

Appendixes

International Regulation of Shift Work

Policies and regulations on shift work vary widely from country to country. This appendix examines regulation of wages, hours, rotation schedules, and rest periods in other nations. It also reports on special provisions for women and specific industries (e.g., the transportation industry), as well as social support services for night and shift workers. The International Labor Organization's (ILO) global role in encouraging and coordinating protective legislation is also discussed.

An estimated 7 to 15 percent of the work force in industrialized countries is engaged in some form of night work (6). As of 1988, 13.3 percent of workers in France, 5.4 percent in Sweden, 12.5 percent in Switzerland, and 15 percent in Norway engaged in some form of night work.

The degree to which various countries address the needs of their shift workers via regulation varies. Most governments regulate basic matters such as extra pay for night work. Some governments, however, address the physiological dangers of night and shift work directly. For example, Bulgarian laws prescribe reduced hours for night work on the assumption that "the performance of night work is harmful to the human organism, as a result of changes in the normal cycle of the physiological functions in the human body which are caused by its performance" (3). In Bolivia, the statutes reflect a belief that "night work is contrary to man's physiology, exhausting and dangerous to the health if practiced as a normal system" (3). In France, the laws allow someone who has been working at night for a long period (5 years' continuous night work or 10 years total) to receive top priority for openings on the day shift. In Angola, a person with medical problems gets a similar priority for openings on the day shift (6). Other countries make different provisions, outlined later in this appendix.

Special arrangements and regulations for shift workers are by no means universal, however. Often, regulations do not address all the needs of shift workers, and when they do, efforts to meet those needs are rarely systematic. Actual response to the needs of the workers depends on a variety of external factors. For example, in some countries the cost of enacting and enforcing protective legislation could be greater than the benefit to the workers. This may be particularly true in less-developed countries, where strict regulations on shift work could slow needed economic development. In other countries, however, where high wages make automation a viable option in some sectors, shift work could be reduced with little economic impact. In still other countries, economics could necessitate the hiring of more shift workers; this is the present position of France and England (6).

In some cases, regulation of shift work did not stem from conscious attempts to address the specific problems of night or other shift workers, but from some other labor initiative, such as a general campaign to reduce work hours. In some countries, such as the United States, the legal framework may make it difficult to enact a national standard. In the United States, many of the regulations fall under the jurisdiction of the States, not the Federal Government (11). The issue of a national standard is unresolved because there has never been an attempt by the Federal Government to test the Constitution on this point. In other countries, traditional methods of dealing with labor problems without government intervention are firmly entrenched. In the United Kingdom, for example, labor problems have been solved through collective agreements, and the government has traditionally not regulated such areas, including shift work. Finally, the absence of national regulation of shift work in the majority of countries can be because "special rules for shift work exist as part of plant agreements applicable to a particular region or branch of industry" (10). This is true in Canada, which has regulations on the provincial level.

The end result is that some countries have extensive regulation and support services for shift workers, and others have virtually none. In a few nations, there are extensive laws that cover a wide range of issues, including leisure facilities, housing facilities, and retirement programs for workers. For the most part, though, regulations dealing with nonstandard work schedules are limited to hours and wages. The most common regulation seems to be increased pay. The second most common seems to be fewer hours.

Few countries have no guidelines. Of the countries analyzed here, six—China, the United States, Canada, the Dominican Republic, Tunisia, and Nigeria—have no national regulation of night or shift work (apart from a few specific industries such as the transportation sector). As noted before, however, regional regulations can exist in the absence of national regulations; therefore, absence of national regulations does not necessarily mean absence of all regulations. Table A-1 displays regulations of work rest, and shift work in 49 countries.

Special night work regulations for certain industries or segments of the population are common. In the United States, for example, there are Federal regulations governing some sectors of the transportation industry (e.g., airlines and marine shipping). Transportation is regulated in many other countries, including Greece, Ireland, Austria, Japan, Spain, and Turkey. Agriculture, on the other hand, is often specifically exempted from shift work regulation, as it is in New Zealand, Norway, Finland,

