Health and safety at work: A trade union priority

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Editorial

Since their very inception, trade unions have seen the improvement of working conditions as one of their top priorities. And indeed, progress in that field, including a clear decrease in work-related accidents in the industrialized world, the improvement of work methods and recognition of the human factor in industries over the last century, owes a lot to efforts by organized labour.

However, the need for trade unions to promote better working conditions has far from disappeared. Figures appearing in this issue of *Labour Education* are shocking: every day sees 5,000 people die from work-related accidents. That is three deaths every minute. Work-related diseases continue to take a heavy toll, affecting at any given time more than 160 million people in both developing and industrialized countries. This is an important issue for all of society, as these casualties help swell the pressures on increasingly stretched public health systems throughout the world. In consequence, the costs and the social impacts on communities have risen.

Statistics will also show that the social and economic burden of this scourge is not evenly distributed. Fatality rates in some European countries are twice as high as in some others, and in parts of the Middle East and Asia, fatality rates soar to four times those in the industrialized countries. Certain hazardous jobs can be from 10 to 100 times riskier in that part of the world. As Jukka Takala, Director of the ILO's programme on safety, health at work and the environment, tells us, agricultural workers are particularly exposed to danger. Out of a total of 335,000 fatal workplace accidents worldwide, some 170,000 casualties are among workers in agriculture. Mining remains unsafe in many places and the construction industry still accounts for 55,000 fatal injuries each year.

Likewise, insurance coverage for occupational safety and health varies widely in different parts of the world: workers in Nordic countries enjoy nearly universal coverage while only 10 per cent or less of the workforce in many developing countries is likely to enjoy any sort of coverage. Even in many developed countries, coverage for occupational injury and illness may extend to only half the workforce.

There is no doubt that poverty is a factor behind weak protection and weak coverage. But, as most contributors to this issue of *Labour Education* point out, much of the suffering generated by poor health and safety has little to do with the level of development or the economic situation, and could be avoided. Preventing work-related diseases and accidents may actually help countries to alleviate poverty, as these accidents and ailments cost an average of 4 per cent of a country's gross national product.

Is poverty to blame for companies from the North being allowed to relocate their dangerous production processes to developing countries? How can one explain, for instance, that a number of enterprises in developing

countries have, recently and within weeks, proved capable of drastically improving their health and safety records, simply in response to their industrialized country clients' calls for higher standards?

Just as the worst forms of child labour should be done away with immediately, and poverty must not be accepted as an excuse for delaying this, so too the worst forms of exploitation that put workers' lives at risk must be eradicated.

One message above all others is conveyed by contributors to this *Labour Education*: things don't have to be this way. Many of the catastrophes and questionable day-to-day work practices are preventable. Prevention must become a priority. ILO standards can help in this. Over half of the 184 Conventions adopted by the ILO have links to health and safety issues. Some, like the Labour Inspection Convention, 1947 (No. 81), the Occupational Safety and Health Convention, 1981 (No. 155) and the Occupational Health Services Convention, 1987 (No. 161) have become key instruments of ILO policy for the promotion of health and safety. This battery of instruments has been reinforced by the adoption, last year, of the Safety and Health in Agriculture Convention, 2001 (No. 184). Other instruments dealing with asbestos, the working environment, the prevention of accidents, the use of chemicals and the prevention of major industrial accidents, also constitute important yardsticks for action on health and safety.

Ratification of those standards is uneven. Some (like the Labour Inspection Convention – 128 ratifications) have high rates of ratification but others, like the Occupational Safety and Health Convention (37 ratifications), have poor rates. Particularly shocking is the low level of ratification of the Asbestos Convention (only 26 ratifications), at a time when it is proven that the fibre kills 100,000 people each year.

The time has come to engage in real action for change. Last year, the ILO adopted new "Guidelines on Occupational Safety and Health Management Systems". Parties have agreed to focus on this as an umbrella programme of action and a means for governments, and employers' and workers' organizations to promote new forms of cooperative management systems that can address the shortfall in adherence to current ILO instruments and programmes. These Guidelines can be made to accompany those principles enshrined in the ILO Declaration on Fundamental Principles and Rights at Work. However, it is up to us all to become familiar with them and to push for dialogue about them within each and every country.

Undeniably there is a lot that needs to be done to encourage and promote observance of the ILO instruments on health and safety. An interesting proposal made in this publication deserves attention: why not add one instrument on health and safety to the core labour standards referred to in the ILO Declaration on Fundamental Principles and Rights at Work?

Yet another message appears in most of the contributions. When it comes to implementation of ILO standards, prevention of accidents and occupational diseases, and general improvement of health and safety at work, there is no better bet than a strong trade union presence. Respect for core labour standards, namely freedom of association and the right to organize, has a direct impact on the health and safety situation at work, as they provide for workers to form or join trade unions and for these unions to be able to negotiate conditions with employers. This in turn implies that trade unions really must ensure that health and safety remain

at the top of their priorities. As information within this issue of *Labour Education* suggests, action on health and safety is one of the key tests applied by workers when deciding whether to join trade unions or to maintain their union membership. Of course, bouquets are always rarer than brickbats, but the trade union movement itself has been too discreet about its achievements in improving health and safety conditions for millions of workers – and about its prevention work, which has probably saved just as many lives. Action on health and safety will be central to renewed efforts by the labour movement to recruit and organize, a number of our contributors assert.

Finally, health and safety issues are not confined to the workplace. Production processes, the use, storage and disposal of chemicals, the type and consumption of energy, etc., all have an impact on the wider environment. For many of the concerns about sustainable development, answers will be found in the workplace. That is why trade unions have put sustainable development on their own agenda, and why they could make a unique contribution to global efforts. The World Summit on Sustainable Development which will be held in Johannesburg later this year has placed public health at the top of its priorities. It therefore provides an excellent opportunity to link across to occupational health and safety. Indeed, the health and safety of workers is a barometer for how society treats the public at large. The Summit will have to recognize that the implementation of sustainable development starts at the workplace and that trade unions must be involved with the employers in promoting effective solutions for change. Not the least of their concerns must be to secure a "fair employment transition" for workers whose future will depend on how governments and companies deal with improving the environment. Like the trade unions, the ILO is calling on the Johannesburg Summit to build a social dimension into sustainable development action.

The International Commemoration Day for Dead and Injured Workers is held on 28 April. It has been observed for a number of years by the international trade union movement, and now by the ILO, with the aim of drawing attention to a world tragedy that too often goes unnoticed.

Obviously, the best tribute that can be paid to those who died or were injured at work is to take action to ensure that this situation is addressed and remedied. Both the ILO and trade unions were founded to ensure that people work in dignity and security. Let no one have any doubts about that.

Manuel Simón Velasco
Director
ILO Bureau for Workers' Activities

Life and health are fundamental rights for workers

Since 1998, SafeWork, the ILO InFocus Programme on Safety and Health at Work and the Environment, has been leading the Organization's efforts to promote occupational health: a gigantic task in view of the number of people killed or injured every day at work. Jukka Takala, Director of SafeWork, takes stock of the situation. In this interview, he highlights a need for including an Occupational Safety and Health (OSH) Convention as part of the ILO's core labour standards. This is expected to be discussed at the 2003 International Labour Conference.

Jukka Takala
Director
ILO InFocus Programme on Safety and Health
at Work and the Environment

Labour Education: The ILO is devoting considerable resources to health and safety. It has decided to join the International Commemoration Day for Dead and Injured Workers observed by the trade union movement on 28 April each year. What can you say about today's situation in terms of health and safety at the workplace?

Jukka Takala: It is a daily disaster that seldom makes the headlines. Every year about 2 million people die in work accidents, according to new estimates being currently made. That is the equivalent of a World Trade Center, an 11 September, tragedy every day. More than 5,000 people die at work every day. And remember that most of the people killed in the terrorist attack in New York were workers. The number of accidents is increasing. Our estimates put the figure at 250 million accidents a year. Work-related diseases affect some 160 million people. And these are only conservative estimates.

How do you mean?

Our figures are based on information collected ten years ago. Since then, the working population has increased. Unprotected work in the informal economy has been growing and although we do not have official records, as this economy is none too visible, we know that lots of problems exist there. These go unreported. The most reliable figures come from those countries that are good at reporting accidents and diseases. But these are also the countries that have the best prevention programmes.

This means that our estimates are quite conservative. For instance, Denmark has, on paper, the highest per capita rate of occupational diseases. This does not mean that Denmark is the most dangerous country. Quite the contrary. Denmark is among the safest, but it reports diseases and pays compensation for them. If, to give you another example, we base our estimation of worldwide occupational fatalities on extrapolations from the figures received from Finland, and we therefore assume

that all countries have the same high safety and prevention standards as in Finland, our estimate would be 1.8 million deaths per year. However, as we know that only a few countries enjoy such high standards, the actual number of people dying at work could be double the present figure – so, well over 2 million.

What are the most dangerous occupations for workers?

Today, agriculture is one of the three most hazardous industries, together with mining and construction, in both developing and industrialized countries. We estimate that out of a total of 335,000 fatal workplace accidents worldwide, some 170,000 casualties are among agricultural workers every year. Many of the world's 1.3 billion agricultural workers are seriously injured in workplace accidents involving machinery, or poisoned by pesticides and other agro-chemicals. That situation led the ILO to adopt a new Convention on health and safety in agriculture last year. Mining, which is now less of a problem in industrialized countries, remains highly dangerous in the developing world. Mines in Asia or Africa are still very labour-intensive, they do not use new machinery or equipment and many people still die in mining both from diseases and from accidents.

You mean that, in general, the situation is much worse in countries of the South?

In fact, one of the trends is that industrialized countries are exporting their hazards to developing countries. Dirty and difficult jobs are left to the South. That includes mining, of course. Many of the ergonomic problems of the North have been moved to the South, where labour is not only cheaper but is also much less protected. The rate of fatal accidents in developing Asia is four times higher than that of industrialized countries. And while workers in Scandinavian countries enjoy universal health coverage and compensation, only 10 per cent of the workforce in developing countries have such social protection, with very limited provisions, if any, for compensation in case of occupational diseases or accidents.

So there is a direct link between poverty and poor health and safety at work?

Clearly, there is a link to poverty. Just as there is a link between child labour and poverty. The reasoning is simple: if the breadwinner dies or is disabled for a short or long period, the whole family, an extended family, will suffer. And there are 410 million such cases annually. The poorer the country, the easier it is to fall in the trap. But there is a point below which you can no longer blame poverty alone. However poor, a country should not accept that children are sold into prostitution. In the same vein, you cannot accept that to get coal out of a mine, one in ten workers are killed. There is much room for improvement and some of this can take place immediately. For instance, we know that when Walmart, the US giant retail chain, told its suppliers in developing Asia that they would have to abide by higher standards in terms of health, safety and working conditions, the response was immediate. Even the smallest supplier in Thailand proved capable of adapting its production to the new standards. So poverty is not always a valid excuse.

But isn't the cost of improving health and safety an obstacle for poor countries?

The cost of doing nothing is actually much higher. We calculated that expenditure related to occupational accidents and diseases represents the equivalent of 4 per cent of the combined gross national product (GNP) of all countries on this planet, or the equivalent of the total GNP of Africa, the Middle East (including oil-rich countries) and South Asia put together. So addressing the issues of health and safety at work could save a lot of resources and is in the interests of governments, companies and workers alike. It is in the interests of society as a whole. No country in the world has shown that it can have high lev-

els of productivity with low levels of safety. No successful company can in the long run show high productivity levels with poor safety.

Last year the International Commemoration Day for Dead and Injured Workers was devoted to victims of asbestos. What is the present situation on that?

We might call it an asbestos epidemic. Last year, at least 100,000 people died from it. And unfortunately, that will continue even though asbestos is now being phased out in major countries. Don't forget that, once a worker is exposed, it may take up to 20 years before the disease appears, so the epidemic is far from being circumscribed. About 35 countries have already banned asbestos, which means it is still used in about 150 countries. In some places, the fibre is even recycled, from the wreckage of ships for instance.

What about the ILO Convention? Does it ban asbestos?

Our Asbestos Convention, No. 162, was adopted in 1986. At that time, it was not possible to ban asbestos for all uses. The Convention bans certain types of asbestos and certain processes like spraying. So that is not a total ban, but the text of the Convention aims at gradually eliminating asbestos. Now, this Convention has only been ratified by 26 countries. So our efforts concentrate on getting as many ratifications as possible. Meanwhile we may consider new measures banning all types of asbestos. We are promoting the establishment of "National SafeWork programmes", which are part of the ILO's effort to promote "decent work". A campaign for a total ban on asbestos would fit well in such programmes. This is the simplest and cheapest preventive measure. We are also seeking joint action by the ILO and the World Health Organization.

Recently, more attention is being paid to health at the workplace – or, at least, so it seems. Has the ILO noticed any improvement?

The trends in both accidents and diseases are mixed. In industrialized countries, we have seen a clear decrease in serious injuries. This is caused by both structural changes resulting in fewer workers in hazardous agricultural, industrial, construction and mining activities, and real improvement in making work healthier and safer. Another contributing factor is the increasing capacity to provide first aid and emergency care which saves lives, although it does not reduce the number of accidents.

A new trend in industrialized countries is the increase in musculoskeletal problems, stress and mental problems, asthmatic and allergic reactions, and problems caused by hazardous material, including carcinogens. Concerns about stress are rapidly surfacing under the pressure of globalization and increased worldwide competition. New technologies, deskilling, downsizing, job losses, job insecurity and poorer conditions of work are adding to the problems. Violence at work is another worrying development. As the world becomes more violent, so does the world of work. Violence at work can be both physical and psychological. It may, for instance, involve repeated actions that alone may be relatively minor but cumulatively may cause serious harm. Violence ranges from homicide and physical attack to bullying, moral harassment and sexual or racial harassment. Stress and violence cost the community between 1 per cent and 3.5 per cent of gross domestic product.

If you add to this the damage caused by drugs, alcohol and tobacco, which affects nearly all countries, the picture is quite bleak. We have just launched a new training package which is called SOLVE and aims at addressing these emerging health problems through action-oriented solutions.

How about developing countries?

In developing countries, the trends are even less favourable. People are migrating to cities. More industries are being set up –

often informal and dangerous ones. Globalization is drawing in workers without previous experience of industrial work. New housing and premises are needed. This leads to an increase in construction work. Infrastructure, such as roads, dams, telecommunications facilities and power generation installations, has to be built. Road traffic increases. Agriculture is mechanized and new products and synthetic materials are manufactured, using chemicals, fibres and minerals. All these factors influence the rates and numbers of injuries and diseases, for which upward trends are visible in many developing countries. In sub-Saharan Africa alone, we estimate that 125,000 work-related fatalities occur per year. And remember that basic compensation for occupational and work-related accidents or diseases is sorely lacking in most developing countries. Only 23 countries have ratified the ILO Employment Injury Benefits Convention (No. 121), adopted in 1964, which lists occupational diseases for which compensation should be paid.

What about labour inspection. Could it not help improve the situation?

Trends on labour inspection have not been so favourable in the past, particularly in developing countries.

Labour inspection is not always seen for what it is, even by governments. It is a service to the population. In too many countries, there are too few inspectors and their training is often not adequate. There are not enough resources put into labour inspection. And often when there are economic difficulties, labour inspection budgets will be among the first to suffer cuts. The ILO's recommendation is that every workplace should be inspected once a year. Only a few countries attain that level. If conditions are good and if management is well organized, labour inspection does not take much time. At the same time, you cannot expect that laws and regulations are respected without any enforcement and monitoring. There must be a system to back those provisions. If you let companies with poor health and safety records survive, these will set a bad example and other companies might be tempted to relax their own safety efforts.

A number of ILO Conventions do relate to health and safety, but they have not been very widely ratified…

More than half of the 184 Conventions adopted so far by the ILO have links to health and safety issues. Some, like the Labour Inspection Convention (No. 81) adopted in 1947, the Occupational Safety and Health Convention, 1981 (No. 155), or the Occupational Health Services Convention, 1985 (No. 161), are key instruments of our policy. Our priority is to increase the number of ratifications of these standards, which could then help improve the situation in individual countries.

But here we face a paradoxical situation. When the ILO adopted its Declaration on Fundamental Principles and Rights at Work in 1998, eight Conventions were rightly confirmed as core labour standards and became the subject of a major campaign. That prompted some of our constituents to relegate other Conventions to second-class status. For example, I know of one major industrialized country that was about to ratify Convention No. 155 but delayed its decision because there was pressure to ratify the Worst Forms of Child Labour Convention. That country could only ratify one Convention per year. It chose the core labour Convention. Yet, while child labour is practically non-existent in that country, health and safety problems are a key concern.

What do you plan to do about that?

A key problem is that safety and health are not given a high priority in the international and national agenda. There is no OSH Convention among the core Conventions of the ILO, which results in difficulties in developing sound programmes with sufficient technical and financial resources. The 2003 International Labour Conference will discuss an integrated approach to OSH standards-related activities

with a view to identifying the ways to achieve improvements at the workplace level and responding to this major problem. The Conference will review the impact of existing standards and of other related activities carried out by the ILO and the member States. We expect that, as a result, ways to include an OSH Convention in the core Conventions or equivalent measures would be proposed together with other means of action for achieving greater impact. If people are left to die or to get disabled at work, where is the sense in the existing core labour standards? The right to safety and health is fundamental. We have already embarked on consultation on this approach and hope we will get support from the different groups, including, of course, the Workers' Group.

Workers have a special interest in this, of course. But does unionization of the workforce have an effect on the health and safety situation at the workplace?

Absolutely. For instance, a recent study on labour inspection in Sweden shows that one of the main reasons for the country's good health and safety record is the tradition of cooperation between workers and employers, and the involvement of workers since the early 1920s. Back then, the workers and employers had already reached agreement on this. The result was a consensus-building process which has continued to this day. There is scientific evidence that the involvement of workers is a major factor in improvements. I am talking here about organized workers, because if they are not organized, they can't get their views heard. There is also a clear link between unionization rates and ratification of ILO Conventions on health and safety. Countries where unionization rates are high are those that have ratified the highest number of Conventions. These countries are also the best in terms of prevention and of health and safety performance in general. And all this results in high-level competitiveness.

Sweden and Finland, which have high unionization rates, have ratified most of the health and safety Conventions.

Yet you believe that trade unions could do more.

Unions should always be vigilant and put more emphasis on health and safety as part of their daily work, besides other issues such as wages, working time and collective bargaining. Employers and workers may think: "It will never happen to me", so trade unions have to remind them of the need to pay attention to safety and to guard them against a false sense of security. Let's not forget that for every one fatal accident, there are 1,200 smaller accidents that cause three days' or more absence from work, 5,000 injuries requiring first aid and 70,000 near-accidents. That means that if you want to avoid that one fatal accident, you have to influence all the contributing factors that eventually lead to death at work when the preventive barriers fail or are missing. That is quite a challenge. It is a continuous challenge. It's like education. Each year, you have new children starting school and they have to be taught how to read. The same goes for the workforce. There is a constant need for training and follow-up. Workers' participation in occupational safety and health management systems is vital. Accidents don't just happen, they are caused. We never agreed that accidents and diseases "go with the job". Unions can leave nothing to chance.

Unsafe production is unsustainable production

The World Summit on Sustainable Development will be held in Johannesburg later this year. It provides an excellent opportunity to promote occupational health and safety in a rapidly changing world. It will have to recognize that sustainable development starts at the workplace and that trade unions have a unique contribution to make in addressing this issue.

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As preparations continue around the globe for the World Summit on Sustainable Development (WSSD) in Johannesburg, South Africa, from 26 August to 4 September 2002, workers and trade unions and their social partners are redoubling efforts to draw attention to the thousands of people who die, are injured or become ill every year because of unsafe, unhealthy and unsustainable workplaces.

"Improving Public Health Through Stronger Health and Safety" is this year's theme for the International Commemoration Day for Dead and Injured Workers, on 28 April. This fits squarely into the message that trade unions will take to Johannesburg: patterns of production that yield such human misery and loss of life can never be considered sustainable.

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Workplace health and safety as a sustainable development issue

While the Commemoration Day and related activities have done much to draw attention to occupational health and safety, many have yet to be convinced that it belongs on the agenda in Johannesburg. Yet the case for occupational health and safety as a tool for sustainable development is undeniable. It is based on the key role that workplaces play in patterns of production and consumption.

Workplaces are certainly at the centre of production, but they are also major consumers in their own right. They are key determinants of other areas of development, such as energy and land use, and are therefore a logical focus for action on sustainable development, especially where it concerns the social dimension.

Focus on the workplace. Workplace-based action, trade unions have argued, exploits the natural synergy between production and consumption, with tremendous potential for "spill-over" between

workplace and community. There is a growing acceptance that public health crises such as HIV / AIDS are work-related, and that prevention and treatment can be most effectively handled through programmes that originate in the workplace.

This focus on the workplace, furthermore, extends a tradition in which health and safety were always linked to problems in the larger socio-economic environment. In fact, the origins of the trade union movement itself are based on a collective response by workers to the human toll of unsustainable patterns of production and social life. Workers and their communities have always been amongst the first victims of unsustainable development, bearing the brunt of job dislocation, community upheaval, industrial disease or death.[1]

The first modest steps provided a measure of protection, and a limited right to participate in decision-making. Over the years, however, these have grown into a highly developed field, as occupational health and safety is today recognized as one of the best examples of industrial relations based upon joint management, and one that is quite naturally expanding to incorporate broader sustainable development issues.

Focus on the social dimension. Efforts to gain acceptance for occupational health and safety at the WSSD will call for much greater attention to the social dimension. This is the least developed area of sustainable development, in spite of the fact that it is one of the three essential "pillars" in the agreements reached at the previous environment and development summit in Rio. Until recently, trade unions were often the only group to draw attention to it, and nine years after Rio, there is still little agreement on "indicators", and very little research on the "people effects" it represents.

Trade unions will be seeking the full integration of the social dimension with economic and environmental proposals, with particular attention to poverty eradication, decent employment, gender and youth issues and a "just transition" – in other words, measures to protect the income, employment and welfare of those affected by shifts towards greater sustainability.

Focus on participatory approaches. Nowhere has the efficacy of workplace-based programmes been better demonstrated than in the area of occupational health and safety, which trade unions continue to promote as a model for local, national and international efforts to achieve sustainable development. This model emphasizes participatory and democratic approaches, making it a "natural fit" for the growing consensus that sustainable development implies broad-based participation in decision-making and control by the people and communities most directly affected by development.

Occupational health and safety programmes in tens of thousands of workplaces around the world have clearly demonstrated how workplace management can be strengthened through joint assessment, target-setting, implementation and verification. A working model for "workplace democracy" has been achieved through health and safety committees, union representatives, works councils and other joint structures. These are, furthermore, committed to education, training and consultations, which are required to raise the awareness, knowledge and competence that are key to full participation.[2]

The mix of participatory mechanisms includes voluntary agreements, ranging from codes of conduct to framework collective agreements, based on a broad consensus that these are part of a mix that must include regulation and standard-setting.[3]

They all include agreement that worker participation is essential for significant change in the workplace. It must be combined, however, with broad citizen participation in community development based on such "indicators" as:

- inclusion of all affected groups;
- transparency of decision-making; and
- access to information at the workplace and in the community.

Trade unions have tremendous capacity to contribute to the search for sustainable development, with ***breadth*** in their numbers – over 2 million collective agreements and 2.5 million workplaces – and ***depth*** in their structures, programmes and discipline.

They have already demonstrated that structures for health and safety can be successfully adapted to meet the challenge of sustainable development. For example:

- Occupational health and safety (OHS) committees can be expanded to accommodate sustainable development issues in the workplace and community.
- Health and safety representatives or "delegates" may become occupational health, safety and environment representatives, with advanced training and supportive community relationships.
- Collective bargaining may be expanded to include "green" provisions reflecting the worker's stake in healthy, sustainable workplaces and social surroundings.
- Union-management arrangements may be expanded to accommodate sustainable development "partnerships" in the overall state of the work and community.
- Joint management systems assessment, target-setting, implementation, evaluation, monitoring and reporting may be expanded to include sustainable development aims.[4]
- Occupational health and safety tool kits can be "repackaged" to accommodate sustainable development concerns.
- Voluntary agreements, including collective agreements, codes of conduct and other accords, may be expanded to address sustainable development concerns.
- A workplace culture can grow beyond health and safety to accommodate sustainable development goals.
- A tradition of public advocacy may be reinvigorated as workers and unions engage in education and orientation of the public on sustainable development issues.

Finally, trade unionism is an international movement, and as such, is equipped to take on the fight for sustainable development within a globalized system of production and consumption. Trade unions have the capacity to communicate their message and mobilize workers around the world, and to work with national governments and international agencies to bring down long-standing barriers.

Unsustainable workplaces

Trade unions have approached occupational health and safety (and now sustainable development) as part of an effort to change ***relations of work***. Their objectives have always included all aspects of the worker's life, consistent with the definition of occupational health provided in 1963 by a joint committee of the International Labour Organization and the World Health Organization, namely:

> The promotion and maintenance of the highest degree of physical, mental, and social well-being of workers in all occupations, the prevention among 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 condition.[5]

This broad-based definition is consistent with the concept of sustainable development, which embraces every sector of economic and social life. As such, it is at odds with occupational health and safety policy that is based on a narrow ***contractarian view*** that work-related risks are freely contracted by workers and remain, in one way or another, under their control.[6] It is also at odds with a ***cost-benefit approach***, which ignores the inequality of power in the employment relationship.

Trade unions have particularly opposed an allocation of resources to health and safety based on the employer's

willingness to pay for hazard reduction. In most societies, they point out, the majority of "damage costs" related to illness and injury have either been socialized, or imposed directly on workers, their families and communities. Seldom do individual employers have to account for and absorb the true costs of losses they have caused.

Doctrines based on "free contracting" are responsible for higher levels of exposure to hazards in the workplace than would ever be allowed for the general public, based on the presumption that control measures will be triggered when workers demand risk premiums or some other form of compensation in return for exposure.[7]

Much of the resistance to the trade union agenda is based on one simple fact, however; conversion to healthy, safe and environment-friendly production *is* costly, because most workplaces have not been designed with either worker health or sustainable development in mind.

Trade unions, NGOs and other social partners challenge those who claim that the existence of hazards and threats must be established "beyond a reasonable doubt" – i.e. that the absence of strong, conclusive, positive evidence justifies inaction. Trade unions have replied with the ***precautionary principle,*** which must be accepted as central to sustainable development. At its simplest, it dictates that the burden of proof that a product or process is safe rests with those who want to introduce it into the workplace or society.

The changing workplace

Since Rio, massive reorganizing and restructuring have taken place in the world's workplace, as ***globalization of production and consumption*** has increased market pressures for goods and services, at lower prices, within shorter deadlines, as well as cost-cutting measures. Emerging forms of work tend to entail intensification and fragmentation of work, staff reductions, multiskilling and subcontracting, speed-up, irregular hours and shifts, fewer margins for local or personal choice, etc. The effects on workers' physical and psychological health are immense

New technology. Technological innovation alone poses an immense challenge. Trade unions have always encouraged transfer of technology to promote employment and capacity building. At the same time, however, they have drawn attention to its negative effects, especially where it is introduced with little regard for social and environmental impacts. A massive increase in musculoskeletal disorders is evidence of an unsustainable approach to technology, as are the threats to farmers and communities posed by genetically modified organisms (GMOs) and biotechnology, especially in developing countries where the most disastrous effects are likely.

Faced with this reality, trade unions have targeted socio-economic security as a *sine qua non* of worker participation in sustainable development, especially where it portends large-scale dislocation for them and their communities. "Just transition" programmes are pursued by unions for reasons of equity, as well as for their instrumentality in building consensus for change. Towards this end, trade unions have worked closely with the ILO's Socio-Economic Security Programme (SES), the InFocus Programme that directs attention to the various dimensions of worker security.

The Johannesburg World Summit provides an excellent opportunity to promote occupational health and safety in a rapidly changing world. It can build on a growing consensus that the benefits of development must be clearly visible in the form of employment, occupational and public health, and stable communities, especially for developing countries. Research, education and literature arising from the Summit will do much to draw attention to the social and occupational costs of current patterns of development, decision-making and global trading patterns. The focus, however, must always be on positive alternatives.

Government, regulation and core labour standards. Trade unions believe that a rapidly changing and "globalizing" world demands an expanded role for government and public authority. In particular, they believe that local authorities can play a leading role in promoting functional democracy through increased capacity building, citizen participation and accountability. They are also committed to public control of such vital areas as water, electricity and other services, such as public transportation and health care.

