Sectoral activities in the ILO

The Sectoral Activities Programme is managed by the Sectoral Activities Department (SECTOR) in the Social Dialogue Sector of the ILO. Its objective is to promote social dialogue at the sectoral level and to facilitate the exchange of information among the ILO's constituents on labour and social developments concerning particular economic and social sectors. One of its means of action is practically oriented research on topical sectoral issues. This publication is an outcome of that research.

The particular characteristics of the various primary, manufacturing and service sectors account for the different form taken in them by issues such as globalization, flexible work organization, industrial relations, the implications of structural and technological change, trends in the number and nature of jobs, and the situation of special groups such as children and women workers. The Sectoral Activities Programme constitutes the principal ILO interface with its constituents at the sectoral level.

Continuing attention is given to eight groupings of major primary, industrial and service sectors: Agriculture and forestry; Education and research; Energy and mining; Infrastructure, construction and related industries; Manufacturing; Private sector services; Public services and utilities; and Transport.

The groupings include the following sectors: Agriculture, plantations, other rural sectors; Basic metal production; Chemical industries; Commerce; Construction; Education; Financial services, professional services; Food, drink, tobacco; Forestry, wood, pulp and paper; Health services; Hotels, tourism, catering; Mechanical and electrical engineering; Media, culture, graphical; Mining (coal, other mining); Oil and gas production, oil refining; Postal and telecommunications services; Public service; Shipping, ports, fisheries, inland waterways; Textiles, clothing, leather, footwear; Transport (including civil aviation, railways, road transport); Transport equipment manufacturing; Utilities (water, gas, electricity). These sectors are vital in virtually all national economies. Issues concerning other sectors or subsectors within groupings are addressed on an ad hoc basis.

The principal activities of the Sectoral Activities Programme are a mix of the development and undertaking of constituent-driven practical action programmes in various sectors in a number of countries, and the holding of international sectoral meetings that provide a forum for discussion and an exchange of views on current issues in the sector concerned. These activities are generally tripartite, with equal participation by governments, employers and workers. Where the government is the predominant employer, however, participation reflects this. From time to time, specialized meetings of experts are held. An outcome of most meetings is agreed conclusions that serve as guidelines for policies and measures for dealing with the issues and problems – at the national level and by the ILO.

The Programme undertakes follow-up activities to these meetings and provides various forms of technical assistance, including the promotion of tripartite sectoral dialogue on priority labour issues at national level, and the provision of advisory services on sectoral labour issues. It also collects, analyses and disseminates technical sectoral information and carries out studies, such as this one, on issues of concern to particular sectors or groups of sectors.

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SECTORAL ACTIVITIES PROGRAMME

Working Paper

Safety and health in the European forestry sector – The impact of more open markets and of increased regulation

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Preface

The European forestry sector has seen some very significant changes over the last ten years from the effects of European Union enlargement as well as major structural changes within the sector itself. All these have had an impact on safety and health in the sector, where accident rates appear to have remained on a plateau and are significantly higher than even farming or construction.

This paper gives an overview of some of the challenges for accident and ill health prevention in the sector, both in the light of the more open labour and trade markets and increased regulation, and how several countries are tacking these challenges. In particular, with the expansion of the European Union, national safety and health legislation has been modernized and harmonized across the EU-27, providing a sound basis for improvements. The paper also refers to some wider issues, including the need for a management systems approach to safety and health and the recently adopted Promotional Framework for Occupational Safety and Health Convention and Recommendation. Finally, the paper makes some recommendations for improvements in the sector.

The ILO would like to thank many national and European organizations for providing much useful information for this paper. At the national level, these include labour inspectorates and forestry experts from ten European countries, namely: Bulgaria, Estonia, Finland, Latvia, Poland, Slovenia, Sweden, Switzerland, Romania and the United Kingdom, who sent helpful data on forestry accidents etc and information about current initiatives to improve safety and health in the sector. At the European level, these include Eurostat – ESAW (European Statistics on Accidents at Work), the United Nations Economic Commission for Europe (UNECE) Timber Section, the European Network of Forest Entrepreneurs and the International Trade Union Confederation, who all provided helpful information and advice.

Elizabeth Tinoco
Director
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Contents

1. Safety and health trends in forestry: The wider context

Background to this paper

1. "Safety and Health in Forestry are Feasible" was the title of an international conference organized by the Joint FAO/ECE/ILO Committee on Forest Technology, Management and Training, in Konolfingen, Switzerland, in October 1996.[1] Several presentations showed that positive improvements in standards of safety and health in the sector were indeed feasible, but accident rates in forestry work appeared to have "stagnated at a high level", with most European countries seeing increasing health problems amongst forestry workers. Participants called for safety and health to be made a high-priority responsibility for managers, for improvements in safety and health training of workers, for better information and communication and for all links in the forestry operators' chain to work together in closer cooperation. Finally, the paper affirmed that "a culture of safety-mindedness must begin to thrive on all levels of forestry work".

2. This paper was then commissioned to consider the impact of changing European markets and of increasing regulation over the last decade on safety and health in forestry. The paper and its recommendations were discussed at the Second International Conference on Safety and Health in Forestry, held in Annecy, France, in May 2007.

Changes in European markets

3. Over the last ten years, Europe has seen great changes both politically and economically. At the political level, in 1996 the European Union consisted of only 15 member States, mainly the more industrialized countries of Western Europe. But on 1 May 2004, a further ten, mainly Eastern European, countries joined the EU, namely Cyprus, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Slovakia and Slovenia. Then on 1 January 2007, Bulgaria and Romania joined the EU, creating the "EU-27" with a total population of about 495 million people.[2]

4. Alongside these political changes, there have also been great economic ones with moves towards a market economy in most if not all European countries. Such a trend has brought about radical changes in employment structures, generally, with the demise of large State-run enterprises and the rapid growth of micro- and small enterprises, greater contracting out of work and increasing cross-border movements of workers. There has also been considerable investment in new technology and modernization of plant and equipment.