Table A-I—Regulation of Work, Rest, and Shift Work in 49 Countries

	<i>Argentina</i>	<i>Australia</i>
<i>Major source of regulation</i> ^a	Legislation	Collective bargaining; mandatory government arbitration
<i>Maximum daily hour</i> ^b	8, but maybe exceeded so long as weekly total does not exceed 40	No general regulations
<i>Maximum weekly hours</i>	48	38-40, but maybe averaged over a period exceeding a week
<i>Rest during the day</i> ^d	For meals (at home if possible) and for duties such as feeding of child	Usually 0.5 hour if work exceeds 5 hours
<i>Minimum rest between days or shifts</i> ^e ..	12 hours	Usually 10 hours
<i>Minimum week/y rest</i> ^f	No work from 1 p.m. Saturday to midnight Sunday	1.5 to 2 days
<i>Shift work (except night work)</i> ^g	Maximum limits on daily and weekly working hours waived, but must average no more than 8 hours/day and 48 hours/week over 3-week period	Maximum of 11 shifts in 12 days, usually extra pay
<i>Night work only</i> ^h	Maximum of 7 hours/night	Extra pay, RWC ⁱ
<i>Data valid as of</i> ^j	1984 ^l	1986 ^l
	<i>Austria</i>	<i>Belgium</i>
<i>Major source of regulation</i>	Legislation	Legislation
<i>Maximum daily hours</i>	10 (8); RC ^m	8, but 10 hours/day if worker is unable to return home every day; maximum of 11 in special cases (including shift work)
<i>Maximum week/y hours</i>	50 (40); RC	40 (50 for shift work; up to 65 hours above average)
<i>Rest during the day</i>	0.5 hour if work exceeds 6 hours	No general regulations
<i>Minimum rest between days or shifts</i> ..	11 uninterrupted hours	No general regulations
<i>Minimum week/y rest</i>	36 uninterrupted hours, except for shift work	24 hours on Sunday
<i>Shift work (except night work)</i>	Maximum of 2 consecutive shifts; maximum of 40 hours/week, averaged	Maximum of 11 hours/day; maximum of 50 hours/week; maximum of 40 hours/week for 13 weeks
<i>Night work only</i>	2 to 6 extra vacation days per year; special pension; extra breaks	Generally prohibited; exceptions up to 11 hours/day; up to 12 hours/day for work that cannot be disrupted; maximum of 50 hours/week so long as it averages 40 hours/week or less over 13 weeks
<i>Data valid as of</i>	1986 ^l	1986 ^l
	<i>Brazil</i>	<i>Bolivia</i>
<i>Major source of regulation</i>	The constitution; legislation, which may sometimes be overridden by collective bargaining	Legislation
<i>Maximum daily hours</i>	10	8
<i>Maximum weekly hours</i>	(48)	(48); RWC
<i>Rest during the day</i>	No general regulations	At least 2 hours; no more than 5 hours of work at a stretch
<i>Minimum rest between days or shifts</i> ..	No general regulations	No general regulations
<i>Minimum weekly rest</i>	1 day/week	Work prohibited on Sundays
<i>Shift work (except night work)</i>	Extra pay	For "team work" hours averaged over 3 weeks; must meet normal daily and weekly limits
<i>Night work on/y</i>	Extra pay; 52.5 minutes are equal to 1 hour of day work	Maximum of 7 hours; extra pay; RWC
<i>Data valid as of</i>	1977 ^l	1980 ^l

