MANAGEMENT AND GOVERNANCE OF

OCCUPATIONAL SAFETY AND HEALTH IN FIVE COUNTRIES

(UNITED KINGDOM, UNITED STATES OF AMERICA, FINLAND, CANADA, AUSTRALIA)

NOHSAC TECHNICAL REPORT 8

DR NICHOLAS KENDALL
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Executive Summary

This review provides an overview of the management and governance of occupational safety and health (OSH) in five countries: the United Kingdom, the United States of America, Finland, Canada and Australia.

The workplace is known to contribute to diseases and injuries, and many causes and contributing factors have already been identified. Further actual or potential factors will be identified through ongoing research, such as the use of surveillance systems.

It is generally acknowledged there are both moral and practical dimensions to safety and health systems. Employees should not risk injury or damage to their health when working, nor should others be adversely affected by their working.

The most common principle is one of hazard identification using some form of risk assessment based on an agreed rule or “standard”. This approach rests on a sequence of assumptions. First is that risks and hazards are known and understood. Second is that they can be accurately identified in practice. Third is that, once they have been identified, they can be eliminated, or at least reduced, and this will yield a subsequent reduction in cases of injury or illness. However, this does not always hold true, nor does it necessarily take account of multifactorial and complex causation.

There is some congruence in the philosophy underlying the OSH systems reviewed. The most important and distinct aspect of this consensus is the reasonable assumption that identifying risk factors for occupational disease and injury is the foundation for effective prevention strategies.

The most obvious divergence between the various systems involves the lack of agreement about what to do in order to manage identified risks.

There is a uniform lack of consistency in the type and manner of application of sanctions applied (usually to employers) if safety and health rules are broken or not followed. There is a universal reliance on punitive sanctions, without attempts to apply positive rewards, for example after rapid remedial action has been taken.

It seems likely that an approach embracing a mixture of methods will be the more successful overall. This should probably incorporate a mix of:

- a set of mandatory, but reasonable, workplace requirements with a legislative basis
- an information dissemination and educational initiative
- encouragement for a collaborative approach between the OSH system and the workplace
- involvement of both employers and employees
- a monitoring approach that involves inspections
- the use of inspections that are prioritised toward truly dangerous jobs and workplaces. It is clear there are uncomfortable work conditions, unpleasant jobs and some truly dangerous jobs. The most effective system, in terms of preventing fatalities and serious work-related diseases or injuries, would emphasise the latter.
- sanctions for lack of compliance with mandatory requirements
- a mix of sanctions that can be applied both positively and punitively
- careful monitoring of the effects.

None of the systems reviewed appear to be actively questioning the possible limitations of the hazard identification model, or the assumption that a high level of avoidance of all risk will have only beneficial effects. This question has social, political and moral implications.
Identifying hitherto unknown risks and hazards, or potential contributing factors, remains a major challenge. The lack of consistency within systems, over time, and between the various systems has seriously hindered the ability of researchers to collect and aggregate data in a meaningful way. Significant efforts are currently underway to harmonise data collection, which will provide an important boost to statistical power in the quest to detect the relevance of suspected factors and perhaps their subtle interplay with other factors.

The relationship between health and injury lacks clarity. This is largely due to the ad hoc manner in which cases are currently classified and attributed. For example, 39% of cases in the UK are classified as injuries, whereas in the US, 94% are called work-related injuries. Poor definitions, together with incentives and disincentives to classify one way or another, provide arbitrary divisions that defy meaningful interpretation.

It can be argued that OSH may be fruitfully linked with public health initiatives and strategies. This is because there are often overlapping areas of interest and similar applicable methodologies. However, in practice, this rarely occurs, for reasons that are not always clear. Anecdotal information from those inside the respective systems suggests it is not just a matter of simple territorial or boundary issues. Rather, it seems there is a general perception that health and injury issues that involve work either are better funded or have a specific tagged funding stream. Hence, there is a general reluctance on the part of those involved in public health matters to use any of their scarce resources in areas that may attract better funding. Furthermore, those involved in work-related health and injury issues are usually constrained by some form of mandate to remain firmly in an arena where work relatedness is demonstrable.

When safety and health systems fail to prevent injury or illness, as they inevitably will do since they cannot be perfect, some form of support and compensation is generally made available to the worker. This varies widely in many details, however there are three common methods for delivery: insurance-model workers’ compensation; social welfare/security benefits; and recourse to appeal and/or litigation.

The impact a compensation system might have on OSH initiatives is not entirely clear. The most common method to inform prevention strategies is to feed back claims’ history in an attempt to identify problem areas. However, the effectiveness of this lacks an evidence base. There is consistent anecdotal evidence from those involved in direct management of such systems that a frequent outcome is merely behaviour modification, such as reclassification or recoding of cases by general practitioners (GPs) or others, rather than a reduction in total claims. However, this may only hold true for less severe diseases or injuries. Feedback on work fatalities, for example, seems to have a more robust effect. That is, the relationship between systems and prevention initiatives may be complex and vary across spectra, such as severity.

The effectiveness of OSH initiatives is hard to quantify for a number of reasons. These include changes within systems, over time, and a lack of comparability between systems. An important and valid question is whether OSH systems function better when they are run as a stand-alone department or embedded within another agency. There is no clear evidence on this matter. However, observation indicates that independent, or at least semi-autonomous, departments may well function more effectively with greater focus and the ability to evolve more rapidly in response to changing needs.
This question leads naturally to a further important issue, namely, how good the available evaluation research is. Despite substantial and well intentioned efforts, the evidence base on the effectiveness of prevention strategies remains weak and equivocal. All the systems reviewed do place a strong emphasis on research, and this is perfectly appropriate and understandable. However, the best method for efficiently delivering research is not immediately clear. Many countries have given the task to a single, large research organisation. However, all seek external and independent research providers. Perhaps it can be argued that the most flexible and effective approach is to have a semi-autonomous research organisation that is required to drive a research agenda based on expert and stakeholder consultation, and that manages and coordinates a number of specialised groups that conduct the actual research. This should be augmented by overall independent evaluation of the research outputs.

The near future may be an exciting time for development within OSH systems, since there is a rapidly maturing approach based on more comprehensive data systems that are harmonised so as to allow more powerful comparisons, and there is a growing recognition that more sophisticated methods targeted at key areas identified by the stronger data sets will yield more effective prevention strategies.
SECTION ONE

INTRODUCTION
1.1 SUMMARY

The workplace is known to contribute to diseases and injuries. Many causes and contributing factors have already been identified. Surveillance systems may help to identify further actual or potential factors.

Occupational safety and health (OSH) is identified as the discipline dealing with the prevention of work-related diseases and injuries as well as the protection and promotion of the health of workers. It aims at the improvement of working conditions and environment.

There is a range of methods for providing national governance of OSH systems. This review provides an overview of the OSH systems and their governance in five countries: the United Kingdom, the United States of America, Finland, Canada and Australia.

1.2 THE WORKPLACE CONTRIBUTES TO DISEASES AND INJURIES

The workplace is a significant and consistent contributor to diseases and injuries and associated fatalities. Diseases and injuries that occur due to work have long-term consequences and represent significant costs, in social and economic terms, to workers, employers, government and the economy.

A reduction in the burden of disease and injury within New Zealand is dependent on understanding the magnitude of that burden and its causes, and determining potential areas for the efficient and effective deployment of resources. Current estimates indicate that occupational diseases account for greater mortality and morbidity than occupational injuries, but are harder to diagnose, measure and monitor for a range of reasons, including long latency periods after exposure, difficulties distinguishing occupational diseases from non-occupational diseases and a lack of awareness about the occupational origins of some diseases.

1.3 IDENTIFICATION OF CAUSES AND CONTRIBUTING FACTORS IS THE BASIS FOR PREVENTION

The National Occupational Health and Safety Advisory Committee (NOHSAC) previously identified that effective occupational disease and injury surveillance systems are an essential part of an effective national OSH strategy. It noted in an earlier report, “If we cannot measure occupational disease and injury, we cannot validly identify priorities, or prevent occupational disease and injury occurring, or measure how effective any prevention strategies are”.

A large number of New Zealanders develop or acquire work-related health problems and injuries each year, and some of these are fatal. Yet this truism is difficult to support with hard factual data about the number of cases, the causes and what can be done to prevent them. Key problems within occupational health include the estimation of the incidence and prevalence of disease and injury, trends within these parameters, and the distribution of disease and injury across variables such as occupational class, geographical location or population subtype. Reliable and valid determination of this data provides the critical foundation for important discoveries such as causes, and what might be done to prevent them.

There are a variety of occupational health surveillance systems and other epidemiological approaches in use around the world to attempt to identify contributors to work-related diseases and injuries. These have been summarised in previous reports to NOHSAC.
1.4 OSH SYSTEMS AND PROGRAMMES

Since 1950, the International Labour Organization (ILO) and the World Health Organization (WHO) have had a common definition of occupational health. This definition was adopted by the Joint ILO/WHO Committee on Occupational Health at its First Session (1950) and revised at its 12th Session (1995):

Occupational health should aim at: the promotion and maintenance of the highest degree of physical, mental and social well-being of workers in all occupations; the prevention amongst workers of departures from health caused by their working conditions; the protection of workers in their employment from risks resulting from factors adverse to health; the placing and maintenance of the worker in an occupational environment adapted to his physiological and psychological capabilities; and, to summarise, the adaptation of work to man and of each man to his job. The main focus in occupational health is on three different objectives: (i) the maintenance and promotion of workers’ health and working capacity; (ii) the improvement of working environment and work to become conducive to safety and health; and (iii) development of work organisations and working cultures in a direction which supports health and safety at work and, in doing so, also promotes a positive social climate and smooth operation and may enhance productivity of the undertakings. The concept of working culture is intended in this context to mean a reflection of the essential value systems adopted by the undertaking concerned. Such a culture is reflected in practice in the managerial systems, personnel policy, principles for participation, training policies, and quality management of the undertaking.

OSH is identified as the discipline dealing with the prevention of work-related diseases and injuries as well as the protection and promotion of the health of workers. It aims at the improvement of working conditions and environment. Members of many different professions (e.g. engineers, physicians, hygienists, nurses) contribute to occupational safety, occupational health, occupational hygiene and improvement of the working environment. A secondary effect of OSH may be to also protect employers, customers, suppliers, members of the public and anyone else who may experience an impact from the workplace environment.

Industrialised western countries have established OSH systems with the specific goal of preventing workplace fatalities and injuries, and reducing the incidence of work-related diseases. These systems involve a range of programmes aimed at the identification of hazards, the education of stakeholders, research, the development of standards, and enforcement and compliance approaches.

1.5 GOVERNANCE FOR NATIONAL OSH SYSTEMS

Many governments realise that lower-quality OSH performance results in both direct and indirect cost burdens to the state. These occur through, for example, social security payments, healthcare costs and the loss of productivity. Employers and employing organisations also sustain costs in the event of an incident at work. These might include insurance levies or premiums, legal fees, fines, compensatory damages, investigation time, lost production, and lost goodwill from the workforce, from customers and from the wider community. Hence, governments have generally had high levels of motivation to establish effective OSH systems.

Many now view the primary rationale for establishing OSH systems and standards as moral. That is, an employee should not have to expect that, by engaging in work activities, their life or limb will be at risk, nor should others be adversely affected by their doing work.

It has been generally recognised that employers and workplaces either cannot or will not act upon these implied moral obligations. Therefore, an element of compulsion has been added.
The OSH systems in use are, in general, based on relevant civil and criminal law. The most common principle is one of hazard identification using some form of risk assessment based on an agreed rule or “standard”. This approach rests on a sequence of assumptions. First is that risks and hazards are known and understood. Second is that they can be accurately identified. Third is that, once they have been identified, they can be eliminated, or at least reduced, and this will yield a subsequent reduction in cases of injury or illness. Unfortunately, this sequence of assumptions does not always hold true in its entirety. For this reason, there is a lack of agreement on what constitutes an effective OSH system. Different states take different approaches to legislation, regulation and enforcement.

1.6 METHODOLOGY

The purpose of the current review is to provide an overview of the OSH systems and their governance in five countries: the United Kingdom, the United States of America, Finland, Canada and Australia.

This was achieved through telephone interviews with personnel from the relevant organisations and the collection of appropriate published information.
SECTION TWO

UNITED KINGDOM
Country Summary

- The United Kingdom (UK) is a constitutional monarchy and political union, and is a full member of the European Union (EU) but has opted out of the Economic and Monetary Union (the euro) for the time being. The total area is 244,820 square kilometres (sq km), of which 241,590 sq km are land. About 23% of the total land area is classified as arable.
- The current population estimate is 60.6 million. The current annual growth rate is 0.5%. Part of this is due to a natural increase (with a birth rate of 10.71 births/1,000 population), but net migration into the UK has been an increasingly important factor. The UK has an ageing population.
- The UK is a highly developed country, with the fifth largest economy in the world and second largest in Europe after Germany. The British economy is estimated at $NZ3.3 trillion. Gross domestic product (GDP) per capita is $NZ45,263. The GDP real growth rate is 1.9%. The inflation rate in 2006 was 2.1%. Public debt is 43.1% of GDP.
- The labour force is 30.1 million, the employment rate is 74.6%, the unemployment rate is 5.5% and the economic inactivity rate is 20.9%.
- Overall life expectancy continues to improve in the UK, with women living longer than men. Boys and girls born in 2004 could expect, on average, to live to 77 and 81 years of age respectively. While the UK population has been living longer over the past 20 years, the extra years have not necessarily been lived in good health. In 2001, the expected time lived in poor health for males was 8.7 years, and 11.6 years for females. The UK population contains sizeable ethnic minorities.
- The Department of Health conducts an annual Health Survey for England. Results for 2005 indicated no significant change in the proportion of adults who were overweight, although there was a marked increase in the proportion who were obese. Leading causes of death for males are approximately 39.5% due to circulatory diseases (including ischaemic heart disease and cerebrovascular diseases) and about 28% from malignant neoplasms. For females, the rates are about 39% and 24% respectively.
- The vast majority of healthcare in the UK is delivered free to the user at the point of care by the National Health Service. Health expenditure in 2005 was $NZ242 billion. It is estimated that about two-thirds of health spending goes on people over 60.
- Work-related health measures (including surveys and surveillance systems) indicate that about 4% of current cancer deaths are due to past exposures at work. According to self-report surveys, about two million people (6.6% of the current workforce) experience ill health or injury that they think is work-related (caused or made worse by their current or past work). About 61% of these instances are ill health, and the rest are injuries. The classification of problems into “health” rather than “injury” may be encouraged by the provision of free healthcare and self-certified sick pay. Ill health accounts for about 80% of working days lost. Approximately 40% of these are attributed to musculoskeletal disorders, and 45% to minor mental health problems including stress and depression.
- Fatal occupational injuries have decreased over the last decade. In 2006, the rate was 0.71 deaths per 100,000 workers. In 2003, the most recent year for which comparable data are available, the rate of fatal injury to workers in Great Britain was the lowest of European member states.
- The Health and Safety Commission (HSC) is responsible for OSH policy in the UK. The Health and Safety Executive (HSE) and local government are the enforcing authorities that work in support of HSC. The HSE acts as the UK Focal Point of the European Agency for Safety and Health at Work.
- The basis of UK health and safety law is the Health and Safety at Work Act 1974. OSH policies are derived from a mixture of international policy and agreements, EU directives and regulations, and legislation at both devolved national parliamentary and UK levels. There is a complex web of institutions and authorities in the UK responsible for health and safety. The current workforce of the HSE is approximately 4,000. Health and safety law in the UK is enforced by inspectors from the HSE or by inspectors from a local authority. The total HSE budget was $NZ613.3 million in 2003/04.
• The Office for National Statistics is the government department that coordinates much of the work of the Government Statistical Service (GSS). The GSS provides the UK with most of its official statistics. The GSS has no formal basis in law.
• The HSE conducts research in the Health and Safety Laboratory and commissions a diverse range of external research projects.
• There are two systems of workplace compensation available to a worker in the UK. One is the social security benefit system administered by the Department for Work and Pensions, and the second is the employers’ liability insurance. Employers’ liability insurance (for a minimum of $NZ14.3 million) is compulsory, enabling employers to meet the cost of employees’ injuries or illnesses, whether they are caused on or off site. Injuries or illnesses relating to motor accidents that occur while employees are working are usually covered separately by motor insurance. State benefits do not involve fault being established. By contrast, employers’ liability insurance requires the courts to establish the negligence of an employer. This is done through actual or threatened litigation. Employees in the UK who are injured or made ill at work are entitled to sue their employer for compensation in the civil courts within a three-year period. The UK is considered to be a highly litigious society.
• The HSC is responsible for establishing national OSH strategies. The HSE and local authorities are responsible for implementing these as programmes and delivering the desired outcomes. The HSC and HSE are required to conduct public consultations.
• UK health and safety law is based on the principle of risk assessment. The HSC and HSE use OSH policy, risk assessment using hazard identification, investigation and enforcement inspections, and strategic programmes.
• The HSC and HSE work toward specific goals and targets, as part of their government-approved business plans. These goals are meaningful and emphasise reductions in working days lost, incidence of work-related health problems and incidence of fatal and major injury incidents.
• The HSC and HSE are directly responsible for evaluating their own policies, strategic plans, enforcement systems and other activities. They publish these reviews, which are conducted both internally and by external parties.

2.1 UNITED KINGDOM – GENERAL INFORMATION

The UK is a constitutional monarchy and political union comprising Great Britain and Northern Ireland (where Great Britain includes England, Scotland and Wales). The UK also has several overseas territories, including Bermuda, Gibraltar, Montserrat and Saint Helena, among others. The dependencies of the Channel Islands and the Isle of Man, formerly possessions of the Crown, form a federacy with the UK collectively known as the British Islands. A constitutional monarchy, the UK is a Commonwealth Realm, sharing the same person – Queen Elizabeth II – with the 15 other Realms as monarch and head of state, forming a personal union with each. The UK is the third most populous state in the European Union (EU) and is a founding member of the North Atlantic Treaty Organisation (NATO) and the United Nations (UN), where it holds a permanent seat on the Security Council. The UK is also one of the world’s major nuclear powers. A wide range of official UK statistical data is available from the Office for National Statistics (ONS).

2.1.1 BACKGROUND INFORMATION

The UK was the dominant industrial and maritime power of the 19th century, and as such, the United Kingdom of Great Britain and Ireland played a leading role in developing parliamentary democracy and in advancing literature and science. At its zenith, the British Empire stretched over one-fourth of the Earth’s surface. The first half of the 20th century saw the UK’s strength seriously depleted in two world wars and the Irish republic withdraw from the
The second half witnessed the dismantling of the Empire and the UK rebuilding itself into a modern and prosperous European nation. As one of five permanent members of the UN Security Council, and a founding member of NATO and of the Commonwealth, the UK pursues a global approach to foreign policy; it currently is weighing the degree of its integration with continental Europe. A member of the EU, it has chosen to remain outside the Economic and Monetary Union (EMU) for the time being. Constitutional reform is also a significant issue in the UK. The Scottish Parliament, the National Assembly for Wales and the Northern Ireland Assembly were established in 1999, but the last is suspended due to wrangling over the peace process, although there are strong indications that it may resume operations in 2007.

2.1.2 AREA

The UK is a country and sovereign state situated in west northern Europe. Its territory and population are primarily situated on the island of Great Britain and in Northern Ireland on the island of Ireland, as well as numerous smaller islands in the surrounding seas. The UK is bounded by the Atlantic Ocean and its ancillary bodies of water, including the North Sea, the English Channel, the Celtic Sea and the Irish Sea. The mainland is linked to France by the Channel Tunnel, and Northern Ireland shares a land border with the Republic of Ireland. The UK has a total area of 244,820 square kilometres (sq km), of which 241,590 sq km are land. The terrain is mostly hills and low mountains (the highest point is Ben Nevis at 1,343 metres (m)), with level to rolling plains in the east and south-east. About 23% of the total land area is classified as arable. Natural resources include coal, petroleum, natural gas, iron ore, lead, zinc, gold, tin, limestone, salt, clay, chalk, gypsum, potash, silica sand and slate. The UK has a coastline 12,429 km in length.

2.1.3 POPULATION

In mid-2005, the UK was home to 60.2 million people, of which 50.4 million lived in England. The average age was 38.8 years, an increase on 1971 when it was 34.1 years, indicating a trend towards an ageing population. In mid-2005, approximately one in five people in the UK was aged under 16, and one in six people was aged 65 or over. The UK has a growing population. It grew by 375,100 people in the year to mid-2005 (0.6%). The UK population has increased by 7.7% since 1971, from 55.9 million. Growth has been faster in more recent years. Between mid-1991 and mid-2004, the population grew by an annual rate of 0.3%, and the average growth per year since mid-2001 has been 0.5%. The mid-2005 population of the constituent countries of the UK is estimated as follows:

<table>
<thead>
<tr>
<th>TABLE 2.1</th>
<th>UK population by region</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>POPULATION</td>
</tr>
<tr>
<td>England</td>
<td>50,431,700</td>
</tr>
<tr>
<td>Wales</td>
<td>2,958,600</td>
</tr>
<tr>
<td>Scotland</td>
<td>5,094,800</td>
</tr>
<tr>
<td>Northern Ireland</td>
<td>1,724,400</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>60,209,500</td>
</tr>
</tbody>
</table>
The UK has an ageing population. This is the result of declines both in fertility rates and in the mortality rate. This has led to a declining proportion of the population aged under 16 and an increasing proportion aged 65 and over. In every year since 1901, with the exception of 1976, there have been more births than deaths in the UK, and the population has grown due to natural change. Until the mid-1990s, this natural increase was the main driver of population growth. Since the late 1990s, although there has still been a natural increase, net international migration into the UK from abroad has been an increasingly important factor in population change.

In 2004, an estimated 223,000 more people migrated to the UK than migrated abroad. This estimated net inflow is much higher than for 2003 when 151,000 more people arrived to live in the UK than left to live abroad. A key reason for this increase was the expansion of the EU in May 2004. Net inflows of non-British EU citizens to the UK increased from 14,000 in 2003 to 74,000 in 2004. Citizens of the ten EU accession countries made up an estimated four-fifths of the increase between 2003 and 2004. The UK has experienced increasing levels of both inward and outward international migration in recent years. Migration into the country increased from 314,000 in 1994 to 582,000 in 2004, with most of the increase to inflows occurring after 1997. Out-migration increased more quickly than inflows but to a lesser extent, from 238,000 in 1994 to 360,000 in 2004. Between 1994 and 1997, net inflows of international migrants fell from 77,000 to 47,000, as outflows rose more quickly than inflows. During the years 1998 to 2003, net inflows fluctuated around a much higher level, with between 139,000 and 172,000 more people migrating to the UK than leaving each year. The net inflow of 223,000 in 2004 was the highest since the present method of estimation began in 1991. Migration is generally most common among younger adult age groups. In 2003 the 15 to 24 and the 25 to 44 age groups together accounted for the large majority of both in-migrants (84%) and out-migrants (75%). Both in-migrants and out-migrants were slightly more likely to be male than female. Study or work are the main reasons for migration. In 2003, more than one-quarter of all in-migrants (135,000 people) came to study in the UK. More than one-fifth (114,000 in-migrants) came for work-related reasons and had a specific job to go to. Over the decade, net inflows of non-British citizens increased substantially, from 127,000 in 1995 to 342,000 by 2004. At the same time, net outflows of British citizens have increased. Net losses of Britons from the UK grew rapidly over the decade, from 17,000 in 1994 to 120,000 in 2004. The largest numbers out-migrating are in the 25 to 44 age group, but since 1999, there has also been a net outflow of British citizens aged 45 to state pension age. In 2003, around two-fifths of British citizens out-migrating were moving to other countries in the EU and over one-quarter to Australia or New Zealand.

In the UK population, boys outnumber girls, whereas women outnumber men. There were 30.7 million females compared with 29.5 million males in the UK population mid-2005, however more boys than girls are born each year. There were between 14,000 and 25,000 more males than females at each age from birth through to age 20. The number of young men relative to young women generally decreased throughout the 20s age group. This was due to the effect of different levels of migration for men and women at these ages (15- to 24-year-olds). Although the number of deaths at these ages was low, higher death rates from accidents and suicide among young men than young women also contributed to the fall in the number of males in their 20s. At all ages above 30, women outnumbered men. This difference in number between the sexes widened through the 30s and early 40s age groups, then remained fairly steady throughout the mid-40s to the mid-50s age groups. This was because the generations born in the 1950s were smaller than those born in the 1960s, however the ratio of these age groups remained fairly constant between 1.00 and 1.02 to men to women. For people in their mid-50s onwards, the gap between the sexes widened as death rates increased at older ages, and the higher mortality rates for men compared with women produced sufficient numbers of deaths to affect the sex ratio. This difference became most pronounced for people in their mid-60s onwards, as the greater male death rates at most adult ages resulted in many more women living to become very elderly. In 2005, there were three times as many women as men aged 90 or over. In recent years, male death rates have reduced at a faster rate than for women, which has contributed to a decrease in the amount by which women outnumber men. Between 1971 and 2004, the death rate for all males fell by 21%, while the death rate for all females fell by 9%. Men are projected to continue to close the gap on
women in the future. In April 2001, the ratio of men to women varied across the ethnic groups in Great Britain. The largest differences were among the Other Asian group, consisting of 55% men to 45% women compared with 55% women to 45% men in the other ethnic groups. The Black Caribbean group also comprised a larger proportion of women than men. There were larger proportions of women than men with White, Black, Chinese, Mixed and Other ethnic backgrounds. By contrast, there was a larger proportion of men than women with Asian backgrounds.

**TABLE 2.2**  
UK key population statistics summary

<table>
<thead>
<tr>
<th>Latest population estimate</th>
<th>60,609,153 (July 2006)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Median age (years)</td>
<td>Total</td>
</tr>
<tr>
<td></td>
<td>39.3 years</td>
</tr>
<tr>
<td>Age distribution</td>
<td>0–14 yrs</td>
</tr>
<tr>
<td>Population growth rate</td>
<td>0.28%</td>
</tr>
<tr>
<td>Birth rate</td>
<td>10.71 births/1,000 population</td>
</tr>
<tr>
<td>Gender ratio (male/female)</td>
<td>At birth 1.05</td>
</tr>
</tbody>
</table>

### 2.1.4 Economic Indicators

The UK is a leading trading power and financial centre, is a member of the Group of Eight (G8), and is a highly developed country, with the fifth largest economy in the world and second largest in Europe after Germany. Agriculture is intensive, highly mechanised and efficient by European standards, producing about 60% of food needs with less than 2% of the labour force. The UK has large coal, natural gas and oil reserves; primary energy production accounts for 10% of GDP, one of the highest shares of any industrial nation. Over the past two decades, the government has greatly reduced public ownership and contained the growth of social welfare programmes. Services, particularly banking, insurance and business services account for the largest proportion of GDP by far, while industry continues to decline in importance.

The British economy is estimated at $NZ3.3 trillion. GDP growth slipped in 2001–03, as the global downturn, the high value of the pound and the bursting of the “new economy” bubble hurt manufacturing and exports. Output recovered in 2004 to 3.2% growth, but fell in 2005 to 1.9%. Despite slower growth, the economy is one of the strongest in Europe. All key indicators of inflation, interest rates and unemployment remain low. The government has been speeding up the improvement of education, transport and health services at a cost in higher taxes and a widening public deficit.

The UK is the home of the “Anglo-Saxon model” that focuses on the principles of liberalisation, the free market, common-law relating to property, and low taxation and regulation. The British were the first in the world to enter the Industrial Revolution and, like most industrialising countries at the time, initially concentrated on heavy industries such as shipbuilding, coal mining, steel production and textiles. The empire created an overseas market for British products, allowing the UK to dominate international trade in the 19th century. However, as other nations industrialised and surplus labour from agriculture began to dry up, the UK started to lose its economic advantage. As a result, heavy industry declined throughout the 20th century. The British service sector, however, has grown substantially, and now makes up about 73% of GDP. The service sector of the UK is dominated by financial services, especially in banking and insurance. London is one of the world’s largest financial centres, with the London Stock Exchange, the London International Financial Futures and Options Exchange and the Lloyd’s of London insurance market all based in the city. It also has the largest concentration of foreign bank branches in the
world. In the past decade, a rival financial centre in London has grown in the Docklands area, with HSBC, Citigroup and Barclays Bank all relocating their head offices there. The Scottish capital, Edinburgh, also has one of the large financial centres of Europe. Tourism is very important to the British economy. With over 27 million tourists a year, the UK is ranked as the sixth major tourist destination in the world. The British manufacturing sector, however, has greatly diminished since World War II. It is still a significant part of the economy, but only accounted for one-sixth of national output in 2003. The British motor industry is a significant part of this sector, although all large-volume producers are now foreign owned. Civil and defence aircraft production is led by the UK’s largest aerospace firm, BAE Systems, and the pan-European consortium known as Airbus. Rolls Royce holds a major share of the global aerospace engines market. The chemical and pharmaceutical industry is also strong in the UK, with the world’s second and third largest pharmaceutical firms (GlaxoSmithKline and AstraZeneca, respectively) being based in the UK. The UK’s agriculture sector is small by European standards, accounting for only 1.5% of GDP. The currency of the UK is the pound sterling, represented by the symbol £. The Bank of England is the central bank and is responsible for issuing currency, although banks in Scotland and Northern Ireland retain the right to issue their own notes, subject to retaining enough Bank of England notes in reserve to cover the issue. The UK chose not to join the European EMU on the launch of the euro currency, although the government has pledged to hold a public referendum for deciding membership if “five economic tests” are met. Currently, UK public opinion is against the notion. However, it may be argued that this is due to the relatively good economic performance, since critics point out that the economy is doing well outside of EMU. Government involvement over the economy is exercised by the Chancellor of the Exchequer (currently Gordon Brown) who heads HM Treasury, but the Prime Minister (currently Tony Blair) is First Lord of the Treasury (the Chancellor of the Exchequer being the Second Lord of the Treasury). However, since 1997, the Bank of England, headed by the Governor of the Bank of England, has had control of interest rates and other monetary policy. The UK government has greatly increased public sector spending (i.e. government spending of taxes) since 1995, and annual spending on investment in infrastructure has grown from £5.6 billion ($NZ16.1 billion) in 1997 to £29 billion ($NZ83.5 billion) in 2006.

| TABLE 2.3 | UK key economic statistics summary |
| GDP (purchasing power parity – PPP) | $NZ2.734 trillion |
| GDP (official exchange rate) | $NZ3.350 trillion |
| GDP real growth rate | 1.9% |
| GDP per capita (PPP) | $NZ45,263 |
| GDP composition by sector | Agriculture 1.0% Industry 25.6% Services 73.4% |
| Inflation rate | 2.1% |
| Population below poverty line | 17% |
| Budget | Revenues $NZ1,325.4 billion Expenditures $NZ1,430.1 billion |
| Public debt | 43.1% of GDP |
| Reserves and foreign exchange and gold | $NZ73.2 billion |
| External debt | $NZ10.69 trillion |
| Economic aid donor | $NZ11.9 billion |
Employment statistics are gathered from a variety of sources in the UK, including a household labour force survey, and are therefore prone to various interpretations. Data are available on employment, economic inactivity (those neither working nor seeking work) and unemployment. The use of different data collection methods at various points in time makes longitudinal trend analysis somewhat more challenging. However, it seems the following key points can be made with confidence.

With regard to employment, it has been noted that UK employment levels have been rising generally over the last three decades, increasing from 24.6 million in 1971 to 28.8 million in 2005. The employment rate for people of working age rose from 71% in 1995 to 75% in 2005. For men, the rate rose from 76% to 79% and for women, from 66% to 70%. Employment rates among parents have increased: in the ten-year period to spring 2005, the employment rate for couple mothers, couple fathers and lone parents increased by six percentage points, four percentage points and 14 percentage points respectively. “Managers and senior officials” is the largest occupational group in the UK, with 15% of people employed in this group. 20% of males are employed in skilled trades compared with only 2% of females. The proportion of people in employment who are self-employed remained steady, at just under 13%, throughout 2005. Employment in the public sector rose by 95,000 in the year to June 2005 to stand at just under six million. The percentage of teleworkers doubled between spring 1997 and spring 2005, from 4% to 8% of the total workforce.

With respect to economic inactivity (those neither working nor seeking work), there were 7.89 million people of working age in the UK in the three months to September 2005. Despite relative stability in overall inactivity rates, there have been different trends for men and women. Among men, the inactivity rate grew from 4.9% in 1971 to 16.6% in 2005. In comparison, the female inactivity rate declined from 40.6% in 1971 to 26.4% in 2005. The largest group among the economically inactive are those looking after the family and home. The size of this group has, however, declined over recent years as more women, particularly those with children, enter the labour market. In autumn 2005, 2.1 million people were inactive due to long-term sickness – 27% of all those who were inactive. The inactive student group has increased over the past decade, so that in autumn 2005 they represented 23% of all working-age inactive people. Economic inactivity rates are highest among those with no qualifications and lowest for those with a degree or equivalent.

The UK experienced a fall in unemployment from a peak of three million in 1993 (just under 11%) to 1.5 million (around 5%) in 2001. Since then, there has been a further and more gradual decline, although towards the end of 2005, unemployment rose slightly. In the three months to September 2005, the unemployment rate was 4.7%. In the three months to September 2005, the male unemployment rate was 5.2% while the female rate was 4.2%. In the three months to September 2005, the unemployment rate for those aged 16–17 was 22.4%, compared with rates of 10.9% for those aged 18–24, 3.4% for those aged 25–49 and 2.9% for those aged 50 and over. In the 12 months to November 2005, the lowest unemployment rates were for people of White ethnic origin (4.4%) and those of Indian origin (6.8%). Unemployment rates were highest for people of Pakistani or Bangladeshi origin (15.0%). In the 12 months to November 2004, the unemployment rate among long-term disabled people was 7.2%, down by 3.2 percentage points from five years earlier.

According to the ONS in October 2006, the trend in the employment rate may have started to rise. The trend in the unemployment rate continues to increase and the number of people claiming the Jobseeker’s Allowance benefit has also risen. The trend in the inactivity rate continues to fall. The number of job vacancies has increased. Growth in average earnings, both excluding and including bonuses, has fallen. The employment rate for people of working age was 74.6% for the three months ending in August 2006, up slightly over the quarter but down 0.1% over the year. The number of people in employment for the three months ending in August 2006 was 29.01 million,
up 120,000 over the quarter and up 255,000 over the year. Total hours worked per week were 929.8 million, up 6.2 million over the quarter and up 8.5 million over the year. These are the highest figures for employment and hours worked since comparable records began in 1971. The unemployment rate was 5.5%, up 0.1% over the quarter and up 0.8% over the year. The number of unemployed people increased by 45,000 over the quarter and by 276,000 over the year to reach 1.70 million. The claimant count was 962,000 in September 2006, up 10,200 on the previous month and up 82,700 on the year. The inactivity rate for people of working age was 20.9% for the three months ending in August 2006, down 0.2% over the quarter and down 0.6% over the year. The last time the rate was lower was in the three months to April 1992. The number of economically inactive people of working age fell by 64,000 over the quarter to reach 7.78 million. The annual rate of growth in average earnings (the AEI), excluding bonuses, was 3.6% in August 2006, down 0.1% from the previous month. Including bonuses, it was 4.2%, down 0.2% from the previous month. The average number of job vacancies for the three months to September 2006 was 608,100. This was up 9,700 on the previous quarter but down 4,400 over the year. The sector showing the largest increase over the quarter was Finance & Business Services, which increased by 6,200. The redundancy rate for the three months to August 2006 was 5.4 per 1,000 employees, down 0.4 over the quarter.

### TABLE 2.4  UK key employment statistics summary

<table>
<thead>
<tr>
<th>Labour force</th>
<th>30.1 million (people of working age)(^{\dagger})</th>
</tr>
</thead>
<tbody>
<tr>
<td>Labour force distribution</td>
<td></td>
</tr>
<tr>
<td>Agriculture</td>
<td>1.5%</td>
</tr>
<tr>
<td>Industry</td>
<td>19.0%</td>
</tr>
<tr>
<td>Services</td>
<td>79.5%</td>
</tr>
<tr>
<td>Employment rate</td>
<td>74.6% (of people of working age)</td>
</tr>
<tr>
<td>Unemployment rate</td>
<td>5.5%</td>
</tr>
<tr>
<td>Economic inactivity rate</td>
<td>20.9% (of people of working age)</td>
</tr>
<tr>
<td>Household income by consumption or percentage share</td>
<td></td>
</tr>
<tr>
<td>Lowest 10%</td>
<td>2.1%</td>
</tr>
<tr>
<td>Highest 10%</td>
<td>28.5%</td>
</tr>
</tbody>
</table>

\(^{\dagger}\) The ONS defines “working age” as 16–64 for men and 16–59 for women.

### 2.1.6 Health Statistics

Collecting and analysing national health indicators is an exceedingly complex topic that consumes large resources and vast amounts of intellectual capital throughout the world. Actual measures and the times of measurement are frequently subject to modification for any number of practical reasons, which may include fiscal and political imperatives. For this reason, comparisons between countries and trends across time are often fraught with difficulty. Regional comparisons within the UK should theoretically be possible, especially following devolution of the Welsh and Scottish health systems. However, these comparisons are also exceedingly complex due to the differing statistical indicators available.

In general, the most basic health indicators – including birth rate, fertility rate, infant mortality, death rates and life expectancy at birth – are used to make general comparisons between countries and to assess trends across time. These have the advantage of being objective and independent of changes in measurement and/or classification systems.

However, these basic health indicators do not provide much contextual flavour to the description of a nation’s health and wellbeing. The demand for and the provision of healthcare services are related not only to the health of the population but also to the ability of that population to provide the collective resources to fund desirable services. There are any number of subanalyses that might be of interest or relevance when considering the health of a population. These might include topics such as health behaviours, smoking and diet, work-related diseases
and injuries, ethnic or migrant status, economic deprivation and so on. The overall health expenditure per head of population is also difficult to capture meaningfully, since significant minorities access private healthcare services in addition to using available publicly funded services. It also fails to take into account less direct but equally relevant expenditure, such as social services and benefits.

It is clear that overall life expectancy continues to improve in the UK, with women living longer than men. Boys and girls born in 2004 could expect, on average, to live to 77 and 81 years of age respectively. This contrasts with the turn of the last century when boys born in 1901 could expect to live to 45 and girls to 49. The increase in life expectancy at birth increased between 1970 and 2004 by eight years for males and six years for females. Over more recent years, the increase in life expectancy among older adults has been particularly dramatic. Between 1970 and 2004, life expectancy at age 65 in England and Wales increased by four and a half years for men and three and a half years for women. By 2004, men who were aged 65 could expect to live to the age of 82, while women could expect to live to the age of 85 on average. The latest (2004-based) projections suggest that these expectations will increase by around a further three years by 2021.

However, while the UK population has been living longer over the past 20 years, the extra years have not necessarily been lived in good health. Life expectancy and healthy life expectancy (expected years of life in good or fairly good health) both increased between 1981 and 2001, with life expectancy increasing at a faster rate than healthy life expectancy. Life expectancy is higher for males than for females. In 2001, the life expectancy at birth of females was 80.4 years compared with 75.7 years for males. However, life expectancy for males has been increasing faster than for females. There was an increase of 4.8 years in male life expectancy between 1981 and 2001. For females, the corresponding increase was 3.6 years. The gap in healthy life expectancy between males and females is smaller than for total life expectancy. In 2001, healthy life expectancy at birth was 67.0 years for males and 68.8 years for females, a gap of 1.8 years. The difference between life expectancy and healthy life expectancy can be regarded as an estimate of the number of years a person can expect to live in poor health. In 1981, the expected time lived in poor health for males was 6.5 years. By 2001, this had risen to 8.7 years. Females can expect to live longer in poor health than males. In 1981, the expected time lived in poor health for females was 10.1 years, rising to 11.6 years in 2001.

The UK population contains sizeable ethnic minorities. According to the 2001 census, 92.1% of the population described themselves as White, of which there were English 83.6%, Scottish 8.6%, Welsh 4.9% and Northern Irish 2.9%. The size of the minority ethnic population was 4.6 million in 2001 or 7.9% of the total population. Those describing themselves as Indian (1.8%) were the largest minority group, followed by Pakistani (1.3%), those of Mixed (1.2%) ethnic backgrounds, Black Caribbean, Black African and Bangladeshi. The remaining minority ethnic groups each accounted for less than 0.5%, but together accounted for a further 1.4% of the UK population. Ethnic group data were not collected on the Northern Ireland census in 1991. However, in Great Britain, the minority ethnic population grew by 53% between 1991 and 2001, from 3.0 million in 1991 to 4.6 million in 2001. Half of the total minority ethnic population were Asians of Indian, Pakistani, Bangladeshi or Other Asian origin. A quarter of minority ethnic people described themselves as Black, that is, one of Black Caribbean, Black African or Other Black, while 15% of the minority ethnic population described their ethnic group as Mixed. About a third of this group were from White and Black Caribbean backgrounds. Unfortunately, reliable data on health indicators by ethnic group are not currently collected in the UK. However, snapshot data are available from the Health Survey for England conducted by the Department of Health (DH). For example, the newest survey revealed the following. The prevalence of angina and heart attack was highest in Pakistani men and Indian men and women, and lowest in the Black African and Chinese groups. Among those aged 55 and over, the prevalence of angina was highest in Pakistani men (31%) and Indian women (15%), while the prevalence of heart attack was highest in the Pakistani group (19% men, 6.9% women). The prevalence of doctor-diagnosed diabetes was significantly higher in Black Caribbean (10% men, 8.4% women), Indian (10%, 5.9%), Pakistani (7.3%, 8.6%) and Bangladeshi (8.2%, 5.2%) men and women than in the general population (4.3% men, 3.4% women). 23% of men and of women in the
general population were obese, with a body mass index (BMI) greater than 30 (kg/m²). With the exception of Black Caribbean (25%) and Irish (27%) men, men from minority ethnic groups had markedly lower obesity prevalence rates than those in the general population. Prevalence was highest in Black African (39%), Black Caribbean (32%) and Pakistani (28%) women, and lowest among Chinese women (7.6%). 37% of Indian and 36% of Chinese men met the recommended guidelines of consuming five or more portions of fruit and vegetables a day. Chinese and Indian women were the most likely to consume the recommended intake of five portions a day (42% and 36% respectively). The proportion was lower in men and women in the other minority ethnic groups, particularly Irish men (26%) and Bangladeshi women (28%) and in the general population (23% of men, 27% of women). Black Caribbean boys (30%) were more likely than boys in the general population (23%) to have had asthma diagnosed by a doctor. Doctor-diagnosed asthma was less prevalent among Black African, Pakistani and Bangladeshi boys (17%, 13% and 12% respectively). The proportion of Black African, Pakistani and Bangladeshi girls with doctor-diagnosed asthma (9%, 8% and 7% respectively) was lower than among girls in the general population (18%).

The DH statistics are part of the Government Statistical Service (GSS). The Health Survey for England is a series of annual surveys designed to measure health and health-related behaviours in adults and children living in private households in England. The Survey was commissioned by the DH and, since April 2005, the Health and Social Care Information Centre. The Survey consists of an interview and nurse visit. It has a series of core elements that are included every year and special topics that are included in selected years. Core topics include general health, smoking, drinking, fruit and vegetable consumption, height, weight, blood pressure measurements, and blood and saliva samples. Special topics include cardiovascular disease, physical activity, accidents, lung function measurement and certain blood analyses. The trend tables focus upon key changes in core topics and measurements.

For example, the survey of adults with respect to obesity and smoking found the following. There was no significant change in the proportion of adults who were overweight, although there was a marked increase in the proportion who were obese. The proportions that were categorised as obese (BMI over 30) increased from 13.2% of men in 1993 to 23.6% in 2004 and from 16.4% of women in 1993 to 23.8% in 2004. The proportion of men who were smokers declined from 28% in 1993 to 22% in 2004. The proportion of women who were current smokers decreased between 1993 and 2004, falling from 26% to 23%. For children, it was found that mean BMI increased among boys (from 17.6 to 18.1) and girls (from 18.0 to 18.4) aged 2–15. Among girls aged 0–15, mean BMI increased from 18.2 in 2001 to 19.0 in 2004, but there was no significant increase among boys aged 0–15 over that period. Fruit and vegetable consumption was measured for children. It was noted that, between 2001 (when monitoring started) and 2004, there were no changes in mean portions of fruit and vegetables consumed: boys consumed, on average, 2.4 to 2.7 portions per day while girls consumed between 2.6 and 2.7 portions per day. There were no clear trends in the proportion of children in different consumption bands.

According to the DH, the leading causes of death, using International Classification of Diseases (ICD) coding, for males and females over the period between 1996 and 2002 were as follows:
<table>
<thead>
<tr>
<th>TABLE 2.5</th>
<th>Indicators of the nation’s health: Male death rates in England per 100,000 population by selected causes</th>
</tr>
</thead>
<tbody>
<tr>
<td>All causes</td>
<td>1,045.3</td>
</tr>
<tr>
<td>All malignant neoplasms (ICD 140–208)</td>
<td>279.2</td>
</tr>
<tr>
<td>Stomach (ICD 151)</td>
<td>16.3</td>
</tr>
<tr>
<td>Colon, rectum, rectosigmoid junction and anus (ICD 153–4)</td>
<td>30.3</td>
</tr>
<tr>
<td>Pancreas (ICD 157)</td>
<td>11.0</td>
</tr>
<tr>
<td>Lung (ICD 162)</td>
<td>77.4</td>
</tr>
<tr>
<td>Prostate (ICD 185)</td>
<td>34.2</td>
</tr>
<tr>
<td>Diabetes mellitus (ICD 250)</td>
<td>11.0</td>
</tr>
<tr>
<td>All circulatory diseases (ICD 390–459)</td>
<td>442.1</td>
</tr>
<tr>
<td>Ischaemic heart disease (ICD 410–14)</td>
<td>273.1</td>
</tr>
<tr>
<td>Cerebrovascular disease (ICD 430–8)</td>
<td>86.3</td>
</tr>
<tr>
<td>Pneumonia (ICD 480–6)</td>
<td>83.5</td>
</tr>
<tr>
<td>Bronchitis and allied conditions (ICD 490–6)</td>
<td>60.0</td>
</tr>
<tr>
<td>Chronic liver disease and cirrhosis (ICD 571)</td>
<td>8.6</td>
</tr>
<tr>
<td>All accidents and adverse effects (ICD E800–E949)</td>
<td>22.8</td>
</tr>
<tr>
<td>Road vehicle accidents (ICD E810–29)</td>
<td>8.9</td>
</tr>
<tr>
<td>Suicide (ICD E950–9, E980–9, excluding E988.8)</td>
<td>14.2</td>
</tr>
</tbody>
</table>

Note: Cause-specific rates exclude neonatal deaths (deaths of infants under 28 days). Figures represent the number of deaths registered in each year. All rates calculated using 1991 census-based estimates, except 1999 and 2001, which are calculated using 2001 census-based estimates. For 1999 and 2001, rates are calculated for ICD-10 causes of diseases.
Table 2.6: Indicators of the nation’s health: Female death rates in England per 100,000 population by selected causes

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>All malignant neoplasms (ICD 140–208)</td>
<td>248.9</td>
<td>244.8</td>
<td>242.6</td>
<td>245.4</td>
<td>235.9</td>
<td>243.4</td>
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<tr>
<td>Stomach (ICD 151)</td>
<td>9.4</td>
<td>9.6</td>
<td>9.2</td>
<td>8.6</td>
<td>7.9</td>
<td>7.6</td>
</tr>
<tr>
<td>Colon, rectum, rectosigmoid junction and anus (ICD 153–4)</td>
<td>28.7</td>
<td>27.6</td>
<td>26.9</td>
<td>26.9</td>
<td>24.9</td>
<td>24.9</td>
</tr>
<tr>
<td>Pancreas (ICD 157)</td>
<td>11.4</td>
<td>11.2</td>
<td>11.1</td>
<td>11.6</td>
<td>11.4</td>
<td>11.7</td>
</tr>
<tr>
<td>Lung (ICD 162)</td>
<td>41.8</td>
<td>40.8</td>
<td>41.6</td>
<td>41.4</td>
<td>40.8</td>
<td>42.3</td>
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<tr>
<td>Breast (ICD 174)</td>
<td>45.9</td>
<td>45.0</td>
<td>43.8</td>
<td>44.2</td>
<td>42.0</td>
<td>42.6</td>
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<tr>
<td>Uterus (ICD 179–82)</td>
<td>9.9</td>
<td>9.4</td>
<td>9.1</td>
<td>4.1</td>
<td>9.0</td>
<td>3.4</td>
</tr>
<tr>
<td>Diabetes mellitus (ICD 250)</td>
<td>11.9</td>
<td>11.7</td>
<td>11.5</td>
<td>12.1</td>
<td>11.3</td>
<td>12.0</td>
</tr>
<tr>
<td>All circulatory diseases (ICD 390–459)</td>
<td>464.9</td>
<td>445.9</td>
<td>439.0</td>
<td>439.8</td>
<td>396.2</td>
<td>404.1</td>
</tr>
<tr>
<td>Ischaemic heart disease (ICD 410–14)</td>
<td>220.0</td>
<td>208.5</td>
<td>203.9</td>
<td>192.6</td>
<td>178.4</td>
<td>169.7</td>
</tr>
<tr>
<td>Cerebrovascular disease (ICD 430–8)</td>
<td>141.3</td>
<td>135.3</td>
<td>134.1</td>
<td>143.4</td>
<td>121.8</td>
<td>134.9</td>
</tr>
<tr>
<td>Pneumonia (ICD 480–6)</td>
<td>124.5</td>
<td>130.7</td>
<td>122.8</td>
<td>85.5</td>
<td>126.2</td>
<td>75.6</td>
</tr>
<tr>
<td>Bronchitis and allied conditions (ICD 490–6)</td>
<td>43.0</td>
<td>44.0</td>
<td>43.3</td>
<td>42.5</td>
<td>42.8</td>
<td>40.4</td>
</tr>
<tr>
<td>Chronic liver disease and cirrhosis (ICD 571)</td>
<td>5.7</td>
<td>6.2</td>
<td>6.3</td>
<td>6.9</td>
<td>6.8</td>
<td>4.4</td>
</tr>
<tr>
<td>All accidents and adverse effects (ICD E800–E949)</td>
<td>16.6</td>
<td>17.0</td>
<td>16.1</td>
<td>16.4</td>
<td>17.2</td>
<td>16.8</td>
</tr>
<tr>
<td>Road vehicle accidents (ICD E810–29)</td>
<td>3.5</td>
<td>3.4</td>
<td>3.3</td>
<td>3.2</td>
<td>3.2</td>
<td>2.8</td>
</tr>
<tr>
<td>Suicide (ICD E950–9, E980–9 excluding E988.8)</td>
<td>4.8</td>
<td>4.7</td>
<td>4.8</td>
<td>3.1</td>
<td>4.9</td>
<td>4.8</td>
</tr>
</tbody>
</table>

Note: Cause-specific rates exclude neonatal deaths (deaths of infants under 28 days). Figures represent the number of deaths registered in each year. All rates calculated using 1991 census-based estimates, except 1999 and 2001, which are calculated using 2001 census-based estimates. For 1999 and 2001, rates are calculated for ICD-10 causes of diseases.

The National Health Service (NHS) delivers the vast majority of healthcare in the UK. This is free to the user at the point of care, with few exceptions. By far the majority of patient consultations are performed in primary care. However, hospitals consume the larger part of the budgets. There are part charges for pharmaceutical prescriptions, but these vary between the English, Welsh and Scottish systems. There is also variation in the range and type of drugs and procedures that are funded within each system. Some patients are able to access dental care provided by the NHS, but this has become constrained by a lack of supply of dentists willing to work under NHS contracts.

The NHS has been given massive increases in its budget in recent years by the UK government. The £49.3 billion ($NZ142 billion) allocated in 2000 was increased by nearly 40% in 2003/04 to £68.7 billion ($NZ248 billion) and then increased again in 2005 to £84 billion ($NZ242 billion). It is estimated that about two-thirds of health spending goes on people over 60 and that, therefore, the ageing population will place an increasingly heavy demand on the NHS in the future. The total estimated hospital and community health services expenditure varies across the age ranges. Estimated totals in 1999/2000 were as listed in Table 2.7.
Detailed figures on the provision of private healthcare in the UK are not available.

The Health and Safety Executive (HSE) is a division within the Department for Work and Pensions (DWP). The HSE Statistics Branch is located in the Analytical Services Division of the Corporate Science and Analytical Services Directorate. It manages and develops statistical sources and produces analyses relating to these. Specifically, it is responsible for:

- surveys, e.g. the Labour Force Survey (LFS) and associated Self-reported Work-related Illness surveys, and the Workplace Health and Safety Survey (WHASS)
- other sources, e.g. RIDDOR (the Reporting of Injuries, Diseases and Dangerous Occurrences Regulations 1995) injury statistics and THOR ill health surveillance schemes
- enforcement statistics relating to the HSE and local authorities.

The HSE publishes health and safety statistics, statistics of fatal injuries and occupational health statistics, and provides comparisons of work-related disease and injuries statistics. Its 2005/06 update about occupational ill health stated that:

Each year over 2 million people suffer from ill health which they think is work-related... Overall, in 2004/05 an estimated 2.0 million people were suffering from an illness which they believed was caused or made worse by their current or past work; 576 thousand of these first became aware of their illness in the past 12 months. These prevalence and incidence estimates come from the Labour Force Survey (LFS), which is our most broadly-based current source but is still not definitive – for example, people may not realise that their ill health is work-related, or may mistakenly think that it is.

Current best estimates are that 4% of cancer deaths are due to past exposures at work. This would mean that, each year, 6,000 people (uncertainty range 3,000 to 12,000) die from cancer related to occupational factors.

**Self-reported incidence**

- Latest estimates from the LFS show 523,000 new cases of work-related ill health:
  - Musculoskeletal disorders – 190,000
  - Stress, depression or anxiety – 195,000
  - Other illnesses – 137,000.
- According to the LFS, there were an estimated 328,000 injuries that met the criteria to be reportable under RIDDOR.
- Ill health accounts for around 61% of the total.
Note that incidence estimates for ill health relate to people who have ever worked, whereas estimates for injuries relate to people who worked in the previous 12 months. There is a tendency for people in the UK to classify work-related problems as “health” rather than “injury”. This may be encouraged by the provision of free NHS healthcare and the ability to self-certify illness for the purposes of obtaining sick pay. It may also be argued that the report of “injury” due to work is also discouraged due to it potentially triggering a cascade of events that may include an HSE investigation, that is, neither employers nor employees feel encouraged to classify a problem as an “injury” unless it is obviously so, or serious in nature.

**Working days lost**

- In 2005/06, an estimated 24.3 million working days were lost due to work-related ill health:
  - Musculoskeletal disorders – 9.5 million
  - Stress, depression or anxiety – 10.5 million
  - Other illnesses – 4.3 million.
- An estimated 6.1 million working days were lost due to injuries.
- Ill health accounts for around 80% of the total.

Notes: (i) The estimate of 6,000 annual cancer deaths includes asbestos-related cancers. A separate estimate for such cancers (mesothelioma and asbestos-related lung cancer) suggests that there were around 4,000 deaths in 2004. (ii) Around 15% of chronic obstructive pulmonary disease (COPD), including bronchitis and emphysema, may be work-related, which suggests there could be approximately 4,000 COPD deaths each year due to past occupational exposures to fumes, chemicals and dusts. (iii) No reliable figures are available for heart disease due to workplace stress, and so this is not included. The proportion of heart disease deaths due to work factors is difficult to estimate.

Over half of all cases of non-fatal work-related illness are musculoskeletal disorders or stress. In 2004/05, as in previous years, the most common types of work-related illness were musculoskeletal disorders – in particular those affecting the back and upper limbs – and stress and other types of mental illness. These accounted for around three-quarters of (LFS) self-reported cases and two-thirds of those seen by (THOR) specialist doctors. But the total also includes diseases ranging from asthma and dermatitis to vibration white finger and deafness. The other types of ill health with the largest numbers of cases reported by doctors in the THOR network were respiratory diseases (such as asthma) and skin diseases (especially dermatitis). Among cases compensated under the IIDB (Industrial Injury Disablement Benefit) scheme, the main categories were vibration white finger, carpal tunnel syndrome and respiratory diseases associated with past exposures to asbestos and coal dust. Other occupational diseases that feature in the different sources include deafness and infections.