This approach reaffirms the need for effective regulation of the workplace, i.e. for more, not less, intervention by the state, as only through a vigorous public presence will human labour be taken out of the realm of competition. However, high standards and other regulatory tools require a well-staffed and resourced inspectorate, mandated to take an aggressive stance towards their work.

A strong regulatory regime is also required to ensure minimum worker rights at the workplace, including procedural rights involved in participatory decision-making. In this regard, the 28 April International Commemoration Day will once again draw attention to the hundreds of trade unionists who are murdered, injured, beaten, tortured or harassed every year because of their efforts to organize, educate and advance the interests of workers according to the ILO core labour standards, including freedom of association. Those who seek sustainable development must declare this type of victimization and suppression totally unacceptable.

The WSSD must therefore call for recognition of ***core labour standards,*** the international instruments that define economic and social rights at work, as basic conditions to the search for sustainable development. It must counter suggestions that these are an issue for industrialized nations only. They are universally applicable, regardless of the stage or nature of national development. The most comprehensive and widely accepted standards are the Conventions and Recommendations of the International Labour Organization, in particular the eight Conventions referred to in the ILO Declaration on Fundamental Principles and Rights at Work.

In December 2001, the International Confederation of Free Trade Unions (ICFTU) declared core labour standards a major trade union priority for the WSSD. Trade unions want them to be incorporated into all local, national and international planning, with special attention to:

- trade, investment and economic development;
- socio-economic security issues such as social and employment transition; and
- workplace assessment of corporate accountability.

Besides being important in their own right, these standards serve as "enabling rights", providing access to other important rights, such as the right to participatory decision-making on which occupational health and safety programmes and collective bargaining are based.

Towards this end, trade unions support and seek to strengthen the role of the ILO, as the appropriate agency to promote occupational health and safety, and broader sustainable development issues, alone and through partnerships. As one of the tripartite partners in the ILO, they have reason to be particularly pleased with statements made by Jukka Takala, Director of SafeWork, the ILO InFocus Programme on Safety and Health at Work and the Environment, who speaks of a renewed commitment to this area. (See interview of Jukka Takala in this issue.) At the same time, other international agencies such as the World Trade Organization (WTO) should not be allowed to neglect their responsibilities, as sustainable development demands that the three "pillars" be integrated in decision-making on all matters.

Notes

[1] For a study of unsustainable forms of production during the First Industrial Revolution, see Redford, Arthur. 1931. *The Economic History of England (1760-1860)*. Longmans, Green and Co., London.

[2] For an authoritative study of the union approach to health and safety through joint worksite committees, see Beaumont, Phil B. 1983. *Safety at Work and the Unions*. Croom Helm, London.

[3] A multistakeholder consultation in Toronto, Canada, in 1999 reached agreement following the CSD1998 Dialogue Session on "Business & Industry".

[4] Workplace assessments are key to joint target-setting, monitoring, record-keeping and implementation, in tandem with enterprise management systems for environment (e.g. Cleaner Production or ISO), health and safety (e.g. ILO Guidelines or government regulations), internal or third-party enterprise audits, and government programmes (e.g. European *Eco Management and Audit Scheme – EMAS)*.

[5] Parmeggiani, Luigi (ed.). 1983. *Encyclopaedia of Occupational Health and Safety*, Third (Revised) edition. International Labour Organization, Geneva.

[6] See Tucker, Eric. 1990. *Administering danger in the workplace: The law and politics of occupational health and safety regulation in Ontario, 1850-1924*. University of Toronto Press, Toronto, Ontario.

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When it comes to health and safety, your life should be in union hands

Many people think the labour movement is about fighting for a better standard of living. Frequently though, the battle is more basic. The unions are fighting for their members' lives.

Rory O'Neill
Editor
Hazards magazine
Health, Safety and Environment officer
International Federation of Journalists

There is no more natural union function than defending the health and safety of members. It is a reason people join unions and a reason people stay in unions. And it has always been so.

Herbert Abrams' *A short history of occupational health*, published last year in the *Journal of Public Health Policy*, says: "It is important to recognize that throughout the often tragic history of worker health and disease, the worker played a primary role as the basis of every significant improvement in legislation, factory inspection, compensation, correction, and prevention."

Abrams concludes: "Labour unrest, protests, strikes, lawsuits, and catastrophes were vital catalysts in obtaining action. Organized labour has been the essential factor central to most workplace health and safety improvements, from the industrial revolution to the present."

When it comes to challenging workplace harm, hygienists might have a measure of it and doctors a diagnosis for it, but only workers with collective power have much chance of doing anything about it. And there is no shortage of up-to-the-minute evidence illustrating this "union safety effect".

The Canadian Labour Congress cites a 1993 study done for the Canadian Ministries of Labour which concludes that union-supported health and safety committees have a significant "impact in reducing injury rates".

Later studies for the Ontario Workplace Health and Safety Agency "found that 78-79 per cent of unionized workplaces reported high compliance with health and safety legislation while only 54-61 per cent of non-unionized workplaces reported such compliance".

But this isn't a Canadian phenomenon. US academic Adam Seth Litwin, now a board member of the US Federal Reserve, then with the London School of Economics, concluded in a review last year of health and safety in UK workplaces that unions dramatically improve safety in even the most hazardous workplaces.

A non-union office worker was, by Litwin's calculations, 13 times more likely to suffer an injury than was a closed-shop union worker on an industrial assembly line.

Litwin found "strikes and slow-downs serve as efficacious union tools for reducing workplace injuries", with the most effective union organizational model "the pre-entry closed shop".

He concludes: "Injury rates can be reduced by allowing for co-determination

regarding health and safety, even in situations where industrial relations may be otherwise characterized as adversarial.

"Even if unions and management quarrel over all the other issues, labour possesses vital, tacit, shopfloor knowledge regarding health and safety, knowledge that is imperative for reducing accident rates."

The true extent of the union protective effect was evaluated in a 1995 study of UK unions. It found that in workplaces with full union recognition and a joint management-union safety committee, serious accident rates were less than half those at firms with no union recognition and no joint committee.

As Owen Tudor, health and safety officer with the UK Trades Union Congress (TUC), put it: "Join a union or your employer will break your legs!"

The story is repeated in Australia. The Australian Government's Workplace Relations Survey 1990-1995 found unionized workplaces were three times as likely to have a health and safety committee, and twice as likely to have undergone a management occupational health and safety audit in the preceding 12 months.

Even in the US, with a relatively low unionization level of 13 per cent, the effect can be seen. A 1991 study, using US data, concluded that unions dramatically increased enforcement of the Occupational Safety and Health Act in the manufacturing sector. Unionized firms had a higher probability of having a health and safety inspection, and their inspections tended to be more probing, as employees exercised their "walkaround rights" – the right to accompany a government inspector during a workplace tour.

Unionized US workplaces were more than five times as likely to be inspected, the research found, and the quality of inspections improved dramatically if the inspector was accompanied by a worker knowledgeable about the hazards in that workplace.

A 1998 paper provides more evidence of the union safety effect. Researchers who surveyed over 400 industrial hygienists and safety engineers in New Jersey concluded "effective strategies for involving workers appear to be conditional on a number of variables, most importantly on worker activism and the effective use of formal negotiations".

The researchers, writing in the *Journal of Public Health Policy*, add: "Findings are consistent with studies from both the US and abroad which emphasize the role of unions in shaping opportunities for effective worker participation."

The authors recognize that union education and training is "a critical variable in achieving effective arrangements for worker participation. In the US as in other countries, unions assist workers in assessing and understanding health and safety information, and collective bargaining agreements protect workers who refuse abnormally dangerous assignments or confront management about their health and safety concerns."

Even the World Bank agrees that unions play a lifesaving role at work. A 1995 World Bank report noted:

"Trade unions can play an important role in enforcing health and safety standards. Individual workers may find it too costly to obtain information on health and safety risks on their own, and they usually want to avoid antagonizing their employers by insisting that standards be respected.

"A union can spread the cost of obtaining information on health and safety issues among all workers, bargain with employers on the level of standards to be observed, and monitor their enforcement without putting any individual worker at risk of losing his or her job.

"Studies in industrial countries indicate that the role of labor unions in ensuring compliance with health and safety standards is often an important one."

Everyone's priority

The nations that we have cited so far have one thing in common – they are relatively rich, relatively mature industrial economies.

But while these countries may have most of the wealth, they don't have most of the workers. Workers outside of rich industrialized nations are part of the same world of work, and what happens to them impacts on the working conditions of every worker, everywhere.

The New York-based Labor Institute warns that spiralling stress and a downward pressure on pay and conditions can be traced to the "four horsemen of the workplace": downsizing, globalization, automation and an increase in the use of temporary workers.

The merger mania, takeovers, economic restructuring, globalization and lean-and-mean production methods of the new century are already putting workers through the economic blender, with employers switching from a "take it or leave it" approach to job negotiations, to a "take it, or we leave you" stance, with a border hop to the next, more accommodating, nation.

Hazards magazine reported in 2000: "The effects of globalization are hurting everywhere, with companies unaccountable to national governments on labour and safety standards. Multinationals like Rio Tinto, Cape, Thor and Union Carbide pocket the profits in one country, and leave a trail of workplace abuse and disease in another."

Global: Unions protect decent standards

Moves by the International Organization for Standardization (ISO) to set up a health and safety management system without union input were quashed in 2000 by the first-ever Internet health and safety campaign waged by the international trade union movement.

Unions felt that the union influence on safety would have been lost. They felt the International Labour Organization was the appropriate body to introduce a standard, because unlike ISO, ILO gives workers a voice as well as employers.

Lobbying across 80 countries by the global union health and safety network of the International Confederation of Free Trade Unions (ICFTU) succeeded in securing enough votes to block the ISO move.

Look at Cape and Union Carbide. UK multinational Cape plc continued mining asbestos in the South African town of Prieska after it decided the combination of UK labour and asbestos disease compensation costs was too much to bear. A five-year legal battle ended this year, with a compensation settlement of UK£21 million agreed for the 7,500 sick, dying and bereaved claimants. For multinational Cape, the maximum price for a South African life is £5,250.

For Union Carbide, life came cheaper still. In the 18 years since its pesticide plant in Bhopal, India, exploded, only 14,824 related deaths have been compensated at a price per corpse averaging £900. Over 400,000 claims have been rejected.

The union effect, though, is apparent everywhere there are workplace hazards to challenge. Take South Africa. The mineworkers' union, NUM, was a driving force behind the Cape compensation campaign.

And a formal inquiry into the dangerous behaviour of the Swiss-owned Vantech company in Mpumalanga also came about as a result of a campaign by NUM. The union revealed that Swiss company operation was poisoning workers with vanadium; the company would not provide the union with medical records of workers who had allegedly died of vanadium poisoning.

Good business?

Wherever people live and work, it is clear that what is good for business isn't necessarily good for workers.

Unions have fought for and won safety laws and employment protection, but the union safety effect, evident worldwide, shows that it is the presence of informed and active unions that give the laws meaning.

There's no single right way to do it. To secure improvements, unions have used methods from dialogue to strike action, ethical trading initiatives to alliances with environmental and human rights groups.

Africa: Unions and integrated pest management

Agricultural workers are acutely aware that chemical pesticides are bad for their health and that of their families and communities. "What are the alternatives?" and "How do we stop using these poisons?" are the questions asked most frequently at health and safety workshops in the sector.

One answer is to encourage workers through their unions to learn about and promote the use of non-chemical Integrated Pest Management (IPM) techniques and programmes for weed, insect pest and disease control on the farms and plantations where they work.

The IUF is now working with the main international agency promoting IPM, the Global IPM Facility (a joint programme of the World Bank, the Food and Agriculture Organization, the United Nations Development Programme and the United Nations Environment Programme), to ensure that agricultural workers and their unions receive training in IPM using the FFS method.

At the end of May 2001, two week-long pilot IPM courses – the first ever for trade unionists – were held for IUF agricultural affiliates in Tanzania (TPAWU) and Uganda (NUPAW and NUCMAW). In total, some 40 workers were trained and will now be applying their new knowledge and skills back in the workplace to reduce pesticide use and improve health and safety standards.

There are, however, prevailing management methods that are undoubtedly and dangerously the wrong way. "Enronomics", the sharp practices that allowed US energy giant Enron to pay its directors millions while plundering the pensions of its entire workforce and destroying the company, is an extreme case of a common workplace disease.

Enron was aided by accounting consultant Arthur Andersen, the company that should have spotted the millions going missing. If you now have concerns about trusting your livelihood to an accountant, you should consider this – for millions of workers, the same accounting firms may be overseeing their lives.

The big five accountants – Arthur Andersen, KPMG, PricewaterhouseCoopers, Ernst and Young, and Deloitte & Touche – are having a growing influence on working conditions, as "independent" auditors of corporate "ethical trading".

A recent report in *Ethical Consumer* magazine presents evidence that safety, environment and labour rights abuses can be as easily ignored as financial misdemeanours.

It need not be this way. The 26 January 2002 edition of the *Focus on the Corporation* column puts the case for an end to "unaccountable accounting". It presents arguments for a new Corporate Accountability Commission that would respect the accountants' dictum "if you don't count it, it doesn't count" and would consider "intangibles and externalities" like real occupational injury costs.

"For example, when workers were injured, you wouldn't merely report the cost of the in-house nurse and the insurance, but you would also report the cost to the worker

Brazil: Unions take on benzene cancer

Negotiations between Brazil's chemical industry and trade unions have produced an unprecedented agreement that provides detailed guidelines and procedures for the environmental control of benzene, involving full participation of workers and their unions.

The 1995 "Benzene Accord" defines benzene as a carcinogen and sets maximum workplace exposure standards. Workers have equal representation on a Permanent National Commission on Benzene to oversee developments, monitor compliance, promote studies, supplement laws and regulations, provide for alternative control measures and issue Certificates for the Controlled Use of Benzene.

The Accord is administered at the plant level by a Representative Group of Benzene Workers (GTP) which has full responsibility for programmes, including worker training. Full employer cooperation with the GTP is required, including access to information and records and provision of office and equipment, and heavy penalties are provided for violations.

Source: Nilton Freitas, Health, Safety and Environment Officer, Brazilian CUT.

of loss of the leg, offset by any benefits you might provide to the worker," it says.

In the modern, global world of work, companies like Enron, with well-paid friends in high places, can write their own rules.

Globalization and the shift in power from labour to capital that accompanies it could undermine the standards, legislation and employment protections that unions have won. But it might also bring real meaning to labour slogans like "an injury to one is an injury to all".

The struggle for better conditions now more than ever transcends borders and is one that can only be lost if constrained by parochialism and short-term self-interest. With over half of the world's largest economies represented by multinational companies, not countries, international solidarity is, in every sense, a matter of survival for unions.

New approaches

Unions are adapting to the new global realities, finding new ways of organizing that look beyond national borders. There are now in place a slew of company-based international agreements underpinning union rights, including safety and covering millions of workers worldwide.

In 1999, tyre and rubber unions from Goodyear plants in 16 countries on five continents, all affiliates of the international chemical, mining and energy union federation ICEM, formed a global union network with workplace health and safety as the group's top priority. The unions agreed to create an international database on Goodyear's operations and working conditions.

An ICEM "global agreement" with Norwegian-based oil multinational Statoil includes "a commitment to provide a safe and healthy work environment, deploying common 'best practice' standards".

A similar ICEM agreement with the German multinational Freudenberg requires the company "to adhere to and continue to develop the required and necessary standards concerning occupational safety, health and environmental protection" wherever it operates. And a January 2002 agreement with Spanish power multinational Endesa again includes a commitment to respect trade union rights and high occupational health and safety standards.

The International Federation of Building and Wood Workers (IFBWW) has similar agreements with Swedish furniture giant IKEA, Skanska, pencil manufacturer Faber-Castell and construction company Hochtief; as has the International Union of Foodworkers (IUF) with French multinational Danone.

An agreement last year between IUF, a banana workers' union (COLSIBA) and the multinational Chiquita – a long-time opponent of independent unions and notorious for its poor safety standards – guarantees core trade union and employment rights to banana workers.

Health and safety is also covered, with the agreement saying: "Chiquita acknowledges its responsibility to provide safe and healthy workplaces, and Chiquita and the IUF/COLSIBA agree to collaborate in efforts to further improve the health and safety of the Company's banana operations."

Unions too are increasingly finding common cause with environmental and human rights organizations.

The US-based International Right to Know Campaign, an environmental, labour and human rights coalition launched last year, "is not just about getting information to the United States but also about making sure that workers in foreign countries have basic information about their working conditions and their rights," says Elizabeth Drake of US union federation, the American Federation of Labor and Congress of Industrial Organizations (AFL-CID).

And international union, religious and civil rights leaders have formed the BehindTheLabel.org anti-sweatshop coalition.

Unions are of necessity becoming more creative and more inclusive in their organizing methods, finding better ways to do their traditional organizing role, supplemented by lessons learned from

India: Dockworkers address illegal imports of hazardous substances

Educated and organized cargo handlers are a first line of protection against hazardous goods entering a country. When a Greenpeace report indicated that India had become a "hotspot" for illegal hazardous wastes imported under the pretext of "recycling", the Port and Dockworkers decided to take on the issue with the assistance of the ILO Bureau for Workers' Activities, Workers' Education and Environment Project.

Union safety committees joined with Indian groups, Toxic Links India, Shristi and Greenpeace, to contact the agencies responsible for dock safety. Extensive research was conducted on the imports, especially in minor ports where protective legislation does not apply, and materials were prepared for safety committees and union members. Training materials were drawn up and a workshop was held in 1999 to train a network of union educators on issues surrounding toxic waste and its handling.

The Hind Mazdoor Sabha (HMS), a national union centre, has produced a briefing document. Widespread publicity and broad-based support have already resulted in stricter enforcement of existing standards on hazardous cargo.

Source: ICFTU briefing document for the UN Commission on Sustainable Development, April 2001.

environmental, anti-globalization and other emerging movements.

In a modern union world, blinkered self-interest amounts to a slow industrial suicide. Action at the workplace, national and international levels is the only thing that will work for the workers.

There's a new union survival plan. Forget *Think Global, Act Local.* Act now, act everywhere.

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For more on Corporate Accountability Commission proposal, see http://www.stakeholderalliance.org

Safer farms for safer food

Idyllic? Not quite. Agriculture is one of the world's three most dangerous sectors. For the first time, new ILO standards give waged agricultural workers the industrial-strength protection that they need. Which is good news for all of us, because safer workers produce safer food.

Peter Hurst
Health, Safety and Environment Coordinator
International Union of Food, Agricultural, Hotel, Restaurant, Catering, Tobacco and Allied Workers' Associations (IUF)

The 21 June 2001 was an historic day for the world's agricultural workers, with the adoption of a new ILO Convention and Recommendation on safety and health in agriculture.

This is the first time that waged agricultural workers – whether permanent, temporary or seasonal – are guaranteed in international law the same rights and levels of protection as other categories of workers, despite the fact that the agricultural industry is one of the most dangerous in the world and has the largest workforce.

There are an estimated 450 million waged agricultural workers worldwide, and their numbers are growing in all regions of the world. They account for 40 per cent of the global agricultural workforce of over 1.1 billion. Between 20 and 30 per cent of the waged workers are women, and child workers also form part of the labour force.

Governments, employers and worker trade unions participating in the 89th Session (2001) of the International Labour Conference in Geneva adopted these new instruments despite the fierce resistance of the Employers' group at the previous year's Conference. There were only two opposing votes (the employers' delegations of Indonesia and Malaysia) and 41 abstentions (28 employers and 13 governments).

An ILO Convention is in effect a treaty between governments but it is unlike other treaties in that it is drafted and approved by the International Labour Conference in which representatives of workers' and employers' organizations take part as delegates with full voting rights. Once ratified, an ILO Convention has the force of international law.

The need to improve safety and health standards in agriculture is paramount, as it is one of the three most dangerous industries, along with construction and mining. Agricultural workers labour in an industry that is not sustainable as measured by the loss of human life, injury and ill health. In 1997, the ILO estimated that 170,000 agricultural workers and farmers were killed in producing the world's food and commodities, out of a total of 330,000 fatal workplace accidents in all occupations worldwide. Agricultural workers also suffer disproportionately among the 250+ million workers injured each year, and the 160+ million who fall ill due to workplace hazards and exposures.

One of the most distinguishing characteristics of agricultural work is that it is carried out in a rural environment, where there is no clear distinction between working and living conditions, as there is for factory or office workers. As a result, agri-

cultural workers and their families face extra dangers, such as exposure to pesticides. However, agricultural workers – who continue to register among the highest levels of global poverty – are generally excluded from effective forms of health, safety and social protection.

Tough negotiations

In the first round of discussions in the Committee on Safety and Health in Agriculture at the 88th Session of the International Labour Conference in 2000, the employers' group categorically rejected any form of Convention or Recommendation, advancing a variety of arguments to support their opposition. They said that adopting a Convention would be too rigid and would financially cripple farmers, placing too large an economic and bureaucratic burden on them, especially on small, family farms. They argued, too, that as agriculture was "different" from other industries, it could not be regulated in the same way as other industrial sectors. Finally, they argued that a sectoral Convention on agriculture was too narrow and that safety and health standards in the industry ought to be part of a review of labour standards to be undertaken by the ILO in 2003.

On the first day of discussions, the Employers' group moved an amendment to abandon any further discussions on a Convention or Recommendation on safety and health in agriculture. In the recorded vote that followed, governments and workers decisively rejected the employer amendment. This rejection was based in part on the broad recognition in the meeting that, far from being a burden, good health and safety standards not only save lives and protect health, but are cost-effective in minimizing absence due to accident or illness. The employers continued to resist the idea of a Convention in the following three weeks of negotiations. However, the negotiations in 2000 finished with strong draft texts of a Convention and Recommendation.

In 2001, and after a series of informal discussions between the employers, the workers and the ILO, the employers' tactics changed to support for a Convention, provided that it was flexible and that many of its provisions were moved to the non-binding Recommendation. However, apart from the references to self-employed farmers, the employers were not successful in this endeavour.

The Workers' group, some 60 strong, was made up of representatives from agricultural and food unions and confederations from all regions of the world. The Secretariat and technical assistance were provided by the International Union of Food, Agricultural, Hotel, Restaurant, Catering, Tobacco and Allied Workers' Associations (IUF).

More than 100 governments participated directly in the negotiations in the Committee.

The Convention

The main provisions of ILO Convention No. 184 include:

- A broad definition of agriculture. *"For the purpose of this Convention the term 'agriculture' covers agricultural and forestry activities carried out in agricultural undertakings including crop production, forestry activities, animal husbandry and insect raising, the primary processing of agricultural and animal products by or on behalf of the operator of the undertaking, as well as the use and maintenance of machinery, equipment, appliances, tools, agricultural installations, including any process, storage, operation or transportation in an agricultural undertaking which are directly related to agricultural production"* (Article 1).
- Governments have to develop a national policy on agricultural safety and health based on "*consultations with the representative organizations of employers and workers concerned*" (Article 4).
- Employers – that is, farmers / growers – have to carry out workplace risk assessments on the farm, plantation or agricultural undertaking before expos-

ing workers to the hazards / risks covered by the Convention, including exposure to chemicals (Article 7(a)).

- Workers have the right to *"remove themselves from danger resulting from their work activity when they have reasonable justification to believe there is an imminent and serious risk to their safety and health and so inform their supervisor immediately. They shall not be placed at any disadvantage as a result of these actions."*
- Articles 12 and 13 cover sound management of chemicals. Although the Convention deals primarily with occupational, that is, workplace, safety and health, Article 12(c) also refers to the need to protect the general environment in respect of disposal of empty containers and wastes – see also the Recommendation, paragraph 7.
- Article 18 on women workers states: *"Measures shall be taken to ensure the special needs of women agricultural workers are taken into account in relation to pregnancy, breastfeeding and reproductive health."*
- With regard to young workers and hazardous work, Article 16 sets the minimum age for such work at 18 years. National authorities may, however, permit persons as young as 16 years of age to carry out hazardous work *"on condition that appropriate prior training is given and the safety and health of the young workers are fully protected"*. Currently, some countries allow children as young as 11 to 13 years old to carry out many types of agricultural work.
- Article 20 on working time arrangements – for the first time in an ILO Convention – makes the connection between hours of work, rest periods, night work and health and safety on the job, issues which are too often neglected.
- Article 21 states: *"According to national law and practice, workers in agriculture shall be covered by an insurance or social security scheme against fatal and non-fatal occupational injuries and diseases, as well as against invalidity and other work-related health risks, providing coverage at least equivalent to that enjoyed by workers in other sectors."* Currently, many workers are not covered by this form of social protection.

The Convention covers only waged workers who work for an employer. At the insistence of the employers and many governments, all references to various categories of self-employed farmers and workers were moved to paragraphs 12-15 of the non-binding Recommendation. This means that categories of self-employed farmers / workers such as small tenants, sharecroppers and subsistence farmers are *not* covered by the Convention. However, Article 3 of the Convention provides: *"Each Member [government] shall list, in the first report on the application of the Convention… any undertaking or category of workers which has been excluded, giving the reasons for such exclusion. In subsequent reports, it shall describe the measures taken with a view to extending progressively the provisions of the Convention to the workers concerned."*

The Recommendation

This non-binding Recommendation provides additional guidance on the provisions of the Convention. Paragraph 7 deals with sound management of chemicals, complementing Articles 12 and 13. In this paragraph, clear reference is also made to ILO Convention No. 170 – the main ILO instrument dealing with chemicals management.

The next steps

Ratification of a Convention is a free act by a State, but once this commitment has been made, the Convention acquires a force that is binding and independent of the mere will of States and must be applied.

ILO member governments have to submit the Convention to their competent authority, usually the national parliament,

within 12 months of the adoption (18 months in the case of federal states) for consideration of the action to be taken. Two countries need to ratify the Convention for it to enter into force.

Lobbying and campaigning to ensure speedy ratification and comprehensive implementation will be needed from trade unions working in cooperation with non-governmental and civil society organizations such as the Pesticides Action Network (PAN). Campaigns should include raising awareness of the new standard in farming communities everywhere. Speedy ratification and comprehensive implementation are clearly the ideals, but even where a country is slow to ratify, or does not ratify, the Convention and Recommendation can be used as standards on which a progressive national agricultural safety and health policy / programme can be based.

In conclusion, the IUF views adoption, ratification and implementation of the Convention and Recommendation as key elements and measures of sustainable agriculture. Agriculture cannot be sustainable if it continues to kill, maim and make ill huge numbers of workers and farmers producing the world's food and commodities, nor if it continues to harm the environment.

A safe and healthy agricultural workforce organized in strong trade unions is also a key element in helping to ensure world food security and promoting food safety. For example, giving workers both the right and the means to wash their hands not only protects them, it also protects the quality of the food. Food should not only be ecologically labelled but socially labelled to the effect that those producing it did so in safe and healthy working conditions.

Preventing injuries and ill-health in the construction industry

You might think that the active, outdoor life in the construction sector would keep you fit and healthy. Quite the reverse is true. Building work deserves its reputation as dirty, difficult and dangerous.

Fiona Murie
Director, Health, Safety and Environment
International Federation of Building and Wood Workers

At least 55,000 people suffer fatal injuries on building sites every year, according to a conservative ILO estimate. That means one person is killed in a site accident every ten minutes. Many hundreds of thousands more people suffer serious injuries and ill-health because of bad, and often illegal, working conditions.

However, the published figures grossly underestimate the number of accidents. In many countries, less than 20 per cent of injuries are reported – and the longer-term impact of occupational diseases is scarcely reflected at all in the statistics.

Downsizing, outsourcing, the use of labour-only subcontracting and the so-called self-employed have a negative impact on the management of health and safety in construction. Responsibilities for planning and coordination of health and safety are often unclear, and compliance with health and safety law is generally poor. Informal contractual conditions in the sector make it difficult for workers to exercise their rights.

To make matters worse, self-regulation is increasingly widespread in the construction industry, and the relevant administrations frequently have a permissive, passive attitude towards employers who ignore health and safety laws, even when this leads to the death of a worker.