Changes in the forestry sector

5. The forestry sector has also felt these winds of change. With the political and economic restructuring in Eastern Europe, for example, the sector has seen the restitution of private forests and many more small firms and single operator businesses replacing much larger State-run enterprises. More widely across Europe, the sector has also seen advancing mechanization, with tree harvesters, forwarders and other heavy-duty machines becoming

[1] Seminar and Workshop Proceedings, "Safety and Health in Forestry are Feasible", Federal Office of Environment, Forests and Landscapes, 3003 Berne, Switzerland, 2007.

[2] http://en.wikipedia.org/wiki/Statistics_relating_to_enlargement_of_the_European_Union.

more common and replacing the more traditional methods of timber extraction. Productivity has thus rapidly increased with, for example, the consumption of round wood in Europe growing by 22 per cent between 2001 and 2005[3] and Russia's timber harvests increasing by 18 per cent over the same period.[4]

6. With increasing mechanization as well as for other reasons, forestry labour markets have markedly decreased. In Poland, for example, 158,900 were employed in forestry in 1985, 64,400 in 1994 and only 27,500 in 2003. Other countries, such as Bulgaria and Romania, have also seen large decreases in numbers of forestry workers. At the same time, there has been much greater cross-border working within the EU generally, with forestry workers moving more easily from one EU country to another. Some EU forestry workers also come from non-EU countries, such as from Serbia, Croatia and Ukraine. There are major implications here for safety and health training, and for effective communication between workers of different language and cultural backgrounds.

7. Sustainable forest management has been another notable feature of the last decade, promoted by organizations like UNECE, the Forest Stewardship Council, and the European Network for Qualification in Forestry (ENQuaFor) and others. Forest certification schemes have become more common as a result. There are implications for safety and health here too, which are now recognized as one of the indicators of sustainable forest management.

8. As a consequence of good stewardship and management, forest cover in Europe is slowly increasing by 0.3 per cent per year, in contrast with other parts of the world.[5] Wood production and use is also shifting noticeably towards Eastern Europe, Russia and CIS countries, a trend that is to set to continue until 2020.[6] Safety and health in forestry may therefore be especially important for those countries, but across Europe, positive steps are being taken to bring about real improvements in this sector.

9. However, the sector has also had to face more frequent forest fires and storms over the last decade, notably in southern and central Europe. There are actual or planned measures in several countries now, including France, Sweden, Norway and Finland, to respond adequately to similar forest devastation in future.[7] In the context of this paper, the urgent need to clear forests after such events – and to do so safely – places sudden and heavy demands on supplies of adequately trained labour. With EU labour markets now more open than ever before, it should in theory be easier to solve these problems in future, although the mutual acceptance of training qualifications across the EU may not be a reality for some time to come.

[3] Forest Products Annual Market Review, 2005–2006, www.unece.org/trade/timber/docs/fpama/2006/fpamr2006.pdf .

[4] Forest Products Annual Market Review, 2005–2006, ibid.

[5] See, for example, "Europe in figures", Eurostat yearbook 2005, Chapter 7.

[6] European Forest Sector Outlook Study 1960–2000–2020, UNECE, 2005 – www.unece.org/trade/ timber/docs/sp/sp-20.pdf.

[7] *Vulnerability and adaptation to climate change in Europe*, European Environmental Agency Technical Report 7/2005, http://reports.eea.europa.eu/technical_report_2005_1207_144937/en.

Safety and health in European forestry – New standards, new approaches

European directives and other standards

10. With EU enlargement, many more European countries have had to implement relevant European Directives since 2004, including "single market" ones as well as those concerning safety and health at work per se. The effect has been to modernize and harmonize national legislation on safety and health at work across Europe, so that there are now equivalent legal standards for managing safety and health at work as well as specific regulations covering particular hazards or sectors.

11. Non-EU countries in Europe, such as Albania, Serbia, Croatia, Switzerland and Ukraine do not have align their national safety and health legislation with EU directives, but amongst candidate countries there is some political will to do so, to demonstrate their readiness to meet the requirements for EU membership.

12. At the same time, there have been new ILO standards on the subject, notably the code of practice *Safety and health in forestry work* (1998)[8] and the Safety and Health in Agriculture Convention, 2001, which also covers forestry.

13. These new laws and guidance will be considered more fully in Chapter 3.

Changing attitudes to safety and health at work across all sectors

14. More generally, there has been a notable shift in attitudes towards safety and health at work over the last ten years, in Europe as elsewhere. The reasons for this are various, but one that should be mentioned is the realization that the overall costs of accidents and ill health to businesses and to governments are far greater than had been previously realized. Governments and employers have both elucidated the "business case" for safety and health, which is increasingly seen as an important contributor to productivity, profitability and employability. Growing interest in corporate social responsibility in recent years has also helped to promote the cause of safety and health, amongst others.

15. Other factors have also played their part, such as increasing regulation and increasing litigation following accidents, but for all these reasons the prevention of accidents and ill health is now often given higher priority amongst governments and their social partners. Such attitudes are certainly not found everywhere, and there are always the better and the poorer performers, but there has been a significant attitude change to safety and health – in this sector as in others – and this needs to be acknowledged.

"New" safety and health risks in forestry

16. The majority of safety and health risks in forestry have been comprehensively covered by publications such as the ILO code of practice mentioned above. Safety risks include the more obvious ones such as from cutting and felling trees, transport and falls from heights; health risks include manual handling, the use of chemicals (e.g. pesticides), noise and vibration. However, the last decade has seen a number of changes in the sector and these in turn have altered the nature of risks faced by workers. For example, increasing

[8] See http://ilo.org/public/english/protection/safework/cops/english/download/e981284.pdf.

mechanization has meant that risks associated with manual labour have been reduced, but others have been introduced, such as being run over by large forestry vehicles.

17. Other issues have been become better understood and documented, such as ergonomics. Improving the ergonomics of forestry work is a particular challenge for the sector, since the work is done outside and often in difficult weather conditions, in difficult terrain and in areas sometimes inhabited by dangerous plants, insects, snakes and animals. Improving the working environment not only benefits the safety and health of the workforce, but brings productivity benefits too. Research on ergonomics in forestry continues.

