation and regulatory inspection (see for example Bluff and Gunningham, 2004; Gunningham and Johnstone, 1999) providing control. That is, they are framed within the parameters of process-based regulation on OSH, implementing a model of regulation that was by now well established across most advanced market economies and in the regulatory thinking promulgated through the ILO at global level. Thus, they combined what was commonly required in the regulation of safety and health arrangements in most advanced market economies and by ILO conventions, with demands of the NUM that had originated in its 'bill of rights' some ten years previously.

The measures on worker representation in the Act also need to be viewed in relation to those on more general worker representation that were developed during the same period. In particular, the measures of the Labour Relations Act 1995 on the rights of trade unions, collective bargaining arrangements, collective agreements and workplace forums which help to provide the wider South African rubric in which the specific measures on representation and consultation on health and safety are situated. A feature of these wider provisions that stands out is the extent to which they provide legally-based support for arrangements on representation and consultation at the workplace level through the implementation of collective agreements (see for example Benjamin and Taylor (eds), 2002).

The extensive detailed and specific provisions on representation and consultation are found in Chapter 3 of the Mines Health and Safety Act 1996. Section 25 (1) of the Act requires the appointment of a health and safety representative for each shift in all mines with 20 or more employees (see section 29 for provisions governing the election of representatives). Section 25 (2) requires the establishment of health and safety committees on which representatives have rights to sit if there are 100 or more employees in a mine. Mine owners are required to conclude a collective agreement with the representative trade union in the mine to determine the details of the numbers of health and safety representatives, their election or appointment, the designated workplaces for which they have representative functions, the functions themselves and the facilities, training and assistance they must be afforded to undertake them, as well as procedures for arbitration and conciliation in the event of dispute. Similarly, the collective agreement is required to provide, where relevant, the arrangements for the establishment of a joint health and safety committee. The agreement must be concluded having regard to both the provisions of MHS Act and also those of the Labour Relations Act 1995, which deals with collective agreements more generally. In terms of the specific functions of health and safety representatives, section 30 of the MHS Act provides that an appointed representative may:

- represent employees on all aspects of health and safety
- direct any employee to leave any working place whenever circumstances arise at that working place which, with reasonable justification, appear to the health and safety representative to pose a serious danger to the health or safety of that employee
- assist any employee who has left a working place in terms of section 23 of the MHS Act²⁶
- identify potential hazards and risks to health or safety
- make representations or recommendations to the employer or to a health and safety committee on any matter affecting the health or safety of employees
- inspect any relevant document which must be kept in terms of this Act
- request relevant information and reports from an inspector
- with the approval of the employer, be assisted by or consult an adviser or technical expert who may be either another employee or any other person
- attend any meeting of a health and safety committee of which that representative is a member; or which will consider a representation or recommendation made by that representative
- request an inspector to conduct an investigation under section 60; or the Chief Inspector of Mines to conduct an inquiry in terms of section 65 and participate in these
- participate in consultations or inspections on health and safety with:
 - the employer or person acting on behalf of the employer; or
 - an inspector (under section 50(2)(e))
- inspect working places with regard to the health and safety of employees at intervals agreed with the employer
- participate in any internal health or safety audit
- investigate complaints by any employee relating to health and safety at work
- examine the causes of accidents and other dangerous occurrences in collaboration with the employer or person acting on behalf of the employer
- visit the site of an accident or dangerous occurrence at any reasonable time and attend a post-accident inspection
- co-operate with the employer in the conducting of investigations in terms of section 11(5), which requires every employer to work in co-operation with a health and safety representative in health threatening situations. Section 11(6) provides that this investigation may be conducted jointly with an inspector
- perform functions agreed by the health and safety committee; or prescribed.

The rights and powers of appointed representatives (see section 29 for provisions for the election and appointment of representatives) apply only in respect of the designated working places for which they are responsible. They are frequently referred to as 'Section Representatives' for this reason. Although they are legally entitled to time with pay to undertake their health and safety functions and receive training to do so, they continue to work at their normal jobs at other times. However, section 26 of the Act also

²⁶ Section 23 empowers an employee to leave any dangerous working place and requires every employer to follow certain procedures in this regard.

makes provision for the appointment, following election (see section 29(2)), of 'full-time' health and safety representatives in accordance with details to be spelled out in a collective agreement between the employer and the representative trade union or, in the absence of a representative trade union, registered trade unions with members in the mine. The number of such representatives must be agreed between the employer and either the representative union or, if there is none, through consultations with the registered unions, or with employees if the latter unions are not present either. The qualifications required to be a full-time health and safety representative may be agreed by the health and safety committee. Full-time representatives may exercise their powers and functions in all parts of the mine for which they are appointed.

In short, therefore, the provisions of the MHS Act 1996, in conjunction with those of the Labour Relations Act 1995, provide a detailed and comprehensive framework of rights and functions for sectional and full-time health and safety representatives and joint health and safety committees in mining that are quite as developed as those found in the advanced market economies of Europe, North America and Australia. They are not identical to those in other countries, however, and have some features that would seem to be quite specifically South African. In particular, both the wording of the employees' 'right to leave' any 'working place' whenever circumstances arise that appear to the employee to pose a serious danger to their health or safety, under section 23, and its linkage with requirement to do so when they are so directed by a health and safety representative, under section 30(b), who is also required under section 30(c) to provide assistance to any employee who has left the working place in these circumstances in accordance with section 23, would seem to be a particularly South African construction. The provision for two types of health representatives within mines, where one is defined by the working place to which he or she is designated and who conducts his or her health and safety activities through release from the duties of a normal job, while the second type is engaged in full-time health and safety representative activities across the whole mine for the duration of their period of appointment, provides for a two-tier system of worker representation on safety and health, which at least as far as the regulatory provisions are concerned, would again seem to be both a comparatively generous provision and one that is particularly South African. Linked to these features of worker representation on safety and health is the role designated for the collective agreement as the preferred instrument through which the details of the legislative provisions are to be applied in each mine. Through this, the trade union, and in particular the 'representative' trade union in the mine, is given considerable prominence in influencing the form and content of the measures to operationalise the regulatory provisions within mines. However, collective agreements are only found in large mines. On small mines there is very little knowledge about how arrangements for OSH representation are implemented and operationalised.

All these features are in keeping with the 'psychological moment' at which this and other legislation on employment rights was drafted in South Africa. It is clearly no coincidence that the institutions of worker representation are foregrounded by legislative means as part of the outcome of a long and bitter struggle — in which the black miners' trade union, the NUM, had played a pivotal role — to overthrow apartheid. How effective

these measures have been in achieving their aims is therefore a key question and it is to the search for evidence of this effectiveness that we next turn.

6.3.3 Operationalising the vision

There have been few studies of the effects of the measures on worker representation on health and safety included in the MSH Act 1996, which is perhaps surprising given its radical departure from previous regulatory models in this and other respects. However, there is a body of literature that documents wider changes in the mining industry in the post-apartheid period immediately following the Act. Several features of this period are evident. Firstly, the changes required by both regulatory and policy developments were considerable, and those on OSH arrangements were themselves part of far wider changes required across all aspects of the ownership, organisation and working conditions in the industry — changes that, furthermore, were designed to introduce approaches previously untried within South African mining. Secondly, it was necessary to implement them while at the same time supporting the continued productivity of the industry and its important role within the South African economy. Thirdly, of course, the changes were to take place in synchrony with and as part of those occurring in wider South African society and its political economy during the periods of reconciliation and transformation following the end of the apartheid era. The changes appear to have experienced a similar trajectory to these wider reforms — embracing a period of euphoric anticipation, during which the measures to achieve the desired changes were first introduced; followed by one in which it became increasingly clear that the measures alone were insufficient to produce the results desired. This period seems to have been followed by a further one in which actions have been proposed or taken to help to support means of achieving the original intentions of reform, or in which analysis has been undertaken which has led to the modification of the outcomes desired and the means of achieving them.

While there are few published accounts specifically relating to the measures on worker representation and consultation on OSH in the years immediately following the introduction of the MHS Act in 1996, it seems clear that by the early years of the new millennium, matters of health and safety in mining were still a cause for some concern. That the reforms were slow to take effect becomes apparent if the extent of fatalities in mining are compared with other industrial sectors in South Africa at this time. For example, using ILO figures, Hermanus (2007) points out that of the total of 908 workers who died in work-related accidents in 2001, 288 had died in mine accidents. Given that miners then accounted for fewer than 500,000 workers (less than 4% of the total workforce) in a national workforce of nearly 14 million, it is evident that a disproportionate percentage of work-related fatalities (approximately 15%) were associated with mining. While the major proportion of these were from gold mining, those experienced in coal mining were far from insignificant.

Tripartite engagement, required under the MHS Act, is formalised in the shape of the Mine Health and Safety Council (MHSC), a national structure established under the Act, tasked with considering the state of health and safety in mines, proposing policy and

legislation, commissioning research, and providing advice to the Minister of Mineral Resources. Through the MHSC, trade unions, government and employers come together to undertake mandated joint responsibilities, which include a biennial review of health and safety. The review takes the form of a Mine Health and Safety Summit. Concern about the high fatality rates and the apparent failure to reduce them to more acceptable levels, as well as wider aspects of work-related ill-health in mines, led the 2003 Health and Safety Summit to set new targets on safety, with the aim of reducing fatalities and serious injuries to internationally comparable levels, as well as achieving major reductions in silicosis and noise-induced hearing loss. But five years after the so-called 2003 milestones it seemed clear these targets would not be met and the Mine Health and Safety Inspectorate, housed in the Department of Minerals and Energy, and acting under a Presidential instruction, conducted a health and safety audit in mining to determine levels of legal compliance. Among its tasks was to examine '... the existence of health and safety representatives and committees, election of representatives and training of representatives'. Its findings highlighted a number of concerns. The report of the Audit noted that after more than ten years since regulatory requirements concerning the election and appointment of health and safety representatives in mines had been adopted, still '.... *some* mines did not have health and safety representatives on all their designated working places' and *some* mines were not following proper election and appointment procedures. It further noted that in some mines there were no formal structures to establish health and safety committees (Department of Minerals and Energy, 2008).

According to the Audit report, the appointed health and safety representatives were inadequately and improperly trained and their rights and powers were insufficiently understood. Also, at some mines there was 'no procedure and/or no training on withdrawal or refusing to work in an unsafe working place'. Moreover, proper procedures for convening and recording meetings were sometimes not followed and health and safety representatives were not provided with appropriate means to record their findings. Among its recommendations it indicated that 'training of health and safety representatives must be prioritised as this will assist greatly in improving vigilance around health and safety issues at workplaces' (Department of Minerals and Energy, 2008).