Deaths on site – predictable but not prevented

The real tragedy behind the statistics is that deaths are preventable. Most people are killed whilst carrying out perfectly routine work, where the hazards are well known. Some of the main causes of fatal injuries in construction are:

- **Falls:** The number-one construction killer in any country is falling from heights, and this is principally due to the lack of proper edge protection in a variety of construction tasks. The most frequent culprit is inadequate ***scaffolding,*** with no proper access or no guard rails to prevent falls. Scaffolding is often erected by unqualified operatives, and is sometimes improvised, using unsuitable materials. Apart from scaffolding problems, other causes of falls include unprotected openings in buildings, lack of edge protection in roof work, lack of crawling boards on fragile roofs, demolition work and inappropriate use of ladders and hoists.
- **Fatal crush injuries and being struck by falling objects:** Excavations which are not shored up (or at least sloped) may collapse, particularly after rainfall. Vehicles operating too close to the edge, where there are no stop blocks, may also

cause a cave-in. Walls may collapse when excavations undermine them. Buildings may collapse when supporting structures are injudiciously altered. Falling objects, materials or tools can strike and kill workers – particularly if they are not wearing hard hats. Such falling objects are due to the lack of toe boards on scaffolding, lack of tool belts for workers, bad storage and stacking, and poor housekeeping. Fatal injuries may also result from improper use of hoists and cranes, and from being struck, crushed or trapped by vehicles, dumper trucks and machinery.

- **Electrocutions:** due to cable strikes, or to contact with or arcing from overhead cables.

Ill-health in building workers – invisible and ignored

Workers in the building trades are exposed to a wide range of hazardous substances and physical hazards. In many countries, the resulting health problems are not recognized as being work-related, and are not reported, recorded or compensated. This social invisibility, this censorship of the true damage to workers' health, means that there is no national policy to prevent occupational ill-health in the sector. It is a vicious circle.

Yet, as with accidents, the causes of ill-health are well known and can be prevented or controlled. Some of the most common health problems in the construction sector are:

- **Deafness:** Exposure to hazardous noise levels is so widespread as to be routine, and occupational deafness is very common among building workers. Here, noise reduction methods can be used, for example on compressors, but personal protective equipment and training are essential to prevent hearing loss.
- **Vibration syndromes:** Hand-arm vibration can cause damage to blood vessels and nerves. This leads to a lack of sensitivity in the fingers. Called Raynauds Syndrome, this condition is particularly due to the use of pneumatic tools. Whole-body vibration is caused by operating heavy machinery and vehicles, and can damage the spine.
- **Back injuries:** These are caused by manual handling of heavy loads, sometimes over long distances – for example, bricks, cement blocks and cement bags weighing 50 kilos. Confined spaces, awkward postures, heavy tasks and productivity demands and long hours can aggravate the problem. Lower back injuries, sciatica, hernias and slipped discs can put people out of the labour market for good.
- **Other musculoskeletal disorders:** These are injuries to muscles, nerves, tendons and joints caused by physically demanding work. Risk factors include: uncomfortable postures, forceful and repetitive movements, awkward tools and sustained effort. In many developing countries, construction work is really labour-intensive. There is little mechanization and tools are rudimentary, recycled and improvised. Typical injuries include: ***bursitis,*** from kneeling, for example floor laying; ***tenosynovitis*** – the inflammation of the tendon sheaths due to overuse and repetitive and forceful movements; ***tendinitis*** – inflammation of the tendons, especially in the shoulder, often due to working with the arms reaching above shoulder level; ***neck problems*** – for the same reason; ***epicondilitis*** ("tennis elbow"), caused by the impact absorbed when making repeated blows.
- **Exposure to hazardous substances:** ***Solvents*** of many different kinds are used in paints, varnishes, lacquers and adhesives. They can cause central nervous system damage and can harm the skin, liver, kidneys and cardiovascular system. Some solvents increase the likelihood of cancer. Solvents can also cause reproductive problems. They can reduce fertility and cause birth defects and miscarriages. ***Isocyanates,*** used in

some paints and varnishes, bonding agents and resins, can cause asthma and dermatitis. In the long term, they are also associated with cancer and reproductive hazards. ***Pesticides*** used in timber treatments are poisons. They can also present serious reproductive hazards. ***Chemical treatments for damp courses*** and ***fire retardants*** can also be hazardous. Welding fumes – which may include a cocktail of all kinds of metal fumes – can cause serious health problems in the long term. The respiratory system is affected and, as chemicals are absorbed, they can slowly affect the brain and internal organs.

- **Dust:** All kinds of dust are bad for the health. There are higher death rates from respiratory disease and from lung and stomach cancers in dusty trades. ***Cement dust, silica, wood dust*** and ***medium-density fibreboards*** pose particular risks. And, of course, ***asbestos*** is highly dangerous and should be banned outright (see box). Low-cost solutions for reducing dust are to get materials pre-cut off site where exhaust ventilation can be used, and to dampen work and isolate dusty work. Good hygiene facilities for washing and changing and proper protective clothing are needed for hazardous jobs, and this is seldom the case in developing countries. Ideally, exhaust ventilated tools, and tools fitted with a water supply for dust suppression should be used. Respiratory protective equipment needs to be selected carefully as different types give widely varying standards of protection. Unfortunately, what is normally given out as personal protective equipment is a "dust mask" made of paper or cloth, rather than filtering respirator masks.
- **Welfare and biological hazards:** The living and working conditions of building workers are poor in developing countries. ***Tuberculosis, cholera and parasitic diseases*** from contaminated water can occur. ***Dengue and malaria,*** caused by mosquito bites, can also be a health hazard. Where pools of water are allowed to accumulate, they make perfect breeding grounds for mosquitoes. Communities around construction sites may also be affected. Seeking work on large construction projects means being away from home and family for long periods. This puts construction workers at risk from ***HIV/AIDS.***
- **Stress:** Noise, dirt, dust, chemicals, work at heights, confined spaces, heavy work and a lack of information and training all contribute to stress. Particularly acute is the fear of accidents, most notably fear of falling. Bullying and pressure are commonplace. Generally the workers, particularly labourers, will have little or no control over how the work is to be done.

Don't compete by cutting safety

The overwhelming majority of accidents in construction are foreseeable and preventable. However, there is rarely a coherent prevention system in place. The micro and macroeconomic costs are considerable. In Europe, the cost of construction accidents is estimated at around 3 per cent of the volume of a project. The cost of strict compliance with European legislation on occupational health and safety is around 1.5 per cent of a construction project's volume.

However, there are costs associated with prevention. Therefore, occupational health and safety and welfare costs should be taken out of competition, and considered as prime costs. Health and safety requirements should be included as mandatory items in procurement policy, contracts and competitive tendering. Failure to comply with such requirements should mean exclusion from competing for tenders.

Personal protective equipment – lip service to prevention

In the construction industry there is an overemphasis on the use of personal pro-

tective equipment (PPE). Of course, good PPE is essential. However, it is a complementary measure to be used along with collective protection – not as an alternative to it. PPE should be used when it is not possible to control the risk properly by other means. PPE is cheap, though, and some employers believe that if workers are wearing their hard hats, then the employer's responsibility is met. This is what we might call the Pontius Pilate style of health and safety.

Prevention strategies – a tripartite approach

Governments' role

Governments have an important role to play as legislators and regulators, but also as clients who can lever changes through the procurement process. Similarly, the World Bank and development agencies can influence labour standards and working conditions on construction sites in many parts of the world. Their procurement policies and conditions of tender should set exemplary standards.

Governments need to have a coherent legislative and policy framework on occupational health and safety in the sector. This should be developed with the social partners through tripartite committees on occupational health and safety, construction industry development boards and training boards. The national policy must include a system for promotion and enforcement of the regulations.

Under-resourcing of the competent authorities, combined with a laissez-faire policy of self-regulation in the industry, can result in a passive and permissive attitude on the part of governments towards even serious breaches of the legislation. Responsible employers need assistance in the form of information, training and guidance on hazards and their prevention. Negligent employers must be shown that they will face stiff fines, high compensation claims, social stigma and loss of licence or liberty.

Employers' role

Employers must give a basic commitment that they will adhere to labour standards and will insist that these are respected by all subcontractors and suppliers. These labour standards are based on ILO Conventions, including such fundamental human rights as freedom of association, the right to organize and the right to collective bargaining.

Employers should pay a training levy to improve the capacity of the workforce on skills and health and safety. Several construction industry training boards have introduced mandatory training on health and safety. There are many positive examples of skills certification and recognition of prior learning, which boost quality and productivity as well as reducing injuries and ill health. There should also be compulsory employers' liability insurance to cover all workers on site.

Company health and safety policies and systems for risk management must include workers participation. Downsizing and outsourcing have created a construction industry dominated by precarious, informal contractual conditions, by subcontracting and by bogus self-employment. This has a direct and negative impact on health and safety.

An effective vehicle for the practical implementation of the safety policy is a joint management-trade union health and safety committee.

Clients and contractors' associations should ensure that:

- Safety, health and welfare provisions are included as mandatory components in tender documents, so as to take these provisions out of competition. All contractors should consider health, safety and welfare items in their cost estimates.
- All management and supervisory staff on their sites have demonstrable competence in occupational health and safety and in management and supervisory skills.

- All workers have a demonstrable skill level, incorporating occupational health and safety.
- All contractors respect labour standards.
- Structures and resources are in place to implement policy and comply with the law.
- There is proper communication and coordination between contractors and the participation of workers, including induction training.

Occupational health and safety targets should be audited for each contractor on site. Previous health and safety performance should be included in the selection criteria for tenders and all bids should present a detailed health and safety plan before work starts.

Unions' role

Low trade union density is a key factor in explaining the poor safety standards in the construction industry.

Strong Unions for Safe Jobs is the title of the Global Programme on Safety, Health and Environment conducted by the International Federation of Building and Wood Workers (IFBWW). Funded by the Swedish national trade union centres (LO and TCO) and promoted by Swedish building workers' union Byggnads, the programme is servicing affiliated trade unions in Africa, Asia and Latin America. The aim is to popularize health and safety as a recruitment and organizing tool, and to assist unions to improve their structure, policy and organizing strategy in this important area of trade union activity. Encouraging results are being obtained by many IFBWW-affiliated trade unions in the following areas:

- Trade union structures improved to bring safety, health and environment into the mainstream of union activities.
- Institutional participation, particularly tripartite work.
- Legislative and policy agenda developed and pursued, negotiation of improved standards, and participation in training on health and safety.
- Collective bargaining agreements that include health and safety.
- Recruitment and organizing strategy, including increased membership, promotion of safety representatives and establishment of safety committees.
- Information and training on hazards and their prevention: carrying out workplace inspections and health surveys, prioritizing hazards, and negotiating for improvements.

Global campaigns

Global campaigns are an important tool for the IFBWW programme. The campaigns help the unions to build solidarity networks with other unions, academics, health professionals, lawyers, families and victims of accidents and ill health, and with communities. Campaigning activities are positive for the unions' image, and give them a leadership role in building strong social pressure for improved working conditions.

Here, securing ratification and application of the relevant ILO Conventions is a major aim – including the Convention on asbestos (see box).

Meanwhile, the ILO Safety and Health in Construction Convention, 1988 (No. 167) has so far been ratified by only 15 countries, although many countries have similar or better legislation on the statute books. The Convention's main points for organizing prevention:

- There should be cooperation between employers and workers in taking appropriate measures to ensure that workplaces are safe and without risk to health.
- All parties to a construction contract have responsibilities, including those who design and plan projects.
- The principal contractor is responsible for coordinating prevention measures.

World's unions want asbestos banned

At the shocking worldwide figure of 100,000 people each year, deaths from asbestos-related diseases have now outstripped deaths from industrial accidents in some countries.

Many of those affected today worked in the building trades. The International Federation of Building and Wood Workers (IFBWW) coordinates a global campaign to get asbestos banned and to prevent workers being exposed to it.

Breathing air containing asbestos dust causes fatal lung diseases. There is usually a long delay between exposure to asbestos dust and the onset of the disease. This can be between 10 and 50 years. The more you are exposed to asbestos, the more chance you will get sick later on.

When inhaled, those of the asbestos fibres that cannot be coughed up or breathed out can become deeply lodged in the lungs. There, they can cause irreparable scarring which continues to grow, even though there is no further exposure to asbestos. This can give rise to a number of painful, debilitating and often fatal diseases, including cancers.

Many of today's asbestos victims worked in building trades. However, asbestos is still widely used in new construction materials, mainly in asbestos cement roofing and pipes. The breaking, cutting, sawing, drilling and sanding of asbestos cement releases asbestos fibres, and presents a very serious health hazard. Construction workers are also still exposed to asbestos in buildings during maintenance, renovation and demolition work.

Any asbestos material in buildings should be identified before work begins, but often sites are not checked for asbestos. If a suspect material is found, then it should be checked. All suspect material should be treated as if it contained asbestos.

Precarious contractual conditions and flexible employment practices in the construction industry undermine prevention measures and the safe systems of work that should be in place. Information, training and trade union organizing on health and safety all save lives.

The ILO's Convention No. 162 and Recommendation No. 172 set out detailed requirements for employers to prevent worker exposure to asbestos, provide protective clothing and facilities, monitor workers' health and provide workers with full information and training.

The IFBWW is campaigning for the ratification and practical application of these ILO standards worldwide, and for full legislation to minimize asbestos exposure and ensure safe working practices.

In fact, the IFBWW and the international trade union movement as a whole have repeatedly called for a global ban on the mining, manufacture, marketing and use of all forms of asbestos and related products. The world's trade unions have agreed on the following measures:

- **Asbestos ban:** Trade unions should lobby their national governments to introduce a ban on asbestos, as part of an international initiative to ban asbestos throughout the world.
- **Protection of workers:** Trade unions should lobby their governments to ratify, effectively apply and enforce ILO Convention No. 162 as a minimum standard to protect workers who may be exposed to asbestos through their work. Trade unions should ensure that the best protection methods to prevent exposure to asbestos fibres are available to workers who have to remove asbestos.
- **Awareness-raising:** Trade unions should develop and maintain a broad-based international campaign to educate workers, the union movement and the public about the risks of exposure to asbestos fibres and the measures to be taken to prevent ill-health and to secure a global ban on asbestos.
- **Alternatives:** Trade unions should seek the replacement of asbestos with alternative substances that are less harmful to human health and the environment. Research should be promoted into technology to develop alternative substances to asbestos where that technology does not currently exist.
- **Information exchange:** Trade unions in countries that manufacture and use asbestos substitutes should distribute technical information on the substitutes to sister unions in countries where those substitutes are not currently manufactured and used.
- **"Just transition":** Where workers may be displaced because of the introduction of an asbestos ban, trade unions should lobby for a just transition to protect the income, employment and welfare of those affected and their communities.
- **Legal action:** Trade unions should seek through their countries' legal systems to bring to justice those employers whose negligence has caused asbestos diseases and environmental damage to the community. The polluters must pay the remediation costs of any environmental damage done by their operations.
- **Compensation:** Trade unions should seek appropriate and prompt compensation for workers who suffer from asbestos-related diseases.
- **Treatment:** Trade unions should campaign to ensure that the victims of asbestos-related diseases will have access to appropriate medical treatment, support services and information.

- There should be an inspection service and penalty measures.
- Workers have the right to remove themselves from imminent and serious danger.

The right to refuse to carry out a dangerous task without fear of victimization is very far from being a reality for most workers. Whilst there is low trade union density in the sector and informal employment, unorganized workers regularly face a choice between doing a dirty and dangerous job or having no job at all. The basic human right to safety is a test of democracy and dignity in the workplace.

Collective bargaining

Collective bargaining agreements should always include points on safety, health and environment, and should guarantee standards that go further than the existing legislative minimum – particularly with regard to the establishment of joint management-union health and safety committees, workers' participation in the prevention of injuries and ill-health and, for example:

- Worker participation in prevention on site.
- The right for trade union health and safety representatives to participate in prevention.
- Time off for training, plus induction training, and toolbox meetings during work time.
- Written health and safety policies.
- Health and safety management systems that include worker participation at all levels.
- Systems for reporting and resolving hazards, including the right for workers to refuse to carry out tasks which pose a serious risk to their health or safety, without fear of victimization or dismissal.

Trade union safety representatives

Trained trade union safety representatives make a positive contribution to the prevention of injuries and ill-health. A recent survey by the British Trades Union Congress indicates that workplaces with such representatives have half the accident rate of comparable workplaces without them.

Trade union safety representatives are aware of the risks in the workplace, and can work closely with workers and management to assist with promoting a working environment where hazards are identified, removed or properly controlled before problems occur.

However, informal workers in construction are widely dispersed in small companies. This poses particular problems in ensuring that they are covered by union safety representatives.

One imaginative solution is the regional safety representatives (RSRs) who have been operating in the construction sector in Sweden since 1949. The system was so successful that it was extended to all sectors in Sweden in 1974. There are currently around 1,450 roving representatives in Sweden, operating in 152,000 workplaces. RSRs service those workplaces with no occupational health and safety committees (less than 50 workers). They have reasonable rights of access to workplaces, and defined functions similar to those of a regular workplace safety representative. The IFBWW is actively promoting the figure of the regional safety representative.

ILO tripartite meeting on the construction industry

At the ILO Tripartite Meeting on the Construction Industry in December 2001, the workers' group brought up proposals on RSRs in the meeting and put forward a resolution. Unfortunately, the employers' group strongly opposed the idea and a consensus could not be reached at that meeting.

However, the conclusions of the meeting were very positive on occupational health and safety, and the employers clearly want to improve standards of prevention in the industry. Some interesting points agreed are:

- The suggestion of agreeing national registers and licensing systems for subcontractors.
- Promoting mandatory basic induction training on health and safety for everyone on site.
- Special attention to be paid to training of workers' health and safety representatives.
- Strict sanctions for infringements of health and safety laws.
- Public procurement procedures should ensure that subcontractors comply with health and safety legislation. If not, they should be excluded from tender lists.

Conclusions

There are many examples of tripartite structures to promote ***social dialogue*** in the construction sector. These include industry development boards and industry training boards as well as national committees on health and safety in construction. The emphasis has to be on:

- Strong health and safety laws, properly enforced, including workers' right to refuse to carry out dangerous tasks without fear of victimization.
- Recognition of trade unions for collective bargaining and the participation of workers in prevention.
- Information and training on hazards and prevention for everyone on site.
- Promotion of health and safety management on site to ensure day-to-day application of prevention measures.

Finding the formula for chemical safety

Workers in the chemical industry face a two-fold challenge: protecting their health and protecting their jobs. Efforts to clean the industry from harmful products will be leading to change that may affect jobs. A "just transition" is the best option. It will facilitate environment-friendly production while cushioning the adverse effect of conversion.

Ian Graham
Information Officer
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Today, we may all be carrying in our bodies about 250 chemicals that did not exist before 1945.

People have benefited greatly from the new products of the chemical industry worldwide. Diseases have been cured or prevented. Food supplies have been protected. New materials have spawned new technologies and new ways of living.

But there is a downside. Environmental exposure to harmful chemicals has increased sharply. And if the general public is affected, how much more so are the industrial workers whose jobs bring them into daily contact with powerful, often dangerous substances?

Workers in the chemical industry itself face a twofold challenge: protecting their health and protecting their jobs. The chemical industry often gets a bad press – sometimes justly, sometimes not – and its future is sometimes called into question.

When job cuts loom, the instinctive response is to keep every product line running for as long as commercially, politically and environmentally possible. However, this approach may not be in the best interests of industrial workers themselves. What happens if the health threat from a product becomes too great, and governments suddenly slam on the brakes? Jobs vanish overnight, without any long-term planning for replacement jobs or accompanying measures. Inevitably, social tensions result. Asbestos and CFCs are cases in point.

The alternative is a "just transition", as advocated by the global union federation that represents chemical workers.

In chemicals as in other sectors, change is bound to happen, argues the International Federation of Chemical, Energy, Mine and General Workers' Unions (ICEM).

Certainly, everything is pointing that way.

By 2003, the European Union (EU) is likely to have 32 major chemicals listed for strict new controls – and in some cases for outright bans. At the world level, a treaty now being finalized will mandate the phase-out of 12 persistent organic pollutants (POPs). More of these POPs may be brought under the treaty later.

And chemicals topped the agenda at the ministerial forum of the United Nations Environment Programme (UNEP) in Cartagena, Colombia, this February. UNEP's background report to the conference suggests a number of key action areas, including action to improve developing countries' ability to deal with chemicals and the issues surrounding them, the promotion of cleaner chemical production

and a shift from "highly toxic chemicals to those with lower toxicity or non-chemical alternatives". The Cartagena forum's proposals will form part of UNEP's input to the UN "Earth Summit" in Johannesburg later this year.

So the best way forward, the ICEM says, is to plan well ahead and to provide a full safety net for the workers who are likely to be affected by change. This "just transition" will facilitate environment-friendly production while cushioning the adverse social impacts of that change.

Seen in this light, the interests of environmentalists and of industrial trade unionists become much more compatible. And indeed, there is some evidence that the two groups now have more in common that they did 20 years ago. Misunderstandings still occur, notably when particular chemicals are demonized. There are also some cultural barriers. The green movement did not, by and large, originate in the industrial working class. As a result, its grasp of industrial realities is not always firm. But dialogue can and does take place.

Responsible Care

If chemical workers are concerned about the industry's future, chemical companies are no less so. The big chemical firms know that their future "licence to operate" will depend on their persuading governments and the public that chemical production is reasonably safe. Not only that. They must also prove that the whole life of each chemical product – from its production, through its transport, to its end use and its final disposal – does not pose unacceptable risks.

"Responsible Care" is the slogan under which chemical companies worldwide have set out to improve their environmental performance and their health and safety record, both within the workplace and beyond.

This programme is unlikely to succeed without the full involvement of chemical workers. Hence the important global union-employer talks that began in February 1999, initially under the aegis of the ILO.

A meeting of the world's governments, chemical employers and chemical unions decided to establish a formal dialogue on Responsible Care between the ICEM and the employers' International Council of Chemical Associations (ICCA).

Among the ILO meeting's conclusions were:

- Internationally comparable systems of performance indicators should be developed and maintained to track chemical enterprises' performance on workplace health and safety and on environmental protection. Workers and their representatives should be involved in the development and use of these systems.
- Workers and their representatives should be actively involved in identifying training and education needs and in designing and implementing training programmes.

The meeting's detailed agreed principles for worker involvement seemed to offer new hope for Responsible Care and the industry's other "voluntary initiatives". The thinking was that careful monitoring by chemical workers and their trade unions, from the workplace right up to the global level, could give more real substance to these programmes and so boost their credibility.

Things moved on from there. A series of negotiations between the ICEM and the ICCA produced a draft agreement that was ready for signature in 2001.

Then the blow fell. At the last minute, the US chemical manufacturers' association, the ACC, refused to endorse the agreement. This surprise decision was apparently at the behest of two anti-union American corporations.

So there is still no global union-management agreement on Responsible Care. The ICEM has not given up, however. It was angered by the ACC's stance, but so were most of the world's chemical manufacturers. The ICEM is still likely to sign agreements on Responsible Care with chemical associations – initially at the national level in most chemical-producing

countries except the US. In Europe, one agreement may cover most of the continent. The hope is that the agreements can be globalized in the near future, when US chemical companies catch up with thinking elsewhere.

Global agreements

Meanwhile, the ICEM is also building strong health, safety and environment provisions into its global agreements with individual multinational companies.

Occupational health and safety is a particularly suitable topic for these agreements. In the short to medium term, globally standardized wage rates are not feasible, and probably not desirable. But on health and safety, there is no practical or moral reason why a company should not immediately apply the same high standards in all its operations worldwide.

The agreements secure the right of the ICEM and its member unions to monitor companies' global performance on the issues covered, and to raise any alleged breaches of the agreements with corporate headquarters management. This is the crucial difference between global agreements and companies' own codes of conduct. And, as the agreements specifically refer to the relevant ILO Conventions, they are an important additional means of securing compliance with those standards.

For chemical safety, obvious touchstones in future ICEM agreements will be the ILO Chemicals Convention, 1990 (No. 170) which deals with safety in the use of chemicals at work and the Prevention of Major Industrial Accidents Convention, 1993 (No. 174).

One concern here is the disappointing ratification rate for these two standards. By the end of 2001, Convention No. 170 had been ratified by only nine countries: Brazil, Burkina Faso, China, Colombia, Mexico, Norway, Sweden, the United Republic of Tanzania and Zimbabwe. For Convention No. 174, only seven countries had signed up: Armenia, Brazil, Colombia, Estonia, the Netherlands, Saudi Arabia and Sweden.

As may be seen, most chemical-producing countries have yet to ratify. ICEM-affiliated unions worldwide will be pressing governments to sign as soon as possible.

The right to know

Of course, in order to tackle chemical hazards, full information is needed about existing chemicals and about new ones being launched on the market. To improve chemical safety, countries really have to adopt comprehensive systems for chemical classification and labelling. This was recognized by the ILO as long ago as 1952, when it began a study of the classification and labelling of dangerous substances.

Until recently, however, information on the full range of chemicals has been surprisingly difficult to obtain. A number of programmes are now tackling this deficit.

In 1992, the UN Conference on Environment and Development (the "Earth Summit") identified the harmonization of classification and labelling of chemicals as one of its priorities. It declared that "a globally harmonized hazard classification and compatible labelling system (GHS) including material safety data sheets and easily understandable symbols, should be available, if feasible, by the year 2000".

A coordinating group was set up to achieve this GHS. The work was overseen by an Inter-Organization Management Committee whose members include all the appropriate UN agencies (such as the ILO) and the Organisation for Economic Cooperation and Development (OECD). The ICEM has been fully involved in this harmonization work, whose main principles are that:

- the overall level of protection offered to workers, consumers, the general public and the environment should not be reduced as a result of harmonizing the classification and labelling systems;
- the hazard classification process refers only to the hazards arising from the intrinsic properties of chemical elements

and compounds, and mixtures thereof, whether natural or synthetic;

- harmonization means establishing a common and coherent basis for chemical hazard classification and communication, from which the appropriate elements relevant to means of transport, consumer, worker and environment protection can be selected;
- the scope of harmonization includes both hazard classification criteria and hazard communication tools, e.g. labelling and chemical safety data sheets (see below);
- changes in all existing systems will be required to achieve a single globally harmonized system; transitional measures should be included in the process of moving to the new system;
- the involvement of concerned international organizations of employers, workers, consumers, and other relevant organizations in the process of harmonization needs to be assured;
- the comprehensibility of chemical hazard communication tools, by the target audience, e.g. workers, consumers and the general public, needs to be addressed;
- test data already generated for the classification of chemicals under the existing systems, should be accepted when reclassifying these chemicals under the harmonized system;
- a new harmonized classification system may require adaptation of existing methods for testing of chemical substances and mixtures;
- in relation to chemical hazard communication, the safety and health of workers, consumers and the public in general should be ensured while protecting confidential business information, as prescribed by the competent authorities.

The *Harmonised Integrated Hazard Classification System for Chemicals and Mixtures* has now been published by the OECD.[1] Together with various other documents – including an ILO-led one on Hazard Communication Tools – it will form the GHS. In December 2002, the GHS is expected to be formally adopted. For the moment, it will not be legally binding on governments, but it may well become a legal requirement at a later date.

An OECD task force is continuing to work on global classification systems for hazard classes not covered by existing systems (aspiration hazards, water-activated toxicity, respiratory tract irritation and narcotic effects). Once agreed, these will be added to the GHS.

In the workplace meanwhile, access to basic information about chemicals has already become much easier, thanks to the International Chemical Safety Cards. These are issued by the International Programme on Chemical Safety (IPCS), in cooperation with the European Union. Each card summarizes essential "shopfloor" health and safety information on a specific chemical used in workplaces. The IPCS is a joint activity of the United Nations Environment Programme, the ILO and the World Health Organization. Through cooperation with various national safety organizations, the cards have been translated into a growing number of languages.[2]

The future of chemical safety, and thus of the chemical industry, depends on information and dialogue. Both will have to be freely available – not least to the industry's workers and their unions.

At the same time, safety will have to be pursued throughout a product's life cycle, right up to its disposal. Somewhat unfortunately, the industry calls this the "cradle-to-grave approach".

Trade unions, too, must insist on safety throughout the cycle, and this is a good issue for labour solidarity across sectors. The ICEM, for instance, is cooperating with the International Union of Food, Agricultural, Hotel, Restaurant, Catering, Tobacco and Allied Workers' Associations (IUF) on safe use of pesticides, and with the International Transport Workers' Federation (ITF) on the safe transport of hazardous materials.

Safety or jobs? Environment or employment? If we plan properly now, we will not have to choose.

For the chemical industry, openness is the best formula – and the safest reaction.

Notes

[1] The full text is available from the OECD web site at http://www.oecd.org/ehs or from OECD Environment Directorate, Environment, Health and Safety Division, 2 rue André Pascal, 75775 Paris Cedex 16, France; fax: +33 1 45 24 16 75; email: ehscont@oecd.org

[2] A list of these languages, with onward links to the cards themselves, is online at http://www.cdc.gov/niosh/ipcs/icstart.html#language

Health and safety in transition

As Central and Eastern Europe adjusts to the market economy, working conditions there will largely be determined by the survival and growth of trade unions.