Jobs with high risks for musculoskeletal disorders include nurses, typists, construction and roadworkers. Detailed results from the 2004/05 LFS show that health associate professionals (the occupational group that includes nurses), healthcare and related personal services (the occupational group that includes care assistants and homecarers) and skilled construction workers and drivers had above average prevalence rates of self-reported musculoskeletal disorders. According to reports from THOR rheumatologists in 2003–05, the jobs carrying the highest risks of incidence of musculoskeletal disorders were typists, assemblers of vehicles and metal goods, and road construction operatives. The THOR data also show the contributing factors involved: the most commonly reported tasks associated with work-related musculoskeletal conditions were guiding/holding tools and heavy lifting/carrying/pushing/pulling, each reported in around one-fifth of all cases. However, it appears that education, healthcare and protective service occupations are most at risk for mental ill health. Detailed 2004/05 LFS results show that teaching professionals, health and social welfare associate professionals (a group including nurses) and corporate managers had higher than average prevalence rates of self-reported stress, depression or anxiety. THOR consultant psychiatrists reported UK armed forces personnel, medical practitioners, police and prison officers as the occupations with the highest incidence rates of work-related mental ill health in 2003–05. The most commonly reported precipitating factors for THOR cases of work-related mental ill health were work pressure and interpersonal difficulties, each mentioned in connection with around a quarter of cases. The riskiest jobs for occupational asthma, contact dermatitis and infections involve exposures to specific substances. Moulders/Core makers/die casters, vehicle spray painters and bakers/flour confectioners had the highest estimated incidence.
rates for occupational asthma in 2003–05, based on reports from THOR respiratory physicians. Reports from dermatologists showed hairdressers/barbers, chemical operatives, glass/ceramics operatives and beauticians had the highest rates for contact dermatitis. For occupational infections, care assistants/homecarers had by far the highest rate. The highest rates of hand-arm vibration syndrome and occupational deafness were in industries with the greatest historical use of power tools and noisy machinery. The industry group with by far the highest rate of new claims for vibration white finger assessed for compensation under the IIDB was extraction, energy and water supply – specifically coal mining (where the rate is affected by the contracting numbers in the industry and greater awareness of the possibility of claiming compensation). For noise-induced deafness, the highest rates were in this industry, along with manufacturing and construction.

Data on fatal occupational injuries obtained from RIDDOR indicated the following:

- The provisional number of workers fatally injured in 2005/06 was 212, a decrease of 5% from 2004/05 when the finalised number of workers fatally injured was 223. This is the lowest on record.
- The rate of fatal injury to workers also decreased in 2005/06, from 0.75 to 0.71 deaths per 100,000 workers, a decrease of 5% and the lowest rate on record.
- There was a general downward trend in the rate in the 1990s, however it has risen twice since then, in 2000/01 and in 2003/04.
- Of the 212 fatal injuries to workers, 92 (43%) occurred in the two industries of construction (59) and agriculture, forestry and fishing (33).
- The provisional number of members of the public fatally injured in 2005/06 was 384, of which 254 resulted from acts of suicide or trespass on railways. The finalised figures for 2004/05 were 370 and 253 respectively.

In 2005/06, the number of workers fatally injured in construction decreased to 59, the lowest on record. In agriculture, there was a reduction to 33, although the numbers can fluctuate each year. In manufacturing and services, the number of fatal injuries to workers increased by two, to 45 and 69 respectively. Allowing for changes in employment, the rate of fatal injury to workers decreased in 2005/06 in construction (lowest on record) and agriculture. Rates of injury have increased in manufacturing and (slightly) in services. In extractive and utility supply industries, the numbers and rates of injury are subject to large year-on-year variation, due to relatively small numbers. Falling from a height continues to be the most common kind (type) of accident, accounting for 22% of fatal injuries to workers in 2005/06. The number of fatal injuries of this kind decreased in 2005/06, from 53 to 46, and the lowest on record. In particular, high falls (over 2 m) have reduced to 26, from an average of 48 per year over the past five years. Being struck by a moving vehicle and being struck by a moving or falling object are the next most common kinds of fatal injury. In 2003, the most recent year for which comparable data are available, the rate of fatal injury to workers in Great Britain was the lowest of European member states.

<table>
<thead>
<tr>
<th>TABLE 2.8</th>
<th>UK key health statistics summary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Birth rate</td>
<td>10.71 births/1,000 population</td>
</tr>
<tr>
<td>Total fertility rate</td>
<td>1.66 children born/woman</td>
</tr>
<tr>
<td>Death rate</td>
<td>10.13 deaths/1,000 population</td>
</tr>
<tr>
<td>Infant mortality rate</td>
<td>Total 5.08</td>
</tr>
<tr>
<td>Death/1,000 live births</td>
<td>Total 78.54 years</td>
</tr>
</tbody>
</table>
2.2 UNITED KINGDOM – NATIONAL OSH SYSTEMS

2.2.1 POLICY

The organisation/institution that is the primary focus for OSH policy in the UK is the Health and Safety Commission (HSC). The HSC is responsible for health and safety regulation in Great Britain. The HSC is sponsored by the DWP and is ultimately accountable to the Parliamentary Under Secretary (for Work and Pensions) (Lords), currently Lord Hunt of Kings Heath OBE.

The HSE and local government are the enforcing authorities that work in support of the HSC, that is, the HSE’s job is to help the HSC ensure that risks to people's health and safety from work activities are properly controlled. To this end, the HSE employs staff from a range of different backgrounds – including administrators, lawyers, inspectors, scientists, engineers, technologists and medical professionals.

The HSE acts as the UK Focal Point of the European Agency for Safety and Health at Work (EASHW). The European Agency’s National Focal Points are normally the competent national authorities nominated by each country’s government and are the Agency’s official representative in the member state. The UK Focal Point is administered and supported by the following social partners: the Trade Union Congress, the Confederation of British Industry and the HSE (Northern Ireland). The EASHW aims to include the opinions of each social partner in all Agency documents. Together with other key health and safety organisations, they form what is termed the “United Kingdom Information Network”.

2.2.2 LEGISLATION

The UK is a sovereign country with specific legislation that governs its citizens. However, it contains devolved national parliaments (Scotland and Wales), is also a member of the EU and is a signatory to various international agreements and conventions. This means that the UK’s OSH policies are derived from a mixture of international policy and agreements, EU directives and regulations, and legislation at both the national parliamentary and UK levels. However, in practice, the HSE remains the principal everyday focus for both the development and implementation of OSH policy in the UK.

In recent years, much of the UK’s health and safety law has originated in Europe. Proposals from the European Commission may be agreed by member states, which are then responsible for making them part of their domestic law. Current health and safety law in the UK, including much of that from Europe, is based on the principle of risk assessment.

The basis of UK health and safety law is the Health and Safety at Work (HSW) Act 1974. The HSW Act sets out the general duties that employers have towards employees and members of the public, and employees have to themselves and to each other. These duties are qualified in the Act by the principle of “so far as is reasonably practicable”. In other words, an employer does not have to take measures to avoid or reduce the risk if they are technically impossible or if the time, trouble or cost of the measures would be grossly disproportionate to the risk. What the law requires here is what good management and common sense would lead employers to do anyway: that is, to look at what the risks are and take sensible measures to tackle them. The Management of Health and Safety at Work Regulations 1999 generally make more explicit what employers are required to do to manage health and safety under the HSW Act. Like the Act, they apply to every work activity. The main requirement on employers is to carry out a risk assessment. Employers with five or more employees need to record the significant findings of
the risk assessment. The HSE considers risk assessment to be straightforward in a simple workplace, such as a
typical office. It believes it should only be complicated if it deals with serious hazards such as those on a nuclear
power station, chemical plant, laboratory or oil rig.

Other regulations require action in response to particular hazards, or in industries where hazards are particularly
high and for these there may be specific regulations.7–25

- The Management of Health and Safety at Work Regulations 1999 require employers to carry out risk
  assessments, make arrangements to implement necessary measures, appoint competent people and arrange
  for appropriate information and training.
- The Workplace (Health, Safety and Welfare) Regulations 1992 cover a wide range of basic health, safety and
  welfare issues such as ventilation, heating, lighting, workstations, seating and welfare facilities.
- The Health and Safety (Display Screen Equipment) Regulations 1992 set out requirements for work with visual
display units (VDUs).
- The Personal Protective Equipment at Work Regulations 1992 require employers to provide appropriate
  protective clothing and equipment for their employees.
- The Provision and Use of Work Equipment Regulations 1998 require that equipment provided for use at work,
  including machinery, is safe.
- The Manual Handling Operations Regulations 1992 cover the moving of objects by hand or bodily force.
- The Health and Safety (First Aid) Regulations 1981 cover requirements for first aid.
- The Health and Safety Information for Employees Regulations 1989 require employers to display a poster
  telling employees what they need to know about health and safety.
- The Employers’ Liability (Compulsory Insurance) Act 1969 requires employers to take out insurance against
  accidents and ill health to their employees.
- RIDDOR requires employers to notify certain occupational injuries, diseases and dangerous events. 1995
- The Noise at Work Regulations 1989 require employers to take action to protect employees from hearing damage.
- The Electricity at Work Regulations 1989 require people in control of electrical systems to ensure they are safe
to use and maintained in a safe condition.
- The Control of Substances Hazardous to Health Regulations 2002 require employers to assess the risks from
  hazardous substances and take appropriate precautions.
- The Chemicals (Hazard Information and Packaging for Supply) Regulations 2002 require suppliers to classify,
  label and package dangerous chemicals and provide safety data sheets for them.
- The Construction (Design and Management) Regulations 1994 cover safe systems of work on construction sites.
- The Gas Safety (Installation and Use) Regulations 1994 cover the safe installation, maintenance and use of
  gas systems and appliances in domestic and commercial premises.
- The Control of Major Accident Hazards Regulations 1999 require those that manufacture, store or transport
dangerous chemicals or explosives in certain quantities to notify the relevant authority.
- The Dangerous Substances and Explosive Atmospheres Regulations 2002 require employers and the self-
  employed to carry out a risk assessment of work activities involving dangerous substances.
- The Control of Asbestos at Work Regulations 2002 set out requirements related to asbestos control.

A significant amount of information is made available to employers and employees about health and safety law,
and safe workplace practices.6,26–52

The HSW Act set up new institutions and provided for the progressive revision and replacement of all health and
safety law then existing.24 The HSW Act created two important new institutions:

- The Health and Safety Commission (HSC) – This is a body of up to ten people, appointed by the Secretary of
  State for Transport, Local Government and the Regions, after consultation with organisations representing
employers, employees, local authorities and others, as appropriate. One of the present members of the Commission has been appointed to represent the public interest. The HSC's primary function is to make arrangements to secure the health, safety and welfare of people at work and the public in the way undertakings are conducted, including proposing new law and standards, conducting research, providing information and advice, and controlling explosives and other dangerous substances. It has a specific duty to maintain the Employment Medical Advisory Service (EMAS), which provides advice on occupational health matters. It also has a general duty to help and encourage people concerned with all these matters.

- **The Health and Safety Executive (HSE)** – This is a body of three people appointed by the HSC with the consent of the Secretary of State for Transport, Local Government and the Regions. The Executive advises and assists the Commission in its functions. It has some specific statutory responsibilities of its own, notably for the enforcement of health and safety law. The Executive's staff, approximately 4,000, includes inspectors, policy advisers, technologists and scientific and medical experts – collectively known as the HSE.

The HSW Act and related legislation are enforced by the HSE, or by local authorities, according to the main activity carried out at individual work premises. The Health and Safety (Enforcing Authority) Regulations 1998 allocate the enforcement of health and safety legislation at different premises between local authorities and the HSE. Local authorities also have statutory responsibilities for the enforcement of health and safety law in certain premises. These are mainly in the distribution, retail, office, leisure and catering sectors. The HSE liaises closely with local authorities on enforcement matters through the Health and Safety/Local Authorities Liaison Committee (HELA). An enforcement liaison officer network in HSE regional offices across Britain also provides advice and support for local authorities.

Government ministers also hold responsibilities. In fact, health and safety is currently regulated the same way across the whole of Great Britain, and a number of different Secretaries of State are responsible to Parliament at Westminster for the activities of the HSC and HSE in different areas. The Secretary of State for Transport, Local Government and the Regions answers to Parliament on the HSC's and HSE's staffing and resourcing, on matters affecting the protection of workers and on all other activities of the Commission and Executive, except when these come within the specific area of responsibility of another Secretary of State, i.e. Trade and Industry on nuclear safety and health and safety aspects of barriers to trade, and the Ministry of Agriculture on certain aspects of pesticide safety. In most of these matters, the Commission, Executive and local authorities act by virtue of their powers and duties under the HSW Act and its associated legislation, or European legislation. In a few, they act under agreements as the agent of the Secretary of State concerned. Secretaries of State have the power to direct the Commission in particular matters and they themselves may introduce health and safety law, provided that they consult the Commission. In practice, almost all health and safety proposals since the 1974 HSW Act have been put forward to Ministers by the Commission. In exercising their responsibilities for negotiating and implementing European health and safety law, Ministers look to the Commission for help and advice.

The HSE provides the HSC with policy, technological and professional advice. The HSE also obtains advice from a network of advisory committees. These deal with particular hazard areas and some with particular industries. Each includes input from employer and employee representatives. Their main function is to recommend standards and guidance, or to recommend an approach to a new or emerging problem. Standards of OSH are normally set in legislation, and governments have long recognised that poor OSH performance results in costs to the state through social security, industrial injuries and other compensation payments, medical costs for treatment and the loss of production. Above all, there can be a significant impact on the employability of the worker, and on families, friends and colleagues.

In the EU, the legislative framework is established by the European Commission through a series of European directives based in Article 137 of the EU Treaty, giving the EU authority to legislate in this field. Directive 89/391/EEC, or the Framework Directive, sets the general principles for effective safety and health at work, with other EU laws addressing specific issues such as chemical agents, noise, pregnant workers and so on.
The EU has established legislation in the form of directives and standards designed to protect the health and safety of Europe’s workers. An exhaustive online database is available from the EASHW.11

Member states have been enforcing authorities to ensure that the legal requirements relating to OSH are met. In many EU countries, there is also strong cooperation between the social partners – employers and worker organisations, and government – to ensure good OSH performance, as it is recognised that this has substantial benefits for the safety, health and wellbeing of workers, and the productivity and wellbeing of enterprises.

The HSE acts as a “focal point” or portal to the EASHW. The EU is a supranational and intergovernmental union of 25 independent, democratic member states. In January 2007, it expanded further to include two new members (Romania and Bulgaria). The EU is the world’s largest confederation of independent states, established under that name in 1992 by the Treaty on European Union (usually known as the Maastricht Treaty). The EU’s activities cover most areas of public policy, from economic policy to foreign affairs, defence, agriculture and trade. However, the extent of its powers differs greatly among areas. In some, the EU may resemble a federation (e.g. on monetary affairs, agricultural, trade and environmental policy, economic and social policy), in others, a confederation (e.g. on home affairs), and in yet others, an international organisation (e.g. in foreign affairs).

The EASHW was established in 1996 with the goal to collect, analyse and promote OSH-related information. The Agency’s mission is to make European workplaces safer, healthier and more productive and, in particular, to promote an effective workplace prevention culture. The EASHW states, “Occupational safety and health is about preventing people from being harmed or made ill through work”. Therefore, they consider OSH to be the discipline concerned with preserving and protecting human and other resources in the workplace. This is no small task among an EU population nearly approaching 460 million, since, according to the EASHW, “Every five seconds, an EU worker is involved in a work-related accident, and every two hours one worker dies in an accident at work”.

The HSE also contributes to Eurostat, and liaises with the European Committee for Standardisation.

2.2.3 DESIGNATED AUTHORITIES

There is a complex web of institutions and authorities in the UK responsible for health and safety. Figure 2.1 provides an overview of these. The three-person HSE consists of the Director General, the Deputy Director General Operations and the Deputy Director Policy. Figure 2.2 provides a detailed outline of the HSE structure. The current workforce of the HSE is approximately 4,000.

In practice, the designated authority for health and safety policy is the HSC, working closely with the HSE and the EASHW. The designated authorities for inspection and compliance are the HSE and approximately 400 local authorities that each implement policy and guidance issued by the HSE.

The more than 400 local authorities in England, Scotland and Wales have responsibility for the enforcement of health and safety legislation in over one million premises. These include offices, shops, retail and wholesale distribution, hotel and catering establishments, petrol filling stations, residential care homes and the leisure industry. More than 11 million people are employed at these premises. By their nature, they attract many millions of members of the public each year. In the retail, wholesale and catering, offices, residential care homes and consumer/leisure industries, the local authorities are the principal enforcing authorities. However, in each case, the HSE may also have some enforcement responsibilities. Inspectors in local authorities are typically environmental health officers. Environmental health departments discharge their HSW Act enforcement duties alongside other local authority enforcement responsibilities. These include, for example, food safety, pollution and housing.
For example, the Aberdeen City Council is one of the responsible local authorities that act as enforcing authorities under the provisions of the HSW Act. Local authorities such as this have statutory duties for a safe system of work controls that apply both to employees and the public who may be affected by work activities (for example, customers and passers-by). It therefore runs an Occupational Health and Safety Enforcement Service within Aberdeen City Council. It states:

As an Enforcing Authority, the authority has a responsibility for the provision of health and safety enforcement services covering a range of businesses, mainly within the service sector, covering approximately 3,900 premises. The types of businesses involved in health and safety enforcement include the following: – retail – wholesale – offices – catering – hotels – residential care homes – leisure and consumer services e.g. launderettes, hairdressers, undertakers, shoe repair, tyre and exhaust fitters, and churches.

The principal responsibility of the local authority is the inspection and audit of these premises, however there is also a responsibility to investigate complaints relating to safety, occupational health and welfare at these workplaces, and any reported accidents arising in the course of work activities at these premises. The local authority OSH service also receives notifications of work involving asbestos in terms of the Control of Asbestos at Work Regulations 2002.

New legislation applicable to OSH is implemented from time to time. There may also be updated or new codes of practice and guidance issued by the HSE. A recent Scottish example is the April 2006 amendment of the Civic Government [Scotland] Act 1982 to extend cover to services and procedures that involve dermal puncture. This includes acupuncture, cosmetic body piercing, electrolysis and tattooing. The Civic Government [Scotland] Act 1982 [Licensing of Skin Piercing and Tattooing] Order 2006 now requires those activities carried out as a business to be licensed with the local authority.

The British Standards Institution (BSI) is more than 100 years old, has 5,500 employees worldwide and operates in over 100 countries. There are over 20,000 current British standards and 2,000 new or revised British, European or international standards produced by the BSI each year. The vast majority of UK standards in use are transposed European or international standards. The development of harmonised European standards supports the directives made under the Treaty of Rome. The BSI is the gateway to UK participation in the Comité Européen de Normalisation Electrotechnique and the International Electrotechnique Commission. The HSE is a major contributor, often on behalf of the BSI, to the development of many of the standards that have health and/or safety aspects. Standards vary in type from the specification of performance goals to guidance on operational practice, to design criteria for industrial products. They are sometimes referred to in published guidance from the HSE, and occasionally the use of standards is required by regulations and codes of practice. The HSC has emphasised the importance of standards in policy statements.
Note: SERCO provides independent safety, risk management and engineering services to the nuclear industry.
FIGURE 2.2  HSE structure

- Director General
  - Deputy Director General Operations
  - Deputy Director General Policy
  - Chief Scientist
  - Field Operations Directorate, includes Rail Inspectorate
  - Railways Directorate
  - Resource Planning Directorate
  - Nuclear Safety Directorate
  - Safety Policy Directorate
  - Solicitor’s Office
  - Health Directorate
  - Strategy and Analytical Support Directorate
  - Nuclear Installations Directorate, Hazardous Installations Inspectorate, includes Central Division, Offshore Safety Division, Land Division and Mines Inspectorate
  - Technology Division
  - Operational Policy Division
  - Operations Unit
  - Local Authority Unit
  - Electrical Equipment

Key
- Board Member
- Non-Board Member

Hazardous Installations Directorate, includes Central Division, Offshore Safety Division, Land Division and Mines Inspectorate

Hazardous Installations Inspectorate, includes Central Division, Offshore Safety Division, Land Division and Mines Inspectorate

Field Operations Directorate, includes Rail Inspectorate

Railways Directorate

Resource Planning Directorate

Solicitor’s Office

Health and Safety Laboratory

Electrical Equipment
2.2.4 Inspection and Compliance Systems

The delivery of inspection and compliance services is principally the responsibility of the HSE. However, local authorities also have important roles to play, with HSE oversight. That is, health and safety law in the UK is enforced by inspectors from the HSE or by inspectors from local authorities. The HSE inspectorate is organised as follows.

Most HSE inspectors work in the Field Operations Directorate, along with the medical staff of the EMAS. The offices are organised in regional groups across the UK. Their work is mainly concerned with inspection and compliance/enforcement. However, they also take on a variety of other tasks including liaison with local authorities, planning matters, providing medical advice, collecting statistics and acting as front-line contacts with the public who may ask for advice on hazards affecting them.

The Field Operations Directorate is organised into seven broad sector groupings, each with similar industrial processes, and the railway industry. It has an Occupational Health and Environmental Unit and a Safety Unit. These units deal with health and safety issues across all employment sectors. They also support the work of the advisory committees (see Figure 2.1).

The Nuclear Safety Directorate (NSD) regulates nuclear safety. UK law requires nuclear plants to hold a licence issued by the HSE before they can operate. The NSD administers licences on behalf of the HSE, establishes conditions for the licences, and also lays down general safety requirements to deal with risks on nuclear sites. The applicable law is complemented by the Ionising Radiations Regulations 1999 that provide protection for all workers in industries including nuclear sites.

The Hazardous Installations Directorate (HID) takes responsibility for enforcing health and safety in a number of industries. These include: the petroleum and diving industries; sites where chemicals are manufactured; sites where large quantities of hazardous chemicals are stored; sites where explosives are manufactured, stored, or processed; pipelines transporting hazardous substances and road transport of hazardous substances; and mining operations and exploratory mine drilling. The HID also advises local authorities on planning matters for installations considered to be potentially hazardous, and other developments in the vicinity of such installations.

HSE or local authority inspectors conduct inspections. Inspectors have the right to enter any workplace without giving notice, although notice may be given where the inspector thinks it is appropriate. On a normal inspection visit, an inspector would expect to look at the workplace, the work activities and the management of health and safety, and to check for compliance with health and safety law. The inspector may also offer guidance or advice. During a normal inspection visit, an inspector will expect to check that those in charge, e.g. employers, have arrangements in place for consulting and informing employees or their representatives, e.g. safety representatives, about health and safety matters. Such arrangements are required by law. They will usually want to talk with employees and their representatives. Sometimes they will take photographs and/or samples. If they consider there is a risk to health and safety that needs to be dealt with immediately, they will take action, usually in the form of serving improvement notices.

On finding a breach of health and safety law, the inspector will decide what action to take. The action will depend on the nature of the breach, and will be based on the principles set out in the HSC’s Enforcement Policy Statement. The inspector should provide employees or their representatives with information about any action taken, or which is necessary for the purpose of keeping them informed about matters affecting their health, safety and welfare.
Inspectors may take enforcement action in several ways to deal with a breach of the law. In most cases, these are as follows:

- **Informal** – Where the breach of the law is relatively minor, the inspector may tell the duty holder, for example the employer or contractor, what to do to comply with the law, and explain why. The inspector will, if asked, write to confirm any advice, and to distinguish legal requirements from best practice advice.

- **Improvement notice** – Where the breach of the law is more serious, the inspector may issue an improvement notice to tell the duty holder to do something to comply with the law. The inspector will discuss the improvement notice and, if possible, resolve points of difference before serving it. The notice will say what needs to be done, why and by when. The time period within which to take the remedial action will be at least 21 days, to allow the duty holder time to appeal to an industrial tribunal if they so wish. The inspector can take further legal action if the notice is not complied with within the specified time period.

- **Prohibition notice** – Where an activity involves, or will involve, a risk of serious personal injury, the inspector may serve a notice prohibiting the activity immediately or after a specified time period, and not allowing it to be resumed until remedial action has been taken. The notice will explain why the action is necessary. The duty holder will be told in writing about the right of appeal to an industrial tribunal.

- **Prosecution** – In some cases, the inspector may consider that it is also necessary to initiate a prosecution. Decisions on whether to prosecute are informed by the principles in the HSC’s Enforcement Policy Statement. Health and safety law gives the courts considerable scope for punishing offenders and deterring others. For example, a failure to comply with an improvement or prohibition notice, or a court remedy order, carries a fine of up to £20,000, or six months’ imprisonment, or both. Unlimited fines and, in some cases, imprisonment may be imposed by higher courts.

Note that, in the UK, Crown bodies must comply with health and safety requirements, but they are not subject to statutory enforcement, including prosecution. The Cabinet Office has established non-statutory arrangements for enforcing health and safety requirements in Crown bodies. These arrangements allow the HSE to issue non-statutory improvement and prohibition notices, and for the censure of Crown bodies in circumstances where, but for Crown immunity, prosecution would have been justified.

### 2.2.5 BUDGETS

The following budget and performance data were available from the HSE, providing information about both the HSC and the HSE.

<table>
<thead>
<tr>
<th>TABLE 2.9</th>
<th>Annual budgets for the HSE 2001/04</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2001/02</td>
</tr>
<tr>
<td></td>
<td>£ MILLION</td>
</tr>
<tr>
<td>Administration costs</td>
<td>192.5</td>
</tr>
<tr>
<td>Programme expenditure</td>
<td>49.4</td>
</tr>
<tr>
<td>Income</td>
<td>(59.4)</td>
</tr>
<tr>
<td>Total HSE resource budget</td>
<td>182.5</td>
</tr>
<tr>
<td>HSL resource budget</td>
<td>6.9</td>
</tr>
<tr>
<td>HSL capital budget</td>
<td>4.2</td>
</tr>
<tr>
<td>Total managed expenditure</td>
<td>191.4</td>
</tr>
</tbody>
</table>

HSL is the Health and Safety Laboratory.
### Table 2.10: Total HSC/HSE staff in post by division/directorate

<table>
<thead>
<tr>
<th>Division Directorate</th>
<th>1999</th>
<th>2000</th>
<th>2001</th>
<th>2002</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health and Safety Commission Support and Senior Management Support Unit</td>
<td>32</td>
<td>33</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Solicitor’s Office</td>
<td>20</td>
<td>20</td>
<td>22</td>
<td>25</td>
</tr>
<tr>
<td>Policy Unit (and Training Initiative)</td>
<td>42</td>
<td>41</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Resources and Planning Directorate</td>
<td>507</td>
<td>506</td>
<td>500</td>
<td>542</td>
</tr>
<tr>
<td>Health Directorate</td>
<td>250</td>
<td>258</td>
<td>245</td>
<td>257</td>
</tr>
<tr>
<td>Safety Policy Directorate</td>
<td>144</td>
<td>136</td>
<td>127</td>
<td>122</td>
</tr>
<tr>
<td>Strategy and Analytical Support Directorate</td>
<td>-</td>
<td>-</td>
<td>102.6</td>
<td>112</td>
</tr>
<tr>
<td>Railways Directorate</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>7</td>
</tr>
<tr>
<td><strong>Operations Group</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Operations Unit</td>
<td>20</td>
<td>26</td>
<td>13</td>
<td>13</td>
</tr>
<tr>
<td>Local Authority Unit</td>
<td>17</td>
<td>15</td>
<td>17</td>
<td>20</td>
</tr>
<tr>
<td>Field Operations Directorate</td>
<td>1,415</td>
<td>1,440</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>HM Railway Inspectorate</td>
<td>97</td>
<td>108</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Field Operations Directorate and HM Railway Inspectorate</td>
<td>-</td>
<td>-</td>
<td>1,567</td>
<td>1,726</td>
</tr>
<tr>
<td>Chemical and Hazardous Installations Division</td>
<td>271</td>
<td>287</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>HM Inspectorate of Mines</td>
<td>35</td>
<td>32</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Offshore Safety Division</td>
<td>237</td>
<td>230</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Hazardous Installations Directorate</td>
<td>-</td>
<td>-</td>
<td>526</td>
<td>583</td>
</tr>
<tr>
<td>Nuclear Safety Directorate</td>
<td>224</td>
<td>240</td>
<td>247</td>
<td>280</td>
</tr>
<tr>
<td>Directorate of Science and Technology</td>
<td>167</td>
<td>167</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Electrical Equipment Certification Service</td>
<td>51</td>
<td>50</td>
<td>44</td>
<td>48</td>
</tr>
<tr>
<td>Technology Division</td>
<td>-</td>
<td>-</td>
<td>123</td>
<td>135</td>
</tr>
<tr>
<td><strong>Total HSE staff</strong></td>
<td><strong>3,529</strong></td>
<td><strong>3,589</strong></td>
<td><strong>3,534</strong></td>
<td><strong>3,870</strong></td>
</tr>
<tr>
<td>Health and Safety Laboratory</td>
<td>351</td>
<td>348</td>
<td>360</td>
<td>367</td>
</tr>
<tr>
<td><strong>Total staff</strong></td>
<td><strong>3,880</strong></td>
<td><strong>3,937</strong></td>
<td><strong>3,894</strong></td>
<td><strong>4,237</strong></td>
</tr>
</tbody>
</table>

**Notes**

1. The Strategy and Analytical Support Directorate was formed from the Senior Management Support Unit, Policy Unit, Statisticians’ Branch, Economic Advisors Unit and Risk Assessment Policy Unit.


3. From 1 April 2000, the Chemical Hazards Installations Division, Offshore Division and HM Mines Inspectorate combined to form the Hazardous Installations Directorate.

4. The Technology Division was formed from the main part of the Directorate of Science Technology, the other parts of which were moved into other directorates.
### Table 2.11: Total HSC/HSE staff in post by occupational group

<table>
<thead>
<tr>
<th>OCCUPATIONAL GROUP</th>
<th>1999</th>
<th>2000</th>
<th>2001</th>
<th>2002</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inspectors§</td>
<td>1,497</td>
<td>1,507</td>
<td>1,534</td>
<td>1,614</td>
</tr>
<tr>
<td>Other professional or specialist staff</td>
<td>1,244</td>
<td>1,311</td>
<td>1,333</td>
<td>1,413</td>
</tr>
<tr>
<td>Other staff</td>
<td>1,139</td>
<td>1,119</td>
<td>1,027</td>
<td>1,210</td>
</tr>
<tr>
<td>Total staff</td>
<td>3,880</td>
<td>3,937</td>
<td>3,894</td>
<td>4,237</td>
</tr>
</tbody>
</table>

§ Includes inspectors on non-inspection duties (e.g. line management, contributing to policy or technical standards).

### Table 2.12: HSE Output and performance measures

<table>
<thead>
<tr>
<th>ACTIVITIES</th>
<th>2000/01</th>
<th>2001/02</th>
<th>2002/03</th>
<th>2003/04</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Major hazards</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of safety cases/reports and nuclear licence actions considered and processed</td>
<td>650</td>
<td>781</td>
<td>812</td>
<td>730</td>
</tr>
<tr>
<td>% safety cases/reports and nuclear licence actions processed to time</td>
<td>89</td>
<td>86</td>
<td>88</td>
<td>88</td>
</tr>
<tr>
<td><strong>Compliance</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of regulatory contacts, including inspections and investigations, made with employers and duty holders</td>
<td>193,000</td>
<td>200,000</td>
<td>206,000</td>
<td>213,000</td>
</tr>
<tr>
<td>Number of incidents/complaints investigated</td>
<td>34,100</td>
<td>41,000</td>
<td>41,500</td>
<td>42,000</td>
</tr>
<tr>
<td>% complaints (about work activities) investigated</td>
<td>76</td>
<td>83</td>
<td>87</td>
<td>92</td>
</tr>
<tr>
<td>% reported events (accidents/incipient) investigated</td>
<td>6.7</td>
<td>10</td>
<td>10.5</td>
<td>10.6</td>
</tr>
<tr>
<td>% high risk workplaces receiving annual site regulatory contact</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>% inspector time on site/contact and related activities (as a proportion of total time available)</td>
<td>80</td>
<td>80</td>
<td>80</td>
<td>80</td>
</tr>
</tbody>
</table>

**Mandatory activities**

| **Modernise and simplify the legal framework** |         |         |         |         |
| Sets of regulations, Approval Code of Practice, consultative documents and new guidance documents introduced | 79      | 64      | 67      | 62      |
| % sets of regulations, ACOPs, consultative documents and guidance documents introduced to time | 90      | 90      | 90      | 90      |

| **Provide information and advice** |         |         |         |         |
| Number of publicity products purchased or accessed (including electronic) | 14.4m   | 28m     | 28m     | 28m     |
| Number of publicity products made available | 7,700   | 9,600   | 8,300–9,600 | 8,300–9,600 |
| Number of enquiries dealt with | 550,000 | N/A     | N/A     | N/A     |
| % Infoline calls answered within 15 seconds | N/A    | 85      | 85      | 85      |
| % public enquiries responded to within ten days | 100     | 100     | 100     | 100     |

| **Resources and outputs** |         |         |         |         |
| Implement risk and technical policy projects | 120     | 80      | 80      | 80      |
| % of research projects to be let through competition or collaboration | N/A    | 55–65   | 55–65   | 55–65   |

| **Operate statutory schemes** |         |         |         |         |
| Providing regulatory services, e.g. issuing exemptions, statutory certificates | 3,700   | 3,338   | 4,501   | 4,496   |
| % service products (statutory certificates etc) processed to time | 93      | 94      | 95      | 95      |
The GSS provides the UK with most of its official statistics. The GSS works in close cooperation with a number of other organisations that also produce official statistics, such as the Bank of England and the Northern Ireland Statistics and Research Agency. The GSS is decentralised, as its 600 statisticians and 4,600 administrative staff are employed by and located in over 30 government departments, agencies and associated bodies. The decentralised system ensures that GSS staff work closely with policy makers and that statistical analysis is used to its fullest extent in shaping and monitoring government policy. The ONS is the government department that coordinates much of the work of the GSS, and its Director is also the Head of the GSS.

Official statistics have been collected by government departments in the UK for many years, sometimes for centuries. For example, records on imports and exports go back as far as the 17th century. The first population census was carried out in 1801. Birth and death statistics started in 1837. The first census of earnings was carried out in 1886, and the first official estimate of national income was made in 1941. The Central Statistical Office (CSO) was set up during World War II by the then Prime Minister, Winston Churchill, and formed part of the Cabinet Office. The duty of the CSO was to collect regular figures on a well ordered and coherent basis that would be accepted and used without question in ministerial and inter-departmental discussion. In August 1989, the CSO became a separate government department, and in November 1991, it became an Executive Agency. In April 1996, the CSO merged with the Office of Population Censuses and Surveys to form the ONS. The purpose of the merger was to meet a widely perceived need for greater coherence and compatibility in government statistics, for improved presentation and for easier public access.

The GSS has no formal basis in law. However, a substantial part of its work is controlled by Acts of Parliament. The GSS mission statement is “To provide Parliament, government and the wider community with the statistical information, analysis and advice needed to improve decision making, stimulate research and inform debate”. GSS activities are formally coordinated through a network of GSS committees. The Policy and Management Committee is chaired by the Head of the GSS and comprises all the senior departmental statisticians. It oversees the work and direction of the GSS. Other subcommittees focus on the areas where GSS standards across departments are most vital: information systems; dissemination; economic statistics; social statistics; and methodology. The ONS has a staff of about 3,000 operating in five locations. It provides the nation with a range of statistical information, including: national accounts; measures of inflation; business statistics; labour market indicators; vital statistics on birth, marriages and deaths; and population estimates and projections. The ONS works in partnership with others in the GSS to provide analyses of social and economic trends, to examine regional trends and profiles, and to monitor the health of the nation. In addition, the ONS is responsible for the registration of births, marriages and deaths. Statistical divisions in other departments produce and provide statistics and analyses related to the work of the department. The Welsh Office and Scottish Office collate, analyse and publish data for their regions in conjunction with the national coverage of other departments. The Northern Ireland Statistics and Research Agency, together with statisticians in other Northern Ireland departments, works closely with the GSS in the production of United Kingdom statistics.

The Director of Statistics in each department is responsible for the statistical work of that department. Decisions on budgets allocated to statistical work and the publication of statistics are the responsibility of the department, but the Head of the GSS is consulted on more important issues. They have right of access to the Prime Minister, through the Head of the Home Civil Service, on matters concerning the integrity and validity of official statistics, and are regarded as the government’s chief adviser on statistics. When providing advice to other departments, they report to the appropriate departmental minister through the Head of Department. The Head of the GSS is also the Director of the ONS and is fully accountable to the Chancellor of the Exchequer for the operation and performance of the Office. In this role, the Director exercises the responsibilities and authorities of a permanent head of a department. The Director is also the Registrar General for England and Wales. This is a statutory office...
to which the office holder is appointed by Letters Patent. The Registrar General has a number of specific statutory rights and responsibilities in relation to registration matters, the periodic censuses of population, and the collection and publication of certain statistical information. The Registrar General is accountable directly to the courts for some aspects of these responsibilities. The Official Statistics Code of Practice sets out good practices built up by government statisticians, with the aim of promoting high standards and maintaining public confidence in official statistics and analyses. The GSS adheres to these standards and encourages the use of the Code of Practice within other organisations that produce official statistics.

The GSS collects data about individuals, households, businesses and other undertakings through statistical inquiries that are conducted in confidence (sometimes under statutory powers). In the UK, there is no single statistics Act which defines the role and responsibilities of the official statistical service, or which provides the legal framework for compulsory surveys and statistical confidentiality. Instead, there are a number of Acts of Parliament specific to statistics, of which the most significant are the 1920 Census Act, the Population Statistics Act 1938, amended 1960, the Statistics of Trade Act 1947, and the Agricultural Statistics Act 1979. In addition there are a number of other Acts relating to, for example, employment, finance, local government and planning, which contain provisions for the collection of information, or for access to administrative data sources for statistical purposes. Not all relevant legislation affects the UK as a whole, and details of the legislation may differ between parts of the UK. Within the GSS, the ONS is responsible for coordinating reviews of statistical legislation, to ensure that the requirements for the provision of an effective statistical service are met. To ensure that statistics are of adequate quality, some GSS inquiries are compulsory. In those cases, obligations to respond are enshrined in the appropriate law, and any survey must state specifically whether it is compulsory or not. The obligation to respond is backed up by penalties. The same laws are also used to protect the confidentiality of information provided in response to official statistical inquiries. There are penalties for unlawful disclosure. By the nature of its operations, the GSS has access to much sensitive personal and commercial data from administrative sources, and from statutory and voluntary inquiries. The guidance given in the GSS Code of Practice on the Handling of Data Obtained from Statistical Inquiries (Cmd 9270) aims to ensure that data obtained by inquiry are handled in a way that reflects the confidentiality needs of those who supply them and obey the laws under which they were collected. The Code provides for the transmission, within government and to outside organisations and bona fide researchers, of anonymised data about statistical units, except where there are legal restrictions (as there are generally for data about businesses collected under statute), or where commitments to the contrary have been given. During its collection, storage, processing and transfer, confidentiality of information about identifiable statistical units is safeguarded at all times. The Code reflects the Data Protection Act 1984, which sets down important principles for the handling of automatically processed data relating to individuals, and gives data subjects certain legal rights including that of access to their personal data. The GSS can transfer confidential data to the Statistical Office of the European Communities (Eurostat) in pursuance of a Community obligation as defined by EC Council Regulation 1588/90. This Regulation requires special arrangements that bind Eurostat to strict confidentiality. Private sector participation in GSS statutory work is limited. However, recent legislation provides greater scope to involve private contractors in statistical work. The Deregulation and Contracting Out Act 1994 enables the removal of barriers to private sector involvement in statutory inquiry work and enables authorised contractors to handle confidential information on behalf of government. In assessing whether private contractors are suitable to carry out such work, an important part of the assessment will be their ability to meet the quality and confidentiality standards required.
2.2.7 RESEARCH INSTITUTIONS

The HSE conducts research in the Health and Safety Laboratory (HSL) and commissions a diverse range of external research projects. The current HSE Research Projects Directory lists details of 1,460 research projects. The EASHW provides an electronic portal to research conducted in member states throughout the EU.

The HSL is an agency of the HSE that has been functioning for over 30 years. The HSL describes itself as the UK’s leading industrial health and safety facility with experience across all sectors. Its mission is “to protect people’s health and safety by ensuring risks in the changing workplace are properly controlled”. As well as delivering a comprehensive service to the HSE, it provides skills and expertise to other public sector organisations and the private sector. The scope of the HSL’s work requires a diversity of talents, and it employs over 350 people including scientists, engineers, psychologists, social scientists, health professionals and technical specialists. The main laboratory is located in Buxton, but there are also a number of field stations. The HSL’s capabilities encompass a wide range of topics including fire; explosion and process safety; human factors and risk assessment; occupational and environmental health; safety engineering; work environment; and specialist photographic and technical services. Services include research and development, specialist advice and consultancy, forensic investigation into the causes of accidents, environmental and biological monitoring, assessment of levels of risk and investigation of their control, establishing realistic requirements for standards and processes for meeting those standards, and validation and certification.

2.2.8 COMPENSATION

There are currently two systems of workplace compensation in the UK. One is the social security benefit system administered by the DWP, for example, the IIDB, and the second is the employers’ liability (EL) insurance. State benefits such as the IIDB do not involve fault being established. By contrast, employers’ liability insurance requires the courts to establish the negligence of an employer. This is often done through actual or threatened litigation.

2.2.8.1 State benefits

Any employee who is injured or made ill at work is entitled to claim benefits under the social security system as well as receive treatment from the NHS. The Social Security Act 1975 provides entitlement “in respect of any day during the injury benefit period on which... he is incapable of work”.

People who become sick while they are working for an employer and earning enough to be relevant for national insurance (NI) purposes (this is lower than the amount when they have to start paying NI contributions) are entitled to statutory sick pay. This is paid out via the employer. People who are not working when they become sick, or are self-employed, or who have been sick for more than 28 weeks may be entitled to the Incapacity Benefit (IB).

The Industrial Injuries Scheme provides preferential social security benefits for disablements caused by an accident or a prescribed occupational disease arising out of or in the course of employment. It is not necessary to have paid NI contributions to be eligible for these benefits. Benefit is paid irrespective of fault.

The IIDB is for people who have suffered an accident at work or contracted a disease because of their job. The DWP administers it. Related benefits that may also be paid include the Constant Attendance Allowance, Exceptionally Severe Disablement Allowance, Reduced Earnings Allowance and Retirement Allowance. According to the DWP, “Industrial Injuries Disablement Benefit is a payment for people who are ill or disabled as a result of an accident, disease or event that happened at work – or in connection with work. We use accident to mean any incident or series of incidents at work which were not deliberate and which resulted in personal injury”.

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People who lodge an injury claim through litigation may have to resort to claiming social security benefits while it is going through the process toward settlement. Should the claim be successful, the claimant will be obliged to repay benefits and possibly some other costs out of the settlement.

2.2.8.2 Employers' liability insurance

All employers are required by law (Employers' Liability (Compulsory Insurance) Act 1969) to take out compulsory insurance against their civil liabilities, unless they are exempt from the Act. The following employers are exempt:

- Most public organisations including government departments and agencies, local authorities, police authorities and nationalised industries.
- Health service bodies including NHS trusts, health authorities, primary care trusts and Scottish Health Boards.
- Some other organisations that are financed through public funds, such as passenger transport executives and magistrates' courts committees.
- Family businesses, i.e. if the employees are closely related to the employer (as husband, wife, father, mother, grandfather, grandmother, stepfather, stepmother, son, daughter, grandson, granddaughter, stepson, stepdaughter, brother, sister, half-brother or half-sister). However, this exemption does not apply to family businesses that are incorporated as limited companies.
- Companies employing only their owner where that employee also owns 50% or more of the issued share capital in the company.

Employers' liability insurance enables an employer to meet the cost of compensation for employees' injuries or illnesses whether they are caused on or off site. However, any injuries or illnesses relating to motor accidents that occur while employees are working are usually covered separately by motor insurance. If an employer has any employees who are normally based in England, Scotland or Wales (including offshore installations or associated structures), they must have employers’ liability insurance. An employer does not need employers’ liability insurance under English law to cover any employees who are based abroad (e.g. if they are on secondment). Public liability insurance is different. It covers employers for claims made against them by members of the public or other businesses, but not for claims by employees. Public liability insurance is generally voluntary, but employers’ liability insurance is compulsory. An employer can be fined if they do not hold a current employers’ liability insurance policy that complies with the law.

An insurer cannot refuse to pay compensation purely because the employer:

- has not provided reasonable protection for their employees against injury or disease
- cannot provide certain information to the insurer
- has done something the insurer told them not to do
- has not done something the insurer told them to do (for example, to report the incident)
- has not met any legal requirement connected with the protection of their employees.

However, this does not mean employers can forget about their legal responsibilities to protect the health and safety of employees. Employers are legally obliged to conduct risk assessments, to take practical measures to protect employees, and to report incidents. If an insurer believes that an employer has failed to meet their legal responsibilities for the health and safety of employees and that this has led to a claim, the policy may enable the insurer to sue the employer to reclaim the cost of the compensation.
The total value of this insurance must be a minimum of £5 million (€NZ14.3 million). It can be made up from more than one policy. If the business is part of a group, a policy for employers’ liability insurance can be taken out for the group as a whole. In this case, the group as a whole, including subsidiary companies, must have cover of at least £5 million. The £5 million minimum level of cover includes costs, so most employers choose to purchase a higher level of cover. It seems that the most common current employers’ liability insurance policy is for £10 million (€NZ28.6 million). Insurance is provided by private insurance companies that might also provide some preventive services, especially if they consider the work setting to be high risk.

### 2.2.8.3 Litigation

Employees in the UK who are injured or made ill at work are entitled to sue their employers for compensation in the civil courts. The UK is acknowledged to be a highly litigious society nowadays.

In general terms, industrial disease claims for compensation must usually have been settled or legal proceedings must have been issued in a court of law within three years of knowledge of a significant injury. This is because of the provisions of the Limitation Act 1980. This states that:

- the limitation period is three years, which runs from the date the injury occurred or from the date the person injured had knowledge of the injury
- the limitation period does not start running until a claimant reaches the age of 18 years
- the limitation period does not run against those who are mentally incapacitated.

In most cases, the time will start running on the day the injury occurs, as in a road traffic accident, however occupational illness is different, as the injury occurs over a long period of time and the symptoms may not become obvious until decades after exposure to the problem. In these cases, the three-year period starts to run from the time when the potential claimant knew or ought to have known of the existence of a problem. In practice, the courts rarely exercise discretion to vary the time limits.

The UK litigation market has become notable for the presence of US-style “ambulance-chaser” legal firms, especially those who operate on a “no win, no fee” basis. The legal firm attempts to extract maximum costs within a settlement, either at court or in out-of-court agreement. In this way, they can legitimately advertise that the claimant will receive “100% of the compensation”. An example of this is, “If we deal with your claim on a ‘no win, no fee’ basis and you win, we are usually able to recover any legal costs, including medical report fees and so on, in addition to your compensation. You will therefore have nothing to pay. If you lose, you will not have anything to pay”.

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2.3 United Kingdom – OSH Programmes

The HSC is responsible for establishing national strategies (whereas the HSE and local authorities are substantially responsible for implementing these and delivering the desired outcomes). The four themes for the current strategy are:

- developing closer partnerships
- helping people to benefit from effective health and safety
- focusing on their core business and the right interventions where they are best placed to reduce workplace injury and ill health
- communicating effectively.

2.3.1 National Strategies

Current health and safety law in the UK, including much of that from Europe, is based on the principle of risk assessment. This is operationalised by the HSC and the HSE through a variety of approaches:

- An occupational health and safety policy
- Risk assessment, using hazard identification
- Investigation and enforcement (inspections)
- Strategic programmes.

According to the HSE, “hazard” means anything that can cause harm (e.g. chemicals, electricity, working from ladders), and “risk” is the chance, high or low, that someone will be harmed by the hazard.

The current HSC Business Plan\(^63\)\(^64\) outlines the investigation and enforcement plan, strategic delivery programmes (SDPs), and strategic enabling programmes (StEPs) for specific areas.

2.3.1.1 Investigation and enforcement

Investigating incidents and enquiring into citizens’ complaints and concerns remain important activities. The HSE will continue to be tough on those businesses that wilfully break the law and put people at risk. Inspectors will not hesitate to use their powers of enforcement (including prosecution where necessary) to achieve the necessary improvements to safeguard people’s health, safety and welfare. The HSC has been pressing for penalties for health and safety offences that properly reflect their seriousness, and the government is committed to raising the maximum penalties when there is a legislative opportunity and as parliamentary time allows. The HSC is playing an active role with the Cabinet Office’s Better Regulation Executive, which is reviewing the sanctions available to regulators – including penalties. This review is due to report in early 2007. The HSC is also evaluating the HSC’s Enforcement Policy Statement, which is due for review in 2007.

HSE inspectors and other front-line staff play a critical role by:

- inspecting workplaces
- providing information and advice to better manage risk
- carrying out assessments
- investigating incidents when things go wrong
- investigating complaints
- enforcing the law, including prosecution, when there has been a serious breach.
The HSC recognises that enforcement action, as well as dealing directly with those who break the law, has an important deterrent effect in the wider health and safety community. The HSC welcomed the recent groundbreaking fines from the courts for serious breaches of health and safety.

The related StEP will continue through 2006/07 to examine the HSE’s and local authorities’ formal enforcement activities and make proposals and implementation plans that will better enable the HSE and local authorities by:

- using enforcement to support the Fit for Work, Fit for Life, Fit for Tomorrow Strategic Development Programme (Fit3 SDP)
- investigating and prosecuting more efficiently and effectively
- identifying, targeting and bringing “rogue” traders to account
- optimising and sustaining, through communications, the ripple and deterrent effect of these activities
- ensuring that the relevant programme proposals mesh with the HSE’s work to control major hazards.

2.3.1.2 The HSE’s strategic programmes

The HSE has established two SDPs as the main agent for delivering the Public Service Agreement (PSA) targets:

1. Fit3
2. Major Hazards.

Four StEPs support the SDP’s work.

Fit3

Fit3 is a three-year programme focused on delivering the conventional health and safety element of the PSA. It is now entering its second year. Fit3 is divided into three main work blocks, comprising a mix of targeted interventions, aligned with conventional health and safety PSA targets (i.e. injury reduction, ill health reduction and reduction in days lost due to work activity). The SDP’s content is based on analysis of the incidence of injury and ill health across known hazard and business sector hot spots.

A mixture of project work, programme-directed inspection and (where necessary) investigation and enforcement supports each work block. Other important work streams, involving staff from across the HSE (e.g. utilising communication activity, engaging with stakeholders, developing partnerships and revising standards and legislation) make significant contributions to Fit3’s work. In 2005/06, there was a further move to focus HSE inspectors’ activity on areas where their enforcement powers are most likely to be required.

Major initiatives and interventions planned to achieve a reduction in the incidence of work-related fatal and major injuries include:

- working with stakeholders to produce an agreed set of workplace transport management standards
- “Moving Goods Safely” – a supply chain initiative aimed at reducing injury and ill health arising from the movement of goods in the logistics, road haulage and goods delivery sectors
- undertaking a major media campaign aimed at promoting safe work at height and implementing the Work at Height Regulations 2005, backed by operational activity to embed improved working practices
- addressing slips and trips in target sectors, including the chemical industry, using a range of operational interventions and following up and evaluating last year’s “Watch Your Step” campaign
- revising the Construction (Design and Management) Regulations 1994, ACOP and guidance, followed by a campaign aimed at the construction and design industries to raise awareness.
Initiatives to achieve a reduction in work-related ill health include:

- providing an independent, three-tier health and safety support service for small firms. “Pathfinders” for Workplace Health Connect was launched in February 2006. The service includes a confidential, impartial advice and support helpline/website for smaller businesses, focused on occupational health issues, reducing sickness absence and assisting rehabilitation and return to work
- rolling out the HSE’s Stress Management Standards to 2,000 organisations in local and national government and the health and financial services sectors, using a direct marketing strategy aimed at chief executives, in conjunction with a series of workshops for human resource professionals
- following up the success of last year’s national publicity and stakeholder engagement campaign on musculoskeletal disorders, Backs! 2006, supported by a targeted inspection campaign
- a series of Safety and Health Awareness Days addressing occupational asthma aimed at the motor vehicle repair and woodworking industries, supported by a targeted inspection campaign and wide-scale operational interventions on asthma and skin disease in local authority enforced sectors
- supporting the revised Noise at Work Regulations with an awareness and worker involvement campaign.

To achieve a reduction in days lost due to work-related injuries and ill health, the Fit3 programme will continue to target the public sector by:

- maintaining the commitment of other government departments to tackling this issue through the Ministerial Task Force, in particular seeking to influence senior management in the top 350 public sector organisations, sharing best practice and encouraging departmental “champions”
- working with employers in the health service to address key issues including stress, manual handling, slips and trips, sickness absence and return to work, violence and aggression, and safety by design
- developing a benchmarking tool to measure local authority performance on managing sickness absence.

**Major Hazards SDP**

The Major Hazards SDP continues to focus on the HSE’s work in regulating and assuring the safe management and control of those industries where catastrophic failures have the potential to cause significant harm.

**(a) Nuclear Major Hazards SDP**

The HSE’s Nuclear Programme delivers work designed to achieve effective and efficient nuclear safety regulation, the ongoing aims being:

- to prevent major nuclear incidents
- to maintain the effective management of nuclear waste
- to reduce the number of reports of occurrences with the potential to lead to an accident.

During 2006/07, the Programme will face a significant amount of new work resulting from restructuring within the industry, accelerated decommissioning and clean-up, and new investment programmes. Particular emphasis will then be placed on prioritising nuclear work to target the HSE’s regulatory activities correctly and achieve greater consistency, proportionality and productivity.

There will also be further refinements to the Programme’s Integrated Intervention Strategy, developing targeted intervention strategies for every duty holder/site so as to ensure that duty holders maintain their safety focus in the face of industry changes and other issues. Within the intervention strategy for each site:

- a significant proportion of the planned inspection interventions will be focused on the “cornerstone” factors of compliance (e.g. licence condition 22, which covers modifications to existing plant), which contribute most to the licensee’s safety management performance, and the prevention of significant nuclear events
• the HSE will secure improvements in the quality of duty holders’ safety submissions. To support this, the Programme will clarify standards and expectations for its staff and duty holders on fit-for-purpose safety cases, and also clarify what constitutes adequate licensee arrangements for producing safety cases. The revision of the NSD’s Safety Assessment Principles will be completed and work started to revise the underpinning Technical Assessment Guides.

(b) Offshore Major Hazards SDP
The Offshore Programme continues to strive to improve health and safety standards by reducing risk in the offshore oil and gas sectors and diving industries. In 2006/07, key work streams include:

• continuing a key inspections project to inspect over 100 installations over three years, aimed at improving asset integrity and working with industry to develop an asset integrity tool kit
• carrying out a structured inspection programme, targeting deck and drilling operations on all offshore installations to eliminate fatalities and reduce all other incidents from these activities by 20% from a 2001 benchmark, and to disseminate lessons learned to the industry
• implementing the revised Offshore Installations Safety Case Regulations, to better target assessment resources and enhance the approach to validation
• working with industry and trade unions via “Step Change in Safety” and the Offshore Industry Advisory Committee to improve workforce involvement (including continued publication of the HSE’s newsletter for offshore, Tea-shack News).

(c) Onshore Major Hazards SDP
The Onshore Chemical Industries Programme has developed a five-year strategy for health and safety in the chemical and associated major hazard industries. It sets out how to deliver the long-term aim of securing the health and safety of workers and members of the public by preventing major accidents and limiting the consequences of potential major accidents. Key work streams include:

• targeted intervention at the 1,100 major hazard sites regulated under the Control of Major Accident Hazards Regulations
• working with industry to develop Process Safety Performance Measures and incident precursor measures
• devolving the planning tool, used presently by the HSE during assessments of the potential consequences of land usage around major hazard sites, to local planning authorities
• structured inspection/education programmes, at selected installations, on health issues such as dermatitis, legionella and asbestosis.