18. Tick-borne diseases have also become of greater concern to forestry workers in the temperate zones of Europe and North America, since they appear to be at greater risk of contracting them because of their working environment. Lyme Borrelosis or Lyme's disease is one of the better known of these. The prevalence of the disease varies considerably in different European countries with an overall increasing prevalence from west to east. The European Union Concerted Action on Lyme Borreliosis set up a website[9] in 1997 to provide up to date information on the disease in Europe and on its epidemiology, exposure and prevention.

19. The greater use of chemicals, such as pesticides or biocides in treating saplings, has also increased health risks, and employers, workers and contractors need to be aware of these and take appropriate precautions. Chemicals should be properly labelled, be accompanied by safety data sheets, and personal protective equipment and adequate washing facilities provided for workers handling chemicals.

Accident and ill health data

20. In spite of efforts to improve the situation, however, across the EU–15 the forestry sector's safety performance appears to have plateau-ed over the last seven to eight years. Table 1 provides averaged figures for the EU–15.

Table 1. Fatal accidents in EU–15 countries from 1999–2004 in the category "Forestry, logging and related services". Data from Eurostat[10]

Year	1999	2000	2001	2002	2003	2004
No. of fatalities reported in above category	62	77	68	84	72	74
No. of non-fatal accidents reported with over three days' absence	25 334	26 370	23 545	26 075	26 118	24 342

21. The above data covers the EU, which until 2004 only comprised 15 countries. To obtain a fuller European picture, national accident data have also been obtained from individual countries, namely: Bulgaria, Estonia, Finland, Latvia, Poland, Slovenia, Sweden, Switzerland, Romania and the United Kingdom. It is not possible to compare data *between countries* because national reporting requirements vary significantly, but lessons can be drawn with respect to trends *within the individual countries concerned* over the period (2000–05):

[9] See http://meduni09.edis.at/eucalb/index.htm.

[10] Personal communication.

- Some Eastern European countries record a dramatic decline in annual figures for *non-fatal accidents* in forestry between 2000–05. Data from Bulgaria, Estonia and Romania, for example, record national reductions of over 50 per cent over this period. "Severe injuries" (differently defined) in the sector have also decreased over this period, but by not as much.

- National figures for *fatal accidents* are mostly very low, so trends are less statistically reliable. However, the annual toll of fatalities has remained much the same across the EU between 2000–05, as table 1 suggests. The same appears to be true for the whole of Europe.

- In Finland, Slovenia, Sweden, Switzerland and the United Kingdom, there have been downward trends in *non-fatal accidents* of 10–20 per cent over the last five to ten years, but these countries started from lower statistical baselines in the earlier years. *Fatal and major injury accidents* in these countries are already very low. Figures 1 and 2 show accident and disease trends in one EU country, namely Sweden, since 1980.

- *Accident incidence rates* (i.e. numbers of accidents per 100,000 workers) have also dropped during the same period in all the countries mentioned above, but less markedly so. This is to be expected, since numbers of forestry workers have also decreased in this period.

- Ill health data are often absent, but some countries, such as Finland and Sweden, do record numbers of occupational diseases in this sector.

22. *Accident incidence rates* are often a better indicator of performance since they take into account numbers of workers. Using data obtained from Eurostat (table 1), from individual Eastern European countries (as above) and from other sources, it has been possible to estimate a European average for fatal accident incidence rates in forestry (table 2). A comparison can be made with other high-risks sectors, namely farming and construction. However, the estimate for forestry must be treated with some caution as it is based on a limited amount of data. Further research, especially of numbers of forestry workers actually employed, is necessary before a more accurate estimate can be obtained.

Table 2. Estimated averages for EU fatal accident incidence rates (Numbers of fatal accidents per 100,000 workers) for certain sectors[11]

Sector	Manufacturing (1994–2001)	Construction (1994-2001)	Agriculture, hunting, forestry (1994–2001)	Forestry only (2000–05 data obtained for this report)
Average EU fatal accident incidence rates	3.5/100 000	12.7/100 000	12.6/100 000	Between 24 and 30/100 000

23. One more factor that needs to be borne in mind is the under-reporting of accidents. This problem is of course not confined to any one sector, but it is more common where workplaces are transient and employment is less formal and where there are larger numbers of contractors and small enterprises – as in forestry. It may even be more of a problem in some countries now than it was 10–15 years ago, when forest work employers

[11] Data for all except forestry from "Work and health in the EU, a statistical portrait", Eurostat, 2004, European Commission.

were often larger organizations that should have been more aware of accident reporting requirements.

24. The positive side to this somewhat depressing picture is that several national governments and their social partners have already started to take concerted action to reduce accidents in the sector. But there is certainly no room for complacency. The challenges of greater mobility of the labour force, together with other factors such as an expanding sector in Eastern Europe, make it more necessary than ever to maintain a preventative approach in this sector and effectively to manage safety and health amongst all the players involved.

2. The impact of more open markets on safety and health

25. The more open trade and labour markets in forestry have had several effects on safety and health issues, namely:

- Greater contracting out of labour has heightened the importance of communication on safety and health matters between forest owners, managers, contractors and operators. This calls for safety and health to be properly managed, ensuring that clear procedures are in place, understood, and followed properly.

- With other structural changes in the sector, including the restitution of private forests and the rapid growth of small firms generally, many forestry operators may well not have received adequate safety and health training and be unaware of relevant legal requirements.

- The expansion of forest markets in Eastern Europe, Russia and the CIS countries places an additional burden on governments and social partners at a time when they are adjusting to political changes from EU enlargement and the emergence into a market economy.

- The growing cross-border movement of workers is already significant for the sector, and will continue to present challenges in terms of communication (for safety and health information to be in readily understood) and of wider cultural change.

- The effects of climate change, resulting in increased storm and flood damage, puts an added strain on Europe's forestry labour force, especially where safety and health training and practice has not yet been harmonized across the continent.