Annie Rice
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Central and Eastern Europe: 17 countries[1] with a common history of planned economy followed by transition to a market economy over the past 10 to 12 years.

Changes in industry and in work organization may have taken place in other parts of the world, but in the transition economies the magnitudes have been or are exponentially greater. Industrial restructuring has had a direct effect on employment, firm size and industrial relations. These in turn have all influenced the way occupational safety and health is considered and solutions are sought in the region.

Within this commonality of background, however, there are significant variations in the political and economic transformation among countries. Thus, Hungary, Poland and the Czech Republic showed real growth in gross national product (GNP) in the mid-1990s, and by 2000 equalled or exceeded their respective 1989 levels. In south-east Europe, on the other hand, most countries continue to produce only 50-80 per cent of their pre-transition output; and only the poorest country, Albania, has surpassed its pre-1989 level. Loss of employment has been a pervasive phenomenon across all the countries of the region, but losses in south-east Europe are generally higher.[2] Estimates suggest that the informal sector now accounts for a quarter to a half of all economic activity in south-east Europe. In Serbia, it is estimated at 70 per cent.[3]

Further east, Ukraine and the Republic of Moldova have plunged into a decade of economic decline, where life consists of a constant struggle for basic security. According to recent ILO surveys in Ukraine,[4] the situation has deteriorated to the extent that the population has shrunk in the wake of a substantial decline in life expectancy.

So what does this mean in terms of occupational safety and health in the region? During the first years after the beginning of reforms, occupational safety and health was somewhat neglected in many countries. There seems to have been a silent acceptance that it was one of the inevitable prices workers had to pay in the course of transition.

Regrettably, these attitudes were also shared by large groups of workers who were under the double pressure of high job insecurity and low and irregular pay. Over the past few years there has been progress, however, and new legal frameworks and institutional arrangements dealing with safety and health at work have been set up in most countries. This has been most noticeable in the European Union (EU) candidate countries,[5] for which the process of accession involves the adoption of EU directives on occupational safety and health.

But still there are marked differences between the candidate countries and the

EU. If we consider fatal occupational accident rates, for example, ILO estimates for the countries of former socialist Europe show a work-related fatality rate of 11.1 per 100,000 workers.[6] This compares most unfavourably with the calculated rate for EU countries of 5.89/100,000 in general, and even of 3/100,000 in some Nordic countries.

Similarly, in 2001 the European Foundation for the Improvement of Living and Working Conditions extended its EU-wide questionnaire-based survey on working conditions to the candidate countries for admission to the EU (CCs),[7] and found that there are important structural differences which may have an effect on occupational safety and health between the candidate countries[8] and the EU countries:

- A higher proportion of workers are engaged in agriculture (18 per cent vs. 5 per cent), but there are wide differences between countries (Romania 45 per cent, Lithuania 18 per cent, Czech Republic 5 per cent). The proportion is reversed in the services sector (55 per cent vs. 66 per cent).
- A lower proportion of workers are in the high-skilled job categories (29 per cent employed in managerial, professional and technical jobs vs. 35 per cent in the EU).
- Women have a higher activity rate (47 per cent in CCs, and even 50 per cent in the Baltic States, vs. 42 per cent in the EU).
- The proportion of workers aged over 45 (46 per cent) and over 55 (16 per cent) is higher in the CCs than in the EU (34 per cent and 11 per cent respectively).
- More workers consider that their health and safety are at risk because of work (42 per cent of respondents compared to 27 per cent in the EU).
- Self-reported work-related health problems are higher in the CCs, particularly fatigue and musculoskeletal disorders. The most frequently reported health problems were: overall fatigue (41 per cent); backache (34 per cent); stress (29 per cent); and muscular pains in the neck and shoulders (23 per cent).
- Exposure to physical risk factors, especially noise, heat and painful positions, is higher. Use of personal protective equipment is, on the other hand, more developed, particularly in Poland, Romania and Slovenia, indicating more collective means of prevention in the EU.
- Work organization is:
  - less client-driven;
  - less decentralized (workers have less responsibility and autonomy); and
  - more hierarchical.
- Job demands, although of a different nature, are high and job control lower.
- Working hours are longer (on average 43.61 hours per week compared with 38.25 in the EU), less gender-differentiated (female part-time work is low) and unsocial hours, such as shiftwork and nightwork, more frequent.
- Fewer workers receive training and work does not provide as many learning opportunities.
- Gender segregation is lower than in the EU and the dual workload is more gender balanced. Women in the CCs are more likely to be in a higher hierarchical position than their EU counterparts (15 per cent of men report a woman as their boss, compared to 7 per cent in the EU).

ACTRAV survey

Some of these factors were investigated in detail in a survey developed and carried out by the ILO's Bureau for Workers' Activities (ACTRAV) in 1998-2000. The survey, which was carried out in eight countries,[9] was aimed at studying the experiences, priorities and concerns of those directly exposed to risks at work – the workers. It was felt that this attitudinal

approach, although subjective, could be used to add an important dimension to trade union policy development, which had so far focused mainly on structural, financial and institutional aspects. The survey, combined with follow-up seminars,[10] came up with some interesting results concerning priorities and trends in the region, including industry-based differences between countries.

The most common safety hazards that were considered as problems of some degree – minor or serious – were falls, transport of materials and lifting, whilst the most common serious problems were electrical hazards, lifting and fire risk.

Similarly, the most common problems concerning health hazards were noise, eye strain, and dust and fumes. Noise was experienced as a problem of some degree in an astounding 67 per cent of workplaces surveyed, eye strain in 62 per cent and dust and fumes in 58 per cent. In this respect, the textile, clothing and leather industries in Lithuania and Bulgaria seemed to be burdened by health problems, and especially serious health problems, much more so than in other survey countries.

Concerning organizational problems, it is not surprising, given the high unemployment rates in the countries surveyed, that job insecurity and work overload were overwhelmingly the most common and serious concerns of workers. Job insecurity was experienced very differently between countries. In the mining industry, for example, 56 per cent of Ukrainian respondents considered job insecurity as a serious problem, compared to only 7 per cent of Slovakian respondents. In addition to the fear of losing their jobs, mining industry workers often suffered from work overload.

All these problems can give rise to health complaints, and the survey found that the most common symptoms from which workers were said to be suffering were tiredness, backache, headache, high blood pressure, irritability and coughing. All of these symptoms were experienced in more than 60 per cent of the workplaces surveyed, and almost 30 per cent of the respondents said that tiredness and backache were *frequent* problems, followed by stress and irritability.

Health and organizational hazards were clearly related to the frequency of symptoms and diseases. For example:

- In workplaces where both job insecurity and work overload were serious problems, frequent suffering from tiredness, stress, irritability, depression and forgetfulness was more than double that in the whole sample. High blood pressure was also more common in these workplaces.
- In 21 per cent of those workplaces where noise was considered a serious problem, workers frequently suffered from deafness and ringing in the ears, and in 32 per cent from headaches.
- In 37 per cent of those workplaces where eye strain was a serious problem, workers frequently suffered from sore eyes, in 20 per cent from visual changes, and in 40 per cent from headaches.
- Most striking was the prevalence of symptoms and diseases from which workers suffered frequently in workplaces where irritants, dust and fumes, and chemicals combined were serious problems. Frequent suffering from such disorders as reproductive problems and birth defects in offspring was eight times more common than in the whole sample. In addition, symptoms or diseases such as cancer and asthma were more than five times more common, and coughing, allergies, skin irritation, breathing difficulties, sore eyes and sore throat were three times more common.

The problems are indeed many and pervasive. They are, according to trade unionists in the region,[11] mainly due to the expansion of the informal sector, unemployment, the introduction of liberal models and the subsequent lack of a social dimension in the labour market, which have had an underlying effect on the general low standard of living and its impact on

workers' health and safety. It may be argued that these conditions are not so different from conditions elsewhere in the world, but it must be remembered that the changes in this region have been sudden and brutal. The changes have done away with the solid, even if low, basis for survival that people could rely on. They may have been underemployed and underpaid, but there was always some employment and some pay.[12]

Hazard pay

Coupled with this are the remnants of the inherited system of control and delivery of occupational health services which are still in flux. Not all aspects of the former system can be considered as bad. For example, it included a highly developed occupational health services component, an element that still dominates even if it has dwindled along with resources. But one aspect that is still characteristic of countries in Central and Eastern Europe and which does nothing to help prevent risks and protect workers is the institutionalized classification and certification of hazardous industries. This determines if a worker is entitled to extra pay, early retirement, shorter working hours and/or food and beverages to counteract the ill-effect of hazardous working conditions.

Indeed, the ACTRAV survey found that hazard pay was still widespread in the region and very common in Bulgarian and Lithuanian workplaces, with at least some workers receiving hazard pay in almost 90 per cent of Bulgarian workplaces surveyed, and *all* workers receiving it in 25 per cent of workplaces. This was not the case in Hungary, on the other hand, where it was found that "only" 25 per cent of the workplaces surveyed had any means of hazard pay. The Hungarian Occupational Safety and Health Act of 1993 specifically states that "the employer may not replace compliance with the requirements of healthy and safe working conditions with monetary or other inducements to the employee".

Hazard pay and other benefits for working in dangerous conditions are obviously deeply rooted in the region, but as the experience in Hungary shows, this can be rethought. This is not just a question of reviewing and reforming legislation but also of changing deeply entrenched attitudes. Because employers and workers have come to expect and depend on this form of compensation, the system is proving difficult to change. One approach to providing the incentives involves establishing risk-based premiums for employment injury benefits, since this rate structure provides a direct financial motivation to enterprises to clean up and ensure safe work. However, there are technical challenges to setting up such systems and little progress has been made so far.

But overall, the period of transition is precisely that – the former system is gradually giving way as many countries develop new legislation based on the provisions of ILO Conventions and European Union Directives. Many countries are modernizing their labour inspection services into a state system[13] which integrates health and safety responsibilities. The development of a totally different industrial relations system is also having an effect on the way improvements concerning health and safety at work are negotiated. The long tradition of trade union expertise in the area is being joined by autonomous employers' organizations in tripartite and bipartite decision-making in occupational safety and health.

Firstly, it is appropriate to mention the need to address the current state of legislation, as providing the appropriate legal base is an essential element for a successful transition to a market economy. In this respect, the desire for membership of the EU determines greatly the new occupational health and safety legislation and policy of the countries in transition. However, in terms of their socio-economic development and their administrative capabilities, the countries continue to differ significantly.[14]

Creating health and safety legislation is one thing, actually implementing it is an-

other. As elsewhere in the world, the recent proliferation of small and medium-sized enterprises means that many workplaces will fall outside the scope of understaffed and underfunded enforcement agencies. But added to this is the general upheaval caused by restructuring of labour inspection services from the domain of trade unions in the former socialist economies. In many cases, the new state-run inspection services are still fragmentary, falling under the responsibilities of two or more ministries. While general or state labour inspectorates have been set up, accompanied by regional inspectorates, it is still standard practice in most countries to rely on the Ministry of Labour for regulation of safety and employment aspects of compliance with legislation, and the Ministry of Health for health-related aspects, including monitoring of hazardous agents. The aim is a rationalization of labour inspection services through integration of occupational safety and occupational hygiene responsibilities under a single central authority to promote a holistic view, primary prevention, one-stop shop concepts, etc.[15]

In addition to occupational safety and health legislation, it is necessary to mention the current state of labour law in each country as well as the underdeveloped social dialogue between employers and employees at enterprise, sectoral, regional and local levels in many of the Central and Eastern European countries. But in this context, there has been a fundamental change in industrial relations and in the trade unions.

Trade unions, as one of the groups of actors in occupational safety and health, are in difficulties in the region. They have seen their membership decline and their role change drastically – even break down – in health and safety, as in other areas, with transition. They are now facing up to being involved in decision-making and collective bargaining from a negotiating standpoint with employers in the privatized industries.

However, before 1989 no separate employer / worker functions were officially recognized, and there were no employer associations involved in the conduct of labour relations. This situation is changing as employers are emerging as a significant autonomous group, and promise to get stronger with the emergence of a larger number of bigger private enterprises.

Bargaining in the region remains quite diverse – it may be central, controlled and coordinated by national unions, or it may be sectoral across a particular industry. But increasingly the trend is to decentralize to individual enterprises. This is a global shift, not just restricted to privatized industries, but not a shift that makes it necessarily better.[16]

Few countries in the region can really claim to have set a pattern for future industrial relations systems, and although enterprise bargaining is the most common form, local bargaining is often complemented by sectoral and, to a lesser extent, national coordination.[17] Local bargaining on health and safety has the obvious advantage of being closest to the realities of the workplace where the agreement should be implemented and specific conditions taken into account. However, from the point of view of solidarity and of broader interests of national economy, social protection and legislation, national coordination is vital for participation in shared responsibility for each country's basic problems.

The process of European integration will also have some influence on collective bargaining in the countries of the region that are seeking membership in the European Union. Already some international agreements are being made to involve unions from the region in the work of European Works Councils which cover the operations of a multinational employer in different countries.

It can be argued that improved working conditions in the region will be largely determined by the survival and growth of trade unions and the role of collective bargaining.

Interestingly, this premise was corroborated by the ACTRAV study,[18] which also looked at the measures and structures available at the workplace to improve working conditions. It showed that a trade union presence at the workplace had a

positive impact on a number of occupational safety and health issues. In the first place, improvements at the workplace were more likely if the results of monitoring of exposure levels were given to the union. Secondly, giving health examination results to the union also had a positive impact on whether improvements were made afterwards.

The extent to which trade unions were involved in occupational safety and health at the workplace depended on the trade union membership level of that workplace. For example, results of monitoring were given to the union much more often in workplaces where the trade union membership level was high. Some health and safety structures were also positively correlated with trade union membership level at the workplace, especially the presence of a union health and safety committee. Union rights to receive information from management, consult with management and participate in joint decision-making concerning occupational health and safety and environmental matters were also more common in workplaces with a high trade union membership level.

It was also shown that in some matters, the disadvantages of smaller workplaces were compensated by the presence of trade unions. For example, while management-run training was more common in larger workplaces, training carried out by unions was more common in smaller workplaces, with unions really filling a gap in those small enterprises where the management did not carry out training at all.

Resolution of problems in Central and Eastern Europe will require a great deal of commitment, responsibility and vision on the part of the "new" social partners in the region, especially, as the ACTRAV survey so amply confirms, among the union leaders and activists.

Notes

[1] The 17 countries of Central and Eastern Europe referred to in this paper are Albania, Bosnia and Herzegovina, Bulgaria, Croatia, Czech Republic, Estonia, Hungary, Latvia, Lithuania, the Former Yugoslav Republic of Macedonia, Republic of Moldova, Poland, Romania, Slovakia, Slovenia, Ukraine and Yugoslavia.

[2] *Economic Survey of Europe*, 2001, No. 1, Appendix Table B.5.

[3] Center for Policy Studies. 2000. *Transformation, social security and human resource development: The case of Serbia*, Friedrich Ebert Stiftung, December, p. 17.

[4] Standing, Guy and Zsoldos, László. 2001. *Coping with insecurity: The Ukrainian people's security survey*, SES Papers, ILO, June, and *Worker insecurities in Ukrainian industry: The 2000 ULFS*, SES Papers, ILO, April.

[5] EU candidate countries from the region are Bulgaria, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovakia and Slovenia.

[6] Takala, Jukka. 1999. "Global estimates of fatal occupational accidents", Special Supplement, *ILO-CIS Bulletin*, No. 1, Vol. 13.

[7] The survey was identical to the Working Conditions Surveys carried out in the EU in 1990, 1995 and 2000 (see Pascal Paoli and Damien Merllié, *Third European survey on working conditions 2000*, Office for Official Publications of the European Communities, L-2985 Luxembourg, 2001). This allows some comparisons to be made between the EU countries and the candidate countries. Obviously, possible structural differences should be kept in mind when comparing individual countries or groups of countries. Overview given to the author. The report of the survey *Working conditions in candidate countries and in the European Union* (2001) is in publication.

[8] In addition to the ten candidate countries of Central and Eastern Europe, the survey included the other two candidate countries of Cyprus and Malta.

[9] Bulgaria, Czech Republic, Estonia, Hungary, Lithuania, Russian Federation, Slovakia and Ukraine.

[10] Rice, Annie and Repo, Paula. 2000. *Health and safety at the workplace – Trade union experiences in Central and Eastern Europe*, ILO-CEET, Budapest. The report, national reports and seminar reports are also available on CD-ROM, ILO-CEET.

[11] Conclusions from four subregional OSHE experts seminars for trade unions carried out by the Bureau for Workers' Activities, ILO. See previous reference.

[12] Rice, Annie. 1998. "Privatisation in the countries of Central and Eastern Europe and its implications for occupational health and safety and the environment" in *New Solutions*, Vol. 8(4), pp 451-460.

[13] Control of occupational safety and delivery of occupational health services were administered before transition by the trade unions.

[14] Regular reports on each candidate country's progress in accession to the EU can be found at the European Union's web site: http: / / europa.eu.int / comm / enlargement / report2001 / index.htm#Regularreport

[15] An ILO tripartite seminar on "Reform and Modernization of Labour Inspection Services", held

in Cyprus in March 2001, identified as one of the major obstacles to reform and modernization of labour inspection services the separation of occupational safety and occupational hygiene inspection responsibilities. It called on the international community, namely the ILO and the WHO, to develop clear guidelines on the issue. Conclusions for the seminar can be obtained from ILO-CEET.

[16] Aro, Pekka O. and Repo, Paula. 1997. *Trade union experiences in collective bargaining in Central Europe*, ILO-CEET.

[17] Rice, Annie and Repo, Paula, op. cit.

[18] Rice, Annie and Repo, Paula, op. cit.

Safety in French-speaking Africa – social security's role

Improving working conditions in Africa and reducing its workplace accident rates and occupational diseases must be a priority in the struggle for the continent's economic and social development. The rural sector and the informal sector are high-risk zones. But the biggest danger is the indifference shown in many countries towards occupational health and safety.

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In African countries, preventive measures have clearly been the Cinderella among the various measures put in place to ensure decent working conditions. In reality, most of the resources of the social security bodies have been swallowed up by compensation payments. Labour inspectorates, meanwhile, have been almost completely preoccupied with settling industrial disputes.

Studies of prevention in developing countries identify two types of problem: on the one hand, those due to the siting and running of enterprises that use hazardous technologies, and ultimately to general policy on technology imports; on the other hand, those linked to the lack of resources or the absence of staff specializing in the prevention of workplace accidents. What is certain is that, if money were invested in prevention, the social security bodies' spending on compensation payments would decrease noticeably.

Prevention and social security

Complete protection against occupational hazards – i.e. accidents at work and occupational diseases – entails three steps: prevention, compensation and rehabilitation. Studies already conducted on the action of African social security bodies have shown that they initially concentrated entirely on compensation. However, prevention is now beginning to attract more interest. Indeed, the level of expenditure on compensation amply justifies attempts by the body concerned to get this spending under control, notably by means of prevention.

Prevention has two main facets. One is humanitarian, because this is all about saving human lives and keeping families safe. The other is undeniably economic, as it concerns the production levels and the productivity of enterprises and countries.

It is difficult to put a figure on the advantages of prevention. While very complete statistics can be established for the number of work accidents and cases of occupational disease, it seems impossible to draw up comparable statistics for the number of accidents and illnesses avoided due to prevention. Nonetheless, it is a proven fact that prevention benefits all concerned.

Employees retain their capacity to work, their physical integrity and their morale, due to a decrease in the number of accidents. The social security funds see

their pay-outs go down. For the State, preventing accidents at work is a way of protecting its human capital, developing its economic capacity and increasing its international competitiveness. And the enterprise, too, stands to win. Reductions in workplace accidents definitely have an impact on employees' overall productivity. Indeed, studies have shown that enterprises have a direct economic interest in combating accidents at work: the ratio between the real cost of an accident and the sum paid out by the insurers is four to one. In other words, the cost incurred by an enterprise when an accident happens is three times higher than the insurance payments that it can obtain.[1]

From the social insurance point of view, an employer's contributions to occupational risk insurance may be linked, in the legislation, to the frequency of accidents on that employer's premises. Such measures also encourage efforts to prevent accidents (and are an economic incitement), since any reduction in the frequency of accidents brings with it a reduction in contribution rates.

Prevention of workplace accidents and occupational diseases is regulated by law in several French-speaking African countries. For example, legislation on prevention is an integral part of workplace accident laws in Benin, Burundi, Cameroon, Côte d'Ivoire, the Democratic Republic of the Congo, Guinea, Madagascar, Niger, Rwanda, Senegal and Togo. In these countries, provisions on the prevention of occupational hazards are integrated into the labour code and it is on this basis that the labour inspectorate shares responsibility for prevention with the social security bodies that manage the insurance coverage of workplace accidents and occupational diseases.

Although it may vary from one country to another, the legislation on risk prevention generally shows great similarities throughout French-speaking Africa, in terms of its conception, methods and means, as well as its objectives.

Three main bodies are concerned with the monitoring and implementation of the legislation on the prevention of occupational hazards:

- the social security institutions;
- the labour inspectorate; and
- the workplace medical inspectorate.

In several of the countries mentioned, preventative action is conducted by these three bodies simultaneously. Naturally, these public-service bodies cooperate closely with the appropriate bodies inside the enterprises – for instance, the safety and health committees, where these exist. The types of action taken by the social security bodies are information and awareness-raising, technical assistance and advice. They also check and monitor the safety measures taken within the enterprise. Their safety inspectors can visit the enterprises at any time, without notice, since they generally have the status of a police officer.

In normal situations, safety inspectors check if all the requirements on working conditions in factories are being met. Inspectors who are unable to check certain technical aspects of production lines may be accompanied by specialists. Checks are also carried out after a workplace accident, in order to determine the exact circumstances of the occurrence. With the information obtained, the social security bodies raise workers' and employers' awareness, on the basis of actual experiences. The information collected during inspections is used to produce statistics. These are valuable indicators when deciding the direction of prevention activities. Concerning workers' health, the social security schemes' own doctors may run health checks on employees within enterprises, particularly when they feel that workplace hygiene is not all it might be.

Intervention by social security bodies (or any other public or private service) remains indispensable in African countries. A workplace accident is an event that happens when people, placed in a working environment, supply work, with the help of machines, according to a certain method. It therefore follows that the primary source

of the accident should be sought in the method of working. Indeed, in any kind of work, an accident depends on the way in which choices have been made about the premises, the machines and their maintenance, and people's training for the tasks to which they are assigned. That goes for mines, agriculture, construction, the chemical industries, textiles and many others.

When employers launch an enterprise, they should recruit prevention specialists, or at least call on their services when needed, so as to reduce hazards within the production process to a minimum. At present, only large enterprises seem to be able to hire experts of this type. Small and medium-scale enterprises, which employ most of a country's workers, lack the means, but could make good use of specialized technical assistance – that is, of a national prevention service that gives advice wherever employers or workers lack experience of occupational safety and health.

The social security institutions are ideally placed to play this role. They have access to general statistical data and are in more or less permanent contact with enterprises. Their prevention work could be complemented by the organization of prevention services within the enterprises themselves. For, in a context where many workers are illiterate and unaware both of the hazards in their workplace and of how to protect themselves, prevention services should be led by specialists within the enterprise who speak the vernacular languages of the country and enjoy the confidence of the workers.

Awareness building among rural people

In most developing countries, the problem of prevention is posed, with a few exceptions, in the same terms. Most of the workforce in these countries is in agriculture, while a large proportion of the active population is underemployed or unemployed. The ratio of industrial to agricultural employment is often 1 to 5 or even sometimes 1 to 10.

The risks to which agricultural workers are exposed vary according to the type of agriculture practised. In most countries of Asia, Africa and Latin America, the population is made up mainly of small farmers engaged in mixed agriculture, often on a subsistence basis. This type of agriculture – raising a small number of farm animals on small fields under mixed cultivation – rules out the use of complicated machinery, the more so as electricity and financial resources will be lacking. Here, the often inappropriate use of pesticides, insecticides or other chemical products poses a risk that the relevant public authorities cannot ignore. The danger is reinforced by illiteracy among the workers. And even if they can read, the labelling is often inadequate. Either the label is in a foreign language (when the product is imported) or else it is illegible due to damp and handling.

Dangerous mechanization

Where the availability of electricity permits mechanization, accidents are more varied and, unfortunately, more frequent. The slogan "do it yourself" is a matter not just of saving money, but also of personal prestige. The inappropriate use of all kinds of equipment, often inadequately labelled, adds new risks to those already mentioned. Accidents due to the use of dangerous machines (tractors, seed-drills, saws, chainsaws) or to the misuse of equipment are the corollary of agricultural mechanization and of the lack of maintenance of such equipment by qualified staff.

The greatest problem facing the developing countries as they combat work accidents in the agricultural sector is one of contact. Communicating with small farmers is difficult, due to their isolation – or the isolation of the villages in which they live – to illiteracy and to a lack of specialized staff and educational materials. But the indifference of the relevant authorities to the need for better safety in rural areas is also an obstacle in many countries.

In most developing countries, the proportion of waged workers to small, "inde-

pendent" farmers is relatively low. In fact, it is declining in a large number of countries that have opted for agrarian reform and have split big landholdings into small units. The risks run by wage-earners are, in principle, the same as those to which small farmers are exposed. However, workers can more easily be reached via their employers for all sorts of administrative procedures, as well as for promoting prevention. This is notably the case for plantation workers.

Other groups at risk

It may safely be said that there are no longer any countries without power stations and a power grid. The hazards posed by the very existence of this equipment do not differ from those in the industrialized countries, although the means of protection against them may vary considerably, according to the level of awareness about accident prevention in the country concerned.

Another sector that is relatively independent of the level of industrialization is the construction industry. Primitive scaffolding, insufficient training in the use of machinery and exposure to difficult climatic conditions are among the factors that play a part in the large number of accidents that occur – many of which are never reported, thus escaping inclusion in any of the official statistics (see article by Fiona Murie, page 23).

Mention should also be made of a particularly important population group in a number of African countries, namely small-scale artisans who use very ancient methods and the simplest of tools. Among all those working for themselves, these are the people most prone to accidents. While it is easier to get into contact with them for the purposes of prevention than with their rural counterparts, this does not mean that it is any easier to get them to accept safety rules.

In most developing countries, there is a considerable gap between large enterprises and small companies, which do not have access to any advice on safety. The big firms, which are often subsidiaries of multinationals, employ a relatively large number of workers, among whom they can afford to train safety specialists. In Africa, the promotion of accident prevention must be adapted to the environment and the conditions in which the worker operates. Experience shows, for example, that the mass media and films are more effective than poster campaigns, even though these should not be neglected. Whenever possible, lectures or courses given by experts and accompanied by practical demonstrations should be organized. Refresher courses should be held from time to time, and newly hired workers should be informed of the risks inherent to their new job.

The prevention of occupational hazards in rural areas remains a complex problem in Africa. Social security rarely covers the agricultural sector, and its contribution to preventing work accidents runs into significant difficulties there. The population is scattered, often illiterate and beyond the reach of the mass media. Given the paucity of practical means available to governments and public authorities, effective coordination should be put in place, including the involvement of the social security bodies, which have decentralized structures across each nation.

By facilitating the task of the social security bodies, by giving them the powers needed to carry out their mission of preventing work accidents and occupational diseases, and by showing real interest in their work, governments will be making it possible to improve the situation of health and safety at work. They will also be contributing to the economic and social development of their countries.

Note

[1] Andreoni, Diego. 1985. ILO: *Le coût des accidents du travail et des maladies professionnelles*, Safety, Health and Occupational Medicine Series No. 54, Geneva, ILO, p. 10.

Caribbean work safety: Trends and challenges*

Caribbean countries are making much-needed improvements to their workplace health and safety legislation. The ILO's input has been influential.

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With one exception, all the ILO member States covered by its Caribbean multidisciplinary team (CAMAT), were formerly British colonies.

In those countries, safety and heath legislation was modelled on the British Factories Act and generally came into effect in the mid-1940s and early 1950s. As such, it covered only those areas that were defined in the legislation as factories. Mining was included in this category. In the former Dutch colony of Suriname, the safety and health legislation brought in during the late 1940s was similarly limited in scope, and has so far remained so.

As these Caribbean States began to move from total dependence on agriculture towards a more diversified and industrialized economy, it became clear that occupational health and safety urgently needed better legislation and better enforcement. At the same time, both employers and workers lacked proper training on safety and health.

Trade unions began agitating for modern legislation. This was no doubt partly the result of the awareness-raising that took place during the national and subregional seminars conducted on a regular basis throughout the region by the ILO/DANIDA project on occupational safety and health.