	Bulgaria	Canada
<i>Major source of regulation</i>	Legislation	Provincial legislation
<i>Maximum daily hours</i>	Maximum of 8.5 for 5-day workweek; maximum of 8 for 6-day workweek; maximum of 6 days before rest days; RC	8
<i>Maximum week/y hours</i>	Maximum of 42.5 for 5-day workweek; maximum of 46 for 6-day workweek; RC	48 (40)
<i>Rest during the day</i>	0.5 hour	No general regulations
<i>Minimum rest between days or shifts</i> . .	12 uninterrupted hours	No general regulations
<i>Minimum weekly rest</i>	48 uninterrupted hours for 5-day workweek; 24 uninterrupted hours for continuous-process workers, shift workers, and 6-day workweek	1 day
<i>Shift work (except night work)</i>	See above; no consecutive shifts, regular rotations	No general regulations
<i>Night work only</i>	For 5-day workweek, maximums of 7 hours/night and 35 hours/week; for 6-day workweek, maximums of 6 hours/night and 36 hours/week	No general regulations
<i>Data valid as of</i>	1986 ⁱ	1986 ⁱ
	China	Colombia
<i>Major source of regulation</i>	Legislation	Legislation
<i>Maximum daily hours</i>	8	Maximum of 8; not applicable to shift work
<i>Maximum week/y hours</i>	48	Maximum of 48; maximum of 56, when necessary, for shift work
<i>Rest during the day</i>	Required but unspecified; extra hour for nursing mothers for feeding	Required but unspecified
<i>Minimum rest between days or shifts</i> . .	No general regulations	No general regulations
<i>Minimum week/y rest</i>	No general regulations	Paid rest on Sundays
<i>Shift work (except night work)</i>	No general regulations	Extra pay; may work over the daily and weekly limits up to 56 hours/week; may work on Sundays, but must receive advance notice and must receive a compensatory rest day
<i>Night work on/y</i>	No general regulations	Extra pay; RWC
<i>Data valid as of</i>	197@	1976J
	Czechoslovakia	Denmark
<i>Major source of regulation</i>	Legislation	Collective agreement
<i>Maximum daily hours</i>	9 (8)	Usually 8, by national collective agreement
<i>Maximum weekly hours</i>	46 (42.5); may be averaged; RC	Usually 39
<i>Rest during the day</i>	0.5 hour if work exceeds 5 hours	No general regulations
<i>Minimum rest between days or shifts</i> . .	12 uninterrupted hours; 8 for shift workers; RW ⁿ	11 hours/day; RC
<i>Minimum weekly rest</i>	32 uninterrupted hours	1 day
<i>Shift work (except night work)</i>	Maximum of 7.5 to 8.5 hours/shift, depending on circumstances; maximum of 56 hours/week for continuous shift workers; minimum of 8 hours rest between shifts	Earn 3 extra hours of leave every 40 hours of work; minimum of 8 hours' rest when changing shifts
<i>Night work only</i>	Extra pay; RWC	No general regulations; RC
<i>Data valid as of</i>	1986 ⁱ	1986 ⁱ
	Dominican Republic	Ecuador
<i>Major source of regulation</i>	Legislation	Legislation
<i>Maximum daily hours</i>	8	Maximum of 8, unless 9 hours are worked to free Saturdays; RC
<i>Maximum weekly hours</i>	44; not applicable to shift or continuous work	44; RC
<i>Rest during the day</i>	No general regulations	No general regulations
<i>Minimum rest between days or shifts</i> . .	No general regulations	No general regulations
<i>Minimum week/y rest</i>	24 uninterrupted hours on Sundays; usually no work permitted on Saturday afternoons	No work permitted on Sundays
<i>Shift work (except night work)</i>	No general regulations	No general regulations
<i>Night work only</i>	No general regulations	Extra pay; RWC
<i>Data valid as of</i>	1986 ⁱ	197@

Table A-I—Regulation of Work, Rest, and Shift Work in 49 Countries—Continued

	Finland	France
<i>Major source of regulation</i>	Legislation	Legislation
<i>Maximum alai/y hours</i>	8; 9 if weekly total is less than or equal to 40	10
<i>Maximum weekly hours</i>	48 (40); RC	48 (39); must average to maximum of 46 hours/week over 12 weeks; RC
<i>Rest during the day</i>	1 hour if work exceeds 7 hours, except for shift work; RC	No general relations; RC
<i>Minimum rest between days or shifts</i> . .	12 hours	No general regulations; RC
<i>Minimum weekly rest</i>	30 uninterrupted hours; RC	24 hours on Sundays
<i>Shift work (except night work)</i>	No general regulations	No consecutive shifts; maximum of 35 hours/week averaged over a year
<i>Night work only</i>	Prohibited	No general regulations; RWC
<i>Data valid as of</i>	1986 ¹	1986 ¹
	Germany	
<i>Major source of regulation</i>	Legislation	
<i>Maximum daily hours</i>	10 (8); RC	
<i>Maximum weekly hours</i>	48; RC	
<i>Rest during the day</i>	0.5 hour if work exceeds 6 hours; RWC	
<i>Minimum rest between days or shifts</i> . .	11 uninterrupted hours; RC	
<i>Minimum weekly rest</i>	24 hours, usually on Sunday; RC	
<i>Shift work (except night work)</i>	May work up to 16 hours once every 3 weeks to change shift, but must be granted uninterrupted rest of 24 hours at least twice during the 3 weeks; RC	
<i>Night work only</i>	No general regulations; RW	
<i>Data valid as of</i>	1986 ¹	
	Greece	Hong Kong
<i>Major source of regulation</i>	Legislation	Legislation
<i>Maximum daily hours</i>	8; 9 for 5-day week	No general regulations; RWC
<i>Maximum weekly hours</i>	48 (40); 56 for shift work	No general regulations; RWC
<i>Rest during the day</i>	No general regulations	No general regulations; RWC
<i>Minimum rest between days or shifts</i> . .	No general regulations	No general regulations
<i>Minimum weekly rest</i>	24 hours, usually on Sundays	24 uninterrupted hours/week; RWC
<i>Shift work (except night work)</i>	Hours averaged over 8 weeks, must conform to normal limits	No general regulations
<i>Night work only</i>	Extra pay; RWC	No general regulations; RWC
<i>Data valid as of</i>	1986 ¹	1981 ¹
	Hungary	India
<i>Major source of regulation</i>	Legislation and collective bargaining	Legislation, but with wide powers to make exceptions by the state governments
<i>Maximum daily hours</i>	12	9, 10.5 including rest time; RC; not applicable to shift work during change of shifts
<i>Maximum weekly hours</i>	40 for industry and government; 42 for the rest of the industries	48; RC
<i>Rest during the day</i>	One 20-minute break/day	At least 0.5 hour/5 hours
<i>Minimum rest between days or shifts</i> . .	11 uninterrupted hours	No general regulations
<i>Minimum week/y rest</i>	1 day/week mandatory; 2 days usual	No general regulations
<i>Shift work (except night work)</i>	Extra pay; regular rotations unless worker requests otherwise; maximum of 36 to 40 hours/week	No general regulations; double shifts allowed
<i>Night work only</i>	Extra pay; regular rotations unless worker requests otherwise; maximum of 36 to 40 hours/week	No general regulations
<i>Data valid as of</i>	1983 ¹	1979