The HSE will deploy significant resources to investigating the December 2005 explosion and fire at the Buncefield oil storage depot. It will follow the inspection with appropriately targeted inspections and by promulgating the lessons learned.

The Onshore Specialised Industries Programme also continues to deliver priority interventions for the mining and open-cast coal sector, the gas supply and major pipeline industries, explosives, and dangerous pathogens and genetically modified organisms.

StEPs
The local authorities’ and the HSE’s Working Together StEP aims to build a partnership that will make the best use of the respective strengths of the HSE and the local authorities in tackling national, regional and local priorities, and deliver the conventional health and safety PSA targets.
During 2006/07, the STEP will take the remaining steps needed to make HSE-local authority joint planning of field activities a reality. The HSE will build and sustain an enduring partnership by:

- implementing the agreed revised governance arrangements for the partnership nationally, regionally and locally, including the work of the Local Government Panel (in routine dialogue with the HSC), a reconstituted HELA and regional partnership arrangements
- providing better training, support and communication for and with local authorities, directly linked to the HSC’s priorities and reflecting the needs of the Fit3 SDP
- continuing to make science and technology funding available to local authorities for new projects, and evaluating those already started
- evaluating pilot work carried out on joint HSE/local authority inspector authorisation in enforcement, with the aim of creating a flexible system and structure that allow joint resources to be used in the most effective manner
- working with other regulators and local authorities to develop a more joined-up approach to describing priorities for local authorities, and how regulatory outcomes can be measured to ensure continuous improvement of their delivery
- delivering the HSC’s priority initiatives by the HSE’s partnership teams in the field, working with local authorities to coordinate the various activities and elements of the partnership.

The HSE continues to promote appropriate management of health and safety as an integral part of effective business management. The Business Involvement STEP works to promote the business benefits of well managed health and safety, greater corporate responsibility and accountability for health and safety, and better understanding of health and safety benefits in small businesses. The STEP’s work for this year will include:

- delivering the benefits from a more customer-focused approach being piloted through the Large Organisation Partnership Pilot
- further promoting corporate responsibility, director accountability and health and safety performance reporting through, for example, guidance and self-assessment/benchmarking tools
- ensuring that small businesses have access to simple, easy-to-understand information and advice from HSE publications and web material and the Small Business Service’s website.

The Worker Involvement STEP will continue to secure more and better worker involvement in health and safety risk management by raising awareness, influencing attitudes and changing behaviours. In 2007, the HSE plans to do this by:

- consulting on the most effective ways to stimulate better dialogue between workers and employers
- publishing and promoting case studies giving practical examples of how organisations have introduced and improved worker involvement, in particular through the HSE’s delivery programmes
- administering the third (and final) annual round of the Worker Safety Adviser (WSA) Challenge Fund, evaluating the second round projects and disseminating emerging examples of good practice, and developing proposals for the future of the WSA initiative, implementing any ministerial decision.

2.3.2 CONSULTATION MECHANISMS

According to the Cabinet Office, “involving the public in the work of government has become an integral part of the policy making process. It is not simply about more open government, although that too is important, it is about making policies more effective by listening to and taking on board the views of the public and interested groups.” The HSC and HSE are therefore required to conduct public consultations. The Cabinet Office Code of Practice on
Consultation provides six consultation criteria that must be reproduced in all consultation documents:

1. Consult widely throughout the process, allowing a minimum of 12 weeks for written consultation at least once during the development of the policy.
2. Be clear about what your proposals are, who may be affected, what questions are being asked and the timescale for responses.
3. Ensure that your consultation is clear, concise and widely accessible.
4. Give feedback regarding the responses received and how the consultation process influenced the policy.
5. Monitor your department’s effectiveness at consultation, including through the use of a designated consultation coordinator.
6. Ensure your consultation follows better regulation best practice, including carrying out a Regulatory Impact Assessment if appropriate.

The HSC and HSE run a dedicated website for the purposes of public consultation, and the HSE archives consultation information received for a minimum period of three years.

2.3.3 Goals and Targets

The HSC and HSE work toward specific goals and targets as part of their government-approved business plans. In 2000, the government and the HSC set national health and safety targets as part of the Revitalising Health and Safety strategy. Specific goals were:

- a 30% reduction in the number of working days lost per 100,000 workers from work-related injury and ill health
- a 20% reduction in the incidence rate of cases of work-related ill health
- a 10% reduction in the incidence rate of fatal and major injury incidents.

PSAs are outlined by HM Treasury and define specific government objectives. There are too many to list here, but ones relevant to the national OSH programmes include those for the Department of Trade and Industry (DTI) and the DWP, that includes the HSC and HSE. For example, the PSA for the DTI incorporates the objective of “raising the rate of sustainable productivity growth” by “demonstrat[ing] further progress by 2008 on the Government’s long-term objective of raising the rate of UK productivity growth over the economic cycle, improving competitiveness and narrowing the gap with our major industrial competitors”.

The PSA for the DWP includes the objective to “promote work as the best form of welfare for people of working age, while protecting the position of those in greatest need”. This requires the DWP, as part of the wider objective of full employment in every region, over the three years to spring 2008, and taking account of the economic cycle, to:

- demonstrate progress on increasing the employment rate
- increase the employment rates of disadvantaged groups (lone parents, ethnic minorities, people aged 50 and over, those with the lowest qualifications and those living in the local authority wards with the poorest initial labour market position)
- significantly reduce the difference between the employment rates of the disadvantaged groups and the overall rate.

Of great relevance to the HSC and HSE is the requirement to “by 2008, improve health and safety outcomes in Great Britain through progressive improvement in the control of risks in the workplace”. Specific PSA targets for 2007/08 (from a 2004/05 baseline) are to reduce:

- the incidence rate of fatal and major injuries by 3%
- the incidence rate of work-related ill health by 6%
- the number of working days lost per 100,000 workers from injury and ill health by 9%.
And by 2007/08 (from a 2001/02) baseline to reduce:

- the number of events reported by licence holders that the HSE’s NSD judges as having the potential to challenge a nuclear safety system, by 7.5%
- the number of major and significant hydrocarbon releases in the offshore oil and gas sector by 45%
- the number of relevant RIDDOR reportable dangerous occurrences in the onshore sector by 15%.

In April 2006, the HSC reported “substantial progress on both the working days lost and work-related ill health targets, reflecting the real progress towards delivery now being achieved. There was, however, no change in the incidence rate of fatal or major injuries. Although there has been significant improvement in specific sectors, for example, a 25% reduction in injury incidence in construction over the last five years, a challenge remains in the service sector”.

2.3.4 Evaluation Methods

The HSC and HSE are directly responsible for evaluating their own policies, strategic plans, enforcement systems and other activities. There are three potential areas for such evaluation:

1. Evaluating impact on overall illness and injury statistics
2. Evaluating strategic projects
3. Evaluating policy.

With regards to overall illness and injury statistics, the HSC publishes the latest statistics on work-related ill health, injury and enforcement. These are compiled by National Statistics, in accordance with the National Statistics Code of Practice. This allows analysis of trends and so on.

The HSC and HSE publish a number of documents that review the progress of various initiatives and strategic projects. External parties conduct many of these reviews, but some are completed internally. It is likely that a number also remain unpublished in the public domain for various reasons.

This process extends to the evaluation of policy, including contributions to the evidence base on particular topics. For example, the HSC and HSE commission external surveys to add to their knowledge base about health and safety matters, and to evaluate the impact of their work. An example is the WHASS programme, which uses 10,000 workers to focus on numbers exposed to different workplace hazards and workers’ concerns, training levels and view of trends in risk.

There does not appear to be a publication that summarises, or a database that systematically indexes, relevant evaluation material. This makes searching for this material and its identification something of an arbitrary process.
SECTION THREE

UNITED STATES OF AMERICA
Country Summary

- The United States of America (US) is a federal republic consisting of 50 states and one federal district. The total area is 9,631,420 sq km, of which 9,161,923 sq km are land. About 23% of the total land area is classified as arable.
- The current population estimate is 300.1 million. The current annual growth rate is 0.9%. Part of this is due to a natural increase (with a birth rate of 14.41 births/1,000 population), but net migration into the US has played a role throughout its history. The US has an ageing population.
- The US has the largest and most technologically powerful economy in the world. GDP is $NZ18.5 trillion. GDP per capita is $NZ63,200. The GDP real growth rate is 3.2%. The inflation rate in 2006 was 3.2%. Public debt is 64.7% of GDP.
- The labour force is 138.8 million, the employment rate is 63.9%, the unemployment rate is 4.4% and the economic inactivity rate is approximately 1% of people of working age.
- Overall life expectancy continues to improve in the US, with women living longer than men. Boys and girls born in 2006 can expect, on average, to live to 75 and 78 respectively. The US population contains sizeable ethnic minorities. In 2000, 25% of Americans were non-White.
- National health statistics describe continuing improvements in the health of the nation, while noting specific problems such as rapidly increasing obesity rates. Mortality rates for the three leading causes of death (heart disease, cancer and stroke) have been falling. In the US, socioeconomic factors are strongly associated with risk of death. The fifth leading cause of death is unintentional injury, of which about half are due to road deaths.
- The US spends more on health per capita than any other country, and health spending continues to increase rapidly. Access to healthcare is determined by many factors, including the supply of providers and the ability to use and pay for available care. The percentage of the population under 65 without health insurance fluctuates between 16% and 18%. Uninsured persons have to rely on the federal Medicaid healthcare programme.
- National survey statistics indicate that non-fatal workplace diseases and injuries occur at a rate of 4.6 cases per 100 equivalent full-time workers among private industry employers. Rates vary across types of work, with the highest rates in good-producing and service-providing industries. Only about 6% of cases are classified as occupational illness and 94% as work-related injury. This may be due to the more straightforward provision of funded healthcare through workers’ compensation insurance systems for injuries, compared with the complexities of obtaining support for occupational illnesses.
- Fatal work injuries occur at the rate of four per 100,000 workers. This rate has been falling slightly over the past decade.
- Two federal institutions are responsible for OSH. The National Institute for Occupational Safety and Health (NIOSH) is part of the Department of Health and Human Services. It is principally a research agency whose purpose is to determine the major types of hazards in the workplace and ways of controlling them. The Occupational Safety and Health Administration (OSHA) is an agency of the Department of Labor. Its mission is to prevent work-related injuries, illnesses and deaths by issuing and enforcing rules (called standards) for workplace safety and health.
- The basis of US health and safety law is the Occupational Safety and Health Act 1970. There is a large number of relevant organisations and institutions both at the federal and state levels. These include an agency responsible for mines (MSHA). OSHA conducts inspection and compliance systems, and 26 states administer their own OSHA-approved plans. The annual budget for NIOSH is $NZ433.7 million, and for OSHA is $NZ708.9 million.
- There is no single legal provision for collection of statistics in the US. Nine federal departments have statistical agencies, and there are a multitude of organisations at state level.
• The major research institution is NIOSH, which established the National Occupational Research Agenda in 1996. This contains 21 unranked priorities. Research is conducted by NIOSH and by contracted external providers.

• There are three methods for a worker to obtain compensation. One is through taxpayer-funded social security programmes. Those relevant to OSH are disability, survivor's benefit, and unemployment insurance. Social healthcare can also be provided. The second is through statutory workers’ compensation. In most states, employers are required to carry insurance. They also run public uninsured employer funds to pay benefits to workers employed by companies who illegally fail to purchase insurance. These schemes are supposed to protect employers from damage suits filed by injured workers. However, in practice, the third method of obtaining compensation is through litigation. There is a large personal injury litigation sector in the US.

• The development and implementation of OSH programmes throughout the US are complex, and involve a range of agencies at both the federal and the state levels, without the benefit of a single organisation to provide harmonisation and oversight. NIOSH claims to provide national and world leadership to prevent work-related illness, injury, disability and death by gathering information, conducting scientific research and translating the knowledge gained into products and services. Both NIOSH and OSHA conduct public consultations.

• US health and safety law is firmly based on the principle of risk assessment and hazard reduction. To this end, OSHA's main responsibilities are to provide for occupational safety by reducing hazards in the workplace and enforcing mandatory job safety standards and to implement and improve health programmes for workers. OSHA regulations and standards apply to most private businesses.

• Standards' development is subject to a systematic process. OSHA can begin standards-setting procedures on its own initiative, or in response to petitions from other parties.

• NIOSH, OSHA and MSHA work toward specific goals and targets. NIOSH's global goals are to conduct research to reduce work-related illnesses and injuries; promote safe and healthy workplaces through interventions, recommendations and capacity building; and enhance global workplace safety and health through international collaborations. OSHA has specific goals to reduce workplace fatalities by 9% (from a 2002 baseline) and to reduce work-related diseases and injuries by 12% from the same baseline.

• NIOSH is evaluated with respect to research output and by an external board. OSHA conducts internal evaluations of its programmes and also obtains external evaluations.

3.1 UNITED STATES OF AMERICA – GENERAL INFORMATION

The United States of America (US) is a country in North America that extends from the Atlantic Ocean to the Pacific Ocean and shares land borders with Canada and Mexico. The US is a federal republic, with its capital in Washington, DC. The US is the third or fourth largest country by total area (depending on whether China's figures include its disputed areas). It is the world's third most populous nation, with over 300 million people. The date of the Declaration of Independence, 4 July, 1776, is generally considered to be the date on which the US was founded. The first federal government was constituted under the Articles of Confederation, adopted in 1781. The Articles were replaced by the Constitution, adopted in 1787. Since its establishment, the liberal democratic nature of the government has grown as suffrage has been extended to more citizens. American military, economic, cultural and political influence increased throughout the 20th century. With the collapse of the Soviet Union at the end of the Cold War, the nation emerged as the world's sole remaining superpower. Today, the US plays a major role in world affairs.
3.1.1 Background Information

The present-day continental US has been inhabited for at least 15,000 years by indigenous tribes. In the 16th century, European exploration and settlement began, led by the English, Dutch and Swedish. By the mid-16th century, the English had gained control of the former Dutch and Swedish settlements and established colonies on the eastern seaboard. On 4 July, 1776, at war with Britain over fair governance, 13 of these colonies declared their independence. In 1783, the war ended in British acceptance of the new nation. Since then, the US has more than quadrupled in size: it now consists of 50 states and one federal district. It also has numerous overseas territories including American Samoa, Baker Island, Guam, Howland Island, Jarvis Island, Johnston Atoll, Kingman Reef, Midway Islands, Navassa Island, Northern Mariana Islands, Palmyra Atoll, Puerto Rico, Virgin Islands and Wake Island. The two most traumatic experiences in the nation’s history were the Civil War (1861–65) and the Great Depression of the 1930s. Buoyed by victories in World Wars I and II and the end of the Cold War in 1991, the US remains the world’s most powerful nation state. The economy has been marked by steady growth, low unemployment and inflation, and rapid advances in technology.

3.1.2 Area

The US is the world’s third or fourth largest country by land area, after Russia and Canada (and China if the disputed territories such as Tibet are included). Its contiguous portion is bounded by the North Atlantic Ocean to the east, the North Pacific Ocean to the west, Mexico and the Gulf of Mexico to the south and Canada to the north. The state of Alaska also borders Canada, with the Pacific Ocean to its south and the Arctic Ocean to its north. West of Alaska, across the narrow Bering Strait, is Russia. The state of Hawaii occupies an archipelago in the Pacific Ocean, south-west of the North American mainland.

The US has a total area of 9,631,420 sq km, of which 9,161,923 sq km are land. The terrain of the US is extremely varied, particularly in the west. The eastern seaboard has a coastal plain that is widest in the south and narrows in the north. The coastal plain does not exist north of New Jersey, although there are glacial outwash plains on Long Island, Martha’s Vineyard and Nantucket. In the extreme south-east, Florida is home to the ecologically unique Everglades. Beyond the coastal plain, the rolling hills of the Piedmont region end at the Appalachian Mountains, which rise above 1,830 m in North Carolina, Tennessee and New Hampshire. From the west slope of the Appalachians, the interior plains of the mid-west are relatively flat and are the location of the Great Lakes as well as the Mississippi-Missouri River, the world’s fourth longest river system. West of the Mississippi River, the interior plains slope uphill and blend into the vast and often featureless Great Plains. The abrupt rise of the Rocky Mountains, at the western edge of the Great Plains, extends north to south across the continental US, reaching altitudes over 4,270 m in Colorado. In the past, the Rocky Mountains had a higher level of volcanic activity. Nowadays, the range only has one area of volcanism (the super-volcano underlying Yellowstone National Park in Wyoming, possibly the world’s largest volcano), although rift volcanism has occurred relatively recently near the Rockies’ southern margin in New Mexico. Dozens of high mountain ranges, salt flats, such as the Bonneville Salt Flats, and valleys are found in the Great Basin region located west of the Rockies and east of the Sierra Nevada, which also has deep chasms, including the Snake River. At the south-western end of the Great Basin, Death Valley lies 86 m below sea level, the second lowest dry land on Earth. It is the lowest point in the Western Hemisphere and is situated near the Mojave Desert. North of the Great Basin and east of the Cascade Range in the north-west is the Columbia River Plateau, a large igneous province shaped by one of the largest flood basalts on Earth. It is marked by dark black rocks. Surrounding the Four Corners region lies the Colorado Plateau, named after the Colorado River, which flows through it. The Plateau is generally high in elevation and has highly eroded sandstone, and the soil is a blood red in some locations. Many national parks, such as Arches, Bryce Canyon, Grand Canyon, and Zion, are in the area. West of the Great Basin, the Sierra Nevada mountain range has Mount Whitney, the
highest peak in the US at 6,194 m. Along the Pacific coast, the Coast Ranges and the volcanic Cascade Range extend from north to south. The north-western Pacific coast shares the world’s largest temperate rainforest with Canada. Alaska has numerous mountain ranges, including Mount McKinley (Denali), the highest peak in North America. Numerous volcanoes can be found throughout the Alexander and Aleutian Islands extending south and west of the Alaskan mainland. The Hawaiian islands are tropical volcanic islands extending over 2,400 km consisting of six larger islands and another dozen smaller ones that are inhabited.

About 23% of the total land area is classified as arable. Natural resources include coal, copper, lead, molybdenum, phosphates, uranium, bauxite, gold, iron, mercury, nickel, potash, silver, tungsten, zinc, petroleum, natural gas and timber. The US has a coastline 19,924 km in length.

3.1.3 Population

A wide range of statistical information is available from the US Census Bureau. Data have been captured from a variety of official surveys and census activity, including the Census Bureau’s Decennial Census of Population and Housing, the Current Population Survey (CPS), the Survey of Income and Program Participation and the American Housing Survey. Data for the US include the 50 states and the District of Columbia. In 2005, the US had a household population of 288.4 million – 147.1 million (51%) females and 141.3 million (49%) males. The median age was 36.4 years, 25% of the population were under 18 years, and 12% were 65 years and older.

The population of the US has been steadily increasing almost throughout its history, but there has been strong recent growth. The population growth of 32.7 million between 1990 and 2000 represents the largest census-to-census increase in US history. During this period, 1.7 million people moved into the US from abroad. The previous record increase of 28.0 million occurred between 1950 and 1960, fuelled primarily by the post-war “baby boom”. Total decennial population growth declined steadily in the three decades following the 1950s’ peak before rising again in the 1990s. In the census of 2000, 281.4 million people were counted in the US, a 13.2% increase from the 1990 census population of 248.7 million. In percentage terms, the population increase of 13.2% for the 1990s was higher than the growth rates of 9.8% for the 1980s and 11.4% for the 1970s. The 1990s’ growth rate was similar to the 13.4% growth in the 1960s and was well below the 18.4% growth for the 1950s.

Population growth from 1990 to 2000 varied geographically, with large population increases in some areas and little growth or decline in others. There were higher rates in the west (19.7%) and south (17.3%) and much lower rates in the mid-west (7.9%) and north-east (5.5%). The west increased by 10.4 million to reach 63.2 million people, while the south grew by 14.8 million to a population of 100.2 million people. The mid-west gained 4.7 million to reach 64.4 million people, and the north-east’s increase of 2.8 million brought it to 53.6 million people. Because of differences in growth rates, the regional shares of the total population have shifted considerably in recent decades. Between 1950 and 2000, the south’s share of the population increased from 31% to 36%, and the west increased from 13% to 22%. Meanwhile, despite overall population growth in each of the past five decades, the mid-west’s share of total population fell from 29% to 23% and the north-east’s proportion declined from 26% to 19%. Every state’s population grew, but Nevada’s rate was the fastest. Large metropolitan areas had strong growth through the 1990s. The majority of Americans lived in the ten most populous states, headed by California. The ten least populous accounted for only 3% of the total population.

Many social and demographic factors contributed to the huge growth of the US population in the 20th century. Declining mortality was one such factor. As public sanitation, personal hygiene and scientific and medical technology improved, life expectancy improved. Average life expectancy at birth increased by about 30 years over the course of the 20th century, from about 47 years in 1900 to about 77 years in 2000. At that time, the projected average life expectancy at birth for women was 79 years, compared with 74 years for men. Infants, in particular, benefited from 20th century advances in health and medicine.
The US has an ageing population, but the pattern varies from that of other countries. The median age of the US population in 2000 was 35.3, the highest it has ever been. The median age is the age at which half the population is older and half is younger. The rise reflects a 4% decline in the number of people aged between 18 and 34, and a 28% increase in the number aged 35 to 64. Between 1990 and 2000, the population 65 and older increased at a slower rate than the population as a whole. The percentage of people in this group fell from 21.6% in 1990 to 12.4% in 2000. This is believed to be due to relatively low birth rates in the 1920s and early 1930s.

In 2000, the female population in the US (140 million) was six million higher than the male population (134 million). Yet, among the group under age 20, there were 105 boys for every 100 girls. This male-to-female ratio declined as age increased. For men and women aged 20 to 44, the ratio was 98. But among the group aged 85 and older, there were only 50 men for every 100 women. The gender balance in the US population in 2000 by age group is shown in Table 3.1.

<table>
<thead>
<tr>
<th>AGE RANGE</th>
<th>NUMBER OF MEN/100 WOMEN</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; 20</td>
<td>105</td>
</tr>
<tr>
<td>20–44</td>
<td>98</td>
</tr>
<tr>
<td>45–54</td>
<td>95</td>
</tr>
<tr>
<td>55–64</td>
<td>91</td>
</tr>
<tr>
<td>65–74</td>
<td>83</td>
</tr>
<tr>
<td>75–84</td>
<td>70</td>
</tr>
<tr>
<td>&gt; 85</td>
<td>50</td>
</tr>
</tbody>
</table>

However, it was noted that, while women in the US outnumber men, they are hampered by higher poverty rates and lower earnings.

In 2000, only 11% of women ended their childbearing years with four or more children, compared with 36% of women in 1976. Families represented 81% of households in 1970, but only 69% of households in 2000. The decline in the proportion of married-couple families with children under age 18 was especially evident, falling from 40% of all households in 1970 to 24% in 2000. 88% of children living with two parents lived with both their biological mother and biological father in 1996. An additional 9% lived with a biological parent and a step-parent. Just over 2% of children in two-parent households lived with two adoptive parents or a combination of adoptive, biological or stepparents. Much of the growth in elementary and high school enrolment has been driven by the increase in births that took place between 1981 and 1994 as women born during the baby boom reached their peak childbearing ages. In 2000, 65% of students had a baby-boomer parent.

The ethnic balance has changed in the US over time. In 1900, about one out of eight Americans was of a race other than White. By 2000, about one out of four Americans was of a race other than White. In 1980, the Hispanic population was 14.6 million and the non-Hispanic was 211 million. By 1990, this had changed to 22.4 million Hispanic and 226.4 million non-Hispanic, and in 2000, to 35.3 million and 246.1 million respectively.
### Table 3.2: US key population statistics summary

<table>
<thead>
<tr>
<th>Latest population estimate</th>
<th>300,184,910 (October 2006)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Median age (years)</strong></td>
<td>Total 36.5 years</td>
</tr>
<tr>
<td>Male</td>
<td>35.1 years</td>
</tr>
<tr>
<td>Female</td>
<td>37.8 years</td>
</tr>
<tr>
<td><strong>Age distribution</strong></td>
<td>0–14 yrs 20.4%</td>
</tr>
<tr>
<td></td>
<td>15–64 yrs 67.2%</td>
</tr>
<tr>
<td></td>
<td>65 yrs and older 12.4%</td>
</tr>
<tr>
<td>Population growth rate</td>
<td>0.91%</td>
</tr>
<tr>
<td>Birth rate</td>
<td>14.14 births/1,000 population</td>
</tr>
<tr>
<td>Gender ratio (male/female)</td>
<td>At birth 1.05 &lt; 15 yrs 1.05</td>
</tr>
<tr>
<td></td>
<td>15–64 yrs 1.75 &gt; 64 yrs 0.72</td>
</tr>
<tr>
<td></td>
<td>Total population 0.97</td>
</tr>
</tbody>
</table>

### 3.1.4 Economic Indicators

The economic history of the US is a story of economic growth that began with marginally successful colonial economies and progressed to the largest industrial economy in the world in the 20th and early 21st centuries. The New York Stock Exchange on Wall Street, in New York City, represents the status of the US as a major global financial power.

Today, the US has the largest and most technologically powerful economy in the world, with a per capita GDP of more than $US43,000 ($NZ63,200). The economic system of the US can be described as a capitalist mixed economy, in which corporations, other private firms and individuals make most microeconomic decisions, and governments prefer to take a smaller role in the domestic economy, although the combined role of all levels of government is relatively large, at 36% of GDP. US business firms are reputed to enjoy greater flexibility than their counterparts in Western Europe and Japan in decisions to expand capital plant, to lay off surplus workers and to develop new products. At the same time, they face higher barriers to enter their rivals’ home markets than foreign firms face entering US markets. US firms are at or near the forefront in technological advances, especially in computers and in medical, aerospace and military equipment. However, their advantage has narrowed since the end of World War II.

While the per capita income of the US is among the highest in the world, the wealth is comparatively concentrated. Even so, approximately 60% of the population earns more than an average resident of Western Europe and the top 20% substantially more. Since 1975, the US has had a two-tier labour market in which virtually all the real income gains have gone to the top 20% of households. This polarisation is the result of a relatively high level of economic freedom. The onrush of technology largely explains the gradual development of a two-tier labour market in which those at the bottom lack the education and the professional/technical skills of those at the top and, more and more, fail to get comparable pay raises, health insurance coverage and other benefits.

Soaring oil prices in 2005 and 2006 threatened inflation and unemployment, yet the economy continued to grow through mid-2006. Imported oil accounts for about two-thirds of US consumption. Long-term problems include an inadequate investment in economic infrastructure, the rapidly rising medical and pension costs of an ageing population, sizeable trade and budget deficits, and the stagnation of family income in the lower economic groups. The US has a small social safety net.
Economic activity varies greatly across the country. For example, New York City is the centre of the American financial, publishing, broadcasting and advertising industries, while Los Angeles is the most important centre for film and television production. The San Francisco Bay area and the Pacific north-west are major centres for technology. The mid-west is known for its reliance on manufacturing and heavy industry, with Detroit serving as the historic centre of the American automotive industry, and Chicago serving as the business and financial capital of the region. The south-east is a major area for agriculture, tourism and the timber industry, and because of wages and costs below the national average, it continues to attract manufacturing.

Farming accounts for less than 1% of the total US GDP but still is a major economic activity. The largest sector in the US economy is services, which employs roughly three-quarters of the workforce.

The economy is fuelled by the abundance of natural resources such as coal, petroleum and precious metals. However, the country still depends for much of its energy on foreign countries. In agriculture, the country is a top producer of corn, soybeans, rice and wheat, with the Great Plains labelled as the “breadbasket” for its tremendous agricultural output. The US has a large tourist industry, ranking third in the world, and is also a major exporter in goods such as aeroplanes, steel, weapons and electronics. Canada accounts for 19% (more than any other nation) of US foreign trade, followed by China, Mexico and Japan.

The social mobility of US residents relative to that of other countries is the subject of much debate. Some analysts have found that social mobility in the US is low relative to other OECD (Organisation for Economic Co-operation and Development) states, specifically compared with Western Europe, Scandinavia and Canada. If there is lower social mobility, it may stem in part from the US educational system. Public education in the US is funded mainly by local property taxes supplemented by state revenues. This frequently results in a wide difference in funding between poor districts or poor states and more affluent jurisdictions. In addition, the practice of legacy preference at elite universities gives preference to the children of alumni, who are often wealthy. This practice reduces available spaces for better-qualified lower-income students. Some analysts argue that relative social mobility in the US peaked in the 1960s and declined rapidly beginning in the 1980s.

The US is an influential country in scientific and technological research and the production of innovative technological products. During World War II, the US was the first to develop the atomic bomb, ushering in the atomic age. From early in the Cold War, the US achieved successes in space science and technology, leading to a space race that led to rapid advances in rocketry, weaponry, material science, computers and many other areas. This technological progress was epitomised by the first visit of a person to the moon in 1969. The US was also the most instrumental nation in the development of the Internet, and as a result, the US continues to control most of its infrastructure. In the sciences, Americans have a large share of Nobel prizes, especially in the fields of physiology and medicine. The National Institutes of Health, a focal point for biomedical research in the US, have contributed to the completion of the Human Genome Project. The main governmental organisation for aviation and space research is the National Aeronautics and Space Administration. Major corporations, such as Boeing and Lockheed Martin, also play an important role.
### TABLE 3.3 US key economic statistics summary

<table>
<thead>
<tr>
<th>Category</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>GDP (purchasing power parity – PPP)</td>
<td>$NZ18.51 trillion</td>
</tr>
<tr>
<td>GDP (official exchange rate)</td>
<td>$NZ18.78 trillion</td>
</tr>
<tr>
<td>GDP real growth rate</td>
<td>3.2%</td>
</tr>
<tr>
<td>GDP per capita (PPP)</td>
<td>$NZ63,200</td>
</tr>
<tr>
<td>GDP composition by sector</td>
<td></td>
</tr>
<tr>
<td>Agriculture</td>
<td>0.9%</td>
</tr>
<tr>
<td>Industry</td>
<td>20.4%</td>
</tr>
<tr>
<td>Services</td>
<td>78.7%</td>
</tr>
<tr>
<td>Inflation rate</td>
<td>3.2%</td>
</tr>
<tr>
<td>Population below poverty line</td>
<td>12%</td>
</tr>
<tr>
<td>Budget Revenues</td>
<td></td>
</tr>
<tr>
<td>Revenues</td>
<td>$NZ3.186 trillion</td>
</tr>
<tr>
<td>Expenditures</td>
<td>$NZ3.708 trillion</td>
</tr>
<tr>
<td>Public debt</td>
<td>64.7% of GDP</td>
</tr>
<tr>
<td>Reserves and foreign exchange and gold</td>
<td>$NZ130.7 billion</td>
</tr>
<tr>
<td>External debt</td>
<td>$NZ13.29 trillion</td>
</tr>
<tr>
<td>Economic aid donor</td>
<td>$NZ10.4 billion</td>
</tr>
</tbody>
</table>

#### 3.1.5 Employment statistics

According to the census held in 2000, 63.9% of the 217.2 million people aged 16 and over in the US were in the labour force. Of the 138.8 million people in the labour force, 129.7 million people were employed, 7.9 million were unemployed and 1.2 million were in the armed forces. The civilian unemployment rate was 5.8%.

These statistics are at variance with those from the CPS released by the Bureau of Labor Statistics (BLS, part of the US Department of Labor), due to methodological differences. According to this measure, in October 2006 the unemployment rate was 4.4% (in October 2005, the Bureau reported a rate of 4.9%). Unemployment rates were calculated for specific groups: adult males (3.8%), adult women (3.9%), teenagers (15.4%), Whites (3.9%), Hispanics (4.7%), Asians (2.7%) and Blacks (8.6%). About 1.5 million persons (not seasonally adjusted) were marginally attached to the labour force in October, and this was considered to be about unchanged from a year earlier. These individuals wanted and were available for work and had looked for a job some time in the prior 12 months. They were not counted as unemployed because they had not searched for work in the four weeks preceding the Survey. Among the marginally attached, there were 331,000 discouraged workers in October, down slightly from a year earlier. Discouraged workers were not currently looking for work specifically because they believed no jobs were available for them. The other 1.1 million marginally attached had not searched for work in the four weeks preceding the Survey for reasons such as school attendance or family responsibilities.

The educational attainment of young adults may be levelling off. The percentage of people aged 25 to 29 in 2000 who had completed high school was 88%, no different from what it was in 1998 or 1999. Even small amounts of post-secondary education are associated with higher earnings. People who had “some college, but no degree” studied, on average, less than one year past high school. However, this additional education was enough to increase their average earnings by NZ$340 per month. The majority of students (5%) had access to a computer both at home and at school in 2000. 23% of children had computer access only at school, while 10% had access only at home. The remaining 10% of students had no access. Real median household income did not change significantly between 1999 and 2000, after experiencing five consecutive years of annual increases.
Although children under age 18 were only 26% of the total population in 2000, they represented 37% of the poor. 61% of women aged 16 and older were working or looking for work in 2000, compared with 74% of men, according to the CPS.

Education, employment and occupation reflect important differences between men and women. Among the population aged 25 and older in 2000, 84% of both men and women were high school graduates. Still, men this age were more likely than women to have graduated from college, 28% compared with 24% respectively. On the other hand, young women were typically better educated than young men. 89% of women aged 25 to 29 were high school graduates in 2000, compared with 87% of men this age. Within this age group, 30% of women held a bachelor’s degree or better, compared with 28% of men. Women have been the majority of college students since 1979. In 2000, 61% of women aged 16 and older were working or looking for work, compared with 74% of men. Earnings were lower for women than for men. The 1999 median earnings for women aged 15 and older who worked full time, year round was NZ$26,300, compared with NZ$36,500 for men in this category.

In 2000, 58% of women aged 16 and older worked in just three occupational categories. 24% worked in administrative support, including clerical. Another 18% worked in professional specialty jobs, and 16% worked as service workers (excluding private household service workers). Men’s occupations were less concentrated. The largest occupational category for men was precision production, craft and repair, accounting for 18% of employed men in the civilian labour force.

Men are somewhat more likely to be married and living with their spouses than women, but are also somewhat more likely to have never been married. In 2000, 51% of women aged 15 and older were currently married and living with their spouses, compared with 55% of men, and even though 25% of women this age had never been married, 31% of men never had. About 2% of both men and women were separated. However, women were more likely than men to be divorced, 10% compared with 8%. Although 10% of women were widowed, only 3% of men were. In 1999, 13% of females and 10% of males lived in poverty. However, the poverty rate was particularly high when women without spouses present maintained families. The 1999 rate for families maintained by a woman with no spouse present was 28%, compared with 12% for families maintained by a man with no spouse present. The rate for married-couple families was just 5%.

<table>
<thead>
<tr>
<th>TABLE 3.4</th>
<th>US key employment statistics summary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Labour force</td>
<td>138.8 million (people of working age)</td>
</tr>
<tr>
<td>Labour force distribution</td>
<td></td>
</tr>
<tr>
<td>Farming, forestry and fishing</td>
<td>0.7%</td>
</tr>
<tr>
<td>Manufacturing, extraction, transportation and crafts</td>
<td>22.9%</td>
</tr>
<tr>
<td>Managerial, professional and technical</td>
<td>34.7%</td>
</tr>
<tr>
<td>Sales and office</td>
<td>25.4%</td>
</tr>
<tr>
<td>Other services</td>
<td>16.3%</td>
</tr>
<tr>
<td>Employment rate</td>
<td>63.9% (of people of working age)</td>
</tr>
<tr>
<td>Unemployment rate</td>
<td>4.4%</td>
</tr>
<tr>
<td>Economic inactivity rate</td>
<td>Approx. 1.0% (of people of working age)</td>
</tr>
<tr>
<td>Household income by consumption or percentage share</td>
<td></td>
</tr>
<tr>
<td>Lowest 10%</td>
<td>1.8%</td>
</tr>
<tr>
<td>Highest 10%</td>
<td>30.5%</td>
</tr>
</tbody>
</table>
Many social and demographic factors contributed to the huge growth of the US population in the 20th century. Declining mortality was one such factor. As public sanitation, personal hygiene, and scientific and medical technology improved, life expectancy improved. Average life expectancy at birth increased by about 30 years over the course of the 20th century, from about 47 years in 1900 to about 77 years in 2000. At that time, the projected average life expectancy at birth for women was 79 years, compared with 74 years for men. Infants, in particular, benefited from 20th century advances in health and medicine. The infant mortality rate (the number of deaths of infants less than one year of age per 1,000 births) decreased sharply over the century, from a rate well in excess of 100 per 1,000 births at the start of the century to a rate less than ten per 1,000 births by the century’s end.

The National Center for Health Statistics (NCHS) publishes a range of US health information. Its 2005 report stated, “The health of the nation continues to improve overall, in part because of the significant resources devoted to public health programs, research, healthcare, and health education”. It also noted, “Childhood infectious diseases such as mumps and measles have all but disappeared, but the prevalence of many chronic diseases is increasing in part associated with increased longevity and aging of the population. In 1999–2002, more than 9% of persons 20 years of age and over and about one-fifth of adults 60 years and over had diabetes, including those with diabetes previously diagnosed by a physician and those with undiagnosed diabetes determined by results of a fasting blood sugar test. A substantial proportion of the population also experiences discomfort from conditions such as arthritis, headache, and back pain, which can affect quality of life. Of particular concern in recent years has been the increase in overweight and obesity, which are risk factors for many chronic diseases and disabilities including heart disease, hypertension, and back pain. The rising number of children and adolescents who are overweight, and the high percentage of Americans who are not physically active raise additional concerns about Americans’ future health”. Decreased cigarette smoking among adults is a prime example of a trend that has contributed to overall declines in mortality. However, the rapid drop in cigarette smoking in the two decades following the first Surgeon General’s Report in 1964 has slowed in recent years. About 24% of men and 19% of women were current smokers in 2003. The prevalence of risky behaviours has also improved over time, including the percent of high school students in grades 9–12 who rode with a driver who had been drinking alcohol. This statistic decreased from 40% to 30% between 1991 and 2003, yet further reductions are certainly considered necessary.

The US spends more on health per capita than any other country, and health spending continues to increase rapidly. Much of this spending is for care that controls or reduces the impact of chronic diseases and conditions affecting an ageing population. Prescription drugs and cardiac operations are two notable examples. In 2003, national healthcare expenditures in the US totalled $US1.7 trillion ($NZ2.6 trillion), a 7.7% increase from 2002. Since 1995, the average annual rate of increase for prescription drug expenditures has been higher than for any other type of health expenditure, indicating the growing importance of prescription drugs. The source of payment for personal healthcare varies according to the type of care provided. In 2003, government sources were the primary payers of hospital and nursing home care, paying for about three-fifths of these types of service, while private health insurance paid for almost one-half of physician services and prescription drugs.

Access to healthcare is determined by many factors, including the supply of providers and the ability to use and pay for available care. The percentage of the population under 65 years of age with no health insurance coverage fluctuated about 16% and 18% between 1994 and 2003. The percentage of the population with private health insurance decreased between 1999 and 2003. This decrease was offset by an increase in Medicaid coverage, resulting in little change in the percentage uninsured. Employer-sponsored health insurance, in particular, has been declining in recent years. Between 2001 and 2003, the proportion of the population under 65 years of age with health insurance obtained through the workplace (a current or former employer or union) declined from 67% to 63%.
Among the native population in the US, 12% were not covered by health insurance in 2000 at any time during the year. However, 16% of naturalised citizens and 41% of non-citizens were not covered. Among children aged 6 to 14 in 1999, 6% had a physical, learning or mental condition that affected their ability to do regular schoolwork.

The NCHS report noted that large disparities in infant mortality rates remain among racial and ethnic groups. The gap in life expectancy between the Black and White populations has narrowed, but persists. Disparities in risk factors, access to healthcare and morbidity also remain. Hispanic and American Indian persons under 65 years are more likely to be uninsured than those in other racial and ethnic groups. Obesity, a major risk factor for many chronic diseases, varies by race and ethnicity. In 2003, the rate of recent mammogram screening for White and Black women was similar, but rates for Asian and Hispanic women remained at a lower level. Many aspects of the health of the nation have improved, but the health of some racial and ethnic groups has improved less than that of others. The large differences in health status by race and Hispanic origin documented in the report may be explained by factors including socioeconomic status, health practices, psychosocial stress and resources, environmental exposures, discrimination and access to healthcare. Socioeconomic and cultural differences among racial and ethnic groups in the US will likely continue to influence patterns of disease, disability and healthcare use.

The population group age 55–64 years is projected to be the fastest growing segment of the adult population over the next decade. In 2004, there were about 29 million persons in this age group. The 55–64 age group is projected to increase by 11 million persons over the 2004–14 period, to 40 million persons by 2014.

The 2005 report from the NCHS reported the following about the leading causes of death for all ages. In 2002, a total of 2.4 million deaths were reported in the US. The overall age-adjusted death rate was 42% lower in 2002 than it was in 1950. The reduction in overall mortality during the last half of the 20th century was driven mostly by declines in mortality for such leading causes of death as heart disease, stroke and unintentional injuries. Throughout the second half of the 20th century, heart disease was the leading cause of death and stroke was the third leading cause. In 2002, the age-adjusted death rate for heart disease was 59% lower than the rate in 1950. The age-adjusted death rate for stroke had declined 69% since 1950. Heart disease and stroke mortality is associated with risk factors such as high blood cholesterol, high blood pressure, smoking and dietary factors.

Other important factors include socioeconomic status, obesity and physical inactivity. Factors contributing to the decline in heart disease and stroke mortality include better control of risk factors, improved access to early detection, and better treatment and care, including new drugs and expanded uses for existing drugs. Cancer was the second leading cause of death throughout the period. Overall age-adjusted death rates for cancer rose between 1960 and 1990 and then reversed direction. Between 1990 and 2002, overall death rates for cancer declined more than 10%. In the 1980s, cancer death rates for females increased faster and in the 1990s declined more slowly than rates for males, reducing the disparity in cancer death rates. Rates for males were 63% higher than rates for females in 1980 and 46% higher in 2002. The trend in the overall cancer death rate reflects the trend in the death rate for lung cancer. Since 1970, the death rate for lung cancer for the total population has been higher than the death rate for any other cancer site. Lung cancer is strongly associated with smoking. Chronic lower respiratory diseases (CLRD) were the fourth leading cause of death in 2002. The age-adjusted death rate for CLRD in 2002 was 54% higher than the rate in 1980. The upward trajectory for CLRD death rates is a result of steadily increasing death rates for females, of 150% between 1980 and 2002, whereas death rates for males increased only 7%. The increasing trend for females is most noticeable for females age 55 years and over. CLRD is strongly associated with smoking. The fifth leading cause of death in 2002 was unintentional injuries. Age-adjusted death rates for unintentional injuries declined during the period 1950–92. Since 1992, however, unintentional injury mortality has gradually increased. Despite recent increases, the death rate for unintentional injuries in 2002 was still 53% lower than the rate in 1950. The risk of death due to unintentional injuries is greater for males than females, and the risk varies with age. For males age 15–64 years in 2002, the risk of death due to unintentional injuries was two to three times the risk for females of those ages. For ages under 15 years and ages 65 years and over, the gender disparity was smaller. The risk of death due to unintentional injuries increased steeply after age 64 years for both males and females.
Although overall unintentional injury mortality has increased slightly since the early 1990s, the trend in motor vehicle-related injury mortality, which accounts for approximately one-half of all unintentional injury mortality, has been generally downward since the 1970s. The decline in death rates for motor vehicle-related injuries is a result of: safer vehicles and highways; behavioural changes such as the increased use of safety belts, child safety seats and motorcycle helmets; and decreased drinking and driving. Death rates generally increase with age for chronic diseases such as heart disease, cancer, stroke and CLRD, as well as for unintentional injuries. Age-adjusted death rates for Black persons exceed those for White persons of the same gender for heart disease, stroke and cancer. Socioeconomic factors are strongly associated with risk of death. In 2002, adult males and females with a high school education or less had death rates more than twice as high as the rates of those with more than a high school education.

The BLS compiles a Census of Fatal Occupational Injuries, which has been conducted each year since 1992. In 2005, a total of 5,702 fatal work injuries were recorded in the US, down about 1% from the revised total of 5,764 fatal work injuries recorded in 2004. The rate at which fatal work injuries occurred in 2005 was 4.0 per 100,000 workers, down slightly from a rate of 4.1 per 100,000 in 2004. Key findings from the 2005 Census of Fatal Occupational Injuries were as follows:

- Fatal work injuries among workers under 20 years of age were up about 18% from the 2004 figure to 166 cases.
- Fatal work injuries involving women in 2005 were down 3% to 402 cases – the lowest total ever recorded by the fatality census.
- Fatalities among agricultural workers were up 23%, from 145 in 2004 to 178 in 2005.
- Fatal work injuries among Hispanic workers increased by 2% in 2005 to a new series high, although the fatality rate for Hispanic workers was lower.
- Fatal falls were lower by 7% after reaching a series high in 2004.
- While the number of fatal work injuries in private construction continued to be the most of any industry sector, the number of fatalities was 4% lower in 2005 than 2004.
- Fatal workplace injuries attributable to hurricanes accounted for 29 fatal work injuries in 2005, although this total may rise as additional cases are identified and verified.

The BLS also provides information on occupational diseases and injuries. It reported that non-fatal workplace diseases and injuries occurred at a rate of 4.6 cases per 100 equivalent full-time workers among private industry employers in 2005, according to the Survey of Occupational Injuries and Illnesses. This was a decline from the rate of 4.8 cases per 100 equivalent full-time workers reported by the BLS for 2004. The rate resulted from a total of 4.2 million non-fatal diseases and injuries in private industry workplaces during 2005, relatively unchanged compared with 2004, and a 2% increase in the number of hours worked. Incidence rates for diseases and injuries combined declined significantly in 2005 for most case types, with the exception of cases with days away from work.

Goods-producing industries as a whole had a disease and injury incidence rate of 6.2 cases per 100 equivalent full-time workers, while service-providing industries had a rate of 4.1 cases per 100 equivalent full-time workers. The incidence rate for goods-producing industries declined by 0.3 cases, and the rate for service-providing industries fell by 0.1 case per 100 equivalent full-time workers compared with the rates reported for 2004. Among goods-producing industry sectors, incidence rates during 2005 ranged from 3.6 cases per 100 full-time workers in mining to 6.3 cases per 100 full-time workers in construction and in manufacturing. While rates among service-providing industry sectors ranged up to 7.0 cases per 100 full-time workers in transportation and warehousing, finance and insurance had the lowest rate within this domain at 1.0 case. Despite this low rate, finance and insurance was the only industry sector to experience a statistically significant increase in the overall incidence rate in 2005, rising by 0.1 case per 100 full-time workers. Small establishments (those employing one to ten workers) reported the lowest rate for diseases and injuries combined (2.0 cases per 100 full-time workers), while mid-size establishments (those employing 50 to 249 workers) reported the highest rate (5.8 cases per 100 full-time...
While incidence rates remained relatively unchanged for establishments employing fewer than 1,000 workers, the rate for large establishments (those employing 1,000 or more workers) declined significantly in 2005 to 5.2 cases per 100 full-time workers, down from 5.4 in 2004. Fourteen industries, each having at least 100,000 diseases and injuries combined, accounted for slightly more than 1.9 million cases (46%) of the 4.2 million total. These same 14 industries also reported having at least 100,000 diseases and injuries in both of the previous two years. Hospitals have topped this group of industries in each of the last three years, followed by nursing and residential care facilities. Approximately 2.2 million diseases and injuries were cases with days away from work, job transfer, or restriction, that is, they required recuperation away from work, transfer to another job, restricted duties at work, or a combination of these actions. The remaining 2.0 million diseases and injuries were other recordable cases that did not result in time away from work. The incidence rate for cases with days away from work, job transfer, or restriction was 2.4 cases per 100 workers, and the rate for other recordable cases was 2.2. Both of these rates decreased by 0.1 cases per 100 equivalent full-time workers from 2004. Cases with days away from work, job transfer or restriction comprise two case types – those requiring at least one day away from work, with or without job transfer or restriction, and those requiring only job transfer or restriction. The latter case type may involve shortened work hours, a temporary job change or temporary restrictions on a worker’s regular duty, for example no heavy lifting. Separately, the rate for cases with days away from work was 1.4 cases per 100 workers (unchanged from 2004) and the rate for cases with job transfer or restriction was 1.0 case per 100 workers (down from 1.1 cases in 2004). The rate in manufacturing for cases with job transfer or restriction (2.0) was higher than the rate for cases with days away from work (1.5). Among the remaining industry sectors included in this chart, the rate for cases with days away from work was higher than the rate for cases with job transfer or restriction.

### 3.1.6.1 Injuries

Of the 4.2 million non-fatal occupational diseases and injuries in 2005, approximately 4.0 million (94.2%) were injuries. Of these 4.0 million injuries, 2.7 million (68%) occurred in service-providing industries that employed 79% of the private sector workforce covered by this survey. The remaining 1.3 million injuries (32%) occurred in goods-producing industries that accounted for only 21% of the private sector employment. (Employment data are derived primarily from the BLS Quarterly Census of Employment and Wages.) The largest shares of injuries were in the manufacturing sector (20%), the healthcare and social assistance sector (16%) and the retail trade sector (15%).

### 3.1.6.2 Illnesses

Workplace illnesses accounted for fewer than 6% of the 4.2 million disease and injury cases in 2005, unchanged from 2004. There were 242,500 newly reported cases of occupational illness in private industry in 2005, relatively unchanged from the 249,000 cases in 2004. Service-providing industries accounted for approximately 55% of these cases, while goods-producing industries accounted for 45%. The manufacturing sector accounted for nearly 39% of all newly reported cases of occupational illness. The “All other illnesses” category accounted for 63% of total illness cases in 2005, compared with over 65% in 2004. Both the number of cases and the incidence rate of “All other illnesses” in private industry experienced a statistically significant decline in 2005, while the remaining categories of illness remained relatively unchanged. Beginning with the 2004 calendar year, the Occupational Safety and Health Administration (OSHA) included “Hearing loss” as a separate illness category. Hearing loss accounted for 11% of all illnesses in 2005, relatively unchanged from 2004. Prior to 2004, hearing loss cases were included in the “All other illnesses” category.
The Survey measures the number of new work-related illness cases that are recognised, diagnosed and reported during the year. Some conditions (for example, long-term latent illnesses caused by exposure to carcinogens) are often difficult to relate to the workplace and are not adequately recognised and reported. These long-term latent illnesses are believed to be understated in the Survey’s illness measures. In contrast, the overwhelming majority of the reported new illnesses are those that are easier to relate directly to workplace activity (for example, contact dermatitis or carpal tunnel syndrome).

<table>
<thead>
<tr>
<th>Table 3.5</th>
<th>US key health statistics summary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Birth rate</td>
<td>14.14 births/1,000 population</td>
</tr>
<tr>
<td>Total fertility rate</td>
<td>2.09 children born/woman</td>
</tr>
<tr>
<td>Death rate</td>
<td>8.26 deaths/1,000 population</td>
</tr>
<tr>
<td>Infant mortality rate</td>
<td>Total 6.43 Male 7.09 Female 5.74</td>
</tr>
<tr>
<td>Deaths/1,000 live births</td>
<td>Total 77.85 years Male 75.02 years Female 80.82 years</td>
</tr>
<tr>
<td>Life expectancy at birth</td>
<td>Total 77.85 years Male 75.02 years Female 80.82 years</td>
</tr>
</tbody>
</table>

### 3.2 United States of America – National OSH Systems

OSH is a complex discipline, therefore it is not surprising that, in a nation as large and diverse as the US, there are a large number of relevant organisations and institutions both at the federal and state levels. For the purposes of this review document, the focus is the federal level. The two major players, not surprisingly, in the OSH arena are the departments responsible for work/labour and health.

The US Department of Labor is a Cabinet department of the US government responsible for occupational safety, wage and hour standards, unemployment insurance benefits, re-employment services and some economic statistics. Many US states also have such departments. The US Secretary of Labor heads the Department. The US Department of Health and Human Services (HHS) is a Cabinet department of the US government with the goal of protecting the health of all Americans and providing essential human services. The Department was previously the Department of Health, Education and Welfare, which included the GI Bill and Veterans’ Administration into the HHS and the US Department of Education, until 1979. However, President Jimmy Carter signed the Department of Education Organization Act (PL 96–88) into law on 17 October, 1979. It split the Departments, and operation of the new ones began on 4 May, 1980. The US Secretary of Health and Human Services administers the HHS. The current Secretary is Michael O Leavitt. This position is a Presidential appointment.

The Occupational Safety and Health (OSH) Act is a US federal law signed into law by President Richard Nixon on 29 December, 1970. The OSH Act was created to protect worker and workplace safety. Its main aim was to ensure that employers provided their workers with an environment free from dangers to their safety and health, such as exposure to toxic chemicals, excessive noise levels, mechanical dangers, heat or cold stress, or unsanitary conditions.

The OSH Act of 1970 created two important federal institutions, one each within the departments of health and labour:

1. The National Institute for Occupational Safety and Health (NIOSH). It is part of the HHS. NIOSH is principally a research agency whose purpose is to determine the major types of hazards in the workplace and ways of controlling them.
2. OSHA. It is an agency of the US Department of Labor. OSHA’s mission is to prevent work-related injuries, illnesses and deaths by issuing and enforcing rules (called standards) for workplace safety and health.
3.2.1 POLICY

Information and discussion are provided for the two major OSH institutions, NIOSH and OSHA. These are two distinct agencies with separate responsibilities. Broadly, NIOSH is in the HHS and is a research agency, whereas OSHA is in the US Department of Labor and is responsible for creating and enforcing workplace safety and health regulations. However, NIOSH and OSHA have a mandate to work together toward the common goal of protecting worker safety and health.

3.2.1.1 NIOSH

NIOSH is the federal agency responsible for conducting research and making recommendations for the prevention of work-related disease and injury.\(^72\) NIOSH is part of the Centers for Disease Control and Prevention (CDC) in the HHS.

NIOSH was established to help assure safe and healthful working conditions for working men and women by providing research, information, education and training in the field of OSH. NIOSH has set itself the goal of providing national and international leadership to prevent work-related illness, injury, disability and death by gathering information, conducting scientific research and translating the knowledge gained into products and services.\(^73–89\)

According to the Strategic Plan for the period 2004–09, NIOSH has embarked upon an inventory of its programmes and aims to provide a detailed portfolio of programmes on the website.\(^73\) This will allow the performance of each NIOSH programme to be tracked relative to the goals and objectives of the Strategic Plan:

- Goal 1: Conduct research to reduce work-related illnesses and injuries. Track work-related hazards, exposures, illnesses and injuries for prevention. Generate new knowledge through intramural and extramural research programmes. Develop innovative solutions for difficult-to-solve problems in high-risk industrial sectors.
- Goal 2: Promote safe and healthy workplaces through interventions, recommendations and capacity building. Enhance the relevance and utility of recommendations and guidance. Transfer research findings, technologies and information into practice. Build capacity to address traditional and emerging hazards.
- Goal 3: Enhance global workplace safety and health through international collaborations. Take a leadership role in developing a global network of occupational health centres. Investigate alternative approaches to workplace illness and injury reduction and provide technical assistance to put solutions in place. Build global professional capacity to address workplace hazards through training, information sharing and research experience.

3.2.1.2 OSHA

OSHA functions within the federal Department of Labor. The current Department of Labor strategic goals are:\(^90–91\)

- goal 1: A prepared workforce – Enhance opportunities for America’s workforce
- goal 2: A secure workforce – Promote the economic security of workers and families
- goal 3: Quality workplaces – Foster quality workplaces that are safe, healthy and fair.
OSHA therefore plays an important role in supporting the Department of Labor’s “Quality Workplaces” goal by carrying out programmes that are designed to save lives, prevent diseases and injuries and protect the health of workers. These programmes include:

- developing guidance and standards for OSH
- inspecting places of employment and working with employers and employees
- offering consultation services to small businesses
- providing compliance assistance, outreach, education and other cooperative programmes for employers and employees
- providing matching grants to assist states in administering consultation projects and approved OSH enforcement programmes
- fostering relationships with other agencies and organisations in order to address critical safety and health issues.