New CARICOM model – with ILO help

Governments and some employers also began to react positively, and the Caribbean Community (CARICOM) sought the assistance of the ILO Caribbean Office in drafting model safety and health legislation.

The draft which was produced follows closely Convention No. 155 on Occupational Safety and Health and the Working Environment especially, and other relevant ILO Conventions. This was circulated to CARICOM member States for their guidance. It is this model that has shaped recent safety and health legislation in the region.

The model moves away from the concept of a "Factories Act" with very limited application to one of "occupational safety and health and the working environment". It also developed a comprehensive list of definitions for terms such as:

- branches of economic activity;
- joint workplace committees;
- domestic worker;
- home work;

* As this article refers to legislative texts, the pronouns "he" and "his" have been retained. They should be read as referring to both genders. *The Editor*

- occupational disease;
- work-related disease;
- workers – including full and part-time, apprentices and trainees; and
- workplace.

These were significant departures from what was contained in the existing factories legislation. The following examples illustrate the differences:

- Workers in the public service were excluded from the coverage of the factories legislation, whereas "branches of economic activity" in the model means "all branches in which workers are employed including the public service".
- Provisions were made for the establishment and functioning, on a tripartite basis, of a National Advisory Council on Occupational Safety and Health and joint safety and health committees at the workplace.
- Domestic workers and homeworkers were also included for coverage in the model.
- The factories legislation concentrated on accidents and paid little attention to diseases. The model rectified this glaring omission by proposing a definition of "occupational disease" and "work-related disease".
- Coverage for part-time workers and persons working from home was provided for under the model. This is an important recommendation taking account of the emergence of a large body of workers in contract, part-time, temporary, homeworking and shiftworking relationships.
- The model set out the duties of employers, workers, supervisors and owners of workplaces, occupiers and suppliers.
- The model contained a clause on refusal to work: "A worker may refuse to work or do a particular job where he or she has reasonable justification to believe that the equipment, machine, device or article presents an imminent danger to the life or health of himself or to another worker."
- The model proposed to prohibit the employer from taking disciplinary action against a worker who refuses to work under the terms and regulations of this section of the Act.
- The model required the employer to provide the worker with hazardous chemical identification and safety data sheets.
- The model stipulated that employers must make arrangements for the safe and efficient disposal of wastes and effluents resulting from any process and that such arrangements shall be designed so as to ensure that disposal does not result in any danger to persons, property or the environment – an important provision in the tourism-dependent Caribbean.

Examples from existing or proposed legislation in Caribbean countries

Guyana

Guyana is the first ILO Caribbean member State to have introduced completely new safety and health legislation drafted along the lines of the CARICOM model.

The Occupational Safety and Health Act, 1997, applies to "existing industrial establishments" (including shops and offices) and to any agricultural undertaking, construction site or logging operation. Its provisions on accidents and diseases also apply to persons employed in any department of government except the police and armed forces.

The Act defines occupational disease and work-related disease, and it set up a National Advisory Council on Occupational Safety and Health to advise the minister and promote public awareness of occupational safety and health.

The Occupational Safety and Health Authority established under this legisla-

tion has the responsibility for designating inspectors to ensure the application of the Act.

The minister is also given the power to appoint an Occupational Safety and Health Commissioner, who "shall have all the powers of an arbitration tribunal to which the provisions of the Labour (Arbitration Procedure) Regulations apply". This reflects the past difficulties in getting the Factories Act enforced. The 1997 Act gives the court wide powers to impose penalties.

A joint safety and health committee at the workplace is provided for under the 1997 Act, with the following functions:

- to identify situations that may be a source of danger or hazard to workers;
- to make recommendations to the employer and the workers for the improvement of the health and welfare of workers;
- to recommend to the employer and the workers in the establishment, maintenance and monitoring of programmes, measures and procedures respecting the safety of workers;
- to obtain information from the employer respecting: (1) the identification of potential or existing hazards of materials, processes or equipment; and (2) safety and health experience and work practices and standards in similar or other industries of which the employer has knowledge;
- to obtain information from the employer concerning the conducting or taking of tests of any equipment, machine, physical agent or biological agent in or about a workplace for the purpose of occupational safety and health; and
- to be consulted about, and have a designated member representing workers be present at, the beginning of testing conducted in or about the workplace to ensure that valid testing procedures are used and that the test results are valid.

Prior to this legislation, trade unions in Guyana had fought for, and had obtained through collective bargaining, the establishment of joint safety and health committees at a number of workplaces. The Act therefore strengthened and extended the scope of a system that was already functioning.

A new provision is included that allows a worker to refuse to work or do particular work where he has reasonable justification to believe that:

- any equipment, machine, device or article the worker is to use or operate presents an imminent and serious danger to the life or health of himself, or another worker; or
- the physical condition of the workplace or the part thereof in which he works or is to work presents an imminent and serious danger to life or health.

In this situation, the worker must immediately report the circumstances of his refusal. It shall be investigated in his presence or in the presence of a worker member of the safety and health committee. The worker must be paid for the time he is off and no disciplinary action can be taken against him.

The Act places considerable responsibility on the Occupational Safety and Health Authority to ensure that adequate provisions are made for the safe use, handling, storage and disposal of hazardous substances. An employer must maintain an inventory of hazardous chemicals and all hazardous physical agents in the workplace. He should also ensure that a hazardous data sheet is maintained and all such dangerous substances are labelled.

The employer is required to notify the Safety and Health Authority of any accident which causes loss of life or disables a worker for more than one day.

Every qualified medical practitioner who believes a patient to be suffering from an occupational disease contracted in the course of his employment is required to send full details to the Authority.

Trinidad and Tobago

For the last 25 years, Trinidad and Tobago has been making efforts to modernize its safety and health legislation. This country has the most diversified economy in the Caribbean and its legislation is very deficient. One of the main reasons for the slow progress seems to be low priority which labour gets in national affairs. However, within the last two years, there has been a concerted attempt to put the legislation in place. The new Occupational Safety and Health Bill, when it finally passes Parliament, will replace the 1948 Factories Ordinance. Essentially, it follows closely the CARICOM model and the country has had the benefit of inputs from the ILO Caribbean Office. Some of the new features will include the creation of an Occupational Safety and Health Authority with advisory and policy-making responsibilities for operations and enforcement.

In spite of the lack of adequate supporting legislation, the trade unions have been doing a most commendable job in ensuring that workers are protected as much as possible. There are active safety and health committees at major industrial establishments and unions have regular training programmes to sensitize their members, and especially for those who sit on joint safety and health committees. Employers, through the Employers' Consultative Association (ECA), also conduct training programmes for their members.

Jamaica

Jamaica may adopt later this year a new Occupational Safety and Health Act that will replace the 1949 Factory Ordinance.

The new legislation will follow the CARICOM model closely. Some of the significant features will be:

- the rights of workers, including:
  - participating in decisions on the use of substances at the workplace;
  - refusing to work in situations where it is believed that there is danger to life or limb;
  - knowing all information about processes and substances used in the workplace;
- establishment of joint safety and health committees at the workplace;
- establishment of a National Advisory Council on Safety and Health;
- improved penalties and inspection;
- inspectors being able to issue contravention tickets on the spot to companies;
- immediate compliance by the employer with the inspector's order, failing which, the offender can be taken to court;
- liability of suppliers, manufacturers and importers;
- employers to provide hazardous chemical-danger sheets for workers and to keep an inventory of such chemicals;
- prohibition of reprisals by employers against workers who refuse to work in situations where they consider the job to be dangerous to life or limb;
- duty of workers to cooperate with the employer in ensuring a safe and healthy working environment;
- the establishment of a National Safety and Health Policy; and
- requirement for the certification of safety and health committee representatives.

Saint Lucia

The Government in St. Lucia is developing in collaboration with the social partners – employers and trade unions – a Labour Code which will address occupational safety and health as one of the issues. Here again, the CARICOM model is being used as a guide and the ILO Caribbean Office is providing technical assistance.

Saint Vincent and the Grenadines, Antigua and Barbuda, Saint Kitts and Nevis, and Suriname

These countries all still operate under outdated 1940s Factories Acts. However, they have all signified their intentions to modernize the legislation along the lines of the CARICOM model and have requested technical assistance from the ILO Caribbean Office.

Dominica

In 1983, Dominica passed into law the Employment Safety Act to provide for:

- reorganizing the system under which safety and health at work is safeguarded and to extend it to cover everyone at work;
- the establishment of consultative and advisory committees; and
- the appointment of safety officers.

It is interesting to note that the Act provides for the appointment of the consultative and advisory committees without any specific involvement of the representative organizations of employers or workers. Furthermore, in the Act there is no provision for the establishment of safety and health committees at the workplace.

The Act also gives the minister powers to make regulations in respect of a wide number of issues, including the protection of employees from exposure to toxic chemicals, fire and explosions.

Barbados

Barbados is in a slightly different position from the other countries in the region in that, as early as 1984, it sought to modernize its safety and health legislation.

Unfortunately, while in many instances it followed the provisions of ILO Convention No. 155 on occupational safety and health at the workplace, it maintained the title of Factories Act and followed slavishly the structure and themes of the 1943 Factories Act. The Act also defined those areas of economic activity, including agriculture, that are covered. Interestingly enough, government departments and offices in the private sector are excluded from coverage in the Act.

The trade unions and the employers have complained about the deficiencies in the legislation and have made representation for a new Act. Tripartite discussions have been completed and it is confidently expected that new legislation will soon be forthcoming.

However, in the existing legislation, some new areas include:

- establishment of joint safety and health committees at the workplace;
- granting employees' representatives access to information relating to all workplace hazards and to all reports relating to the workplace environment;
- allowing for the taking of samples of, and conducting of tests on, hazardous materials;
- prevention of dismissal or disciplining of an employee for requesting an inspection of his workplace by an inspector; and
- provision for effective arrangements for the disposal of waste and effluents arising out of the manufacturing process carried on in a factory.

Additionally, an advisory committee called the National Advisory Committee on Occupational Safety and Health (NACOSH) has been established.

Other trends

In the region, there is a move towards extending the concerns of safety and health in the workplace beyond the traditional concerns to a more holistic approach that includes issues such as HIV/AIDS, alcoholism, diabetes, stress and violence.

Within the last decade, many of the economies in the Caribbean have been at-

tracting off-shore financial services, call centres and data inputting. Most of the work involves the use of computers. The workers are mainly young women and the growing complaints arising from their work are severe back pain, repetitive strain injuries (RSI) and eye-strain.

Recently, the Jamaica Confederation of Trade Unions, in collaboration with the Chemistry Department of the University of the West Indies, developed a training programme on the safe use, handling and disposal of asbestos. The ILO Bureau for Workers' Activities (ACTRAV) provided funding for the pilot training project, from which a regional project is expected to develop.

Challenges for the Caribbean member States

From the above, there are a number of issues that emerge as challenges for the Caribbean countries. Among the most urgent are:

- The modernization of legislation on occupational safety and health along the lines of the CARICOM model. This is especially so in view of the impending realization of the Caribbean Single Market and Economy (CSME).
- Training in occupational safety and health for workers, employers and safety and health inspectors.
- Providing proper remuneration for trained safety and health inspectors, so that an effective inspectorate can be built and maintained.
- Developing awareness among all sectors, and especially the employers, that a holistic approach to workers' health is important and that a safe and healthy workplace is conducive to increased productivity and improved competitiveness.
- Training and raising the awareness level of the medical profession on occupational safety and health issues.
- Convincing the insurance industry that it has an important role to play in promoting a safe and healthy working environment.
- Establishing effective safety and health policy-making bodies at the national and enterprise level.
- Developing a close working relationship between the Safety and Health Authorities and the Pesticide Control Boards.
- Linking safety and health at the workplace with the natural environment and ensuring that proper systems are put in place to prevent the discharge of untreated sewerage from damaging the marine ecosystems.
- Developing an appreciation among the workers, employers and the general public for the safe use and disposal of non-biodegradable substances such as asbestos.
- Ensuring that workers use the protective equipment that is provided for them.
- Maintaining proper statistical records on accidents and work-related diseases.
- Maintaining effective recording systems for payments made for occupational accidents and diseases.
- The extension of traditional safety and health issues to include HIV/AIDS, other diseases (diabetes, stress, etc.) and violence at the workplace.

Europe slipping on health and safety

Working conditions in Europe have deteriorated over the past ten years, while EU policy on occupational health and safety has slowed down. New initiatives are planned for 2002-2006. But will they live up to workers' expectations?

Anne Renaut
Journalist
Specialist on European social issues

Accelerated work rhythms, more flexible jobs and hours, greater exposure to physical hazards – working conditions in the European Union (EU) have deteriorated since 1990. So, at least, says a survey by the European Foundation in Dublin.[1]

Certainly, the number of workers who believe that they are exposed to occupational health and safety risks decreased between 1990 and 2000 (27 per cent in 2000, as against 30 per cent in 1990 and 28 per cent in 1995). But a growing proportion of workers report work-related health problems. Thus, 33 per cent of workers complained of backache in 2000, as against 30 per cent in 1995, and 23 per cent noted general fatigue (20 per cent in 1995), while 28 per cent of workers are still suffering from stress and 15 per cent have headaches (13 per cent in 1995).

And more European workers now say that they are exposed to such hazards as noise, temperature, pollution, vibrations, heavy loads or painful postures.

The European Foundation's study notes that 37 per cent of workers claimed to be handling heavy loads in 2000, a rise of 6 per cent since 1990. It also says that 47 per cent of workers were subject to intense noise (up 4 per cent from 1990), and that 29 per cent of employees have to work amidst intense noise (up 2 per cent from 1990).

Speed-ups and flexibility

Marked by high work rates and tight deadlines, the intensification of work accelerated, especially between 1990 and 1995, but also between 1995 and 2000. At the same time, the nature of work within the EU changed. Work rhythms are now governed more by market constraints and external demands from customers and colleagues than by production norms or hierarchical control.

Repetitive work is still widespread (57 per cent of workers complained of this in 2000, the same figure as in 1995). Workers whose jobs entail repetitive actions are more prone to musculoskeletal disorders than are other workers.

Another factor in the decline of working conditions is flexibility, as regards both work times and the organization of work and employment. All-week, round-the-clock operation is becoming more common. This flexibility means irregular weekly working hours for 24 per cent of workers and irregular working days for 41 per cent. For 19 per cent of workers, this situation sometimes conflicts with family and social commitments.

Flexibility also affects the organization of work, as regards multitasking, shift work and responsibilities.

Employment, too, is becoming flexible. Non-standard contracts, temping and subcontracting are all the rage. And temporary workers are more exposed to physical hazards, high work intensities and high work speeds than are permanent workers. More than 50 per cent of temporary workers say that they work in uncomfortable postures, as against 46 per cent of those on fixed-term employment contracts and 45 per cent of those on permanent contracts. Over a third of temporary workers (35 per cent) suffer from noise, compared with 27 per cent on fixed-term contracts and 30 per cent on permanent contracts.

Invisible risks

Violence and harassment at the workplace are still major problems. In 2000, 9 per cent of workers complained of intimidation, as against 8 per cent in 1995, but this varies greatly from one country to another, and the researchers suppose that the figures do not show the full extent of the problem.

"Occupational risks have become invisible," Marc Sapir insists. He is the Director of the Trade Union Technical Bureau (TUTB), an occupational health and safety institute set up by the European Trade Union Confederation (ETUC). A big question, Sapir says, is whether laws drawn up to tackle the traditional risks of the industrial era are still relevant today.

"In the 1970s," he points out, "the aim was to protect specialized workers on production lines. There was a whole series of responses to that, using participative, ergonomic approaches. Whereas these days, workers in Europe have far more responsibilities. They approve of that, but it does also mean enormous pressure – for instance, as regards performance targets." Such stress is found particularly in the new jobs in the tertiary sector.

A question mark also hangs over the future of Europe's social protection systems, in view of its ageing population. "But if people's working lives have to be prolonged in order to finance social security, then the quality of employment must be improved," Sapir emphasizes.

Women are not immune from bad working conditions – quite the contrary. Fewer women than men hold positions of responsibility. Women are paid less than men in identical posts. More women are in precarious employment, with repetitive tasks and greater requirements of availability and flexibility. Women's work is all the more arduous because they do most of the cooking (women: 64 per cent; men: 13 per cent) and the childcare (women: 41 per cent; men: 24 per cent). Occupational health and equality unite in the ETUC's call for a revision of the 1992 EU directive on maternity – and in particular for maternity leave to be extended from 14 to 20 weeks. Directives have the force of law in all EU member states.

Officially, the number of work accidents is not increasing, but there is a statistical problem here, because the only accidents or diseases that are recorded as such are those covered by compensation funds. This means that under-reporting of accidents is very high in many countries. The same difficulty applies to the figures for absenteeism and invalidity.

Nonetheless, Eurostat records some 5 million work accidents each year. Of these, 5,500 are fatal (1998 figures) and 10,000 result in handicaps that prevent any resumption of work.

The highest-risk sectors are fisheries, construction and agriculture, and the workers most at risk are the young (between 18 and 24 years of age, the risk of an accident is 40 per cent above average) and older people (beyond age 65, the risk of a fatal accident is 62 per cent higher than the average for 55- to 64-year-olds).

Moreover, work injuries and accidents are expensive. According to the European Commission, 500 million working days are lost each year through accidents or illness. That is 60 times more days lost than through strikes or industrial disputes.

Not a priority for the EU

However, since 1992, EU initiatives have been marking time. That, at least, is the view of the ETUC which denounces, on the one hand, the campaigns conducted by the employers and, on the other, a weakening of the resources that the European Commission devotes to this issue. The Union of Industrial and Employers' Confederations of Europe (Unice) believes that the EU's "legislative framework is in place" and that it covers all known hazards.[2]

And yet the EU's basic treaties set a more ambitious objective in this field than the mere convergence of national policies. The aim is to harmonize laws. "Occupational health is no longer seen as a priority," the ETUC feels, and "the Commission seems to have given up any idea of guiding the process politically."[3]

Moreover, in the EU Member States, the transposition of the EU directives into national law has merely brought about a few adjustments, except in Spain and Italy, which seem to have opted for a thorough overhaul. This impression is confirmed by a recent ruling of the European Court of Justice which for the first time, on 15 November 2001, found against a Member State on the grounds of inadequate and incomplete transposition of the contents of the June 1989 framework directive, which deals with the whole issue of occupational health and safety.

Trade unions, meanwhile, have mobilized in a number of EU countries, putting the quality of working conditions and national prevention policies back on the agenda.

In France, it was the asbestos affair that brought the issue back into the limelight. For decades, the French Government underestimated the dangers of asbestos. Then, in 1996, it banned its use. This showed up the inadequacies of the prevention system.

The coherence of the prevention system also became a matter for debate in Italy, which faced an increase in the number of declared occupational accidents and dysfunctions in the relevant supervisory bodies run jointly by employers and trade unions. So, in September 2000 in Modena, the unions organized the first national assembly of worker health and safety representatives. On 20 October 2000, a work stoppage was held in support of health and safety.

In Spain, where the workplace accident statistics are just as dramatic, two general strikes were held in the construction sector in February 2000 and March 2001, and a national action plan was developed, with trade union involvement, in the sectors concerned.

In the United Kingdom, a series of disasters at sea (*Piper Alpha* and the capsizing of the *Herald of Free Enterprise* off Zeebrugge, for instance), in public health (such as the epidemic of bovine spongiform encephalopathy (BSE), better known as "mad cow disease") and on the railways (for example, at Paddington) demonstrated the failings of an approach that favours self-regulation by employers combined with a weakening of public control and of social checks and balances.

In Sweden, the trade unions campaigned for proper account to be taken of health and safety in small and medium-scale enterprises, where the risks are higher than in big firms.

Completing harmonization

In this context, the ETUC believes that harmonization must be completed on the basis of the fundamental principles set out in the framework directive of June 1989. The ETUC emphasizes the importance of the ILO Conventions in this regard, notably No. 155 (on occupational safety and health, 1981) and No. 161 (on occupational health services, 1985), and advocates "more systematic cooperation" with the ILO. Unfortunately, few of the EU countries have ratified these Conventions. Only eight European States are signed up to Convention No. 155, and just three to Convention No. 161.

The unions particularly deplore the inability to adopt a directive on physical haz-

ards as a whole. Instead, the EU adopted a common position solely on the issue of vibrations. The unions are calling for a revision of the 1986 directive on noise, and notably for more stringent threshold limit values.

On chemical hazards, the trade unions denounce the delay in adopting the 1998 directive. They regard this directive as inadequate. They are calling for a speed-up in the setting of EU-wide threshold limit values, for the protection of all workers against carcinogens, and for a revision of the 1983 directive on asbestos.

Concerning the organization of work, the ETUC wants the maximum working week reduced from 48 hours to 44 and an end to member States' right to grant individual waivers outside of any collective agreements.

On new hazards, the ETUC demands an overall directive on ergonomic problems, with particular attention to musculoskeletal disorders, as well as action programmes on issues such as stress and moral harassment.

Finally, the ETUC wants the scope of the directives to be extended, before 2004, to self-employed workers, domestic workers and workers in small and medium-sized enterprises, who are more exposed than those in large companies.

On prevention services, such as occupational medicine, the main union demand is for the ratification of ILO Convention No. 161 and the establishment, in 2002, of common guidelines for improving the coverage of workers.

Pointers but no programme

While recognizing the specificity of occupational health and safety, the ETUC also suggests that this dimension should be brought into other EU policies.

The unions also want the rules governing the internal market to take better account of occupational safety requirements, with effective monitoring systems for the market in workplace equipment and chemical preparations and better trade union participation in technical standardization work.

On employment, one particular call from the ETUC is for preventive measures to be evaluated in relation to the normal full span of a working life. In other words, working conditions should be considered acceptable only if they enable people to stay at work right up to retirement age. The ETUC also opposes selection on the basis of a worker's state of health and advocates the integration of disabled people into the workplace.

As regards social protection, the conditions for the recognition of occupational diseases should be harmonized. But the ETUC speaks of an "obvious failure" on this. Currently, the occupational diseases that are recorded and recognized as such differ from country to country. This causes serious inequalities in the payment of compensation by national social insurance bodies.

True, the EU is now at last launching a new occupational health and safety strategy for 2002-06. The strategy document seeks to promote "decent work", based on an ILO concept, and develops a global approach which takes account of new hazards. It also stresses the need for a "culture of prevention". Yet this is a strategic document, whereas the unions want "a programme and not just pointers".[4] The ETUC warns against the dangers of a quantitative approach to national objectives as proposed by the Commission since this could lead to distortions. Thus, reducing the number of workplace accidents could mean, at the same time, reducing the coverage of them. The Commission also plans to integrate, in its guidelines on employment for 2003, reference to the problems of stress. Stress will also be on the agenda of EU consultations with social partners and will be at the centre of a fully-fledged occupational health and safety campaign in 2002. Practical guidelines to implement EU directives on health and safety, improvement to existing legislation on musculoskeletal diseases and a new directive on mobbing and violence at work are in preparation.

In November 2001, EU Social Affairs Commissioner Anna Diamantopoulu spoke about this strategy, which would favour "good practice" by enterprises on the basis of "voluntarism" and "tailored solutions" and would develop a "prevention culture" through training and education. The Commission also intends to ensure that Member States implement the directives properly, particularly as regards small and medium-scale enterprises.

Meanwhile, the European Occupational Safety and Health Agency in Bilbao[5] will be organizing a new campaign in 2002 – this time on "stress". It will also be raising awareness of the dangers in the fishing industry, where the risk of accidents is 2.4 times higher than the European average across all sectors.

As the EU will expand to include some 25 countries over the next few years, the Commission warns of the risk of "social dumping" in the field of health and safety.

Certainly, many more workers in the candidate countries perceive health and safety hazards in their workplaces (42 per cent, as against 27 per cent in the EU) and work-related health problems (41 per cent complain of general fatigue, as against 23 per cent in the EU) according to the first findings of a survey by the European Foundation.[6] So the trade unions want an EU fund to be created for the improvement of the working environment, and they insist that the conditions for transposing directives into national law should be identical for the candidate countries.

Notes

[1] In 2000, the Dublin-based European Foundation for the Improvement of Living and Working Conditions conducted its third survey on working conditions in the European Union. The previous two were in 1995 and 1990. In all, 21,500 people were questioned – 1,500 in each Member State except Luxembourg, where 500 people took part.

[2] *Sécurité et santé au travail, une priorité pour les employeurs,* Unice, August 2000.

[3] *Pour une relance de la politique communautaire en santé au travail,* ETUC and TUTB, June 2001.

[4] *S'adapter aux changements du travail et de la société: une nouvelle stratégie communautaire de santé et de sécurité 2002-2006,* communication from the Commission, March 2002.

[5] See the agency's site at http://europe.osha.eu.int

[6] In 2001, the European Foundation conducted the same survey on working conditions in the 12 countries that are candidates for EU membership. The results will be published at the end of 2002.

Malaysia goes for tripartism on safety and health

A new emphasis on tripartism has helped to improve occupational health and safety in Malaysia. But there is still much to be done.

A. Navamukundan
National Union of Plantation Workers
Malaysia

In Malaysia, the traditional approach to providing safety and health at the workplace was based on the popular view that the Government can avoid occupational hazards through enforcement of detailed regulations. However, this heavy reliance on the Government has now given way to a new strategy of promoting a tripartite approach to occupational safety and health in all sectors of the economy.

The responsibility for safety and health is placed at the enterprise level, where an effective and accountable internal system is developed in which management and workers and their organizations play a leading role, and self-regulation is encouraged, consistent with standards promulgated through laws and regulations by the Government.

Occupational Safety and Health Act 1994

The Occupational Safety and Health Act came into force in February 1994. It covers all economic sectors, including the public services and statutory authorities, except those subjected to the Merchant Shipping Ordinance and the armed forces.

The Act and the accompanying regulations oblige employers to provide and maintain safe plant, work systems, workplaces and working environments. Employers are also required to provide information, instruction, training and supervision to enable employees to perform the work in a safe manner and without risks to health.

The systems and procedures focus on the following areas of concern:

- safety and health training;
- safe systems of work;
- environmental control;
- safe workplaces;
- machine guarding;
- housekeeping;
- safe plant and equipment;
- noise control;
- dust control;
- safe use of toxic materials;
- internal communication and participation;
- utilization of safety committees;
- fire safety and prevention;
- medical facilities and welfare;
- accident reporting and investigations;
- emergency procedures and monitoring; and
- radiation safety.

It is the obligation of the employer to establish an occupational safety and

health committee where there are more than 40 employees. The committee's main function is to review the measures and investigate any matters that may arise. There must always be consultation between the employer and the committee on safety and health matters. It is important to note that approximately 20 per cent of the employers in the formal sector have less than 40 employees in their enterprise and, therefore, are exempted from this obligation.

A competent safety and health officer has to be appointed in industries which have been gazetted by the minister. The safety and health officer's job is to ensure compliance with the Act and promote safe conduct of work. Medical surveillance is also mandatory in industries where work may pose risks to the health of workers.

It is the duty of an employer to notify the nearest occupational safety and health office of any accident, dangerous occurrence, occupational poisoning or disease which has occurred or is likely to occur at the workplace. Doctors are also required to report cases of occupational poisoning or occupational diseases.

The Act also provides for the establishment of the tripartite National Council for Occupational Safety and Health, which may carry out investigations on health and safety issues over a wide range of areas.

Breaches of the Act are punishable by fines, imprisonment or both.

Three sectors at risk

The three important sectors which incur high rates of accidents are manufacturing; trading; and agriculture, forestry and fishing. These three sectors contribute approximately 72 per cent of the industrial accidents that are reported to the social security organization. It is important to note that a large number of accidents do not enter the statistics because they occur in small-scale enterprises and among workers who are in the informal sector of the economy.

The manufacturing sector is complex in its structure. The majority of the firms involved are in the small- and medium-scale industries where the unionization of workers is low or absent. Further, some of these small-scale industries are family-owned businesses with family labour. Added to this are the home-based industrial activities which provide services to the larger manufacturing industries, e.g. assembly of components at home. It is impossible to expect the enforcement or compliance of standards of occupational safety and health at these kinds of work establishment.

In the trading sector, the number of accidents is also high – especially commuting accidents incurred by the workers in this sector. In these cases, occupational safety is not confined to the work premises but also applies to risks involved in commuting and traffic hazards.

