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## Addressing the safety of forest workers

*C. Peirano*

*In Argentina, a national training programme has halved work-related accidents in the forest.*

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Forest-based employment may be thought of as a “green” job – work that contributes substantially to preserving or restoring environmental quality (UNEP, 2008). Nevertheless, the working conditions of many people employed in the forest sector are still far from adequate. Ensuring worker safety and welfare is critical if the forest sector is to provide “decent” jobs<sup>1</sup> and to serve as a development tool for a sustainable future.

Forest work is considered among the most hazardous in the world (UNEP, 2008). The International Labour Organization (ILO, 2011) recently recommended that both training and social dialogue be improved to break the vicious circle of

low productivity, low wages and high accident rates that characterize the forest sector. Among other things, it proposed that social dialogue be promoted to create an enabling environment for labour unions, employers’ associations and collective bargaining practices and to ensure that relations between workers and management are based on regular consultation and fairness on both sides.

<sup>1</sup> The ILO defines decent work as productive work in conditions of freedom, equity, security and human dignity, with the protection of rights, the delivery of a fair income and the provision of social protection.

*Previous page: Chainsaw operators in native forest. They have highly dangerous jobs, and much more attention to their safety is needed. The often informal nature of their employment, however, hinders improvement*

This article describes a process along these lines in Argentina’s forest sector,<sup>2</sup> where the incidence rate of forest accidents<sup>3</sup> was cut in half between 2004 and 2010. During this period, efforts were made to improve ongoing training and social dialogue – as per the ILO recommendation – in order to reduce the high rate of occupational accidents in the sector.

**FOREST WORK IN ARGENTINA**

Argentina has approximately 30 million hectares (ha) of native forest and 1.2 million ha of planted forest. About ninety-five percent of the forest industry’s timber supply is obtained from planted forests. An average 38 000 ha of planted forest were established (with exotic species, mainly pine, eucalyptus and willow) each year in the period 2005–2010 (FAO, 2010), while the average annual timber harvest was about 11 million m<sup>3</sup> (Argentine Forest Association, 2012). According to FAO (2010), 32 000 people were employed in



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**Workshops were held to, among other things, develop standardized job categories in the forest sector**

the forest sector in 2000, the most recent year for which an estimate is available.

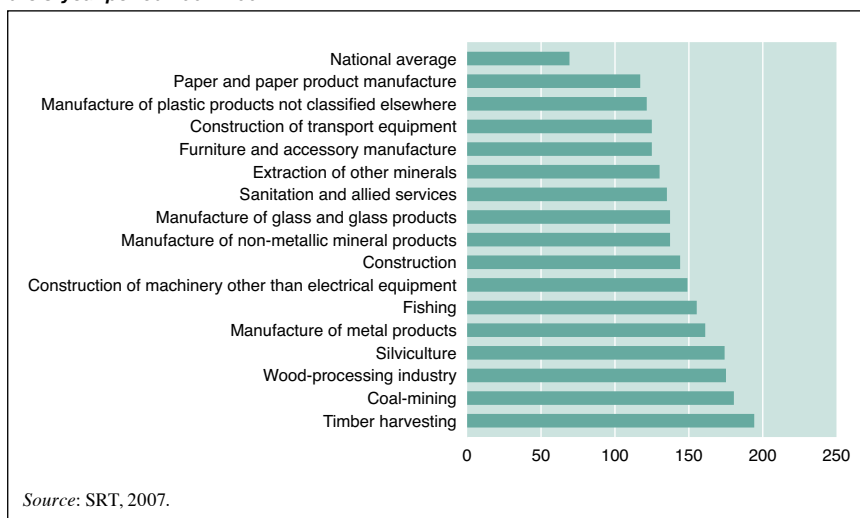
Forest work is characterized by high informality and low worker safety, with the most hazardous jobs carried out by people with little formal education. According to data from the Supervisory Authority for Occupational Risks (SRT), the sector formally employed an average of 9 200 people during the 2003–2010 period. If the estimate of a total workforce of 32 000 is correct, two out of every three forest jobs are informal. This figure is high, but it is in line with ILO’s estimates that 66–72 percent of all workers globally are employed informally (ILO, 2011). In

the forest sector, it is estimated that the majority of informal work is associated with native forests. Almost 40 percent of formal forest employment is in Misiones, the country’s main forest-industry province (SRT, 2007).