The 2010 Summit launched a framework that included guiding principles, commitments and action points, to shift health and safety culture, referred to in the sector as the Culture Transformation Framework. As part of this process it commissioned consultants to undertake a study of health and safety arrangements in mining (Shaw et al, 2010). As far as worker representation and consultation on OSH were concerned, its results corroborated many of the findings of the previous Audit. For example, it found that although respondents were generally positive about the effectiveness of consultation, health and safety representatives often reported difficulties in gaining time and resources to properly consult with those they represented. Moreover, many sites included in the study reported that it was difficult to engage health and safety representatives and the workforce in planning and strategic OSH issues and the role of the health and safety representative was not always well understood. On a number of

sites, for example, they were seen as the company's safety officers rather than representatives of the workforce. At the same time, when the representatives took action to address OSH issues, the response was not always supportive of their role (Shaw et al, 2010).

Subsequently, researchers have begun to examine both the activities of health and safety representatives and the practice of refusing dangerous work under section 23 of the MHS Act and preliminary findings emerging from this work would seem to confirm the concerns revealed in the above investigations (Coulson, 2017).

At the same time, during the last decade or so, major changes have taken place in the nature of trade union representation in mining, reflecting, among other things, widespread frustration with the role of the NUM²⁷ and the emergence of alternative trade union representation, especially the rise of the significance and strength of the Association of Mine workers and Construction Union (AMCU) in platinum and gold mines, where it is now the largest trade union in some mines. AMCU was created in 2001 and, like the much longer established National Union of Metalworkers of South Africa (NUMSA), also has membership in the steel industry and elsewhere. While in coal mining the NUM remains the dominant trade union, these developments and the reasons behind them are also reflected in declining membership figures here too. Recent data shows, for example, that the union has lost more than 32,000 members within the last five years (Business Day, 2017) amid accusations of the failure of its leadership to heed the needs and wishes of members and 'cosying up to management' (Phakathi, 2013). Other researchers have also found evidence of the openness of senior shop stewards within mines to bribery as well as their 'capture' by the pervasive ethos of managerial strategies at the mine level in which such practices are the norm (Buhlungu and Bezuidenhout, 2008). The event most symbolic of the challenges faced by the NUM in recent years was the Marikana massacre in 2012, which took place during an unofficial strike in the Lonmin platinum mines and resulted in the deaths of more than 35 miners. But as Phakathi (2013), suggests, based on his own ethnographic studies (Phakathi, 2017) as well as the review of other recent research in mining, dissatisfaction felt by miners about the unrepresentative way in which the NUM union structures operated at mine level and beyond, was already deeply embedded among members of disenchanted work groups in other mines long before this incident. The strike was organised by workers' committees at the mine in defiance of the NUM, which was widely seen as both opposed to the strike and hostile towards its organisers. Following the massacre and the eventual settlement of the strike, disaffection with the NUM heightened and the haemorrhaging of its membership increased, with the rapid parallel growth of AMCU. Although these changes have been most prominent in

²⁷ There is a substantial literature addressing the role of the NUM in the change from apartheid to democracy and the challenges the latter has posed for an organisation that was formed hardly more than a decade before the final overthrow of apartheid and which played a central role in this. This is not the place to detail the consequences of this. Suffice to say that having played a central part both within the ANC and in leading industrial actions against the apartheid regime, the move to democracy and with it an ANC majority government in 1994, placed very different requirements on the NUM and its leaders, and has occasioned considerable and increasing debate concerning its capacity to meet them as a trade union representing the interests of mine workers during the recent history of the transformation to democracy.

platinum and gold mines, they might be anticipated to have had repercussions for the support for activities of health and safety representatives, and especially for those belonging to the NUM, in coal mines too. However, there appears to have been little direct study of these effects in coal mines.

Meanwhile, prominent in the industry responses to improving OSH and spreading good practice in the last few years has been the employer-led initiative called the Mine Occupational Safety and Health Leading Practice Adoption System (MOSH). But, as one evaluation of this initiative has made clear, while in theory this system includes a commitment to worker involvement, in practice labour representatives have reported feeling excluded from its main activities as well as from their planning (Hermanus et al, 2015). The researchers who undertook this evaluation suggest this was because the initiative was developed and implemented outside the formal consultative systems in the mines — such as those involving worker health and safety representatives and joint health and safety committees. Respondents indicated they were included in the MOSH process only at a late stage of its implementation. Features of this initiative suggest it is focused on building a process for changing individual behaviour, and it is therefore not entirely surprising that it should marginalise representation and bypass the formal arrangements for joint consultation. These are common features of such behaviour-based approaches to health and safety management generally and of those found in mining in particular (see for example Walters et al, 2016a). In addition to MOSH, several of the large multinational mining companies active in South Africa also have their own OSH initiatives, but again the position of worker representatives within these systems is at best incorporated into the activities of safety departments and, at worst, it is marginalised by them.²⁸ We will have cause return to the implications of this approach in the light of our own findings.

The literature documenting underlying social and wider work relations issues is also relevant to an understanding of representation on OSH in South African mines during the period of transformation. For example, the labour relations literature identifies broad trends in the labour market that impacted on the labour movement and the initiatives adopted by trade unions to address the problems they generated (see for example Webster and Buhlungu, 2004). Other literature has documented both the effects of globalisation and those of modern managerialism on the contexts and practices of representation more widely and pointed to some of the consequences for representation of moves towards greater efficiency, productivity and equity in mining during the period of transformation (Buhlungu and Bezuidenhout, 2008; Williams, 2003). More ethnographically orientated studies have offered various understandings of mine workers' responses to racial and coercive forms of labour control both during apartheid and subsequently, in which workers' subjective orientation, agency and resilience to repressive and contemporary work structures are discussed (see for example Phakathi, 2012). All of this analysis is relevant to gaining a deeper understanding of the underlying reasons for limitations identified by the published research concerning the current practices of representation and consultation on health and safety discussed in

²⁸ For example, Anglo American has a system called Critical Control Management in which the engagement with health and safety representatives is negligible.

previous paragraphs. Here again, therefore, we will have reason to return to this literature in the light of our own findings.

In summary, therefore, under the MHS Act 1996 there are extensive rights that provide for the representation of mine workers' interests in health and safety in the coal mines of South Africa. Their content compares favourably with similar arrangements found in mining health and safety regulations of advanced market economies in the present study. However, the limited previous research on the implementation and operation of measures providing for representation and consultation in coal mining in South Africa suggests that, while structures of representation have been set up in the larger mines, there are a number of limitations on the extent of their operation — and by extension this further suggests that their effectiveness in representing the interests of mine workers may also be limited. Reasons for this situation are likely to be related to features of recent South African political history, but nevertheless it is also likely that they can be understood as particular variants of the same broad determinants that influence the uptake and operation of similar measures in other countries. To explore this further, we turn next to the presentation of the findings from the fieldwork undertaken in the present study.

6.4 Worker representation and consultation on health and safety: indicative field evidence

In the following section, findings on experiences of representation in South African mines are organised under a series of broad headings reflecting the preconditions for effectiveness that have been established in previous studies (see Chapter 2, Volume 1) and evaluated in our results accordingly. As we outlined in Section 6.2, the fieldwork was undertaken with the co-operation of the NUM, which is the main trade union in coal mining in South Africa, but it is not the only one. It was not possible to include a detailed examination of experiences of representation in the case of other trade unions in coal mining, but nothing we learned from interviews with officials of some of the other trade unions suggests that these experiences would be likely to differ in any fundamental way from those explored in the following sections.

Before turning to the details of the experiences of the representatives, however, we need to say a little about the structures of representation from which they were drawn.

6.4.1 The regulatory steer

The provisions of the MHS Act 1996 concerning representation on health and safety in coal mines were outlined in Section 6.3.2. They provide a set of rights governing the election and appointment of both ‘sectional’ health and safety representatives (who are to be released from their normal work on full pay to conduct their health and safety functions in designated work areas of the mine, but who continue with their normal work activities at other times) and ‘full-time’ health and safety representatives, who have jurisdiction covering the mine more widely and who also liaise with the sectional representatives. These provisions allow the trade union to put in place a structure for representation on health and safety within the trade union branch at the mine which is integrated into other representative structures that are in place in the branch and provided for by wider labour relations legislation, such as the Labour Relations Act 1995. The NUM representatives who took part in the present study described the features of these arrangements in relation to their particular branches and regions and explained how they operated. They also talked about the role of the collective agreement that the trade union negotiated with the mining operator, in clarifying the way the provisions might apply in a particular workplace, and also how those of Codes of Practice developed under a collective agreement spelled out more practical details of the arrangements for their implementation and operation. In this respect, for instance, they gave examples of how the collective agreement or code of practice might elaborate arrangements on training, or provide particular support for representatives in the contentious activity of directing mine workers to leave dangerous workplaces, or support them through providing access to the mine for regional or national level trade union officials.

We have organised our findings on these experiences into the following seven sub-sections, each addressing the representatives’ experiences under the key elements of the regulatory provisions governing their rights and functions.

6.4.1.1 *Election and appointment to trade union positions on health and safety representation and mine and regional trade union structures for safety and health*

Although there were minor variations of detail between the regions, in essence, trade union structures for representation on health and safety were similar. Our respondents reported that *within the mine*, health and safety representatives were elected and officially appointed in accordance with the regulatory requirements in most of the mines included in the study. However, there was some uncertainty among them concerning whether, in the mines where they were representatives, all the positions at the ‘sectional’ health and safety representative level were taken up, and there was some variation in views concerning the ease with which such positions could be filled, and whether sufficient representatives were elected by employees following the processes outlined in the MHS Act. This uncertainty resonates with the findings of Coulson (2018) concerning practices of representation on OSH in gold, platinum and diamond mines referred to previously, which indicated that among the sectional representatives

interviewed for that study, although appropriate procedures for election and appointment were followed, it had been facilitated by supervisors and/or the OSH department at the mine. Rarely had representatives been aware of any overt presence of the trade union during such procedures and some of the representatives felt they had been obliged to take on the role and felt uncomfortable in the position. But it further needs to be borne in mind that most of the representatives in our study came from large mines in which there were often up to 3,000 employees and 70 to 80 sectional representatives were elected (with equal numbers of stand-in (or deputy) representatives to cover shifts when they were not there). It is therefore perhaps not unexpected that they should be somewhat uncertain as to whether all these positions were in fact filled at any given point in time.