In the plantation industry, industrial accidents are also relatively high. The Malaysian plantation industry is tree-crop based. Oil palms, rubber, coconut, cocoa and tea are all tree crops. Each crop has its peculiar hazards. Occupational safety and health standards in the plantation industries are poor compared with other sectors of the economy. Crop workers in particular are left to manage their safety on their own. For example, oil palm harvesters working in tall palm areas require appropriate protection from loose fruits and trash that can injure their eyes and heads. However, plantations have yet to take this seriously enough to provide workers with safety equipment that is practical and suited to the climatic conditions.

Similar situations exist with regard to workers handling pesticides and other field implements. It is assumed that plantation workers have an understanding of the safety and health aspects of their work, but the high incidence of accidents on the plantations shows the weakness of the system. Occupations have yet to be scientifically assessed by medical practitioners to determine the short- and long-term health implications of each occupation. The obvious risks are, of course, well known but

the long-term implications still require in-depth research. This form of research is vital to establish appropriate preventive measures.

Fieldwork involving machinery and implements is also an important risk area in plantations. Transportation – and in field operations, machinery and appliances – is not inspected and certified safe and fit for use by any public authority. Transport equipment, for example, is not subject to Road Transport Department certification unless the vehicles use public road systems. The absence of such periodic evaluation and certification by competent authorities has meant that a great deal of unsafe equipment is still in use in the fields. The Government must take this issue seriously.

One other important hazard for plantation workers is working with insecticides, herbicides and fungicides.

There is wide use of pesticides, herbicides and fungicides in all agricultural subsectors. The risks to workers from these chemical formulations are high. While there is a concerted effort to remind workers of the hazards involved, some are still negligent about taking care of themselves.

Employers who engage workers on a contract for services usually leave the responsibility of occupational safety and health to the contractors. The results of pesticides poisoning are in many cases seen only after a time lag. So the warning signs are delayed and the workers do not take the symptoms seriously. They prefer to opt for other work for a short while to recover and then return to their occupation with the chemicals.

Work in rubber factories, palm oil mills and other agricultural processing plants is relatively better organized than field operations. The Occupational Safety and Health Act and the activities of the Department of Occupational Safety and Health have improved standards at these workplaces. However, there is a need for further improvements, especially through education programmes and the training of workers to be safety conscious.

Social Security Organization (SOCSO)

The Government has been concerned about relief for workers involved in industrial accidents. In order to provide a comprehensive social security safety net for workers, the Government enacted the Employees' Social Security Act, 1969, and the Employees' Social Security (General) Regulations, 1971. SOCSO is managed by a board of directors with representatives from the Government, employers' organizations and trade unions. This tripartite representation builds a joint responsibility for caring for injured workers and promoting occupational health and safety.

The protection given by SOCSO covers medical care, cash benefits, provision of artificial aids and rehabilitation. SOCSO has ensured universal coverage of employees through the principle of cooperation with employees and employers.

The principal and immediate employer (this refers to an employer who has employed the employee directly to work for him) who employs one or more employees is required to register and contribute monthly for all employees. The principal employer is also liable to ensure that all employees employed by the immediate employer have been registered and their contributions have been paid.

Contributions are made for each eligible employee according to the rates specified under the Act. The employee's share of 0.5 per cent of wages is paid for coverage under the invalidity pension scheme, while the employer, for the employment injury scheme, pays 1.75 per cent and contributes to the invalidity pension scheme. The rate of contribution is based on the monthly wage of the employee in accordance with 24 categories. Contributions should be made from the first month the employee is employed.

In the event that the employees have not been registered and the immediate employer cannot be located, the principal employer is liable under the Employees Social Security Act, 1969 for all contributions.

A worker employed under a contract of service or apprenticeship and who is an

employee under the Act and earns a monthly wage of 2,000 Malaysian ringgits (RM) or less must contribute to SOCSO.

There are two situations regarding employees who earn more than RM2,000 monthly. They are:

- Employees who have been previously registered and have contributed to SOCSO must continue to contribute even if the present wage exceeds RM2,000 per month. These employees will be protected in line with the principle of "once covered always covered" to preserve their rights acquired under the Invalidity Pension Scheme.
- Employees who receive a monthly wage exceeding RM2,000 and who have not previously registered or paid contributions to SOCSO are given an option to be covered under the Act. Both the employer and the employee have to consent to the coverage, by filling in the necessary form.

All employees eligible for coverage under the Act must register and contribute to SOCSO irrespective of their employment status, whether it is permanent, temporary or casual in nature. However, certain categories of workers are exempted from coverage, namely government employees, domestic servants, the self-employed and foreign workers (exempted since 1993).

All employees must be registered irrespective of their age. However, employees who exceed age 55 will continue to be protected if they continue to be employed after that age. Only the employer contributes to SOCSO for such employees.

This is a compulsory scheme. Employers must cover their employees even if they have other private insurance coverage for them. Employees are eligible to claim benefits from SOCSO and compensation under any private insurance policy in the event of an accident.

SOCSO provides protection to eligible employees through two schemes, the Employment Injury Insurance Scheme and the Invalidity Pension Scheme.

The schemes provide an employee with protection for :

- accidents that occur while travelling to or from work or in connection with work;
- accidents that occur at the workplace, and which arise out of and in the course of employment; and
- diseases that result from exposure to various hazards at work.

If an employee meets with an accident or suffers from any occupational disease, he or she is also entitled to treatment at a SOCSO panel clinic or at any government hospital or clinic.

Conclusion

Standards of occupational safety and health in Malaysia have improved over time. The Occupational Safety and Health Act and regulations are supported by other legislation specific to areas of concern, e.g. the Factories and Machineries Act and the Pesticides Act.

The Government has encouraged a tripartite approach to promoting occupational safety and health at work. Trade unions and employers' organizations play a key role in promoting safety and health education programmes for employers and workers.

The Government has also established a National Institute of Occupational Safety and Health to promote education, research and development in this field, thus supporting the work of the Department of Occupational Safety and Health in the Ministry of Human Resources. In addition, non-governmental organizations such as the Society for Occupational Safety and Health also play an important role in increasing workers' awareness.

Although there is effective support for the formal sector of the employment market, there is serious concern about workers in the informal sector who do not benefit from these programmes or SOCSO. The presence of a large number of immigrant

workers, especially illegal immigrant workers, compounds the problems associated with occupational safety and health, as most immigrant workers are employed through contractors for labour services.

The Government is actively pursuing research and development, but there is a need for a greater flow of information between medical agencies, e.g. hospitals, clinics and research establishments, so that information on trends can be monitored for proactive intervention in order to prevent a deterioration of standards.

One particular deficit is the lack of any focus on the specific needs of women workers, especially in the plantation industry.

The challenge ahead is to strengthen the tripartite role further in raising standards of occupational safety and health, based on the principle that "prevention is better than cure".

Improving health and safety – new law for New Zealand

A proposed new workplace health and safety law in New Zealand aims to improve the country's poor record in this field. The law would provide for proper employee representation, universal coverage and meaningful penalties in case of breaches. These have been sorely lacking so far. New Zealand's fatality record has, as a result, been 25 to 50 per cent worse than those of Australia and the United States.

Ross Wilson
President
Council of Trade Unions (CTU), New Zealand

New Zealand has a shocking record of work-related death, injury and illness. Despite a small population, research shows that over 500 people die each year of work-related accidents and illness. Thousands more suffer non-fatal accidents and illness and the impact of stress and fatigue.

Internationally, New Zealand's record compares badly. Over a range of high-risk industries, the occupational fatality record is 25 to 50 per cent worse than those of both Australia and the United States.

The year 2002 has begun with a tragic toll of workplace deaths. New Zealand's government occupational safety and health agency, OSH, reported a "horrific start to the working year". A 29-year-old mother of three died while cleaning a newly installed faulty piece of machinery in a meat works. The machinery had not been checked and the worker had no training in its use. A construction worker lost his life when a retaining wall collapsed on a building site, highlighting a dramatic rise in the number of deaths in the construction industry in New Zealand over the past 12 months. Media reports of the accident referred to "skimping on health and safety" in the construction industry as the cause of the death.

Poor record

During a visit to New Zealand in 1999, the Royal and Sun Alliance Group Chief Executive, a Mr. Mendelsohn from London, commented on our occupational safety record. He said that New Zealand has "Third World workplace accident rates" and that this high rate could be due to a lack of incentive for employers to improve workplace safety. He also observed that New Zealand's construction work death rate is the worst in the Western world.

The forestry sector is another where rates are unacceptably high. OSH statistics reveal that forestry workers are 70 times more likely to be killed in a work accident than the average New Zealand worker. An article in a New Zealand health and safety magazine has pointed out that the workplace death rate in New Zealand is 3.25 times higher than in the United Kingdom.

Unions view New Zealand's health and safety situation as a workplace accident crisis. Workplace health and safety laws are simply not working and we have long been calling for changes to the law. Along with fatalities and accidents, occupational diseases also take a huge toll. This toll is increasing with the deferred effects of previous exposures to asbestos.

The intensification of work under New Zealand's previous labour law, the Employment Contracts Act (which substituted individual contracts for collectively bargained conditions involving trade unions), has led to a dramatic increase in the use of toxic chemicals, and the emergence of new epidemics like Occupational Overuse Syndrome and stress resulting from the intensification of work. That anti-worker piece of industrial legislation, introduced by the first Conservative Government, was in place for nine years until its repeal in 2000 by the Labour / Alliance coalition, currently in government. Unfortunately, other legislation, including the Health and Safety in Employment (HSE) Act, not only failed to prevent accidents, but has created the conditions in many industries which have allowed them to happen.

The health and safety law has failed for very predictable reasons. The first Government could not be relied upon to enforce the Act vigorously, and thus ensure that the prospect of substantial court fines would provide an incentive for employers to comply with the safety standards required. The legislation provides no enforceable provisions for employee involvement, representation or even a clear right to refuse unsafe work.

The first Conservative Government starved OSH of funds, with the result that there was a significant drop in the number of prosecutions against employers. Its Conservative successor also actually siphoned off funds collected for OSH and used them for other purposes.

That there are serious cases which should have been prosecuted has been confirmed by research undertaken in the rail industry, a high-risk area. A law firm reviewed OSH files relating to four serious railway accidents where OSH had not prosecuted, two of which were fatal. Their conclusion was that there was clear evidence of breaches of the Health and Safety in Employment Act and that "it would be of great concern if they were typical of OSH decisions not to prosecute". The result of these soft policies is reflected statistically. Research has shown that occupationally related fatality rate reductions of between 60 and 70 per cent have been achieved over the past two decades in Sweden, Japan, Germany and the United States. By comparison, a New Zealand university study shows that, at best, the New Zealand fatality rate reduction over the past two decades has been 30 per cent.

What is the solution?

The Council of Trade Unions strongly believes that unions should have meaningful involvement at national, industry and enterprise levels concerning workplace health and safety. The Government has a responsibility not only to ensure that minimum standards of safety are maintained as a criminal law responsibility, but also to put in place a statutory framework which encourages progress towards the safest possible environment in all workplaces.

At the national level, there should be a tripartite process to determine acceptable minimum standards of safety. Once established, the national minimum standards should be embodied in understandable legislation, regulations and codes of practice. The laws, regulations and codes of practice should be well publicized. These minimum standards should be rigorously enforced by an inspectorate, with substantial penalties for breaches.

At industry level, the legislation should encourage the development of practices and programmes which aim for best practice in health and safety. These OSH strategies should be integrated with quality management and worker participation so that work and workplace design, training and protection of the safety and health of workers can be addressed on an industry basis.

At workplace level, there should be legislative recognition of the workers' right to know (about potential hazards they face at work), right to participate (in decisions affecting their safety and health at work) and right to refuse dangerous work. While the critical importance of management commitment to health and safety is ac-

knowledged, the involvement of workers is both a valuable contribution to the solution of health and safety problems and an important expression of industrial democracy. The best prevention strategies involve the people at risk, the employees, developing and maintaining their own safe systems of work.

Similarly, there is an emerging recognition in many industries that they simply cannot eject their pollutants into the surrounding environment. This is resulting in an integrated approach to the work environment and the wider environment, with sustainable and cleaner production as the objective.

A change of law

At the end of 1999, a Labour / Alliance coalition government was elected. Since the election we have seen a number of major changes to industrial legislation, resulting in a fairer balance between employers and workers.

New workplace health and safety legislation currently being considered in our parliamentary system proposes to address our shocking health and safety record. The proposals include:

- extending coverage of the Act to include workers, such as rail workers and aircrew, presently excluded from the protection of the Act;
- enabling any person to legally enforce the Act against employers;
- introducing a system of spot fines;
- clarifying that stress and fatigue are hazards under the Act; and
- most importantly, encouraging an inclusive partnership approach between employers and employees, with some limited rights for elected health and safety representatives to play a leadership role.

Although unions and health and safety professionals have welcomed the proposed changes, employers' representative groups and some right-wing politicians have lobbied strongly against the changes. That the main opposition spokesperson on industrial relations, for example, has described the proposed amendments as "draconian" is, though not surprising, a cause for concern.

The proposal for instant fines and increased fines has come in for strong criticism from these groups. To put the level of fines into perspective, it should be noted that the penalties in the Commerce Act and the Hazardous Substances and New Or-

Health and safety representatives

The heart of New Zealand's proposed new law is its provision for the election and training of health and safety representatives. The proposed right of employees to elect their own representatives is strongly supported by New Zealand's Council of Trade Unions (CTU).

Helping employees to protect themselves in this way works well in other countries and there has been no evidence to support the concerns which have been expressed in New Zealand that such powers will be abused.

It is quite clear there is a real need for the new law, both to protect the interests of thousands of employees and to signal to employers the urgent need to address this modern workplace hazard and thus avoid large common-law damages awards in the courts. Unions want to use the new legislation to work cooperatively with employers on health and safety protections, but the experience of the past ten years has shown that there need to be substantial penalties before some employers take health and safety seriously.

The real focus of the Act is to provide a framework within which employers and employees, either individually or collectively as unions, can identify workplace hazards and jointly develop effective strategies to eliminate them. Unions are disappointed that the Bill does not include the power for elected and trained employee health and safety representatives to issue provisional improvement and prohibition notices in respect of unsafe work. Such systems have been shown to work overseas. However, the proposed law follows the well-established international model of employee participation, which recognizes that employees should have rights to ensure their own health and safety at work, and to work together through their union.

ganisms Act are up to 50 times higher than under the Health and Safety in Employment Act.

The union movement and health and safety professionals are clear that if the law is to have any deterrent, then the penalties must be substantial. A commentator has pointed out that the NZ$30,000 (approximately US$13,000) fine imposed on a major construction company for serious breaches of the Act resulting in a tragic death in 1999 was "little more than a petty cash call, a paltry sum that sends no message to company management … In the UK the charge would almost certainly have been manslaughter and the penalty would have been higher by a factor of 10 or more."

The announcement of changes has drawn protests from employers' groups, and sparked a campaign of opposition. This is despite an OSH analysis of submissions on a discussion paper preceding the announcement of changes, which showed that 72 per cent of health and safety professionals thought increased fines would improve workplace health and safety, 88 per cent supported instant fines, and 67 per cent thought anyone should be able to prosecute.

The Council of Trade Unions hopes that the fines will provide the necessary incentive for the minority of employers who do not take health and safety protection at work seriously.

Employers have made much of so-called "compliance costs" in proposed changes, when in fact increased fines are, of course, "non-compliance" costs, for those who fail to provide safe systems of work.

The true costs of non-compliance are the huge pain and anguish to the families of more than 500 dead workers, but also the huge economic burden of not preventing workplace accidents and diseases. This cost is estimated to be as high as 6-8 per cent of New Zealand's GDP.

There has been quite a shrill reaction from employers' groups to the reference in the proposed law to stress and fatigue as hazards in the modern workplace. Objections to the clarification of stress or fatigue in the law are also unfounded. In fact, stress and fatigue have been covered by the HSE Act since its inception in 1993 and, in submissions prior to the proposed changes being put together, 73 per cent of health and safety professionals, and 66 per cent of employers, supported additional measures to address stress.

In fact, common law already imposes a potential liability for large damages awards against employers who disregard workplace hazards that can cause mental stress and breakdown.

The trade union movement is fighting hard against the campaign that opposes changes to New Zealand's workplace health and safety law. Unions know these changes are necessary to address our shocking record.

Challenge to work together

But the real challenge lies ahead, after the implementation of the new law. The real challenge is to move beyond minimum standards, within the government framework and the incentives it provides, to improve and achieve best practice in health and safety protection of workers.

The proposed new law provides for the type of proper employee representation, universal coverage and meaningful penalties that have been blocked until now. New Zealand society should be mature and honest enough to acknowledge that employment agreements can be a workplace framework within which employers and employees can develop injury prevention and health protection programmes. New Zealand should follow the successful models from other countries and develop best practice industry programmes which can then be applied through codes of practice in individual workplaces.

The policies of the last decade have failed New Zealand workers. Their health, their safety and their lives have too often been sacrificed to operational exigencies and profit.

It is time for safety and health to be given the priority it deserves.

Ten safety and health challenges for the twenty-first century

Where should occupational health and safety be heading over the next few decades? An expert in the field lists his top ten challenges.

Juan Carlos Hiba*
Specialist on Working Conditions and Occupational Health and Safety
Multidisciplinary Technical Team for the Andean Countries,
ILO Lima Office

First challenge: integrating the concepts of working conditions and working environment into occupational safety and health

The first challenge is to integrate the broad perspective opened up by the concepts of *working conditions and working environment* into the current vision of occupational safety and health.

This is a multidimensional concept to the promotion of which the ILO has been committed for more than 20 years now, through the International Programme for the Improvement of Working Conditions and the Working Environment launched in 1976. It takes in a series of factors that govern the actual working and social situation faced by working men and women. Issues generally seen as forming part of this concept include, among others, the *length, organization and content of the working day, welfare provisions in the workplace* and *social services*. In view of their importance, and of their links with other working conditions, issues of remuneration should also be included within this concept.

The relations between the different components and factors that shape working conditions and the working environment are very important, since it is impossible to improve these conditions without taking account, at every stage, of the conception, planning, organization, distribution and performance of work, of all the conditions in which workers carry out their tasks.

So the first challenge facing occupational health and safety is to move beyond an analysis of accidents and of technology-driven hazards, so as to consider all of the real conditions in which people work and the consequences of these conditions.

The ILO decided to study this issue and produced a book entitled *Introduction to working conditions and the environment*, which has since become a classic in its field.[1]

Second challenge: building ergonomics into occupational health and safety

The second challenge concerns the appropriateness of building ergonomic insights into occupational health and safety.

The main characteristic of ergonomics is that it is centred on human beings. When planning an analysis of human activity, ergonomics homes in on people. In contrast to most approaches by psychology and other applied sciences or technologies, ergonomics does not view men and women as variables to be adjusted. Rather, it ex-

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amines the work situations in which they find themselves, so as to promote working conditions that permit working men and women to grow and develop as people. Such thinking led Theureau (1992), for example, to define ergonomics as a "political technology".[2]

According to Neffa (1988), ergonomics is seen as an autonomous discipline, based on experimental results obtained from empirical study. It is capable of providing specific information that can be used to modify installations, machinery, equipment and tools as well as technology aimed at better adapting work to people. It is a discipline built on the contributions of anthropometrics, occupational physiology, occupational psychology, engineering, biomechanics, toxicology and other allied disciplines that look at people within their work situation.

One important contribution by ergonomics is the distinction between *prescribed work* – better known as "tasks" – and *actual work* or "activity", which is what the worker really performs within his or her job.

Ergonomics has also pointed out the fallacy in the idea of an *average worker*. Anthropometric studies are a good basis for showing just how far people can vary in size. This variation in anthropometric dimensions is accompanied by other individual differences, such as a ranking of capacities and limitations and other physical and physiological variables. These, in turn, produce different capacities to resist and adapt to occupational risks. Consequently, it has become clear that systems cannot be designed for the average worker.

Ergonomics, according to the same author, serves a number of different purposes. Firstly, it helps reduce or eliminate occupational risks by promoting safe work, removed from workplace accidents and occupational diseases. Secondly, it serves to improve working conditions in order to avoid an increase in fatigue due to a high overall workload derived from various factors – the physical burden, in terms of muscular effort, the psychological burden and the mental burden. Finally, ergonomics promotes more efficient productive activity.

The rational use of ergonomic knowledge appropriate to each reality should, Neffa comments, make it possible to improve productivity, reduce accidents, improve quality and reduce the labour costs entailed by absenteeism, employee turnover, disputes and job apathy. Ergonomics, Neffa concludes, provides elements for questioning the rationality and efficiency of the scientific organization of work, as manifested in Fordism and Taylorism, and for humanizing work.[3]

As may be seen, there are good reasons for making use of ergonomics. To boost the efficiency of occupational health and safety policies and programmes, engineers and doctors specialized in these two disciplines should build a strategic alliance with ergonomists. And if there are none to hand, they should seek them out, meet them and draw them into safety programmes. And if they cannot find any ergonomists, they should study ergonomics themselves.

Third challenge: promoting more active cooperation between workers and employers

The third challenge is within enterprises. This is the need to promote more active cooperation between workers and employers on occupational safety and health. This cooperation on processes to improve safety, workers' health, working conditions and the working environment should come naturally, but it still doesn't. Changing all that will entail putting processes of social dialogue in place inside enterprises. Mechanisms have to be started up that will foster information, consultation and negotiation.

Workers must be able to play an active part in these processes. After all, as adults, they are capable of taking decisions on a wide variety of matters outside the workplace. They are capable of founding families, of raising and educating their children, of fulfilling their civic duty to help

decide the political future of their country. So why should they not be able to take a leading role in protecting their own safety and health when they are at work? They can do it. The problem is getting them to do it.

In reality, work can be analysed from the perspective of a power conflict. Entrepreneurs feel entitled to direct the work – as regards pay, hours and work organization, for instance. Workers aspire to control the work, and try to gain greater autonomy by increasing their ability to decide about work rhythms, breaks and so on.

Occupational safety and health professionals should strive to eliminate the barriers to active cooperation and should elaborate new practical strategies that favour such participation. The techniques of participative ergonomics should be taken into account when tackling this challenge and achieving these goals. Some ILO Conventions also promote such practices.

Fourth challenge: encouraging the extension of a safety culture in education, in the family and at work

The fourth challenge is to extend the scope of occupational safety and health, bringing it into the field of culture. The idea is to encourage a safety culture in the family, in education and at work. Experience has repeatedly shown that achieving significant improvements in workplace safety and health is a matter not of technology but of culture.

It has been observed in the developed countries – where it took more than a century to develop a safety culture – that a basic prerequisite for the reduction of workplace accidents, injuries and diseases is the gradual integration of safety principles and recommendations into national law and practice.

To this end, national policies have to be drawn up and the necessary action has to be identified for turning such principles into standards and regulations.

Unfortunately, in many of the rapidly industrializing countries, not everyone is yet aware of the positive values of a safe and healthy working environment and of a safety culture. Very often, safety and health requirements are regarded as barriers to trade. This is mainly the case in small- and medium-scale enterprises, whose owners and managers see cuts in production costs as the key to viability and survival. By contrast, in other, more prosperous societies or countries, some transnational corporations have made the safety culture the top point in their business principles.

So the sustained promotion of good practice on health, safety and the environment, and a continual integration of the safety culture as an essential part of culture in general, may be the only way to reduce the constantly rising costs of protecting health and the environment, while at the same time permitting increases in the general productivity of the production sectors.

The question, then, is whether such cultures can indeed be established. What has to be done in order to achieve this? Safety cultures can be established only through:

- a large-scale process of awareness raising and education about workplace safety and health;
- a process for developing consensus and consultation mechanisms between the social protagonists – i.e. governments, entrepreneurs, workers and others who are interested and involved in issues of safety, occupational health and the environment; and
- the participation of the national economic and financial institutions.

The development of a safety culture nevertheless depends to a significant extent on the availability of reliable information that permits proper decision-making, and on smart use of existing resources. As Dr. Takala, the Director of the ILO's SafeWork Programme, recently put it: "Safety culture is, in part, a question of resources and technology. But to achieve it, the main things needed are better information and management and firmer ethical standards,

which make it possible to tackle effectively the workplace hazards that are still present and are still growing."

Fifth challenge: achieving better analysis, recording and reporting of accidents and occupational diseases

The fifth challenge relates to the study and recording of accidents and to the procedures for reporting them. These analyses should be made in order to build up reliable statistics that will enable the monitoring and elimination of accidents and occupational diseases. This fifth challenge gives rise to two considerations:

The first reflection has to do with the traditional way of studying accidents. When the causes are analysed, there is a built-in tendency to go for the figures that will point to human failings. "Human error" is the usual expression, and 80 per cent of accidents are said to be due to operator error. Some people are even described as accident-prone. A second way of trying to simplify the analysis is to look at whether the accident had its origins in an unsafe act or in an unsafe condition. And a further, slightly more complex, approach to the search for causes is the technique of charting causes as a tree and thus trying to get back to the causes of the original event that caused the accident or the failure.

A question which we should be asking ourselves is why these remarkably simplistic types of accident analysis exist. One reason may be the necessity, which is almost always imperative, of rapidly finding a culprit or a single cause. Another may be the poor quality of accident recording systems and procedures, which are often designed by officials who are more concerned with an accident's financial repercussions on insurance policies than with the lives, safety and health of workers.

Such simplifying approaches ought to be banned. Account should be taken of the deeper and more varied root causes of accidents. This implies that investigations should, for example, recognize that accidents happen due to deficiencies in social, labour and organizational relations within workplaces.

Thus, Dwyer and Raftery (1991) maintain that, traditionally, sociology and ergonomics have been unaware of each other.[4] The same could probably be said of relations between sociology and occupational safety and health. So the challenge is to increase the study and investigation of the sociological theory and the organizational aspects of accidents.

The second reflection relates to the importance of developing programmes that strengthen vigilance and monitoring as regards occupational safety and workplace hazards.

One of the pillars of prevention is the systems for recording and reporting accidents. These must be thoroughly improved. What usually happens is that the mechanisms that come into play during the process of recording and reporting actually disturb the flow of information, produce distortions and cause significant losses of data. This in turn leads to major under-recording of occupational accidents and diseases.

Occupational health and safety professionals therefore need to bring about improvements in the recording and reporting systems for occupational accidents and diseases. The challenge is to develop training programmes for inspectors, health service officials, employers and workers that promote: (i) the establishment of more and better accident registers; (ii) the design of reporting systems that avoid or minimize the loss of significant data; (iii) high-quality processing and timely communication of the data obtained; (iv) the availability of up-to-date, accurate statistics; and (v) the development of strategies to control and reduce accidents.

Sixth challenge: improving the quality and scope of public labour inspectorates

The sixth challenge facing occupational safety and health stems from rationalization processes within public administra-

tions and the privatization of many public services which has taken place in Latin America over the last 20 years. On the principle of the subsidiarity of the State, some public responsibilities have been transferred to the private sector. Labour ministries have suffered budget cuts and the loss of some of their powers to oversee worker health and safety. In some countries, national policy has been to promote the creation of insurance companies covering occupational risks, thus transferring to private initiatives part of the responsibility for overseeing occupational safety and health.

The Cartagena de Indias Declaration, adopted by the Ministers of Labour of the five Andean countries in May 1999, includes remarkably clear recognition of the value and importance of the quality of working life and the important part played by labour in ensuring economic progress and social development. One component of the action plan that accompanies the Declaration specifically underlines the importance of efficient labour inspection services.

Effective preventive work in the field of occupational safety and health requires a well-qualified labour inspection system in each country. It must have the capacity for active prevention, the technical equipment and instruments needed for precise, reliable diagnosis, and services that are nationwide in their coverage and able to reach into sectors of production where workers have less labour protection.

The challenge to occupational safety and health, and to its professionals, is thus to contribute to the elaboration of training programmes for labour inspectors and other public officials, and to strengthen and modernize the capacities of labour ministries as regards the prevention of occupational accidents and diseases. These programmes could be centred on: (i) the hierarchization and social recognition of labour inspection services; (ii) the improvement of their officials' technical capacities and competencies; and (iii) the improvement of the overall quality of their professional performance.

Seventh challenge: the quality of safety, worker health and working conditions within micro-enterprises, small-scale enterprises and the informal sector – the big challenge

This is the major challenge because it affects more than 90 per cent of the workers in Latin America and the Caribbean.

First, the challenge in micro-enterprises and small enterprises. What are the outstanding tasks for occupational safety and health in this sector? Four kinds of action appear necessary:

- The development of practical, voluntary action should be promoted in micro- and small enterprises in order to achieve low-cost improvements in working conditions and occupational safety and health.
- Cooperation should be promoted among groups of enterprises that wish to take joint initiatives to improve the installations and the welfare services that they offer their employees, such as transport services, canteens and childcare.
- Cooperation between enterprise owners and managers and their workers should be extended in order to identify problems concerning working conditions and the monitoring of occupational safety and health and to seek solutions.
- The introduction of processes of continual improvement in working conditions and the working environment should be encouraged, so as to create a positive impact on enterprises' productivity and competitiveness.