	Ireland	Israel
<i>Major source of regulation</i>	Legislation	Legislation and collective agreement
<i>Maximum alai/y hours</i>	11 (9); RC	8; 7 on the day before holidays and days of rest
<i>Maximum weekly hours</i>	60 (48); maximum of 56 for shift work; RC	47
<i>Rest during the day.</i>	0.5 hour/5 hours; RC	No general regulations
<i>Minimum rest between days or shifts</i> . .	No general regulations; RWC	No general regulations
<i>Minimum week/y rest</i>	No work allowed on Sunday; Saturday short day; shift work exempted; RC	36 uninterrupted hours; 25 for shift workers
<i>Shift work (except night work)</i>	Not allowed unless granted special license (maximum of 48 hours/week averaged over 3 weeks) or required by the nature of the work (maximum of 56 hours/week); minimum of 8 hours between shifts; 15-minute break required 3 to 4 hours into shift; no double shifts	No general regulations; lower minimum weekly rest
<i>Night work only.</i>	Prohibited	Maximum of 7 hours/night; RWC
<i>Data valid as of.</i>	1989 ¹ °	1986¹
	Italy	Jamaica
<i>Major source of regulation</i>	Legislation	Legislation
<i>Maximum daily hours</i>	8; RC	(8)
<i>Maximum weekly hours</i>	48; shift work can be averaged over a year	40
<i>Rest during the day.</i>	No general regulations; RC	<i>No</i> general regulations
<i>Minimum rest between days or shifts</i> . .	No general regulations; RC	No general regulations
<i>Minimum week/y rest</i>	24 hours, usually on Sundays	No work permitted on Sundays; usually no work on Saturdays
<i>Shift work (except night work)</i>	No general regulations	No general regulations
<i>Night work only.</i>	No general regulations; RWC	No general regulations; RWC
<i>Data valid as of.</i>	1986¹	19831
	Japan	Morocco
<i>Major source of regulation</i>	Legislation	legislation
<i>Maximum alai/y hours</i>	8	(8 to 10, depending on how many days per week worked)
<i>Maximum weekly hours</i>	48, averaged over 4 weeks; RC	48
<i>Rest during the day.</i>	45 minutes if work exceeds 6 hours; 1 hour if it exceeds 8	No general regulations; RWC
<i>Minimum rest between days or shifts</i> . .	No general regulations	No general regulations
<i>Minimum weekly rest</i>	1 day	Uninterrupted 24 hours per week, starting from midnight
<i>Shift work (except night work)</i>	Maximum of 10 hours/day; maximum of 60 hours/week averaged over 4 weeks; RC	Prohibited
<i>Night work on/y.</i>	Extra pay; RWC	No general regulations; RWC
<i>Data valid as of.</i>	1986 ¹	1985¹
	Netherlands	New Zealand
<i>Major source of regulation</i>	Legislation	Combination of legislation, arbitration, and collective agreement
<i>Maximum daily hours</i>	8.5; RC	8
<i>Maximum week/y hours</i>	48 (40)	40
<i>Rest during the day.</i>	If work exceeds 5.5 hours, 0.5 hour within the first 4.5 hours	By collective agreement
<i>Minimum rest between days or shifts</i> . .	No general provisions	By collective agreement
<i>Minimum weekly rest</i>	No work allowed on Sundays or Saturday afternoons	2 days
<i>Shift work (except night work)</i>	Prohibited; when changing shifts, up to 18-hour shifts allowed	No general regulations
<i>Night work only.</i>	Prohibited without special permit; hours must be approved by minister or fulfill either: 1) maximum of 48 hours/week averaged over 3 weeks, maximum of 54 hours in any given week, and maximum of 144 in any given 3-week period; or 2) maximum of 60 hours/week averaged over 4 weeks, and maximum of 56 hours in any given week and maximum of 192 hours over any given 4-week period	No general regulations; RC
<i>Data valid as of.</i>	198611	1986 ¹