Consistent with the Department of Labor’s emphasis on managing for results, the current OSHA Strategic Management Plan focuses on serious hazards and dangerous workplaces. The Plan includes strategies that emphasise:

- exercising strong, fair and effective enforcement
- expanding partnerships and voluntary programmes
- expanding outreach, education and compliance assistance.

OSHA’s Strategic Management Plan recognises a number of important challenges.

- Challenge 1: OSHA oversees a large and diverse population of employers and workers.
- Challenge 2: Trends in the demographic characteristics of the US workforce and the changing nature of work create special safety and health challenges.
- Challenge 3: Fatality, illness and injury trends reveal new OSH issues that need to be addressed, including new approaches to construction safety and ways to address transportation safety and workplace violence.
- Challenge 4: Emerging issues in health, safety and emergency preparedness present new challenges that need to be addressed during the planning horizon.
- Challenge 5: OSHA does not have a systemic intelligence gathering process for analysing trends, emerging issues and programme strategies.

OSHA claims to have considerable success in improving disease and injury statistics in the US. “Since OSHA was created in 1971, the workplace fatality rate has declined 62% and occupational disease and injury rates have dropped 42%. According to the Bureau of Labor Statistics, disease and injury rates declined in 2001 for the ninth year in a row to an all-time low of 5.7 per 100 workers. Despite these significant gains, every day 16 workers die on the job and more than 14,000 experience an injury or illness.”

Current strategic goals for the period from 2003 to 2008 have been set with some very specific targets. These include the goal to achieve a 5% annual reduction in disease and injury rates for cases involving days away from work at worksites receiving direct intervention. This is augmented with measurable goals for each of OSHA’s programmes.

To try to achieve these current goals and overcome the challenges faced, OSHA has established a diverse range of programmes that are described in detail on pages 84–88. These include: enforcement; on-site consultation programmes; cooperative programmes; compliance assistance, outreach, training, and education and information services; and standards and guidance.
The applicable enabling legislation for OSH in the US is the OSH Act 1970. The OSH Act is served by numerous regulations and interdependencies with other legislation at both the federal and state levels.

The OSH Act created both NIOSH within the federal HHS, and OSHA within the federal Department of Labor. OSHA is the principal regulatory agency in the US for OSH. Regulatory agencies are independent government commissions charged by the legislature with setting and enforcing standards for specific industries in the private sector. The US government invented the concept in 1887, and the theory is that a commission of experts on the industry being regulated is better equipped to regulate it than the legislature or executive departments. Designed to operate with a minimum of executive or legislative supervision, agencies have executive, legislative and judicial functions, and their regulations have the force of law. Important US regulatory agencies include the Food and Drug Administration, OSHA, the Federal Communications Commission and the Securities and Exchange Commission.

The Mine Safety and Health Administration (MSHA) is an agency of the US Department of Labor, which administers the provisions of the Federal Mine Safety and Health Act 1977 (Mine Act).

### 3.2.2.1 Legislation relevant to NIOSH

The Institute is authorised to:

- develop recommendations for OSH standards
- perform all functions of the Secretary of Health and Human Services under Sections 20 and 21 of the Act:
  - Conduct Research on Worker Safety and Health (Section 20)
  - Conduct Training and Employee Education (Section 21)
- develop information on safe levels of exposure to toxic materials and harmful physical agents and substances
- conduct research on new safety and health problems
- conduct on-site investigations (Health Hazard Evaluations) to determine the toxicity of materials used in workplaces (42 Code of Federal Regulations (CFR) Parts 85 and 85a)
- fund research by other agencies or private organisations through grants, contracts and other arrangements.

### 3.2.2.2 Legislation relevant to OSHA

Workplace safety in the US is regulated by the OSH Act 1970, and implemented by OSHA. The Fair Labor Standards Act is a federal law enforced by the Employment Standards Administration that mandates labour standards such as breaks, overtime and minimum wages for employers. Many states have additional requirements.

OSHA is part of the US Department of Labor and is responsible for developing and enforcing workplace safety and health regulations. Again, many states have additional requirements, often as part of workers’ compensation legislation and regulations.

In general, the OSH Act covers all employers and their employees in the 50 states, the District of Columbia, Puerto Rico and other US territories. Coverage is provided either directly by OSHA or by an OSHA-approved state job safety and health plan. Employees of the US Postal Service also are covered, under provisions made by the Postal Employees Safety Enhancement Act 1998.91
The OSH Act defines an employer as any “person engaged in a business affecting commerce who has employees, but does not include the United States or any state or political subdivision of a state”. Therefore, the Act applies to employers and employees in such varied fields as manufacturing, construction, longshoring, agriculture, law and medicine, charity and disaster relief, organised labor and private education. The Act establishes a separate programme for federal government employees and extends coverage to state and local government employees only through the states with OSHA-approved plans. The Act does not cover:

- self-employed persons
- farms which employ only immediate members of the farmer’s family
- working conditions for which other federal agencies, operating under the authority of other federal laws, regulate worker safety. This category includes most working conditions in mining, nuclear energy and nuclear weapons' manufacture, and many aspects of the transportation industries
- employees of state and local governments, unless they are in one of the states operating an OSHA-approved state plan.

The OSH Act covers all private sector working conditions that are not addressed by safety and health regulations of another federal agency under other legislation. OSHA also has the authority to monitor the safety and health of federal employees. The OSHA-approved state plan states extend their coverage to state and local government employees. OSHA is also responsible for administering a number of whistleblower laws relating to safety and health.

The OSH Act assigns OSHA two regulatory functions: setting standards and conducting inspections to ensure that employers are providing safe and healthful workplaces. OSHA standards may require that employers adopt certain practices, means, methods or processes reasonably necessary and appropriate to protect workers on the job. Employers must become familiar with the standards applicable to their establishments and eliminate hazards. Compliance with standards may include ensuring that employees have been provided with, have been effectively trained on, and use personal protective equipment when required for safety or health. Employees must comply with all rules and regulations that apply to their own actions and conduct.

Even in areas where OSHA has not set forth a standard addressing a specific hazard, employers are responsible for complying with the OSH Act's “general duty” clause. The general duty clause, Section 5(a)(1) 29 USC 654(b)(1), states that each employer “shall furnish... a place of employment which is free from recognized hazards that are causing or are likely to cause death or serious physical harm to his employees”. A recognised hazard is defined as a danger recognised by the employer's industry or industry in general, by the employer, or by common sense.24 The general duty clause does not apply if there is an OSHA standard dealing with the hazard, unless the employer knows that the standard does not adequately address the hazard.

The Act encourages states to develop and operate their own job safety and health programmes. OSHA approves and monitors these state plans, which operate under the authority of state law. There are currently 22 states and jurisdictions operating complete state plans (covering both the private sector and state and local government employees) and four (Connecticut, New Jersey, New York and the Virgin Islands) that cover state and local government employees only. States with OSHA-approved job safety and health plans must set standards that are at least as effective as the equivalent federal standard. Most but not all of the state plan states adopt standards identical to the federal ones.

There are Federal OSHA Regulations: General Industry (29 CFR 1910), Construction (29 CFR 1926), Maritime (shipyards, marine terminals, longshoring) Employment (29 CFR 1915–1919) and Agriculture (29 CFR 1928). OSHA has regulations on posting and other administrative matters in 29 CFR 1903 and on recording and reporting of diseases and injuries in 29 CFR 1904. While some standards are specific to just one category, others apply across industries. Among the standards with similar requirements for all sectors of industry are those that address access to medical and exposure records, personal protective equipment and hazard communication. The Access to
Medical and Exposure Records regulation provides a right of access to employees, their designated representatives and OSHA to relevant medical records, including records related to employees’ exposure to toxic substances. The Personal Protective Equipment standard is defined separately for each segment of industry except agriculture. It requires employers to provide employees with personal equipment designed to protect them against certain hazards and to ensure that employees have been effectively trained in the use of the equipment. This equipment can range from protective helmets to prevent head injuries in construction and cargo handling work, to eye protection, hearing protection, hard-toed shoes, special goggles for welders and gauntlets for iron workers. The Hazard Communication standard requires manufacturers and importers of hazardous materials to conduct hazard evaluations of the products they manufacture or import. If a product is found to be hazardous under the terms of the standard, the manufacturer or importer must so indicate on containers of the material, and the first shipment of the material to a new customer must include a material safety data sheet (MSDS). Employers must use these MSDSs to train their employees to recognise and avoid the hazards presented by the materials.

As of November 2006, OSHA listed the following Regulations (Standards – 29 CFR) as being currently in force:

- PART 70 Production or Disclosure of Information or Materials.
- PART 70A Protection of Individual Privacy in Records.
- PART 1900 Reserved.
- PART 1901 Procedures for State Agreements.
- PART 1902 State Plans for the Development and Enforcement of State Standards.
- PART 1903 Inspections, Citations and Proposed Penalties.
- PART 1904 Recording and Reporting Occupational Injuries and Illness.
- PART 1905 Rules of Practice.
- PART 1906 Administration Witness and Documentations in Private Litigation.
- PART 1908 Consultation Agreements.
- PART 1910 Occupational Safety and Health Standards.
- PART 1911 Rules of Procedure for Promulgating, Modifying or Revoking OSHA Standards.
- PART 1912 Advisory Committees on Standards.
- PART 1912A National Advisory Committee on OSHA.
- PART 1913 Rules Concerning OSHA Access to Employee Medical Records.
- PART 1915 Occupational Safety and Health Standards for Shipyard Employment.
- PART 1917 Marine Terminals.
- PART 1918 Safety and Health Regulations for Longshoring.
- PART 1919 Gear Certification.
- PART 1920 Procedure for Variations under Longshoremen’s Act.
- PART 1921 Rules of Practice in Enforcement under Section 41 of Longshoremen’s Act.
- PART 1922 Investigational Hearings under Section 41 of the Longshoremen’s and Harbor Workers’ Compensation Act.
- PART 1924 Safety Standards Applicable to Workshops and Rehab. Facilities.
- PART 1925 Safety and Health Standards for Federal Service Contracts.
- PART 1926 Safety and Health Regulations for Construction.
- PART 1927 Reserved.
- PART 1928 Occupational Safety and Health Standards for Agriculture.
- PART 1949 Office of Training and Education, OSHA.
- PART 1952 Approved State Plans for Enforcement of State Standards.
- PART 1953 Changes to State Plans.
• PART 1955 Procedures for Withdrawal of Approval of State Plans.
• PART 1956 Plans for State and Local Government Employees without Approved Plans.
• PART 1960 Basic Program Elements for Federal Employees OSHA.
• PART 1975 Coverage of Employees under the Williams-Steiger OSHA 1970.
• PART 1978 Rules for Implementing Section 405 of the STAA of 1982.
• PART 1990 Identification, Classification and Regulation of Carcinogens.
• PART 2200 OSHA Review Commission.
• PART 2201 Regulations Implementing the Freedom of Information Act.
• PART 2202 Rules of Ethics and Conduct of Review Commission Employees.
• PART 2203 Regulations Implementing the Government in the Sunshine Act.
• PART 2205 Enforcement of Nondiscrimination on the Basis of Handicap in Programs or Activities Conducted by the Occupational Safety and Health Review Commission.
• PART 2400 Regulations Implementing the Privacy Act.

OSHA regulations also cover such items as record keeping, reporting and posting:

• Record keeping – Every employer covered by OSHA that has more than ten employees, except for employers in certain low-hazard industries in the retail, finance, insurance, real estate and service sectors, must maintain three types of OSHA-specified records of job-related diseases and injuries. The OSHA Form 300 is an injury/illness log, with a separate line entry for each recordable injury or illness. Such events include work-related deaths, diseases and injuries other than minor injuries that require only first aid treatment and that do not involve medical treatment, loss of consciousness, restriction of work, or transfer to another job. Each year, the employer must conspicuously post in the workplace a Form 300A, which includes a summary of the previous year’s work-related diseases and injuries. The Form 300A must be posted by 1 February and kept in place until at least 30 April. OSHA Form 301 is an individual incident report that provides added detail about each specific recordable injury or illness. An alternative form, such as an insurance or workers’ compensation form that provides the same details, may be substituted for OSHA Form 301. Employers with ten or fewer employees and employers in statistically low-hazard industries (listed in 29 CFR 1904, Subpart B) are exempt from maintaining these records. Industries currently designated as low-hazard include: automobile dealers; apparel and accessory stores; eating and drinking places; most finance, insurance and real estate industries; and certain service industries, such as personal and business services, medical and dental offices, and legal, educational and membership organisations. However, such employers must keep these records if they receive an annual illness and injury survey form either from the BLS or from OSHA. Employers selected for these surveys, even those usually exempt from illness and injury recording requirements, will be notified before the end of the prior year to begin keeping records during the year covered by the survey.
• Reporting – Each employer, regardless of industry category or the number of its employees, must advise the nearest OSHA office of any accident that results in one or more fatalities or the hospitalisation of three or more employees. The employer must so notify OSHA within eight hours of the occurrence of the accident. OSHA often investigates such accidents to determine whether violations of standards contributed to the event.
The OSH Act grants employees several important rights. Among them is the right to complain to OSHA about safety and health conditions in their workplaces and, to the extent permitted by law, have their identities kept confidential from employers, contest the amount of time OSHA allows for correcting violations of standards and participate in OSHA workplace inspections.

Private sector employees who exercise their rights under OSHA can be protected against employer reprisal, as described in Section 11(c) of the OSH Act. Employees must notify OSHA within 30 days of the time they learned of the alleged discriminatory action. OSHA will then investigate, and if it agrees that discrimination has occurred, OSHA will ask the employer to restore any lost benefits to the affected employee. If necessary, OSHA can initiate legal action against the employer. In such cases, the worker pays no legal fees. The OSHA-approved state plans have parallel employee rights provisions, including protections against employer reprisal.

In 1996, Congress passed the Small Business Regulatory Enforcement Fairness Act (SBREFA) in response to concerns expressed by the small business community that federal regulations were too numerous, too complex and too expensive to implement. SBREFA was designed to give small businesses assistance in understanding and complying with regulations and more of a voice in the development of new regulations. Under SBREFA, OSHA and other federal agencies must:

- produce Small Entity Compliance Guides for some rules
- be responsive to small business enquiries about compliance with the agency's regulations
- submit final rules to Congress for review
- have a penalty reduction policy for small businesses
- involve small businesses in the development of some proposed rules through Small Business Advocacy Review Panels.

In addition, SBREFA established ten Small Business Regulatory Fairness Boards to receive comments from small businesses across the country about federal compliance and enforcement issues and activities, and report these findings annually to Congress. The legislation also gives small businesses expanded authority to recover attorneys' fees and costs when a federal agency has been found to have acted excessively in enforcing federal regulations.

OSHA states that it has implemented President Clinton's regulatory reform initiative. This involved giving employers and employees the choice of engaging in a safety partnership with OSHA or facing traditional enforcement, using common sense in developing and enforcing regulations, and measuring results, not red tape.

The most controversial event in the history of OSHA was its attempt to implement the Ergonomics Program Standard that was due to go into effect on 16 January, 2001. This required employers to have distributed to their employees the required basic information on musculoskeletal disorder (MSD) signs and symptoms and start their musculoskeletal disorder programme for receiving and responding to employee reports of possible musculoskeletal disorders by 14 October, 2001. This was based on an amendment to Part 1910 of Title 29 of the Code of Federal Regulations to include the Subpart W Sec. 1910.900 Ergonomics Program Standard. This initiative met with substantial opposition from two quarters. Industry and employers were deeply concerned about the costs of implementation that they would have been responsible for, and the scientific community was sceptical about the potential effectiveness due to the lack of an evidence base. However, in March 2001, both the Senate and the Congress voted on consecutive days to repeal the Ergonomic Standard. The repeal was one of the first major pieces of legislation signed by President George W. Bush. Since the repeal of the ergonomics standard, OSHA has issued three ergonomics guidelines and only a small handful of ergonomic citations under the Act's "general duty" clause. Some have argued that the Bush administration has largely replaced the process of issuing mandatory regulations with voluntary guidelines and put additional resources into other, previously existing voluntary programmes, as well as the new "Alliance" programme.
3.2.2.3 Legislation relevant to MSHA

The Federal Mine Safety and Health Amendments Act of 1977 delegated additional authority to NIOSH for coal mine health research. The mine health and safety law authorised NIOSH to:

- develop recommendations for mine health standards for MSHA
- administer a medical surveillance programme for miners, including chest X-rays to detect pneumoconiosis (black lung disease) in coal miners
- conduct on-site investigations in mines similar to those authorised for general industry under the OSH Act
- test and certify personal protective equipment and hazard measurement instruments.

3.2.3 DESIGNATED AUTHORITIES

As noted above, the OSH Act 1970 created both NIOSH and OSHA, while the MHSA administers the provisions of the Mine Act. NIOSH is in the HHS and is an agency established to help assure safe and healthful working conditions for working men and women by providing research, information, education and training in the field of OSH. OSHA is in the US Department of Labor and is responsible for developing and enforcing workplace safety and health regulations. MHSA is also an agency within the Department of Labor to enforce compliance with mandatory safety and health standards in the nation's mines.

NIOSH

NIOSH is the federal agency responsible for conducting research and making recommendations for the prevention of work-related disease and injury. NIOSH is part of the CDC in the HHS. The CDC is one of the 13 major operating components of the HHS, which is the principal agency in the US government for protecting the health and safety of all citizens and for providing essential human services, especially for those people who are least able to help themselves. The CDC was founded in 1946 to help control malaria, and it has remained at the forefront of public health efforts to prevent and control infectious and chronic diseases, injuries, workplace hazards, disabilities and environmental health threats. It is true to say that currently the CDC is internationally recognised for research.

OSHA

OSHA is an agency of the US Department of Labor. It was created by Congress under the OSH Act, signed by President Richard M. Nixon, on 29 December, 1970. Its mission is to prevent work-related injuries, illnesses and deaths by issuing and enforcing rules (called standards) for workplace safety and health.

The US Department of Labor was established in 1913, and OSHA began functioning on 28 April, 1971. The organisational structure of the Department of Labor is outlined in Figure 3.1. The Office of Congressional and Intergovernmental Affairs is responsible for OSHA. The agency is directed by the Assistant Secretary for Occupational Safety and Health and is headquartered in Washington, DC. It has ten regional offices located throughout the US.
Figure 3.1: Organisational chart for US Department of Labor

- Scheduling and Advance
- Executive Secretariat
- Center for Faith Based & Community Initiatives
- Office of the 21st Century Workforce
- Office of Small Business Programs
- Office of the Assistant Secretary for Administration and Management
- Office of the Solicitor
- Office of Congressional and Intergovernmental Affairs
- Office of Public Affairs
- Office of the Assistant Secretary for Policy
- Employment Training Administration
- Employee Benefits Security Administration
- Veterans' Employment and Training Service
- Bureau of International Labor Affairs
- Occupational Safety and Health Administration
- Employment Standards Administration
- Mine Safety and Health Administration
- Bureau of Labor Statistics
- Office of the Chief Financial Officer
- Women's Bureau
- Office of Disability Employment Policy
- Office of the Inspector General
- Office of the Secretary of Labor
- Chief of Staff
- Office of the Deputy Secretary of Labor
- Office of the Solicitor
- Benefits Review Board
- Employees' Compensation Appeals Board
- Administrative Review Board
- Office of Job Corps
- Office of Disability Employment Policy
- Office of the Inspector General
From the outset, OSHA’s tasks were to enforce rules, or oversee state-run programmes, to protect against hazards in most of the nation’s workplaces. However, from its beginnings, OSHA has been a controversial agency that has drawn much criticism from both business and labour groups. Businesses have charged that the agency’s regulations are difficult to understand and often unreasonably rigid, that penalties are unfair, paperwork is excessive, and the cost of compliance is burdensome to small businesses. That is, OSHA as inspectors were criticised for being “nitpickers”, and the costs of compliance with rules have provoked opposition from manufacturers. However, attempts to accommodate them have caused consternation among the unions, which have described OSHA’s enforcement procedures as weak, and have complained that the agency has failed to reduce occupational hazards. Since 1977, the agency has made an effort to concentrate on dangerous industries and to eliminate out-of-date regulations. Meanwhile, OSHA is being challenged by some businesses in the courts more frequently.

OSHA’s statutory authority extends to most non-governmental workplaces where there are employees. State and local government workers are excluded from federal coverage. However, states operating their own state workplace safety and health programmes under plans approved by the US Department of Labor cover most private sector workers and are also required to extend their coverage to public sector (state and local government) workers in the state. Section 2 (11) of the OSH Act encourages states to develop and operate their own state OSH programmes. OSHA regulations (29 CFR Part 1956) also permit states without approved plans to develop plans that cover only public sector workers. In these states, private sector employment remains under federal OSHA jurisdiction. Twenty-two states and territories operate plans covering both the public and private sectors and four states (Connecticut, New Jersey, New York and the Virgin Islands) operate public-employee-only plans.

MSHA

MSHA, like OSHA, is also an agency of the US Department of Labor, which administers the provisions of the Mine Act to enforce compliance with mandatory safety and health standards as a means to eliminate fatal accidents, to reduce the frequency and severity of non-fatal accidents, to minimise health hazards and to promote improved safety and health conditions in the nation’s mines. MSHA carries out the mandates of the Mine Act at all mining and mineral processing operations in the US, regardless of size, number of employees, commodity mined, or method of extraction. MSHA is divided into several subdivisions under the Office of the Assistant Secretary for Mine Safety and Health. The Coalmine Safety and Health Division is divided into 11 districts covering coal mining in different portions of the US. The Metal and Nonmetal Mine Safety and Health Division covers six regions of the US.

Relationship between OSHA and MSHA

In general, unsafe and unhealthful working conditions on mine sites and in milling operations come under the jurisdiction of MSHA and its regulations. This jurisdiction includes construction at mine and mineral milling sites, including construction related to mining and milling performed by independent contractors. Where the provisions of the Mine Act and standards issued under it either do not cover or do not apply to OSH hazards on mine or mill sites (e.g. in those facilities unrelated to mining or milling, such as hospitals on mine sites), OSHA applies. Also, when MSHA receives information about possible unsafe working conditions in an area over which it has authority, but for which its statutes or standards afford no appropriate remedy, it will refer the matter to OSHA.
OSHA encourages compliance through the cooperative programmes outlined above. This is supplemented and supported by a wide-scale information dissemination programme and training initiatives. The OSHA Office of Training and Education develops, directs, oversees, manages and ensures the implementation of OSHA’s national training and education policies and procedures. The OSHA Training Institute (OTI) provides training and education in OSH for federal and state compliance officers, state consultants, other federal agency personnel and the private sector. The OTI Education Centers offer the most frequently requested OTI courses for the private sector and other federal agency personnel at locations throughout the US. The OSHA Outreach Training Program delivers a variety of courses. For example, individuals who complete a one-week OSHA training course are authorised to teach ten-hour or 30-hour courses in construction or general industry safety and health standards. Under the Disaster Site Worker Outreach Training Program, individuals who complete a four-day OSHA training course are authorised to teach a 16-hour course in safety and health to workers who provide skilled support or site clean-up services. The resource centre offers OSH training videos for loan to OSHA employees, OSHA grantees, consultation programmes, state plan states, voluntary protection programme sites, OTI Education Centers, federal agency OSH trainers, and OSHA outreach trainers. The Susan Harwood Training Grant Program awards grants to non-profit organisations to develop training and educational programmes, reach out to appropriate workers and employers, and provide these programmes to these workers and employers.

These OSHA programmes and initiatives are supported by “compliance assistance resources”. These provide a substantial amount of information available in both printed and electronic formats. They are available in four broad areas:

- Electronic compliance assistance tools, including “eTools” and online safety and health topics pages.
- Publications including fact sheets on specific topics, such as amputation, asbestos, blood-borne pathogens, the electrical safety hazards of overloading cable trays, carbon monoxide, crystalline silica, downed electrical wires, emergency exit routes, ergonomics, ethylene oxide, evacuating high-rise buildings, farm safety, fire safety, flood clean-up alerts, formaldehyde, hazardous chemicals in labs, hazardous waste operations and emergency response, the health effects of hexavalent chromium, highly hazardous chemicals, chainsaws, falls, fungi, general decontamination, hand hygiene and gloves, heat stress, lead hazards, portable generator safety, search and rescue, West Nile virus, workers handling human remains, working outdoors, work zone traffic safety, imminent danger, job safety and health, lockout/tagout, Lyme disease alert, marine terminal fall protection for personnel platforms, maritime ship-breaking, motor vehicle safety, personal protective equipment, planning and responding to workplace emergencies, powered platforms, and SARS (severe acute respiratory syndrome). There is also a wide range of small printed cards to be used as workplace reminders, posters, email bulletins, safety and health information bulletins, and technical manuals.
- Training resources including materials from Harwood grantees, the training and reference materials library and training videos.
- Other compliance assistance resources including information from compliance assistance specialists, industry-specific resources, multimedia PowerPoint presentations, the NIOSH Health Hazard Evaluation Program, the OSHA Consultation Program, sample programmes, and small business material.

Workplace inspections and investigations are conducted by OSHA compliance safety and health officers (CSHOs). These officers are safety and health professionals trained in the disciplines of safety and industrial hygiene. An OSHA CSHO may conduct an inspection of a workplace (in accordance with the OSH Act) without providing advance warning. After the inspection, the CSHO reports the findings to the area director who evaluates them. If a violation exists, OSHA will issue a citation and notification of penalty detailing the exact nature of the violation(s) and any associated penalties.
States administering their own OSH programmes through plans approved under Section 18(b) of the Act must adopt standards and enforce requirements that are at least as effective as federal requirements. There are currently 26 states and territories with OSHA-approved safety and health plans – 23 covering the private and public (state and local government) sectors and three covering the public sector only. Plan states must adopt standards comparable with the federal standards within six months of a federal standard’s issue. Most states adopt standards identical to the federal standards and have similar inspection procedures (including citations and penalties, and employer and employee rights and responsibilities). However, there may be different or additional state OSH requirements.

According to OSHA, inspections are always conducted without advance notice. There are, however, special circumstances under which OSHA may give notice to an employer, but such notice will normally be less than 24 hours. These circumstances include:

- imminent danger situations that require correction as soon as possible
- accident investigations where the employer has notified the agency of a fatality or catastrophe
- inspections that must take place after regular business hours or that require special preparation
- cases where notice is required to ensure that the employer and employee representative or other personnel will be present
- cases where an inspection must be delayed for more than five working days when there is good cause
- situations in which the OSHA area director determines that advance notice would produce a more thorough or effective inspection.

Employers that receive advance notice of an inspection must inform their employees’ representative or arrange for OSHA to do so. If an employer refuses to admit an OSHA CSHO or if an employer attempts to interfere with the inspection, the Act permits appropriate legal action, such as obtaining a warrant to inspect.

OSHA has published a system of inspection priorities (in descending order): imminent danger; catastrophes and fatal accidents; complaints and referrals; programmed inspections; and follow-up inspections.

The OSH Act provides for penalties and sanctions. Every establishment covered by the Act is subject to inspection by OSHA CSHOs. These individuals are chosen for knowledge and experience in OSH, and are trained in OSHA standards and in the recognition of OSH hazards. In states with their own OSHA-approved state plans, pursuant to state law, state officials conduct inspections, issue citations for violations and propose penalties in a manner that is at least as effective as the federal programme. OSHA conducts two general types of inspection – programmed and unprogrammed. Establishments with high injury rates receive programmed inspections, while unprogrammed inspections are used in response to fatalities, catastrophes and complaints. The OSH Act authorises OSHA to treat certain violations, which have no direct or immediate relationship to safety and health, as de minimus, requiring no penalty or abatement. OSHA does not issue citations for de minimus violations. Types of violation that may be cited and the penalties that may be proposed include:

- other than serious violation – A violation that has a direct relationship to job safety and health, but probably would not cause death or serious physical harm. A proposed penalty of up to $US7,000 ($NZ10,454) for each violation is discretionary.
- serious violation – A violation with a substantial probability that death or serious physical harm could result and where the employer knew, or should have known, of the hazard. A penalty of up to US$7,000 ($NZ10,454) for each violation must be proposed.
- willful violation – A violation that the employer intentionally and knowingly commits. The employer either knows that what they are doing constitutes a violation, or is aware that a condition creates a hazard and has made no reasonable effort to eliminate it. The Act provides that an employer that willfully violates the Act may be assessed a civil penalty of not more than US$70,000 ($NZ104,540) but not less than US$5,000.
The mission of the OSHRC is to provide fair and timely adjudication of workplace safety and health disputes. To this end the Occupational Safety and Health Review Commission (OSHRC) was established. This is an independent adjudicatory agency that was also created by the OSH Act, to decide contests of citations or penalties resulting from OSHA inspections of American workplaces. The Review Commission, therefore, functions as an administrative court, with established procedures for conducting hearings, receiving evidence and rendering decisions by its administrative law judges (ALJs).

The mission of the OSHRC is to provide fair and timely adjudication of workplace safety and health disputes between the Department of Labor and employers. In doing this, the Commission plays a vital role in encouraging safe and healthy workplaces for American workers. Upon notification that an employer or affected employees has contested a citation, the OSHRC creates a case file. The Review Commission’s Office of the Executive Secretary, which functions much like the court clerk's office, assigns docket numbers to each contest, or new case, at its National Office in Washington, DC. All affected parties are then notified by mail of the docketing of the case. Thereafter, the Chief ALJ assigns the case to a judge in Washington, DC, or one of the agency's regional offices in Atlanta or Denver. The OSHRC Rules of Procedure provide for two levels of adjudication. The first level is before an ALJ. The second level is a review of the ALJ's decisions by the agency's commissioners in Washington if one of the parties petitions for review. The OSHRC Rules of Procedure may be found in Part 2200 of Title 29 of the Code of Federal Regulations. These Rules govern two types of proceedings. The more formal conventional proceedings involve the use of pleadings, discovery, a hearing and post-hearing briefing or argument. The less formal method, called Simplified Proceedings, employs fewer legal procedures and is permitted in certain less complex cases and can be requested by either party. In Simplified Proceedings, there are no formal pleadings, and early discussion among the parties to narrow the disputed issues is required. Details on Simplified Proceedings are in the Rules of Procedure. Upon receipt of a case by the assigned ALJ, a hearing date is set and a hearing site is selected as close as possible to where the alleged violation(s) occurred. On the hearing date, the ALJ from the Review Commission conducts the adversarial proceedings in accordance with the Commission's Rules of Procedure. A cited employer or an affected employee may appear with or without legal counsel. OSHA's representative is the Secretary of Labor who is represented by a government attorney, who bears the burden of proving the violation(s). Upon hearing all of the evidence, the judge will issue a written decision based on findings of fact and conclusions of law. As part of the judge's decision, the citation(s) will be affirmed, modified or vacated. The decision becomes final in 30 days unless, within that period, one of the parties requests that the decision of the ALJ be directed for review by the

Citation and penalty procedures may differ somewhat in states with their own OSH programmes.

As noted above, the inspection and compliance systems deployed by OSHA have been criticised by employers, and often viewed as expensive and complex to comply with. It is not surprising, therefore, that OSHA should have to deal with relatively frequent disputes. To this end the Occupational Safety and Health Review Commission (OSHRC) was established. This is an independent adjudicatory agency that was also created by the OSH Act, to decide contests of citations or penalties resulting from OSHA inspections of American workplaces. The Review Commission, therefore, functions as an administrative court, with established procedures for conducting hearings, receiving evidence and rendering decisions by its administrative law judges (ALJs).

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three OSHRC commissioners in Washington, DC. If one of the three commissioners directs that the case be reviewed, they review all of the evidence, briefs, arguments and the ALJ’s decisions. Thereafter, they render a decision to affirm, modify or vacate citations and penalties that have been proposed by OSHA. If a review of the ALJ decisions by the commissioners is not directed, the petitioning party may request review by an appropriate US Circuit Court of Appeals. Any person who is adversely affected or aggrieved may also appeal the decision of the three OSHRC commissioners to an appropriate US Court of Appeals. Review by a Court of Appeals must be sought within 60 days after the Commission’s final decision is issued.

3.2.5 BUDGETS

3.2.5.1 NIOSH budget

The total CDC budget for the 2005 financial year was $US8 billion ($NZ12.1 billion). From this, OSH received $US285.7 million for “activities related to the research, tracking, and prevention of work-related injuries”\(^{(105)}\). These monies fund NIOSH and also its National Occupational Research Agenda (NORA) programme, mine safety, and the National Personal Protective Technology Laboratory.\(^{(106)}\)

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<tr>
<th>TABLE 3.6</th>
<th>Annual NIOSH budget</th>
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<td>All Other Occupational Safety and Health</td>
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<td>Occupational Safety and Health Management and Administrative Costs</td>
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<td><strong>Total Occupational Safety and Health</strong></td>
<td><strong>282.9</strong></td>
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3.2.5.2 OSHA budget

The OSHA budget is funded through the Department of Labor.\(^{(107-109)}\) Details are in Table 3.7. The Department of Labor publishes an annual performance budget that reflects the effort to integrate the Department’s performance objectives with resource requirements into a performance-budget submission.\(^{(109,111)}\)
The mission of the Occupational Safety and Health Administration (OSHA) is to save lives, prevent diseases and injuries and protect American workers. The agency promulgates and enforces occupational safety and health standards and provides compliance assistance to employers and employees. OSHA also assists other Federal agencies in establishing and maintaining occupational safety and health programs for Federal workers and provides funding for state administered safety and health consultation programs. Consistent with its strategic goals, OSHA will focus on the most serious hazards and dangerous workplaces and expand compliance assistance opportunities.

**Safety and Health Standards** — The Safety and Health Standards activity provides for the development, promulgation, review and evaluation of occupational safety and health standards and non-regulatory products.

**Federal Enforcement** — The Federal Enforcement activity encourages compliance with workplace standards under the Occupational Safety and Health Act of 1970 through the physical inspection of work sites, and by fostering the voluntary cooperation of employers and employees. OSHA will continue to target inspections on the worst hazards and the most dangerous workplaces and assist employers and employees in creating safe and healthy workplaces.

**State Programs** — The State Programs activity supports grants to 26 states that have assumed responsibility for occupational safety and health enforcement under OSHA approved plans. State Programs support enforcement, consultation, and education and training efforts in OSHA programs operated by the states. These resources enable OSHA's state partners to meet new challenges and complement Federal OSHA's program strategies.

**Technical Support** — This activity provides support to Federal OSHA programs in several areas, including construction, standards setting, variance determinations, compliance assistance, and enforcement. Areas of expertise include laboratory accreditation, industrial hygiene, occupational health nursing, occupational medicine, chemical analysis, equipment calibration, and safety engineering.

**Federal Compliance Assistance** — This activity supports a variety of cooperative assistance programs, training and outreach to provide compliance assistance to employers and employees, particularly small businesses. Employers are encouraged to establish voluntary employee protection programs, and Federal agencies are assisted in implementing job safety and health programs for their employees. Professional training for compliance personnel and others with related workplace safety and health responsibilities is conducted at the OSHA Training Institute, and further training is provided to the public by education centers selected and sanctioned by the Institute.

**State Consultation Grants** — This activity supports 90 percent of Federally funded cooperative agreements with designated State agencies to provide free on-site consultation to employers upon request. State agencies tailor work plans to their States while maximizing their impact on disease and injury rates in smaller establishments. These projects offer a variety of services, including safety and health program assessment and assistance, hazard identification and control, and the training of employers and their employees.

**Training Grants** — This activity supports safety and health training grants to nonprofit organizations to provide employee and employer training programs targeted to address specific industry needs for safety and health education. In FY 2006, this training grant program will be eliminated. Since OSHA provides direct outreach activities and training on important safety and health issues in a variety of ways other than through training grants, the agency will continue to deliver compliance assistance, outreach, and training for employers and workers.

**Safety and Health Statistics** — Safety and Health Statistics provides information technology, management information and statistical support for OSHA's programs and field operations through an integrated data network and statistical analysis and review.

**Executive Direction and Administration** — This activity provides overall direction and administrative support for OSHA.
3.2.6 DATA COLLECTION AND ANALYSIS

The statistical system of the US government is decentralised and complex. Several executive departments in the federal government have agencies within them whose sole mission is to compile and publish statistics for government and public use. In many cases, these agencies have cooperative arrangements with state agencies for the collection and publication of statistics. In addition to statistical agencies, some 60 other federal agencies collect and publish statistics for general use or conduct statistical surveys and studies to support their research, programme evaluation or administrative functions. The Office of Management and Budget (OMB), in the Executive Office of the President, is responsible for statistical policy and coordination within the federal government. The 1787 US Constitution requires the taking of a census every ten years. During the 19th and 20th centuries, the collection and publication of statistics by the federal government increased and expanded in scope as the federal government’s size and role expanded. The collection, analysis and publication of statistics have always been decentralised, with statistical programmes placed in departments whose functions made them the most obvious collectors or users of particular statistics. Formal coordination began in the 1930s, with central policy and coordination functions first assigned to a Central Statistical Board (1934) and then (1939) to the Bureau of the Budget, later OMB.

There is no single legal provision for the collection of statistics in the US. Different titles and sections of the United States Code (USC) authorise the collection and publication of statistics by different federal agencies. The statistical policy authority of OMB is contained in 44 USC 3504, 31 USC 1104 and Executive Order No. 10253 of 11 June, 1951. The OMB in Statistical Programs of the US government publishes overview descriptions of major statistical programmes annually. Furthermore, there is no single national statistical agency in the US. Nine departments have statistical agencies within them: the Department of Agriculture (National Agricultural Statistics Service and Economic Research Service); the Department of Commerce (Bureau of Economic Analysis and Bureau of the Census); the Department of Education (National Center for Education Statistics); the Department of Energy (Energy Information Administration); the HHS (National Center for Health Statistics); the Department of Justice (Bureau of Justice Statistics); the Department of Labor (BLS); the Department of Transportation (Bureau of Transportation Statistics); and the Department of the Treasury (Statistics of Income Division of the Internal Revenue Service). These agencies operate on the basis of separate statutes that authorise, or in some cases require, the secretaries of departments to collect and publish statistical data on particular subjects. OMB is responsible, under the Budget and Accounting Procedures Act (Title 31, Section 1104, USC) and the Paperwork Reduction Act 1995 (44 USC 3504) for oversight, coordination and policy direction of federal statistical activities. OMB’s functions include: planning over the long term to improve statistical programmes; coordinating statistical activities through budget review and other means; establishing government-wide policies, principles, standards and guidelines for data collection, classification and publication; evaluating statistical programmes and agency performance; promoting the sharing of information collected for statistical purposes consistent with privacy rights and confidentiality pledges; and coordinating the participation of the US in international statistical activities, including the development of comparable statistics. OMB’s Statistical Policy Office carries out these functions.

Various committees of the Congress of the US oversee the activities of the statistical agencies and of OMB in carrying out statistical policy and coordination functions. Most statistical agencies have advisory groups that provide professional advice on methods and practices. At the request of the federal agencies, the Committee on National Statistics of the National Academy of Sciences studies selected statistical topics to improve the effectiveness of the federal statistical system.
Statistical agencies are integral parts of their parent departments, with agency heads reporting to their department secretaries. Agencies prepare budget requests each year, reflecting proposed programme changes for the coming fiscal year. These are reviewed by the parent departments and included in the departments’ budget requests to OMB. OMB reviews statistical agency requests for conformity with the President’s budget goals and government-wide statistical priorities. Under the Paperwork Reduction Act, OMB also reviews all proposed collections of information involving ten or more respondents in the public, including statistical surveys, to ensure they are designed efficiently and the data collected are likely to be useful for their intended purpose. Agencies decide the scope and content of their publications, subject to budget constraints, broad OMB guidelines on the dissemination of information, and OMB statistical standards and guidelines.

The Freedom of Information Act (FOIA) (5 USC 552) requires federal agencies to disclose records that are not specifically exempted. Information collected for statistical purposes is exempt from the public disclosure requirements of FOIA if it has been collected under a statute (for example, 13 USC, the Census Code) that prohibits disclosure, or it qualifies for an FOIA exemption covering “trade secrets and commercial or financial information obtained from a person and privileged or confidential”. Most statistical agencies collect information under statutes prohibiting disclosure. Statutes prohibiting public disclosure vary in the extent to which they permit inter-agency use of information for statistical purposes. For example, information collected by the Bureau of the Census under 13 USC is accessible only to employees of the Bureau of the Census. By contrast, the law protecting the confidentiality of the Department of Agriculture’s statistical data collections permits the data to be used for statistical purposes by other agencies. Statutory authority exists to require a response of the population to economic censuses and to certain other surveys, mainly of businesses. The major household surveys and many major economic surveys are conducted without mandatory reporting authority.

The most important US organisations relevant to the OSH area are the Department of Labor’s BLS, which provides data on injuries, illnesses and fatalities, the HHS (National Center for Health Statistics) and the Bureau of Transportation Statistics.

3.2.7 RESEARCH INSTITUTIONS

The major research institution is NIOSH, which has established and manages NORA. This is a collaborative programme to stimulate innovative research in workplace safety and health. It began in 1996, when over 500 individuals and organisations contributed to the first agenda. These contributions identified 21 priority areas for the 21st century.13 The priorities were not ranked, but did seek to encompass current and future needs. The 21 priorities were grouped into three categories:

**Disease and Injury**
- Allergic and irritant dermatitis.
- Asthma and COPD.
- Fertility and pregnancy abnormalities (later known as reproductive health research).
- Hearing loss.
- Infectious diseases.
- Low back disorders.
- Musculoskeletal disorders.
- Traumatic injuries.
**Work environment and workforce**

- Emerging technologies.
- Indoor environment.
- Mixed exposures.
- Organisation of work.
- Special populations at risk.

**Research tools and approaches**

- Cancer research methods.
- Control technology and personal protective equipment.
- Exposure assessment methods.
- Health services research.
- Intervention effectiveness research.
- Risk assessment methods.
- Social and economic consequences of workplace illness and injury.
- Surveillance research methods.

NIOSH and its partners recently celebrated ten years of research activities at the NORA Symposium 2006. Past research conducted under NORA can be found through the searchable online Compendium of NORA Research Projects. Other key activities are described in *The Team Document*.

NIOSH also runs an office of extramural programmes. The overall goal of these is consistent with the general NIOSH goals of the prevention of illnesses, injuries and deaths caused by hazards on the job. Recognising the potentially valuable contributions of extramural scientists and educators to this endeavour, NIOSH sponsors research and training through its extramural programmes, which complement the Institute's intramural programmes.

One example is the WorkLife Initiative, which incorporates the “r2p: Research To Practice at NIOSH” programme. This is a new initiative focused on the transfer and translation of research findings, technologies and information into highly effective prevention practices and products that are adopted in the workplace. The goal of r2p is to reduce illness and injury by increasing the workplace use of effective NIOSH and NIOSH-funded research findings.

### 3.2.8 Compensation

There are basically three methods for a worker to obtain compensation in the US. One is accessing a social security benefit, the second is through a workers’ compensation system, and the third is through litigation. US healthcare involves direct costs to sick or injured workers, therefore compensation for both loss of earnings and costs of healthcare are relevant.

#### 3.2.8.1 Social security in the US

Social security in the US is a social insurance programme funded through dedicated payroll taxes called FICA (Federal Insurance Contributions Act). In this system, tax deposits are entrusted to the Federal Old-Age and Survivors Insurance Trust Fund, the Federal Disability Insurance Trust Fund, the Federal Hospital Insurance Trust Fund and the Federal Supplementary Medical Insurance Trust Fund. By dollars paid out, the US social security programme is the largest government programme in the world. The central part of the social security programme is sometimes abbreviated as OASDI. This refers to the three main beneficiaries: OA for retirement, S for widows’
and survivors’ income, D for the disabled and I for insurance. The Social Security Act 1935 was part of President Roosevelt’s “New Deal” in response to widespread unemployment and poverty during the 1930s. This Act provided benefits to retirees and the unemployed, and a lump-sum benefit at death. Payments to current retirees were (and continue to be) financed by a payroll tax on current workers’ wages, half directly as a payroll tax and half paid by the employer. Payroll taxes were first collected in 1937. The Social Security Administration (SSA) has its headquarters in Woodlawn, Maryland. In 1935, the term “social security” covered unemployment insurance as well (now run by the Department of Labor). While this continues to be a federal programme, it is run by individual states and territories.

The SSA programmes most relevant to OSH are disability, survivor’s benefit and unemployment insurance.

Disability (social security)

The Social Security Amendments Act 1954 initiated a disability insurance programme that provided the public with additional coverage against economic insecurity. At first, there was a disability “freeze” of workers’ social security records during years when they were unable to work. While this measure offered no cash benefits, it did prevent such periods of disability reducing or wiping out retirement and survivor benefits. On 1 August, 1956, the Social Security Act was amended to provide cash benefits to disabled workers aged 50–65 and disabled adult children. Over the next few years, Congress broadened the scope of the programme, permitting the dependants of disabled workers to qualify for benefits, and eventually, disabled workers at any age could qualify. Social security disability insurance pays benefits to a worker, and certain members of their family, if the worker is “insured” by virtue of having worked long enough and having paid social security taxes. A worker can receive benefits five months after the date that the worker became disabled, regardless of age. The eligibility formula requires a certain number of credits (based on earnings) to have been earned overall, and a certain number within the ten years immediately preceding the disability, but with more lenient provisions for younger workers who become disabled before having had a chance to compile a long earnings’ history. To be eligible, the worker must be unable to continue in their previous job and unable to adjust to other work, with age, education and work experience taken into account. Furthermore, the disability must be long term, lasting 12 months, expected to last 12 months, resulting in death, or expected to result in death. The amount of the disability benefit payable depends on the worker’s age and record of covered earnings. Supplemental security income (SSI) pays benefits based on financial need. It uses the same disability criteria as the insured social security disability programme, but SSI is not based upon insurance coverage. Instead, a system of means testing is used to determine whether the claimant’s income and net worth fall below certain income and asset thresholds after the claimant establishes disability. Severely disabled children may qualify for SSI. Standards for child disability are different from those for adults. In addition, non-disabled minor children of disabled or deceased workers may receive dependants’ or survivors’ benefits. A programme called Disabled Adult Child Insurance Benefits provides benefits for the disabled adult children of disabled or deceased workers. Disability determination at SSA has created the largest system of administrative courts in the US. Depending on the state of residence, a claimant whose initial application for benefits is denied can request reconsideration or a hearing before an ALJ. Such hearings sometimes involve the participation of a vocational expert or medical expert, both independent, unbiased witnesses, as called upon by the ALJ. Reconsideration involves a re-examination of the evidence, and the opportunity for a hearing before a (non-attorney at law) hearing officer. The hearing officer then issues a decision in writing, providing justification for the finding. If the claimant is denied at the reconsideration stage, they may request a hearing before an ALJ. In some states, SSA has implemented a pilot programme that eliminates the reconsideration step and allows claimants to appeal an initial denial directly to an ALJ. The number of applications for social security is very large (approximately 650,000 applications per year), and therefore the number of hearings requested by claimants often exceeds the capacity of ALJs. After the hearing, the ALJ issues a written decision. This can be fully favourable (the ALJ finds the claimant disabled), partially favourable (the ALJ finds the claimant disabled at some point, or the ALJ finds that the claimant was disabled but has improved), or unfavourable (the ALJ finds that the claimant was not disabled at all).
Claimants can appeal to the Social Security Appeals Council if they receive a partially favourable or unfavourable decision. The Appeals Council does not hold hearings but accepts written briefs. The response time from the Appeals Council can range from 12 weeks to more than three years. Further avenues of appeal are available through the federal district court, the appropriate appellate circuit court, and finally to the US Supreme Court.

**Survivor’s benefit (social security)**

If a worker who is covered by social security dies, a surviving spouse or dependent children can receive a survivor’s benefit. Survivors’ benefits are available to a divorced spouse under certain circumstances. Survivors’ benefits to children who are themselves not disabled end when they attain 18 years of age, or when they graduate from high school, whichever is later. The earliest age for a benefit to be paid to a widow or a widower is 60. The survivor’s benefit is equal to the worker’s full retirement benefit for spouses who are at, or older than, the survivor’s normal retirement age. If the worker dies when the survivor is younger, there is an actuarial reduction.

**Unemployment insurance**

The Department of Labor’s unemployment insurance programmes provide unemployment benefits to eligible workers who become unemployed through no fault of their own, and meet certain other eligibility requirements. State governments administer them. Unemployment insurance payments (benefits) are intended to provide temporary financial assistance to unemployed workers who meet the requirements of state law. Each state administers a separate unemployment insurance programme within guidelines established by federal law. Eligibility for unemployment insurance, benefit amounts and the length of time benefits are available are determined by the state law under which unemployment insurance claims are established. In the majority of states, benefit funding is based solely on a tax imposed on employers (although three states require minimal employee contributions). Related programmes also administered by the Department of Labor include: Disaster Unemployment Assistance, which provides financial assistance to individuals whose employment or self-employment has been lost or interrupted as a direct result of a major disaster declared by the President of the US; Unemployment Compensation for Federal Employees, which provides benefits for eligible unemployed former civilian federal employees; Unemployment Compensation for Ex-Service Members, which provides benefits for eligible ex-military personnel; Extended Benefits, which are available to workers who have exhausted regular unemployment insurance benefits during periods of high unemployment; Trade Readjustment Allowances, which are income support to persons who have exhausted unemployment compensation and whose jobs were affected by foreign imports; and Self-Employment Assistance, which offers dislocated workers the opportunity for early re-employment.

**Healthcare (social)**

The 1960s brought additional changes to the social security programme. The most significant change involved the passage of Medicare. Under Medicare, health coverage was extended to social security beneficiaries aged 65 or older (and eventually to those receiving disability benefits as well). Nearly 20 million beneficiaries enrolled in Medicare in the first three years of the programme. Social security continued to be responsible for the Medicare programme until a 1977 reorganisation created the Health Care Financing Administration (HCFA). HCFA assumed administrative responsibility for Medicare at that time. In 2001, HCFA was renamed the Centers for Medicare and Medicaid Services. Medicaid is the US health insurance programme for individuals and families with low incomes and resources. It is jointly funded by the states and federal government, and is managed by the states. Among the groups of people served by Medicaid are eligible low-income parents, children, seniors and people with disabilities. Medicaid is the largest source of funding for medical and health-related services for people with limited income.
3.2.8.2 Statutory (workers’) compensation

In the US, most employees who are injured on the job, or made sick by their work, have an absolute right to medical care for that injury and, in many cases, monetary payments to compensate for resulting temporary or permanent disabilities. Employers are generally required to carry workers’ compensation insurance, and in most states there are substantial financial penalties that can be imposed on employers that fail to do so. Before the development of workers’ compensation in the US, following initiatives in Germany and the UK, workers made sick or injured in the workplace only had the choice of suing their employers. Through the 1880s to the beginning of the 20th century, the legal profession in the US grew, and the increase of lawsuits had the same effect on the judicial system in the US that it had in England and Germany. First, the crowded dockets, second, few judges to handle the cases and third, and most important to the worker, judgments were rendered in favour of the worker at a steadily increasing rate. By 1908, the workers were winning in nearly 15% of all cases. The American concept of “workmen’s” compensation was based on Germany’s and England’s philosophy, namely that industry is responsible for the costs of injuries inherent in industrial occupations. The first “workmen’s” compensation law passed in the US was the Federal Employers’ Liability Act, which covered certain federal government employees engaged in hazardous occupational duties as well as employees of common carriers engaged in interstate and foreign commerce. Therefore, it was the federal government that took the lead in providing workers with protection in the event of on-the-job injuries in the US. Individual states moved a little slower, and in 1911, Wisconsin was the first state to adopt a workers’ compensation law. Subsequently workers’ compensation schemes have become the most important remedy for injured workers. These schemes also protect employers from damage suits filed by injured workers, and provide employers with a basis for calculating production costs.

Most states run public uninsured employer funds to pay benefits to workers employed by businesses that illegally fail to purchase insurance. Insurance policies are available to employers through commercial insurance companies; if the employer is deemed an excessive risk to insure at market rates, they can obtain coverage through an assigned-risk programme. Private insurance companies nearly always provide workers’ compensation, but 12 states operate state funds that serve as a model to private insurers and insures state employees. There is a smaller number of states that have state-owned monopolies. The largest state fund is California’s State Compensation Insurance Fund. To prevent the publicly owned funds from under-cutting private insurers, they are generally required to act as assigned-risk programmes or insurers of last resort, and they can only write workers’ compensation policies. In contrast, private insurers can turn away the worst risks and can write comprehensive insurance packages covering general liability, natural disasters and so on. It is illegal in most, but not all, states for employers to terminate employees for reporting workplace injuries or for filing workers’ compensation claims. Most states also prohibit refusing employment for having previously filed a workers’ compensation claim. However, employers can consult commercial databases of claims data and it would seem nearly impossible to prove that an employer discriminated against a job applicant because of a claims history.

The Department of Labor runs the Office of Workers’ Compensation Programs (OWCP). This had its origins in an organisation established in 1916 to administer claims under the Federal Employees’ Compensation Act. Benefits are available under this Act to more than three million federal employees. OWCP also administers the Longshoremen’s and Harbor Workers’ Compensation Act 1927. This Act covers all maritime workers injured or killed on the navigable waters of the US, as well as employees working on adjoining piers, docks and terminals, plus a number of other groups. Compensation under this Act is paid by employers that are self-insured, or through insurance policies provided by private insurers to employers. The Black Lung Benefits Reform Act 1977 provides monthly payments and medical treatment to coal miners totally disabled from pneumoconiosis (black lung) arising from their employment in the nation’s coal mines, and monthly payments to their surviving dependants. The fourth and newest programme under OWCP is the Division of Energy Employees’ Occupational Illness Compensation, which delivers benefits to eligible employees and former employees of the Department of Energy, its contractors and subcontractors, or to certain survivors of such individuals, as provided in the Energy Employees’ Occupational Illness Compensation Program Act. The Division also delivers benefits to certain beneficiaries of Section 5 of the Radiation Exposure Compensation Act.
3.2.8.3 Litigation

There is a large personal injury litigation sector in the US. However, under ordinary circumstances, an employee who qualifies for workers’ compensation benefits cannot file a personal injury suit against the employer. There are two narrow exceptions where workers’ compensation pre-emption might not apply, and an employer might be subject to lawsuit: when an employer intentionally causes injury to an employee; and when an employer is required to carry workers’ compensation insurance but fails to do so. From a legal perspective, workers’ compensation litigation is generally considered to be simpler than traditional injury litigation, as it takes place in an administrative setting and may involve relaxed evidentiary rules. Furthermore, lawyers’ fees are usually limited by statute. A person who is injured at work may also have a claim against a third party. For example, they might claim against the manufacturer of unsafe machinery, the owner of the premises where the injury occurs (if different from the employer), or against another company whose employee is alleged to have caused the injury.

3.3 UNITED STATES OF AMERICA – OSH PROGRAMMES

The development and implementation of OSH programmes throughout the US are complex and involve a range of agencies at both the federal and the state levels, without the benefit of a single organisation to provide harmonisation and oversight.

3.3.1 NATIONAL STRATEGIES

The national programmes for NIOSH, OSHA and MSHA are outlined below.

3.3.1.1 NIOSH strategies and programmes

NIOSH claims to provide national and world leadership to prevent work-related illness, injury, disability and death by gathering information, conducting scientific research and translating the knowledge gained into products and services.\(^{116-125}\) NIOSH believes its mission is critical to the health and safety of every American worker. It bases this belief on statistics indicating that, each day, an average of 9,000 US workers sustain disabling injuries on the job, 16 workers die from an injury suffered at work and 137 workers die from work-related diseases. The Liberty Mutual 2005 Workplace Safety Index estimated that employers spent US$50.8 billion in 2003 on wage payments and medical care for workers hurt on the job.

NIOSH’s strategic goals include:

- conduct research to reduce work-related illnesses and injuries
- promote safe and healthy workplaces through interventions, recommendations and capacity building
- enhance global workplace safety and health through international collaborations.