The full-time health and safety representatives among our interviewees had all been elected and officially appointed into their positions. In common with most of the interviewees, they were nearly all very experienced miners with on average more than 20 years of working in mines behind them, usually in both underground and open-cast mines. Most had previously been part-time sectional health and safety representatives and had also held office as shop stewards, often at the same time as being health and safety representatives. Although for the duration of their appointment as full-time health and safety representatives, most were based in the health and safety department of the mines in which they were employed, they nevertheless appeared to both prioritise and play a substantial role in representing fellow mine workers on health and safety matters. They did, however, point out that this was not always the case and that there were other full-time health and safety representatives who appeared to use this position as a means of improving their career opportunities and who were amenable to working closely with the personnel of the health and safety departments to which they were attached to achieve this. Here it is important to bear in mind that for most mine workers, election to this position by their co-workers represents a tangible promotion that includes an increased salary, since the arrangements for the pay of full-time safety and health representatives reflect those negotiated for shop stewards in collective agreements signed with recognised unions on site. And it is these arrangements that are among those perceived, by miners who have become dissatisfied with the representativeness of the NUM, to be open to abuse. That they carried such implications was also evident from the testimony of the full-time representatives among our participants. One interviewee, for example, said:

My predecessors were mostly people who were looking to better themselves instead of addressing the issues of health and safety.

Our interviewees were at pains to distinguish themselves from these practices. Indeed, some of the elected full-time health and safety representatives talked passionately about the responsibilities of this role and how they perceived the position to have grown out of the miners' struggles on health and safety during the period marking the end of the apartheid era, in which they had been involved as young mine workers and of which they remained conscious. At the same time, they spoke eloquently about the challenges associated with taking on this role as miners with limited educational backgrounds,

having to address technical matters of OSH in mining and interact with management personnel, inspectors and OSH professionals:

The challenge we face is to learn fast and grow fast.

They identified the support for their role coming from their trade union organisation at branch, regional and national levels as critical in enabling them to address these challenges and spoke further about the responsibilities of the role that were implied by the trust in them shown by their fellow mine workers in electing them into their positions as health and safety representatives:

It's a great challenge in fact, but it's all about where you come from. Especially when you are in the union, they teach you how to approach these kinds of things and the challenges you will have with your employers — they teach you how to differentiate.

They also spoke of the role conflict they sometimes felt between their position as a full-time health and safety representative for all the workers in the mine and their allegiance to the NUM. Interestingly in this respect, some of the full-time representatives talked of the pressure they felt from managers to adopt the former position without any reference to its *representative* function, conflating their role with that of the functions and duties of a safety *officer* employed for this purpose by the company. Such pressure was made greater by the position that the full-time representatives took up within the health and safety department. One full-time representative — who was also the secretary for the NUM Branch health and safety structure — explained:

Like to me, the management would say — because you are a Full-time, you have two caps —one for the Fulltime and one for the NUM. When I ask a question they say – which one are you wearing? You must take the NUM cap and leave it aside ... or resign as a Full-time...

This representative clearly felt pressure from the management to follow the company line on health and safety matters and not to question the arrangements from the perspective of being a trade union representative. While a representative from another mine said:

If you are a full-time safety representative you cannot be a shop-steward.

In the former case the representative was acutely aware of the conflicted position occupied when 'both caps' were worn. Like all of the other full-time representatives interviewed, they took steps to ensure that it did not lessen their representative function. However, all these representatives were committed trade union activists. It was clear from their testimony that they had experience of other full-time representatives who were far less successful in resisting pressures from the company managers to behave solely as a functionary of the mine health and safety department to which they were attached.

Moving beyond the arrangements for the election and appointment of health and safety representatives in the mine, the NUM branches had additional structures to support representation on health and safety, consisting of branch level sub-committees and individual branch appointments with OSH roles. There was some variation between branches in the details of these arrangements but, essentially, they all were in place to try to ensure that safety and health issues were addressed at the branch level. In some cases, there was a special branch sub-committee or group dealing with health and safety matters, which was a designated part of the 'NUM structure' at branch level, where the tasks of the trade union were divided into several separate categories for which there were designated union representatives responsible for their operation. So, for example, as one interviewee explained, in their branch, under the aegis of the branch committee which consisted of the Chair and Deputy Chair, Secretary and Deputy Secretary and the Treasurer and which was responsible for the affairs of the branch overall, there were a further set of structures, catering for women, youth, education and health and safety, all of which had union representatives acting as chairpersons and secretaries for them. These arrangements were in addition to the sectional and full-time health and safety representatives at the mine. Sometimes — as in this case — the Health and Safety Secretary was also a full-time health and safety representative, but this was not necessarily always the case. Whether the same individuals were involved or not, however, a close relationship was maintained between the branch structures and the sectional and full-time representatives who participated in the study. Moreover, whatever the precise arrangements at their mine and branch were, all the representatives generally reported that safety issues enjoyed prominent positions on branch committee agendas. In short, therefore, there were considerably developed branch and regional level structures for supporting representation on health and safety in the mines we studied.

The branch structures related both to the trade union arrangements for OSH within the mine, as well as those involving liaison with the regional level, where again there were further structures in place for administering support for worker representation on health and safety in all the regions included in the study (although interviewees were at pains to point out that arrangements of other unions at branch and regional level were different). Broadly, in each of the 11 NUM regions, there were a secretary and chair with responsibilities for health and safety matters. Their tasks included the organisation and delivery of trade union training and advice for the mine level representatives, as well as the administering of NUM campaigns around OSH. The regional officials were normally full-time positions elected for set periods (usually from one to three years depending on the position and region). Incumbents were normally seconded from the mine where they were employed with the agreement of the mine management, occasionally returning to give support to the mine when requested to do so. In their capacity as regional chair/secretary, they advised all the branches and co-ordinated co-operation between branch and national levels. These were thus quite senior positions they held within the NUM, branch and regional structures. They also sat on the regional tripartite forums for health and safety, as well as on the trade union health and safety committees at regional and national levels and on Mining Health and Safety Council advisory committees. They further dealt with issues that were common across a number of

mines, such as that of contractorisation for example, which was widespread and growing in the mining industry and about which the trade union had its own policy perspectives.

6.4.1.2 Inspection activities

As well as election and appointment of sectional and full-time health and safety representatives, the MHS Act also provides legislative support for the activities of these representatives, including their role in identifying hazards and risks and participating in consultations or inspections on health and safety with employers/managers and inspectors. It further specifies that the latter include routine regular joint inspections and internal audits. The mine health and safety representatives interviewed in the present study indicated that they did indeed participate in such activities. They spoke of the routines in their mines in which, at pre-shift meetings with workers and the supervisors within the sections for which they were responsible, they would discuss the safety issues for the shift and listen to the concerns expressed by workers. They often followed up these concerns with supervisors at the meeting or, if appropriate, they investigated them further and took them up with managers following the meeting.

All of the representatives conducted formal workplace inspections. They did so both jointly with supervisors and managers, and by themselves. There were generally written reporting procedures for addressing issues thus identified, including defined time-limited procedures for addressing or following up issues. The full-time representatives pointed out that in the latter respect they often acted as a support for sectional health and safety representatives, accompanying them on inspections, and showing them what and how to inspect health and safety issues in their designated workplaces. They also sought information from the full-time health and safety representative on the shift immediately prior to them starting work, in order to be abreast of issues that might have arisen. They further referred to inspecting the fitness of employees, checking evidence of their medical examinations and so on to ensure they were well enough to carry out their designated tasks, once again reflecting the concern about the state of the burden of ill-health among the mine workers more generally. For the inspection of the mine itself and the operation of plant and machinery, as well as the competence of the operators, the representatives reported that they used various guides and checklists with which they were provided to undertake these tasks, but that they often used their own discretion as to what exactly they were going to focus on during an inspection. Welfare facilities were also included in the inspections, especially checking provision of adequate supplies of good quality drinking water for the mine workers.

There was a general consensus among the representatives that the normal range of fatal and serious risks of underground coal mines applied to the mines in which they worked, including: fire and explosions; rockfalls; and electrical and machinery hazards. The major risks involved in the open-cast mines in which they and their fellow mine workers worked included those involving moving vehicles, and especially the interface between large and small moving vehicles and those experienced in the interface between workers and vehicles. Mechanical hazards associated with the moving parts of

stationary machines were also seen as a major cause of injury in both types of mines. In addition, dust was regarded as a major health hazard in both open-cast and underground mines, but exacerbating the risk in the open-cast mines were widely held notions among supervisory staff that because the mines were open-cast the risks involved were less than underground, whereas in fact the reality was that the dust control in open-cast mines was less developed than it was underground. Other risks that were prominent in the discussions with the representatives concerned the problem of noise control within the mine and the challenges of both safety and health issues associated with heavy manual handling, in which both acute injuries, as well as long term musculoskeletal disorders, were experienced. All such risks were the subjects of inspection and many had set procedures for checking the work areas for which they were responsible for the occurrence of such risks and the operation of their means of prevention.

6.4.1.3 *Stopping dangerous work*

As we have already noted, the combination of the right to direct any employee to leave any working place whenever circumstances arise which appear to pose a serious danger to the health or safety of that employee, with the requirement to assist any employee who has left a working place in terms of section 23 of the MHS Act, are particular features of South African regulatory requirements on worker representation on health and safety in mining that have already attracted some attention in the literature. The reflections of health and safety representatives on their experiences of its operation, therefore, were of some interest.

To begin with, representatives made clear that they used the provision to direct employees to leave a working place only rarely and only when they were sure that circumstances justified it. They were aware of the serious nature of invoking it and also of the scrutiny their actions would almost certainly receive from their employer. They were also keenly aware of the likely hostility of such scrutiny. As one representative put it:

The challenge still there is the threat from the employer's side...starting to exercise that right, you become a victim of the right.

By this the interviewee meant that representatives needed to be prepared to address the consequences of their actions in the investigations that were likely to follow. Other representatives talked about ways in which they would try to prepare for the use of the power by ensuring they had strong evidence to support their case for directing employees to leave their working place. For example, they said they tried to ensure that, where it was possible to do so, they made a photographic record of the situation (see also Section 6.4.1.5 below). The full-time health and safety representatives commented that sectional representatives were most vulnerable in this respect because they were dealing with situations in their own designated working places and they talked about the conflicting interests that might exist between them and the foremen in these workplaces concerning safety matters. Talking about the foremen, one representative said:

They are there for the production. Once I stop the work they are going to get the questions from the boardroom – why did you stop the production?