Table A-I—Regulation of Work, Rest, and Shift Work in 49 Countries-Continued

	Nigeria	Norway
<i>Major source of regulation</i>	Legislation	Legislation
<i>Maximum daily hours</i>	No general regulations	8
<i>Maximum weekly hours</i>	No general regulations	40; 38 for revolving shift work; 36 for continuous shift work
<i>Rest during the day</i>	1 hour if work exceeds 6 hours	0.5 hour if work exceeds 8 hours
<i>Minimum rest between days or shifts</i> . .	No general regulations	10 hours; RC
<i>Minimum weekly rest</i>	No general regulations	36 hours, 24 of which must be uninterrupted
<i>Shift work (except night work)</i>	No general regulations	See above
<i>Night work only</i>	No general regulations	No general regulations; RC
<i>Data valid as of</i>	1984 ¹	1986 ¹
	Panama	
<i>Major source of regulation</i>	Legislation	
<i>Maximum daily hours</i>	8; 7 for night shift; 7.5 for mixed shifts	
<i>Maximum weekly hours</i>	48; 42 for night workers; 45 for mixed workers	
<i>Rest during the day</i>	Minimum of 0.5 hour	
<i>Minimum rest between days or shifts</i> . .	No general regulations	
<i>Minimum weekly rest</i>	24 uninterrupted hours	
<i>Shift work (except night work)</i>	After a double shift, worker must receive 12 uninterrupted hours of rest; extra pay	
<i>Night work only</i>	Maximum of 7 hours/day; maximum of 7.5 hours/day if shift is mixed day-night shift; extra pay; RW	
<i>Data valid as of</i>	197 [@]	
	Papua New Guinea	Philippines
<i>Major source of regulation</i>	Legislation, collective agreements, court awards, common rules	Legislation
<i>Maximum daily hours</i>	8	8
<i>Maximum weekly hours</i>	44 for rural areas, 42 for urban	48
<i>Rest during the day</i>	No general regulations	1 hour/day for meal; short rest breaks required but not specified
<i>Minimum rest between days or shifts</i> . .	No general regulations	1 day, normally Sundays
<i>Minimum weekly rest</i>	No general regulations	No general regulations
<i>Shift work (except night work)</i>	Extra pay	Extra pay (10%); RWC
<i>Night work only</i>	No general regulations	197 [@]
<i>Data valid as of</i>	1986 ¹	
	Poland	Romania
<i>Major source of regulation</i>	Legislation	Legislation
<i>Maximum daily hours</i>	8 for 6-day week; 9 for 5-day week	8; RWC
<i>Maximum weekly hours</i>	46 (42)	46; RWC
<i>Rest during the day</i>	No general regulations	0.5 hour plus lunch break
<i>Minimum rest between days or shifts</i> . .	No general regulations	12 uninterrupted hours
<i>Minimum weekly rest</i>	No work on Sundays; usually no work on three Saturdays/month	48 uninterrupted hours twice a month; 24 uninterrupted hours on the other weeks; usually this rest falls on Sundays
<i>Shift work (except night work)</i>	Maximum of 42 hours/week, averaged	Extra pay
<i>Night work only</i>	Extra pay	Maximum of 7 hours without diminution in pay; bonus; extra breaks; RWC
<i>Data valid as of</i>	1986 ¹	1986 ¹