NIOSH maintains a Board of Scientific Counselors. The Board is composed of established scientists from a variety of fields related to OSH. The Board members provide advice and guidance to the Institute in developing and evaluating research hypotheses, systematically documenting findings and disseminating results that will improve the safety and health of workers. They also evaluate the degree to which NIOSH activities: conform to standards of scientific excellence in accomplishing objectives in OSH; address currently relevant needs in the field of OSH, either alone or in collaboration with activities outside of NIOSH; and produce their intended results in addressing important research questions in OSH, in terms of both the applicability of the research findings and the dissemination of the findings.
NIOSH is headquartered in Washington, DC, with research laboratories and offices in: Cincinnati, Ohio; Morgantown, West Virginia; Pittsburgh, Pennsylvania; Spokane, Washington; and Atlanta, Georgia. NIOSH is a professionally diverse organisation with a staff of over 1,400 people representing a wide range of disciplines including epidemiology, medicine, industrial hygiene, safety, psychology, engineering, chemistry and statistics. NIOSH scientists work in multidisciplinary teams and carry out a focused programme of intramural and extramural research to prevent or reduce work-related disease and injury. In 1996, NIOSH and over 500 partners established NORA, a framework to guide the efforts of the OSH community in 21 priority research areas. NORA encompasses research areas such as traumatic injury, asthma and COPD, hearing loss and control technologies. These priority areas were identified through extensive input from NIOSH’s federal and non-federal partners. Since 1996, NIOSH has aligned its intramural and extramural research to increase its investment in NORA priority areas.

NIOSH research has provided progress in a number of areas in OSH, such as:

- developing virtual reality technology to simulate elevated workplaces to better study the risk factors for initiating a fall, the major cause of workplace fatalities in the construction industry
- evaluating the effectiveness of ultraviolet germicidal irradiation to prevent the transmission of tuberculosis in healthcare settings
- evaluating state-of-the-art lifting equipment to eliminate low-back injuries among nursing aides, orderlies and attendants
- identifying industries and occupations with increased risk for COPD and estimating the proportion due to workplace exposures by industry and occupation
- defining the current state of noise control technology for the mining industry and conducting over 3,600 audiometric tests while training workers to protect their hearing.

**NIOSH prevention, surveillance, and training and communication programmes**

- The NIOSH Health Hazard Evaluation (HHE) programme responds to requests for workplace evaluations from employers, employees and their representatives, and other agencies. Through the HHE programme, NIOSH identifies current hazards and recommends practical, scientifically valid solutions for reducing exposures and preventing disease, injury and disability. A recent HHE involved an investigation of an outbreak of a rare respiratory disease at a microwave popcorn processing plant in Missouri. NIOSH determined that the workers’ illness was due to exposure to inhaled vapours from artificial butter flavourings. The company instituted NIOSH recommendations to protect its workers, and NIOSH scientists continue laboratory and outreach efforts to further characterise the nature and the scope of the problem.
- In 1998, NIOSH established the Fire Fighter Fatality Investigation and Prevention programme to reduce fire fighter line-of-duty deaths and injuries through surveillance, investigations of fatalities, and the development and dissemination of practical recommendations. Individual reports from the programme are disseminated to over 25,000 volunteer and career fire departments across the country.
- The National Personal Protective Technology Laboratory (NPPTL) was established at the NIOSH Pittsburgh site to provide leadership for the prevention of disease and injury among workers who must rely on personal protective equipment, including respirators, gloves and hard hats. NPPTL’s strategic research programme will ensure that the development of new personal protective equipment will meet real needs, as work settings, technologies and worker populations change, and new threats emerge.
- NIOSH conducts and supports a variety of programmes to track occupational diseases and injuries. These include the Sentinel Event Notification System for Occupational Risks, which is a collaborative effort with state health departments to improve the recognition and prevention of occupational sentinel health events, such as asthma, silicosis, amputations, burns, dermatitis and noise-induced hearing loss. NIOSH also supports the Adult Blood Lead Epidemiology and Surveillance (ABLES) programme in over two-thirds of the states. Through ABLES, states track and respond to cases of excessive lead exposure and develop broader intervention activities.
• Established in 1990, the NIOSH Agricultural Centers programme provides a national resource to address agricultural health and safety problems through research, education, prevention and intervention efforts. In 2001, nine regional centres nationwide developed over 370 collaborative programmes with other regional and national agricultural organisations.

• NIOSH supports training of OSH professionals and researchers through 16 regional education and research centres (ERCs) and 35 training project grants in 22 states and Puerto Rico. These programmes are critical for meeting the increasing demand for occupational physicians, occupational nurses, industrial hygienists and other safety professionals. The ERCs also provide education to practising professionals through extensive continuing education programmes.

• The NIOSH website provides access to the full range of NIOSH information and publications. In 2002, the site supported nearly 500,000 visitor sessions a month, and the average monthly page views totalled 1.75 million. NIOSH is also communicating OSH information in Spanish through NIOSH en Español.

**NIOSH services**

- The NIOSH website, searchable, with topic pages, holds collections of OSH information arranged by subject.
- The health hazard evaluation programme investigates potentially hazardous working conditions, when requested by employers or employees.
- The NIOSH Publications office and the NIOSH 1–800 number disseminate information on preventing workplace disease, injury and disability.
- NIOSH training opportunities provide training to OSH professionals.
- NIOSH’s numerous databases include the International Chemical Safety Cards, the Pocket Guide to Chemical Hazards, NIOSHTIC-2 and many more.

As part of its mission, NIOSH operates programmes in every US state to improve the health and safety of workers. As part of these state activities, NIOSH:

- evaluates workplace hazards and recommends solutions when requested by employers, workers or state or federal agencies
- builds state worker safety and health capacity through grants and cooperative agreements
- funds OSH research on a wide variety of topics at universities and other organisations
- supports OSH training programmes.

**Health hazard evaluations**

An HHE is a study of a workplace. It is done to learn whether workers are exposed to hazardous materials or harmful conditions. On the basis of the information provided, NIOSH responds to an HHE request in one of three ways: in writing with helpful information and/or a referral to a more appropriate agency; with NIOSH staff calling to discuss the problems and how they might be solved; or with NIOSH staff visiting the workplace. When this happens, they will meet with the employer and the employee representatives to discuss the issues. They will tour the workplace. They may review records about exposure and health, interview or survey employees, measure exposures and do medical testing. These activities may happen during one or more visits. At the end of this evaluation, NIOSH will provide a written report to the employer and to the employee representatives. This can take from a few months to a few years, depending on the type of evaluation. In private sector and federal workplaces, an employee can request an HHE if they are currently an employee at the workplace of concern and have the signatures of two other employees. If the workplace has three or fewer employees, the signature of only one employee is enough. An officer of a labour union that represents employees for collective bargaining can request an HHE. Any management official may request an HHE on behalf of an employer. When the workplace is part of a state or local government, NIOSH authority is more limited than for the private and federal sectors. The cooperation of the employer may be necessary before NIOSH can do an evaluation.
Because NIOSH conducts a range of efforts in the area of research, guidance, information and service, it has been organised into specific programmatic categories that can be readily communicated and strategically governed and evaluated. The NIOSH programme portfolio has been organised into eight NORA sector programmes that represent industrial sectors, and 15 cross-sector programmes organised around adverse health outcomes, statutory programmes and global efforts. In addition to these programme areas, NIOSH is organising seven coordinated emphasis areas that support the sector and cross-sector programmes. These categories are as follows.

**NORA sector programmes**
- Agriculture, forestry and fishing.
- Construction.
- Healthcare and social assistance.
- Manufacturing.
- Mining.
- Services.
- Transportation, warehousing and utilities.
- Wholesale and retail trade.

**NIOSH cross-sector programmes**
- Authoritative recommendations.
- Cancer, reproductive and cardiovascular diseases.
- Communications and information dissemination.
- Emergency preparedness and response.
- Global collaborations.
- Health hazard evaluation (HHE).
- Hearing loss prevention.
- Immune and dermal diseases.
- Musculoskeletal disorders.
- Personal protective technology.
- Radiation dose reconstruction.
- Respiratory diseases.
- Training grants.
- Traumatic injury.
- Work organisation and stress-related disorders.

**NIOSH-coordinated emphasis areas**
- Economics.
- Exposure assessment.
- Engineering controls.
- Occupational health disparities.
- Small business assistance and outreach.
- Surveillance.
- WorkLife Initiative.

### 3.3.1.2 OSHA strategies and programmes

OSHA is an agency of the US Department of Labor established in 1971 pursuant to the OSH Act 1970. Its main responsibilities are to provide for occupational safety by reducing hazards in the workplace and enforcing mandatory job safety standards, and to implement and improve health programmes for workers. OSHA regulations and standards apply to most private businesses in the US.
Standards’ development is subject to a systematic process. OSHA can begin standards-setting procedures on its own initiative, or in response to petitions from other parties, including the Secretary of Health and Human Services (HHS), NIOSH, state and local governments, any nationally recognised standards-producing organisation, employer or labour representatives, or any other interested person.

If OSHA determines that a specific standard is needed, any of several advisory committees may be called upon to develop specific recommendations. There are two standing committees, and ad hoc committees may be appointed to examine special areas of concern to OSHA. All advisory committees, standing or ad hoc, must have members representing management, labour and state agencies, as well as one or more designees of the Secretary of HHS.

The two standing advisory committees are:

- the National Advisory Committee on Occupational Safety and Health, which advises, consults with and makes recommendations to the Secretary of HHS and to the Secretary of Labor on matters regarding administration of the Act
- the Advisory Committee on Construction Safety and Health, which advises the Secretary of Labor on the formulation of construction safety and health standards and other regulations.

Recommendations for standards also may come from NIOSH, which conducts research on various safety and health problems, provides technical assistance to OSHA and recommends standards for OSHA’s adoption. While conducting its research, NIOSH may make workplace investigations, gather testimony from employers and employees, and require that employers measure and report employee exposure to potentially hazardous materials. NIOSH also may require employers to provide medical examinations and tests to determine the incidence of occupational illness among employees. When such examinations and tests are required by NIOSH for research purposes, NIOSH, rather than the employer, may pay for them.

Once OSHA has developed plans to propose, amend or revoke a standard, it publishes these intentions in the Federal Register as a Notice of Proposed Rulemaking, or often as an earlier Advance Notice of Proposed Rulemaking. Prior to the publication of proposed and final major rules, OSHA consults with OMB under procedures established by Executive Order. OSHA consults with small businesses on proposed rules that significantly affect them through a panel with participation by the Small Business Administration and OMB, as required by SBREFA.

An Advance Notice is used when necessary to solicit information that can be used in drafting a proposal. The Notice of Proposed Rulemaking will include the terms of the new rule and provide a specific time (at least 30 days from the date of publication, usually 60 days or more) for the public to respond. Interested parties who submit written arguments and pertinent evidence may request a public hearing on the proposal when none has been announced in the Notice. When such a hearing is requested, OSHA will schedule one, and will publish, in advance, the time and place for it in the Federal Register. After the close of the comment period and public hearing, if one is held, OSHA must publish in the Federal Register the full final text of any standard amended or adopted and the date it becomes effective, along with an explanation of the standard and the reasons for implementing it. OSHA may also publish a determination that no standard or amendment needs to be issued.

Under certain limited conditions, OSHA is authorised to set emergency temporary standards that take effect immediately and are in effect until superseded by a permanent standard. OSHA must determine that workers are in grave danger due to exposure to toxic substances or agents determined to be toxic or physically harmful, or to new hazards, and that an emergency standard is needed to protect them. When this is the case, OSHA publishes the emergency temporary standard in the Federal Register, where it also serves as a proposed permanent standard. It is then subject to the usual procedure for adopting a permanent standard, except that a final ruling should be made within six months. The validity of an emergency temporary standard may be challenged in an appropriate US Court of Appeals.
Standards may be appealed at any stage, including recourse to judicial challenge. No decision on a permanent standard is ever reached without due consideration of the arguments and data received from the public in written submissions and at hearings. Any person who may be adversely affected by a final or emergency standard may file a petition (no later than the 59th day after the rule's promulgation) for judicial review of the standard with the US Court of Appeals for the circuit in which the objector lives or has their principal place of business. Filing an appeals petition, however, will not delay the enforcement of a standard, unless the Court of Appeals specifically orders it.

Employers may ask OSHA for a variance from a standard or regulation if they cannot fully comply by the effective date, due to shortages of materials, equipment or professional or technical personnel (known as temporary variances), or can prove their facilities or methods of operation provide employee protection “at least as effective” as that required by OSHA (known as permanent variances). Employers located in states with their own OSH programmes can apply to the state for a variance. If, however, an employer operates facilities in states under federal OSHA jurisdiction and also in state plan states, the employer may apply directly to federal OSHA for a single variance applicable to all the establishments in question. OSHA will then work with the state plan states involved to determine if a variance can be granted that will satisfy state as well as federal OSHA requirements. A temporary variance may be granted to an employer that cannot comply with a standard or regulation by its effective date due to the unavailability of professional or technical personnel, materials or equipment, or because the necessary construction or alteration of facilities cannot be completed in time. Employers must demonstrate to OSHA that they are taking all available steps to safeguard employees in the meantime, and that the employers have put in force effective programmes for coming into compliance with the standard or regulation as quickly as possible. A temporary variance may be granted for the period needed to achieve compliance, or for one year, whichever is shorter. It is renewable twice, each time for six months. An application for a temporary variance must identify the standard or portion of a standard from which the variance is requested and the reasons why the employer cannot comply with the standard. The employer must document those measures already taken and to be taken (including dates) to comply with the standard and establish that all possible steps to safeguard employees against the hazards covered by the standard are being taken. The employer must certify that workers have been informed of the variance application, that a copy has been given to the employees’ authorised representative and that a summary of the application has been posted wherever notices are normally posted. Employees also must be informed that they have the right to request a hearing on the application. The temporary variance will not be granted to an employer that simply cannot afford to pay for the necessary alterations, equipment or personnel.

A permanent variance (alternative to a particular requirement or standard) may be granted to employers that prove their conditions, practices, means, methods, operations or processes provide a safe and healthful workplace as effectively as would compliance with the standard. In making a determination, OSHA states that it weighs the employer's evidence and arranges a variance inspection and hearing where appropriate. If OSHA finds the request valid, it prescribes a permanent variance detailing the employer's specific exceptions and responsibilities under the ruling. When applying for a permanent variance, the employer needs to inform employees of the application and of their right to request a hearing. Any time after six months from the issuance of a permanent variance, the employer or employees may petition OSHA to modify or revoke it. OSHA also may do this of its own accord. Sometimes an interim order is issued, so that employers may continue to operate under existing conditions until a variance decision is made. Application for an interim order may be made either at the same time as, or after, application for a variance. If OSHA denies the request, the employer is notified of the reason for denial. If the interim order is granted, the employer and other concerned parties are informed of the order, and the terms of the order are published in the Federal Register. The employer is required to inform employees of the order by giving a copy to the authorised employee representative, and by “posting a copy wherever notices are normally posted”.

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(UNITED KINGDOM, UNITED STATES OF AMERICA, FINLAND, CANADA, AUSTRALIA) – NOHSEAC TECHNICAL REPORT B
If an employer is participating in an experiment to demonstrate or validate new job safety and health techniques, and either the Secretary of Labor or the Secretary of HHS has approved the experiment, a variance may be granted to permit the experiment. In addition to temporary, permanent and experimental variances, the Secretary of Labor may find certain variances justified when the national defence is impaired. Finally, it is worth noting that variances are not retroactive. An employer that has been cited for a standard violation may not seek relief from the citation by applying for a variance. The fact that a citation is outstanding, however, does not prevent an employer filing a variance application.

The operational delivery of OSHA standards into US workplaces takes place through a variety of programmes, in addition to compliance assistance. As noted above, OSHA states that it has implemented President Clinton’s regulatory reform initiative. This involved giving employers and employees the choice of engaging in a safety partnership with OSHA or facing traditional enforcement, using common sense in developing and enforcing regulations and measuring results, not red tape. For this reason, OSHA currently places its major emphasis on cooperative programmes. These offer a number of opportunities for employers, employees and organisations to work cooperatively with the agency. In addition, OSHA offers a free consultation programme, with the service delivered by state governments. This programme aids employers to find out about potential hazards at their worksites and to improve their OSH management systems, and even enables them to qualify for a one-year exemption from routine OSHA inspections.

OSHA currently has four major cooperative programmes:

- The Voluntary Protection Program (VPP).
- The Safety and Health Achievement Recognition Program (SHARP).
- The Alliance Program.
- The OSHA Strategic Partnership Program.

**Voluntary Protection Program**

The VPP is an OSHA initiative aimed at extending worker protection beyond the minimum required by OSHA standards. The VPP is designed to:

- recognise the outstanding achievements of those who have successfully incorporated comprehensive safety and health programmes into their total management systems
- motivate others to achieve excellent safety and health results in the same outstanding way
- establish a relationship between employers, employees and OSHA that is based on cooperation rather than coercion.

An employer may apply for the VPP at the nearest OSHA regional office. OSHA reviews the application and visits the worksite to verify that the safety and health programme described is in effect at the site. All participants must send their injury information annually to their OSHA regional offices. Sites participating in the VPP are not scheduled for programmed inspections. However, OSHA handles any employee complaints, serious accidents or significant chemical releases according to routine procedures.

The VPP is available in states under federal jurisdiction. Some states operating OSHA-approved state plans have similar programmes.

**Safety and Health Achievement Recognition Program (SHARP)**

This programme recognises small employers that operate an exemplary safety and health management system. Employers that are accepted into SHARP are recognised as models for worksite safety and health. Upon receiving SHARP recognition, the worksites will be exempt from programmed inspections during the period that the SHARP certification is valid. To participate in SHARP, an employer must contact their state’s consultation programme and request a free consultation visit that involves a complete hazard identification survey.
**Alliance Program**

This programme enables trade or professional organisations, businesses, labour organisations and educational institutions that share an interest in workplace safety and health to collaborate with OSHA to prevent diseases and injuries in the workplace. OSHA and the organisation sign a formal agreement with goals that address training and education, outreach and communication, and promoting the national dialogue on workplace safety and health.

**OSHA Strategic Partnership Program**

In this programme, OSHA enters into an extended voluntary cooperative relationship with employers, associations, unions and councils, and sometimes entire industries. Partner worksites may be very large, but most often they are small businesses averaging 50 or fewer employees. Strategic partnerships are designed to encourage, assist and recognise efforts to eliminate serious hazards and achieve a high level of worker safety and health. All partnerships emphasise sustained efforts and continuing results beyond the typical three-year duration of the agreement.

**3.3.1.3 MSHA strategies and programmes**

The mission of MSHA is to administer the provisions of the Mine Act and to enforce compliance with mandatory safety and health standards as a means to eliminate fatal accidents, reduce the frequency and severity of non-fatal accidents, minimise health hazards, and promote improved safety and health conditions in the nation's mines.

**3.3.2 CONSULTATION MECHANISMS**

**3.3.2.1 NIOSH**

Without a doubt, the core of NIOSH activity is research, both in the laboratory and in the field. The most important consultation mechanism has been NORA. This is a collaborative programme to stimulate innovative research in workplace safety and health. It began in 1996, when over 500 individuals and organisations contributed to the first agenda. These contributions identified 21 priority areas for the 21st century. The priorities were not ranked, but did seek to encompass current and future needs.

**3.3.2.2 OSHA (Department of Labor)**

The Department of Labor, including OSHA, has a broad and diverse mission resulting in a variety of activities. These activities, in turn, affect and influence a large number of stakeholders such as workers, employee organisations and unions, employers and employer groups, other federal and state agencies, various advisory committees, professional organisations, public interest groups and consumer organisations, and governmental bodies including Congress. The Department of Labor and OSHA consider that the first principle of consultation with these stakeholders is the preparation of a strategic plan, enabling others to identify and comprehend the planned and intended direction of the organisation as a whole. OSHA solicits views of major stakeholders on an ongoing basis. This consultation process is done primarily at the individual programme level and rests on “established dialogues.” Consultation with other federal agencies does not appear to be mandatory, but represents an ongoing process.

**3.3.2.3 MSHA**

MSHA’s external stakeholders include Congress, miners and labour organisations, mine operators and trade associations, independent contractors who perform work on mine property, manufacturers who sell equipment and products for use in mines, persons who provide services such as training for miners or emergency rescue capabilities to mines, states that participate in MSHA’s State Grant programme, and other federal agencies. MSHA states that it stays in contact with its stakeholders through meetings with interest groups in the mining community to identify clearly their expectations and concerns and implement changes that will result in positive, measurable outcomes. Other avenues of stakeholder feedback are regional and national forums, as well as rule-making
hearings in the mining community. For example, MSHA reported that it held dozens of outreach meetings with stakeholders in 2002, in order to obtain input on how to improve the safety and health conditions of miners. As part of this process, the Coal Mine Safety and Health Districts held 24 stakeholder meetings. Metal and Nonmetal management officials attended over 30 major stakeholder meetings, and Metal and Nonmetal field officers held several hundred additional stakeholder meetings at individual mine sites. Hundreds of stakeholders, including miners, mine operators, educators, trade unions, trade associations, equipment manufacturers and others, attended these meetings. As a means to encourage feedback and gather input from the mining community concerning the manner in which MSHA conducts its core operations and establishes goals and objectives, district offices convene “problem solving” meetings with representatives from labour and management. The purpose of these meetings is to identify issues affecting the safety and health of miners and develop a consensus strategy for satisfactorily addressing these issues. In a like manner, MSHA senior staff meet with representatives from industry trade associations, officials from labour organisations and corporate officials from mining companies to discuss safety and health issues that are national in scope. Feedback obtained at these meetings may provide MSHA with additional information and recommendations that can be incorporated into enforcement training or research strategies. MSHA has attempted to expand existing outreach efforts to identify and to communicate with historically non-participating audiences. As a result of this, it believes four discrete target audiences where increased communication can have a significant impact are new operators, new miners, non-participatory operators and contractors.

3.3.3 GOALS AND TARGETS

The strategic goals and performance targets for NIOSH, OSHA and MHSA are provided in detail below.

3.3.3.1 NIOSH goals and targets

The NIOSH strategic plan for 2004–09 lists three strategic goals and objectives. NIOSH states its vision is “delivering on the nation’s promise – safety and health at work for all people through research and prevention”, and its mission is “to provide national and world leadership to prevent work-related illnesses and injuries”. The specific goals are as follows:

**Goal 1. Conduct research to reduce work-related illnesses and injuries.**

- Track work-related hazards, exposures, illnesses and injuries for prevention.
- Generate new knowledge through intramural and extramural research programmes.
- Develop innovative solutions for difficult-to-solve problems in high-risk industrial sectors.

**Goal 2. Promote safe and healthy workplaces through interventions, recommendations and capacity building.**

- Enhance the relevance and utility of recommendations and guidance.
- Transfer research findings, technologies and information into practice.
- Build capacity to address traditional and emerging hazards.

**Goal 3. Enhance global workplace safety and health through international collaborations.**

- Take a leadership role in developing a global network of occupational health centres.
- Investigate alternative approaches to workplace illness and injury reduction and provide technical assistance to put solutions in place.
- Build global professional capacity to address workplace hazards through training, information sharing and research experience.
3.3.3.2 OSHA goals and targets

The Department of Labor publishes an annual performance budget that reflects the effort to integrate the Department’s performance objectives with resource requirements into a performance-budget submission.\textsuperscript{109, 110} For example, in the 2006 financial year, Strategic Goal 3 Quality Workplaces was “Foster quality workplaces that are safe, healthy and fair”. This is further defined by setting targets in two broad outcome goals: reducing workplace injuries, illnesses, and fatalities; and fostering equal opportunity workplaces. The goals for reducing injuries, illnesses, and fatalities were specified as follows:

\textit{Performance Goal DOL-06-3.1A: Reduce work-related fatalities.}
Indicator: Reduce the rate of workplace fatalities by 9% from baseline (for sectors covered by the OSH Act)
Baseline: 1.62 fatalities per 100,000 workers (FY 2000–02 average)
Target: 1.47 fatalities per 100,000 workers (FY 2004–06 average)

\textit{Performance Goal DOL-06-3.1B: Reduce work-related injuries and illnesses}
Indicator: Reduce the rate of workplace injuries and illness by 12% from baseline
Baseline: 1.6 days away from work cases per 100 workers (CY 2002)
Target: 1.4 days away from work cases per 100 workers (CY 2006)

3.3.3.3 MSHA goals and targets

The MSHA strategic plan for 2003–08 lists five strategic goals, each with specific subgoals and targets.\textsuperscript{110}

\textit{MSHA Strategic Goal 1: Reduce the fatality and injury rates in the nation’s mines.}
MSHA performance goals:
1.1 Reduce the fatal injury incidence rate by 15% per year.
1.2 Reduce the ALL injury incidence rate 50% below the FY 2000 baseline by the end of FY 2005.

\textit{MSHA Strategic Goal 2: Reduce miners’ exposure to health hazards.}
MSHA performance goals:
2.1 Reduce the percentage of respirable dust samples in coal mines exceeding the applicable standards by 5% per year for designated occupations.
2.2 Reduce the percentage of silica samples in metal and non-metal mines exceeding the applicable standards by 5% per year for high-risk occupations.
2.3 Reduce the percentage of noise exposures above the citation level in coal and metal and non-metal mines by 5%.

\textit{MSHA Strategic Goal 3: Establish MSHA as a model workplace.}
MSHA performance goals:
3.1 Competitively source 5% of commercially competitive functions.
3.2 Convert 20% of service contracts above US$25,000 to performance-based contracts.
3.3 Reduce MSHA employee disease and injury claims and incidence rate by 20% below the projected baseline.
3.4 Reduce MSHA employee injury incidence rate for lost time injuries by 5%.
3.5 Reduce workers’ compensation costs by 5% each year.
MSHA Strategic Goal 4: Improve organizational performance and enhance services provided to the public through effective deployment of information technology resources.

MSHA performance goals:
4.1 Continue implementation of MSHA’s Standardized Information Systems.
4.2 Continue MSHA’s network expansion.

MSHA Strategic Goal 5: Secure and protect information technology resources through a highly available and secure processing environment.

MSHA performance goal:
5.1 Implement security procedures and controls and communicate them to workforce.

3.3.4 EVALUATION METHODS

Evaluation methods for NIOSH, OSHA and MSHA are outlined below.

3.3.4.1 NIOSH

NIOSH has two forms of evaluation. One is for NIOSH to list its outputs in terms of research and also as “research accomplishments”. The second is external evaluation by the NIOSH Board of Scientific Counsellors. This Board is composed of established scientists from a variety of fields related to OSH. One function of the Board is to provide advice and guidance to NIOSH in developing and evaluating research hypotheses, systematically documenting findings and disseminating results that will improve the safety and health of workers. However, the Board also provides external evaluation of the degree to which NIOSH activities: conform to standards of scientific excellence in accomplishing objectives in OSH; address currently relevant needs in the field of OSH, either alone or in collaboration with activities outside NIOSH; and produce their intended results in addressing important research questions in OSH, in terms of both the applicability of the research findings and the dissemination of the findings.

3.3.4.2 OSHA (Department of Labor)

The Department of Labor, which is responsible for OSHA, states in its strategic plan that it has worked to increase both the quality and quantity of programme evaluations in order to improve decision making, planning and programme execution at every level within the Department. Evaluations by independent parties provide the Department with valuable information on the extent to which programmes achieve their objectives, whether processes are operating as intended, and the cost benefits of a programme. The impetus for conducting a programme evaluation may be internal or external to the programme. A programme evaluation may address findings or recommendations from reports issued by the Government Accountability Office, which performs evaluations of programmes throughout the federal government. A programme may also conduct an evaluation for its own betterment, independent of any external reports or recommendations. The benefits of programme evaluation often extend beyond the area studied. The Department of Labor also states that it recognises the important role programme evaluations play in improving programme results. For this reason, it attempts to ensure programme evaluations are independent and focus on key performance areas. By administering funds through its Program Planning and Results Center, the Department believes it is able to award programme evaluation funds more strategically to individual agencies and programmes. The Center selects agencies for evaluations through an internal competitive awards process. Decision-making occurs within the context of the entire Department, taking into account its strategic and performance planning needs. Considerations include departmental programme and performance priorities and external factors or circumstances, and whether the programme is scheduled to undergo an evaluation process. Center staff serve as the Contracting Officer’s Technical Representatives, thereby reinforcing the independence of the evaluation. The Center is then well equipped to advise agencies on a range of performance issues, including follow-up on recommendations from those evaluations, at both the agency and departmental
In addition to independent programme evaluations, several agencies conduct quality control activities to identify areas for improvement. For example, the Employee Benefits Security Administration evaluates the quality of the investigations conducted by its field officers through closed case quality reviews. The results of the reviews are used to develop plans of action to improve the quality of the enforcement programme and to identify and share promising practices. WHD maintains and coordinates an accountability review system in all five regions. As part of this system, investigations conducted by district offices are reviewed for adherence to established policies and procedures and to ensure uniform application of the law. The BLS conducts or contracts for sensitive application security reviews (SASRs) of all sensitive systems. SASRs ensure that the applications or systems protect the information from unauthorised access, use, disclosure, disruption, modification or destruction. These reviews guarantee the integrity, confidentiality and availability of economic information.

### 3.3.4.3 MSHA

MSHA has an extensive database of information that is available to mine operators, miners, trade associations, labour representatives and the public. The database includes information on fatalities and injuries and is broken down for each state by the type of mine and the cause of each incident. This information is constantly examined for trends, especially high-incidence-type injuries, illnesses or hazardous conditions where MSHA needs to dedicate its resources. In preparation for the annual report, and as input to the quarterly departmental reviews, MSHA prepares a quarterly review and analysis of performance objective measures. Each review consists of data by quarter for each performance measure versus data for comparable timeframes from previous fiscal years and other data identified throughout the year that may be of interest. Additional information includes a review of MSHA resources, a review of outputs (e.g. the number of inspections) and a review of industry data. Quarterly meetings are held with the administrators for each of the programme areas to discuss the goals and performance measures. MSHA conducts periodic enforcement accountability reviews of district organisations. The primary purpose of these reviews is to determine if Coal Mine Safety and Health, and Metal and Nonmetal Mine Safety and Health are meeting the statutorily mandated responsibilities in accordance with MSHA policies and directives. Evaluators who conduct reviews use a set of core questions that focus on functional responsibilities encompassing enforcement, training and special investigation activities, as well as resource utilisation and budgetary accountability. The results of the review are used to assess how well a district is fulfilling mandated responsibilities and effectively using resources to accomplish MSHA goals and objectives. The results are also used to initiate corrective actions in district activities. MSHA convenes periodic meetings with district managers, education and training and headquarters senior staff to identify and discuss local, regional or national issues that impact on the safety and health of miners and to recommend and/or develop strategies to address these issues.
SECTION FOUR

FINLAND
Country Summary

- Finland is a republic and member of the EU and the euro monetary system. The total area is 338,145 sq km, of which 304,473 sq km are land. About 6.5% is classified as arable.
- The current population estimate is 5.2 million. The annual growth rate is 0.14%, mostly due to a natural increase (with a birth rate of 10.45 births/1,000 population).
- Finland is a developed country whose trade relationships and politics were previously influenced heavily by the Soviet Union. It now has a free-market economy with a per capita output equal to that of many other western economies. Trade remains highly important and represents about one-third of GDP. Its key economic sector is manufacturing of principally wood, metal, engineering, telecommunications and electronic products. GDP is $NZ243.5 billion. GDP per capita is $NZ46,616. The GDP real growth rate is 3.0%. The inflation rate in 2006 was 0.9%. Public debt is 39.6% of GDP.
- The labour force is 2.6 million, the employment rate is 68.7%, the unemployment rate is 6.8% and the economic inactivity rate is not calculated.
- Overall life expectancy continues to improve and is now 76 years for males and 82 years for females.
- Mortality rates for cardiovascular diseases are generally substantially higher for men and women in the Baltic (Estonia, Latvia and Lithuania) countries than in the Nordic (Denmark, Finland, Iceland, Norway and Sweden) countries. Mortality from cancer for women is lower than in the Nordic countries. Mortality from AIDS is very low in both the Baltic and the Nordic countries. Death rates for fatal accidents are substantially higher in the Baltic countries than in the Nordic countries, particularly for men in all age groups. Deaths from road traffic accidents show the same pattern. Suicide rates are also substantially higher in the Baltic countries than in the Nordic countries, particularly for men in all age groups.
- Healthcare is mainly taxpayer funded, with small part-charges to users for consultations and prescriptions. These have maximum annual amounts payable. Total public and private healthcare expenditure is $NZ19.7 million. This represents about 7.3% of GDP.
- The Occupational Safety and Health Administration, part of the Ministry of Social Affairs and Health, is responsible for most OSH matters. The Federation of Accident Insurance Institutions is also an important stakeholder, since employers are obliged to take out statutory workers’ compensation insurance.
- The Department for Occupational Safety and Health is responsible for drafting and developing the OSH legislation and national policy on OSH, for coordinating research and for participating in international cooperation on OSH.
- The recent educational and industrial strategy in Finland appears to be based firmly on building an information society. This seems to have resulted in rapid and ongoing changes at many workplaces, and this may have posed something of a challenge for existing OSH legislation. Furthermore, there are indications that, despite good surveillance systems and hazard identification approaches, there were no clear signs of improvement in rates of disease, injury and fatality in Finnish workplaces through the 1990s. For this reason, the major enabling legislation was reviewed, and then renewed. This resulted in the new Occupational Health Care Act 2001 and the Occupational Safety and Health Act 2002. The new legislation defines obligations for both employers and employees, who are required to be active participants in their own safety and that of other employees. As an EU member state, Finland is also bound by European legislation.
- There are about 450 staff in the Finnish Occupational Safety and Health Administration, of which about 350 are inspectors.
- Statistics Finland is responsible for the compilation of official statistics. Employers, local authorities and a range of institutions and organisations are obliged to provide data.
• The Finnish Institute of Occupational Health is an expert semi-autonomous organisation dedicated to OSH. It conducts research and training initiatives and provides direct input to policy formulation. There are about a dozen specific research institutions throughout the country.

• Finland has a complex structure of social insurance incorporating a comprehensive range of social security and insurance institutions. Finnish statutory accident insurance is compulsory and is provided by 12 companies. It covers occupational disease and injury. It covers incidents both at work and on the journey to work. Compensation for work-related diseases and injuries takes priority over other forms of statutory compensation and pensions. This means that the injured worker is first paid the compensation to which they are entitled on the basis of statutory accident insurance in full, and the benefits of other social insurance (such as sickness insurance) are only paid if there is additional entitlement to them.

• The national OSH strategy is ratified by the Ministry of Social Affairs and Health, following consultation and input from interested parties. The current strategy emphasises that OSH shall first and foremost be carried out by workplaces on their own initiative. It includes, but extends well beyond, the principle of risk assessment. Current targets are the maintenance and promotion of the work ability and functional capacity of workers, the prevention of occupational accidents and diseases, the prevention of musculoskeletal diseases, mental wellbeing at work, the promotion of workers’ capacities to cope with work; and control over one’s own work.

• Specific objectives are: a steady reduction in the number and severity of accidents; promoting the health and functional capacity of workers; improving the performance, productivity and quality of workplaces; increasing the wellbeing of workers; promoting high-standard safety cultures at workplaces; and the application of the zero-risk vision and its operational implications in the entire Finnish work life. The methods for measuring and evaluating these targets are not always clear.

• The Ministry of Social Affairs and Health is responsible for evaluating the impacts of policies and programmes. The special action programmes are all externally evaluated.

### 4.1 FINLAND – GENERAL INFORMATION

The Republic of Finland is one of the Nordic countries.

#### 4.1.1 BACKGROUND INFORMATION

Finland was a province and then a grand duchy under Sweden from the 12th to the 19th centuries and an autonomous grand duchy of Russia after 1809. It won its complete independence in 1917. During World War II, it was able to defend its freedom successfully and resist invasions by the Soviet Union – albeit with some loss of territory. In the subsequent half-century, the Finns made a remarkable transformation from a farm/forest economy to a diversified, modern industrial economy. Per capita income is now on par with that of western Europe. As a member of the EU, Finland was the only Nordic state to join the euro system at its initiation in January 1999.

#### 4.1.2 AREA

Situated in northern Europe, Finland shares land borders with Sweden to the west, Russia to the east and Norway to the north, while Estonia lies to its south. Finland is bounded by the Baltic Sea with the Gulf of Finland to the south and the Gulf of Bothnia to the west. The Aland Islands, off the south-western coast, are an autonomous province of Finland.
The total area of Finland is 338,145 sq km, and of this 304,473 sq km are land. It is a country of 187,888 lakes (larger than 500 sq m) and 179,584 islands. One of these lakes, Saimaa, is the fifth largest in Europe. The Finnish terrain is mostly flat with few hills and its highest point, the Halti at 1,328 m, is found in the extreme north of Lapland. Besides the many lakes, the landscape is dominated by extensive boreal forests (about 75% of the land area) and there is little arable land. Only about 6.5% is classified as arable.

The greater part of the islands are found in the south-west, part of the archipelago of the Aland Islands, and along the southern coast in the Gulf of Finland. Finland is one of the few countries in the world that is still growing. Owing to the post-glacial rebound that has been taking place since the last ice age, the surface area of the country is growing by about 7 sq km per year.

Natural resources include timber, iron ore, copper, lead, zinc, chromite, nickel, gold, silver and limestone. Finland has a coastline 1,250 km in length.

4.1.3 POPULATION

According to Statistics Finland (SF), the population at the end of 2005 was 5,255,580, made up of 2,572,350 males and 2,683,230 females. The population is projected to grow to 5.3 million by 2010 and peak at 5.4 million in 2030, before declining to 5.3 million by 2040.

The fertility rate for Finnish women was 4.68 in 1900, and this declined steadily until the 1970s when it was in the range of 1.67. It subsequently climbed very slightly to 1.80 in 2004.

<table>
<thead>
<tr>
<th>TABLE 4.1</th>
<th>Finland key population statistics summary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Latest population estimate</td>
<td>5,231,372 (July 2006)</td>
</tr>
<tr>
<td>Median age (years)</td>
<td>Total 41.3 years</td>
</tr>
<tr>
<td>Age distribution</td>
<td>0–14 yrs 17.1%</td>
</tr>
<tr>
<td>Population growth rate</td>
<td>0.14%</td>
</tr>
<tr>
<td>Birth rate</td>
<td>10.45 births/1,000 population</td>
</tr>
<tr>
<td>Gender ratio (male/female)</td>
<td>At birth 1.04</td>
</tr>
</tbody>
</table>

4.1.4 ECONOMIC INDICATORS

According to SF, the GDP for 2005 was 143.8 billion ($NZ278.2 billion). Finland was one of the 11 countries joining the EMU on 1 January 1999. The national currency markka (FIM) in circulation was withdrawn and replaced by euro (EUR) in the beginning of 2002.

In the past, Finnish trade relationships and politics were, by and large, determined by an avoidance of provoking first the feudally ruled Imperial Russia and then the totalitarian Soviet Union. Despite the hindrance caused by an influential neighbouring country, Finland eventually became one of the most globalised nations in the world. For decades now, Finland has had a highly industrialised, largely free-market economy with a per capita output equal to that of other western economies such as, for example, Sweden, the UK, France and Germany. Its key economic sector is manufacturing of principally wood, metal, engineering, telecommunications and electronic products.
Trade is important, with exports equalling almost one-third of GDP. Except for timber and several minerals, Finland depends on imports of raw materials, energy and some components for manufactured goods. Because of the northern climate, agricultural development is limited to maintaining self-sufficiency. Forestry, an important export earner, provides a secondary occupation for the rural population.

In 1991, Finland fell into a deep recession caused by economic overheating, depressed foreign markets and the dismantling of the barter system between Finland and the former Soviet Union. More than 20% of Finnish trade was with the Soviet Union before 1991, and in the following two years, the trade practically ceased. In 1991 and again in 1992, Finland devalued the markka (then the Finnish currency) to promote export competitiveness. This helped stabilise the economy and the recession bottomed out in 1993, with continued growth through 1995. Since then, the growth rate has been one of the highest of OECD countries. Finland has been declared the most competitive country in the world for three consecutive years 2003–05 (four times in the last five years) by the World Economic Forum. In recent years, there has been a national focus on research and product development, with special emphasis on information technology. For example, Nokia has become a leader within the global telecommunications sector.

<table>
<thead>
<tr>
<th>TABLE 4.2</th>
<th>Finland key economic statistics summary</th>
</tr>
</thead>
<tbody>
<tr>
<td>GDP (purchasing power parity – PPP)</td>
<td>$NZ243.5 billion</td>
</tr>
<tr>
<td>GDP (official exchange rate)</td>
<td>$NZ277.0 billion</td>
</tr>
<tr>
<td>GDP real growth rate</td>
<td>3.0%</td>
</tr>
<tr>
<td>GDP per capita (PPP)</td>
<td>$NZ46,616</td>
</tr>
<tr>
<td>GDP composition by sector</td>
<td>Agriculture: 2.7%</td>
</tr>
<tr>
<td>Inflation rate</td>
<td>0.9%</td>
</tr>
<tr>
<td>Population below poverty line</td>
<td>N/A</td>
</tr>
<tr>
<td>Budget</td>
<td>Revenues: $NZ149.8 billion</td>
</tr>
<tr>
<td>Public debt</td>
<td>39.6% of GDP</td>
</tr>
<tr>
<td>Reserves and foreign exchange and gold</td>
<td>$NZ17.1 billion</td>
</tr>
<tr>
<td>External debt</td>
<td>$NZ318.3 billion</td>
</tr>
<tr>
<td>Economic aid donor</td>
<td>$NZ569.9 million</td>
</tr>
</tbody>
</table>

4.1.5 EMPLOYMENT STATISTICS

According to the most recent Labour Force Survey (LFS) of SF, the number of employed persons in September 2006 was 2,438,000, or 38,000 higher than a year earlier. In the private sector, the number of employed persons went up by 46,000. There were 49,000 more wage and salary earners in continuing full-time employment. Jobs increased in all provinces. In September, the employment rate, i.e. the proportion of the employed among persons aged 15 to 64, stood at 68.7%, which was 0.7 percentage points higher than one year before. The employment rate for women rose by 0.5 percentage points to 66.7%. The employment rate for men rose by 1.0 percentage points to 70.7%. Adjusted for seasonal variation, the employment rate was 69.1%.

According to the LFS, there were 179,000 unemployed in September 2006, 5,000 fewer than in the year before. The unemployment rate was 6.8%, having been 7.1% in the year before. Adjusted for seasonal variation, the unemployment rate was 7.9% in September. The unemployment rate for women diminished from 7.9% in the year
before to 7.5%, and the unemployment rate for men diminished from 6.4% to 6.2%. In September 2006, the unemployment rate among young people aged 15 to 24 was 14.7%, which was 1.4 percentage points lower than in the previous year's September. Adjusted for seasonal variation, the unemployment rate for young people was 18.4%. The unemployment rate was lowest in the Province of Southern Finland, where it stood at 5.8%, and highest, at 10.6%, in the Province of Eastern Finland.

According to the LFS, the average number of employed persons in the third quarter of 2006 was 2,494,000, which is 50,000 more than over the corresponding period in the year before. Examined by industry, employment increased during the third quarter of 2006 in metal and technology industries, business services and public administration. Examined by province, the number of employed persons grew most in the Province of Southern Finland. The average number of unemployed persons was 181,000, which was 9,000 fewer than in the third quarter of 2005.

According to the LFS, the average number of employed persons in the January to September 2006 period was 2,445,000, which is 44,000 more than over the corresponding period in the year before. The average number of unemployed persons was 214,000, or 14,000 fewer than in the January to September period of 2005.

At the end of September 2006, there were 228,000 persons registered as job seekers at the labour exchange offices, in accordance with the Unemployment Security Act and the Labour Exchange Office Regulations. The number of unemployed job seekers was 29,000 lower than in September 2005. Unemployment fell from the previous year in the areas of all Employment and Economic Development Centres. The number of those covered by employment policy measures was 4,000 higher than in September the year before, and was 3.4% of the labour force. There were 24,000 unemployed job seekers aged under 25 at the labour exchange offices. Their number was 4,000 lower than in the previous year's September. During September 2006, 36,000 new vacancies were reported to the labour exchange offices, which is 6,000 more than in September 2005.

The proportion of females in the Finnish workforce increased from 44.0% in the period 1960–64 to 48.1% in 2004.

<table>
<thead>
<tr>
<th>TABLE 4.3 Finland key employment statistics summary</th>
</tr>
</thead>
</table>
| Labour force (2003) 2.617 million (people of working age)  
Labour force distribution |
| Agriculture and forestry 4.4% |
| Industry 4.4% |
| Construction 6.0% |
| Commerce 17.5% |
| Finance, insurance and business services 12.0% |
| Transport and communications 6.0% |
| Public services 30.2% |

Employment rate 68.7% (of people of working age)
Unemployment rate 6.8%
Economic inactivity rate N/A
Household income by consumption or percentage share
Lowest 10% 4.2%
Highest 10% 21.6%

§ Defined as aged 15–64.
Responsibility for the daily running of the health service lies with the municipalities, in terms of both primary and emergency care. In private clinics, the physicians are mostly specialists. Patients need no referral to visit these partly by private general medical practitioners. Physicians working in health centres are mainly general medical practitioners. Chief Medical Officers and the Forensic Medical Officers function as advisers to the regional administration of healthcare and treatment in hospitals. Supervision of the health service comes under the Ministry of Social Affairs and Health (MSAH) but is, in practice, carried out by counties and the National Agency for Medico-legal Affairs. The Chief Medical Officers and the Forensic Medical Officers function as advisers to the regional administration of MSAH. General medical treatment is partly carried out in the health centres owned by the municipalities, and partly by private general medical practitioners. Physicians working in health centres are mainly general medical practitioners. In the public health service system, patients need a referral for specialist services, with the exception of emergencies. In private clinics, the physicians are mostly specialists. Patients need no referral to visit these private specialists. Physicians working in private clinics may send their patients to either public or private hospitals.

4.1.5.1 Differences between the LFS and the Labour Exchange Statistics

The employment situation is monitored monthly both with the sample-based LFS of SF and with the register-based Labour Exchange Statistics of the Ministry of Labour. The Labour Exchange Statistics describe the situation on the last weekday of the month. The data for the LFS are collected for every week of the month.

The LFS follows the recommendations of the ILO and the practices required by Eurostat, the Statistical Office of the European Communities. According to them, a person is classified as unemployed if they are aged 15 or over, do not have a job, have actively sought employment in the past four weeks and would be available for work within two weeks. The Labour Exchange Statistics are based on legislation and administrative regulations.

The LFS and the Labour Exchange Statistics apply two basically different criteria to how actively a person seeks work and makes themselves available on the labour market. Due to statistical differences, the number of unemployed job seekers may not agree with the number of unemployed persons calculated in accordance with the ILO recommendations. Since the LFS is a sample survey, its data allow for random variation. For example, the 95% confidence interval, or margin of error, for the unemployment rate in September is about ± 0.5 percentage points. The confidence interval for the number of unemployed persons in September is approximately ± 15,000 persons.

4.1.6 Health Statistics

Like other industrialised countries, Finland has witnessed a significant change in life expectancy for its population. In the early 20th century, between 1911 and 1920, it was only 43.4 years for men and 49.1 years for women. By 1990, it had increased to 70.9 years for males and 78.9 years for females, and by 2005 this had increased to 75.5 and 82.3 years respectively.

In the Finnish health system, expenditure is mainly financed through municipal taxes and government block grants. In addition, a smaller amount of financing comes from insurance, employers and user charges. The user charge for medical consultations in health centres is either 11 for the first three first visits or 22 for a year, and about 40% of the costs for a private general medical practitioner and dental care. Children under the age of 18 are exempt from charges in health centres. For medicines, 10/$NZ21.30 plus 50% of the remainder is charged. For certain diseases, considerably less is paid (5/$NZ29.7 plus 25%), and in some cases medicines are free of charge. If the annual cost for medicines exceeds 604.72/$NZ1,169.8, the rest of the cost is reimbursed. For hospitalisation, the charge is 26/$NZ250.3 per day (12/$NZ23.2 in psychiatric care), 22/$NZ42.6 per day in short-term care and 72/$NZ139.3 for day surgery. A ceiling of 590/$NZ1,141.3 has been introduced for the maximum user charge during one calendar year, after which services are free of charge for the rest of the year, with the exception of short-term stays in institutions/hospitals (13/$NZ225.1 per day). There are also tax relief schemes for persons with high costs for medical treatment, medicine and so on. The government prepares the legislative basis for the health service, where the most important acts are the Public Health Act, the Act for Specialist Treatment of Diseases and the Act for the Treatment of the Mentally Ill. The whole population is covered by national health insurance.

Responsibility for the daily running of the health service lies with the municipalities, in terms of both primary healthcare and treatment in hospitals. The Chief Medical Officers and the Forensic Medical Officers function as advisers to the regional administration of MSAH. General medical treatment is partly carried out in the health centres owned by the municipalities, and partly by private general medical practitioners. Physicians working in health centres are mainly general medical practitioners. In the public health service system, patients need a referral for specialist services, with the exception of emergencies. In private clinics, the physicians are mostly specialists. Patients need no referral to visit these private specialists. Physicians working in private clinics may send their patients to either public or private hospitals.
with a referral. The specialised central and regional hospitals are run by federations of municipalities. In mental healthcare, more and more emphasis is placed on outpatient treatment, and the use of institutions is decreasing. At the health centres, there are also a number of beds, mainly for the treatment of elderly people. The municipalities also have responsibility to establish the necessary number of nursing homes places, provide healthcare, school healthcare and dental treatment, and ensure that occupational health services are established (either organised by employers themselves or provided by the public sector).

The total number of consultations per capita each year is slightly lower in Finland than in all other Nordic and Baltic countries, except Sweden.

<table>
<thead>
<tr>
<th>TABLE 4.4</th>
<th>Total number of healthcare consultations in Nordic and Baltic countries</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>DENMARK</td>
</tr>
<tr>
<td>Total number of consultations (millions)</td>
<td>27.4</td>
</tr>
<tr>
<td>Total number of consultations per capita</td>
<td>5.1</td>
</tr>
</tbody>
</table>

There are some marked differences in mortality per 100,000 inhabitants between the Nordic (Denmark, Finland, Iceland, Norway and Sweden) and the Baltic (Estonia, Latvia and Lithuania) countries. This applies to infant mortality, and also to mortality in the age groups below 65 years, where particularly men in the Baltic countries show high mortality, thus contributing to the wide gap in life expectancy between men and women. Mortality from cancer is highest for men up to the age of 75 years in the Baltic countries, whilst mortality from cancer for women is lower than in the Nordic countries. Subsequently, the picture becomes more uniform. Mortality rates for cardiovascular diseases are generally substantially higher for men and women in the Baltic countries than in the Nordic countries, although the trend in the older age groups is similarly decreasing. Mortality rates are also substantially higher for the younger age groups (35–54 years) in the Baltic countries, particularly for men, and there has even been a slight increase during the last few years. Mortality from AIDS has fallen substantially since 1995, particularly in the Nordic countries. Mortality from AIDS is very low in both the Baltic and the Nordic countries, both as a result of new methods of treatment and because of a shorter time of exposure to the risk in the Baltic countries (the HIV virus spread to the Baltic countries much later than to the Nordic countries). Death rates for fatal accidents are substantially higher in the Baltic countries than in the Nordic countries, particularly for men in all age groups. Deaths from road traffic accidents show the same pattern. Suicide rates are also substantially higher in the Baltic countries than in the Nordic countries, particularly for men in all age groups.

Total healthcare expenditure per capita as a percentage of GDP was 7.5% in 1995, 6.7% in 2000 and 7.3% in 2002.

<table>
<thead>
<tr>
<th>TABLE 4.5</th>
<th>Public and private healthcare expenditure in Finland</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>MILLION</td>
</tr>
<tr>
<td>Public financing</td>
<td>7,723</td>
</tr>
<tr>
<td>Private financing</td>
<td>2,485</td>
</tr>
<tr>
<td>Total healthcare expenditure</td>
<td>10,208</td>
</tr>
</tbody>
</table>

Finland has 3.0 doctors, 1.0 dentists and 10.6 nurses per 1,000 population.
In 2004, the leading causes of death were (in descending order) cardiovascular diseases, tumours, respiratory diseases, gastrointestinal diseases, other diseases, accidents and violence, and suicides.

<table>
<thead>
<tr>
<th>TABLE 4.6</th>
<th>Finland key health statistics summary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Birth rate</td>
<td>10.45 births/1,000 population</td>
</tr>
<tr>
<td>Total fertility rate</td>
<td>1.73 children born/woman</td>
</tr>
<tr>
<td>Death rate</td>
<td>9.86 deaths/1,000 population</td>
</tr>
<tr>
<td>Infant mortality rate Deaths/1,000 live births</td>
<td>Total 3.55</td>
</tr>
<tr>
<td>Life expectancy at birth (2006 estimate)</td>
<td>Total 78.5 years</td>
</tr>
</tbody>
</table>

### 4.2 FINLAND – NATIONAL OSH SYSTEMS

In Finland, MSAH is responsible for most OSH matters, although the Federation of Accident Insurance Institutions is also an important stakeholder, since employers are obliged to take out statutory workers’ compensation insurance. The fundamental operational principle for the Occupational Safety and Health Administration is, “The occupational safety and health administration, in close cooperation with the labour market organisations, affects the functioning of the workplaces and working environment by increasing the employees’ occupational safety, well-being, health and results of their activities.”

#### 4.2.1 POLICY

According to MSAH, “In Finland, occupational safety and health is based on the concept of a good working environment, which besides occupational safety and health, covers terms of employment and the psychic well being of the employees. The main objective of occupational safety and health is to maintain and develop health, safety and work ability of the employee, as well as to prevent occupational accidents and illnesses.”

The role of the Finnish Occupational Safety and Health Administration is to enhance “the workplace's own capacity and will to improve the working conditions, and in general to manage the occupational safety and health issues independently, so that the employees’ contentment with work and productivity are improved”. It proposes that integrating OSH into other activities of the business or enterprise, as well as the viewpoints of productivity and economy, have meant extending the concept of OSH. In addition to safety and health, it covers the mental wellbeing of the workers, contentment with the work, skills and motivation, good organisation and management. The employer has responsibility, stipulated in law, for the safety and health aspects of the work, but the employee also has obligations concerning improving working conditions and maintaining work ability.

The Occupational Safety and Health Administration supports employers and employees to improve working conditions and fulfil obligations, as well as in integrating OSH into other activities of the workplace.

The Department for Occupational Safety and Health is responsible for drafting and developing the OSH legislation and national policy on OSH, for coordinating research and for participating in international cooperation on OSH. The Department is also responsible for the performance guidance of the District Administration for Occupational Safety and Health, which supervises OSH, and for the performance guidance of other authorities and establishments under the Ministry in matters of OSH. OSH also covers the terms and conditions of employment.
relationships, the physical, social and mental demands of work, and the functioning of workplace communities. OSH services are designed to enhance wellbeing at work. Priorities in OSH include the prevention of work-related musculoskeletal disorders, the promotion of employees’ mental wellbeing at work and the prevention of accidents in the workplace.

4.2.2 LEGISLATION

The recent educational and industrial strategy in Finland appears to be based firmly on building an information society. This seems to have resulted in rapid and ongoing changes at many workplaces, and this may have posed something of a challenge for existing OSH legislation. Furthermore, there are indications that, despite good surveillance systems and hazard identification approaches, there were no clear signs of improvement in rates of disease, injury and fatality in Finnish workplaces through the 1990s. For this reason, the major enabling legislation was reviewed, and then renewed.127

First was a new Occupational Health Care Act 2001,130 which was passed on 21 December, 2001 and came into force in Finland on 1 January, 2002. This bolstered healthcare services for employees in companies, with the aim of enhancing worker wellbeing. The main aim of this Act appears to be to direct employee healthcare measures toward ensuring that employees can sustain longer working lives. Presumably this was, at least in part, a response to the ageing workforce. It also contained a significant shift of focus toward promoting health and the ability to work, and established a new basis for addressing issues concerned with working conditions. Under the Act, the employer must arrange employee healthcare services and must have a written action plan for them. The employer can arrange these services themselves, or subcontract for them. However, the employer is also obliged to take into account employee preferences and proposals regarding the healthcare. The Act also modernised provisions on the confidentiality, handling and storage of information. Both the employer and employee are obliged to pass relevant information about work and the workplace to the responsible healthcare service. This is designed to facilitate workplace evaluation and potential prevention strategies. The healthcare service provider also has a duty of care to inform both the employer and the employee about potential workplace hazards. These explicitly include “the functioning of the workplace community”, which has generally been interpreted to acknowledge the role of workplace stress.