This situation often led to difficult relations between the safety representatives and the foremen in designated working places. For sectional safety representatives who were vocal over safety issues, this could create problems for them in other aspects of their work; while for representatives who were seen by foremen to be compliant with their need to maintain production schedules, this could lead to preferential treatment.

In another example, the interviewees spoke about how managers, supervisors and workers were sometimes complicit in flouting the mine management's own procedures on dealing with unsafe machines. They explained that the mine safety management procedures identified three categories of risk associated with machinery safety. They included Category A, which meant that if a safety problem of this magnitude were discovered, the machine was to be stopped immediately and not used until the fault/unsafe feature was rectified; Category B indicated that the fault/unsafe feature presented a serious enough risk to warrant remedy within 8 hours; while category C meant the risk was considered to be lower and the fault/unsafe feature was to be put right within a specified number of days. Despite this categorisation, interviewees gave examples in which pressures of production meant that there were occasions in which supervisors and workers might be complicit in continuing to use a machine that had been labelled with a Category A notice in order to meet short term production targets. They added that in such situations, both workers and their supervisors would be likely to be treated sympathetically by managers for trying to get the job done, while the safety representative would be seen as being obstructive for serving the notice or insisting that such a notice should be observed. They suggested these examples demonstrated how, in the prevailing culture in the mines, it was left to the safety representatives to act on safety matters rather than either managers or employees assuming responsibility for their own procedures and actions in respect of these matters.

Other representatives discussed how, in order to resolve or even avoid some of these conflicts and provide more certainty concerning the procedures involved in stopping or leaving dangerous work, this had become the subject of the provisions of their collective agreement in which specific procedures were agreed and spelled out. Despite this, however, there was a general consensus among all the representatives who took part in this study that, for the sectional safety representatives, becoming involved with issues requiring them to direct employees to leave the site of dangerous work was a challenging matter and one with which they were very likely to seek support from the full-time representative to avoid becoming isolated in a dispute with management over their actions. While the full-time representatives suggested that, for their part, they more or less anticipated such engagement would be sought and regarded it something that was an inevitable aspect of their role.

6.4.1.4 *Other investigations — complaints, accidents and dangerous occurrences*

Representatives have rights to investigate complaints by any employee relating to health and safety at work. They also have rights under the MHS Act to examine the causes of accidents and other dangerous occurrences in collaboration with the employer or person acting on behalf of the employer; and also to visit the site of an accident or dangerous occurrence at any reasonable time and attend a post-accident inspection.

Generally, our respondents reported mixed successes in undertaking these activities, with both barriers and supports to their engagement with them being similar to those experienced with other forms of inspection and making representations detailed in other sections. Investigating mine workers' complaints was not an infrequent activity undertaken by both sectional and full-time representatives. The extent to which they were able to do so, however, depended on the operation of time-off arrangements allowing them to leave their normal work to follow-up a complaint. As with the previous examples concerning inspections and stopping dangerous work, pressures of production could lead foremen and supervisors to seriously limit the capacity of sectional safety representatives to undertake these activities. Full-time health and safety representatives were normally better placed to find time to follow-up complaints, but here too they reported often having to confront difficult and obstructive foremen and supervisors and suggested that, both for themselves and for the sectional safety representatives, a special skill set was required which combined confidence in themselves in their dealings with managers, good knowledge of the health and safety issues they addressed, and strong communication skills that enabled them to convey the seriousness of their purpose to foremen, supervisors and managers, without necessarily adopting a confrontational position. They suggested that training and experience were important in achieving this skill set, as well as being able to act in the knowledge that, as trade union representatives, they could rely not only on their statutory rights but also on the support of the trade union at branch, regional and national levels in their achievement. This said, they acknowledged that the problems confronted by the sectional safety representatives in finding the necessary time to undertake these investigations remained significant and largely dependent on the co-operation of foremen, supervisors and managers.

In the case of incident investigation, several relevant issues were mentioned. In investigations undertaken for company purposes of determining causation and accountability, there was little engagement sought from sectional worker representatives. Participants argued that, in their experience, supervisors and managers commonly blamed mine workers for causing accidents, and in cases where material damages occurred, disciplinary actions against mine workers were not uncommon. In these situations, representatives might become involved in attempts to defend the mine workers, who they regarded as unfortunate victims of chains of events, in which investigating underlying causes was not of interest to management. They also talked about the problems sectional representatives experienced in receiving adequate time off to undertake accident investigations. At the same time, they suggested that as

members of the mine health and safety departments, full-time health and safety representatives might play a role in joint accident investigations for the purposes of future prevention. Accident investigations were also the subject of discussion during health and safety committee meetings and, in the participants' experience, the mines in which they were employed all had set procedures for reporting accidents. Finally, the participants explained how serious accidents might occasion advice and visits from members of the regional trade union health and safety structures. Similarly, they reported that Department of Mineral Resources (DMR) inspectors involved in such inspections were also likely to consult the health and safety representatives, as required under the MHS Act.

6.4.1.5 *The right to be informed*

According to the MHS Act provisions, representatives can inspect any relevant document, which must be kept in terms of the Act. Generally, they did not seem to have encountered significant problems specific to doing this. However, it was difficult to gauge from the interviews the extent of their practice in this respect and there seemed to be considerable variation between mines. Similarly, with regard to facilities for finding information and communicating with fellow representatives, quite a varied experience was reported. The better end of this experience included office space with access to computers, the internet and email facilities for representatives, the use of mobile telephone applications such as membership of WhatsApp groups for sharing information, their use as cameras to record incidents and to share them with colleagues as well as to demonstrate concerns to managers, and the use of short dialling codes to facilitate swift privileged communications. However, these were facilities available either to the full-time health and safety representatives or those involved with branch structures. Generally, the respondents who had previously been sectional health and safety representatives reported that the facilities to which they had access in this sectional role were considerably more limited and that the obstructive nature of some supervisors and middle managers (discussed in more detail in other sections) also meant that, in such situations, information to which they felt they were entitled was not forthcoming.

6.4.1.6 *Making representations*

Health and safety representatives have rights to make representations or recommendations to the employer or to a health and safety committee on any matter affecting the health or safety of employees. Interviewees explained that they understood there to be a process in place in the mines to enable them to do this. It involved firstly going to the supervisor to report and to try to resolve the problem. If this was not successful, then the sectional health and safety representative could seek the advice and/or intervention of the full-time health and safety representative. The next level of authority to which the problem might then be taken was that of the relevant joint health and safety committee for the area of the mine concerned where, as well as the sectional and full-time representatives, there were senior managers present, including the head of the department, to discuss and take up the matter themselves. If there was still a lack of

resolution, the head of department might take the matter to the colliery health and safety committee and in this way it would come to the attention of the general manager to authorise necessary actions to be taken. But they went on to say:

This is the process. Just explaining the process. How you use the process that depends on the person. It doesn't mean you should wait for these meetings – if you meet resistance there with the supervisor you call a full-time safety representative

In practice, therefore, despite the existence of procedures for consultation on OSH, and the knowledge of them by representatives, both the activity of making representations and its outcomes were influenced by a host of factors in addition to the presence and knowledge of procedures. These might vary from mine to mine, and even within mines, according to the personalities and practices of the foremen, supervisors and managers involved and the determination and abilities of representatives.

6.4.1.7 *Experiences of the joint health and safety committee*

Under the MHS Act 1996, a health and safety representative is entitled to attend any meeting of a health and safety committee of which they are a member; or which is the body that will consider representations or recommendations they make. Generally, there was a hierarchy of committees that dealt with health and safety matters in the mine and at its peak was a colliery level 'executive committee'. Along with the health and safety representatives, the general manager of the mine, as well as the heads of the various mine management departments, were members of this committee. There was some variation in the extent and nature of the other health and safety committees, but normally there were health and safety committees for each section or department of the mine or committees that met monthly and were attended by sectional representatives, full-time representatives and safety officers. The representatives were all in agreement that the most important decision-making committee was the one at the mine level and in their view this was primarily because it was attended by the general manager. Generally, representatives received paid time to attend meetings. Senior representatives also said that in most mines it was union practice to hold a meeting of the safety representatives before that of the main mine health and safety committee in order to agree between them what were their priorities for this meeting. Some representatives also explained how the provisions of their collective agreement ensured that one or two senior members of the branch committee were also able to attend the meeting to ensure that health and safety representatives were able to address management with confidence of support from the trade union in the mine.

Representatives talked about the role of the joint health and safety committee in a variety of ways referred to elsewhere in this account, such as in their descriptions of the procedures they were obliged to follow when making representations or investigating complaints. They also referred to them when discussing the communication strategies of the mines inspectorate.

In addition to the functions of the committees in these particular situations, the representatives made a number of general observations concerning their experiences of the conduct of their meetings. These included the observation that, while in some cases the committee employed the practice of rotating the position of chair between the trade union side and the health and safety manager, nevertheless the management often behaved as though it was their committee rather than one jointly constituted. As we outlined in the previous section, representatives understood the hierarchical structure of the committees and used them as a means of escalating issues to higher levels and ultimately to capture the attention of the general manager of the mine and ensure that appropriate action would be taken. In this way they clearly distinguished between issues that could be resolved at section or departmental level and those that were more serious, difficult or generic that required actions at higher levels. They often recognised the need to meet with other representatives prior to meetings of the higher level joint committee in order that they could agree a position they wished to take in relation to particular issues, but generally they were not provided with the facility time to hold such meetings and instead had to rely on the emergence of a trade union side consensus around issues as a result of their airing at other levels in the procedure for addressing OSH at the mine. Nevertheless, meetings between representatives, as well as mass meetings in order for the trade union to engage with its membership, are common features of labour relations in South African mines.

6.4.2 Management commitment

Representatives were at pains to point out that much had been achieved since the implementation of the MHS Act in 1996. This, they said, was evident in the improvement that could be measured in health and safety outcomes in coal mining. They also said it could be seen in the consultation that now occurred between managers and health and safety representatives and the engagement of the latter with the range of activities on health and safety that were pursued in the mines. They saw the two areas of improvement as connected. In all of the mines in which the representatives carried out their activities, they operated in relation to systems in place for recording and reporting inspections and investigations and other joint activities. The systems varied in detail but were normally part of wider employer driven management systems for safety and health that emphasised the monitoring of OSH activities and performance, communicating results to the persons and levels within the organisation responsible for remedial action, and documenting and communicating actions, both to remedy problems thus identified or to move actions required to higher levels for decisions. The representatives appeared to be well-informed about their role in these systems and the importance of requirements for documentation of findings, requirements for change, remedial actions taken and outcomes.