	South Africa	South Korea
<i>Major source of regulation</i>	Legislation	Legislation
<i>Maximum daily hours</i>	9.25 for 5-day week; 8 for 6-day week; 8.5 hours for 6-day week if work does not exceed 5 hours/day	8; RWC
<i>Maximum weekly hours</i>	46	48, but may be averaged over 4 weeks; RWC
<i>Rest during the day</i>	1-hour meal break if work exceeds 5 hours	0.5 hour for every 4 hours
<i>Minimum rest between days or shifts</i> . .	No general regulations	No general regulations
<i>Minimum week/y rest</i>	No general regulations	1 day
<i>Shift work (except night work)</i>	Maximum of 8 hours/day for continuous shift work; maximum of 9.25 hours/day for 5 shifts/week; maximum of 8 hours/day for 6 shifts/week ; if one shift does not exceed 5 hours, maximum of 8.5 hours/day	No general regulations
<i>Night work only</i>	No general regulations	Extra pay; RWC
<i>Data valid as of</i>	1985 ⁵	1984⁴
	Spain	Sweden
<i>Major source of regulation</i>	Legislation	Legislation
<i>Maximum daily hours</i>	9	8
<i>Maximum weekly hours</i>	40	40; may be overridden by collective agreement
<i>Rest during the day</i>	15 minutes/day; RW	No more than 5 hours at a stretch
<i>Minimum rest between days or shifts</i> . .	12 uninterrupted hours	No general regulations
<i>Minimum weekly rest</i>	Sunday, plus either Saturday afternoon or Monday morning	36 hours
<i>Shift work (except night work)</i>	Maximum of 2 weeks at a time unless worker volunteers	No general regulations
<i>Night work only</i>	Extra pay; RC	Prohibited
<i>Data valid as of</i>	1986⁶	1986¹¹
	Switzerland	Tunisia
<i>Major source of regulation</i>	Legislation	Legislation
<i>Maximum daily hours</i>	No general regulations; RC	9
<i>Maximum weekly hours</i>	45 in industry, office, technical, and sales; 50 for others, including craft and commerce; 52 in shift work (60 for special cases)	48, for nonagricultural work
<i>Rest during the day</i>	15 minutes if work exceeds 5.5 hours; 0.5 hour if it exceeds 7; 1 hour if it exceeds 9	1 hour
<i>Minimum rest between days or shifts</i> . .	Work permitted from 5 a.m. in summer or 6 a.m. in the winter to 8 p.m.; RW	10 uninterrupted hours
<i>Minimum week/y rest</i>	1 day, usually Sundays	24 uninterrupted hours
<i>Shift work (except night work)</i>	Shifts must rotate every 6 weeks; extra pay; 52 rest days/year of 24 uninterrupted hours each; 9 hours/day averaged over 6 weeks; weekly rest period may be reduced to 20 uninterrupted hours	No general regulations
<i>Night work only</i>	Prohibited; for exceptions, maximum of 9 hours/day averaged over 6 weeks; maximum of 6 weeks at a stretch; RW	No general regulations
<i>Data valid as of</i>	198910	198@

Table A-I—Regulation of Work, Rest, and Shift Work in 49 Countries—Continued

	Turkey	United Kingdom
<i>Major source of regulation</i>	Legislation, but the Minister of Labor may set rules for night and other shift workers	Collective bargaining, but employers must not require excessive hours or shift patterns likely to lead to ill health or fatigue-induced accidents
<i>Maximum daily hours</i>	7.5 for 6-day workweek, 8.5 for 5-day workweek; maximums of 10.5 and 11.5, respectively	No general regulations; RC
<i>Maximum weekly hours</i>	45	No general regulations; RC
<i>Rest during the day</i>	15 minutes if work exceeds 4 hours; 0.5 hour if it lasts 4-8 hours; 1 hour if it lasts 8 hours or more	No general regulations; RC
<i>Minimum rest between days or shifts</i> . .	No general regulations	No general regulations
<i>Minimum weekly rest</i>	35 hours, beginning at 1 p.m. on Saturday	No general regulations
<i>Shift work (except night work)</i>	Minimum of 8 hours of rest when changing shifts; maximum of 1 week on night shift at a stretch	No general regulations; RC
<i>Plight work only</i>	Maximum of 7.5 hours/night; RWC	No general regulations; RWC
<i>Data valid as of</i>	1986 ¹	1989 ¹ °
	United States	Uruguay
<i>Major source of regulation</i>	State legislation	Legislation; ILO conventions
<i>Maximum daily hours</i>	No general regulations; RC	(8)
<i>Maximum weekly hours</i>	40	48
<i>Rest during the day</i>	No general regulations	No general regulations
<i>Minimum rest between days or shifts</i> . .	No general regulations	No general regulations
<i>Minimum weekly rest</i>	No general regulations	No work on Sundays, plus another day of rest during week; 36 uninterrupted hours for commercial sector; RWC
<i>Shift work (except night work)</i>	No general regulations	No general regulations
<i>Night work only</i>	No general regulations	No general regulations; RWC
<i>Data valid as of</i>	1986 ¹	1980 ¹
	U. S.S.R.	Venezuela
<i>Major source of regulation</i>	Legislation	Legislation
<i>Maximum daily hours</i>	10 (8)	8
<i>Maximum weekly hours</i>	41; RC	418
<i>Rest during the day</i>	Maximum of 2 hours for each 4 hours worked	0.5 hour; no more than 5 hours of continuous work
<i>Minimum rest between days or shifts</i> . .	At least twice the number of hours in the last shift worked	No general regulations
<i>Minimum weekly rest</i>	42 uninterrupted hours	1 day
<i>Shift work (except night work)</i>	No double shift; regular rotations, usually in 1-week cycles	No general regulations
<i>Night work only</i>	Extra pay; working hours shortened by 1 hour (nonapplicable to necessary continuous work)	Extra pay; maximum of 7 hours/day; maximum of 42 hours/week for laborer, 40 for other workers; for mixed work (up to 4 hours of night work), maximums of 7.5 hours/day and 45 hours/week
<i>Data valid as of</i>	1986 ¹	1984 ¹
	Yugoslavia	
<i>Major source of regulation</i>	Legislation; workers' decisions	
<i>Maximum daily hours</i>	No general regulations	
<i>Maximum weekly hours</i>	42	
<i>Rest during the day</i>	1 hour	
<i>Minimum rest between days or shifts</i> . .	Minimum of 12 hours	
<i>Minimum weekly rest</i>	24 hours, usually on Sundays	
<i>Shift work (except night work)</i>	No general regulations	
<i>Night work only</i>	Extra pay; 15 extra vacation days per year	
<i>Data valid as of</i>	1986 ¹	