The dramatic case of the working conditions of informal sector workers needs to be addressed. To get this problem into focus, let us look at the case of the informal urban sector and ask, "What are the conditions under which these workers operate?" These workers should not be seen as a natural part of the urban landscape, but rather as men, women, young people

and children who are trying to survive and who, in order to do so, work on the street. What are the characteristics of their working and living conditions?

If one analyses the situation of urban informal sector workers in Latin America – but also in the other developing countries – it will be found that they live in precarious dwellings, in areas far away from where they work. They lack good transport services. They lack health and welfare services at work. They lack social protection. They work in an unsafe and often insalubrious environment. They are often unaware of the kinds of hazard to which they are exposed. They have low incomes and low productivity and they do not have any capital with which to improve their businesses. And, for many of them, home and workplace are one and the same.

The challenge facing occupational health and safety and its professionals is therefore to find effective ways of improving the conditions in which these people work. Broadly, this should include individual and collective awareness-raising exercises, as well as practical training and mobilization and lobbying vis-à-vis those in office who have generated the growth of this sector. So all of this begs the question: should we improve the working conditions of urban informal workers, or should we create new opportunities, so that street work will no longer exist?

Eighth challenge: putting across the vision and model of a national workplace safety and health system

While it may not be possible to observe and analyse the functioning (or misfunctioning) of all the national-level components that go to make up a national policy on occupational safety and health, any attempts to sectoralize this will lead to partial advances and retreats, to a bureaucratization of inspection and investigation, and to redundancy among partial measures and regulations.

The way to overcome these limitations is to take, once and for all, a systemic approach that enables us to identify all the components of the system, assess all its deficiencies and limitations, detect the presence or absence of links between its components, remove the barriers that impede such links and interactions and, above all, create opportunities to improve the efficiency of the system.

A systemic approach will, for example, make it possible to find out why the principles needed for the establishment of a national policy are lacking. From there, one can go on to determine the need to formulate, implement and periodically re-examine a coherent national policy on worker safety and health and the working environment. The aim of this policy would, for example, be to prevent accidents and damage to health that occur during work or as a result of work, or that are related to work activity, so as to reduce to the minimum, as far as is reasonable and feasible, the causes of the hazards inherent to the working environment.

The lack of national policies and legislative measures, due to the absence of a systemic approach, in turn gives rise to the sectorialization of regulations, to the superimposition of technical standards, to the emergence of multiple bodies devoted to overseeing compliance with the standards, and to the duplication of monitoring efforts.

An approach based on a national system of workplace safety and health would, moreover, permit identification of the system components that relate to safety information, technical education and training, scientific and technological research, and the communication and propagation of knowledge in this field.

The challenge here is to produce a diagnosis of the situation of the national occupational safety and health system, identify its elements, detect its capacities and limitations and draw up proposals for modernizing and strengthening it.

Ninth challenge: building occupational safety and health values into national education

Safety culture, which was the fourth challenge, leads on to another consideration, relating to safety education as part of everyday life.

This reflection may be illustrated by a tale from the time when the author was working for the ILO in Europe. He was living in a small village in the French countryside, very near to Geneva. One Sunday morning, he drove off from home in his car. Turning into an avenue, he found himself behind a boy aged around 7 or 8 who was riding his little bicycle about ten metres ahead of the car. Keeping an eye on him, the author drove slowly along. On his head, the boy had a safety helmet. They travelled on like this for about 200 metres, until the boy reached an intersection. He then raised his right arm and held it out horizontally to indicate his intention of turning right.

This signal was obviously the result of one or more lessons that the child had received at school on how to ride a bicycle through the streets of his village. The simple gesture impressed upon the author the value and results of an early but necessary education in the art of riding along a street. This boy was applying safety culture in his day-to-day life.

Safety and health professionals should urge that educational curricula and programmes, at all levels but particularly in primary school, should include the values of a safety culture.

Tenth challenge: contributing to a convergence of occupational health, safety and environment standards

The tenth and last challenge for workplace safety and health is at the national level and concerns the need to seek convergence, so as to harmonize occupational safety and health legislation among the countries of the region.

On the one hand, the globalization process has opened up new opportunities to accelerate world economic growth, increase employment creation and reduce poverty. But, on the other hand, there is no guarantee that this will automatically result in greater social justice. Indeed, the hopes born when the economy was opened up and globalized are now turning into disillusion for large sections of the population, and new protectionist temptations have begun to emerge.

To quote ILO Director-General Juan Somavia: "Unless the majority of people feel that they are benefiting from the new global economy, it will be vulnerable to social conflict." Thus, if the liberalization of trade is to be fully supported by the populace, an adequate balance must be achieved between economic growth on the one hand and social progress on the other.

According to López-Valcárcel (ILO, 1996), workplace safety and health play a prominent role in the process of economic integration which is taking place as a result of globalization.[5] This has, for example, manifested itself in two important schemes for regional economic integration – the European Union and the North American Free Trade Agreement.

The aim of integration in occupational safety and health is to achieve convergence among the risk levels for accidents and occupational diseases. This convergence is needed in order to avoid a sort of social dumping, under which some countries offer worse conditions than others as regards workplace safety and health, and thus lower labour costs.

The route to convergence of occupational risk levels among different countries is via the harmonization of certain standards or regulations aimed at improving workplace safety and health.

In the case of the Andean countries, the importance of the Cartagena de Indias Declaration should be emphasized. One example of this is the decision, embodied in the Declaration, to have common workplace health and safety standards. This will guarantee a minimum quality standard for working conditions, which will thus be similar in the different Andean countries. It will help to prevent the kind

of social dumping that benefits some countries to the detriment of others.

One way of ensuring common standards is for these countries to move towards a systematic and sustained convergence of national law and practice on safety, health and conditions at work. This convergence would be strengthened by a trend in the Andean countries towards homogenizing their respective legislations.

In this respect, the national legislations of the Andean countries should incline towards establishing: (i) similar principles for a national policy in this field; (ii) the various aspects of action that could be taken at national level; and (iii) relevant action that should be taken within enterprises. The two ILO international standards that correspond to these needs are the Occupational Safety and Health Convention, 1981 (No. 155) and the Occupational Health Services Convention, 1985 (No. 161). Among the Andean countries, Venezuela alone has ratified the first of these Conventions, and Colombia is in the process of ratifying the second.

In conclusion, at the dawn of the twenty-first century, occupational safety and health, as disciplines at the service of social progress, face a number of important challenges. Naturally, occupational health and safety professionals have a major responsibility to turn these challenges into achievements. They must fight for workers to be able to contribute fully, and without risks, to building the wealth of nations. Better working conditions, prevention of occupational hazards and the promotion of a safety culture will enable the Latin American countries to achieve and maintain a sustained economic growth, together with just social progress for all their people.

Notes

[1] Clerc, J. M. 1987. *Introduction to working conditions and environment*. ILO, Geneva, Second impression 1990.

[2] Theureau, J. 1992. Postface in L. Pinsky. *Concevoir pour l'action et la communication, essais d'ergonomie cognitive*, Peter Lang, Bern.

[3] Neffa, J. C. 1988. "La ergonomía: o cómo ir más allá de la prevención de riesgos", in Wisner, A. *Ergonomía y condiciones de trabajo*. Editorial Humanitas, Buenos Aires.

[4] Dwyer, T. and Raftery, A. E. 1991. "Industrial accidents are produced by social relations of work: A sociological theory of industrial accidents", in *Applied Ergonomics*, 22, 3, pp. 167-178.

[5] Lopez-Valcárcel, A. 1996. *Seguridad y salud en el trabajo en el marco de la globalización de la economía.* Working document No. 26. ILO, Lima.

Workplace stress: A collective bargaining issue

Stress is on the increase everywhere and nowhere more so than in the workplace. Pills are not the answer. Prevention is better than cure. And bargaining is better than suffering.

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Everybody knows what stress is all about. It is a common feature of modern life. Most people are exposed to daily pressures in both the workplace and outside, and are used to coping with moderate amounts without suffering any major ill effects. Some people are even more productive and energetic when they work under stress. Indeed, there are good stressors that can promote wellness and stimulate creativity.

But if stress is intense and continuous, if pressures pile up, then it can cause physical illness and psychological disorders. Numerous surveys confirm that the problem has progressively escalated everywhere – in developed but also in developing countries. Stress has become a major health and safety issue across all occupations and sizes of companies, in the public and private sectors. The findings from recognized national and international research bodies are significant and show that work-related stress can no longer be ignored or merely be tackled with remedial treatment.

Death from overwork

Work is the main cause of stress for over one-third of employees in Europe. So says the Third European Survey on Working Conditions, carried out by the Dublin-based European Foundation for the Improvement of Living and Working Conditions.

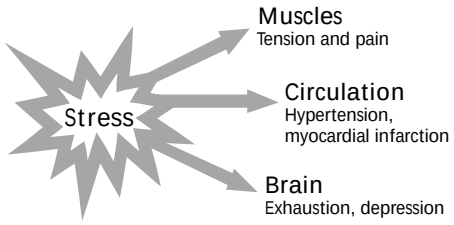
In Japan, the proportion of workers suffering from serious anxieties or stress in their working life increased from 53 per cent in 1982 to 63 per cent in 1997, and *karoshi* – or death from overwork – continues to be a serious issue. With firms adopting new personnel management policies on account of the recession or for the purpose of strengthening their competitiveness, this trend is bound to accelerate. It is also worth noting that *karojisatu* (suicide as a result of overwork) has recently taken on a new dimension in Japan and, for the first time, has been the subject of a judicial decision[1].

In the United Kingdom, 54 per cent of safety representatives at the Iron & Steel Trades Confederation (ISTC) have identified stress as one of their top five health and safety concerns. Fifty-five per cent of the same union's branch secretaries have singled it out as a top priority. In 2001, the ISTC commissioned a report on *Work Organization and Occupational Health and Safety in the UK Steel Industry*. The report concludes that "there is strong evidence that psychosocial aspects of work, including long hours, heavy workload, lack of

control over work, lack of social support at work and lack of opportunities to develop skills, impact on the physical and mental health of workers".

Stress causes problems with the muscular system and circulation, increasing the risk of myocardial infarction. It also affects the brain in terms of exhaustion and depression.

Work-related stress and illness



Source: Åsberg, M. and Nygren, Å. in *Stress and burnout – A growing problem for non-manual workers,* International Metalworkers' Federation (IMF), Geneva 2001.

What causes stress?

Generally, stress results from a combination of factors which are difficult to separate. However, as research has shown, the high-pressure environment of the modern workplace accounts for most of the problems linked to stress and burnout.

The globalization and deregulation of economies have prompted significant modifications in the nature and organization of work and brought workers under ever-increasing pressure. The work/life balance has been disrupted by job insecurity and the related hire-and-fire culture, rising unemployment, heavier workloads, more intense demands, flexible working arrangements and more technology. The growth in casual and temporary work and contracting out have also led to increased job insecurity, which generates a climate where people are feeling constantly under threat.

Although trade unions in a number of countries have been quite successful in the struggle to reduce working time, this has often been accompanied by an increase in overtime – unofficial and unpaid – and work intensification. In France, many companies have made up for shorter working hours by trimming breaks and increasing job flexibility, resulting in more stress in the workplace.

Restructuring, lean production, subcontracting and outsourcing reduce the number of jobs and put higher requirements on individual workers, in terms of both quality and quantity of production. Workers have to adjust continuously to new working methods and management techniques. They have to deliver faster and make better products and services at lower prices. They have to work at high speed and to tight, often unrealistic, deadlines. The nature of work is also changing and more driven by customer demand. The client is king and determines the work rhythm. With their competitive requirements, companies today have become real stress-producing factories. It is no longer machines that break down. It is the workers themselves.

The incursion of information technology (IT) is not extraneous to this development. The pressure of mastering the IT revolution fuels workplace stress. Moreover, new technology and computer science are

Why this increase in work stress?

1. From manual to mental work
2. Globalization of the economy
3. Reorganization and mergers
4. Information and communication technology
5. 24-hour economy
6. New production concepts
7. Rapid expansion of the service sector
8. Flexibilization of work
9. Work-home spillover
10. Fewer working hours and working overtime

Source: Kompier. M. in *IMF Report on Stress and Burnout, op. cit.*

imposing their rhythm on daily life and make the borderline between work and private life more and more blurred. Working schedules are no longer what they were yesterday.

In many enterprises, for certain categories of employee, time is becoming less relevant. What matters is the carrying out of projects and achieving the predetermined goals. The notion of working time is vanishing and the employee's attitude is increasingly dictated by the need to attain these objectives. Many people are taking their work home and log in as teleworkers. Whether they have to work overtime to achieve these results is not management's concern.

"Do whatever you like but make sure that you are profitable" is the motto in many enterprises. The high return requirements imposed by shareholders take precedence over workers' interests and exert excessive pressure on them. This pressure does not necessarily come from management alone but also from other colleagues. As the head of the IBM Works Council in Germany points out, "cruel mechanisms" may "take place between the co-workers. It is peer pressure aimed at those who do not go along and who do not contribute towards the survival of the business unit."[2] These developments are undermining solidarity and cooperation among workers and thus contributing to tension in the workplace.

Control and autonomy are another important dimension in understanding whether or not people develop stress. As research has shown, a situation of high demand combined with low worker control over the work process can lead to stress and related illnesses.

Stress is a topic that is discussed more and more in the media. In Sweden, for example, it has been given a high profile in the press and is the subject of numerous debates. Between 1997 and 2000, there has been a tenfold increase in the number of articles addressing this issue.

The cost of stress

Stress has a high cost – a high human cost but also a high financial cost – and it figures as one of the main causes of sick leave. A number of studies underline the fact that the costs of stress to society are increasing continuously.

High levels of stress have detrimental effects on workers' health and may lead to a variety of disorders and illnesses, including hypertension, and also alter the immune system. In addition, the loss of capacity to cope with working and social situations can lead to less success at work, possibly unemployment. It can give rise to greater strain in family relationships and even result in depression or death.

For enterprises, the cost of stress is multifaceted. It can be reflected in absenteeism, higher medical costs and employee turnover, with the associated cost of recruiting and training new workers. It can also take the form of diminished productivity and efficiency. According to calculations from Volvo Trucks, a non-manual worker suffering from burnout costs the enterprise SEK1 million (US$95,400)

Cost of work-related stress

- In the United Kingdom, it has been suggested that over 40 million working days are lost each year due to stress-related disorders. According to one estimate, stress costs British industry 2 or 3 per cent of gross domestic product a year.
- In Australia, the Federal Assistant Minister for Industrial Relations estimated the cost of occupational stress to be around A$30 million in 1994 (US$22 million) and A$55 million were paid out on stress claims in 1998/99.
- In the United States, over half of the 550 million working days lost each year due to absenteeism are stress-related.
- In Switzerland, the direct costs of stress amounted to about CHF4.2 billion (US$2.6 billion) in 2000.

Source: ILO, Safework; and International Metalworkers' Federation. For Switzerland, figures from the State Secretariat for Economic Affairs.

and an executive more than SEK4 million (US$381,500).[3]

This cost factor should already be a good reason for governments and employers to act and take effective steps to improve the situation.

What can be done?

When the issue is raised, employers often point at personal problems of employees. They argue that stress is primarily a matter of individual differences and the level of work-related stress cannot be correctly measured. As a result, they do not bother to question the way work is organized or what the content of tasks is.

Psychology and occupational medicine are relied upon to cure people, rather than the workplace or work organization. Consequently, workers are encouraged to cope with stress by means of tranquillizers and other drugs. Not only does this not tackle the underlying cause, but there are reasons to believe that it could lead to long-term dependence and additional health problems.

Stress needs to be controlled at source. Stress management techniques and complementary medicine may have some positive benefits in the short term and help relieve the strains caused by stress, but they cannot remove the source of stress itself. They are ineffective in improving the work environment. To be successful, any strategy should not focus on the individual in isolation, but look at the relationship between the worker, his or her job context and working conditions, and incorporate changes upstream at the workplace as well. Stress prevention strategies should focus on the workplace.

Job stress is the result of a "mismatch" between the worker and his or her job. There is a clear linkage between stress and other workplace issues such as, for example, enterprise restructuring and employment, working time, flexibility, skills development, payment systems, control and participation. Stress is a topic for trade union policy and should, therefore, enter the field of collective bargaining.

Stress should also be the subject of minimum international norms. Most countries have standards for health and safety provisions at the workplace, but these standards tend to focus on the physical aspects and do not clearly include the psychological or mental health aspects of working conditions. Action should be taken within the ILO to set legally binding standards in this field and devise effective implementation mechanisms.

Some trade union responses

As indicated above, stress emanates to a large extent from the way work is organized. It can therefore only be prevented if workers seek to have the work reorganized, collectively through their unions.

In this connection, some affiliates of the International Metalworkers' Federation (IMF) have broken new ground and started working out innovative approaches. In the Netherlands, the Dutch trade union confederation FNV has developed an instrument called the "Stress Quick Scan" which consists of a questionnaire and an associated computer programme to analyse the results. It has enabled unions to identify the causes of stress and put the issue on the company agenda.

Indeed, when trade unions succeed in demonstrating that stress leads not only to health problems for the workers but also to different kinds of quality problems (bad service, errors, poor image, etc.) for the company, then management is more willing to discuss and embark upon a prevention strategy.

In Germany, IG Metall launched an initiative in 1999 under the motto *Arbeiten ohne Ende – meine Zeit ist mein Leben* (Work without end – my life is my time) and opened a debate on this issue in enterprises and throughout the union structure.

This initiative met with a good response both on the shop floor and amongst the general public, and has generated a great deal of debate throughout the entire country. IG Metall will pursue this cam-

paign, enhance cooperation with practitioners of occupational medicine and researchers, and expand existing networks. It will also be a key element in the new debate on working time to be initiated this year. In Sweden, the Swedish Union of Clerical and Technical Employees in Industry (SIF) has produced a CD-ROM entitled *Allt har sin tid* (There is a right time for everything), which describes the balance that must be struck between work, leisure and rest, and the repercussions if the proper balance is absent.

In Canada, the Autoworkers' Union is carrying out a study in cooperation with medical staff and university researchers on the relationship between work organization and blood-pressure levels of autoworkers.

In Japan, Denki Rengo (Japanese Electrical, Electronic and Information Union) established a "Heartful" centre in 1999 as a concrete action policy towards providing mental health care. The centre provides consultation to union members and their families over the telephone (toll-free dial) on matters of mental health. Services are provided by the centre on a strictly confidential and anonymous basis.

In the United Kingdom, the issue of work-related stress has come to the fore over the past few years, and there are encouraging signs that stress prevention will be put on a statutory footing. It would seem that the Government has recognized the problem, and the trade unions are also pushing for legislation. At the moment, the International Steel Trades Confederation (ISTC) is working with the Corus Group of companies to develop an occupational health and safety training which deals with bullying, harassment and stress.

As experience shows, a participative approach is a critical success factor in any stress-prevention strategy. A top-down strategy without employee participation is doomed to failure. To be successful, prevention policies must be planned, implemented and evaluated with the active involvement of workers and their trade union representatives.

Addressing the negative consequences of changes in the nature of work has always been a key function of industrial relations. Constantly changing organization of work and its corollaries, stress and burnout, are challenges for organized workers and the trade unions. New attitudes and strategies are needed to tackle this new area of worker protection.

Raising awareness among union membership is an important element in advocating stress-prevention measures. Unions must promote understanding of the stress syndrome, its causes and the problems that result from it, and explain the need for early intervention. They should include awareness-building exercises in their activities to enable their members to demand that employers take the necessary measures upstream and that prevention prevails over cure.

Notes

[1] In March 2000, the Supreme Court ruled for the first time that a company had a legal responsibility for an employee's suicide caused by depression from overwork. In: *Karojisatu – Suicide as a result of overwork*, Japan Labour Bulletin, 1 November, 2000.

[2] Wilfried Glissmann in the IMF Report on Stress and Burnout, op. cit.

[3] http: / / www.sif.se / arbetsmiljö / psykosocial arbetsmiljö / stress & utbrändhet.

Night work – the dark side

Night work is a reality – and, in some sectors, a real necessity. But, try as they may, most human beings will never be night owls. Night work cuts across biological rhythms and puts work times at loggerheads with social and family life. This yawning gap has a big impact on workers' health.

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Journalist
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Night work means working when your body wants to rest. The circadian rhythms (our 24-hour biological clocks) are disturbed. This shake-up causes medical problems in most men and women who work nights.

It was long believed, without evidence, that night workers quickly reversed their biological rhythms (cardiac rhythms, temperature, digestion, secretions, appetite, etc.) so as to adjust biological activity to night-time employment. Now, we know that things do not happen that way. Short-term night work (two or three days) has virtually no influence on biorhythms. But neither does long-term night work really reverse biorhythms. It just flattens certain rhythms out to some extent. One explanation for this may be the contradictory influences exercised, on the one hand, by working hours and, on the other, by social and family rhythms that fiercely oppose these disturbances.

So some rhythms, such as heartbeats, shift over to the pattern imposed by night work, while others, like the secretion of digestive juices, abide by social and family hours. Other rhythms still, such as temperature overall, take a middle stance and change after four or five days. This split between night workers' biorhythms stops their organisms from adapting completely to night schedules. Try as they may, most human beings will never be night owls. Age, and a worker's material situation, also influence his or her ability to adjust.

One or two hours' less sleep

Night workers experience more or less all the sleep problems that exist. Working hard all night does not mean that you will sleep like a log the next morning. First problem: when night workers get home, the daylight sends their organism a signal and reinforces their circadian rhythms' natural urge to wake them up. Then come all the problems caused by what the rest of society is doing: traffic, children playing, the phone ringing and so on. Hunger rhythms also interfere with sleep patterns. Consequently, sleep is often interrupted at noon in order to down some food, and in some cases is then resumed as an afternoon nap. So mental fatigue is less completely overcome: paradoxical sleep – the part that we dream in – is shorter. It arrives sooner after falling asleep than is the case with night-time slumber, but it is interrupted at the end of the morning by the reactivation of the biological rhythms. On average, it is estimated that a night worker sleeps between one and two hours less than a day worker. The night worker's fatigue is further increased by the fact that

working when the organism is in its deactivation period takes more effort than the same activity during the day.

Despite the biological drawbacks of night work, its frequency is increasing in several Western countries, notably because the main aim of enterprises is to maximize profits. "Night work is appearing in a growing number of sectors, without any technical justification," explains Denis De Mey, of the Belgian union confederation FGTB. "Rather, it's a matter of the employers' exploiting their plant more intensively in order to increase profitability. This is the case, for instance, in the construction sector, or in road-building. We're told this is for safety reasons, to get the work done while there's less traffic, but everyone knows that night-time traffic is more dangerous."

Bad meals at night

Apart from sleep problems, gastrointestinal disorders are the symptoms most frequently reported by shift workers:[1] appetite problems, constipation, acid indigestion, diarrhoea, abdominal pains, a rumbling stomach, etc. Longer-term, many shift workers are liable to suffer serious illnesses, such as chronic gastritis, gastro-duodenitis, colitis and gastro-duodenal ulcers. Various estimates put the incidence of these in night workers as two to ten times higher than in their day worker colleagues.[2] There is an explanation for all these ailments: the night-time meal, taken at a time when the gastric secretions are deactivated, is often eaten cold, in a hurry and without appetite. This lack of appetite prompts the worker to take it with spices and with stimulants such as coffee and alcohol, which are aggressive on an unprotected stomach lining. As canteens are generally not open at night, the workers would do better to take their two main meals at home.

The stress associated with night work or shift work can also have negative consequences for the cardiovascular system, as several epidemiological studies have shown in recent years. "Neurovegetative reaction, or the lack of such reaction, provokes an increased hormonal response, which has repercussions on blood pressure, cardiac rhythms, thrombotic processes and the metabolism of lipides and glucose."[3] However, it is difficult to isolate night work as a risk factor for cardiovascular diseases, particularly as night work often leads to an accumulation of other risks, such as higher tobacco use, sleep disturbances or psychological problems. This last category of problems seems to be more frequent among night workers, due perhaps in part to sleep loss and chronic fatigue. Nervousness, anxiety, asthenia, depression and aggressivity are also more frequent among permanent night workers than among those who alternate their working hours. The lack of recuperating sleep also, incidentally, tends to increase the effects of ageing. "My great concern is premature ageing at all levels," says Dr. Versailles-Tondreau, a Belgian occupational physician who specializes in night work. "In people who have worked nights for more than 20 years, ageing is on average five to seven years more rapid. You can see it with the naked eye, particularly on their skin."

Given the health problems that may be caused by night work, it might be thought that night workers would report sick more often than their daytime colleagues. Precise statistics on this are few and far between, but a 1980 study of chemical industry workers does not show any difference between night and day workers as regards the frequency of illness. This may be due to greater solidarity between night workers, or to the fact that night workers regard their symptoms as "inherent" to their activity, while a daytime colleague would be more inclined to call the doctor. On average, however, shift workers' illnesses last longer than those of day workers.[4]

As far as work accidents are concerned, there are no statistics to prove that they are more numerous at night. "But from experience, we know that night-time work accidents often have more serious conse-

Hints for improving night work …

- It should be a personal choice.
- Rest in bed for at least six to seven hours, even if you are not asleep for all of that time. And have a good nap in the afternoon.
- Make sure the conditions are right for sleeping – unplug the phone or switch it to voicemail, disconnect the doorbell or put a note on the door, make sure the room is dark enough, wear earplugs, etc.
- Have a hot meal two or three hours after you get up and before beginning the night shift – at about 6 p.m., for instance. If possible, eat at the same time each day. When you come off the shift, don't eat a big meal before going to sleep.
- Keep your social life going – try to adapt your schedules to your family's, try to take a meal together with your nearest and dearest, try to have contact with other night workers during your free time.

… and for organizing work schedules

- Reduce the number of permanent night workers to the minimum. No study has ever shown that biological rhythms adjust completely to night work.
- Prefer short shift cycles: don't make people work six or seven nights in succession, but rather three or four at most. Sleep deficit tends to build up after several successive night shifts, while rapid alternation makes it possible to vary rest periods and maintain social contacts. In this way, the organism can live more often in its normal state, thus ensuring less fatigue and fewer negative effects on health.
- Rotate shifts forwards rather than backwards: sleep and general well-being improve if shifts rotate from morning to afternoon to night.
- Avoid direct moves from one shift to another. For example, if a worker ends one shift at 10 p.m. and starts the next at 6 a.m., this obviously does not leave enough time for rest. There should be an interval of at least 11 hours between the end of one work period and the beginning of another.
- The morning shift should not start too early – if possible, not before 7 a.m. It has been noticed that, even when they have to get up very early, workers rarely go to bed before 9.30 or 10 p.m., due to family or social constraints. In the case of the "3x8" system, some advocate the pattern "8 a.m.-4 p.m.; 4 p.m.-12 p.m.; 12 p.m.-8 a.m.". This allows two-thirds of the workers to be resting at the time when the body is most in need of it (between 2 a.m. and 5 a.m.).
- Logic also demands that efforts be made to shorten the night shift. Night work requires more effort, and this should mean that work times are shorter. However, opinion is divided on this. Some think that a "2x12" roster suits workers at the end or in the middle of their careers better than "3x8", because the 2x12 entitles them to compensatory days off which, when added to weekends, give workers a foretaste of retirement, as they have more time to fill. However, the "2x12" system is inadvisable for work that is very demanding either physically or mentally.

quences than other ones," Denis De Mey emphasizes. "This is, in particular, due to the fact that the worker is more isolated if an incident occurs." It is also in the middle of the night, when workers are most tired, that they are most prone to chronic illnesses. "I've noticed that workers who have chronic health problems (asthma, spasms, hypoglycaemia, etc.) are more often prey to them between two and five in the morning," Dr. Versailles-Tondreau explains. "In fact, I knew an asthma sufferer who died of an attack in the middle of the night. He was working on rotary presses, and his colleagues didn't realize how serious the attack was."

More breast cancers in women who work nights?