But they further noted that improvements were 'not one hundred per cent'. There were areas of particular difficulty, areas in which representatives struggled to achieve appropriate levels of involvement and the presence of management practices that could easily marginalise engagement of representatives. They suggested that there were continuing tensions between these managerial practices and their involvement, at both

the sectional and full-time levels. An often repeated view was that the extent of successful engagement depended upon the character of the representatives and their willingness to stand up for themselves in the presence of managers. Knowing the entitlements of health and safety representatives and being possessed with the confidence to use them was seen as important in this respect:

If you don't know your rights, you don't challenge them and you will have a problem....

The support of the trade union was also seen as critical. The representatives pointed out that, although they were aware that the regulatory requirements on the election appointment and functions of health and safety representatives had been fought for by the trade unions, nevertheless they were elected by all of the workers and then appointed by the company. They were conscious that there was, therefore, a possibility that some representatives would not be 'aligned with the union' — a situation our interviewees found regrettable:

If you are not aligned to the union, they are using you to sign anything because they know you don't have power

The representatives who took part in the interviews were all active and committed members of the NUM. Nevertheless, they talked about the difficulties they all faced in obtaining adequate time for proper consideration of health and safety matters. They expressed frustration with managerial practices of simply presenting the safety procedures that were to be followed without consulting representatives on their development, and being expected to sign off standard operating procedures that were developed by managers without their involvement. Some full-time representatives spoke of feeling a covert threat of reprisals from managers after their term of office had ended if they were perceived to have been unsupportive or disloyal. They gave examples of such concerns influencing the willingness of other representatives they had known to talk freely about OSH matters to mines regulatory inspectors in front of managers:

Sometimes you don't want to be in trouble — you know they are going to penalise you....

Although they acknowledged they were protected from victimisation while an elected full-time health and safety representative, they feared such protection would be removed when they ended their term of office and therefore were aware of pressure to moderate their criticism of health and safety management as a result:

They were trying to trap him — when his term of office is ended they are going to grind him!

As noted in Section 6.2, all of the representatives we interviewed were full-time but most had been sectional safety representatives before this and they said they had felt particularly vulnerable in this role despite the regulatory measures, which ostensibly

offered protection against victimisation. They were generally of the view that there were many ways in which vocal and active health and safety representatives could be silenced or side-lined by supervisors, foremen and managers. They gave examples of how foremen made agreements amongst themselves by which they could simply move a troublesome sectional safety representative to work in another part of the mine where it would be far more difficult for them to function in relation to the designated working place for which they were appointed as a health and safety representative. In addition, they said it sometimes required intervention and support from full-time health and safety representatives to support the sectional health and safety representative to offset attempts by supervisors, foremen and managers to marginalise them. The representatives suggested that while senior managers were generally supportive of their functions, it was the middle managers and supervisors who made difficulties — especially for the sectional health and safety representatives. However, this caused some of the more experienced senior representatives interviewed to express some doubts about the reality of the commitment shown at senior levels too, since despite their apparent concern about problems that representatives faced with lower management and supervisors, this seldom led to any change in the behaviour of the latter.

Some representatives also suggested they had insufficient time to have proper discussions concerning preventive actions either with other health and safety representatives or mine workers and that section heads were often unwilling to get together to discuss the preventive actions that the representatives thought to be necessary. They further indicated that unwillingness to release sectional health and safety representatives to take part in the investigation of accidents and incidents was a common problem and that, generally, matters of production were prioritised by managers and supervisors over those of safety and health with which the representatives were themselves concerned:

There is not enough time because of production to release sectional safety representatives to attend meetings

Representatives spoke of areas of work in the mine from which health and safety representatives would hardly ever be released to attend meetings because of these pressures of production. They suggested, for example, that draglines in open-cast mines were typical of what was seen by managers as continuous operations from which operators could not be spared, while work on coal extraction at the coal face underground was also subject to production targets meaning that the release of health and safety representatives engaged in such work to attend meetings was unlikely to be approved. They also suggested that some supervisors felt threatened by the implied criticism of their own role when the actions of health and safety representatives identified problems in their areas and they would attempt to prevent these actions from taking place. Examples were given of situations in which supervisors got together to undertake OSH activities themselves and then demanded that health and safety representatives sign off their outcomes without actually having been involved with them themselves.

There was a greater focus on safety than on health in the matters in which representatives became involved in the mine. Several factors were suggested to explain this, including acknowledgement that often the nature of the information required to understand health issues was more obscure and less easily available than that concerning more obvious safety matters. Moreover, its significance was sometimes also more difficult to understand and appreciate, especially in terms of the relationship of ill-health with work in the mine. This said, the representatives generally recognised that the nature of the health problems faced by mine workers and the burden of ill-health among them were substantial. A key activity that several representatives discussed, the significance of which was agreed by all respondents, was the role played by sectional representatives in determining the wellness of fellow mine workers at the start of the shift, along with the extent to which these mine workers might need support to enable them to undertake their allotted tasks and the wider support they might need to remain in work while already incapacitated by ill-health. Lung diseases such as TB, as well as HIV and related conditions, musculoskeletal disorders and noise-induced hearing loss, were frequently mentioned as prevalent in the mines.

There was an expectation placed on health and safety representatives by mine-managers that they would play a role in ensuring compliance from mine workers with health and safety rules and practices of safety behaviour required of workers in the mine, such as in wearing appropriate personal protective equipment, operating machinery safely or following rules in relation to mine vehicle safety. To some extent, the health and safety representatives appeared to accept this role as part of their functions. They talked about the low education levels among mine workers, especially among older workers, those from the former homelands, as well as the younger mine workers' limited experience and understanding of safety issues. While they suggested that, in these respects, things had improved in recent years, they nevertheless said they accepted that it meant there was a role for representatives in encouraging their fellow mine workers to follow safety practices. At the same time, they spoke — and at times quite bitterly — about the double standards employed in seeking compliance from workers on matters of safety behaviour. There was widespread agreement among the representatives that different statuses of individuals within the mine power structure made for a very uneven application of behavioural safety requirements, with some workers likely to be subjected to heavy penalties for reported transgressions, while for others a blind eye would be turned towards the same kind of transgression. Position in the hierarchy within the mine, as well as the race of the individual, were argued by the representatives as significant in determining these different outcomes.

6.4.3 Trade union support

Representatives talked positively about support they received from trade union branch and regional structures and from interventions by the regional secretary and chairperson. They also discussed the training they had received to carry out their activities, both that provided (or facilitated) by their employers and that provided by their trade union. Moreover, they said that, if necessary, they felt they could call on their trade union to intervene in disagreements over technical matters with the employer and to organise additional independent expertise to examine the matter in question.

6.4.3.1 Regional support

Support for trade union health and safety representative activities from the regional level took several forms. In one region the representatives spoke enthusiastically about committee meetings attended by full-time representatives from all the mines in the region, for which they prepared reports concerning the activities and issues on health and safety in their mines and discussed these and those from other mines during these one-day meetings every quarter:

So then we start discussing those reports we share information. By doing so, although I've never been in that mine already I know about its challenges and I've got similar challenges and so I know how to approach those challenges from sharing those reports and also the regional chairperson come in and advise – what you need to do to overcome them.

The sharing of information between branches in this way was greatly valued by the representatives. They talked further about how the outcomes of these meetings could also be passed to the national level and allowed the union to monitor and compare OSH issues across regions. In other cases, the regional organisation could be notified directly from a branch requesting their intervention with a problem that they had been unable to resolve at the branch level, and the regional officials would then become directly involved with the branch/mine. The region might also share this information with the national level. Furthermore, regional officials were able to enter the mines in the region. They did so quite frequently, engaging, for example, with the inspection of the sites of fatal injuries, as well as supporting health and safety representatives and shop stewards across a range of other issues on health and safety when they were requested to do so. Regional officials said they rarely met obstruction from employers and managers when they wished to visit mines for the purposes of supporting the representatives on the mine site.

The regional organisation was also an important source of information and advice on a range of other issues that may be of concern to the representatives in their day-to-day activities.

The representatives were nevertheless all aware of the way in which their role was changing and how far development of the organisation of health and safety matters in

coal mining had moved since the early days of the implementation and operation of the MHS Act that the NUM had been instrumental in bringing about. Some of them talked about how, despite having played this important role in the past, the NUM now faced new challenges. They were especially aware that, as well as their on-going struggles with the management over safety and health in the mines, there was also a challenge to the hegemony of the NUM from the growing presence of alternative trade unions in the mines, and especially from the growth of AMCU. The representatives viewed this challenge in different ways, some suggesting that it simply meant that the NUM needed to 'sharpen up its act' and that there was no automatic justification for it monopolising union membership, while others appeared to have had direct experience of quite difficult relations with AMCU representatives and members. Of communication with AMCU representatives, one said:

I can go and request information from them. Yes I can get that information — but it's not going to be easy.

Whatever the difficulties of this relationship, it was clear that in some mines the NUM was no longer the sole institution of organised labour. As recounted previously, there is a strong sense both within the NUM and surrounding it that it currently faces something of a crisis of confidence in its role on the part of its members and is losing their support at an alarming rate. While all the mine level representatives who took part in the study were strongly committed to the trade union, they nevertheless expressed strong views concerning the need for it to move with the times and adapt to current situations. Equally, there was little sign that such movement has so far been achieved entirely successfully.

6.4.3.2 Training

The representatives had received training from several different sources. Employers are obliged to provide or facilitate basic training, within three months of their appointment, for all sectional health and safety representatives, to inform them of their rights and functions as well as of OSH risks and procedures for addressing them in their role. Normally, this took the form of a 3 to 5 day course held at the mine site and provided by Mining Qualifications Authority (MQA) approved trainers. MQA provides 3 units of up to 5 days each, with a 'unit standard' for each. The three units are:

- Unit Standard 259622: Describe the functions of the workplace health and safety representative
- Unit Standard 259636: Explain basic health and safety in and around the workplace
- Unit Standard 244383: Conduct continuous hazard identification and risk assessment within a workplace

These constitute accredited training at NQF²⁹ level 2, and are normally provided by private training institutions or mine site training departments that have accreditation from the MQA to deliver this training. At the launch of this programme it was estimated there were 40,000 health and safety representatives who required this training in the sector. However, there has been much criticism of the quality of its provision. Organised labour and the NUM in particular have been especially critical. The MHSC commissioned a review of the training but the review was thought to have been poorly done and has not been made publicly available.