According to SRT (2007), the forest-related activities of silviculture, wood product industry (i.e. wood processing) and timber harvesting were three of the four most hazardous occupations in the three-year period 2002–2004 (coal-mining being the other in this group). The reported figure of 195 accidents per 1 000 workers in timber harvesting made that subsector the most hazardous in the country (Figure 1).

The informality and high occupational risk of the forest sector are compounded by the high social vulnerability of workers.

**1 Ranking of the 16 activities in Argentina with the highest workplace accident rates per 1 000 workers for the 3-year period 2002–2004**



<sup>2</sup> The programme described in this article encompasses not only forest operations such as silvicultural operations and timber harvesting but also the wood-processing industry. However, this article focuses on labour conditions in forest operations.

<sup>3</sup> The incidence rate refers to the number of reported cases of accidents in the workplace per 1 000 workers (not including accidents incurred on the way to or from work) during the calendar year. See [www.srt.gov.ar](http://www.srt.gov.ar) for more information.

For example, a recent study revealed that 78 percent of surveyed chainsaw operators had only primary-school education, in most cases incomplete, and their wages were the main source of household income (Peirano, Bustos and Nahirňak, 2009).

Informality, low educational levels and a work environment involving hazardous activities, often in remote areas, present major challenges for improving job safety and providing forest-sector workers with job security. Forest workers have little hope of a sustainable future without safe, decent, reliable work.

Tackling this issue in the forest sector – and especially in timber harvesting – was given high priority by the Argentine Forest Association (the main association of Argentina's forest enterprises) and the Argentine Union of Rural Workers and Stevedores (UATRE, the main union of forest-sector workers). These two bodies saw an opportunity in the launch of a state-funded programme by the Ministry of

Labour, Employment and Social Security (MTEySS) in 2004 to certify labour competencies and training. The aim of the Labour Competencies Certification and Lifelong Training Programme is to ensure that workers in any sphere have appropriate training, thereby reducing the level of occupational risk, increasing employability and allowing the spread of better practices in the sector (Peirano, Bustos and Nahirňak, 2009).

### **Labour Competencies Certification and Lifelong Training Programme**

The Labour Competencies Certification and Lifelong Training Programme is designed to obtain the active participation of organizations representing employers, unions and academics based on guidelines laid down by MTEySS. The forest sector was one of the first sectors in which key bodies signed a framework agreement for implementing the programme.

Under the programme, jobs are standardized, evaluation tools are developed

in accordance with norms, evaluators are trained, workers are evaluated, those demonstrating the necessary competencies receive certificates, and a curriculum and teaching materials for training are developed. Certification bodies were established for the forest sector coordinated by business representatives from the Argentine Forest Association, UATRE, and equivalent bodies for fire management (the National Fire Management Plan) and timber and furniture (business and workers' associations for the timber sector). The National Council for the Labour Competencies Certification and Lifelong Training Programme was established in collaboration with these institutional representatives, and a network of forest-sector, timber and furniture training institutions was created.

The main features of the programme are:

- *state policy*: promoted by MTEySS and involving a technical team that will remain in place for an 8-year period;



*Tree-pruners in Patagonia, Argentina: tree-pruning is one of the standardized job categories for which ongoing training, curricula and teaching materials have been developed and instructors trained in their use*

**A team of firefighters awaits evaluation as chainsaw operators, an important part of their skill development**



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- *competencies*: following ILO guidelines on the development of competencies, which entail standardization, worker certification and ongoing training;
  - *social dialogue*: carried out by representatives of business and workers' associations, with the support of MTEySS and requiring the active involvement of the principal managers and supervisors of workers involved in the programme;
  - *territory-based nature*: although national in scope, actions under the programme are concentrated where significant forest-sector activities are located;
  - *workers' certification*: allows the recognition of workers' knowledge and is used in designing workers' training and professional qualifications;
  - *lifelong training*: the ultimate goal of the programme – the continuing training of workers to a standard validated and legitimized by business and unions;
  - *institution-building*: includes competency-based training for teachers.
- By the end of 2011, eight forest-operations job categories had been standardized

(firefighter, chainsaw operator, agrochemical preparer and applier, planter, pruner, freight machine operator, harvesting supervisor and forestry supervisor), 52 evaluators had been trained and approximately 3 500 workers had been evaluated. According to data from MTEySS, between 2004 and the end of 2011 about 3 200 workers in those job categories had been trained with programme funds and the remainder had been trained with supplemental funding from enterprises. Ongoing training, curricula and teaching materials had been developed for the eight standardized job categories, and about 20 instructors had been trained in their use.