In December 2001, a tripartite committee that had examined reform proposals for the existing Occupational Safety and Health Act issued its recommendations. This resulted in the Occupational Safety and Health Act 2002,131 which came into force in Finland on 1 January, 2003. It replaced the Occupational Safety and Health Act 1958.132 The new Act states, “The objectives of this Act are to improve the working environment and working conditions in order to ensure and maintain the working capacity of employees as well as to prevent occupational accidents and diseases and eliminate other hazards from work and the working environment to the physical and mental health, hereinafter referred to as health, of employees.”131 This legislation is applied to all employees working for Finnish employers regardless of their nationality.

Specific provisions of the new Act define obligations for both employers and employees, and also require cooperation between employers and employees such that “Employers and employees shall cooperate in maintaining and improving safety in workplaces”.135 Employers are obliged to apply safety management methods in all operations, including planning and organising work. Employers are expected to arrange relevant monitoring of workloads and to monitor the extent to which these workloads correspond to workers’ physical and mental capacity. Employees are not only the object of protection, but also active participants who must, by all available means, take care of their own safety and that of other employees. Employers also need to take actions to prevent harassment at the workplace.
An exhaustive list of all related and relevant minor legislation in Finland is available online from the International Occupational Safety and Health Information Centre, also called the Centre International d’Information de Sécurité et d’Hygiène du Travail, which is an agency of the ILO.\textsuperscript{133}

As an EU member state, Finland is also bound by European legislation. In the EU, the legislative framework is established by the European Commission through a series of European directives based in Article 137 of the EU Treaty, giving the EU authority to legislate in this field. Directive 89/391/EEC, or the Framework Directive, sets the general principles for effective safety and health at work, with other EU laws addressing specific issues such as chemical agents, noise, pregnant workers and so on. The EU has established legislation in the form of directives and standards designed to protect the health and safety of Europe’s workers. An exhaustive online database is available from EASHW.\textsuperscript{53}

The Finnish OSH authorities cooperate with the EU Advisory Committee on Safety and Health at Work and also with the governing bodies of the European Foundation for Improvement of Living and Working Conditions, and the European Agency on Safety and Health at Work. The authorities also cooperate with expert bodies like the Senior Labour Inspectors Committee and the Scientific Committee on Occupational Exposure Limits.\textsuperscript{154}

4.2.3 Designated Authorities

OSH matters fall largely under the responsibility of MSAH.\textsuperscript{128} However, the Federation of Accident Insurance Institutions is also an important stakeholder, since employers are obliged to take out statutory workers’ compensation insurance.

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{MSAH_organisational_chart.png}
\caption{Finnish MSAH organisational chart\textsuperscript{135}}
\end{figure}
The Finnish Institute of Occupational Health is funded by MSAH, and governed by a board of directors responsible to the minister. It was founded in 1945 and has approximately 600 permanent staff and about 300 project contractors. There is a surveillance division. The Occupational Safety and Health Inspectorates and the Occupational Safety and Health Department of MSAH are the enforcement authorities of OSH legislation concerning workplaces. Control of products used at work is also exercised by these authorities, in response to Finnish membership of the EU. In the European economic area, goods move freely across national borders. This presupposes that they conform to requirements concerning them. The Occupational Safety and Health Department and the Occupational Safety and Health Inspectorates supervise the conformity of machines, equipment, chemical substances and personal protective equipment used at work, by means of market surveillance, in order to ensure that only safe and conforming products are used at workplaces. In market surveillance, the Occupational Safety and Health Department cooperates with TUKES, the Safety Technology Authority, the National Product Control Agency for Welfare and Health, and the National Consumer Administration. The full list of institutions responsible for OSH in Finland is as follows:\textsuperscript{128, 129}

- Ministry of Social Affairs and Health.
- Ministry of Labour.
- Occupational Safety and Health Inspectorates.
- Finnish Institute of Occupational Health.
- Centre for Occupational Safety.
- Finnish Work Environment Fund.
- Technical Research Centre of Finland (VTT).
- National Product Control Agency for Welfare and Health (SSTV).
- Safety Technology Authority (TUKES).
- Radiation and Nuclear Safety Authority (STUK).
- Consumer Agency.
- Federation of Accident Insurance Institutions (FAII).

The following overview information describes each of the major components for the OSH sector in Finland:\textsuperscript{128, 129, 134}

**Ministry of Social Affairs and Health**

MSAH is in charge of improving the social and healthcare services and the population's wellbeing with the help of preventive social and healthcare policy. The Ministry not only gives authorities instructions on the operations concerning OSH matters, but is also in charge of the preparation and enforcement of legislation concerning OSH. It also coordinates research in the field and international cooperation. The Occupational Safety and Health Department is responsible for the preparation and development of OSH legislation, the coordination of research and the better utilisation of research information. The Department also directs Occupational Safety and Health Inspectorates, improves their operational prerequisites and develops supervisory methods. The development of occupational healthcare legislation belongs to the Department for Promotion of Welfare and Health.

**Ministry of Labour**

The Ministry of Labour promotes the operation of the labour market and work organisations, as well as the integration of immigrants. The Policy Department is in charge of the strategy of the Ministry and concentrates on the preparation of Acts, as well as work and immigration policies. The Executive Department is responsible for the implementation of the work policy through the Employment and Economic Development Centres. The Ministry of Labour prepares the essential work legislation together with the labour market organisations. The Acts to be prepared by the Ministry include the Contracts of Employment Act, Act on the Employment of Household Workers, Working Hours Act, Annual Holidays Act, Co-determination in Enterprises Act, Personnel Funds Act, Representation of Personnel in the Management of the Enterprise Act, Young Employees Act, Income Security Act, Collective
Labour Agreements Act, Work Council Act and Work Litigation Act. Legislation concerning OSH falls into the scope of the Occupational Safety and Health Department of MSAH. The Labour Council, operating in connection with the Ministry of Labour, gives interpretations concerning OSH legislation on working hours, annual holidays, young employees and occupational safety. The National Workplace Development Programme coordinated by the Ministry of Labour supports different workplace projects, in order to improve productivity and the quality of working life. The Programme also creates and maintains cooperation networks disseminating information and experiences and promotes the use of research in the development of working life. In addition to the Ministry of Labour, the labour market organisations and MSAH participate in the Programme.

**Occupational Safety and Health Inspectorates**

The Occupational Safety and Health Inspectorates of Finland are run by MSAH and provide the practical supervision of OSH. The Inspectorates give instructions to employers and employees, and provide advice on applying regulations concerning work conditions and employment, and supervise compliance with these in workplaces. The Occupational Safety and Health Inspectors have the right to visit all workplaces and to look at relevant documents. The Inspectorates can require an employer to address defects concerning OSH in the workplace. Finland is divided into 11 Occupational Safety and Health Inspectorates, responsible for approximately 240,000 workplaces, in which almost 30,000 inspections are carried out annually. The Inspectorates have approximately 450 staff, of which 350 are inspectors.

**Finnish Institute of Occupational Health**

The Finnish Institute of Occupational Health is an expert organisation in the field of OSH. The aim of its activities is to ensure employee health and well functioning workplaces. The Institute pursues these goals by conducting research and providing expert services, training and information. Research emphasises: employee health; features of a good working environment; the physical and mental pressure associated with work; dangers caused by chemical substances, noise, heat and radiation; safe working methods; and occupational accidents and illnesses. About 230 research projects are conducted each year. Experts from the Institute provide information and instruction on the planning of healthy, productive and high-quality working environments. The services include measuring harmful radiation doses at workplaces, testing people who apply for demanding professions, psychological studies concerning work, the development of workplaces and directions on the establishment of action programmes concerning OSH. The Institute also organises about 300 courses annually and runs a very large information centre on occupational healthcare. There are approximately 600 staff based in six regional institutes in Kuopio, Lappeenranta, Oulu, Tampere, Turku and Helsinki.

**Centre for Occupational Safety**

The Centre for Occupational Safety promotes healthy, safe and profitable working conditions and work communities. Key activities are focused on OSH, occupational healthcare, profitability, productivity and quality. The basic principle is that cooperation between management and personnel is the best way to develop these matters. The Centre produces and distributes information about the development of working conditions, using the following strategies:

- **Training** – about 200 elementary, advanced and special courses and information campaigns annually.
- **Working community services** – training and development at individual workplaces when necessary.
- **Publications** – general guides for different fields of activity and about different matters, information leaflets, training material, transparency series, video cassettes for training.
- **Information** – e.g. Työyhteisöviesti – Arbetsplatsinfo (a magazine dealing with work community matters), four issues per year.
- **Guidance and information services** – information retrieval and advice according to the needs of customers.
- **Maintenance of a register of contact persons** – the addresses of about 65,000 persons dealing with OSH as well as occupational healthcare at workplaces in the private sector and in municipalities.
The funding comes from the Finnish Work Environment Fund and sales of training and material. TTK-Valmennus Oy, owned by the Centre for Occupational Safety, offers development and training services concerning the working environment, working ability and work communities. The services are offered at market prices, and they consist of products developed on the basis of demand, experience and research results and tailored to fit the individual customer’s needs.

**Finnish Work Environment Fund**

The Finnish Work Environment Fund was established in 1979. Labour market organisations are represented in its administration, and MSAH supervises the activities of the Fund. The resources come from accident insurance fees and levies applied to employers. The Fund finances research and development aimed at improving the working environment, and also promotes the safety and productivity of workplaces. Additionally, the Fund finances the operation of the Centre for Occupational Safety. Financial grants are provided for work that focuses on the work environment, employment and productivity at work. Funding is given in the form of research and development grants, information and training grants, and development aid, as well as personal grants for relevant research or training.

**Technical Research Centre of Finland (VTT)**

VTT is an independent expert organisation whose task is to maintain and improve the level of Finnish technology and satisfy public and private research and testing needs. The Ministry of Trade and Industry supervises VTT, which is divided into nine technology-based research units and has over 2,900 staff. Research and development, promoting occupational safety, is often carried out as a part of other development activities aimed at competitiveness, quality and productivity. The most important unit researching and developing occupational safety is VTT Automation.

**National Product Control Agency for Welfare and Health (STTV)**

STTV is in charge of social and health hazards caused by products containing alcohol, tobacco and chemicals, and it ensures compliance with the regulations concerning these products. MSAH supervises STTV. The Chemicals Department of STTV is responsible for the prevention and control of health hazards caused by chemicals. STTV’s tasks within chemical control are mainly based on EU legislation. The operation includes the assessment and acceptability of the chemicals and pesticides, matters concerning classification and labelling, market surveillance and monitoring laboratories. The Product Register Unit maintains a product register of the chemical register. It contains information on dangerous chemicals on the market in Finland. The register is in use by the product control authorities of the Chemicals Act. STTV employs 71 people, 22 of whom work in the Chemicals Department and 12 in the Product Register Unit. The Agency cooperates with MSAH, the Finnish Environment Institute, the Plant Production Inspection Centre and the National Authority for Medicines.

**Safety Technology Authority (TUKES)**

TUKES is an expert organisation that organises, supervises and develops technical safety and reliability. It functions in a number of areas such as chemical and process safety, pressure equipment safety, electrical safety, rescue equipment, measuring instruments and precious metals. The aim of TUKES is to protect people, property and the environment from safety risks and to promote technical reliability. Supervisory tasks are organised into two units: plant and installations surveillance (institutions, installations and technical services); and product safety enforcement (products and measurements). Besides supervisory tasks, TUKES participates in national and international cooperation, the development of legislation, and different research and development projects. Also, it actively gives information on matters concerning technical safety and reliability. TUKES operates mainly in the area of the Ministry of Trade and Industry, but it has tasks in areas of various other ministries also.
Radiation and Nuclear Safety Authority (STUK)

STUK is the organisation that supervises radiation and nuclear safety. It provides expertise in the areas of radiation instruments, radioactive substances, nuclear power plants, nuclear materials and nuclear waste. Its main task is to prevent and restrict the harmful effects of radiation. STUK also controls natural radioactive substances in working, housing and living environments and exposure to radiation caused by them, as well as exposure to non-ionising radiation that is not the responsibility of other authorities. The legislation contains provisions on monitoring, maximal values and health controls of employees’ exposure to radiation. The information on exposure is registered in a dose register. STUK currently monitors the radiation exposure of about 12,000 employees in 1,300 workplaces. STUK sets the national measurement norms, therefore it ensures that radiation measurements made in Finland are performed with precision to internationally acceptable standards. STUK provides national customers with services in radiation dose measurements, radioactivity counts and other expert services. Expert services abroad are mainly provided to the Finnish Ministry of Interior, and to the EU. An integral part of STUK’s activities are research, radiation control of the environment and emergency readiness operations. STUK employs about 290 persons.

Consumer Agency

The task of the Consumer Agency is to guarantee the financial, health and legal status of consumers and to promote participation by consumers in private and public decision-making. The Agency also supervises compliance with the Product Safety Act. This is done using market surveillance to ensure the safety of consumer goods and services. A variety of control methods are used, including studies on the safety of products, testing samples from market surveillance with the Customs Laboratory, dealing with complaints and notifications and market surveillance projects with the supervisory authorities. If a product is found to be dangerous or defective, the Consumer Agency tries to negotiate with the manufacturing company in order to rectify the defects, or as a last resort, cancels the sale of the product. The Agency can place a ban on sales and is empowered to impose fines in order to remove dangerous goods from the market. The main product groups controlled in this way are personal protection devices, children’s toys and accessories, textiles, perfumes, and sports and leisure equipment, as well as different consumer services such as fitness centres, amusement parks, skiing slopes and playgrounds.

Federation of Accident Insurance Institutions (FAII)

The FAII tackles those areas requiring cooperation between the insurers who provide statutory accident insurance, and other insurance products required by legislation. The Federation investigates workplace fatalities, using a board with representatives of central labour market organisations, insurance companies and the Centre for Occupational Safety. It investigates about 30 to 40 fatalities each year. The investigation reports are submitted to the OSH contact persons at workplaces and to other experts. These reports are based on visits by a sector investigation group to the workplace and the documents provided by the OSH authorities, as well as the police. The Federation also runs an OSH committee, with representation from the labour market organisations and insurance sector. The committee coordinates the occupational safety work in the insurance sector, and directs the OSH activities of the Federation.
4.2.4 Inspection and Compliance Systems

The Finnish Department for Occupational Safety and Health of MSAH serves as the highest government body for OSH administration. It has a staff of about 90 and supervises independent Labour Inspectorates covering the whole country. The most important are:

- the preparation and drafting of OSH legislation
- the performance and resource management of the Occupational Safety and Health Inspectorates
- the monitoring of their results
- the improvement of inspection methods
- the coordination and targeting of OSH research
- the application of the results of research projects at the workplace level
- market surveillance and product control.

The Department consists of four units: Legislation, Development, Field Operations and Administrative Resources.

Staff include chief inspectors (people with a university qualification and/or long experience and seniority who normally manage a group of inspectors), engineers (professionally qualified), inspectors (with technical qualifications or persons who have joined the Inspectorate from industry and who may not be qualified academically or technically, but who have practical experience in health and safety matters at the workplace, either as safety delegates or safety supervisors), and lawyers (professionally qualified). In Finland, there are no academic degrees that would directly give competence for an OSH inspector's tasks. Therefore, an important part of the training is on the job, with Inspectorates arranging work orientation for their newly recruited employees.

The law dealing with working conditions, including OSH, applies to all persons working under a contract of employment, and the responsibility for its enforcement, with few exceptions, lies with the Occupational Safety and Health Administration. Thus the coverage of inspection extends to all sectors of the economy and all branches, including the private and public sectors, cooperatives and non-governmental organisations. The inspection of mines is a task of the Safety Technology Authority. There is also, within MSAH, the Radiation and Nuclear Safety Authority for nuclear safety inspection and protection against radiation.

According to the Occupational Safety and Health Administration Act, the OSH Authorities are to promote safety and health at work by:

- developing (and promoting) safety and health at work
- supervising, through inspections and investigations, the compliance of OSH regulations, within the legal mandate stipulated to the OSH authority
- carrying out planning and development activities for OSH
- carrying out advisory, information, research, and training and education activities for OSH
- providing instructions, advice and statements on the implementation of OSH regulations
- providing instructions, advice and training on OSH for the self-employed, and planning and developing OSH for their needs
- collaborating actively with the organisations of employers and workers in the field of OSH
- performing all the other functions and tasks especially stipulated to the OSH authority.
The OSH authorities are independent in their supervisory and inspection activities. The powers given to the inspectors are also set out in the Occupational Safety and Health Act and the regulations on Enforcement and Cooperation on Workplace Safety and Health. They include the power to:

- enter any place of work at any reasonable time of day or night to carry out inspections and to make enquiries
- question employers and employees about matters of OSH and other matters concerning working conditions. This power does not extend, however, to requiring them to make written statements
- call for and examine all registers and other documents legally required to be kept
- take samples of materials and products for analysis
- take photographs and measurements
- issue an inspection protocol or improvement notice. The notice identifies the law that is being broken and describes the nature of the deficiency; it may suggest how the deficiency can be rectified, and stipulates a time limit within which the employer must answer to the inspector on the action they have taken
- issue a legally binding enforcement notice under the authority of the Head of Inspectorate if the inspection protocol has not had the desired effect. The notice stipulates a time limit within which the required work must be completed and may, although this is not obligatory, set a fine which must be paid if the deadline is not met. The employer has the right of appeal to a regional administration court
- issue a prohibition notice in cases where an inspector believes there is an imminent risk to life or health. The notice comes into force immediately.

4.2.5 BUDGETS

The Finnish Ministry of Social Affairs and Health is responsible for the relevant budgets. However, information is not currently available in English.

4.2.6 DATA COLLECTION AND ANALYSIS

SF, Finland’s national statistical agency, is responsible for the compilation of most official statistics. Apart from SF, several other (mainly administrative) government agencies compile official statistics in fields falling within their purview.

In 1748, when Finland was part of Sweden, a government bureau was set up in Sweden for the purpose of compiling population statistics. Finland received its own bureau of statistics in 1865. In 1884, the bureau was renamed the Central Statistical Office of Finland. The same year, a series of publications entitled Official Statistics of Finland became the joint forum for all producers of official statistics. The current SF is an independent government agency set up under the Ministry of Finance. The Director General is an appointment made by the President of Finland. SF prepares a mid-term programming and budgeting plan, which is submitted to the Ministry of Finance. The plan provides the basis for preparing the annual budget, which is approved by Parliament at the proposal of the Council of State, and the annual work programme, which is approved by the Director General. SF is independent in its professional activities and may freely decide on the publication of its results as well as on the contents of its publications. About 65% of official statistics in Finland are compiled by SF and the rest by about 20 other government agencies, derived primarily from the basic data they need for their administrative activities. For instance, statistics on agriculture are compiled by the information centre of the Ministry of Agriculture and Forestry, and statistics on foreign trade by the Board of Customs.
The legal basis for SF is provided by the Act on Statistics Finland, dated 24 January, 1992. Relevant legislation includes the Act on Statistics Finland (24-1-1992), Decree on Statistics Finland (14-2-1992), Statistics Act (21-1-1994) and Personal Data File Act of Finland (30-4-1987). Under the Statistics Act, state authorities are obliged to supply to SF, from the data files in their possession, all the data that are necessary for the production of statistics. Employers, self-employed persons, unincorporated public enterprises, local government authorities and non-profit institutions and foundations are obliged to supply data on their finances and activities. If a respondent subject to an obligation to provide data fails to supply the data by the date laid down, they may be obligated to supply the data under the threat of a fine. The data acquired for statistical purposes are confidential. Data on the activities of central and local government authorities and the data in the business register are, however, public. Confidential data may be released only for the purposes of scientific research or statistical surveys without identifiers. The Statistics Act also provides that statistics shall be reliable and that they shall be published as soon as possible after their completion. Uniform definitions and classifications shall, where possible, be used. The Personal Data File Act 1987 protects personal privacy, interests and rights. Under the Act, SF may establish personal data registers to serve the needs of statistical compilation without permission from data-protection authorities.

The main tasks charged to SF are to compile statistics and surveys regarding conditions in society, and collaborate with other government authorities in the compilation of national statistics. SF is responsible to an oversight board, and uses a scientific advisory board. The members of the board represent mainly public and private research institutes and statistical institutions. The main functions of the board are to prepare research and development programmes of statistics and to counsel and monitor social, economic and methodological research at SF. Various other advisory groups specialise in different subject matter areas, and are composed of scientists or representatives of main users of information and other interested parties (e.g. representatives of important respondent groups). The most important ones are the permanent advisory groups for economic, social, and business and enterprise statistics.

4.2.7 RESEARCH INSTITUTIONS

Finland has a very active research sector in the OSH area. This is probably due, in large measure, to the prominence given to such research in national policy. Much of the research is conducted by governmental organisations. However, universities also carry out a significant proportion.134

The main research institutions in Finland, with their major areas of activity and competence, are as follows:

- Finnish Institute of Occupational Health – comprehensive multidisciplinary research structure and programme covering all fields of OSH.
- VTT, VTT Automation – safety technology, risk assessment and management.
- STUK – research, regulation, enforcement and services in the field of radiation safety.
- TUUKS – safety-promoting research and development activities.
- Tampere University of Technology/Occupational Safety Engineering – safety technology.
- University of Kuopio/Department of Environmental Science – occupational and environmental hygiene.
- University of Oulu/Work Science – ergonomics, safety systems.
- Helsinki University of Technology/Laboratory of Work Psychology and Leadership – organisation of work, leadership, psychosocial aspects of work and work organisations.
- Lappeenranta University of Technology – safety technology research.
- Work Research Centre at the University of Tampere – research on work life and its structural changes, and social aspects of work.
- The Tampere School of Public Health at the University of Tampere – occupational health, musculoskeletal disorders, ergonomics.
- The UKK Institute for Health Promotion Research – promotion of physical work ability and general functional capacity at work.
Finland’s National Research Policy Programme for OSH research was established in 1994 and revised in 1998. In 2005, the programme “Workplace Welfare Research in Finland and its Priority Areas – a Perspective of Health and Safety” was published. Current research priorities set by this initiative are: the development of products, production and organisations; the management of risks; the psychosocial functioning of work organisations; the promotion of health in work life; the maintenance and promotion of work ability and functional capacity; health and safety risks and loading factors; occupational safety and occupational health services; and the economic impact of working conditions.

### 4.2.8 Compensation

Finland has a complex structure of social insurance incorporating a comprehensive range of social security and insurance institutions (see Figure 4.2). However, it is important to note that compensation for work-related diseases and injuries takes priority over other forms of statutory compensation and pensions. This means that the injured worker is first paid the compensation to which they are entitled on the basis of statutory accident insurance in full, and the benefits of other social insurance are only paid if there is additional entitlement to them. Note that Finnish statutory accident insurance provides cover for both occupational disease and occupational injury.

In Finland, the insurance covers incidents both at work and on the journey to work. An employee is entitled to compensation even when the employer fails to take out the mandatory accident insurance. A foreign employee working for a Finnish employer has to be insured by the employer.

<table>
<thead>
<tr>
<th>FIGURE 4.2</th>
<th>Structure of the Finnish social insurance system (modified from Rantanen, 2006)</th>
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### 4.2.8.1 Statutory accident insurance scheme

In Finland, work accidents and occupational diseases are compensated through the statutory accident insurance system. According to the current legislation, every employer that employs a person for more than 12 days a year must provide occupational accident insurance for their worker.

The history of the Finnish occupational accident insurance system can be traced back to 1895. The current occupational accident insurance system covers employees in the public and private sectors, including the self-employed. Approximately 2.4 million people in Finland are currently covered. The present occupational accident insurance legislation is based on the Labour Accident Insurance Act 1948, although an Act on accident insurance for public sector employees was passed in 1935. These Acts have subsequently been amended several times. The latest amendments were passed in 2004 and 2005. An Act providing accident insurance for self-employed farmers was passed in 1981 and most recently amended in 2003.
The risks covered by accident insurance in Finland include both work accidents and work-related diseases. Work accidents are defined as being “due to an unexpected, sudden external event which causes injury or illness to an employee while he or she is working, in circumstances related to his/her work or in his/her work place, when going on errands for his/her employer or while protecting or trying to protect property or his/her employer or while saving or trying to save human lives in the course of his/her work”. Employees are also covered while commuting to and from work, and since 1993, physical assault at work has also been included as a work accident. Occupational disease is defined as “a disease which is probably primarily due to physical, chemical or biological factors associated with work done during a period of employment”.

The accident insurance system is financed on the basis of premiums paid by employers, in line with EU directives. The level of the premium is based on payroll, but is also dependent on the average accident risk for the industrial sector to which the business belongs (pooling the collective risk of the branch). MSAH sets premium levels. Some big businesses pay more than a preset limit, and the level of the premium is defined on the basis of the accident rates of the individual businesses (experience-based tariff). For smaller businesses paying premiums lower than the preset, the premium is defined by the average risk. Thus, in the larger businesses, the accident insurance costs of the businesses are dependent on the accident risks and level of safety in the businesses themselves.

Compensation is paid for the following events, as defined by the Occupational Accident Insurance Act:

- Labour accidents occurring:
  - on the job
  - in conditions resulting from the job:
    - at the workplace or in an area belonging to the workplace
    - on the way to or from work
    - when the employee is running an errand for their employer
  - if the employee attempts to protect or save their employer’s property or human lives in connection with their work.

- Occupational diseases defined by the Act on Occupational Diseases.

- Injuries caused by specially defined physical strain or other unfavourable ergonomic conditions at work.

The scope of compensation by occupational accident insurance is broad, and the level of compensation is relatively high, often resulting in full 100% compensation of all costs caused by the accident or occupational disease and the loss of earnings and, if needed, also the loss of the worker’s working capacity. The appropriate diagnosis and treatment, as well as the rehabilitation of accidental injuries and occupational diseases are compensated. Wage-replacement benefits for loss of ability to work are paid to employees, or in the case of fatal diseases and injuries, are paid to survivors. The accident insurers also provide advisory services for accident prevention and safety improvement.

In Finland, 12 private accident insurance companies under the supervision of MSAH provide occupational accident insurance. Every insurance company handling statutory accident insurance in Finland has to be a member of FAII. The FAII currently comprises 12 companies and two state organisations (the Farmers’ Social Insurance Institution and the State Treasury). The FAII functions as the coordinating body for all the organisations that are engaged in statutory accident insurance. According to the FAII, from the current population of about five million, there are approximately 2.6 million in the workforce. The number of employers is about 200,000. Each year, up to 120,000 work accidents occur that are covered by insurance. Approximately 14,000 of these occur while commuting to and from work. About 5,500 occupational diseases are registered each year. The most common of these are upper limb musculoskeletal pain problems, hearing diseases, or injuries due to stress and strain.
4.2.8.2 Sickness insurance

Sickness insurance provides a daily sickness benefit and rehabilitation allowance, and reimburses private medical and dental fees, laboratory and treatment costs, pharmaceutical expenses and travel expenses related to treatment. It also covers maternal, paternal and parental allowances, the special maternity allowance and special care allowance. According to MSAH, all residents in Finland are entitled to sickness insurance compensation (if their home is Finland and they live mainly in that country). Employees of Finnish firms who work abroad remain, together with their families, within the Finland sickness insurance system. The amount of sickness insurance varies, depending on what it is being claimed for. Sickness benefit; rehabilitation allowance; maternal, paternal and parental allowances; the special maternity allowance and special care allowance are assessed according to income.

4.3 FINLAND – OSH PROGRAMMES

It is the Finnish government’s stated aim to “ensure that all citizens can participate fully in work life, contribute to longer working careers, facilitate the coordination of family life and work, promote equality and make work more attractive”. The government also supports actions to help immigrants, people with disabilities and those who are difficult to employ. Workplace development programmes have been set up to assist smaller workplaces. Other government aims include providing resources to facilitate and enhance equality, the coordination of work and family life, psychological OSH, wellbeing at work and more effective monitoring of working hours, the development of good management practices and general expertise, workplace health promotion work and the special needs of the ageing workforce.

4.3.1 NATIONAL STRATEGIES

The current OSH strategy ratified by MSAH emphasises that OSH shall, first and foremost, be carried out by workplaces on their own initiative. The overall strategy was developed with input from major interest groups and social partners, and defines present and future objectives. The development targets prioritised by the current strategic plan are:

- the maintenance and promotion of the work ability and functional capacity of workers
- the prevention of occupational accidents and diseases
- the prevention of musculoskeletal diseases
- the mental wellbeing at work
- the promotion of workers’ capacities to cope with work
- control over one’s own work.

The tactics and underlying principles to achieve the implementation of this strategy are:

- based on the modern concept of OSH and the European environment
- emphasising holistic, systematic and spontaneous action at workplaces
- promoting a modern safety culture and safety management
- strengthening client orientation
- developing and strengthening OSH district administration
- focusing the authorities’ supervision according to the desired effects
- developing more diverse supervision methods
- promoting cooperation between the present statutory systems at workplaces
- providing support from the Ministry in the implementation of the strategy
- ensuring research and development support for implementing the strategy.
The OSH strategic plan is to be implemented in close collaboration with social partners, research institutions and professional associations. Periodic follow-up and evaluation have been organised to occur every three years. The current strategic plan is due for review and revision.

The major implementation method is national action programmes, which together constitute a national policy and programme for OSH. That is, the Finnish OSH Programme is not a single plan but consists of the strategic plan and several national programmes. Currently, there is a diverse range of national programmes:

- The Veto Programme 2003–2007 (Ministry of Social Affairs and Health) National Programme for an Attractive Working Life
- The Occupational Accident Prevention Programme 2001–2006: Prioritising occupational safety (Ministry of Social Affairs and Health)
- The National Programme on Chemical Safety (Ministry of the Environment)
- The Health 2015: Public Health Programme (Ministry of Social Affairs and Health)
- The Noste Programme 2003–2007 (Ministry of Education) Raising adults’ level of education and training
- The National Programme for Aging Workers 1998–2002 (Ministry of Social Affairs and Health)
- The Tobacco Control Programme (Ministry of Social Affairs and Health)
- The Well-being at Work Programme 2000–2003 (Ministry of Labour)
- The Finnish National Productivity Programme (Prime Minister’s Office)

Measures that help people extend their working years and maintain their work ability have recently risen to the fore in the social welfare and health policies of many European countries. Improving the quality of work life, prolonging work careers, and promoting health at work are all preconditions for achieving a sustainable, stable and productive society, thus furthering the objectives of the Lisbon Strategy. The Finnish Ministry of Social Affairs and Health and the Finnish Institute of Occupational Health launched a joint project in 2005 to draw up recommendations concerning the extension of working years and the promotion of occupational health. The central principle in the resulting recommendation is that efforts to develop working conditions and the role of wellbeing at work should be given a more prominent status. It stresses that goals pertaining to labour protection, occupational health and wellbeing at work should also be taken into account in policies other than those directly concerned with labour protection and occupational health. In addition, more efficient cooperation is needed between sectors. This initiative also underlines the importance of good management and proposes the development of national or regional programmes in order to increase the appeal of work, and thereby to extend working life. The recommendation is divided into four areas: workers’ health in all policies; a healthy enterprise; making services accessible to all; and innovations needed to achieve better work life.
4.3.2 Consultation Mechanisms

As the leading OSH authority in Finland, the Department for Occupational Safety is responsible for policy making under the supervision of the Minister of Social Affairs and Health.\textsuperscript{139} The coordination of policies and activities at the national level takes place in ministerial groups at the government level, with the ministers coordinating their policy-making with other departments. The OSH Department of the Ministry coordinates its activities mostly in ad hoc negotiations with the other ministries and social partners, first of all in the advisory committees, which constitute a broad consultative mechanism with social partners and other relevant stakeholders. The coordination mechanisms cover the whole OSH sector. As part of the Nordic welfare model, Finnish work life is based on the principle of tripartite collaboration between the government, employers and employees.\textsuperscript{134, 139} All the key policies related to work life, the labour market, social security and OSH are negotiated collectively between the three partners (government, employers and trade unions), and agreements are usually made on a consensus basis. The leading role of the government arises from the strong efforts to reach a societal consensus and the legislative power that is subject to parliamentary approval and control.

The policy advisory committees span the various sectors and professional disciplines, i.e. trade unions and employers, professional associations and other non-governmental organisations. In some cases, industries and businesses are also included. The advisory committees are legislation based and have an official status in administration. The committees are appointed by the Government Council and are located within the jurisdiction of MSAH. According to the Government Ordinance, the “members of the Committee are to be appointed so as to represent the most representative social partners’ organizations and other stakeholders of importance to the development of OSH”.\textsuperscript{134, 139} The Government Ordinance stipulates the tasks of the committees as to:

- deal with the issues of harmonisation and promotion of OSH activities, and promotion of collaboration in OSH
- deal with the preparation of actions for the most important regulations, development, planning and follow-up in OSH
- discuss the general activity lines, objectives for results, and direct the resources for the promotion of OSH
- deal with other issues important for the development of OSH within the jurisdiction of the OSH Administration
- deal with all the other relevant issues requested by MSAH.

The advisory committees may establish specific sub-committees with a wide representation of various stakeholders.

4.3.3 Goals and Targets

Each of the national programmes has goals or targets. For example, MSAH runs the Occupational Accident Prevention Programme 2001–2006 called “Prioritising occupational safety”. This Programme was launched due to: rapid changes in work life, workplaces, work organisations and production methods; the strategy for 2010 of MSAH, calling for the improvement of safety and health at work and the attractiveness of work life; a levelling off in the declining trends in accident rates and rising trends in some sectors; and EU policies and other international influences. The objectives of the Programme are:\textsuperscript{139}

- a steady reduction in the number and severity of accidents
- promoting the health and functional capacity of workers
- improving the performance, productivity and quality of workplaces
- increasing the wellbeing of workers
- promoting high-standard safety cultures at workplaces
- application of the zero-risk vision and its operational implications in the entire Finnish work life.
4.3.4 Evaluation Methods

As the organisation with overall responsibility, MSAH follows the impacts of policies and programmes through evaluations, studies and surveys, and attempts to use high-quality methods for impact analyses and evaluations.

The special action programmes (national programmes) are all externally evaluated. In addition, the National Strategy on Occupational Safety and Health is periodically evaluated, and it aims at the implementation of legislation and at the continuous improvement and development of conditions of work, health, safety and wellbeing at work. It also contributes to the implementation of the government programmes and the Ministry’s general strategy in all aspects of work life, work environment, safety and health.
SECTION FIVE

CANADA
Country Summary

- Canada is a constitutional monarchy and a parliamentary democracy with a federal system of parliamentary government comprising ten provinces and three territories. It is a bilingual and multicultural nation, with both English and French as official languages at the federal level. Canada is the world’s second largest country by total area, after Russia, with a total area of 9,984,670 sq km, of which 9,093,507 sq km are land. Only 4.57% of the total land area is classified as arable.

- The current population estimate is 33.1 million. The current annual growth rate is 0.88%, with a birth rate of 10.78 births/1,000 population. In comparison with most developed countries, Canada maintains a relatively high immigration rate.

- Canada is one of the world’s wealthiest nations and is a member of the G8. GDP is $NZ1.67 trillion. GDP per capita is $NZ50,877. The GDP real growth rate is 2.9%. The inflation rate in 2006 was 2.9%. Public debt is 69.6% of GDP.

- The labour force is 17.6 million, the employment rate is 63.0%, the unemployment rate is 6.2% and the economic inactivity rate is not calculated.

- According to Statistics Canada (SC), the population is living longer and is generally in better health than previous generations. Overall life expectancy is estimated at 77 years for males and 84 years for females. Canada is an ethnically diverse nation, with 34 ethnic groups with at least 100,000 members each. Canada’s aboriginal population is growing almost twice as fast as the rest of the Canadian population.

- Recent health surveys reveal that heart disease, cancer, mental health problems, HIV/AIDS, asthma, obesity and diabetes are some of the health conditions that continue to affect many Canadians.

- The federal, provincial and territorial governments fund about 70% of all healthcare, with the rest being privately funded. However, there are significant inequities in accessing public healthcare. Access to specialised healthcare services is not straightforward, with one in five reporting difficulties. In 2003, Canada spent 10% of GDP on healthcare, about $NZ161.5 billion, or an average of $NZ5,105 per person.

- Canadian workers are covered by provincial or federal labour codes, depending on the sector in which they work. The Canada Labour Code deals with workers covered by federal legislation. This includes those in mining, transportation and federal employment. All other workers are covered by the health and safety legislation of the provinces in which they work.

- Health Canada runs the Canadian Centre for Occupational Health and Safety (CCOHS), which is a vehicle for dissemination and communication to stakeholders, and was created by the Canadian Centre for Occupational Health and Safety Act 1977–78. The CCOHS is the agency of the federal government that seeks to promote safe and healthy workplaces and prevent work-related diseases and injuries. However, provincial and territorial labour departments and workers’ compensation boards carry out a great deal of additional work in this area. The CCOHS has a staff of 96 and an annual budget of $NZ5.9 million.

- The Public Health Agency of Canada (PHAC) was created in 2004. It has an interest in injury prevention and runs a health surveillance programme. Injury prevention approaches currently appear limited to the provision of information about specific activities (e.g. equestrian, rugby, in-line skating) or the use of specific products (e.g. baby walkers, infant swings, trampolines, shopping carts). This initiative is less aimed at the workplace and more toward recreation and leisure, and family life.

- OSH is based on Part II of the Canada Labour Code 1985. The federal Labour Programme is run by the Department of Human Resources and Social Development Canada (HRSDC), which is responsible for implementing the Canada Labour Code and developing relevant policy. The current strategy involves the National Intervention Model, a process that assesses components of OSH in workplaces and is supposed to provide the framework to improve any deficiencies identified.

- SC provides a centralised national system, with a legal basis from the Statistics Act 1985.
There are four major organisations involved in relevant research at the national or federal level: the Association of Workers’ Compensation Boards of Canada; the CCOHS; Health Canada through PHAC; and the HRSDC. The provincial authorities, either governmental or workers’ compensation boards, also run research departments. For example, WorkSafe BC runs a Research Secretariat. There are also independent research institutions in Canada, some of which are highly productive. One example is the Toronto-based Institute for Work & Health in Ontario.

Mandatory/statutory workers’ compensation began in 1915 in Ontario. Workers’ compensation remains a provincial responsibility in Canada, therefore the exact rules vary from province to province.

The majority of OSH programmes are conducted at provincial level by provincial organisations. There is a limited amount of federal activity, and this is conducted in the main by the HRSDC and the CCOHS. The current National Intervention Model is a six-step multifactorial process aimed at collaboration with workplaces, with an emphasis on high-risk sectors and employers, and the development of partnerships with employers and employees. The overall goals and aspirations are to reduce fatalities and occupational disease and injury rates, but there are also shorter-term pragmatic goals of improving information quality, usability and user satisfaction, and increasing awareness of services.

Evaluation of progress toward goals is currently based on data that are likely to be unreliable, due to lower capture rates and lack of comparability between different provincial systems. The evaluation of strategic projects is more systematic.

5.1 CANADA – GENERAL INFORMATION

Canada is a constitutional monarchy with Elizabeth II, Queen of Canada, as head of state, and a parliamentary democracy with a federal system of parliamentary government and strong democratic traditions.

5.1.1 BACKGROUND INFORMATION

Canada is a land of vast distances and rich natural resources. It became a self-governing dominion in 1867 while retaining ties to the British Crown. Economically and technologically, the nation has developed in parallel with the US, its neighbour to the south across an unfortified border. Inhabited first by aboriginal peoples, Canada was founded as a union of British and former French colonies. Canada gained independence from the UK in an incremental process that began in 1867 and ended in 1982.

Canada today is a federal constitutional monarchy with a parliamentary democracy, comprising ten provinces and three territories. It is a bilingual and multicultural nation, with both English and French as official languages at the federal level. A technologically advanced and industrialised nation, Canada maintains a diversified economy heavily reliant on its abundant natural resources and on trade, particularly with the US, with which Canada has had a long and complex relationship. The Canadian Constitution governs the legal framework of the country and consists of written text and unwritten traditions and conventions. The Constitution includes the Canadian Charter of Rights and Freedoms, which guarantees basic rights and freedoms for Canadians that, generally, cannot be overridden by legislation of any level of government in Canada. It contains, however, a “notwithstanding clause”, which allows the federal Parliament and the provincial legislatures the power to override some other sections of the Charter temporarily, for a period of five years. Current important political issues in Canada include the problem of meeting public demand for quality improvements in healthcare and education services after a decade of budget cuts. Canada also faces questions about integrity in government following revelations regarding a corruption scandal in the federal government that had helped revive the fortunes of separatists in predominantly francophone Quebec.
Canada is the world's second largest country by total area, after Russia. It occupies most of northern North America. Extending from the Atlantic Ocean to the Pacific Ocean and northward into the Arctic Ocean, Canada shares land borders with the US to the south and to the north-west. Since 1925, Canada has claimed the portion of the Arctic between 60°W and 141°W longitude, but this claim is not universally recognised.

Canada has a total area of 9,984,670 sq km, of which 9,093,507 sq km are land. The terrain is enormously varied, consisting of mostly plains with mountains in the west and lowlands in the south-east. The highest point is Mount Logan (5,959 m). The northernmost settlement in Canada (and in the world) is Canadian Forces Station Alert on the northern tip of Ellesmere Island — latitude 82.5°N — just 817 km from the North Pole. The population density of 3.5 people per sq km is among the lowest in the world. The most densely populated part of the country is the Quebec City-Windsor Corridor along the Great Lakes and Saint Lawrence River in the south-east. To the north of this region is the broad Canadian Shield, an area of rock scoured clean by the last ice age, thinly soiled, rich in minerals, and dotted with lakes and rivers. Canada has far more lakes than any other country in the world and has a large amount of the world's fresh water. The Horseshoe Falls in Ontario is the largest component of Niagara Falls, one of the world's great waterfalls, a major source of hydroelectric power and a tourist destination. In eastern Canada, the Saint Lawrence River widens into the Gulf of Saint Lawrence, the world's largest estuary. The island of Newfoundland lies at its mouth. South of the Gulf, the Canadian Maritimes protrude eastward from the Gaspé Peninsula of Quebec. New Brunswick and Nova Scotia are divided by the Bay of Fundy, which experiences the world's largest tidal variations. Ontario and Hudson Bay dominate central Canada. West of Ontario, the broad, flat Canadian Prairies spread toward the Rocky Mountains, which separate them from British Columbia. Northern Canadian vegetation tapers from coniferous forests to tundra and finally to Arctic barrens in the far north. The northern Canadian mainland is ringed with a vast archipelago containing some of the world's largest islands.

Only 4.57% of the total land area is classified as arable, with approximately 0.65% planted in permanent crops. Natural resources include iron ore, nickel, zinc, copper, gold, lead, molybdenum, potash, diamonds, silver, fish, timber, wildlife, coal, petroleum, natural gas and hydropower. Canada has a coastline 202,080 km in length.

5.1.3 Population

The population of Canada was 3.23 million in the 1850s when records began. By the end of the 20th century, this had expanded ten-fold to more than 30 million. The population in mid-2006 was estimated at 33,098,932.

Canada is an ethnically diverse nation. According to the 2001 census, it has 34 ethnic groups with at least 100,000 members each. The largest ethnic group is Canadian (39.4%), followed by English (20.2%), French (15.8%), Scottish (14.0%), Irish (12.9%), German (9.3%), Italian (4.3%), Chinese (3.7%), Ukrainian (3.6%) and First Nations (3.4%). Canada's aboriginal population is growing almost twice as fast as the rest of the Canadian population. In 2001, 13.4% of the population belonged to visible minorities. In comparison with most developed countries, Canada maintains a relatively high immigration rate. Immigrants are particularly attracted to the major urban areas of Toronto, Vancouver and Montreal. In Canada, the provinces and territories are responsible for education, thus Canada has no national department of education. Each of the 13 education systems is similar, while reflecting its own regional history, culture and geography. The mandatory school age varies across Canada but generally ranges between the ages of 5–7 and 16–18, contributing to an adult literacy rate that is 99%. Post-secondary education is the responsibility of the provincial and territorial governments that provide most of the funding; the federal government provides additional funding through research grants. In 2002, 43% of Canadians aged between 25 and 64 had post-secondary education; for those aged 25 to 34, the post-secondary attainment reached 51%.
<table>
<thead>
<tr>
<th><strong>TABLE 5.1</strong></th>
<th>Canada key population statistics summary</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Latest population estimate</strong></td>
<td>33,098,932 (July 2006)</td>
</tr>
<tr>
<td><strong>Median age (years)</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>38.9 years</td>
</tr>
<tr>
<td><strong>Male</strong></td>
<td>37.8 years</td>
</tr>
<tr>
<td><strong>Female</strong></td>
<td>39.9 years</td>
</tr>
<tr>
<td><strong>Age distribution</strong></td>
<td></td>
</tr>
<tr>
<td>0–14 yrs</td>
<td>17.6%</td>
</tr>
<tr>
<td>15–64 yrs</td>
<td>69.0%</td>
</tr>
<tr>
<td>65 yrs and older</td>
<td>13.4%</td>
</tr>
<tr>
<td><strong>Population growth rate</strong></td>
<td>0.88%</td>
</tr>
<tr>
<td><strong>Birth rate</strong></td>
<td>10.78 births/1,000 population</td>
</tr>
<tr>
<td><strong>Gender ratio (male/female)</strong></td>
<td></td>
</tr>
<tr>
<td>At birth</td>
<td>1.05</td>
</tr>
<tr>
<td>&lt; 15 yrs</td>
<td>1.05</td>
</tr>
<tr>
<td>15–64 yrs</td>
<td>1.01</td>
</tr>
<tr>
<td>&gt; 64 yrs</td>
<td>0.75</td>
</tr>
<tr>
<td><strong>Total population</strong></td>
<td>0.98</td>
</tr>
</tbody>
</table>

5.1.4 ECONOMIC INDICATORS

Canada is one of the world’s wealthiest nations with a high per capita income, and is a member of the OECD and G8. Canada is a free-market economy with slightly more government intervention than the US, but much less than most European nations. Canada has traditionally had a lower per capita GDP than the US, but higher than the large western European economies. It is generally acknowledged that wealth in Canada has been more equally divided than in the US. For the past decade, after a period of turbulence, the Canadian economy has been growing rapidly with low unemployment and large government surpluses at the federal level. Today, Canada closely resembles the US in its market-oriented economic system, pattern of production and high living standards. The national unemployment rate of 6.2% in October 2006 is about as low as it has been in 30 years. Provincial unemployment rates vary from a low of 3.6% in Alberta to a high of 14.6% in Newfoundland and Labrador.

In the past century, the impressive growth of the manufacturing, mining and service sectors has transformed the nation from a largely rural economy into one that is primarily industrial and urban. As with other first-world nations, the Canadian economy is dominated by the service industry, which employs about two-thirds of Canadians. However, Canada is unusual among developed countries in the importance of the primary sector, with the logging and oil industries being two of Canada’s most important. Canada is one of the few developed nations that is a net exporter of energy. It has vast deposits of natural gas on the east coast, and large oil and gas resources centred in Alberta and also present in neighbouring British Columbia and Saskatchewan. The vast Athabasca Tar Sands give Canada the world’s second largest reserves of oil behind Saudi Arabia. In Quebec, British Columbia, Newfoundland and Labrador, Ontario and Manitoba, hydroelectric power is a cheap source of abundant energy. Canada is also one of the world’s most important suppliers of agricultural products, with the Canadian Prairies one of the most important suppliers of wheat and other grains. Canada is the world’s largest producer of zinc and uranium and a world leader in many other natural resources such as gold, nickel, aluminium and lead. Many, if not most, towns in the northern part of the country, where agriculture is difficult, exist because of a nearby mine or source of timber. Canada also has a sizeable manufacturing sector, centred in southern Ontario and Quebec, with the automobile industry especially important.

Canada is highly dependent on international trade, especially trade with the US. The 1989 Canada-US Free Trade Agreement and 1994 North American Free Trade Agreement (NAFTA) (which included Mexico) touched off a dramatic increase in trade and economic integration with the US. Since 2001, Canada has successfully avoided economic recession and has maintained the best overall economic performance in the G8. Since the mid-1990s, Canada’s federal government has posted annual budgetary surpluses and has steadily paid down the national debt.
### Table 5.2: Canada key economic statistics summary

<table>
<thead>
<tr>
<th>Category</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>GDP (purchasing power parity – PPP)</td>
<td>$NZ1.671 trillion</td>
</tr>
<tr>
<td>GDP (official exchange rate)</td>
<td>$NZ1.556 trillion</td>
</tr>
<tr>
<td>GDP real growth rate</td>
<td>2.9%</td>
</tr>
<tr>
<td>GDP per capita (PPP)</td>
<td>$NZ50,877</td>
</tr>
<tr>
<td>GDP composition by sector</td>
<td></td>
</tr>
<tr>
<td>Agriculture</td>
<td>2.3%</td>
</tr>
<tr>
<td>Industry</td>
<td>29.2%</td>
</tr>
<tr>
<td>Services</td>
<td>68.5%</td>
</tr>
<tr>
<td>Inflation rate</td>
<td>2.2%</td>
</tr>
<tr>
<td>Population below poverty line</td>
<td>15.9%</td>
</tr>
<tr>
<td>Budget</td>
<td></td>
</tr>
<tr>
<td>Revenues</td>
<td>$NZ240 billion</td>
</tr>
<tr>
<td>Expenditures</td>
<td>$NZ229.5 billion</td>
</tr>
<tr>
<td>Public debt</td>
<td>69.6% of GDP</td>
</tr>
<tr>
<td>Reserves and foreign exchange and gold</td>
<td>$NZ49.7 billion</td>
</tr>
<tr>
<td>External debt</td>
<td>$NZ661.4 billion</td>
</tr>
<tr>
<td>Economic aid donor</td>
<td>$NZ3.9 billion</td>
</tr>
</tbody>
</table>

#### 5.1.5 Employment statistics

According to Statistics Canada (SC), the overall unemployment rate for Canada in October 2006 was 6.2%. Nationally, the unemployment rate for adult women set a record low, dropping to 4.9%, while for adult men it edged down to 5.4%. However, there are regional variations in the unemployment rate, and it also varies across age groups. The western provinces of Alberta and Saskatchewan continued to outpace the rest of the country in employment growth in 2006. In Alberta alone, employment increased by 23,000 in October, while the unemployment rate hit a three-decade low of 3.0%. Following four months of weakness, youth employment jumped by 34,000 in October, all in full time. Almost half of the employment growth came from Alberta, pushing the youth employment rate up 2.9 percentage points to 67.5%, the highest rate in the country. Young people of both sexes aged 15 to 24 had a national unemployment rate of 11.3% and an employment rate of 58.8%. Males 25 years or older had a national unemployment rate of 11.3% and an employment rate of 69.6%. Females 25 years or older had a national unemployment rate of 4.9% and an employment rate of 58.2%. The unemployment rate was highest in Newfoundland, at 14.2%, and lowest in Alberta, at 3.0%. 
### Table 5.3: Canada key employment statistics summary

<table>
<thead>
<tr>
<th>Category</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Labour force</strong></td>
<td>17.6 million (people of working age)§</td>
</tr>
<tr>
<td><strong>Labour force distribution</strong></td>
<td></td>
</tr>
<tr>
<td>Agriculture</td>
<td>2.0%</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>14.0%</td>
</tr>
<tr>
<td>Construction</td>
<td>5.0%</td>
</tr>
<tr>
<td>Services</td>
<td>75.0%</td>
</tr>
<tr>
<td>Other</td>
<td>4.0%</td>
</tr>
<tr>
<td><strong>Employment rate</strong></td>
<td>63.0% (of people of working age)</td>
</tr>
<tr>
<td><strong>Unemployment rate</strong></td>
<td>6.2% October 2006</td>
</tr>
<tr>
<td><strong>Economic inactivity rate</strong></td>
<td>N/A</td>
</tr>
<tr>
<td><strong>Household income by consumption or percentage share</strong></td>
<td>Lowest 10% 2.8%</td>
</tr>
<tr>
<td></td>
<td>Highest 10% 23.8%</td>
</tr>
</tbody>
</table>

§ Statistics Canada defines “working age” as 15+ years.

### 5.1.6 Health statistics

According to SC, the Canadian population is living longer and is generally in better health than previous generations. However, SC recognises a number of important challenges in the health sector, including the ongoing reform of the healthcare system. Recent surveys have indicated that most Canadians believe that they are in very good to excellent health. Life expectancy, as well as health-adjusted life expectancy, has increased, the infant death rate has dropped, many infectious diseases have been practically eliminated and medical techniques have continued to evolve.

However, although Canadians are healthier today than in the past, a number of problems persist. Heart disease, cancer, mental health problems, HIV/AIDS, asthma, obesity and diabetes are some of the health conditions that continue to affect many Canadians. Moreover, new infectious disease strains, such as SARS, the West Nile virus and infection from *C. difficile* bacteria, are being monitored because they pose an ongoing threat to public health. There are marked disparities in health status among Canada’s population groups. Certain groups, such as the indigenous people, are generally in poorer health than the rest of the population. People who lead a healthy lifestyle (that is, those who are active, eat well, drink alcohol in moderation and do not smoke) are less likely to have health problems. Better socioeconomic conditions, such as higher income and higher education, also contribute to a better state of overall health.

Many Canadians have health limitations that interfere with their daily activities. In 2001, 3.6 million people living in households (particularly the elderly) confirmed that health problems limited their activities in some way. The types of disability most frequently reported by people aged 15 and over are mobility or dexterity problems, pain-related disability and hearing or vision impairments. Among the elderly, mobility and memory problems are the most frequently reported disabilities.

Access to specialised healthcare services (such as visits to specialists, non-emergency surgeries and diagnostic tests, as well as access to first contact services) can be a challenge for a number of Canadians, according to the 2003 Health Services Access Survey. In 2003, more than 2.9 million Canadians visited a medical specialist to be assessed for a new illness or condition, and about 21% (just over 600,000 people) reported experiencing a difficulty with access. Also, 13% of those who accessed non-emergency surgery (about 200,000 people) reported that they had experienced difficulties. The majority of those experiencing difficulties reported that the main barrier was too long a wait for care.

In Canada, the federal, provincial and territorial governments share responsibility for the healthcare system. The system, which gives all Canadians access to healthcare, has undergone many changes since universal healthcare
was implemented in 1968. Hospitals experienced big changes in the 1990s. While hospitals had 25% fewer beds in 1997/98 than in 1984/85, trips to emergency rooms and clinics rose 9%. In addition, the use of outpatient services was three times higher in 1997/98 than in 1984/85. More patients were also being treated in day surgery. While there was a decrease in institutional care, community-based care increased. From 1996 to 2002, the proportion of elderly people who received community care for a long-term health condition went from 26% to 32% among women and from 17% to 21% among men. Healthcare professionals in Canada include a wide range of regulated and unregulated caregivers. The first category includes doctors, nursing staff, physiotherapists, occupational therapists and dentists. Family members, friends and community volunteers make up the second category. In 2000, more than 1.5 million Canadians worked in health and social services. Nursing is the most frequent healthcare occupation. In 2000, most of Canada’s 232,000 registered nurses worked in hospitals, and more and more are working in community health. However, Canada’s nursing staff is ageing, and fewer young people are entering the profession.

Physicians are the second largest group of regulated healthcare professionals. In 2000, more than 57,800 doctors worked in clinical and non-clinical practices in Canada, an increase of 5.3% since 1996. During that period, the increase in the number of specialists was higher than in the number of family physicians. Like nurses, doctors are a group that has been ageing faster than some other professions. Despite the increased number of doctors, more than 3.6 million Canadians, or 14% of the population, did not have a GP in 2003. Of these, more than 1.2 million people were unable to find one and the other 2.4 million had not looked for one.