26. Overall, the need is to manage safety and health effectively in the sector. Employers and workers and their organizations have a large role to play here, as do government authorities and other stakeholders. The importance of promoting a preventative safety and health culture at enterprise, nationally and European levels is paramount, in this sector as in others, and all stakeholders need to be engaged in bringing about such changes.

A preventative safety and health culture

27. "Safety culture" has been variously defined, but the concept in general embraces attitudes and behaviour towards safety and health at work, with prevention as a core element. In a 2005 report,[12] the ILO defined the term as:

> One in which the right to a safe and healthy working environment is respected at all levels, where governments, employers and workers actively participate in securing a safe and healthy working environment through a system of defined rights, responsibilities and duties, and where the principle of prevention is accorded the highest priority.

28. The concept was previously introduced into the ILO code of practice *Safety and health in forestry work* (paragraph 40), and applies to everyone engaged in forestry operations, their attitudes and behaviour. At least one EU country is currently researching the behavioural aspects of forestry accidents and ways to change poor patterns of behaviour.

[12] ILO report IV(1), *Promotional framework for occupational safety and health*, http://ilo.org/public/english/standards/relm/ilc/ilc93/pdf/rep-iv-1.pdf.

29. How to move towards a "preventative safety and health culture" is the obvious next question, and a full answer would occupy much more space than would be appropriate in this short paper. However, there are three key principles for making such a change happen:

- *Strong leadership and visible commitments to prevention from the top.* Prevention needs to be a real priority – and resources allocated to achieving it – so that such it is not compromised by competing expectations and demands. In the context of forestry, owners and large enterprises need to take a lead and motivate and influence contractors and others through the "supply chain".

- *Good communication of the issues and what needs to be done.* Education and training is vital, getting the right messages across to those who need to know them, to help influence attitudes and practice. Forestry owners and the larger management companies can take a lead here, as can national forestry services, training institutions and other organizations.

- *A culture of prevention needs to permeate organizations.* Positive behaviour and attitudes should be recognized and endorsed. In the workplace, it is not just about changing workers' behaviour; management attitudes also need to be changed.

A management systems approach

30. Central to developing a preventative culture is the need to manage safety and health, just as other business functions are managed – to plan, organize and monitor working conditions, and so to avoid workplace accidents and ill health as far as possible. When analysing the causes of accidents and ill health there are several factors to take into account, namely:

- Organizational factors (lack of safety and health policy or clear responsibilities, poor maintenance, lack of information, supervision and training, etc.).

- Physical factors (the working environment, unsafe machinery or transport, hazardous chemicals not poorly stored or used, ergonomic factors, etc.).

- Human or behavioural factors (poor attitudes to safety and health, lack of concentration, forgetfulness, tiredness, deliberate circumvention of protective measures to speed up production etc.).

31. A management systems approach enables all these factors to be considered together and to be addressed holistically and proactively. More detailed guidance on this is given in the ILO *Guidelines on occupational safety and health management systems*.[13] Such an approach is very necessary in the forestry sector because of increased contracting out of work and the number of small firms and entrepreneurs now working in the sector, as mentioned earlier. Some countries have produced guidance on this subject especially for the forestry sector.[14] A framework for action is given in the box below, based on ILO guidelines.

[13] http://ilo.org/public/english/protection/safework/cops/english/download/e000013.pdf.

[14] See, for example, "Managing health and safety in forestry", Health and Safety Executive, United Kingdom, www.hse.gov.uk/pubns/indg294.pdf.

Managing health and safety in forestry
(with reference to the ILO Guidelines on occupational safety and health management systems)

Policy

- Provide strong leadership and commitment to improving safety and health
- Commit to specified principles
- Consult with worker representatives and gain their participation

Organizing

- Define roles, e.g. landowner, forestry work manager, contractor, subcontractor
- Designate responsibilities and accountability
- Assure competence through good training and information, etc.
- Set down documented arrangements and procedures for employees and contractors
- Communicate internally and externally

Planning and implementation

- Plan and develop the system to promote compliance with national law and good practice (e.g. ILO code of practice *Safety and health in forestry*)
- State measurable, realistic and achievable objectives
- Identify and assess risks and specify preventative measures

Evaluation

- Monitor and measure performance
- Investigate work-related injuries and ill health
- Undertake audits and review management of safety and health

Action for improvement

- Preventive and corrective action
- Continual improvement

The role of government authorities, employers and workers

32. Government enforcing authorities, such as the labour inspectorates, employers and workers all have a role to play in prevention and managing safety and health at work. While enforcing authorities can give appropriate guidance and take enforcement action where needed, employers have the main responsibility for implementing a safety and health management systems approach. In organizing for safety and health, there is also an important role for safety representatives and committees, and the forestry sector should ensure that appropriate worker representation exists, and that safety committees are regularly held at enterprise levels.

The promotion of safety and health

33. A wider range of techniques than inspection and enforcement is appropriate in promoting greater awareness of safety and health. For example, Annual Safety Days or Weeks raise the profile of particular safety and health issues and gain greater public attention, hopefully with positive benefits. Since 2003, the ILO has held a World Day for Safety and Health, which each year addresses particular topics and seeks raise awareness about safety and health globally. Every year since 2000, the European Agency for Safety and Health at Work has organized a week (in October) when a particular safety and health topic is

targeted throughout the EU, and national initiatives are encouraged, hopefully resulting in some cultural change. In 2007, the topic is musculo-skeletal disorders.

34. The ILO Promotional Framework for Occupational Safety and Health Convention, 2006, and its accompanying Recommendation, encourage national safety and health programmes that may focus on particular sectors like agriculture and forestry, and promote cultural change. Clearly, prevention is much to the fore in such programmes, but how to achieve cultural change is not easy and national programmes offer a way forward.

National safety and health programmes and awareness-raising initiatives

35. As well as more traditional methods of inspection, advice and enforcement, national programmes aim to raise the profile of safety and health and improve standards in practice through wider approaches. So high-profile events with wide political support may be organized, national plans for improvement drawn up and the media engaged. Publicizing risks of accidents through the TV or radio often has a big impact, and in the present context, while single forestry operators may be "unreachable" as far as the inspection authorities are concerned, they may well be reached through the media.