^a**Major source of regulation:** the authority behind the regulations, usually legislation or collective bargaining. Legislation means national laws. Collective bargaining means national collective bargaining. National collective bargaining can mean one monolithic agreement between one major employers' association and one major employees' association or a multitude of collective bargains, depending on the job and the area. The common thread is that the bargains are uniform or coordinated enough so that virtually every worker in the nation is protected. The determination of whether there is such uniformity is based on the judgment of the experts and authorities within each country.

^b**Maximum daily hours:** the maximum number of hours a person can normally work in a day where standard daily hours are routinely fewer, this is noted. Many countries permit averaging of hours over a longer period; where applicable, this is noted in parentheses.

^c**Maximum weekly hours:** the maximum number of hours a person can normally work in a week; where standard weekly hours are routinely fewer, this is noted in parentheses.

^d**Rest during the day:** the breaks permitted during the day for relaxation and for meals.

^e**Minimum rest between days or shifts:** the length of the rest period required between one period of work and the next.

^f**Minimum weekly rest:** amount of rest required per week.

^g**Shift work (except night work):** all regulations regarding shift work, including rotation schedules, pay, hours, and retirement plans.

^h**Night work only:** all regulations regarding night work.

ⁱ**Data valid as of:** excludes any legislation enacted after this date.

^j**Data from *International Encyclopedia for Labour Law and Industrial Relations*, R. Blanpain (ed.) (Boston, MA: Kluwer, 1982).**

^k**RWC—restrictions on women and children.** This means that there are regulations limiting the work of these populations; e.g., they may be permitted to work fewer hours than men or only certain hours.

^l**Data from *Conditions of Work Digest*, vol. 5, No. 2 (Geneva: International Labor Organization, 1986).**

^m**RC—restrictions on children; see RWC.**

ⁿ**RW—restrictions on women; see RWC.**

^o**Data have been verified in 1989 by the relevant ministry or department of the country in question.**

NOTE: Only general, national regulations are given; local regulations are omitted, as are industry-specific regulations, such as rules on airline pilots. In addition to the restrictions on women and children (RWC, RC, RW), six exceptions exist in almost every country: One, restrictions on maximum hours, night work, and weekend work do not apply to certain around-the-clock jobs, e.g., nursing, police work, domestic work, and restaurant work. Two, the restrictions do not apply to certain industries where it is not technologically feasible to stop work, e.g., steel, textile, and agriculture during harvest. Three, during catastrophes and emergencies, restrictions are lifted. Four, in a few countries, during periods of labor shortage around Christmas, restrictions on work hours are suspended; for disasters and Christmas overtime, workers are usually entitled to compensatory rest. Five, many countries place special restrictions on pregnant or nursing women over and above the general restrictions on women; e.g., in many countries, nursing mothers receive extra breaks to feed their children. Six, professionals and managers are exempt from maximum work hour restrictions.

SOURCE: Office of Technology Assessment, 1991.

Ireland, Japan, Greece, the U. S. S.R., Hungary, and Turkey. Many countries limit the hours of work in unhealthy or dangerous occupations, including Turkey, Czechoslovakia, Yugoslavia, and Hungary. Six countries prohibit night work by women, and many regulate young people's and women's night work much more stringently than men's.