Some criticism of this training provision was aired by the representatives we interviewed. The main criticism was that the training that they had experienced tended to be based on modules developed more in relation to underground hard rock mining rather than the mixed underground and surface mining involved in coal extraction.

In addition, the collective agreement per mine site provided for representatives to attend a trade union-organised induction course of one-week's length, which dealt with their trade union role as well as with procedures for health and safety. But this was intended for shop-stewards rather than the full-time health and safety representatives. In principle, there was training available for representatives who were part of the branch trade union structure for health and safety at the mine, which took place at regional level.

Further additional training could be provided when a need for it was identified and where the employer agreed to facilitate it. The representatives gave examples of how they might, as full-time representatives, initiate such training themselves by identifying the need, for example in relation to hazard identification skills for sectional safety representatives, approaching the employer with a request for its provision, and identifying who would be its beneficiaries. However, even though the employer might organise training in response to this request and bring in trainers to deliver it, it did not necessarily lead to all those for whom it was intended actually benefiting since they would still need to be released from their jobs to attend and circumstances may not allow this to occur in all cases.

Virtually all the representatives who were interviewed were experienced union representatives. Several had held office for a considerable time, and they had themselves received a range of different forms of training. For example, several talked about also being familiar with undertaking routine monitoring measurements in relation to dust and noise exposures in the mines where they worked, and a couple spoke of having received both training and qualifications in the appropriate occupational hygiene techniques to enable them to do so. Notably they had done this while employed within the safety departments of the mines.

Nevertheless, while they found that the provision of training by the trade union adequately addressed the basic rights of representatives, some of them suggested that it lacked sufficient focus on health or environmental matters that were of concern in the

²⁹ National Qualifications Framework.

mines in which they worked. There was also a general consensus that the training provided by the union was 'not enough'. For example, one representative who was currently the chairperson of the NUM regional health and safety committee talked of how the employer had organised his professional training in occupational hygiene while he was attached to the safety department of a large open-cast mine as a full-time health and safety representative. He had pursued his interest in occupational hygiene because he felt that most health and safety representatives did not understand how monitoring equipment worked or how to interpret the results of such monitoring, and as a result they allowed the employer and management too much leeway in controlling these matters. Apart from being unable to question management concerning the veracity of reported occupational hygiene findings, this he said also meant that representatives were insufficiently active on hygiene and health issues, suggesting that:

In most cases the safety reps are focused on safety they forget about occupational hygiene and this leads to problems

Here, again, the somewhat conflicted position of the full-time health and safety representatives placed in the health and safety departments of the mines in which they work was brought into sharp focus. The full-time representatives talked of the training opportunities their employers made available to them when they were in this role and how it could be used to amass competencies that would enable them to take up positions within health and safety management when their term of office had been completed. Indeed, some of the full-time representatives talked of a widespread expectation that this would be the case and indicated how they had already acquired some certified competencies and were actively pursuing others.

6.4.4 Support from the mines inspectorate

Generally, representatives were very positive about the attitude and role of the DMR inspectors. They reported being consulted by the inspectors when they visited the mines. They said that inspectors actively sought out full-time representatives and they made sure that the full-time representatives were present during the inspection and when they reported their findings back to the mine at the end of the visit. They also said that they always asked to see the appropriate sectional health and safety representatives when inspecting the working places they covered, and they engaged with these representatives, asking them about their working places and informing them of their findings. When they consulted with or reported back to the joint health and safety committee, again they would often direct their remarks towards the health and safety representatives.

The inspectors in our region.... They don't ignore the sectional safety representatives or the full-time representatives — these are the people they talk to

Under the MHS Act, representatives are entitled to request an inspector to conduct an investigation under section 60, or the Chief Inspector of Mines to conduct an inquiry in

terms of section 65, and to participate in these investigations and inquiries. But we found few examples of this having occurred. In one or two cases it was suggested that senior managers would have found such actions 'disloyal' and representatives did not feel sufficiently secure in their employment to risk this. But generally the representatives had not found it necessary to make such requests. They talked instead about being satisfied with the conduct of the inspectors in pursuing their own investigations at the mines and their willingness to co-operate with them while they were visiting. They mostly had not felt the need to summon the inspector to the mine or to report matters to them unless they were asked by the inspectors to do so. But they were clear that they had the capacity to do so if necessary and had little doubt concerning the willingness of the DMR inspector to respond.

Some representatives suggested that, in their experience, the DMR inspectors did not announce their visits in advance to them. But at the same time they also pointed out that this could be because these representatives were likely to be on site and not in the office at the time when such announcements were made. They felt that even if *they* did not know about these visits in advance, someone in the union – either the branch chair or secretary, or the full-time health and safety representatives – would be likely to know about the visit and they were all broadly in agreement that when they were on site the DMR would always ask to meet with the representatives.

Regional officials who were interviewed also indicated how the inspectors maintained contact at the regional level. They could email them to request information, and visit them at their offices if necessary. They also met at the regional tripartite committees and in other forums. Here again there was a strong sense of the existence of a very positive relationship between the trade union officials and the mines inspectorate. It was distinguished to some extent from that shared with the mines level safety representatives in as far as the latter said that, although they communicated very extensively with the inspectors when they were on site at the mine, this communication did not extend beyond the mine.

6.4.5 A question of health?

The literature discussed in Section 6.3 of this chapter identifies a range of work-related health issues that have confronted mine workers in South Africa since colonial times. In particular, it highlighted the scale of problems of lung disease related both to work in dusty mines and to the spread of infection as a consequence of the migrant employment and accommodation strategies of the mining companies, leading not only to high incidence of TB but, more recently, also to the virulence of the HIV/AIDS epidemic among mine workers. The legacy of these experiences — which were the result of the way in which work in mining was organised — remains prominently manifest in the burden of ill-health borne by mine workers up to the present times. Unsurprisingly, the participants in the study were conscious of these issues in their daily experience of work in mining. Assessment of their colleagues' fitness to work formed part of their appreciation of what was involved in risk assessment at the start of each shift and a relevant factor in the background to most of their OSH representative

activities. In this respect, participants were further aware of issues of work overload and fatigue among mine workers and their relation to the organisation of work and production schedules within the mine. However, apart from intervening to help individuals in undertaking tasks at levels they were able to manage, the representatives had little influence over the planning or control of these matters. They regarded helping with the provision of support for mine workers who were incapacitated by poor health as one of the tasks they felt obliged to undertake as health and safety representatives and they spoke at length of the experiences of providing social support to fellow mine workers both within and in addition to their daily routines in the mines where they were employed.

Participants were therefore aware of the prevalence of health issues, such as dust-related lung diseases, and of the need for preventive measures through adequate dust monitoring and control in the mines. However, for the majority of participants, while the question of work-related lung disease was part of everyday life in the mine, medical, scientific and engineering aspects of its prevention were matters for specialists, and they felt poorly equipped to directly question the authority of company specialists on these matters themselves. Records of these activities were the subject of discussion at joint health and safety committee meetings and, generally, participants acknowledged that representatives would benefit from more information and training on these matters in order to be able to engage more effectively with them. Similarly, there was an understanding among the representatives that there were a range of exposures in the mines, to excessive noise levels, vibration, hazardous chemicals and so on, that were probable causes of work-related ill-health, which all required appropriate monitoring and control. In addition, other potentially health-related matters, such as the ergonomics of operating machinery and the incidence of musculoskeletal damage, were frequently referred to in the participants' accounts of their experiences of representation on OSH in the mines.

With some notable exceptions, in all these cases participants agreed that, while they were aware of the existence of a range of exposures in the mines that were likely to be harmful to health, they possessed insufficient knowledge and competencies to feel entirely confident that they were able to engage effectively in the discussion of measures in place to monitor and control them. Here again, therefore, there was a concern with the need for greater provision of training on these matters. As discussed previously, there were a few representatives who had benefited from such training. Overall, however, the focus on *safety* management in the mine, in common with the specialist nature of occupational hygiene practice, left most of the representatives feeling that, while there were clearly important occupational and environmental health issues to be addressed, this combination of affairs meant that, with few exceptions, health and safety representatives were somewhat marginalised in the activities of monitoring evaluation and control of workplace exposures involved in the prevention of work-related ill-health in the coal mines where they were employed.

6.4.6 The organisation of work and employment in the mine and the problem of contractors

All the representatives acknowledged that there were problems dealing with contractors. They talked at length about the effects of the outsourcing strategies applied by the larger mining companies that, in the interests of achieving perceived business benefits in price and production efficiency, increasingly adopted practices involving the contracting out of work activities in the mines which led to the presence in the mines of large numbers of contractors and their employees. They included many smaller contracting organisations that the representatives felt possessed neither the will nor the capacity to follow the health and safety requirements in place in the mine. They reported many examples of poor health and safety practices adopted by the contractors, as well as examples of poor welfare provisions for the contractor workforces that were the result of the ways in which the contracting companies went about meeting the demands of the price and delivery requirements of the purchasers of their services. These experiences, they suggested, occurred despite the presence of health and safety management strategies in the mine that ostensibly applied to all those who worked there, whatever the nature of their contractual arrangements. They suggested that this showed that such management strategies were at best only partially effective, but also at a more fundamental level they suggested that the process of outsourcing contradicted these strategies to a degree that resulted in the procurement of services from organisations without the proper capacity to be able to meet their requirements and with a work culture that disproportionately penalised their employees for the failings of management practice. They discussed the difficulties this presented them with as representatives of labour. On the one hand, like the health and safety management arrangements in the mine, in their representational activities on health and safety they did not distinguish between workers who were directly employed in the mine and those who were the employees of contractors, and were prepared to intervene in both. On the other hand, they found that differences between the two were often both obvious and quite extreme. This was true not only of the differences in the health, safety or welfare conditions in question, but also in the culture and security of employment in the different organisations, with the contractor workforce being more vulnerable in all these respects. They illustrated the problems this created with examples of where far poorer facilities for welfare were available for the employees of contractors, or where unsafe practices among these workers were condoned and even encouraged by contractors. Sometimes interventions by the representatives had resulted in improvements for the contractor workforce, but in other cases they could lead to harsh discipline being meted out to contractor employees, or to their removal altogether from the mine.