Another cause for concern is that a Danish statistical study shows that the risk of developing breast cancer may be 50 per cent

higher for women who work nights,[5] and as much as 70 per cent higher for women who have worked nights for more than six years. As this is the first study on this specific question, prudence is required when drawing lessons from it, particularly as the sample was not fixed with great precision. More detailed research would have to be done before being able to state with certainty that night work is a risk factor for the development of breast cancer. Indeed, the link between the two is not immediately obvious, but the author of the study, Johnni Hansen, puts forward the following hypothesis: Night work alters sleep rhythms and exposure to natural life, and this may influence the level of activity of melatonin, a hormone that helps to regulate biological rhythms. But melatonin, which is secreted mainly at the end of the evening, in anticipation of sleep, also plays a role in determining levels of oestrogen, a hormone of which excessive quantities are thought to be associated with breast cancer. The Danish researcher does, however, point out that other aspects of night workers' social life, for instance in some cases higher levels of alcohol consumption, may increase the risk.

In this respect, it should be emphasized that ILO Convention No. 89 (revised) on night work by women, adopted in 1948, in principle provides for a ban on night work by women in industry. However, in a ruling issued on 25 July 1991, the Court of Justice of the European Union declared this Convention to be incompatible with the principle of the equality of the sexes proclaimed by Community Directive 76/207 (which has the force of law in all the countries of the European Union (EU)). The Court considered that a form of discrimination was involved, an impediment to equality of opportunity between men and women as regards access to the labour market. Following this ruling, the seven EU member countries that had not yet withdrawn from Convention No. 89 did so in a hurry, followed by other countries. The International Labour Conference, acting on a call to revise Convention No. 89, adopted in 1990 both a protocol to Convention No. 89, with a view to facilitating its ratification, and a new Convention on night work, No. 171, which no longer bans women from night work in industry, but regulates such work for men and women alike. This Convention came into force in 1995, but has so far been ratified by only six States.

Shift work

One of the problems most frequently mentioned by shift workers (organized in successive shifts, implying regular night work) is the adverse effect on family and social life. Those who work at night and sleep during the day have difficulty in finding time for their spouses, their families and their friends. A survey in the British steel industry shows that 40 per cent of shift workers complain of not having enough time with their wives. In the United States, another study showed that shift work increases the risk of divorce by 7 to 11 per cent.[6] Fewer hours are spent with the family and, often, the time is of lower quality because night workers are more irritable. Then there are the obstacles to shift workers' sex lives. One in two British steelworkers working on eight-hour shifts (2 a.m. to 10 a.m.; 10 a.m. to 6 p.m.; and 6 p.m. to 2 a.m.) describes the times when he is working nights as "sexless"!

Alternating night work also affects collective activities, whether sports, access to culture, political or trade union activity, etc. A shift worker cannot be involved in these activities on a regular basis. So it is often noted that night workers have fewer friends. Some of them greatly resent this. They feel shut out of society and ask to be put back on a day job, even if this means losing some financial advantages. Others, more solitary by nature, spend their free time on individual hobbies that are easier to organize: gardening, do-it-yourself, cycling, etc. But few night workers ever imagined all the social, family or medical consequences of night work before actually living through them.

However, it is not always easy to persuade somebody to stop working nights,

despite the health risks. Surveillance by the hierarchy is less strict at night. The feeling of camaraderie between colleagues is often greater. Sometimes, night workers are given extra days off. They may have more time to look after the children or to make use of services that are only available during the day.

And there are a whole series of activities that cannot stop at night, either because they are essential to society or because the financial cost would really be too high: emergency services, police, blast furnaces, foundries, etc. So the question is how best to organize night work in the interests of workers' health. Studies conducted so far suggest a series of tips aimed at limiting as far as possible the damage to night workers' health (see box).

Notes

[1] Shift work means that people regularly work hours outside the normal "9 to 5" working day.

[2] *Travail posté et santé,* European Foundation for the Improvement of Living and Working Conditions, January 2000.

[3] idem, p. 27.

[4] idem, p. 11.

[5] Source: article published on the web site http: / / www.circadian.com

[6] White, L. and Keith, B. 1990. "The Effect of Shiftwork on the Quality and Stability of Marital Relations", in Westfall-Lake, P. and Mc Bride, G. N. *Shiftwork Safety and Performance: A Manual for Managers and Trainers,* Lewis Publishers, Florida.

Check out the check-in: Airport work hazards

Men have from three to ten times more compensated industrial accidents and injuries per worker than women. But this does not mean that women's jobs are safer than men's. The hazards in many jobs performed by women are hidden behind an illusion of "safe" and "clean" work.

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Airport check-in staff report high levels of workplace injury and a substantial fear of violence, according to the findings of new ILO-led research.[1]

This report should ring alarm bells for management. For example, serious hazards are faced by airport check-in workers. Most of these workers are women, but the tasks and the equipment are rarely engineered with women in mind. Inexpensive redesign of these jobs can boost worker protection – and airport security.

It is the first-ever comparative study of the health effects on check-in workers working with different levels of airport mechanization. The study has come up with the surprising conclusion that check-in workers may be as vulnerable to occupational injury as heavy manual labourers. Yet workers tend to remain unaware of the risks of their working environment and practices until they develop temporary or permanent disorders.

The study has revealed that check-in workers show widespread awareness, and fear, of the risks of violence from aggressive passengers, with one in 20 workers saying they have experienced some form of abuse (verbal or physical) from passengers. The widespread lack of training and inadequate protection at the check-in counter leaves workers relatively unprotected against assault.

These findings hold even more importance since the events of 11 September 2001 in New York and Washington, DC. While civil society is experiencing heightened concern today about the safety of air travel, check-in workers can be empowered and can become part of the first line of defence to protect travellers, crew and aircraft against potentially dangerous passengers. Given management support and appropriate training, check-in workers make a logical and important link in the chain to ensure passenger and aircraft safety, yet to date employers have not put such systems into place.

Check-in workers are generally skilled at noticing passengers who appear agitated. Extending systems of protection in airports to include check-in workers in the hierarchy would be a proactive measure for air transport safety, and would serve to increase the level of professionalization, skills and development for these workers.

The ILO study reveals a mix of obvious as well as less apparent hazards of the job. Check-in workers risk musculoskeletal injury from frequent lifting and handling of

* Thanks are given to the ITF for parts of its article, "Perils of the check-in desk", published in the *Journal of the International Transport Workers' Federation*, Vol. 2, 2001.

baggage and prolonged standing while operating a computer. Other hazards include aggression from passengers, poorly designed workstations and uneven workload distribution. Workers have little or no control over the rhythm of work, the organization of their work, or the design of their workstations. Most check-in workstations lack adjustability, yet are intended to be shared by any number of workers, of any size.

In many airports, baggage check-in is performed manually, requiring check-in workers to lift and carry bags, often weighing up to 50 kilos, throughout their entire work shift. Workstations where workers spend their working day sitting down cause high rates of musculoskeletal disorders, even where baggage check-in is fully mechanized and thus, in principle, obviates the need for workers to lift and carry the bags.

A fully mechanized baggage system includes a conveyor belt which takes baggage from the check-in scale to another conveyor which carries it to the aircraft loading area. A semi-mechanized or manual system for baggage check-in requires check-in workers to lift every bag off the scale and carry them to the conveyor which takes bags to the aircraft loading area. A fully mechanized baggage handling system, at an adjustable workstation providing workers with the possibility to alternate between sitting and standing, is the preferred design. Additionally, a high check-in counter provides workers a degree of protection against aggressive passengers, compared to a low check-in counter.

The problems identified are not only confined to the check-in counter. Work-related musculoskeletal disorders (MSDs) are the most common women's occupational health problem and constitute the majority of cases of occupational disease today.

The two-country study examines check-in workers and injury/illness data at three airports representing typical workstation designs in many parts of the world. The airports studied were: in Switzerland, Geneva International (fully mechanized, where check-in workers sit throughout their entire work shift); and in Canada, London, Ontario (semi-mechanized) and Dorval International, Montreal (fully mechanized, where workers can work both sitting and standing). Manual-only check-in stations were not covered in this study, though they continue to be widespread at small airports and in poorer countries, usually implying additional strains for workers.

Semi-mechanized baggage systems appear to place check-in workers at particular risk of musculoskeletal injury. Fully mechanized baggage handling systems tend to be more comfortable and free workers from excessive manual lifting. But they can still cause discomfort and subsequent injury due to frequent bending and other movements while staff are tagging baggage. Adjustable sit/stand workstations (such as at Dorval International) appear to increase comfort levels and to reduce the risk of injuries.

Preliminary findings

Some key preliminary findings from the study sample reveal the following:

- Nearly 20 per cent of workers were absent from work with neck pain in the last year, and 44 per cent reported having to miss work due to back pain. Baggage tagging, either from a sitting or standing position, increases physical strain, but more injuries occur where there is no mechanized system for handling baggage, and where workers sit for a whole shift.
- Workers suffer less injury and discomfort in domestic airports than in international terminals where baggage is often heavier and larger.
- Workers often lift loads exceeding the standard 30 kg limit.
- Bending low, reaching forward, lifting with one hand, and hauling bags to the conveyor belt put workers at increased risk of injury, yet no workers in the study had received training on manual lifting.

- Computer work at a non-adjustable workstation leads to strained, uncomfortable body posture whether sitting or standing.
- The risks of discomfort and injury remain largely unrecognized due to lack of training.
- Over 82 per cent of workers have experienced verbal abuse on the job, 17.4 per cent have experienced threats from passengers, and 4.5 per cent have been subject to physical assault from passengers. Nearly 45 per cent of workers perceive a substantial risk of violence in their work.

Women's work: hidden hazards

In most countries of the world, women are concentrated in service jobs, in selected areas of manufacturing, and in agriculture. Within each of these areas of work there is a concentration of women in the jobs with the lowest pay and the least status.

Not until the 1970s was any systematic investigation begun into the health effects of women's work. Even today, most research of this nature concentrates on major industries in industrialized countries, and thus mainly on traditional male jobs.

North American research and practice in occupational health have been conditioned by the workers'compensation system, where occupational health and safety commissions define priority groups for study based on the degree of compensation to those groups. Research tends to be concentrated on injuries and illnesses that cause a worker to lose work time and which have a clearly defined cause. This practice means that the impact of waged work on millions of women in both the formal and informal sectors of the global economy continues to go unrecorded and unregulated, despite the fact that many jobs performed exclusively or predominantly by women have an important physical component which can produce pain and even disability.

Research, recognition and compensation are limited for women's work because the jobs usually assigned to women often lack dramatic, easily identifiable dangers, making women and women's jobs appear "safe". Workers' compensation statistics show that men have from three to ten times more compensated industrial accidents and injuries per worker than women. These statistics are often interpreted to mean that women's jobs are safer than men's while in reality, the hazards inherent in many jobs performed by women are hidden behind an illusion of "safe" and "clean" work.

Women's biology differs from that of men – and women often perform different jobs under different conditions than men, coupled with a heavier burden of domestic tasks. All of these factors need to be taken into consideration when assessing the impact of waged work on women's health.

The lack of research on women's occupational health is also reflected in the methods used to determine appropriate standards for physical working conditions such as temperature, as well as maximum weights to be lifted. For workplace standards and the research on which such standards are based to be appropriate for women as well as men, they need to take into account the physiology, anatomy and anthropometry of women as well as the physical stressors women experience at work and those to which they return at home. Women's waged work cannot be separated from the rest of their lives.

Fundamentally, this approach is indispensable because the average woman is a different size and shape from the average man, and standards based on men's physiology and anthropometry will not be protective for most women.

In the case of airport check-in work, a job predominantly but not exclusively performed by women, adjustable workplace arrangements are called for to enable a good workstation fit for both male and female workers and to allow for the important differences in body size found among workers in different countries,

given that airports are found in every country of the world.

Many women work in poorly paid, low-status jobs with high performance demands and low potential for worker control over working conditions, pace of work and demands. These conditions have been well identified as causes of negative stress in studies of male workers. High-demand and low-control jobs have been shown to cause stress, resulting in negative health outcomes in workers.

Airport check-in work is characterized by high demand on workers, with little or no control by them, and includes repetitive work, particularly computer-based.

A study of several thousand Swedish women found that those women performing monotonous, rapid-pace work with little control over their work hours or conditions of employment suffered more from alcohol-related or gastrointestinal illnesses or were hospitalized more often for heart attacks. Another study of women followed over a ten-year period in the United States found that women with "high strain" jobs had nearly three times more chance of developing coronary heart disease than workers in other jobs. And a 1993 OECD (Organisation for Economic Co-operation and Development) review of key studies on women's work and health found that women are more exposed to monotonous, repetitive work than men, that women's work content can often be characterized as high-demand, low-control, and that in typically male-dominated jobs the workplace is designed for male body size / shape and male norms, including most worktables and workstations where women work.

Particular to service sector jobs often performed by women, such as airport check-in work, are pressures to respond to the needs of passengers / clients / customers, a job stressor described as "emotional labour" in studies on airline flight attendants. Jobs which involve selling one's emotional labour require workers to pretend to have positive feelings they may not really be experiencing and to deny their negative responses in order to make passengers feel they are being cared for. Although the emotional strain involved in work with the public has been little researched, in studies of flight attendants it has been shown to be an important cause of stress, exhaustion and burnout from interacting with the public. In addition, these studies show that workers report "loss of self", due to feelings and emotions becoming dulled in self-defence during difficult situations with passengers and customers.

Work-related musculoskeletal disorders have been well studied because they constitute the majority of cases of occupational disease; they are also the most common of women's work-related health problems. Conclusions from the European Foundation's 1996 Survey showed that, among workers in the European Union today, more women workers are employed in jobs with a risk of MSDs than males and the risk of MSDs exists in all industrial sectors. According to the United States Bureau for Labor Statistics, women make up 46 per cent of the workforce and 33 per cent of those injured at work, yet women account for 63 per cent of repetitive motion injuries that result in lost work time (47,408 injuries out of 75,188). MSDs account for nearly half of all lost work time injuries and illnesses among women.

Translating research into action

Many of the problems identified in the study of check-in workers could be solved for relatively little cost, especially when set against the costs of high levels of injury. Yet the current trend in airports is for lower costs, recruitment of less experienced, younger workers, and the focusing of less attention on working conditions.

There are obvious ways to increase comfort for check-in workers. The biggest risk factors come with excessive workloads due to high volumes of passengers, constrained and awkward postures, and strains from lifting or repetitive hand movements. Managers need to ensure adequate staffing and breaks, and to provide adjustable keyboard trays, adjustable chairs and sufficient leg

space. Workers should be able to alternate between sitting and standing during a work shift and they should, for example, be able to view a baggage scale display without twisting. It is suggested that the cost of retrofitting semi-mechanized or manual check-in systems may be less than the costs to employers, workers and insurance companies from MSDs, lost work time, disability and retraining.

The challenge of dealing with difficult and sometimes dangerous passengers presents a need for adequate training and for the design features of check-in workstations to protect workers from irate passengers. At the same time, campaigns against "air rage" (aggressive behaviour by passengers on aircraft, particularly towards cabin crew) should be extended in order to protect check-in staff.

These issues will be reinforced in an international media campaign to be launched by the International Transport Workers' Federation (ITF), aimed at the empowerment of check-in workers, and the dissemination of the study results to bargaining agents of ITF affiliates worldwide.

Where occupational health and safety research is designed and carried out in conjunction with relevant trade unions, it is proven to lead to more sustainable actions in the workplace than research conducted in isolation from the workers concerned. The research team hopes that the findings of this study will provide trade unions with a practical evidence-based tool to develop concrete proposals for collective bargaining to address the problems raised here.

Notes

[1] The ILO-led research has been conducted together with the Canadian Centre for Occupational Health and Safety, the International Transport Workers' Federation, with support from the Canadian Labour Congress, the Canadian Autoworkers' Union, representing check-in workers in Canada, the PUSH and SSP/VPOD trade unions representing check-in workers at Geneva International Airport, and the ILO's Bureau for Workers' Activities and the SafeWork Programme. The findings and recommendations of this study will be disseminated shortly by the ITF to aviation unions worldwide. Interim findings were presented at the ITF Health and Safety Conference in Stockholm in May 2001.

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Body mapping for workplace health

By drawing simple maps of their body or their workplace, workers can record, in a visual form, their health problems, work hazards and overall work environment. This helps them to share their knowledge of problems and solutions – and it gives unions some very useful information.

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A British training project launched in 2001 is aimed at helping workers and union representatives to:

- use body mapping to identify problems that were causing work-related ill health; and
- help workers and their union health and safety representatives to tackle the problems causing work-related ill health.

Run by the British Trades Union Congress (TUC), with some financial support from the Government's enforcement authority, the Health and Safety Executive, the pilot training project began by developing a draft workbook on body mapping. This was used for two TUC tutor training workshops. The TUC course developers were grateful to the Canadian Union of Public Employees and Hazards Publications for sharing mapping materials that they had previously developed. TUC tutor feedback on the draft materials was taken into account and a body mapping course workbook for union safety representatives was produced.

The activities and resources in the workbook were used selectively by over 200 safety representatives and a total of 18 TUC tutors on core TUC health and safety courses. Structured feedback on the materials was gathered from the participants and tutors using standard evaluation forms. Amendments were made to the body mapping workbook in light of the feedback.

Why use mapping?

As well as a picture's being "worth a thousand words", there are a number of reasons why mapping is useful for workers and their trade union safety representatives.

Mapping:

- involves workers, is participatory and develops a collective approach;
- encourages discussion and analysis;
- uses workers' experience and knowledge to paint detailed pictures of their working conditions;
- is more easily and widely understood than most other forms of information;
- helps to overcome problems of literacy and language differences; and
- is simple and fun to use!

Who can organize mapping?

A trained worker facilitator, a trade union educator, or a trade union health and safety representative can carry out mapping using:

- small group discussions; or
- larger groups to record and display large amounts of information.

How many participants should be in a mapping group?

It is better if workers interact with each other and their trade union facilitator, so groups of six to ten are best. It is also better to organize groups by department, job, or some other common characteristic.

Confidentiality and security

Mapping works best when workers feel safe and comfortable that the information they are about to reveal cannot be used against them in any way. Workers will be more open in discussing issues when they are in groups consisting only of other workers, and with a facilitator that they can trust, such as a trade union representative / educator.

Types of maps

The types of maps to be created will depend on the type of information to be collected. This article concentrates upon two of them – ***body mapping*** and ***hazard mapping.***

Body mapping

What can body mapping be used for?

Trade unions can use body mapping to collect information about workers' health, such as:

- diseases;
- illnesses;
- injuries;
- aches and pains;
- stress symptoms;
- reproductive problems;
- other related problems.

Body mapping is a way of identifying common patterns of health problems amongst workers in a particular workplace, normally doing the same or a similar job. Identifying common health complaints does not mean for certain that the causes are all work-related. Body mapping is an excellent tool to help highlight areas for action or for further investigation.

Body mapping:

- provides an easy and effective way to encourage workers to speak out and report symptoms of ill health that they suffer from;
- identifies common patterns of health problems amongst workers in a particular workplace or doing the same job; and
- highlights areas for further investigation and trade union action.

Conducting a body mapping session

Two large outlines of the human body are drawn on a flip chart or kraft paper. The separate images are labelled "Front" and "Back" and tape is used to stick the images to the wall. Marker pens are provided so that workers can mark any symptoms that they have on to the body map.

The facilitator explains what they are proposing to do, and makes it very clear to everyone that information from individuals

Examples of different symptoms

- × → Aches and pains
- × → Allergies
- × → Reproductive problems in men or women
- × → Stress-related disorders

is confidential. Workers are asked to make a mark (×) on the body map to show any areas of the body which they believe are affected by their work. Different coloured marker pens will help to identify different symptoms, but this is not essential.

After the workers have finished marking the front and back of the bodies, they are asked to describe, one at a time, what health problems their marks represent. The facilitator can make a note of the nature of the health problems, beside the relevant marks. Workers are then asked for any observations they have regarding common patterns of health problems and to discuss these.

Action

The trade union facilitator and the workers can collectively draw some initial conclusions and action points from the body mapping activity. Detailed notes of workers' comments and conclusions are kept and used with the workers for action planning.

Hazard Mapping

What can hazard mapping be used for?

Hazard mapping can be used to identify workplace hazards, such as:

- noise and vibration;
- sexual harassment;
- poor scaffolding;
- chemicals;
- working alone; and
- unguarded machinery.

In addition, workers will have the chance to think about hazards which may be "hidden", for example:

- the impact of precarious contracts upon working conditions; and
- the way work is organized and scheduled.

Like body mapping, hazard mapping gives a visual picture and will often follow on from a body mapping session. Through the use of drawings, hazard mapping helps workers and their union representatives to visualize their workplace and the hazards that exist (or existed years ago). It also provides information that they can present to:

- an employer;
- a government inspector;
- a joint labour-management health and safety committee;
- a supervisor; and
- a workers' compensation representative.

Conducting a hazard mapping session

The words "HAZARD MAP" are written on large blank sheets of paper. Sticky tape and marker pens are made available. It can be helpful to have a blank sheet of paper for each different occupational or departmental group. The trade union facilitator explains what they are proposing to do.

The group of workers who have a common work area or similar work environment are asked to sketch out their hazard map collectively. It is important to encourage workers to be creative and not to worry about their drawing abilities. The drawings can be very rough, and should include:

- a sketch or outline of the physical layout of the work area(s) and any equipment, machinery or other characteristics, such as doors, loading bays and windows;
- figures representing workers (these can be simple stick figures);
- any hazards which exist and labels or descriptions for each of the hazards, such as chemicals, dusts, extreme temperatures, unguarded machinery, repetitive work, violence from clients, and any other hazards; and
- a title for the map identifying the area(s) being represented.

Workers are then asked to:

- describe their maps;
- add any further details to their maps that they think of as they are describing what they have drawn;
- make observations about what they see in each of the maps;
- make comments regarding patterns, or common hazards; and
- comment on the causes and effects.

Action

The trade union facilitator and the workers can collectively draw some initial conclusions and action points from the hazard mapping activity. Detailed notes of workers' comments and conclusions should be kept and used with the workers for action planning.

Evaluation of the TUC training project

Course materials

The course materials and mapping techniques were evaluated using:

- collective feedback from the safety representatives to the tutors;
- evaluation forms filled in by tutors and safety representatives; and
- a follow-up survey of a sample of safety representatives three months after their course.

Participants were asked to grade the body mapping course materials. The results were as follows:

- Excellent = 46%
- Very good = 24%
- Good = 30%

There were no responses grading the materials as "average" or "poor."

Analysis of body mapping by participants and tutors

Body mapping has been an overwhelming success during the pilot project. As described by one tutor, "it is an extremely fruitful way of uncovering health problems". And by another tutor, "a useful additional tool for safety reps". A participant stated: "The format can be adapted locally to differentiate between the wide range of literacy skills that may be present in the workplace, therefore making the strategy available to all members without fear of intimidation."

During the courses: action taken by trade union safety representatives

All participants tried body mapping in their workplaces. Many safety representatives identified health problems using the maps with their members. Some examples of the actions that safety representatives took as a result of body mapping included:

- raising the findings at the safety committee;
- findings used as a negotiating tool for improvements;
- new chairs now ordered to deal with the back pain that had been identified;
- change in procedures and new risk assessments requested;
- body maps used with display screen equipment and other risk assessments, and the findings placed on the agenda of the safety committee;
- working area redesigned; and
- body mapping analysis used in order to show management the underlying problems that had previously been unnoticed.

During the courses – action and a selection of tutors' views

- "I feel that the techniques may provide an extremely fruitful way of uncovering health problems. For example, one rep who I have known for six months and had many fascinating discussions with, mentioned something that had never come out before. She said that in her workplace (a care home), it was commonly accepted that if you worked there for about five years you would need a hysterectomy because manual handling was so bad. I think that body mapping has the double benefit of enabling reps to spot themes and at the same time stopping members taking such things for granted."
- Several representatives used it as a tool for making improvements. Eight out of ten said that they will use body mapping as a result of the course. Three representatives are trying to get it implemented council- and / or plant-wide.
- It encouraged representatives to speak to members and pick up issues.

Stress at work – An example of body mapping action

A representative did a body mapping exercise as an assignment on the TUC Certificate in Occupational Health and Safety. She called an informal meeting which all members attended, except one person who was on sick leave. Body maps and felt pens were provided. The information gathered from the body mapping session was converted into bar charts and displayed on the union notice board.

The findings will be taken to management at the next Health and Safety Committee meeting. The representative wants management to look into high stress levels that have been highlighted by the body mapping exercise. She thinks that stress is contributing to the high levels of headaches, stomach upsets and neck/shoulder tension. She is also of the view that lighting, display screen equipment and ventilation are contributing to the problem.

Body mapping upper limb disorders

A safety representative working in manufacturing and packing toiletries did a body mapping exercise as a project on a TUC Health and Safety Stage 2 course. A production line was chosen with five workers who do the same job which rarely changes. The representative met with the workers and gave them three different coloured stickers for each of the three main jobs on the line, and also constructed a hazard map of the line.

The results included:

- upper back and neck problems with stacking; and
- upper back, arm and wrist aches with traying off.

Short-term preventive measures have now been introduced, e.g. job rotation, whilst more permanent preventive measures are pursued. Since the project, far more workers have come to see the safety representatives and have raised issues that need tackling.

- The pilot project has now turned into workplace body mapping with other groups of workers.
- All the representatives on the course tried it out and reported back. Some are planning to use it as an ongoing method of obtaining members' views.
- In several cases, body mapping led to further action by representatives and employers. Some examples were: training programmes established; new equipment purchased; and general dialogue initiated.

Follow-up of the impact of body mapping in the workplace

Action – what did the safety representatives find out from body mapping?

Respondents were asked what they found out as a result of using body mapping techniques. The responses from the safety representatives were overwhelmingly posi-

tive. The quotes below give an impression of some of the findings from the body mapping exercises:

- Many women suffered the same aches and pains in the packing hall due to repetitive jobs.
- Men suffered with back and neck problems due to repetitive lifting of weights.
- Most had problems caused by the same equipment, i.e. back problems as the office chairs do not adjust.
- Most workers were suffering the same aches and strains.
- Problems were occurring and this was a method of identifying them, easily and in a systematic way.
- Staff were very good at communicating what parts of their body hurt or what they were suffering from, so diseases were highlighted.
- Back pain and stress-related illness were identified.

Action taken by safety representatives and management

Of the safety representatives in the impact sample, 80 per cent had taken action as a result of what they had found out as a result of body mapping.

Sixty per cent of managers in the impact sample had taken action as a result of the representations made by the safety representatives. In addition, some of the safety representatives expected management to take some action even though they had not yet done so.

Eighty per cent of the safety representatives in the sample said that they would be using body mapping with their members in the future.

Examples of action taken in the months since the courses concluded

Twenty per cent of the safety representatives who completed the impact questionnaire were interviewed by telephone, so that further information could be gathered. Examples of workplace action since the courses concluded are given below.

Body mapping stimulates changes in the way the job is done

A safety representative at a bakery introduced body mapping following a pilot TUC course. The body mapping exercise revealed back injuries and strains. In the safety representative's opinion, it was not until the workers worked on a body-mapping exercise together that they realized that other workers were getting similar aches and strains.

After the course had finished, the safety representative took the findings to management. As a result, the way that the job is done has been changed with the introduction of:

- new, smaller baskets that do not hold as much of the product; and
- job rotation and task variety.

The safety representative says that the members are much happier as a result of the changes.

Action plans following body mapping

A safety representative compared two groups of members' responses to body mapping. One group was doing a lot of manual handwriting, and the other group was using display screen equipment. Both groups suffered from similar aches and pains in the back, head and hands.

The safety representative used these examples at the health and safety committee meeting. The response from management was not particularly positive, but the occupational health and safety adviser supported the findings. As a result, an action plan has been agreed to prioritize the improvement of the risk assessment procedures. Body mapping will be used as part of this wider process.

The safety representative has also run a one-day body mapping briefing for eight other safety representatives at the workplace, and feels that body mapping is a really useful tool that members find very easy to use.

Conclusions from the pilot TUC mapping project

The use of mapping in this TUC pilot exercise has proved to be an overwhelming success.

During and after the pilot courses:

- It is clear that body mapping works best when it is facilitated by the union safety representative as a collective exercise with a small group of members / workers.
- There has been a positive response from both safety representatives and workers.
- The response from management has not always been positive.
- There has been action taken in the workplace by both safety representatives and management.
- Improvements have been made to work processes and tasks.
- Procedures have been developed to incorporate body mapping and hazard mapping.
- Body mapping has sometimes been integrated into risk assessment procedures so that safety representatives can identify ill-health symptoms that need to be addressed.

As a result, the amended body mapping workbook has now been posted on the TUC tutors' web site, TUC learn*O*nline, for use on other courses.

In practice, it seems clear that body mapping is a very helpful tool for trade union representatives to represent and articulate effectively the health and safety interests of workers.