In 2003, Canada spent roughly $NZ161.5 billion on healthcare, or an average of $NZ5,105 per person. 10% of the Canadian GDP was dedicated to healthcare spending, a level first reached in 1992. Public funds are the primary source of funding for healthcare. In 2001, 71% of total healthcare expenses in Canada were paid for from the public purse. The rest of the funding comes from the private sector, which generally funds services such as dental care, vision care, chiropractic care and medication.

Expenses incurred by hospitals are the top category of health expenditure, which totalled 30% in 2003. Retail drug sales are the second most costly category, followed by doctor services.

Life expectancy increased in Canada from 59 years for males and 61 years for females in the 1920s, to 75 and 81 years respectively at the end of the 20th century. Infant mortality rates remain steady at about 4.7 per 1,000 live births.

<table>
<thead>
<tr>
<th>TABLE 5.4</th>
<th>Canada key health statistics summary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Birth rate</td>
<td>10.78 births/1,000 population</td>
</tr>
<tr>
<td>Total fertility rate</td>
<td>1.61 children born/woman</td>
</tr>
<tr>
<td>Death rate</td>
<td>7.8 deaths/1,000 population</td>
</tr>
<tr>
<td>Infant mortality rate</td>
<td>4.7 Total Deaths/1,000 live births</td>
</tr>
<tr>
<td></td>
<td>Male 5.15</td>
</tr>
<tr>
<td></td>
<td>Female 4.22</td>
</tr>
<tr>
<td>Life expectancy at birth (2006 estimate)</td>
<td>Total 80.22 years</td>
</tr>
<tr>
<td></td>
<td>Male 76.86 years</td>
</tr>
<tr>
<td></td>
<td>Female 83.74 years</td>
</tr>
</tbody>
</table>

5.2 CANADA – NATIONAL OSH SYSTEMS

Canadian workers are covered by provincial or federal labour codes, depending on the sectors in which they work. The Canada Labour Code deals with workers covered by federal legislation. This includes those in mining, transportation and federal employment. All other workers are covered by the health and safety legislation of the provinces in which they work.
Health Canada runs the Canadian Centre for Occupational Health and Safety (CCOHS), which is a vehicle for dissemination and communication to stakeholders, and was created by the Canadian Centre for Occupational Health and Safety Act 1977–78. The purpose of that legislation was “to promote the fundamental right of Canadians to a healthy and safe working environment by creating a national institute concerned with the study, encouragement and cooperative advancement of occupational health and safety, in whose governing body the interests and concerns of workers, trade unions, employers, federal, provincial and territorial authorities, professional and scientific communities and the general public will be represented”.

The Public Health Agency of Canada (PHAC), also known as Agence de Santé Publique du Canada, was created in 2004. It is an agency of the Department of Health within the government of Canada. The headquarters are in Winnipeg, Manitoba, which is the location of Canada’s only level 4 microbiology laboratory for human health. PHAC is responsible for public health and, more specifically, emergency preparedness and response and infectious and chronic disease control and prevention. PHAC also has an interest in injury prevention and runs a health surveillance programme. Injury prevention approaches currently appear limited to the provision of information about specific activities (e.g. equestrian, rugby, in-line skating) or the use of specific products (e.g. baby walkers, infant swings, trampolines, shopping carts). This initiative is less aimed at the workplace and more toward recreation and leisure, and family life.

5.2.1 POLICY

The federal Labour Programme is run by the Department of Human Resources and Social Development Canada (HRSDC). The HRSDC is responsible for implementing the Canada Labour Code and developing relevant policy. It participates in, and contributes to, the policy research initiative that conducts research in support of the government of Canada’s medium-term agenda. Its core mandate is “to advance research on emerging horizontal issues, and to ensure the effective transfer of acquired knowledge to policy-makers”. Following a recent review, the HRSDC concluded that the inspection of worksites is one of the most effective OSH interventions. It also concluded that better prevention results are achieved by focusing on employers and worksites at higher risk of work injuries within a given industrial sector, and that the risk of work injuries is usually defined using indicators such as frequency rate, incidence rate, prevalence rate and severity index associated with workplace injuries. These findings led to the development of the National Intervention Model, a process that assesses components of OSH in workplaces and provides the framework to improve any deficiencies identified. The Model was initially used as a pilot project by four regions. Subsequently, a single National Intervention Model was developed to provide a reliable and consistent approach across the country. This is described in detail below.

5.2.2 LEGISLATION

OSH is based on Part 2 of the Canada Labour Code 1985. This is an Act passed by the Canadian federal Parliament to consolidate certain labour statutes. The Code applies, in general, to those industries in which the federal government has jurisdiction instead of the provinces. These industries include broadcasting, telecommunications, chartered banks, postal service, airports and air transportation, shipping and navigation, and inter-provincial or international transportation (e.g. road, railway, ferry or pipeline). The Code also applies to businesses in the Territories, on First Nations reserves, and certain Crown corporations. However, it does not apply to the Royal Canadian Mounted Police, the military, or those who used to be covered by the Public Service Staff Relations Act 1985, which has been repealed, or its successor, the Public Service Modernisation Act 2003.
The Code is divided into three distinct parts. The first part deals with collective bargaining between unions and employers. It was mainly derived from the Industrial Relations and Disputes Investigation Act 1948. The second part deals with health and safety in the workplace. The third part deals with employment standards, but defers mostly to provincial legislation about employment.

The purpose of Part 2 of the Code is “to prevent accidents and injury to health arising out of, linked with, or occurring in the course of employment to which this Part applies”. It deals with maintaining the health and safety of workers in the workplace, and places most emphasis on the recognition and prevention of hazards. Sections 124 and 125 set out the duties of employers with regard to the health and safety of their employees. A list of 45 general and specific duties for employers to follow is provided. This list includes, for example, providing first-aid facilities, potable water, sanitary and personal facilities, prescribed safety materials, equipment, devices and clothing. These duties placed on employers extend beyond the workplace and include all areas in which employees may travel in the course of a working day. Employers are also responsible for third party contractors and any other people with whom they are in an employment relationship. Sections 122.3 and 132 establish conditions for employees with special needs, and also cover pregnant and nursing employees. Section 126 sets out the duties of employees. It is their duty to “take all reasonable and necessary precautions to ensure the health and safety of the employee, the other employees and any person likely to be affected by the employee’s acts or omissions” and to use any safety features that the employer provides. Sections 127.1 and 128 set out a resolution process for whenever there is conflict between an employee and employer. An employee is permitted to “refuse to use or operate a machine or thing, to work in a place or to perform an activity, if the employee while at work has reasonable cause to believe that the performance of the activity constitutes a danger to the employee or to another employee”. There is a requirement for all complaints to be reasonably investigated to find if the claim is justified. In order to facilitate investigations, Sections 134 to 140 establish requirements, regulations and procedures for health and safety committees, representatives and officers. A committee must be established consisting of at least two employees for workplaces with 20 or more employees. For workplaces with fewer than 20 employees, a non-managerial employee, functioning as a health and safety representative, must select at least one representative. The employer must be readily accessible to this representative in order to address health and safety matters. Regional health and safety officers are appointed by the Minister of Labour and investigate incidents and complaints concerning health and safety in the workplace. Section 148 sets out provision for fines of up to $SCAN1,000,000 ($NZ1,293,011) and up to two years in prison for violations of this part of the Code. Fatalities that occur in contravention to this part of the Code can be construed as a criminal act and prosecuted as such. There are special provisions for coal mines. Section 137.1 establishes the composition, procedures and regulations of a Coal Mining Safety Commission, and Section 125.3 requires employers to submit their plans and procedures to this Commission. Section 140 provides for the designation of health and safety officers, and Section 141 outlines their powers, including inspections.

The CCOHS operates under the legislative authority of the Canadian Centre for Occupational Health and Safety Act 1977–78, which was passed by unanimous vote in the Canadian federal Parliament. The purpose of this Act is “to promote the fundamental right of Canadians to a healthy and safe working environment by creating a national institute concerned with the study, encouragement and cooperative advancement of occupational health and safety, in whose governing body the interests and concerns of workers, trade unions, employers, federal, provincial and territorial authorities, professional and scientific communities and the general public will be represented”. Enabled by this legislation, the CCOHS is therefore the agency of the federal government of Canada that seeks to promote safe and healthy workplaces and prevent work-related diseases and injuries. However, provincial and territorial labour departments and workers’ compensation boards carry out a great deal of additional work in this area.
According to the Association of Workers’ Compensation Boards of Canada, the relevant Acts and regulations are as follows:

**Alberta**
- Regulations – Workers’ Compensation Regulation; Firefighters’ Primary Site Cancer Regulation.

**British Columbia**
- Regulations – Boards of Review Regulation; Fishing Industry Regulations; Occupational Disease Recognition Regulation; Occupational Health and Safety Regulation; Reports of Injuries Regulations; Transitional Review and Appeal Regulation; Workers’ Compensation Act Appeal Regulation; Workers’ Compensation Act (Review Board) Regulation; Workers’ Compensation Appeal Tribunal Compensation Regulation.

**Manitoba**
- Regulations – Adjustment in Compensation Regulation; Appeal Commission Rules of Procedure; Declaration of Workers in Government Employment Order No. 1, 1989; Declaration of Workers in Government Employment Orders; Excluded Industries, Employers’ and Workers’ Regulation; Firefighters’ Minimum Periods of Employment and Non-Smoking Regulation; Group Life Insurance Regulation; Interest on Over-Assessment Regulation; Interest, Penalties and Financial Matters Regulation; Self-Insured Employers’ Regulation; Workers’ Compensation (Miscellaneous Provisions) Regulation, repeal.

**New Brunswick**
- Regulations – Forms; Exclusion of Workers; Permanent Physical Impairment Rating Schedule; Pension Fund; General; Funding of Safety Associations.

**Newfoundland and Labrador**
- Regulations – Construction Industry Early and Safe Return to Work and Re-employment Regulations; Workplace Health, Safety and Compensation Regulations; Workplace Health, Safety and Compensation Review Division Regulations.

**Northwest Territories and Nunavut**
- Regulations – Appeals Tribunal Rules of Procedure; Assignment of Statement Administration Order; Legislative Review Assignment Order; Workers’ Compensation General Regulations.

**Nova Scotia**
- Regulations – Chronic Pain Regulations; Firefighters’ Compensation Regulations; Interjurisdictional Mutual Aid Regulations; Workers’ Advisers Program Eligibility Regulations; Workers’ Advisers Program Transitional Regulations; Workers’ Compensation Appeal Backlog Regulations; Workers’ Compensation Appeal Tribunal Alternative Dispute Resolution Regulations; Workers’ Compensation General Regulations; Workers’ Compensation Temporary Benefits Regulations; Workers’ Compensation Transitional Appeal Regulations.

**Ontario**
- Regulations – Benefit for Loss of Retirement Income; First Aid Requirements; Functional Abilities Form; General; Pension Plan for Board Employees; Reinstatement in the Construction Industry.
Prince Edward Island
• Act – Workers’ Compensation Act.
• Regulations – General Regulations; Appeal Regulations; Spousal Benefits Regulations.

Quebec
• Act – Loi sur les accidents du travail et les maladies professionnelles.
• Regulations – 36 associated regulations.

Saskatchewan
• Act – Workers’ Compensation Act.
  Regulations – Workers’ Compensation General Regulations; Workers’ Compensation Act Exclusion Regulations.

Yukon
• Act – Workers’ Compensation Act.

5.2.3 DESIGNATED AUTHORITIES

Since 2003, the federal HRSDC has held labour responsibilities. The HRSDC is responsible for implementing the Canada Labour Code, including Part 2 on OSH.

In practice, it provides a centralised service for disseminating information, and day-to-day operational activity for OSH is devolved to provincial organisations that serve as the designated authorities. These are:

• Alberta – Alberta Department of Human Resources and Employment
• British Columbia – Workers’ Compensation Board of British Columbia
• Manitoba – Manitoba Labour and Immigration
• New Brunswick – Workplace Health, Safety and Compensation Commission
• Newfoundland and Labrador – Occupational Health and Safety Department
• Northwest Territories and Nunavut – Workers’ Compensation Board
• Nova Scotia – Department of Environment and Labour
• Ontario – Ontario Ministry of Labour
• Prince Edward Island – Workers’ Compensation Board
• Quebec – Commission de la santé et de la sécurité du travail du Québec
• Saskatchewan – Saskatchewan Department of Labour
• Yukon – Yukon Workers’ Compensation Health and Safety Board.

CCOHS

The CCOHS is a Canadian federal government agency based in Hamilton, Ontario, which serves to support the vision of eliminating all Canadian work-related illnesses and injuries. The Centre was established in 1978. The CCOHS is a federal departmental corporation reporting to the Parliament of Canada through the federal Minister of Labour. There is a tripartite Council of Governors with representatives from government (federal, provincial and territorial), employers and workers. The CCOHS seeks to provide credible, unbiased and relevant information about workplace hazards and conditions easily and widely accessible to all Canadians.

The published mission for the CCOHS is “to be the Canadian Centre of Excellence for work-related disease and injury prevention initiatives and occupational health and safety information”.\(^{145}\) The principal method to achieve this is by facilitating consultation and cooperation among federal, provincial and territorial jurisdictions, and engaging both labour and management. The CCOHS therefore assists in the development and maintenance of policies and programmes, and serves as a national centre for information relating to OSH.
To this end, the CCOHS offers a diverse range of products and services that are designed in cooperation with national and international OSH organisations, with an emphasis on preventing illnesses, injuries and fatalities. Some of these services are provided free to all users (such as OshAnswers, the person-to-person enquiry service, the electronic newsletter and public presentations), and some specialty resources are provided on a cost recovery basis (these include database subscriptions, manuals and training programmes). The CCOHS has attempted to address the consistently high level of diseases and injuries incurred by new and young Canadian workers with the development of a “Youth Zone” on its website. This contains practical information and resources specific to young workers, their employers and parents, to help prepare them to assume their roles for health and safety at work.

The CCOHS runs the CANOSH website to enable Canadians “to easily and independently locate occupational health and safety information provided by the federal, provincial and territorial governments of Canada and by the CCOHS”.

Association of Workers’ Compensation Boards of Canada (AWCBC)

The AWCBC is not a designated authority per se. However, it serves as an important bridge between provincial workers’ compensation boards that are designated authorities in each province. The AWCBC was founded in 1919 as a non-profit organisation “to facilitate the exchange of information between Workers’ Compensation Boards and Commissions”. It began at a time when workers’ compensation law, policy and administration were in their infancy. There were six founding members: Ontario, Nova Scotia, British Columbia, Manitoba, Alberta and New Brunswick. Saskatchewan joined in 1929, Quebec in 1931, Prince Edward Island in 1949 and Newfoundland in 1950. Lastly, the Northwest Territories and Nunavut and Yukon Territory joined in 1974. Membership has expanded to include two honorary members and a number of associate members who are interested in and focus on activities consistent with the AWCBC’s vision, which supports the common goal of safe workplaces and healthy workers. The AWCBC is governed by its Constitution. Funding for the AWCBC has historically come from membership dues. Currently, expenses for the operation of the national office and annual convention are pro-rated among the full members, and associate members pay a yearly fee.

The AWCBC’s vision is “to drive a strong Canadian leadership role in providing the safest and healthiest workplaces in the world and a fair, affordable workers’ compensation insurance system”, and its mission is “achieving excellence through data analysis, shared knowledge, education and networking”. The AWCBC established a National Work Injuries Statistics Program in 1993, and this provides statistical summaries on the number of accepted time loss diseases and injuries and the number of fatalities for each Canadian jurisdiction. It also provides comparison statistics for financial measures annually from each provincial board.

5.2.4 INSPECTION AND COMPLIANCE SYSTEMS

Section 140 of the Canada Labour Code Part 2 provides for the designation of health and safety officers. It states, “The Minister may… enter into an agreement with any province or any provincial body specifying the terms and conditions under which a person employed by that province or provincial body may act as a health and safety officer”. Section 141 outlines the powers of health and safety officers, and Section 141.1 defines the powers of inspection. Specifically, Section 141 states that:

A health and safety officer may, in carrying out the officer’s duties and at any reasonable time, enter any work place controlled by an employer and, in respect of any work place, may:

(a) conduct examinations, tests, inquiries, investigations and inspections or direct the employer to conduct them;
(b) take or remove for analysis, samples of any material or substance or any biological, chemical or physical agent;
(c) be accompanied or assisted by any person and bring any equipment that the officer deems necessary to carry out the officer's duties;
(d) take or remove, for testing, material or equipment if there is no reasonable alternative to doing so;
(e) take photographs and make sketches;
(f) direct the employer to ensure that any place or thing specified by the officer not be disturbed for a reasonable period pending an examination, test, inquiry, investigation or inspection in relation to the place or thing;
(g) direct any person not to disturb any place or thing specified by the officer for a reasonable period pending an examination, test, inquiry, investigation or inspection in relation to the place or thing;
(h) direct the employer to produce documents and information relating to the health and safety of the employer's employees or the safety of the work place and to permit the officer to examine and make copies of or take extracts from those documents and that information;
(i) direct the employer or an employee to make or provide statements, in the form and manner that the officer may specify, respecting working conditions and material and equipment that affect the health or safety of employees;
(j) direct the employer or an employee or a person designated by either of them to accompany the officer while the officer is in the work place; and
(k) meet with any person in private or, at the request of the person, in the presence of the person's legal counsel or union representative.

Section 141.1 states that:

(1) A health and safety officer shall conduct an inspection of the work place in the presence of:
   (a) an employee member and an employer member of the work place committee; or
   (b) the health and safety representative and a person designated by the employer.

Inspection not to be delayed

(2) A health and safety officer may proceed with an inspection in the absence of any person mentioned in subsection (1) if that person chooses not to be present.

5.2.5 BUDGETS

The CCOHS provides free information on OSH to support Canadians in their efforts to improve workplace safety and health. Canadians are provided information through a free and impartial personalised service via telephone, email, person-to-person, fax or mail. Alternatively, they can independently access a broad range of electronic and print resources developed to support the safety and health information needs of Canadians. This may include cost recovery products and services and is supported financially by contributions from various stakeholders. Through health and safety information development, the CCOHS collects, processes, analyses, evaluates, creates and publishes authoritative information resources on OSH for the benefit of all working Canadians. This information is used for education and training, research, policy development, the development of best practices, the improvement of health and safety programmes, achieving compliance and for personal use. When the product or service provided by the CCOHS is to identifiable external recipients with benefits beyond those enjoyed by the general taxpayer, a user fee is charged. The CCOHS promotes and facilitates consultation and cooperation among federal, provincial and territorial jurisdictions and participation by labour, management and other stakeholders in the establishment and maintenance of high standards and OSH initiatives for the Canadian context. The sharing of resources results in the coordinated and mutually beneficial development of unique programmes, products and
services. Collaborative projects are usually supported with a combination of financial and non-financial contributions to the programmes by stakeholders and result in the advancement of the health and safety initiatives. Budget information for the period 2006–09 is available from the Treasury Board of Canada Secretariat (Sécretariat du Conseil du Trésor du Canada).

<table>
<thead>
<tr>
<th>TABLE 5.5</th>
<th>CCOHS planned spending146</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2006/07</td>
</tr>
<tr>
<td>Financial resources ($000)</td>
<td>$CAN 4,484/$NZ5,925</td>
</tr>
<tr>
<td>Human resources (full-time equivalent)</td>
<td>96</td>
</tr>
</tbody>
</table>

The CCOHS is a national centre dedicated to the advancement and dissemination of unbiased information on OSH. The CCOHS provides Canadians with information about OSH that is trustworthy, comprehensive and intelligible. The information facilitates responsible decision-making, promotes improvements in workplace health and safety, increases awareness of the need for a healthy and safe working environment, and supports OSH and education training. The CCOHS has one overall programme activity, OSH information development, delivery services and tripartite collaboration. The Centre’s policies and programmes are directed to the pursuit of key results.
<table>
<thead>
<tr>
<th>TABLE 5.6</th>
<th>CCOHS planned spending by strategic outcomes¹⁴⁶</th>
</tr>
</thead>
<tbody>
<tr>
<td>EXPECTED RESULTS</td>
<td>PRIORITIES</td>
</tr>
<tr>
<td>Easy access to occupational health and safety information and service</td>
<td>Satisfaction with and ease of access and retrieval of OHS information from inquiries service, web access and other sources</td>
</tr>
<tr>
<td></td>
<td>Proactively identify new resources to meet Canadians’ current information needs</td>
</tr>
<tr>
<td></td>
<td>Expand content provided from the internet via OshAnswers</td>
</tr>
<tr>
<td></td>
<td>Enhance CCOHS’s internet usability through improved technology and website design</td>
</tr>
<tr>
<td></td>
<td>Identify emerging high-risk OHS issues and needs, and develop appropriate products/services to address the needs, such as guides, web portals and forums</td>
</tr>
<tr>
<td></td>
<td>Ongoing development and refinement of existing OSH products and services</td>
</tr>
<tr>
<td>Increased awareness and understanding of occupational health and safety issues in the workplace</td>
<td>Hosting national forums on key issues</td>
</tr>
<tr>
<td></td>
<td>Promoting healthy workplaces and OSH information through internet, training, conferences and presentations</td>
</tr>
<tr>
<td></td>
<td>Enhancement of website presentation and its searchability</td>
</tr>
<tr>
<td></td>
<td>Provide additional key resources on chemical health and safety</td>
</tr>
<tr>
<td></td>
<td>Increase content through partnerships such as the Canadian Health Network</td>
</tr>
<tr>
<td></td>
<td>Provide Health and Safety Report as an electronic newsletter delivered to Canadians via the internet</td>
</tr>
<tr>
<td></td>
<td>Develop internet chat group capabilities mechanism to assist Canadians to efficiently exchange ideas on health and safety</td>
</tr>
<tr>
<td>Application of occupational health and safety information to improve workplace practices</td>
<td>Increase workplace effectiveness through provision of health and safety management systems</td>
</tr>
<tr>
<td></td>
<td>Provide unbiased high quality OSH information</td>
</tr>
<tr>
<td></td>
<td>Improve application in workplace through promotion of healthy workplace</td>
</tr>
<tr>
<td></td>
<td>Foster collaboration and exchanges in ideas through national dialogues, forums and conferences to increase applications in workplace and improve practices</td>
</tr>
<tr>
<td></td>
<td>Collaborate with education sector, youth groups, and partners to expand and improve teaching health and safety in the school system</td>
</tr>
<tr>
<td>Partial recovery of costs from user fees</td>
<td>Sale of products and services that meet the objective of improving health and safety in the workplace</td>
</tr>
<tr>
<td></td>
<td>Increase revenues in new product lines</td>
</tr>
</tbody>
</table>
Canada has a centralised statistical system in which SC, the national office, has main responsibility for serving the statistical needs of the country, including other levels of government. Constitutionally, the field of census and statistics is the responsibility of the federal government, but this has never precluded statistical activity by the provinces in their spheres of jurisdiction. Between 1871 and 1911, the federal Department of Agriculture conducted censuses at ten-year, and sometimes five-year, intervals. These covered not only population and agriculture, but also general economic activities. But surveys between censuses were rare, and such non-census statistics as did emerge resulted from the administrative activities of various departments and were fragmentary and uncoordinated. A departmental commission was set up in 1912 to rationalise this unsatisfactory situation and recommended the organisation of a central statistical office to coordinate, unify, extend and improve statistics. In 1918, the Dominion Bureau of Statistics was created. It was given a mandate that has changed very little since, notwithstanding a change of name to Statistics Canada in 1971.

The legal basis for SC is provided by the Statistics Act. Relevant legislation includes the: Statistics Act, RSC 1985, c. S-19; Corporations Returns Act, RSC 1985, c. C-43; Access to Information Act, RSC 1985, c. A-1; Privacy Act, RSC 1985, c. P-21; and Canadian Security and Intelligence Service Act, RSC 1985, c. C-23. The Statistics Act gives SC a number of statutory duties: to collect, compile, analyse, abstract and publish statistical information; to collaborate with government departments in the collection, compilation and publication of statistical information; to take population and agricultural censuses; to reduce duplication in the information collected by government departments; and to promote and develop integrated social and economic statistics pertaining to the whole of Canada and its provinces. The Corporations Returns Act also requires SC to produce certain kinds of information.

The key provisions of the Statistics Act are that SC is to “collect, compile, analyse, abstract and publish statistical information relating to the commercial, industrial, financial, social, economic and general activities of the people”. As such, in terms of subject coverage, the Act provides the scope of the mandate of the agency. The Act also provides for full access by SC to all records maintained by all levels of government, business, institutions and individuals, including income tax records. The Act requires mandatory responses by all organisations or persons to surveys conducted by the agency, unless the survey is specifically designated by the minister as voluntary. In carrying out surveys, SC has adopted a policy of explanation, persuasion and appeal to civic duty to elicit willing responses. It tries to avoid the threat of penalties. The Act gives the agency broad responsibility for establishing compatible standards and for eliminating duplication of effort by federal and provincial departments. The Act provides stringent protection of the confidentiality of identifiable individual returns made for the purposes of the Act. Employees of SC are required to swear an oath of secrecy, and the Act prescribes severe penalties to any employee who violates confidentiality provisions. Returns made under the Statistics Act are privileged information and, as such, may not be used in legal proceedings. The Access to Information Act provides citizens and permanent residents of Canada with the right of access to records under the control of federal government institutions. There are a number of exemptions from this right of access, the most important of which, from the statistical standpoint, is identifiable individual returns made under the Statistics Act. The Privacy Act protects the privacy of individuals with respect to personal information about themselves held by a government institution, and provides individuals with a right of access to such information. Pursuant to the provisions of the Privacy Act, government institutions have the discretion, in certain situations, to disclose personal information without the consent of the individual to whom it relates. These provisions are subject to any other Act of parliament, and accordingly, the confidentiality provisions of the Statistics Act preclude the release of personal information collected pursuant to the Statistics Act under these provisions of the Privacy Act.
The head of SC is the Chief Statistician of Canada. For the purposes of carrying out the requirements of the Statistics Act, their duties are to advise on matters pertaining to the statistical programmes of the departments and agencies of the government of Canada, to supervise the administration of the Statistics Act and to control the operations and staff of SC and to report yearly on the activities of SC to the responsible minister. A related statistical body, the National Statistics Council, was established in 1986 by the Minister Responsible for Statistics Canada under Cabinet Decision authority. It is composed of about 40 members, appointed by the minister. They are selected on the basis of individual excellence, so as to represent a variety of interests and users. Appointments are for three years, and the Council members are eligible for reappointment. The Chief Statistician of Canada serves as an ex officio member of the Council. The main task of the Council is to advise the Chief Statistician of Canada in setting priorities and in guiding the programmes of SC.

SC is a separate government entity, but reports to Parliament through a minister with designated responsibility for the agency (currently that is the Minister of Industry). The responsible minister exercises certain responsibilities under the Statistics Act, on the advice of the Chief Statistician. Otherwise, the Chief Statistician supervises the administration of the Act and controls the operations and staff of SC. The Cabinet specifically authorises the contents of censuses of population and agriculture. Otherwise, programme decisions are made by the Chief Statistician. SC’s overall budget is authorised by Parliament, based on the advice of the Treasury Board. Programme budgets are based largely on the decisions of the Chief Statistician. The Chief Statistician makes decisions on the publication of statistical results. The responsibility to publish information has been interpreted to mean that all end products of the agency are to be placed in the public domain. The publication process is set up to allow information to be made public as soon as it becomes available, and when information is released, it is available to everyone at the same time. SC is programmatically and administratively centralised, but geographically decentralised. The headquarters are in Ottawa, with five regional and four satellite offices across the country. SC collaborates closely with the statistical offices of the ten provinces and three territories.

Some statistics are produced and published by other federal departments as incidental by-products of their primary activities, and some are developed by provincial statistical offices. However, the great majority of official statistics originate from SC.

5.2.7 RESEARCH INSTITUTIONS

There are four major organisations involved in relevant research at the national or federal level. These are the AWCBC, the CCOHS, Health Canada through PHAC and the HRSDC. These have been described in detail elsewhere in this report.

The provincial authorities, either governmental or workers’ compensation boards, run research departments. For example, WorkSafe BC runs a Research Secretariat. There are also some independent research institutions in Canada, some of which are highly productive. One example is the Toronto-based Institute for Work & Health in Ontario.
5.2.8 COMPENSATION

Statutory workers’ compensation began in Canada in 1915 in Ontario. Manitoba followed in 1916 then British Columbia in 1917. The Ontario system arose after an inquiry by Chief Justice William Meredith, who outlined a system that workers should be compensated for workplace injuries, but that they must give up their right to sue their employers. As Canada’s first workers’ compensation programme, both employees and employers hoping to avoid lawsuits favoured it. Workers’ compensation remains a provincial responsibility in Canada, therefore the exact rules vary from province to province.

5.3 CANADA – OSH PROGRAMMES

The majority of OSH programmes are conducted at provincial level by provincial organisations. There is a limited amount of federal activity, and this is conducted, in the main, by the HRSDC, and the CCOHS.

5.3.1 NATIONAL STRATEGIES

The federal Labour Programme is run by the HRSDC. The HRSDC is responsible for implementing the Canada Labour Code. Following a recent review, it concluded that inspection of worksites is one of the most effective OSH interventions. It also concluded that better prevention results are achieved by focusing on employers and worksites at higher risk of work injuries within a given industrial sector, and that the risk of work injuries is usually defined using indicators such as frequency rate, incidence rate, prevalence rate and severity index associated with workplace injuries. These findings led to the development of the National Intervention Model, a process that assesses components of OSH in workplaces and provides the framework to improve any deficiencies identified. The Model was initially used as a pilot project by four regions. Subsequently, a single National Intervention Model was developed to provide a reliable and consistent approach across the country.

The National Intervention Model to promote healthier and safer workplaces is described by the HRSDC as a six-step process:

1. Selection of Employer – The Labour Programme has a reliable and transparent selection process. Various sources of information are used to indicate which occupations will have a higher risk of injury or illness and which worksites have the highest accident rates.
2. Employer Commitment – This step includes an on-site meeting with the employer where the process is explained and their “buy-in” is secured. This is an important step because the process is meant to be voluntary with the focus on prevention and education.
3. Occupational Health and Safety Appraisal and Development – During this stage a preliminary assessment of health and safety components at the workplace is completed. Depending on the outcome of the appraisal, tools and assistance may be provided to the employer by Labour Programme officers. It is not the intention here to provide training on how to comply with the Code, but rather to provide employers with the information and tools that will assist them.
4. Occupational Health and Safety Assessment – This is a formal assessment of workplace components such as safe working procedures; health and safety education and training; hazardous occurrence investigation, recording and reporting; health and safety representatives, committee and policy committee, and the internal complaint resolution process.
5. Occupational Health and Safety Analysis and Action Plan – This step of the process is the analysis of the information gathered to date and working with the employer to create goals to meet the requirements of the Code. Compliance with the assessment components serves as an indicator as to the likely success of the overall occupational health and safety program in a given workplace.

It is worth noting that the approach to implementing the National Intervention Model at the level of the workplace is completely voluntary. That is, it was designed as a collaborative and non-confrontational approach to assist in the establishment of an effective internal responsibility system in targeted workplaces.

The overall goal is to focus on high-risk sectors and employers and to work in partnership with employers and employees to enhance their capacity to resolve workplace health and safety matters quickly, efficiently and autonomously. In addition, the intention is not to evaluate or audit the workplace for compliance purpose, but to perform an assessment and to develop a work plan to address any deficiencies.

5.3.2 Consultation Mechanisms

The federal Labour Programme is run by the HRSDC. The HRSDC is responsible for implementing the Canada Labour Code and developing relevant policy. It participates in and contributes to the policy research initiative that conducts policy research in support of the government of Canada’s medium-term agenda. This involves consultation.

The CCOHS “promotes and facilitates consultation and cooperation among federal, provincial and territorial jurisdictions and participation by labour, management and other stakeholders in the establishment and maintenance of high standards and occupational health and safety initiatives for the Canadian context”.

5.3.3 Goals and Targets

Specific OSH goals or targets for the HRSDC, and Health Canada through PHAC, could not be identified. Likewise, the AWBCB appears to only specify higher-level general goals. However, specific plans and priorities for each of the key CCOHS strategic outcomes have been established:

- Easy Access to Occupational Health and Safety Information and Service
  The Inquiries Service is the national resource centre that provides free and confidential access to occupational health and safety (OH&S) information, in English or in French, to the Canadian working population. Specialists in workplace health and safety are available to assist Canadians with their questions via a telephone service, e-mail or fax. In addition, we develop and provide OshAnswers, available as a web based information service that covers over 600 topics in occupational health and safety. The health and safety information is presented in a question-and-answer format and answers more than 3,500 questions. CCOHS also offers extensive information on its website and through various products and services. Emerging risks for OHS issues and needs are identified so appropriate products and services can be developed. The goals for the upcoming year are:
  - To increase the amount of information available through OshAnswers by providing additional content delivered from the Internet
  - Further understand citizen satisfaction by employing user surveys and research to establish improvements
  - Enhance the CCOHS website usability through improvements to its searching capabilities and content presentation
  - Increase awareness of the Inquiries Service to Canadians
  - Identify emerging needs and develop products such as guides, web portals, forums in response to needs
  - On-going development and refinement of existing OHS products and services to ensure the content is current and relevant
Application of Occupational Health and Safety Information to Improve Workplace Practices

The application of occupational health and safety information in the workplace is important to achieve reductions in diseases and injuries. Providing information that is useable in the workplace and giving Canadians tools that enhance workplace conditions is important. The goals for the upcoming year are:

- Produce three new health and safety guides relating to current needs in occupational health and safety
- Increase the availability of e-learning material to expand the range of requested OSH course offerings
- Improve the availability of information through enhancements to the CCOHS website and improve the searchability of the website contents
- Develop and provide additional resources on chemical health and safety
- Provide and make publicly accessible more workplace health and wellness content information through partnerships with organizations such as the Canadian Health Network
- Provide tools such as the healthy workplace web portal and health and safety management systems
- Foster collaboration and exchanges in ideas through national dialogues, forums and conferences to increase applications in workplace and improve practices
- Collaborate with the education sector, youth groups and partners to improve the teaching of health and safety in the school system

Increased Awareness and Understanding of Occupational Health and Information Issues in the Work Place

The goals for the upcoming year are:

- Hosting national forums on key issues
- Promoting healthy workplaces and OSH information through internet, training, conferences and presentations
- Enhancement of website presentation and its searchability
- Provide additional key resources on chemical health and safety
- Increase content through partnerships such as the Canadian Health Network
- Provide Health and Safety Report as an electronic newsletter delivered to Canadians via the Internet
- Develop Internet chat group capabilities to assist Canadians to efficiently exchange ideas on health and safety
- Promote nation-wide the importance of health and safety in the workplace
- To participate in various collaborative projects with different levels of government and other organizations throughout the year.

Partial Recovery of Costs from User Fees

CCOHS's funding structure requires that 50% of its budget be funded through the sale of products and services. The extent of programming is dependent upon the ability to generate the necessary revenues.
5.3.4 Evaluation Methods

Specific evaluation methods for OSH programmes or initiatives could not be identified for the HRSDC, or for Health Canada through the PHAC. Evaluation by the AWCBC appears limited to data available from the National Work Injuries Statistics Programme and the annual comparison financial measures from each provincial board. However, evaluation methods for the specific goals set for the CCOHS this year have been established:

- **Easy Access to Occupational Health and Safety Information and Service**
  These services are monitored through reviews of website statistics, service impact statistical reports, direct client feedback and user satisfaction surveys. Periodic evaluations are also conducted to include performance measurement information in addition to key informant interviews.

- **Application of Occupational Health and Safety Information to Improve Workplace Practices**
  The outcomes from this program are measured through various methods including website statistics, distribution of publications, copyright applications, and evaluative information on the sharing of information and use of information in the workplace. Client surveys and focus groups are also conducted to obtain user feedback on the accessibility and usability of products and services.

- **Increased Awareness and Understanding of Occupational Health and Information Issues in the Workplace**
  The measurement of success is the distribution of information and the wide reach and use of these services. This can be measured through distribution statistics, participation in promotions and awareness campaigns and website statistics.

- **Partial Recovery of Costs from User Fees**
  The success of this program is measured through the revenues generated from sales and the ability to meet operating expenses.
Country Summary

- The Commonwealth of Australia is considered to be the world's smallest continent, but is the sixth largest country. It is a constitutional monarchy with a parliamentary system of government consisting of six states, two major mainland territories and other minor territories. The total area is 7,686,850 sq km, of which 7,617,930 sq km are land. About 6.2% of the total land area is classified as arable.
- The current population estimate is 20.7 million. The annual growth rate is 0.85%, with 12.14 births/1,000 population. Australia has maintained an active immigration programme to boost population growth.
- Australia has a prosperous developed economy. GDP is $NZ921.5 billion. GDP per capita is $NZ47,519. The GDP growth rate is 2.7%. The inflation rate in 2006 was 2.7%. Public debt is 16.1% of GDP.
- The labour force is 10.8 million, the employment rate is 65.0%, the unemployment rate is 4.6% and the economic inactivity rate is not calculated.
- It appears that not only are Australians living longer, but they also enjoy better health. Based on the latest Australian mortality rates, a boy born in 2004 was expected to live to 78.1 years, on average, while a girl would be expected to live to 83.0 years, on average. However, a boy and girl aged 15 in 2004 would be expected to live to ages 78.7 and 83.5 years, respectively. Life expectancy is not uniform across populations within Australia. Aboriginal and Torres Strait Islander peoples have a much lower life expectancy than the general Australian population. Indigenous Australians born in the period 1996–2001 are expected to live nearly 20 years less than the rest of the population.
- A national health survey in 2004/05 found that 7% of working-age people had received a work-related injury in the previous four weeks. 11% of persons of all ages reported a long-term condition that resulted from injury, and 25% of these were musculoskeletal.
- Fatal injuries are most commonly caused by suicide, transport accidents, falls, accidental poisoning, suffocation, drowning and assault. Prior to 1991, the leading injury cause of death was motor vehicle accidents, but after 1991, the death rate from motor vehicle accidents became lower than the death rate from intentional self-harm (suicide).
- The Australian Safety and Compensation Council (ASCC) has statutory powers to declare national standards and codes of practice. The ASCC is a tripartite body, with members currently representing federal, state and territory governments, the Australian Chamber of Commerce and Industry, and the Australian Council of Trade Unions. ASCC standards and codes need to be adopted by state and territory governments before they have any legal force.
- OSH and workers' compensation in Australia is state-based, and all OSH regulations and legislation are the responsibility of state and territory OSH authorities. All national standards and codes of practice produced by the ASCC are guidance and advisory documents only. While the ASCC is not itself a regulatory authority, it was clearly created to influence policy development and policy harmonisation between the states and territories. The ASCC does not make or enforce laws. The 2005/06 budget for the ASCC is approximately $NZ20.9 million.
- Australia is a federation with six states and two internal territories, and a federal government. The legislative powers of the federal Parliament are set out in the Commonwealth Constitution. The Commonwealth Constitution does not give the Commonwealth a general power to legislate for OSH, hence there are ten OSH statutes (six state Acts, two territory Acts, a Commonwealth Act covering Commonwealth employees and a Commonwealth Act covering the maritime industry). There are also specialist OSH statutes covering the mining industry in some states.
The Australian Bureau of Statistics is Australia's official statistical agency.

The primary agency for health information in Australia is the Australian Institute of Health and Welfare (AIHW). The AIHW is an Australian government statutory authority accountable to Parliament. It operates under the provisions of the Australian Institute of Health and Welfare Act 1987. The various state authorities, such as workers’ compensation organisations, also collect statistics, and some of these are published.

Due to the federal nature of Australia, there is no single national research institution that tackles the whole field of OSH.

Workers’ compensation in Australia is a compulsory, employer-financed, “no-fault” occupational disabilities programme for work-related disease and injury. When an accident does occur, it is the employer’s responsibility to ensure the injured worker receives all necessary medical and rehabilitation care and does not suffer loss of income. This is achieved through a workers’ compensation claim to the appropriate authority in the state (or, if a federal worker, to the federal system). Workers’ compensation is regulated by state legislation. There is no uniformity of benefits between states, so the precise extent of workers’ compensation insurance cover varies from state to state.

The Department of Employment and Workplace Relations is responsible for the office of the ASCC. The ASCC provides policy advice on OHS and workers’ compensation matters. It develops national OHS standards and codes of practice, and undertakes research and analysis of national workers’ compensation data. The national strategy published by the ASCC aims at enhancing harmonisation between the state systems across a range of factors that include data collection and standards and codes.

Both the ASCC and Comcare undertake public and stakeholder consultation programmes.

The ASCC has specified ambitious national targets of producing a sustained reduction in work-related fatalities of 10% by June 2007 and at least 20% by 2012, and also to reduce workplace injuries by 20% by June 2007 and by at least 40% by 2012.

The ASCC has identified indicators of success, but has yet to specify methods for evaluating and measuring progress toward goals.

6.1 AUSTRALIA – GENERAL INFORMATION

Australia is considered to be the world’s smallest continent, but is the sixth largest country. The Commonwealth of Australia is a constitutional monarchy with a parliamentary system of government consisting of six states, two major mainland territories and other minor territories. It is a country in the Southern Hemisphere comprising the mainland of the world’s smallest continent and a number of islands in the Southern, Indian and Pacific Oceans. Neighbouring countries include: Indonesia, East Timor and Papua New Guinea to the north; the Solomon Islands, Vanuatu and the French dependency of New Caledonia to the north-east; and New Zealand to the south-east.

6.1.1 BACKGROUND INFORMATION

Indigenous people have inhabited the mainland of the continent of Australia for more than 42,000 years. After sporadic visits by fishermen from the north and by European explorers and merchants starting in the 17th century, the eastern half of the mainland was claimed by the British in 1770 and officially settled through penal transportation as the colony of New South Wales (NSW) on 26 January, 1788. As the population grew and new areas were explored, another five largely self-governing Crown colonies were successively established over the course of the 19th century. On 1 January, 1901 the six colonies became a federation, and the Commonwealth of Australia was formed. Since federation, Australia has maintained a stable liberal democratic political system and remains a Commonwealth Realm. The new country took advantage of its natural resources to rapidly develop
agricultural and manufacturing industries and to make a major contribution to World Wars I and II. In recent decades, Australia has transformed itself into an internationally competitive, advanced market economy. It boasted one of the OECD’s fastest growing economies during the 1990s, a performance due, in large part, to economic reforms adopted in the 1980s. Long-term concerns include pollution, particularly effects that may occur following global depletion of the ozone layer, and the management and conservation of coastal areas, especially the Great Barrier Reef. The capital city is Canberra, located in the Australian Capital Territory. The current national population is around 20.6 million people and is concentrated mainly in the large coastal cities of Sydney, Melbourne, Brisbane, Perth and Adelaide.

6.1.2 AREA

Australia’s landmass is on the Indo-Australian Plate. Surrounded by the Indian, Southern and Pacific Oceans, Australia is separated from Asia by the Arafura and Timor Seas. Australia has a total area of 7,686,850 sq km (including Lord Howe Island and Macquarie Island), of which 7,617,930 sq km are land. Australia has a total 25,760 km of coastline and claims an extensive exclusive economic zone of 8,148,250 sq km. This exclusive economic zone does not include the Australian Antarctic Territory. The Great Barrier Reef is the world’s largest coral reef. It lies a short distance off the north-eastern coast and extends for over 2,000 km. The world’s largest monolith, Mount Augustus, is located in Western Australia. The highest point on the Australian mainland is Mount Kosciuszko (2,228 m) on the Great Dividing Range, although Mawson Peak on the remote Australian territory of Heard Island is taller at 2,745 m. By far the largest part of Australia is desert or semi-arid. Australia is the driest inhabited continent and the flattest, and has the oldest and least fertile soils. Only the south-eastern and south-western corners of the continent have a temperate climate. The majority of the population lives along the temperate south-eastern coastline. The northern part of the country, with a tropical climate, has vegetation consisting of rainforest, woodland, grassland, mangrove swamps and desert. Climate is highly influenced by ocean currents, including the El Niño southern oscillation, which is correlated with periodic drought, and the seasonal tropical low-pressure system that produces cyclones in northern Australia. About 6.2% of the total land area is classified as arable. Natural resources include bauxite, coal, iron ore, copper, tin, gold, silver, uranium, nickel, tungsten, mineral sands, lead, zinc, diamonds, natural gas and petroleum.

6.1.3 POPULATION

According to the Australian Bureau of Statistics, the current population is estimated to be 20,700,748. Australia’s estimated resident population is projected to increase to between 24.9 and 33.4 million in 2051, and to between 22.4 and 43.5 million in 2101.

Most of the 20.7 million Australians are descended from 19th- and 20th-century immigrants, the majority of whom came from Great Britain and Ireland. Australia’s population has quadrupled since the end of World War I, spurred by an ambitious immigration programme. Australia has maintained one of the most active immigration programmes in the world to boost population growth. Most immigrants are skilled, but the immigration quota includes categories for family members and refugees. In 2001, the five largest groups of the 23.1% of Australians who were born overseas were from the UK, New Zealand, Italy, Vietnam and China. Following the abolition of the White Australia policy in 1973, numerous government initiatives have been established to encourage and promote racial harmony based on a policy of multiculturalism.

The indigenous population – mainland aborigines and Torres Strait Islanders – was 410,003 (2.2% of the total population) in 2001, a significant increase from the 1976 census, which showed an indigenous population of
115,953. Indigenous Australians have higher rates of imprisonment and unemployment, lower levels of education, and life expectancies for males and females that are 17 years lower than those of other Australians. Perceived racial inequality is an ongoing political and human rights issue for Australians.

A large number of Australians (759,849 for the period 2002/03) live outside their home country. Fewer than 15% of Australians now live in rural areas. English is the official language and is spoken and written in a distinct variety known as Australian English. According to the 2001 census, English is the only language spoken in the home for around 80% of the population. The next most common languages spoken at home are Chinese languages (2.1%), Italian (1.9%) and Greek (1.4%). A considerable proportion of first- and second-generation migrants are bilingual. It is believed that there were between 200 and 300 Australian aboriginal languages at the time of first European contact. Only about 70 of these languages have survived, and all but 20 of these are now endangered. An indigenous language remains the main language for about 50,000 (0.02%) people. Australia has a sign language known as Auslan, which is the main language of about 6,500 deaf people. School attendance is compulsory throughout Australia between the ages of 6 and 15 years (16 years in South Australia and Tasmania, and 17 years in Western Australia), contributing to an adult literacy rate that is assumed to be 99%. Government grants have supported the establishment of Australia’s 38 universities, and although several private universities have been established, the majority receives government funding. There is a state-based system of vocational training colleges, known as TAFE Institutes, and many trades conduct apprenticeships for training new tradespeople. Approximately 58% of Australians between the ages of 25 and 64 have vocational or tertiary qualifications, and the tertiary graduation rate of 49% is the highest of the OECD countries. The ratio of international to local students in tertiary education in Australia is the highest in the OECD countries.

### Table 6.1
Australia key population statistics summary

<table>
<thead>
<tr>
<th>Latest population estimate</th>
<th>20,700,748 (October 2006)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Median age (years)</td>
<td>Total 36.9 years</td>
</tr>
<tr>
<td></td>
<td>Male 36.0 years</td>
</tr>
<tr>
<td></td>
<td>Female 37.7 years</td>
</tr>
<tr>
<td>Age distribution</td>
<td>0–14 yrs 19.6%</td>
</tr>
<tr>
<td></td>
<td>15–64 yrs 67.3%</td>
</tr>
<tr>
<td></td>
<td>65 yrs and older 13.1%</td>
</tr>
<tr>
<td>Population growth rate</td>
<td>0.85%</td>
</tr>
<tr>
<td>Birth rate</td>
<td>12.14 births/1,000 population</td>
</tr>
<tr>
<td>Gender ratio (male/female)</td>
<td>At birth 1.05</td>
</tr>
<tr>
<td></td>
<td>&lt; 15 yrs 1.05</td>
</tr>
<tr>
<td></td>
<td>15–64 yrs 1.02</td>
</tr>
<tr>
<td></td>
<td>&gt; 64 yrs 0.79</td>
</tr>
<tr>
<td></td>
<td>Total population 0.99</td>
</tr>
</tbody>
</table>

#### 6.1.4 Economic Indicators

Australia has a prosperous, western-style mixed economy, with a per capita GDP slightly higher than the UK, Germany and France in terms of purchasing power parity. The country was ranked third in the UN 2005 Human Development Index and sixth in The Economist worldwide quality-of-life index 2005. In recent years, the Australian economy has been resilient in the face of a global economic downturn. Rising output in the domestic economy, robust business and consumer confidence, and rising exports of raw materials and agricultural products are fuelling the economy. Australia’s emphasis on reforms, low inflation and growing ties with China are considered to be key factors behind the economy’s strength. Current areas of concern to some economists include Australia’s high current account deficit and the high levels of net foreign debt owed by the private sector. The impact of drought, weak foreign demand and strong import demand pushed the trade deficit up from AUD$8 billion in 2002 to AUD$18 billion in 2003, AUD$13 billion in 2004, and nearly AUD$17 billion in 2005. Housing prices probably peaked in 2005, diminishing the prospect that interest rates would be raised to prevent a speculative bubble. Conservative fiscal
policies kept Australia's budget in surplus from 2002 to 2005. In the 1980s, the Hawke government started the process of economic reform by floating the Australian dollar in 1983, and deregulating the financial system. Since 1996, the Howard government has continued the process of micro-economic reform, including partial deregulation of the labour market and the privatisation of state-owned businesses, most notably in the telecommunications industry. Substantial reform of the indirect tax system was implemented in July 2000 with the introduction of a 10% goods and services tax (GST), which has slightly reduced the heavy reliance on personal and company income tax that characterises Australia's tax system. The Australian economy has not suffered a recession since the early 1990s. As of July 2006, unemployment was 4.8% with 10,223,300 persons employed. The service sector of the economy, including tourism, education and financial services, comprises 70% of GDP. Agriculture and natural resources comprise 3% and 5% of GDP but contribute substantially to Australia's export performance. Australia's largest export markets include Japan, China, the US, South Korea and New Zealand.

<table>
<thead>
<tr>
<th>TABLE 6.2</th>
<th>Australia key economic statistics summary</th>
</tr>
</thead>
<tbody>
<tr>
<td>GDP (purchasing power parity – PPP)</td>
<td>NZ955.6 billion</td>
</tr>
<tr>
<td>GDP (official exchange rate)</td>
<td>NZ921.5 billion</td>
</tr>
<tr>
<td>GDP real growth rate</td>
<td>2.7%</td>
</tr>
<tr>
<td>GDP per capita (PPP)</td>
<td>NZ47,519</td>
</tr>
<tr>
<td>GDP composition by sector</td>
<td>Agriculture 3.0%</td>
</tr>
<tr>
<td>Inflation rate</td>
<td>2.7%</td>
</tr>
<tr>
<td>Population below poverty line</td>
<td>N/A</td>
</tr>
<tr>
<td>Budget</td>
<td>Revenues NZ375.6 billion</td>
</tr>
<tr>
<td>Public debt</td>
<td>16.1% of GDP</td>
</tr>
<tr>
<td>Reserves and foreign exchange and gold</td>
<td>NZ65.1 billion</td>
</tr>
<tr>
<td>External debt</td>
<td>NZ486.3 billion</td>
</tr>
<tr>
<td>Economic aid donor</td>
<td>NZ1,344 million</td>
</tr>
</tbody>
</table>

6.1.5 EMPLOYMENT STATISTICS

According to the Australian Bureau of Statistics (ABS) the national unemployment rate in October 2006 was 4.7%. When this is seasonally adjusted, it reduces to 4.6%. Compared with the previous month, unemployment had decreased by 0.1 percentage point. The male unemployment rate decreased by 0.2 percentage points to 4.5%, and the female unemployment rate remained at 4.8%. The employment participation rate decreased by 0.4 percentage points to 64.7%.

In common with many other developed countries, Australia is experiencing a demographic shift towards an older population, with more retirees and fewer people of working age. The Social Policy Research Centre at the University of New South Wales published a report in 2001 concluding the following. In the early 1980s, employment rates fell significantly for older men, especially for those aged 55–59. However, employment rates for older men have remained reasonably steady since 1986. Female employment has grown steadily over the period, with the largest growth among women aged 45–54. For both men and women, employment rates are generally higher for those with more education. For men, this is particularly the case in the older age groups where the fall in the employment rate with age is greatest for those with less education. For women, the employment rate gap due to education is larger, but is more uniform across age groups.
Employment rates are also higher for people who own their own homes, although the gap between homeowners and other tenure types diminishes as age increases. Older homeowners have lower employment rates than those still paying mortgages. These results are possibly due to a wealth effect, with renters, and to some extent mortgagees, unable to afford to take early retirement. At the same time, however, people who live in less disadvantaged regions are more likely to be employed, and this gap does not decrease before retirement age. Marriage shows no clear relationship with employment for women, but men who have never married are less likely to be employed in all age groups. Women whose husbands are not employed are much more likely to be not employed themselves. However, this relationship is relatively constant across all age groups, rather than appearing to have a particular association with joint early retirement. Australian-born people are slightly more likely to be employed than people born overseas are. However, for men this is due to different unemployment rates rather than non-participation rates.

### Table 6.3: Australia key employment statistics summary

<table>
<thead>
<tr>
<th>Table 6.3</th>
<th>Australia key employment statistics summary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Labour force</td>
<td>10.79 million (people of working age)&lt;sup&gt;5&lt;/sup&gt;</td>
</tr>
<tr>
<td>Labour force distribution</td>
<td>Agriculture 3.6%</td>
</tr>
<tr>
<td>Employment rate</td>
<td>65.0% (of people of working age)</td>
</tr>
<tr>
<td>Unemployment rate</td>
<td>4.6% October 2006</td>
</tr>
<tr>
<td>Economic inactivity rate</td>
<td>N/A</td>
</tr>
<tr>
<td>Household income by consumption or percentage share</td>
<td>Lowest 10% 2.0%</td>
</tr>
</tbody>
</table>

<sup>5</sup> The Australian Bureau of Statistics defines “working age” as 15 years and over.

### 6.1.6 Health Statistics

The primary agency for health information in Australia is the Australian Institute of Health and Welfare (AIHW), which produces authoritative and comprehensive publications across the broad areas of health and welfare. Over the period 1901–2000, life expectancy at birth increased by 21.4 years for males and 23.3 years for females. However, the rate of growth in life expectancy over the century was not constant. According to the AIHW, a government department, life expectancy is an indication of how long a person can expect to live on average, given prevailing mortality rates. Technically, it is the average number of years of life remaining to a person at a specified age, assuming current age-specific mortality rates continue during the person’s lifetime. It is considered as a good measure of population health. Low infant mortality rates and an ageing population are both indicative of longer life expectancy. The expected length of a life is inversely related to the mortality rates at that time. In Australia, life expectancy has increased significantly over the past century, reflecting the considerable falls in mortality rates, initially from infectious diseases and, in later years, from cardiovascular disease. For instance, Australian mortality rates for cardiovascular disease began decreasing rapidly in 1968, which in turn resulted in an increase in life expectancy. Depending on how you calculate life expectancy, you will derive slightly different information. For example, based on the latest Australian mortality rates, a boy born in 2004 was expected to live to 78.1 years, on average, while a girl would be expected to live to 83.0 years, on average. However, a boy and girl aged 15 in 2004 would be expected to live to ages 78.7 and 83.5 years, respectively.
Life expectancy is not uniform across populations within Australia. Aboriginal and Torres Strait Islander peoples have a much lower life expectancy than the general Australian population. Indigenous Australians born in the period 1996–2001 are expected to live nearly 20 years less than the rest of the population. There are many influences on mortality and life expectancy. For instance, the rise in cigarette smoking over the past century has resulted in large increases in mortality from lung cancer, cardiovascular disease, and respiratory and other conditions. These increases in mortality had a retarding effect on life expectancy during those decades. Once the effects of smoking had been understood, public health campaigns and changes in public health regulation began to reduce smoking rates. The effect of legislation, rises in tobacco taxes and other health promotion activities is now starting to become evident in the mortality rates and other measures. A sharp decline in the proportion of males who are smoking has been followed by a decline in the incidence of male lung cancer. A rise in smoking prevalence among females has been followed by a rise in the incidence of female lung cancer.