Among the representatives interviewed there was little, if any, experience of involvement with the mine management in agreeing the health and safety conditions and standards required of contractors at planning stages prior to their appointment, or in agreeing in advance procedures for monitoring their performance while undertaking their contracted tasks. Indeed, the representatives were unable to provide any examples of their engagement with health and safety aspects of the planning of the organisation of work and employment of contractors in the mine. These matters

remained the sole prerogative of the mine management. As a result, opportunities that such engagement might offer the trade union representatives to influence the conditions under which the employees of contractors might be expected to work in the mine prior to their appointment could not be acted upon and the representatives were left with little choice but to play a reactive role in relation to the monitoring of health and safety matters once the contractors were already on site. In these situations, the normal procedures for resolving problems was through raising the matter in question with their own mine management, who would then address the contractor directly, if they saw fit to do so. This could be a circuitous and potentially lengthy process and the representative had little opportunity to exert any direct influence on its outcomes. However, several of the examples that the representatives gave of their own efforts to influence contractors' OSH and welfare practices, which they felt had been moderately successful, had clearly involved them in more direct actions. Again, this may be further illustrative of the ways in which, in practice, the circumstances and personalities involved in the resolution of particular issues might serve to circumvent set procedures.

Despite these moderate successes, however, it was clear from the interviews overall that the increasing presence of a multi-contractor workforce in the mines was regarded by the representatives as a major challenge to their efforts to achieve sustainable improvements in health and safety for all the mine workers at their mine sites.

6.4.7 What worked well, but what might work better?

When representatives reflected on what they thought were their successes in their role, what was especially striking was the extent to which their reflections were couched, not in terms of personal agency, but rather those of collective action. They stressed, for example, the importance of providing their fellow mine workers with adequate feedback on how the mine management was proposing to address their concerns. They felt strongly that workers needed to know the progress that was being made in taking these concerns forward and getting them resolved. They saw sharing knowledge with other mine workers as central to their role and stressed the position they occupied was not one that should be used for personal advancement. In terms of tangible changes they had achieved, as well as talking about making workers and their supervisors more aware of the health and safety issues in the mine, they also talked about making workers more aware and more confident concerning their rights to refuse dangerous work, and they were especially satisfied when they had been able to provide help in this way to the workers of contractors whose conditions were considerably worse than those of the directly employed mine workers. On personal achievement one said:

I cannot talk about my own achievement but what I've achieved through the union. You know, since I was involved in the union ... today I can tell you I am able to engage irrespective of any forum. Not with formal qualifications. Just to engage. I can debate issues. I can stand in front of people, and talk with them, irrespective of numbers I've learned even to educate myself ... I was not a person that can go and look at the documents But now, through the union, now I've learned even to listen.....to let people speak. And I can go buy the legislation, read it and get the information and engage.....Through the union I've learned to respect people and to listen..... And I'm able to conclude and to give a direction to the matters we've discussed. I think one of the issues I need to do is I need to improve by knowing the legislation more so I can give feedback to the members correctly. Its not about me — its about the union itself.

At the same time, others were clearly proud of their achievements in getting to grips with technical and scientific elements of health and safety in coal mines and especially of achieving a degree of understanding and competence in occupational hygiene practice that was recognised both by their peers and by managers.

This said, they also suggested that among the major challenges faced by representatives was the insecurity of their situation, despite the protections offered to them by the legislation. There were two elements to which representatives attached a strong sense of significance. The first concerned the behaviour of supervisors and middle-managers who failed to follow the OSH requirements of the mine and acted to deny representatives' rights to carry out their health and safety functions as defined by the regulatory requirements, often acting in collusion with other foremen, supervisors and middle managers to marginalise the role of the representatives in a variety of ways. Representatives explained the relative impunity with which some supervisors and middle managers acted as a consequence of the absence of any serious attempt on the part of the company to discipline them. While they felt that senior management were obliged to make a show of taking health and safety matters seriously, they questioned the true extent of their commitment in this respect, arguing that in reality they often turned a blind eye to transgressions of supervisory and middle managers who were acting unsafely in order to meet company production schedules that applied to them. Indeed, they suggested that, instead, disciplinary procedures were more commonly directed against mine workers and the representatives themselves — which was the second element that made their situation insecure. And as we have already documented, this sense of insecurity pervaded not only their immediate relations with the mine management, but also their feelings concerning their future employment prospects within the mine. Such role conflict between their expectations when acting to represent the interests of mine workers and those of supervisors and managers in relation to the behaviour that they expected of the representatives, served to heighten their perception of the precariousness of their situation.

Finally, there was strong agreement among the fieldwork participants that their role in relation to work-related health issues among mine workers was in need of greater

support. There were several inter-related elements in their argument concerning what might be improved, reflecting the range of health-related issues in which representatives became involved, which have been discussed already. So, for example, they commented on how having more time and better support during pre-shift meetings with mine workers would allow sectional representatives more opportunities, not only to assess the risks in relation to the tasks required of mine workers in the shift, but to assess the wellness of their colleagues who would undertake them and more adequately explore alternatives in cases where health issues were likely to cause mine workers difficulties. They further commented on what they felt was their limited training in relation to occupational health issues in comparison with that focused on safety matters in the mine. These limitations related to understandings about the nature of work-related ill-health, its main forms, causes and prevalence in coal mining, as well as more particular understandings concerning the nature of the physical and chemical hazards in this environment and the means with which they could be monitored and evaluated.

6.5 Conclusions

The development of rights to representation on health and safety for black mine workers in South Africa emerged from the struggle to overthrow the apartheid regime. They were enacted with the MHS Act 1996, amid the legislative reforms of the 1990s which provided the framework for radical change in structures and procedures for the conduct of labour relations in South African workplaces. They were typical of the provisions on worker representation on health and safety that were also the result of wider reforms applied in other sectors, which borrowed from ILO standards and legislation already in place in advanced market economies, to create a framework of statutory support for worker representation on health and safety at work, although they included some features that are suggestive of the influence of statutory arrangements in mining in other countries, such as rights to instruct and support workers in refusing dangerous tasks and in the creation of a two-tier system of sectional and full-time health and safety representatives. Their drafting also implemented measures developed around the same time in ILO Convention 176. Thus, in the mid-1990s they were a part of a regulatory framework for reforming OSH arrangements in an industry in which health and safety outcomes for mine workers were acknowledged to be extremely poor and substantially worse than in mines operated by many of the same global companies in countries with similar economic performance in other parts of the world.

Given this background, the first important conclusion to emerge from the study is that its evidence shows many qualitative indications of the positive role played by trade union health and safety representatives in making effective contributions to the operation of health and safety arrangements in coal mines and also of the support they receive in this role from trade unions as well as from regulatory inspectors. It indicates that the experience of the NUM full-time health and safety representatives and other representatives who were part of the union structures for representation on health and safety was generally concerned with addressing serious risks and that the representatives used effective techniques of representation to do so.

However, trade union representatives participating in the study were selected with the assistance of the national officers and officials of the NUM and it was anticipated that selection through this route would result in an over-representation of more active trade union representatives from relatively strong trade union branch and regional structures — in other words, a ‘best case’ scenario in terms of the experience thus captured. As the evidence of the previous sections illustrates, the representatives nearly all came from very large mines in which there were structures for representation in place, and they were either experienced full-time health and safety representatives or active members of the trade union structures for health and safety created by the NUM at branch and regional levels. As we have noted, they all reported significant engagement in health and safety activities at their workplace and regional levels. Nevertheless, they were also clear in their accounts of the difficulties they faced in undertaking this work and pointed to their experience of the many examples of barriers and constraints that needed to be overcome in order to take effective action, as well as to their knowledge of other representatives who had been unable to surmount these challenges. This leads to the second important conclusion from the study, which suggests that while there is evidence that worker representation can and does play an important role in the processes that determine positive health and safety outcomes for mine workers, it is equally clear that its role is mediated by the presence of a set of contextual determinants that act to either support or limit its effectiveness in this respect. Limiting factors applied strongly, even in the ‘best case’ scenarios we investigated in the present study — and it is likely that their presence would be even more limiting in situations in which workplace trade union organisation around OSH is weaker than in the examples included in our present investigation.

Looking in more detail at our evidence of the contextual factors determining the capacities for engagement of worker representatives, we have found plenty of examples to suggest that broadly the sets of ‘preconditions for effectiveness’ identified in previous studies also apply and explain the relations and experiences of health and safety representatives in the present account. That is, the extent of statutory support for representational activities, the degree of managerial commitment to participative approaches to OSH and the level of support from trade unions helped determine the extent of the practices and outcomes in worker representation in coal mines where our participants were employed. But precisely how this occurred reveals some interesting details.

Thus, for example, the MHS Act 1996 in combination with the Labour Relations Act 1995, together allow trade union health and safety representatives extensive rights and functions. Strong statutory support is therefore in evidence in South Africa, but there was little sign of strict enforcement of representation and participation rights by the regulatory agency. As elsewhere, despite their comparatively elaborate provision of rights, the statutory provisions remain, essentially, enabling legislation — the extent of operation being largely determined by the capacities and will of its beneficiaries and duty-holders. For example, in the mines where the representatives worked, collective agreements contained relatively generous provisions for the election and appointment of health and safety representatives, in compliance with the guidelines of the legislation

— or even exceeding it. This contrasts with the situation reported in mines that have been the subject of previous studies, where they were frequently found not to have appointed representatives (Department of Minerals and Energy, 2008; Shaw et al 2010). Unfortunately, the well-developed arrangements in place in the mines where the representatives in the present study were employed cannot be taken as an indication that the situation has improved overall, since it is most likely a reflection of the effects of the bias in the selection of the participants in the study, referred to above. Perhaps more significant as far as what our analysis can tell us about the effectiveness of the processes involved, is that even in these mines, it will be recalled, the representatives themselves suggested that the election and appointment of sectional health and safety representatives fell somewhat short of the agreed complement.

Similarly, another area in which the intervention of regulatory statutory support might have been anticipated to be fairly prominent was in support of the representatives' actions in stopping dangerous work. Here again, however, while the representatives were clearly aware of their rights in relation to stopping dangerous work, and did not suggest they experienced any opposition to their actions from the regulatory inspectorate, the success or otherwise of these actions depended far more on their own skills and capacities and on the authority they were able to exert within their mines, than it did on support from the intervention of regulatory inspectors.