The programme attracted significant participation from forest-sector employers and union officials. The standardization process was carried out with the involvement of leading enterprises in the sector, which collaborated by identifying experienced workers and supervisors. Using guidelines provided by MTEySS, the standardization process, which was carried out in collaboration with the region's main training institutions, took about three months for each job category and involved workshops, interviews and field trips. Each standard was validated in a workshop with

the participation of counterparts from employers and unions.

Special care was taken in identifying evaluators for training; they needed to have had more than five years' experience, including in staff management. The human resource managers and owners of contracting companies were invited to the evaluator-training workshops in order to raise their awareness and involve them directly in the process.

This process was initially supported by medium- and large-sized forest enterprises (mainly those based in the planted-forest estate) with either environmental certification (for example ISO 14000) or forest management certification (e.g. the Forest Stewardship Council) and located in the main forest zone (Misiones and Corrientes). Later, smaller forest enterprises became involved, particularly forest-service contractors. By the end of 2011, workers from 12 of Argentina's provinces had been evaluated.

In every case, the scope of the programme was confined to formally employed planted-forest workers. This limitation was a concern, and with a view to including native-forest workers, evaluations were later carried out in the



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## Number of forest workers with insurance cover for occupational risk: Argentina, 2003–2010

workers was similar to the 2003 figure. This latter decrease reflects, in part, an overall decline in the economy, but it also had structural causes.<sup>4</sup> For example, the 2008 global financial crisis hit the international timber market hard, reducing activity, and there has also been a major recent expansion in the mechanization of forest harvesting.

### Changes in the incidence of work-related accidents in the forest sector

Figure 3 shows a dramatic (49 percent) decline in occupational accidents in timber harvesting between 2003 and 2010. In 2003, there were 198 accidents per 1 000 workers, with a rate of occupational risk almost double that of the agriculture sector and more than three times the national average. In 2010, 101 accidents were reported per 1 000 workers, bringing the forest sector close to the average for agriculture and to less than double the national average. In the same period, the overall national rate of work-related accidents fell by 10 percent, while the rate in the agriculture sector fell by 15 percent. Throughout the period, 93 percent of reported forest accidents entailed a loss of working days and/or resulted in incapacitating injury.

Table 1 shows that the largest reductions in work-related accidents between 2003 and 2010 took place in forest services (50 percent reduction), forestation, and felling and rough dressing of trunks and timber (both 47 percent), while other forest operations (which include charcoal production and forest tree nurseries) showed a reduction of 20 percent. It should be noted

country's north (Chaco and Formosa, with visits to Salta and Jujuy). These evaluations showed that the situation of workers in those areas was precarious and that the first action should be to provide training so that safety standards could be adopted before a start was made on certifying the competencies of workers. The informal nature of employment was seen as a constraint.

The situation in Chaco was eased by the signing of a Workers' Co-responsibility Agreement by a local employment association, UATRE, the Government of Chaco and MTEySS, facilitating the formalization of employment, starting in 2010. This move provided incentives for launching a major training process, together with institution-building for ongoing training, in 2011. The impacts of these recent actions have not yet been analysed.

### IMPACTS OF THE PROGRAMME

The reach of the overall programme was good: by the end of 2011, about 30 percent of formally employed forest workers had been evaluated, and it is estimated that more than 50 percent had received competencies training. The next question is whether the process has affected the incidence of forest accidents in the six years since this major public programme got under way.