It appears that not only are Australians living longer, but they also enjoy better health. The AIHW reported, using measures of self-assessed health status, that just over half (57%) of people aged 18 years and over reported their overall health as excellent or very good in 1997, and a further 28% reported that they were in good health. Proportions were similar for the two sexes. The remaining 15% rated their health as either fair or poor. In interpreting these findings, note that some people in poorer health were not included in the survey (for example, people living in institutions such as hospitals and nursing homes). Self-assessed health status is strongly related to age. In the 1997 survey, the proportions reporting excellent or very good, good, and fair or poor health remained relatively unchanged up to the age group 35–44 years. At ages over 44 years, the proportion reporting excellent or very good health declined with increasing age, from 66% at ages 35–44 to 37% at ages 75 and over, and the corresponding proportion reporting fair or poor health increased from 10% to 33%.

**Injury**

The ABS has recently released results from a snapshot study on injury in Australia. This used data collected from the 2004/05 ABS National Health Survey (NHS)*. The 2004/05 NHS collected information on the type of injury, the damage caused by the injury, the activity and location at the time of injury, the part of the body affected and the action taken, as well as long-term conditions resulting from injury. It noted that an injury is a trauma, poisoning or other condition of rapid onset to which factors and circumstances external to the person contributed significantly. Injury prevention and control was first recognised as a national health priority for Australia in 1986. Although the average impact of less severe injuries is relatively low, they are so numerous that the aggregate burden due to them is considerable, in terms of costs of providing treatment and time lost from work.

The 2004/05 NHS indicated that 18% of the population (3.6 million persons) had sustained a recent injury (in the previous four weeks). The age group most likely to sustain a recent injury was the 0–14 years age group, with a reported prevalence of 25% (males 24%, females 25%). The likelihood of sustaining an injury within the previous four weeks declined with age to 10% of those aged 65 and over. Males reported a slightly higher prevalence of recent injury overall (19%) compared with females (18%), although this pattern varied across age groups. The most common events which led to an injury were cuts (28% of all events) and falls of 1 m or less (21% of all events). The proportion of males who received a recent injury from cuts (31% of all males with injuries) was higher than the proportion of females (25% of all females with injuries). Injuries from bites or stings occurred more frequently to females (12% of all females with injuries) than males (7% of all males with injuries). Recent injuries from vehicle accidents that occurred were most likely to occur in the 25–34 years age group (34% of all vehicle accidents). Many types of recent injury were more likely to happen to those in the 0–14 years age group, for example 55% of all falls below 1 m and 51% of falls of more than 1 m, 51% of all attacks by another person resulting in injury and 37% of injuries from bites or stings.

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* See http://www.abs.gov.au Catalogue No: 4825.0.55.001
With regard to alcohol, it was found that adults at high risk of long-term health problems due to a risky/high-risk level of alcohol consumption were more likely to report one or more injuries in the four weeks before interview than adults who never consumed alcohol (18% compared with 11%). Drinking alcohol has been associated with risk of injury in many settings, including vehicle and cycling accidents, incidents involving pedestrians, falls, fires, sports and recreational injuries, and violence. The presence of alcohol in the body at the time of injury may also be associated with greater severity of injury and less positive outcomes. In 2004/05, 3% of recently injured persons reported being under the influence of alcohol or other substances at the time of injury. Of these, more males than females reported being under the influence of alcohol or other substances at the time of injury (55% and 45% respectively).

With regard to work, it was found that as reported in the 2004/05 NHS, one-quarter (25%) of recently injured persons aged 15 years and over were injured while they were working for an income. Of all employed persons aged 15 years and over, 7% had received an injury while working for an income in the four weeks prior to interview. More than half (63%) of persons in the 2004/05 NHS who received an injury while working for an income had injuries in the form of open wounds. Of adults employed in all industry groups, those in the construction industry were most likely to receive a recent injury while working for an income – 13% of construction workers were recently injured while working for an income compared with 7% of all employed adults. Similarly, employed tradespersons and related workers (aged 18 years and over) were the occupation group most likely to receive a recent injury while working for an income (15% were recently injured while working for an income). The majority of tradespersons injured were in three industries – the construction industry (36%), the manufacturing industry (19%) and the retail trade industry (17%).
Long-term injuries are long-term conditions resulting from injury. In the 2004/05 NHS, 11% of persons of all ages reported a long-term condition that resulted from injury. In persons 15 years and over, musculoskeletal conditions were the most commonly reported long-term condition due to an injury. Musculoskeletal conditions accounted for a quarter (25%) of all long-term conditions due to injury. Injury was reported (for those 15 years and over) as the cause for 31% of those with back/pain problems or disc disorders, 16% of those with rheumatism and other soft issue disorders, and 12% of those with arthritis.

**Hospitalisations**

Injury accounted for over one in 20 hospital separations in 2003/04, with more than 370,000 inpatient episodes that year. Age is an important factor in the number of separations for injury. Young adults produce the most separations, late middle-aged the least, while those in advanced old age again produce many separations. The rate of hospitalised injury among those 85 years or over in 2003/04 was more than 8,900 per 100,000 persons. This high rate is almost entirely due to injury following a fall.

**Health system costs**

In 2000/01, 8% of total allocated health expenditure ($AUD4.0 billion) was spent on persons who experienced injuries. The majority of expenditure on injuries in 2000/01 took place in hospitals (70%), with 15% of expenditure being used on out-of-hospital medical expenses. Costs associated with professionals such as physiotherapists and chiropractors accounted for 7% of expenditure. Falls accounted for 41% of expenditure on unintentional injuries in 2000/01. Adverse events in surgical or medical care, such as infections after treatment and inappropriate medication (18%) and road traffic accidents (11%) were the other major events leading to expenditure on unintentional injuries. Injuries due to homicide and violence accounted for 60% ($AUD223.3 million) of total allocated health expenditure on intentional injuries in 2000/01, with $AUD149.2 million (40%) being spent on suicide and self-inflicted injuries.

**Mortality**

Injury deaths are conventionally defined as those where the underlying cause of death was determined to be an external cause. The ABS Causes of Death Collection includes information on these deaths. The most common external causes of death are suicide, transport accidents, falls, accidental poisoning, suffocation, drowning and assault. Deaths from external causes have decreased markedly over the last 30 years in Australia, mainly due to decreasing death rates from transport accidents. Prior to 1991, the leading external cause of death was motor vehicle accidents, but after 1991, the death rate from motor vehicle accidents became lower than the death rate from intentional self-harm (suicide). For the total population, death rates from injuries increase with remoteness (from 1.2 times higher than major cities’ rates in inner regional areas to 2.4 times in very remote areas). There is a strong pattern of increasing mortality from injury with increasing remoteness, particularly for males. In 2004, external causes accounted for 6% of total registered deaths (all ages). In younger age groups, however, this proportion was far greater. For example, in the 15–24 year age group, external causes (mainly transport accidents and suicide) accounted for 71% of total deaths. Boys are more likely than girls to both experience and die as a result of an injury. While half of all children are boys (at 30 June 2001, 51% of 1- to 14-year-olds were boys), nearly two-thirds of injury deaths between 1999 and 2003 for this age group were boys (62%).

<table>
<thead>
<tr>
<th>TABLE 6.4</th>
<th>Australia key health statistics summary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Birth rate</td>
<td>12.14 births/1,000 population</td>
</tr>
<tr>
<td>Total fertility rate</td>
<td>1.76 children born/woman</td>
</tr>
<tr>
<td>Death rate</td>
<td>7.51 deaths/1,000 population</td>
</tr>
<tr>
<td>Infant mortality rate</td>
<td>5.08 deaths/1,000 live births</td>
</tr>
<tr>
<td>Male</td>
<td>5.67</td>
</tr>
<tr>
<td>Female</td>
<td>4.47</td>
</tr>
<tr>
<td>Life expectancy at birth (2006 estimate)</td>
<td>80.5 years</td>
</tr>
<tr>
<td>Male</td>
<td>77.64 years</td>
</tr>
<tr>
<td>Female</td>
<td>83.52 years</td>
</tr>
</tbody>
</table>
6.2 **AUSTRALIA – NATIONAL OSH SYSTEMS**

Australia is a federation with six states and two internal territories, and a federal government. The legislative powers of the federal Parliament are set out in the Commonwealth Constitution. The Commonwealth Constitution does not give the Commonwealth a general power to legislate for OHS, hence there are OHS statutes for each state (six state Acts, two territory Acts, a Commonwealth Act covering Commonwealth employees and a Commonwealth Act covering the maritime industry). There are also specialist OHS statutes covering the mining industry in some states, and a plethora of other specialist statutes in each state.

6.2.1 **POLICY**

In 1985, the federal government legislated for the formation of the National Occupational Health and Safety Commission (NOHSC). The purpose of NOHSC was to lead and coordinate national efforts to prevent workplace death, disease and injury in Australia. However, NOHSC was abolished in 2005 and replaced by the ASCC. The first meeting of the ASCC was held on 20 October, 2005. Unlike the former NOHSC, which was established by an Act of Parliament (the NOHSC Act), the new ASCC was established administratively, with functions and powers determined by the government of the day. However, it has statutory powers to declare national standards and codes of practice. ASCC is a tripartite body, with members currently representing federal, state and territory governments, the Australian Chamber of Commerce and Industry, and the Australian Council of Trade Unions. ASCC standards and codes need to be adopted by state and territory governments before they have any legal force.

The ASCC states that, through a partnership of government, unions and industry, it leads and coordinates national efforts to prevent workplace death, disease and injury, improve workers’ compensation arrangements, and improve the rehabilitation and return to work of injured workers. The ASCC also identifies other key tasks to provide a national forum for state and territory governments, employers and employees to consult and participate in the development of policies relating to OHS and workers’ compensation matters; and to promote national consistency in the OHS and workers’ compensation regulatory framework.

OHS and workers’ compensation in Australia is state-based, and all OHS regulations and legislation are the responsibility of state and territory OHS authorities. All national standards and codes of practice produced by the ASCC are guidance and advisory documents only. While the ASCC is not itself a regulatory authority, it was clearly created to influence policy development and policy harmonisation between the states and territories. The ASCC does not make or enforce laws. The national standards may be adopted by the governments in the state and territories regulation to make up part of their OHS regulatory frameworks. The ASCC agrees to adopt the national standards and codes of practice, and the Office of the ASCC seeks to influence this adoption.

6.2.2 Legislation

A summary of applicable Australian law on OSH is provided that pertains to the Commonwealth and to each state.\textsuperscript{151,152}

6.2.2.1 Commonwealth

- Australian Workplace Safety Standards Regulations 2005 – The Regulations set out further particulars relating to publication and consultation requirements to be met by the ASCC when declaring national standards and codes of practice, under Sections 6 and 7 of the Australian Workplace Safety Standards Act 2005.
- Occupational Health and Safety (Commonwealth Employees) Act 1991 – The objects of this Act are to secure the health, safety and welfare at work of employees of the Commonwealth and of Commonwealth authorities; and to protect persons at or near workplaces from risks to health and safety arising out of the activities of such employees at work.
- Occupational Health and Safety (Maritime Industry) Act 1993 – An Act to promote the occupational health and safety of persons employed in the maritime industry, and for related purposes.
- Road Transport Reform (Dangerous Goods) Act 1995 – An Act to make provision for safety in the transport of dangerous goods by road part of the system of nationally consistent road transport laws.
- Road Transport Reform (Dangerous Goods) Regulations 1997 – Principal Regulations.
- Safety, Rehabilitation and Compensation Act 1988 – An Act relating to the rehabilitation of employees of the Commonwealth and certain corporations and to workers’ compensation for those employees and certain other persons, and for related purposes.

Australian Capital Territory

- Dangerous Substances Act 2004 (No. 7/2004) – An Act about dangerous substances, and for other purposes.
- Machinery Act 1949 – An Act relating to the installation, use, inspection and operation of machinery.
- Machinery Regulation 1950 – made under the Machinery Act 1949.
- Magistrates Court (Occupational Health and Safety Infringement Notices) Regulations 2004 – The purpose of these Regulations is to provide for infringement notices under the Magistrates Court Act 1930, part 8 for certain offences against the OSH legislation.
• Radiation Protection Act 2006 – An Act to provide for the protection of the health and safety of people, and for the protection of property and the environment, from the harmful effects of radiation, and for related purposes. This Act is awaiting commencement default commencement under s 2 (3): 1 July 2007.
• Scaffolding and Lifts Act 1912 – An Act about scaffolding, lifts, cranes, building, excavation and compressed air work.
• Scaffolding and Lifts Regulation 1950 – made under the Scaffolding and Lifts Act 1912.
• Workers’ Compensation Act 1951 No 2 – An Act relating to compensation to workers for injuries arising out of or in the course of their employment, and for other purposes.
• Workers’ Compensation Regulation 2002 – made under the Workers’ Compensation Act 1951.

New South Wales
• Coal Mine Health and Safety Act 2002 – An Act to secure the health, safety and welfare of persons in connection with coal operations; to repeal the Coal Mines Regulation Act 1982; to amend certain Acts; and for other purposes.
• Explosives Act 2003 – An Act to provide for the regulation and control of the handling of explosives and explosive precursors; to provide for the regulation of certain other dangerous goods; and for related purposes.
• Explosives Regulation 2005 – This legislation was made under the Explosives Act 2003.
• Mine Health and Safety Act 2004 – An Act to secure the health, safety and welfare of persons in connection with certain mines; to repeal the Mines Inspection Act 1901; to amend certain Acts; and for other purposes.
• Mine Safety (Cost Recovery) Act 2005 – An Act to make provision with respect to the funding of regulatory activities in relation to mine safety.
• Occupational Health and Safety (Clothing Factory Registration) Regulation 2001 – This legislation was made under the Occupational Health and Safety Act 2000.
• Occupational Health and Safety Act 2000 (NSW) – An NSW Act to secure the health, safety and welfare of persons at work; to repeal the Occupational Health and Safety Act 1983; and for other purposes.
• Occupational Health and Safety Regulation 2001 – This legislation was made under the Occupational Health and Safety Act 2000.
• Rail Safety Act 2002 – An Act to promote the safe construction, operation and maintenance of railways; to repeal the Rail Safety Act 1993; and for other purposes.
• Road and Rail Transport (Dangerous Goods) (Rail) Regulation 1999 – This legislation was made under the Road and Rail Transport (Dangerous Goods) Act 1997.
• Road and Rail Transport (Dangerous Goods) Act 1997 – An Act to make provision for safety in the transport of dangerous goods by road as part of the system of nationally consistent road transport laws; and to make provision for safety in the transport of dangerous goods by rail; and for other purposes.
• Rural Workers’ Accommodation Act 1969 – An Act to provide for the accommodation of rural workers; to repeal the Rural Workers’ Accommodation Act 1926 and the Rural Workers’ Accommodation (Amendment) Act 1951; and for purposes connected therewith.
• Workers’ Compensation Act 1987 (NSW) – An NSW Act to provide for the compensation and rehabilitation of workers in respect of work-related injuries; to repeal the Workers’ Compensation Act 1926 and certain other Acts; and for other purposes.
• Workers’ Compensation Regulation 2003 – This legislation was made under the Workers’ Compensation Act 1987.
• Workplace Injury Management and Workers’ Compensation Act 1998 – An Act to provide for the effective management of work-related injuries and injury compensation for workers in respect of such injuries; and for other purposes.
• Workplace Injury Management and Workers’ Compensation Regulation 2002 – This legislation was made under the Workplace Injury Management and Workers’ Compensation Act 1998.
Northern Territory

- Dangerous Goods (Road and Rail Transport) Act – An Act to make provision for safety in the transport of dangerous goods by road as part of the system of nationally consistent road transport laws and to make provision for safety in the transport of dangerous goods by rail.
- Dangerous Goods (Road and Rail Transport) Regulations – Made under the Dangerous Goods (Road and Rail Transport) Act.
- Marine (Safety Manning) Regulations – Made under the Marine Act.
- Marine (Safety) Regulations – Made under the Marine Act.
- Radioactive Ores and Concentrates (Packaging and Transport) Act – An Act to make provision for the packaging, storage and transport of radioactive ores and concentrates.
- Work Health (Occupational Health and Safety) Regulations – Made under the Work Health Act.
- Work Health Act – An Act to promote OSH in the Territory to prevent workplace diseases and injuries, to protect the health and safety of the public in relation to work activities, to promote the rehabilitation and maximum recovery from incapacity of injured workers, to provide financial compensation to workers incapacitated from workplace injuries or diseases and to the dependants of workers who die as the results of such injuries or diseases, to establish certain bodies and a fund for the proper administration of the Act, and for related purposes.
- Work Health Court Rules – Made under the Work Health Act.
- Work Health Regulations – Made under the Work Health Act.

Queensland

- Coal Mining Safety and Health Act 1999 – An Act to regulate the operation of coal mines, to protect the safety and health of persons at coal mines and persons who may be affected by coal mining operations, and for other purposes.
- Coal Mining Safety and Health Regulation 2001 – Made under the Coal Mining Safety and Health Act 1999.
- Dangerous Goods Safety Management Act 2001 – An Act about the safe management in Queensland of the storage and handling of hazardous materials, particularly dangerous goods and combustible liquids, and the management of major hazard facilities and emergencies involving hazardous materials, and for other purposes.
- Mining and Quarrying Safety and Health Act 1999 – An Act to regulate the operation of mines, other than coal mines, to protect the safety and health of persons at mines and persons who may be affected by operations, and for other purposes.
- Mining and Quarrying Safety and Health Regulation 2001 – Made under the Mining and Quarrying Safety and Health Act 1999.
- Workers’ Compensation and Rehabilitation Act 2003 – An Act to establish a workers’ compensation scheme for Queensland, and for other purposes.

South Australia

- Dangerous Substances Act 1979 – An Act to regulate the keeping, handling, transporting, conveyance, use and disposal, and the quality, of dangerous substances; and for other purposes.
• Explosives (Fireworks) Regulations 2001 – Made under the Explosives Act 1936.
• Explosives (Security Sensitive Substances) Regulations 2006 – Made under the Explosives Act 1936.
• Explosives Act 1936 – An Act to consolidate and amend the law relating to explosives.
• Explosives Regulations 1996 – Made under the Explosives Act 1936.
• Mines and Works Inspection Act 1920 – An Act to make better provision for the regulation and inspection of mines and works, and for other purposes.
• Occupational Health, Safety and Welfare Act 1986 – An Act to provide for the health, safety and welfare of persons at work, and for other purposes.
• Radiation Protection and Control Act 1982 – An Act to provide for the control of activities related to radioactive substances and radiation apparatus, and for protecting the environment and the health and safety of people against the harmful effects of radiation, and for other purposes.
• Rail Safety Act 1996 – An Act to promote the safe construction, maintenance and operation of railways as part of a national approach to rail safety regulation, and for other purposes.
• WorkCover Corporation Act 1994 – An Act to provide for the reconstitution of the Workers’ Rehabilitation and Compensation Corporation and its continuation under the name WorkCover Corporation of South Australia; to provide for its functions and powers; and for other purposes.
• Workers’ Rehabilitation and Compensation (Claims and Registration) Regulations 1999 – Made under the Workers’ Rehabilitation and Compensation Act 1986.
• Workers’ Rehabilitation and Compensation Act 1986 – An Act to provide for the rehabilitation and compensation of workers in respect of disabilities arising from their employment, and for other purposes.

Tasmania
• Workers’ (Occupational Diseases) Relief Fund Regulations 1996 – Made under the Workers’ (Occupational Diseases) Relief Fund Act 1954.
• Workers’ Rehabilitation and Compensation Act 1988 – An Act to provide for the rehabilitation and compensation of workers in respect of occupational injuries suffered by workers, to repeal the Workers’ Compensation Act 1927, and for other purposes and to amend the Evidence Act 1910 and the Magistrates Act 1987.
• Workers’ (Occupational Diseases) Relief Fund Act 1954 – An Act to consolidate and amend the law relating to the payment of compensation to employees in certain industries in respect of occupational diseases contracted by them in the course of their employment.
• Workplace Health and Safety Act 1995 – An Act to provide for the health and safety of persons employed in, engaged in or affected by industry, to provide for the safety of persons using amusement structures and temporary public stands and to repeal certain enactments.


Victoria


• Dangerous Goods (Explosives) Regulations 2000 – The objectives of these Regulations are to provide for the safety of people and property in relation to the manufacture, storage, sale, transport, use, disposal and import of explosives; to provide for the management of risks arising out of security concerns associated with explosives; to provide for the safe location of vessels containing explosives while in port; to provide for the establishment and implementation of safety management systems in factories; to regulate the manufacture, storage, transport and use of explosives in mines and quarries; to prohibit the misuse of explosives; and to prescribe matters for the purposes of the Act.

• Dangerous Goods (HCDG) Regulations 2005 – The objectives of these Regulations are to: regulate access to high-consequence dangerous goods; provide for the management of risks arising out of security concerns associated with explosives and high-consequence dangerous goods; make further provision for explosives; and make consequential amendments to other regulations made under the Dangerous Goods Act 1985.

• Dangerous Goods (Storage and Handling) Regulations 2000 – The objectives of these Regulations are: to revoke the Dangerous Goods (Storage and Handling) Regulations 1989; and to provide for the safe storage and handling of dangerous goods.

• Dangerous Goods (Transport by Rail) Regulations 1998 – The objectives of these Regulations are: to adopt the Transport Code for the purposes of regulating the transport of dangerous goods by rail and to ensure consistency with the provisions for the transport of dangerous goods by rail in other jurisdictions throughout Australia; prescribe matters for the purposes of the Act; ensure the safety of persons and property in relation to the transport of dangerous goods by rail; and ensure consistency with the provisions for the transport of dangerous goods by road.

• Magistrates’ Court (Occupational Health and Safety) Rules 2005 – The object of these Rules is to provide forms of application to the Court under Sections 83 and 85 of the Occupational Health and Safety Act 2004.

• Occupational Health and Safety (Asbestos) Regulations 2003 – The objective of these Regulations is to protect persons against the risk of asbestos-related disease resulting from exposure to airborne asbestos fibres.

• Occupational Health and Safety (Confined Spaces) Regulations 1996 – The objective of these Regulations is to protect people at work against risks to health or safety associated with the entry to, work in and exit from confined spaces.

• Occupational Health and Safety (Entry Permits) Regulations 2005 – The objective of these Regulations is to prescribe the information to be included in entry permits issued by the Magistrates’ Court under Part 8 of the Occupational Health and Safety Act 2004.

• Occupational Health and Safety (Hazardous Substances) Regulations 1999 – The objective of these Regulations is to protect people at work against risks to their health associated with the use of hazardous substances.

• Occupational Health and Safety (Issue Resolution) Regulations 1999 – The objective of these Regulations is to prescribe a procedure for the effective resolution at workplaces of health and safety issues as they arise, where there is no agreed procedure for resolution.

• Occupational Health and Safety (Lead) Regulations 2000 – The objective of these Regulations is to protect people against risks to their health associated with the use of lead at workplaces.
• Occupational Health and Safety (Major Hazard Facilities) Regulations 2000 – The objective of these Regulations is to provide for the safe operation of major hazard facilities in order to: reduce the likelihood of a major incident occurring; and reduce the consequences to health and safety and damage to property in the event of a major incident.

• Occupational Health and Safety (Manual Handling) Regulations 1999 – The objective of these Regulations is to reduce the number and severity of musculoskeletal disorders associated with tasks involving manual handling.

• Occupational Health and Safety (Mines) Regulations 2002 – The objective of these Regulations is to protect people in mines against risks to their health and safety.

• Occupational Health and Safety (Noise) Regulations 2004 – The objective of these Regulations is to ensure that: the exposure of employees to noise in the workplace is controlled so as to reduce the incidence and severity of hearing loss resulting from excessive exposure to noise; and there is consultation within the workplace in relation to the control of employees’ exposure to noise.

• Occupational Health and Safety (Plant) Regulations 1995 – The objective of these Regulations is to protect people at work against risks to health or safety arising from plant and systems of work associated with plant.

• Occupational Health and Safety (Prevention of Falls) Regulations 2003 – The objective of these Regulations is to prevent incidents at workplaces involving falls of more than 2 metres and to prevent or reduce injury resulting from those falls.

• Occupational Health and Safety Act 2004 – An Act to secure the health, safety and welfare of employees and other persons at work... and to repeal the Occupational Health and Safety Act 1985.

Western Australia


• Dangerous Goods (Transport) Act 1998 – An Act to provide for the safe transport of dangerous goods by vehicles.


• Explosives and Dangerous Goods Act 1961 – An Act: to consolidate and amend the law relating to explosives; to regulate the manufacture, importation and use of explosives, and the classification, marking, storage, carriage, and sale of explosives and dangerous goods; and for other incidental purposes.

• Mines Safety and Inspection Act 1994 – An Act: to consolidate and amend the law relating to the safety of mines and mining operations and the inspection and regulation of mines, mining operations and plant and substances supplied to or used at mines; to promote and improve the safety and health of persons at mines; and for connected purposes.

• Occupational Safety and Health Act 1984 – An Act to promote and improve standards for OSH, to establish the Commission for Occupational Safety and Health, to provide for a tribunal for the determination of certain matters and claims, to facilitate the coordination of the administration of the laws relating to OSH, and for incidental and other purposes.

• Occupational Safety and Health Regulations 1996 – Made under the Occupational Safety and Health Act 1984.
6.2.3 DESIGNATED AUTHORITIES

Because Australia is a federation with six states and two internal territories and a federal government, there are multiple authorities. A list is provided below, with a brief overview statement obtained from each organisation.

**Commonwealth**

*Australian Safety and Compensation Council* – The ASCC is a council made up of government, employer and employee representatives. It leads and coordinates Australia’s national effort to promote best practice in OSH, improve workers’ compensation arrangements and improve the rehabilitation and return to work of injured workers. Its role is to develop national OSH and workers’ compensation policy, encourage policy discussion and research, and promote consistency in legislation developed by states and territories.


**Australian Capital Territory**


**New South Wales**

*WorkCover NSW* – WorkCover NSW is a statutory authority within the Minister for Commerce’s portfolio. Its primary objective is to work in partnership with the NSW community to achieve safe workplaces, effective return to work and security for injured workers.

*Workers’ Compensation Commission* – The Workers’ Compensation Commission resolves workers’ compensation disputes between injured workers and employers. It is an independent statutory tribunal within the justice system in NSW. Its dispute resolution model implements the objectives of the Commission as set out in Section 367(1) of the Workplace Injury Management and Workers’ Compensation Act 1998. The Commission is committed to providing a transparent and independent forum for the fair, just, timely and cost-effective resolution of workers’ compensation disputes in NSW.

**Northern Territory**

*NT WorkSafe* – NT WorkSafe is a division of the Department of Employment, Education and Training. On 11 June, 2003, NT WorkSafe became the administrative and regulatory arm of the Northern Territory Work Health Authority, the statutory body established under the Work Health Act. NT WorkSafe took over responsibility from the Office of Work Health for the territory-wide regulation of OSH, rehabilitation and workers’ compensation.

**Queensland**

*Queensland Workplace Health and Safety Board* – The Workplace Health and Safety Board is the principal source of advice to the Queensland government and Minister for Industrial Relations on workplace health and safety matters in Queensland. Established under the Workplace Health and Safety Act 1995 on 1 February, 1998, the primary function of the Board is to give advice and make recommendations to the Minister about policies, strategies, allocation of resources, and legislative arrangements for workplace health and safety in Queensland.

*WorkCover Queensland* – WorkCover Queensland is a Queensland government-owned statutory authority, which means while it is owned by the government. WorkCover operates as an independent, commercial enterprise.
**South Australia**

SafeWork SA – SafeWork SA is South Australia's new OHS agency. Its primary role is to promote and encourage safe, fair and productive working lives in South Australia by working with employers, employees, unions and industry representatives. Formerly called Workplace Services, SafeWork SA is responsible for administering industrial relations legislation and managing all occupational health, safety and welfare functions in its state (including some functions previously managed by WorkCover).

**Tasmania**

WorkCover Tasmania – The WorkCover Tasmania Board is established by the Workers’ Rehabilitation and Compensation Act 1988 and is responsible for: overseeing the operation of Tasmania’s workers’ rehabilitation and compensation scheme; reviewing the incidence and cost of occupational disease and injuries; reviewing insurer performance and premium levels; issuing licences and permits to insurers and self-insurers and overseeing the operation of the Nominal Insurer; managing the workers’ compensation fund; monitoring and reviewing the Department of Infrastructure, Energy and Resources in connection with the exercise of powers and performance of functions under the Workers’ Rehabilitation and Compensation Act 1988 and the Workplace Health and Safety Act 1995; managing the workers’ compensation database to allow review of and reporting on scheme performance; advising the minister on matters relating to workers’ compensation, workplace health and safety and rehabilitation programmes; promoting and educating workers and employers about accident prevention strategies, developing healthy and safe workplaces, and effective occupational rehabilitation of injured workers and their early return to work; and making recommendations to the minister or the Secretary of DIER with respect to such matters as it considers necessary for the purposes of the Workplace Health and Safety Act 1995.

Workplace Standards Tasmania – Workplace Standards is a division of the Department of Justice. Workplace Standards Tasmania is responsible for administering much of the legislation that regulates business in Tasmania. OSH, workers’ compensation, long service leave, shop trading hours, bank holidays and some occupational registrations are key areas. It also has responsibility for many industrial relations matters.

**Victoria**

The Victorian WorkCover Authority (VWA) – The VWA is the manager of Victoria’s workplace safety system. Broadly, the responsibilities of the organisation are to help avoid workplace injuries occurring, enforce Victoria’s OSH laws, provide reasonably priced insurance for employers, help injured workers back into the workforce and manage the workers’ compensation scheme by ensuring the prompt delivery of appropriate services and adopting prudent financial practices. The VWA is governed by a Board that is accountable to the government, stakeholders and society.

**Western Australia**

WorkCover WA – WorkCover WA is the statutory authority responsible for the administration of the workers’ compensation system in Western Australia.

WorkSafe Western Australia – WorkSafe is a division of the Department of Consumer and Employment Protection, the Western Australian state government agency responsible for the administration of the Occupational Safety and Health Act 1984.

### 6.2.4 Inspection and Compliance Systems

Because Australia is a federation with six states and two internal territories and a federal government, there are multiple authorities that take inspection and compliance approaches.

Information on all of these has been provided in other sections, by state or territory. It is beyond the scope of this review to describe or evaluate all of those systems.
6.2.5 BUDGETS

The 2005/06 budget for the ASCC is approximately $NZ20.9 million. Unfortunately, detailed information on the budget for the ASCC was not available to the reviewer.

6.2.6 DATA COLLECTION AND ANALYSIS

The ABS is Australia’s official statistical agency. It provides statistics on a wide range of economic and social matters covering government, business and the population in general. It also has an important coordination function with respect to the statistical activities of other official bodies. The ABS has developed a forward work programme statement for the period 2005/06 to 2007/08, which reflects the strategic directions of the agency and takes account of the discussions of the Australian Statistics Advisory Council. This document is notable, from an OSH perspective, for an almost complete absence of reference to this topic.

The primary agency for health information in Australia is the AIHW. The AIHW is an Australian government statutory authority accountable to Parliament. It operates under the provisions of the Australian Institute of Health and Welfare Act 1987. This agency produces authoritative and comprehensive publications across the broad areas of health and welfare. However, it does not collect or publish injury statistics per se. The National Injury Surveillance Unit (NISU) at Flinders University is a collaborating unit that undertakes research, surveillance, analysis, consultation and teaching, and disseminates information on injury control. The NISU publishes a limited range of national injury statistics including statistics relating to brain injury, burns/scalds, drowning/near-drowning, fractures, poisoning/invenomation and spinal cord injury.

The various state authorities, such as workers’ compensation organisations, also collect statistics, and some of these are published.

6.2.7 RESEARCH INSTITUTIONS

Again, due to the federal nature of Australia, there is no single national research institution that tackles the whole field of OSH.

University-based research organisations include the Research Centre for Injury Studies at Flinders University in Adelaide, South Australia. The Research Centre is an academic organisational unit within the School of Medicine which, in turn, is part of the Flinders University Faculty of Health Sciences. The Research Centre’s mission is to contribute to reducing the burden of human injury and adding to knowledge of its nature, causes, effects and control. Staff undertake research, conduct surveillance, analysis, consultation and teaching, and disseminate information on injury control and related matters to public health and other practitioners, academics, government and the community. Sometimes these activities are undertaken in collaboration with other individuals and organisations. The largest programme run by the Research Centre is the AIHW NISO, which is a collaborating unit of the AIHW.
Workers’ compensation in Australia is a compulsory, employer-financed, “no-fault” occupational disabilities programme for work-related disease and injury. When an accident does occur, it is the employer’s responsibility to ensure the injured worker receives all necessary medical and rehabilitation care and does not suffer loss of income. This is achieved through a workers’ compensation claim to the appropriate authority in the state (or, if a federal worker, to the federal system). An employer that does not have a workers’ compensation policy may face severe penalties. These vary from state to state. Currently NSW has the most severe penalties for failing to carry an appropriate policy, with fines up to $AUD55,000 ($NZ63,216), or six months in prison.

Workers’ compensation is regulated by state legislation. There is no uniformity of benefits between states, so the precise extent of workers’ compensation insurance cover varies from state to state. However, statutory workers’ compensation benefits are “no fault” benefits. Providing a worker’s employment was a contributing factor to an injury or illness, this usually means that cover is established and the employee becomes entitled to benefits that are defined by the applicable workers’ compensation policy in that state. It is usually not necessary that the work environment be the sole or even the main cause of an injury. The precise nature and extent of the connection between work and injury will vary from state to state and, in some cases, according to the nature of the injury.

This means that the work relatedness may be a point of contention, and this could lead to a challenge from the liable employer. In some states, but not all, injuries suffered on journeys to and from work are also covered by workers’ compensation.

Workers’ compensation benefits are usually payable when the work environment contributes to an injury or disease. Benefits generally include weekly earnings, medical and hospital treatment, and rehabilitation. Sometimes there is eligibility for legal costs and lump-sum payments. Benefits are subject to restrictions such as industrial awards or statutory limits, all of which vary between states.

Employer premiums are also calculated differently in the various states. In NSW, Victoria, Queensland and South Australia, there are statutory formulae for the assessment of workers’ compensation premiums and levies. In other states, the premium is set largely on the basis of the insurer’s assessment of the risk, but this is still usually within statutory guidelines. Regardless of the state scheme, all premiums have the following variables: remuneration is the variable factor for calculating premium; industry classification is used to determine base premium rates; and claims’ experience is used to adjust premiums to a “real” risk rate (the claims’ experience may be industry based or individual employer based).

Workers may also, under some circumstances, lodge a common law claim. This is a claim for damages in which it is necessary for the worker to prove “fault” in the form of negligence or breach of statutory duty on the part of the employer. A workers’ compensation policy will often also cover liability for any work-related common law claims by employees. Again, the extent to which a worker may bring a common law claim varies from state to state.
6.3 AUSTRALIA – OSH PROGRAMMES

6.3.1 NATIONAL STRATEGIES

The Department of Employment and Workplace Relations is responsible for the Office of the ASCC. The ASCC provides policy advice on OHS and workers’ compensation matters. It develops national OHS standards and codes of practice, and undertakes research and analysis of national workers’ compensation data. The ASCC provides a national forum by which representatives of state and territory governments, employers and employees consult and participate in the development of policies relating to OHS and workers’ compensation. The ASCC states that it leads and coordinates Australia’s national effort to:

- promote best practice in OSH
- improve workers’ compensation arrangements
- improve the rehabilitation and return to work of injured workers.

It defines its role as to:

- develop national OSH and workers’ compensation policy
- encourage policy discussion and research
- promote consistency in legislation developed by states and territories.

The ASCC has published a long-range national OHS strategy for the decade from 2002 to 2012. This strategy “was agreed to by all Australian governments, the Australian Chamber of Commerce and Industry (ACCI) and the Australian Council of Trade Unions (ACTU). The Strategy sets very clear and ambitious goals for OHS and is a key initiative to improve Australia’s OHS performance”. Nine areas have been identified for national action.

- Comprehensive OHS data collections. This is to include extending data coverage, developing consistent definitions and measurement principles, and extending systems to allow the timely reporting and provision of information.
- A coordinated research effort. This is to include: establishing research priorities, cooperative arrangements and networks; exploring partnerships between areas concerned with public and occupational health; and improving communication with national and international OHS research bodies.
- A nationally consistent regulatory framework that includes reviewing national standards and codes, developing new national standards where need is demonstrated and repealing superseded regulations.
- Strategic enforcement. This is to include: benchmarking and sharing best practice approaches; developing strategic approaches based on proactive targeting, risk assessment and innovative sanctions; and publicising enforcement policies.
- Effective incentives could be extended by examining the effectiveness of current premium-setting incentives and investigating innovative non-financial incentives.
- Compliance support should be improved by developing hazard- and industry-specific guidance, supporting access to consistent compliance advice and developing OHS management systems guidance and auditing mechanisms.
- Practical guidance. This is to include developing means for improved access to information and supporting the development of guidance and facilitating the sharing of guidance developed within specific industries and jurisdictions.
- OHS awareness. This is to include maximising gains from substantial investment in awareness campaigns by sharing experience and learning, and developing evaluation approaches suitable for measuring the impact of awareness and information initiatives.
- OHS skills’ development. This is to include: integrating health and safety into vocational, professional and inspectorate training arrangements; promoting the integration of OHS competencies into management training, including for small business; encouraging the development of suitable OHS training resources; and researching improved methods of OHS skills’ development.
The ASCC has also stated that it has a workers’ compensation role, and that this will involve leading research and analysis of workers’ compensation arrangements in Australia. The ASCC will use the findings of this research to progress a nationally consistent and harmonised workers’ compensation system. Current workers’ compensation research areas are the ageing workforce, psychological injury, return to work, comparative information and labour force participation.

6.3.2 Consultation Mechanisms

Both the ASCC and Comcare undertake public and stakeholder consultation programmes.

6.3.3 Goals and Targets

The ASCC has established specific national targets:\[^{56}\]

- Sustain a significant, continual reduction in the incidence of work-related fatalities with a reduction of at least 20% by 30 June 2012 (and with a reduction of 10% being achieved by 30 June 2007).
- Reduce the incidence of workplace injury by at least 40% by 30 June 2012 (with a reduction of 20% being achieved by 30 June 2007).

These were derived from the agreed national priorities:

- Reduce high incidence/severity risks.
- Improve the capacity of business operators and workers to manage OHS effectively.
- Prevent occupational disease more effectively.
- Eliminate hazards at the design stage.
- Strengthen the capacity of government to influence OHS outcomes.

Comcare has established priorities based on three key result areas:

- Safe and healthy workplaces.
- Early and safe return to work.
- Accessible and affordable compensation.

6.3.4 Evaluation Methods

In its National OHS Strategy 2002–2012, the ASCC has identified the following indicators of success:

- Workplace parties recognise and incorporate OHS as an integral part of their normal business operations.
- Increased OHS knowledge and skills in workplaces and the community.
- Governments develop and implement more effective OHS interventions.
- Research, data and evaluations provide better, timelier information for effective prevention.

Methods for measuring or determining if these goals have been met were not provided. Instead, the ASCC stated that it will develop more specific indicators during implementation.
SECTION SEVEN

SUMMARY AND CONCLUSIONS
This review provides an overview of the management and governance of OSH in five countries: the United Kingdom, the United States of America, Finland, Canada and Australia. The workplace is known to contribute to diseases and injuries, and many causes and contributing factors have already been identified. Further actual or potential factors will be identified through ongoing research, such as through the use of surveillance systems.

All five countries under consideration are western industrialised nations with many similarities to New Zealand. However, there are a number of differences. The US, Canada and Australia are all conglomerates of separately governed states or provinces, with a federal government that has a less unique role than in nation states with a single governmental structure such as Finland. The UK lies somewhere between these poles, with partially devolved government structures, yet still maintaining a strong centralised executive structure. However, it is also part of the EU, which is now the largest federation of nation states in the world.

The OSH systems in use are, in general, based on relevant civil and criminal law. The most common principle is one of hazard identification using some form of risk assessment based on an agreed rule or “standard”. This approach rests on a sequence of assumptions. First is that risks and hazards are known and understood. Second is that they can be accurately identified in practice. Third is that, once they have been identified, they can be eliminated, or at least reduced, and this will yield a subsequent reduction in cases of injury or illness. Unfortunately, this sequence of assumptions does not always hold true in its entirety. For this reason, there is a lack of agreement over what constitutes an effective OSH system. Different countries and states within those nations take different approaches to legislation, regulation and enforcement.

**UK**

There is a single governance body (HSC/HSE) with enabling legislation and regulations. The HSE drives policy, via the HSC, directly to the government. However, the role of EU directives has become more relevant, with the HSE now acting as a portal for the EASHW. The major bonus from this is improving harmonisation with other European systems, allowing greater comparability and data pooling. The HSE and local authorities have responsibility for OSH, but the HSE is the final authority. Both the HSE and local authorities conduct inspections and employ inspectors. Currently about 38% of the HSE's staff is inspectors. Enforcement is through the issuing of notices, and prosecutions when required. There is a lack of a cooperative or collaborative approach, and the main focus is on employers, with much less on employees. The HSE provides information, but is relatively passive with respect to education. Current data collection systems are fragmented, with low capture rates. This represents a major and ongoing disadvantage, with little apparent opportunity for remedy in the near future. There are modest research facilities, although these are primarily laboratory based. However, substantial external research projects are regularly contracted. There is no workers’ compensation system per se. Instead, there is a sole reliance on compulsory employers’ liability insurance and state-funded social security benefits. Litigation has been playing an increasing role in British society. The HSE's national programmes strongly emphasise hazard identification and enforcement. However, there has been a more recent emphasis on managing sickness absence and lost time at work, but it remains to be seen if this will translate into effective and practical programmes. The major goals and aspirations are to reduce fatalities, occupational disease and injury rates. Unfortunately, a current evaluation of these goals is based on data that are unreliable due to low capture rates. The evaluation of strategic projects and policy is not conducted in a systematic manner.

**US**

There is a single federal governance body, OSHA, but there are many others involved state by state, especially with implementation. There are enabling federal legislation and regulations, but also a plethora of local state legislation. Policy is strongly driven by the federal approach set out by OSHA in setting standards and methods to enforce these. NIOSH conducts research, and OSHA and NIOSH are supposed to work together. However, it is not entirely clear how effective this relationship is and whether, in practice, ideas and concepts derived from NIOSH research actually end up assisting to develop policy with OSHA. OSHA has responsibility for most non-governmental
employees in the US, and there is also MSHA which works in collaboration with the mining sector. Some states administer their own safety and health programmes, although they are obliged to use standards and enforcement at least as effective as federal requirements. In theory, OSHA is the final authority. Both OSHA and MSHA have inspectors. Effort is made to achieve compliance through cooperative programmes aimed at getting employers on-side. However, enforcement is through inspections, usually without notice, and these may be followed with citations and penalties. There is a greater emphasis on employers and less on employees. OSHA disseminates information and provides some education and training. Data collection is quite fragmented, with mixed capture rates, and these are more often low. NORA drives the NIOSH research approach. There is also an initiative aimed at getting research into practice. The workers’ compensation system is mandatory, but is applied at state level. There is wide variation in these systems between states. There is also social security, and this is largely a social insurance approach. There is a large personal injury litigation sector. The research programmes conducted by NIOSH are comprehensive, but there is a strong emphasis on hazard and risk identification. OSHA’s national programmes emphasise standards’ development and employer compliance. The major goals and aspirations are to reduce fatalities, and the occupational disease and injury rates. Evaluation of progress toward these goals is based on data that may be less reliable due to mixed capture rates. The evaluation of strategic projects and policy is not systematic.

**Finland**

There is a government department that has major responsibility, and this is delegated to the Finnish OSHA. There are national enabling legislation and regulations. The Finnish OSHA drafts and develops policy, and this is contributed directly to the responsible ministry and government. Finland contributes to EU directives and policy development. The Finnish OSHA is given responsibility for OSH and has enforcement powers. Inspectors work for the ministry supervised by the Finnish OSHA. Enforcement is conducted through issuing notices and fines. SF collects and collates data from all sources, and there are modest to high capture rates. The FIOH conducts research and provides education and training. There is a very large and active research centre. Compensation comes from social insurance and statutory accident insurance (which covers both work-related disease and injury). The FAII oversees it. National programmes are proactive and include strategies aimed at wellbeing in the workplace as well as prevention. Emphasis is placed on both employers and employees.

Goals are also to reduce fatalities and the occupational disease and injury rates. The evaluation of progress toward these goals is based on data with moderate to high capture rates. Strategic programmes are externally evaluated, and this appears to be moderately systematic.

**Canada**

There are multiple governance bodies. These are federal for some workers and provincial for others. There is a large body of enabling legislation and regulations. Provincial statutes are based on the federal Code, but there is a lot of variability. Safety and health is often made into a part of the workers’ compensation system. The HRSDC is a federal department that has responsibility for OSH. It develops policy. The CCOHS disseminates information and provides some education and training. The AWCB is not a designated authority, but serves as a bridge between provincial workers’ compensation boards. Each province has its own legislation.

Inspections are empowered by the federal Code. However, inspectors are employed in provinces, under separate systems that are usually driven by the provincial workers’ compensation system. Data is collected centrally by SC, but there appear to be only low or inconsistent capture rates. There are four major research organisations, but these are not necessarily well coordinated. The workers’ compensation system is mandatory, but it exists at the provincial level, with considerable variation in form and structure. There is also a social security system and a personal injury litigation sector. The HRSDC runs national programmes, and many of these are multifactorial, aimed at collaboration with workplaces, with an emphasis on high-risk sectors and employers and the development of partnerships with employers and employees. The overall goals and aspirations are to reduce fatalities and
occupational disease and injury rates, but there are also shorter-term pragmatic goals of improving information quality, usability and user satisfaction, and to increase awareness of services. Evaluation of progress toward goals is currently based on data that are likely to be unreliable, due to lower capture rates and a lack of comparability between different provincial systems. The evaluation of strategic projects is more systematic.

**Australia**

The ASCC acts as the federal body that can declare standards and codes of practice, but these need to be adopted by states and territories before they have legal force. There are enabling legislation and regulations, but these are complicated by a plethora of statutes and regulations from states and territories with large variations and a lack of harmonisation. The major policy focus for OSH is derived from the workers’ compensation approaches, which differ for each state or territory. The ASCC is not a regulatory body but seems designed to influence federal policy-making. State and territory governments are the final authorities in their areas of jurisdiction and run the inspection and compliance systems. The greatest emphasis seems to be on employers. Data collection is fragmented, with variable capture rates, and there is an inevitable tendency to emphasise workers’ compensation data because of this. The research sector appears weak, lacking a national focus or strong leadership to provide coordination. Workers’ compensation insurance is mandatory for all employers, but the rules and conditions vary between states and territories. There is a personal injury litigation sector. The ASCC is starting to demonstrate strong leadership, and has undertaken long-term planning with a systematic approach. An important goal is to harmonise systems within Australia. Current evaluation of progress toward these goals is based on data that currently seem unreliable, due to low capture rates and a lack of comparability between states and workers’ compensation systems. The evaluation of strategic policy has not been systematic, but is showing clear promise that it will be under the leadership of the ASCC.

**Conclusions**

Countries with devolved or separate legislatures functioning within a federated group seem to suffer important disadvantages resulting from the lack of harmonisation between the various OSH systems that they have. This extends from more simple matters, such as incongruent definitions between systems, right through to the complexities of legislation and regulations.

The UK stands alone among the countries reviewed in lacking an identified workers’ compensation system. It is possible to speculate on any number of reasons for this. Perhaps the presence of an NHS delivering healthcare free to the user across the whole population has reduced the practical pressures to develop such a system.

Whatever their historical origins, the governance of safety and health systems in the countries reviewed all currently acknowledge there is both a moral and a practical dimension. It is widely recognised that employees should not have to risk life or limb when engaging in work activities, nor should others be adversely affected by their working. No doubt the influence of international movements such as the ILO and WHO have contributed to a convergence of opinion about this issue. Governments also realise that low-quality OSH performance adversely affects their economies, both directly and indirectly. The pragmatic political choice is always to attempt to manage a potential threat, and this has been potent motivation for the development of both OSH systems and workers’ compensation methods.

The classification of a work-related problem that impacts on an employee’s health as either an illness or an injury clearly has an arbitrary component. This seems to rest firmly, at least in part, on contextual aspects of the relevant system. Thus, the systems that provide incentives for a health problem to be classified as an illness, rather than as an injury, report much higher rates of work-related diseases. Arguably, the UK is again a stand-out in this regard, with 61% classified as ill health and only 39% as injuries. This is in stark contrast to the US, for example, with only about 6% of cases classified as occupational illnesses and 94% as work-related injuries. Clearly there are not such huge differences in the workforces of each country so as to arrive at such marked differences in rates. Rather, this is an issue of classification and attribution, which, in turn, are influenced by the subtle forces within each system.
There is a resounding congruence in the underlying philosophy for OSH between all five countries under consideration, namely a reliance on the assumption that identifying risk factors, or potential contributors to occupational disease and injury, is the foundation of effective prevention strategies. Furthermore, this hazard identification approach needs to be acted on directly at the actual workplace by employers, and employers need to be motivated to participate in this approach, making it necessary to have some form of inspection and enforcement system. There are some differences in strategies and methods to get employers to participate, and these range from those that use a cooperative model through to sole reliance on punitive measures. Also, there are some differences in the weight placed on employee involvement. Some systems adopt the simple approach of merely giving employees rights to complain, while others take the view that the active involvement of employees in hazard identification and risk reduction is more effective.

Currently there does not seem to be any reliable evidence as to what enforcement or compliance system is the most effective. It seems reasonable to propose that motivating either employers or employees, or both, to participate is always going to be a complex business. Motivation is well understood to have a “carrot” and a “stick” aspect, that is, multifactorial approaches are intuitively the more appealing, yet they have been the more rare to date.

There is a uniform lack of consistency in the type and manner of application of sanctions applied (usually to employers) if safety and health rules are broken or not followed. There is a universal reliance on punitive sanctions, without attempts to apply positive rewards, for example after rapid remedial action has been taken.

Therefore, it seems likely that an approach embracing a mixture of methods will be the more successful overall. This should probably incorporate a mix of:

- a set of mandatory, but reasonable, workplace requirements with a legislative basis
- an information dissemination and educational initiative
- encouragement for a collaborative approach between the OSH system and the workplace
- involvement of both employers and employees
- a monitoring approach that involves inspections
- the use of inspections that are prioritised toward truly dangerous jobs and workplaces. It is clear there are uncomfortable work conditions, unpleasant jobs and some truly dangerous jobs. The most effective system, in terms of preventing fatalities and serious work-related injuries or diseases, would emphasise the latter.
- sanctions for lack of compliance with mandatory requirements
- a mix of sanctions that can be applied both positively and punitively
- careful monitoring of the effects.

None of the systems themselves seems to actively be questioning the possible limitations of the hazard identification model, or the assumption that a high level of avoidance of all risk will have only beneficial effects. However, this debate about the potential effects of safety and health legislation is more commonly being held in the public domain in western countries. For example the Guardian newspaper in the UK reported in an article entitled “School trips under threat from ‘litigious’ parents” on 1 November, 2004 that “the National Association of Schoolmasters/Union of Women Teachers (NASUWT) is recommending that none of its members take school trips because of the risk of being sued”. The current advice from NASUWT has subsequently been modified to state, “Because of the great personal and professional risks involved, members should consider carefully whether or not to participate in non-contractual educational visits and journeys. If members ignore this advice then every effort should be made to minimise the risk”. In the US, the OSHA model, which relies heavily on the threat of punitive sanctions, is widely perceived by both employees and employers as onerous to comply with, but even worse, as largely ineffective. There is an overt lack of “ownership”, and the system seems almost perversely designed to pit employees and employers as antagonists on the industrial battlefield rather than as collaborative partners who both have vested interests in safety and health. This is true to a lesser extent in the UK system also. Of course, social and political circumstances constantly change and evolve within our modern societies.
Close integration between data systems, including surveillance, research and analysis, sophisticated programme implementation and policy development, seems to be an elusive goal within the countries reviewed. Perhaps it is best achieved currently in Finland. This may be an artifact of the size of the country, with a population not too dissimilar from New Zealand’s. However, it is more likely the result of careful planning to construct systems that are able to integrate with each other. To be fair, the larger countries may achieve this equally well at regional, state or provincial level. However, they have yet to arrive at consistent policy and systems and methods across their whole populations.

Identifying hitherto unknown risks and hazards or potential contributing factors remains a major challenge. The lack of consistency within systems over time and between the various systems has seriously hindered the ability of researchers to collect and aggregate data in a meaningful way. Significant efforts are currently underway to harmonise data collection, which will provide an important boost to statistical power in the quest to detect the relevance of suspected factors and perhaps their subtle interplay with other factors.

It can be argued that OSH may be fruitfully linked with public health initiatives and strategies. This is because there are often overlapping areas of interest and similar applicable methodologies. However, in practice, this rarely occurs, for reasons that are not always clear. Anecdotal information from those inside the respective systems suggests it is not just a matter of simple territorial or boundary issues. Rather, it seems there is a general perception that health and injury issues that involve work either are better funded or have a specific tagged funding stream. Hence, there is a general reluctance on the part of those involved in public health matters to use any of their scarce resources in areas that may attract better funding. Furthermore, those involved in work-related health and injury issues are usually constrained by some form of mandate to remain firmly in an arena where work relatedness is demonstrable.

When safety and health systems fail to prevent injury or illness, as they inevitably will do since they cannot be perfect, some form of support and compensation is generally made available to the worker. This varies widely in many details. However, there are three common methods for delivery: insurance-model workers’ compensation; social welfare/security benefits; and recourse to appeal and/or litigation.

The impact a compensation system might have on OSH initiatives is not entirely clear. The most common method to inform prevention strategies is to feed back claims’ history in an attempt to identify problem areas. However, the effectiveness of this lacks an evidence base. There is consistent anecdotal evidence from those involved in direct management of such systems that a frequent outcome is merely behaviour modification, such as reclassification or recoding of cases by GPs or others, rather than a reduction in total claims. However, this may only hold true for less severe injuries or illnesses. Feedback on work fatalities, for example, seems to have a more robust effect. That is, the relationship between systems and prevention initiatives may be complex and vary across spectrums, such as severity.

The effectiveness of OSH initiatives is hard to quantify for a number of reasons. These include changes within systems, over time, and a lack of comparability between systems. An important and valid question is whether OSH systems function better when they are run as a stand-alone department or embedded within another agency. There is no clear evidence on this matter. However, observation indicates that independent, or at least semi-autonomous, departments may well function more effectively with greater focus and the ability to evolve more rapidly in response to changing needs.
This question leads naturally to a further important issue, namely, how good the available evaluation research is. Despite substantial and well intentioned efforts, the evidence base on the effectiveness of prevention strategies remains weak and equivocal. All the systems reviewed do place a strong emphasis on research, and this is perfectly appropriate and understandable. However, the best method for efficiently delivering research is not immediately clear. Many countries have given the task to a single, large research organisation. However, all seek external and independent research providers. Perhaps it can be argued that the most flexible and effective approach is to have a semi-autonomous research organisation that is required to drive a research agenda based on expert and stakeholder consultation, and that manages and coordinates a number of specialised groups that conduct the actual research. This should be augmented by overall independent evaluation of the research outputs.

The near future may be an exciting time for development within OSH systems, since there is a rapidly maturing approach based on more comprehensive data systems that are harmonised so as to allow more powerful comparisons, and there is a growing recognition that more sophisticated methods targeted at key areas identified by the stronger data sets will yield more effective prevention strategies.
8.1 **Currency Conversion Rates**

All currencies were converted to New Zealand dollar equivalents at the following rates:

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<th>Currency</th>
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<td>$CAN1 (Canadian dollar)</td>
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<tr>
<td>$US1</td>
<td>1.517911</td>
</tr>
</tbody>
</table>
REFERENCES


62. Thompson & Co Solicitors. If you do not win your case we will not charge you a penny for the work we have done and you get to keep 100% of your compensation. http://www.thompsonandco-solicitors.co.uk, 2006.