Despite these caveats in relation to the statutory requirements, one notable feature of the representatives' testimony that emerged more generally was the extent to which they nevertheless felt supported in their roles by the regulatory inspectorate, especially in relation to being consulted during inspection visits and in the openness of the inspectorate towards having contact with them both at mine level and through tripartite structures at the level of the region. These positive views contrast strongly with those of representatives in other countries in the study where we have found them to be far less impressed with the willingness of inspectors to engage with them.

These observations, therefore, provide some South African nuances to more general conclusions concerning statutory support as a precondition for the effective operation of arrangements for worker representation on health and safety in coal mining. For while they do not dispute the importance of a statutory framework, or the role of collective agreements in setting up systems for representation, they suggest that the operation of these systems require something more than legislative requirements or the contents of collective agreements to ensure their effectiveness. Moreover, while they show that the regulatory inspectorate in coal mining is perceived by health and safety representatives as somewhat more supportive of their role than elsewhere, the administrative nature of the function of the law in relation to their appointment and rights seems to function in similar way — leaving the matter largely to stakeholders to determine for themselves, the outcomes of which were dependent upon the resources and power relations between the parties and individuals involved.

Turning to the role of management commitment and support, in our investigation it was obvious that most of the determinants of the representatives' activities were under the

control of the mine management and here, despite the selection of representatives from the likely 'better end' of experience of representation, a number of factors limiting the representatives' effective engagement were identified and widely shared. For example, the respondents made it plain that they regarded the effectiveness of representation in the mines where they worked to be limited by the amount of time available to conduct representational activities, and in this respect suggested that managerial priorities often favoured production at the expense of allowing representatives to properly engage with what they saw as significant safety and health issues. The full-time representatives that were the majority of the respondents interviewed for the present study obviously did not confront these problems in getting time off themselves, since by the nature of their appointment they were already engaged in full-time representational activities, but they were all aware of its existence for sectional representatives, who needed to seek the time off from their normal jobs to make representations or investigate complaints from their constituents. While generally some provision was made for these representatives to take time off to conduct routine inspections, more ad-hoc investigations were reported to be problematic since these necessitated interaction with often unsympathetic, suspicious or defensive foremen, supervisors and middle managers. The full-time representatives further indicated that, although senior managers themselves often supported the rights of health and safety representatives in principle, in practice they turned a blind eye to the obstructive behaviour of middle managers, especially where conflicts were perceived between production priorities and representatives' concerns over safety matters.

Generally, it was relations between the representatives and supervisory and middle managers that were regarded as most problematic and they reflected embedded patterns of work relations in the coal mines. In particular, it was noted that the culture of work in the mine meant that in effect there was one rule for the foremen, supervisors and middle managers, and another for the mine workers and their representatives. Such absence of trust appeared endemic in the representatives' perceptions of labour relations at these levels in the mines, and it led them to perceive significant challenges in 'getting things done' effectively on safety and health in the mines, as well as engendering the strong sense of insecurity they reported representatives generally feeling concerning their positions and future employment prospects in the mine. Here again, although the participants in the study reported many examples of the ways in which they had overcome these problems themselves, through learning skills and gaining confidence in their role, as well as seeking the protection of the trade union, they also gave accounts of many other situations in which they suggested their fellow representatives, both sectional and full-time, had been considerably less successful.

Related to these observations were other perceptions of the representatives concerning their role within the mine and especially the somewhat ambiguous position occupied by full-time health and safety representatives, who were located within the health and safety departments in their mines and who in these situations worked in close co-operation with company health and safety officers. While the representatives who formed part of the NUM branch structures for health and safety were quite clear concerning their trade union role, the full-time health and safety representatives were

strongly aware of both the duty they held to represent *all* mine workers and the challenges they confronted from mine managers when trying to do so in a *representational* way while situated within the structures and among colleagues responsible for *managing* OSH within the mines. All of the full-time representatives that took part in the study were committed NUM activists. They had found ways of delivering their representational tasks while occupying a position within the health and safety department, utilising opportunities this position provided for access to information and training in skills that would enhance their representational functions. However, they all spoke of the struggle this had entailed and the pressures they confronted from managers to conform to managerial expectations of their role. They also all spoke of other full-time health and safety representatives in their experience who succumbed to these pressures, and who used their position as full-time health and safety representatives to enhance their subsequent career.

A further continuing challenge with which all the representatives contended was the strong presence in the mines of behaviourally based health and safety management strategies. Although the MHS Act frames the responsibilities of the employer in terms of risk management, a prominent theme running through the representatives' testimony concerned the extensive use of behaviour-based approaches to safety by the mine management to reinforce the hierarchical nature of the control of work in the mine in which the role of representational participation was frequently marginalised. These experiences resonate with the criticism in previous accounts concerning the lack of room for engagement of worker OSH representatives with company led initiatives on safety and health such as MOSH, and the study offers a more in-depth understanding of the reasons for this. Representatives acknowledged that poor safety education and training for mine workers, along with embedded work practices among established mine workers, meant that there were issues of compliance in relation to company safety rules. They spoke of the ambivalent situation in which these techniques placed them as representatives, with an expectation from managers that they would participate in the supervision of mine workers' safety behaviour while at the same time feeling a necessity to protect their constituents from victimisation by foremen and supervisors on the grounds of safety behaviour. But, here again, they were critical of what they regarded as hypercritical company practices that allowed many foremen and supervisors to ignore safety procedures in the interests of production, while disciplining ordinary mine workers for non-compliance with the rules of safety behaviour. From the perspective of the representatives, therefore, the impact of global company OSH managerial strategies reinforced the operation of these behaviour-based arrangements, and did little to reduce the vulnerabilities of mine workers to unfair disciplinary practices which threatened their employment security, without adding meaningfully to an improved culture of safety behaviour at the mines in which they worked.

A related concern shared by many of the representatives was that such strategies, and indeed the whole approach to managing safety and health at the workplace, promoted safety but neglected health. Yet as the representatives were well aware, work-related mortality and morbidity in the coal mines was, and still is, of far greater magnitude than are serious or fatal injuries. It is clear from the account above that work-related health

issues were of grave concern to the representatives but that, for the majority of them, they felt disadvantaged by their perceived limited specialist knowledge and understandings in terms of being able to address them effectively or monitoring whether the mine management was doing so itself.

Wider managerial strategies on the organisation of work and employment in the mines were also regarded by representatives as posing significant challenges to OSH and to the capacity the representatives had to act *representatively* in this respect. Two issues were of particular concern. One, already touched upon above, concerned the strong focus on production and accountability for meeting production schedules, in relation to which representation on health and safety matters continually struggled to have any influence. Generally, there were few examples given of representatives having any involvement with the planning of work in the mines — even though it was clearly understood by all the representatives that the way in which work was organised had significant effects on health and safety outcomes. The second related issue that was of particular concern was the growing presence of contractorisation in the mines. In many of the large mines where participants in the study were employed, around one third or more of the workforce at any one time were the workers of contractors. Here again, there were no examples given of representatives having any involvement in determining the health and safety aspects of *planning* the role of contractors in the mines, and therefore they were left with having only a reactive role in relation to the many safety and health issues raised by the presence of contractors and their employees at the mines.

The processes created by both the OSH management strategies, and their situating within the wider corporate practices governing the organisation of work and employment, therefore, presented major difficulties for the health and safety representatives that took part in the present study. To the extent that it can be argued that these approaches are driven by wider global tendencies in corporate management, it raises questions concerning the role of wider trade union organisation in resisting their negative impact on the health, safety and welfare of mine workers. These are issues to which we will return in the comparative discussion of the findings from the study overall. However, in relation to the South African experience, it seems clear that if they represented a significant challenge to the trade union organisation on OSH in the mines in which our participants were employed, it is not unreasonable to extrapolate that they would present even greater challenges to representative participation in health and safety arrangements in mines where trade union organisation is weaker.

Indeed, all of the participants in the study valued the support they received from their trade union in their roles, both at branch and regional levels, while some also spoke about valuable support in this respect from national officers with responsibility for health and safety. At the same time, they were not uncritical of the trade union and expressed concerns about wider issues confronting the NUM at the present time and, for some, especially the confusing and sometimes conflictual nature of current union rivalries within their mines. More specifically in relation to health and safety matters, there was general agreement among the participants concerning the value they attached to the

role of trade union training on health and safety and unanimity among them that it would be beneficial if the trade union were able to provide both more training and training that was better targeted to their needs.

In summary, therefore, in relation to the determinants of effective representative participation on health and safety, the findings from the fieldwork, in combination with what can be learned from the existing literature on the activities of health and safety representatives in South African coal mines, suggests a mixed picture. On the one hand, regulatory requirements support a provision for worker representation on health and safety that is comparable with the best-developed arrangements elsewhere in the world. Moreover, there is some evidence from the testimonies of representatives in the present study that, with the support of their trade union, the oversight of the regulatory inspectorate and co-operation of company managers, they have been able to use more or less the full range of these provisions to effectively represent the interests of their mine worker constituents and contribute to improved health and safety outcomes among them. In addition, in less co-operative situations, by utilising skills they have gained with the help of training and experience of trade union representation, they have been able to represent and defend mine workers' OSH interests through stopping unsafe work or successfully influencing managerial compliance with regulatory OSH requirements. On the other hand, it is quite clear that their capacity to do so relies on a set of supports that are unlikely to be present in more than a small number of 'best case' scenarios that were probably seriously over-represented in the fieldwork of the present study. Even in many of the situations referred to by these 'best case' participants, they and/or their colleagues faced a hostile supervisory and middle management bent on meeting production targets. Representatives felt this hostility to be covertly supported by more senior managers and by a production orientated culture in the mine in which behaviour-based safety management reinforced the mine workers' sense of employment insecurity, mistrust and hierarchical control. These targets of course also meant that mine workers themselves would not necessarily welcome the intervention of safety representatives if they perceived it to threaten pay or bonuses linked to production. Moreover, the character of more proactive approaches to safety management arrangements adopted by the global mining companies operating the majority of mines where the participants in the present study were employed, served only to reinforce behavioural strategies, while at the same time incorporating health and safety representatives both structurally and functionally, and consequently either controlling or marginalising them.

Resistance to these strategies is of course possible, and the representatives in the present study furnished many examples of ways in which they did this, but how successful such resistance might be in scenarios in which the preconditions for effective representation are themselves not strongly evident is far from certain.

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