36. National programmes need the support of all stakeholders and to have clear aims and targets to be met over a given time period. Over the last ten years or more, several EU countries have run such programmes or campaigns for the forestry sector. These include Switzerland (in the 1990s), Romania (2003–04) and Bulgaria (run by the National Forestry Directorate in collaboration with the General Labour Inspectorate). The United Kingdom's tripartite Arboriculture and Forestry Advisory Group has a programme for 2005–08 for the sector, focused on particular safety and health issues of national importance. Focused programmes such as these, where backed up by inspection and enforcement if appropriate, are very effective in raising awareness and reducing accidents and ill health.

37. In the United Kingdom, "Safety and Health Awareness Days" have been run especially for forestry managers and operators. Organized in collaboration with social partners, these events have proved to be very worthwhile, as they have been held on site in forests instead of in classrooms. Practical demonstrations of safety and health risks have been given and participants have been actively engaged in discussing how best to avert them. Other awareness-raising initiatives include regular publicity on safety and health in forestry as well as holding special events. For example, in Finland, the Centre of Occupational Safety publishes annually a four-colour tabloid newspaper on safety and health in forestry.

38. All this points to a wider role for the enforcing authorities, to build on their traditional roles of inspection, advice and enforcement, to working more innovatively with their social partners so as to have greater impact in the work.

Training and certification of forest operators

39. An expanding and more mobile labour force needs to be a well-trained one for accidents and ill health to be averted. There are forest services and/or forestry training programmes in most if not all EU countries and many are well established, but the extent to which safety and health matters are covered is variable. This becomes a special problem for cross-border working. Many countries do not accept training qualifications of other (EU or non-EU) countries, and insist on a formal assessment of the competence of foreign workers and if necessary for them to be retrained. This issue came to a head with the need for clearance after wind-blows when the need for skilled labour was urgent.

40. This points to the need for greater harmonization of safety and health training of forest workers throughout Europe, including the EU but not exclusively so. Such an approach should be more feasible, at least in theory, now that there is much harmonized EU safety and health legislation to underpin it. Certificates issued in one EU country should then be acceptable throughout the EU, while non-EU countries that permit their forestry workers to work within the EU may also wish to adopt similar training schemes. The content of such training would need to be discussed fully and this would take some time, but in the long term it should give some reassurance to the industry that wherever forestry workers come from within the EU, they should be satisfactorily trained in safety and health.

41. The certification of forests adds a further dimension and this could include workers' safety and health training as well as other issues. This would make a lot of good sense given that the success of forestry operations inevitably depends largely on its workers and that includes their safety and health.

Wider partnerships for safety and health

42. By working in wider partnerships with their stakeholders, much more can be achieved in terms of real reductions of accidents and ill health than otherwise. In the past, safety and health at the enterprise level has been largely left to the enforcing authorities and their traditional social partners – the employers, workers and their organizations. Such social dialogue must indeed be the basis for improving safety and health, but other stakeholders also have a vested interest in safety and health and greater progress can be made by involving them.

At the European/global level

43. Several European and international organisations are directly or indirectly concerned with safety and health in forestry. These include UNECE's Timber Committee, the European Network of Forest Entrepreneurs, the Forest Stewardship Council and the European Network for Qualification in Forestry. The European Agency for Safety and Health at Work, the European Commission, the FAO and the ILO all have wider interests than forestry, but they are also actively concerned to promote good standards of safety and health in general. All these are suitable partners in promoting high standards of safety and health, amongst other issues, in the forestry European sector.

44. Safety and health training is one particular area where international and national organizations can work together in partnership. This would be an excellent area for the Joint UNECE/FAO/ILO committee to work on together, bringing in other players as needed. A common curriculum for safety and health training across Europe would be in everyone's interests, since trained operators with appropriate certification should then be acceptable across the EU, as the labour market now requires.

At the national level

45. In addition to those mentioned earlier, there are several other significant stakeholders in the sector with a vested interest in safety and health. In particular, the manufacturers and suppliers of forestry machinery and equipment have an important part to play and need to engage with users – i.e. forestry managers and operators – and the enforcing authorities to ensure that new machinery does not create unexpected risks during usage. Work equipment that has been manufactured with user safety in mind can make a real difference. For example, through careful design, maintenance on the jibs of harvesters can now be carried out at ground level rather than from the jib, eliminating the need for working at heights.

Feedback from operators and the enforcing authority is vital if design improvements are needed.

46. Another obvious partnership for safety and health is that between individual enterprises. In other sectors, larger enterprises have extended their in-house safety training courses to their contractors and suppliers, under what has been termed the Good Neighbours Scheme. In some cases, contracts are also dependent on contractors' satisfactory performance, which is probably the most effective way of bringing changes in attitudes towards safety and health. It is not known whether Good Neighbours Scheme has been used specifically in the forestry sector, but it should lend itself to such an approach given the wide use of contractors.

3. The impact of increased regulation on safety and health in forestry

47. As mentioned in Chapter 1, the last decade has seen the adoption of several important new "standards" – new legislation and guidance – on safety and health at work, for the forestry sector as well as for others. EU directives have been especially important in this context, and international standards have had an impact too. There are broadly two "families" of EU Directives that impinge on safety and health at work:

- Firstly, many single market directives apply to a range of new product types, placed on European markets for consumer use, at home or at work.
- Secondly, many workplace directives require a number of provisions for employers and others to ensure that the working environment is safe and without risks to health.

Single market directives

48. These directives are aimed at removing barriers to trade within the EU and in so doing they place duties on manufacturers and suppliers to meet a range of relevant essential health and safety requirements, which ensure the products supplied present minimal safety and health risks to users. Having met such requirements and others for type testing and documentation, products are then "CE" marked and can be marketed legally within the EU. Further information can be found at relevant web sites.[15]

49. Single market directives relevant to the forestry sector include the Machinery Directive (98/37/EC) and the Personal Protective Equipment Directive (89/686/EC). Both contain a range of essential health and safety requirements that have to be met before relevant new products can legally be sold in the EU. Manufacturers of new forest vehicles, for example, must fit all requisite safety features including falling object/rollover protective structures. The driver should have seat restraints and sufficient all-round visibility from the cab, and seating should be well designed ergonomically with minimal driver exposure to whole body vibration. Chain saws should have safety features to prevent risks from kickback and hand–arm vibration exposure reduced to minimal levels.