#### Change in coverage for occupational risk

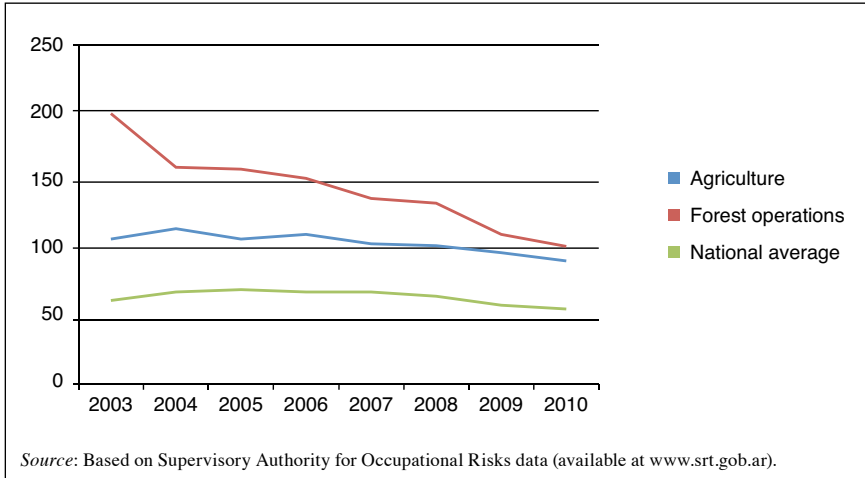
The registration of forest workers for labour risk insurance cover, an indicator of formal employment, increased by 47 percent between 2003 and 2008, from 7 601 to 11 860 individuals (Figure 2). This increase was reversed in the following two years: in 2010 the number of registered

**TABLE 1. Incidence of work-related accidents for various types of forest work: Argentina, 2003–2010**

Description	2003	2004	2005	2006	2007	2008	2009	2010
Incidence (per 1 000)								
Forestation	122.7	111.2	150.2	130.0	118.9	115.4	86.0	67.8
Forest services	260.0	190.2	168.4	164.0	162.2	166.2	136.5	129.6
Felling and rough dressing of trunks and timber	183.3	193.1	181.3	173.6	125.6	92.2	89.8	100.1
Other forest operations	109.2	124.8	121.5	122.6	96.4	107.2	95.0	87.3

<sup>4</sup> Unpublished survey carried out by the author among major forest-sector companies in February 2012.

**3**  
**Incidence of work-related accidents per 1 000 workers in the agriculture and forest sectors and national average, Argentina, 2003–2010**



that the standardized jobs correspond to the first three groups of workers.

The reduction in work-related accidents started in 2004 for forest services, in 2005 for felling and rough dressing of trunks and timber, and in 2006 for forestation. Note, however, that data for the period do not indicate any improvement in the percentage of formal employment in the sector.

**CONCLUSION**

This article has shown that Argentina’s formal forest sector was able to achieve a steady fall in work-related accidents in forest operations – almost five times the national fall – between 2004 and 2010. The reduction in the accident rate coincided with the launch and implementation of the Labour Competencies Certification and Lifelong Training Programme, which, among other things, instituted a dialogue among employers, workers and academics.

It is estimated that the programme was able to evaluate about 30 percent of formal workers, the group for which statistics are available regarding work-related accidents. A specific study would be needed to establish causality; for example, the trend towards greater mechanization in timber harvesting might have had some impact on accident rates. Nevertheless, the data presented here are encouraging, and the country’s experience can be taken as a

positive example for regions wishing to put in place a systematic approach to tackling work safety and providing ongoing training to forest workers.

Various factors were involved in the success of this approach: the early involvement of the forest sector’s leading enterprises and training institutions, support from

*Forest workers pose before evaluation under the responsibility of the workers' union, UATRE*



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**A chainsaw operator refuels during an evaluation exercise**

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union representatives, a focus on building relevant competencies, and clarity regarding the objectives of MTEySS for the programme.

Certification met with rapid acceptance in the formal sector, especially among workers involved with planted forests, but it has been more difficult to achieve in areas in which informality of employment is more the norm. With the standardization of jobs, training can lead to the adoption of safety standards and help transfer skills to workers in regions with the highest incidences of informality. However, such efforts will be of limited effectiveness if working conditions are not improved and informality itself is not reduced.

The reduction in occupational risk achieved in Argentina between 2004 and 2011 shows that the forest sector is capable of generating safer jobs. If the sector is to play its potentially significant role in providing green, decent jobs as part of a sustainable future, the further formalization of employment is necessary. ♦



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