50. Many European norms (EN standards) have been agreed for particular products, including chain saws and some other forestry machines. Compliance with these standards gives presumption of conformity with relevant essential requirements. ISO standards do not have the same status, although manufacturers will often refer to those during the design process. Some joint EN/ISO standards have been adopted.

51. Single market directives are implemented into national legislation by each EU Member State and then enforced by relevant authorities. In most countries, it is the same authority that deals with workplace safety and health that also enforces this "supply" legislation, ensuring that manufacturers and suppliers meet relevant requirements.

[15] For example, see http://ec.europa.eu/enterprise/regulation/index_en.htm.

Workplace safety and health directives

52. The "parent" of this family of directives is the so-called Framework Directive for safety and health at work (89/391/EEC), which provides a broad basis for improving standards of safety and health at work, stating employers' obligations for managing safety and health and providing protective measures, information and training for workers, and also workers' responsibilities. It has very broad application, covering all sectors of employment.

53. The Use of Work Equipment Directive (89/655/EEC), as amended, focuses specifically on workplace equipment, including fixed and hand-held machinery and mobile plant. It, therefore, applies to forestry vehicles, chain saws and also non-mechanical equipment such as ladders and ropes. Employers are required to select suitable equipment and to ensure that it is safe and without risks to health and is properly maintained. Lifting equipment must be marked with its safe working load, and thoroughly examined before use and at specified intervals. Workers must be informed about risks and properly trained, so forestry vehicle drivers, chainsaw operators and others must all receive safety training.

54. Also important for the forestry sector are the Vibration Directive (2002/44/EC) and the Noise Directive (2003/10/EC). These two directives set down exposure limits for hand–arm vibration, for whole-body vibration and for noise, and are, therefore, relevant to many forestry machines including chainsaws and harvesters. Where noise and vibration levels cannot be reduced at source, appropriate personal protective equipment must be provided. Other EU directives may also be relevant to forestry work, such as those governing noise emissions and the safe use of chemicals.

55. Taken together, all these directives provide a very comprehensive coverage of safety and health issues, and they should also all be implemented as national legislation in EU Member States. Importantly, comprehensive and up to date safety and health legislation should now exist as national legislation throughout EU Member States, although the precise form of the legislation will vary from one country to another. In reality, however, law needs to be understood and properly applied in practice, and much still needs to be done in this area especially in new EU Member States.

Inspection and enforcement activities

56. Meanwhile, the enforcing authorities – mainly the labour inspectorates – carry out inspection visits and apply the law in practice, providing advice on how the requirements of the law may be met and enforcing it where necessary. In the past, inspectors may only have visited forestry sites quite rarely, often to investigate accidents, but there are signs of positive change. Increasingly, the enforcing authorities are carrying our preventive or proactive inspection visits, to give advice and guidance to forestry operators before incidents occur or as part of a wider preventative campaign. The change fits is welcome and fits in well with the broader approach for working in partnerships to promote improvements in a sector like forestry.

57. Although the enforcing authorities focus on inspection and giving advice, taking formal enforcement action from time to time is also necessary to ensure fairness and consistency. Enforcement may take various forms, ranging from issuing formal prohibition or improvement notices to issuing administrative fines or taking formal prosecutions in court. Over the last ten years, enforcement practice has changed and developed especially with EU enlargement, when governments have taken the opportunity to modernize their inspection systems and approaches. Some labour inspectorates regularly report on high-profile enforcement activities to promote greater compliance with the law.

58. However, some labour inspectorates are still weak in terms of their available resources – for all sectors, not just for forestry – and there is considerable variation as to the extent to which legislation is actively enforced across the EU. Many forest operators claim that they rarely if ever see an inspector, which is very likely to be true. This needs to be addressed as a serious issue, and it highlights the need for closer working with social partners, national training associations, forest services, universities and others, to promote compliance more widely. The "business case" for safety and health needs also to be better publicized, that fewer work-related accidents and diseases makes sound economic and business sense.

59. The ILO is making efforts to assist and to strengthen labour inspectorates, and in particular has issued *Guidelines for labour inspection in forestry* (2006),[16] which provides specific guidance to meet this need. Although it covers more issues than just safety and health, it provides valuable assistance to labour inspectorates and other enforcing authorities seeking to have greater impact in this sector.

International standards

60. Meanwhile, several new globally applicable (ILO) standards have been adopted over the last decade. Some of these apply to all sectors, while others are more specifically focused on agriculture or forestry. The most relevant ILO safety and health standards and guidance adopted over the last ten years are:

- the code of practice *Safety and health in forestry work* (1998),[17] which provides detailed guidance for the forestry sector;
- the Safety and Health in Agriculture Convention 2001 (No.184), with its accompanying Recommendation (No. 192); these apply to forestry as well as conventional farming and provide a framework for preventing accidents and ill health in these sectors;
- *Guidelines on occupational safety and health management systems* (2001), which provides broad guidance on planning and organizing for safety and health;
- *Guidelines for labour inspection in forestry* (2006), mentioned above;
- the ILO Promotional Framework for Occupational Safety and Health Convention 2006 (No.187), and its accompanying Recommendation (No. 197), which promote safety and health widely through national systems and programmes.

61. The ILO code of practice *Safety and health in forestry*, published in 1998, is not legally binding but provides guidance that may well be used as a benchmark for good practice. The Code is widely available and has now been translated into at least eight languages (English, French, Spanish, Russian, Polish, Serbo-Croat, Czech and Albanian). An outline of its main provisions is given in the text box below.

[16] See www.ilo.org/public/english/dialogue/sector/sectors/forest/guidelines.pdf.

[17] See http://ilo.org/public/english/protection/safework/cops/english/download/e981284.pdf.

ILO code of practice *Safety and health in forestry* 1998

Outline of main provisions

- General principles for safety and health in forestry, legal frameworks and duties and responsibilities of competent authorities, of employers, managers, supervisors, contractors and workers and of manufacturers and suppliers.
- A framework for action at the enterprise level, developing a safety and health policy, organization and the assignment of responsibilities, identification and management of risks, communication and information.
- General requirements for safety and health, training and qualifications, safety of chemicals and machinery, work clothing and personal protective equipment, first aid, rescue and occupational health services, and reporting and investigation of accidents and diseases, etc.
- Technical guidelines for safety and health, planning and organization, site inspections, protection from unfavourable weather, special precautions for silviculture, harvesting, extraction, transport and high-risk operations.

Glossary of technical terms and references, including relevant ILO and ISO standards.

62. The Safety and Health in Agriculture Convention 2001 (No.184), and its accompanying Recommendation (No. 192), apply to forestry as well as conventional farming. These standards cover similar ground to the above code but are more broadly focused. Only four European and CIS countries have so far only ratified the Convention, namely Finland, Moldova, Slovakia and Sweden. Greater ratification would help to promote safety and health in the forestry sector.

63. The ILO *Guidelines for labour inspection in forestry* address labour inspection practice for promoting decent work in general, covering not only safety and health but other matters such as collective bargaining, equality of opportunity and treatment, fair remuneration and child labour. It nevertheless provides helpful guidance for inspectors in terms of how to plan visits, developing checklists, assessing working conditions and follow-up.

64. Other ILO guidance on the subject is available through the newsletter *Forworknet Update*, which covers safety and health as well as other topics. Several editions have been published over the last few years and can be obtained from the ILO or downloaded from its web site.[18]

Other forms of regulation

65. Enterprises may impose their own internal rules or "regulations" that their own employees and contractors need to follow. Some may be there to meet the demands of forest certification schemes, while others may be part of an enhanced management of safety and health. It will then be necessary for contractors and other forest operators to follow necessary procedures before they can work for the forest enterprise in question. Such "regulations" may not be part of national legislature, but they are nevertheless an important aspect of the overall control that some are exercising and they often carry weight in raising standards in practice. Internal company inspections often accompany such an approach.

66. Internal company rules and regulations may increase over the coming years, as the forestry sector gets to grips with a very high accident rate and the insurance costs that go along with that. Such efforts should all help in the overall drive to improve the sector's safety and health performance, but these efforts should be matched by other initiatives that involve all stakeholders in a collaborative effort to maintain high standards.

[18] See www.ilo.org/public/english/dialogue/sector/sectors/forest.htm.

4. Conclusions and recommendations

With respect to the more open markets and safety and health

67. The more open European markets and changing employment structures in the forestry sector present a number of opportunities for safety and health. These include greater awareness-raising, better communication and pressing for better safety and health management practice, especially in dealing with contractors and workforces from different countries and language and cultural backgrounds.

68. The main conclusions and recommendations in respect of the more open markets and safety and health are:

- *A Europe-wide approach.* The more open labour market, with its cross-border working, implies that safety and health issues need to be addressed Europe-wide, covering EU and non-EU countries. National efforts are valuable, but there needs to be concerted international effort to work together, involving governments and all stakeholders in comprehensive and innovative approaches to tackle the challenges. With forestry production and use expected to move from west to east in the next decade, there may need to be a special effort to assist Eastern European countries, Russia and the CIS countries with regard to safety and health.

- *Preventative safety and health culture.* A preventative culture is much needed throughout the European forestry sector, especially with the amount of contracting out of work that now exists. Safety and health management systems should be widely promoted, and the enforcing authorities and their social partners should be better informed so that they can take appropriate action. Such a change may be harder to achieve in those countries where there has traditionally been more of an emphasis on compensation following accidents rather than on preventing them.

- *Promotion of safety and health.* National programmes or campaigns for safety and health in the sector are also highly effective in promoting safety and health in this sector and are to be recommended across Europe. However, a Europe-wide campaign is also recommended, so that all EU and non-EU countries are engaged in a corporate effort to improve safety and health in the sector. The Senior Labour Inspectors' Committee has run similar campaigns for agriculture and construction; it is recommended that one should be proposed for forestry. The very high fatal accident incidence rates in forestry would alone justify such a campaign.

- *Partnerships.* Partnerships for safety and health in the European forestry sector need to be maintained if they are to continue to be effective. The "business case" for safety and health in forestry (implications for productivity and competition) in particular needs to be further researched and publicized. Government authorities like the labour inspectorates need to be prepared to work in wider partnerships, such as with the media and NGOs, and to do so more innovatively so as to raise awareness of the risks in the sector and of the need for improvements.

- *Safety and health training and certification.* Existing forestry training centres should be thoroughly up to date with safety and health legislation and good practice, so that they can promote goods standards through their training courses. Certification is currently being considered by the sector, and again national and European organisations need to work together on this. It may be that at some point in the near future harmonized training curricula and certification can be agreed upon. Mutual

recognition of safety and health training certificates should then be possible, saving the industry much unnecessary time an effort in retraining operators to suit national requirements. Such wide recognition would be especially helpful in dealing with emergencies after wind-blows.

- *Countries are recommended to try out particular initiatives*, such as the national campaigns run in Switzerland, Romania and Bulgaria (paragraph 36) or the Safety and Health Awareness Days of the United Kingdom (paragraph 37). A European forum, such as that provided by the Senior Labour Inspectors' Committee or the Joint UNECE/FAO/ILO Committee, could help with the sharing of good practice and the strengths and weaknesses of certain initiatives.

With respect to increased regulation and safety and health

69. A sound base of European legislation now exists, and this is already well established in older EU Member States. However, newer EU Members are still coming to terms with it and changing their inspection and other systems at the same time. The challenge therefore is to communicate and to apply that legislation (and other standards of good practice) so that more are aware of it and that it is effectively enforced.

70. The main conclusions and recommendations in respect of increased regulation and safety and health are:

- *Awareness raising.* With much new EU legislation, it is inevitable it will take time in some countries for everyone, especially small enterprises and contractors, to become familiar with it. Awareness-raising information campaigns are recommended, with key aspects of safety and health in forestry highlighted. The ILO code of practice *Safety and health in forestry* should also be widely publicized.

- *The Safety and Health in Agriculture Convention 2001 (No. 184)*, has so far been ratified by only four European countries. Ratification by more countries would help to develop stronger national safety and health legislation for the forestry sector, as for agriculture in general. It is recommended that the ILO should further promote ratification of this important Convention.

- *Health risks.* These are now comprehensively addressed by European legislation, but less attention has traditionally been given to health compared to safety. It is, therefore, recommended that the sector should give particular attention to risks such as poor ergonomic design, high levels of noise, hand-arm and whole-body vibration, poor handling and storage of chemicals such as pesticides, tick-borne diseases and other health risks. Some of these may be more of an issue for manufacturers and designers of forestry machinery and other equipment, but employers and workers both need to take action, such as with respect to the handling of pesticides.

- *Government action.* Governments need to take a lead in raising awareness and promoting compliance with legislation. Some labour inspectorates have already done much here, targeting the forestry sector and successfully managing to reduce accidents, but more needs to be done. All enforcing authorities are recommended to give particular attention to this sector in their inspection programmes, given that it is still one of the most hazardous ones. The ILO *Guidelines for labour inspection in forestry* should be more widely publicized.

- *Data collection.* Some accident and ill health data are available but they are often not readily accessible. It is recommended that such data should be systematically

collected and made widely available, because of the high risks of accidents (and ill health) in this sector. Better comparisons can thus be made about subsequent progress.

- *Information exchange about good practice.* It is recommended that government authorities exchange information about good practice more often, so that successful initiatives in the forestry sector can be spread across Europe more quickly. The Senior Labour Inspectors Committee provides one forum for such information exchange, but there are others especially in the forestry sector.

Appendix

Safety and health in forestry: References

ILO Conventions and Recommendations

Labour Inspection (Agriculture) Convention 1969 (No. 129), and its accompanying Recommendation (No. 133).

Occupational Safety and Health Convention 1981 (No.155), and its accompanying Recommendation (No. 164), and Protocol to the Convention, 2002.

Occupational Health Services Convention 1985 (No. 161), and its accompanying Recommendation (No. 171).

Safety and Health in Agriculture Convention 2001 (No.184), and its accompanying Recommendation (No. 192).

Promotional Framework for Occupational Safety and Health Convention 2006 (No. 187), and its accompanying Recommendation (No. 197).

European Directives for safety and health

Single Market Directives

Directive 89/686/EEC of 21 December 1989 on the approximation of the laws of the Member States relating to personal protective equipment (the "Personal Protective Equipment Directive").

Directive 98/37/EC of 22 June 1998 on the approximation of the laws of the Member States relating to machinery (the "Machinery Directive").

Workplace Directives

Directive 89/391/EEC of 12 June 1989 on the introduction of measures to encourage improvements in the safety and health of workers at work (the "Framework Directive").

Directive 89/655/EEC of 30 November 1989 concerning the minimum safety and health requirements for the use of work equipment by workers at work (the "Use of Work Equipment Directive") and its two Amendments 95/63/EC of 5 December 1995 (regarding lifting operations) and 2001/45/EC of 27 June 2001 (regarding working at heights).

Directive 2002/44 of 25 June 2002 on the minimum health and safety requirements regarding the exposure of workers to the risks arising from physical agents (vibration) (the "Vibration Directive").

Directive 2003/10/EC of 6 February 2003 on the minimum health and safety requirements regarding the exposure of workers to the risks arising from physical agents (noise) (the "Noise Directive").

Other workplace directives relating to the use of chemicals, the use of personal protective equipment and manual handling.

Other useful publications

Code of practice, *Safety and health in forestry work*, ILO, 1998.

Guidelines on occupational safety and health management systems, ILO, 2001.

Guidelines for labour inspection in forestry, ILO, 2006

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Employment and poverty in Sri Lanka: Long-term perspectives (Vali Jamal)	2000	WP.157
Recruitment of educational personnel (Wouter Brandt and Rita Rymenans)	2000	WP.158
L'industrie du textile-habillement au Maroc: Les besoins des chefs d'entreprise et les conditions de travail des femmes dans les PME (Riad Meddeb)	2000	WP.159
L'évolution de la condition des personnels enseignants de l'enseignement supérieur (Thierry Chevaillier)	2000	WP.160
The changing conditions of higher education teaching personnel (Thierry Chevaillier)	2000	WP.161
Working time arrangements in the Australian mining industry: Trends and implications with particular reference to occupational health and safety (Kathryn Heiler, Richard Pickersgill, Chris Briggs)	2000	WP.162
Public participation in forestry in Europe and North America: Report of the Team of Specialists on Participation in Forestry	2000	WP.163
Decentralization and privatization in municipal services: The case of health services (Stephen Bach)	2000	WP.164
Social dialogue in postal services in Asia and the Pacific: Final report of the ILO-UPU Joint Regional Seminar, Bangkok, 23–26 May 2000 (edited by John Myers)	2000	WP.165
Democratic regulation: A guide to the control of privatized public sservices through social dialogue (G. Palast, J. Oppenheim, T. McGregor)	2000	WP.166
Worker safety in the shipbreaking industries: An issues paper (Sectoral Activities Department and InFocus Programme on Safety and Health at Work and the Environment)	2001	WP.167
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Le rôle des initiatives volontaires concertées dans la promotion et la dynamique du dialogue social dans les industries textiles, habillement, chaussures (Stéphanie Faure)	2001	WP.169
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The impact of the restructuring of civil aviation on employment and social practices (Bert Essenberg)	2003	WP.197
Raising awareness of forests and forestry. Report of the FAO/ECE/ILO Team of Specialists on Participation in Forestry and the FAO/ECE Forest Communicators Network	2003	WP.198
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