Hours and Wages

Although most employers voluntarily give night workers higher wages than day workers, many countries have laws to ensure extra pay for night work. These range from 10-percent increases (Germany and the Philippines) to 50-percent increases (Korea), with many countries in between (25 percent in Ecuador, Greece, Ireland, Japan, Portugal, Switzerland, and Spain). In other countries, extra pay for night work is often achieved by collective bargaining. Normally, employers are free to pay the workers more than prescribed by law (6). In the United States, the increase in pay for shift workers is between 7 and 10 percent.

Some governments mandate shorter work hours for night work instead of higher wages, which can have the same effect as raising wages because the workers often receive the same pay for less work. Unlike higher wages, however, shorter hours are directly protective, in that they seek to reduce the strain on the workers. In Argentina, 52 minutes of work at night is considered equivalent to an hour of daytime work. In Brazil, 52.5 minutes is equivalent to 1 hour. These conversions from 52 or 52.5

to 60 minutes are required by law and are used to calculate pay, overtime, and compliance with the maximum working hour restrictions. Some countries arrange shorter hours via collective bargaining (6). In still other countries, such as Bolivia, shorter work hours are written into the constitution (5). In Finland and Sweden, the maximum length of night work is 2 hours shorter than the daytime limit, and in Czechoslovakia it is 2.5 hours shorter. Finally, some countries grant early retirement or longer vacations for night workers instead of, or in addition to, shorter workdays. Australian night workers earn an extra week of vacation every year. Austrian night workers receive 2 to 6 extra vacation days per year, and Yugoslavian employees get 15 extra days (5,6). In both Austria and Luxembourg, night workers are entitled to early retirement by law, and Austrian night workers receive a special pension in addition.

Sometimes extended workdays are unavoidable because of technological constraints. For example, in steel mills using continuous casting techniques, any interruption in the production process damages the machinery. During harvesting season, agricultural workers must work long hours to gather all the crops on time. Mindful of such circumstances, many countries permit some workers, such as shift or seasonal workers, to work longer than normal. These countries include Argentina, Belgium, Austria, Finland, Japan, Switzerland, Bolivia, Colombia, Israel, and India. But employers must limit total work hours so that the average hours are equal to those of the average worker. For example, shift workers in Finland can work a maximum of 40 hours per week, averaged over a

2-to 3-week period. For continuous shift work, they can work a maximum of 90 hours over 3 weeks. Similarly, in Argentina the average hours worked over a 3-week period by a shift worker must conform to the limits imposed for day workers. Thus, leeway in arranging work hours is allowed in some countries, but only within the constraints of maximum total hours.

As described throughout this report, for many shift workers the arrangement of rotations is just as important as the number of hours worked. Physiological and social problems associated with night and shift work are affected considerably by the scheduling of shifts (9). Thus, most workers here and abroad strongly prefer rotating schedules to permanent night shifts (6). In response to this preference, many countries impose limits on the number of consecutive nights a person is permitted to work. Furthermore, most countries (including Finland, Greece, Hungary, Iraq, Norway, Paraguay, Turkey, the U. S. S.R., and Venezuela) encourage rotating schedules, usually on 1-week rotations. Iraq imposes a maximum of 1 month for night work, and Switzerland forbids more than 6 consecutive weeks of night work. Recent research, however, has shown that permanent night shift work may be physically, mentally, and socially better in some situations than rotating shifts and that 1-week rotations seem to be the most disruptive to biological rhythms (9).

Finally, another point of concern is double shifts. Some countries permit double shifts (India, Austria, Germany, the Netherlands, Panama), but more countries prohibit them. Many do so indirectly, by restricting the number of hours that can be worked consecutively, but the U. S. S.R., France, Ireland, Turkey, and Czechoslovakia do so directly. According to recent research, an extra-long break is advisable when shift workers are changing from a night to a day shift (6). On rotation schedules of one week or longer, shift workers build up a sleep debt during the night shift. This debt should be alleviated by extra sleep at the end of the night rotation (6). At present, no country requires this type of extra rest. Also, no country regulates the direction in which shifts rotate (i.e., forward or backward).

Other Concerns

Apart from the issues of pay and hours, shift workers have a host of other concerns. These include obtaining adequate medical supervision, food, sleep, transportation, and entertainment. Shift workers can face health problems from continually operating out of synchrony with their biological rhythms. Factory canteens often close at night, and night workers must endure relatively poor food. Sleep during the day is more likely to be interrupted than sleep at night. Transportation and entertainment schedules are usually designed around standard daytime work schedules.

Only a few countries have provisions for extra medical supervision. The most common form of supervision, where it exists, is a medical examination before a worker engages in shift work. Such supervision is required bylaw in France and Portugal and by collective agreement in Germany (6).

One characteristic complaint of the shift worker is digestive problems. Often, ulcers can be traced to the quality and availability of food. With rotating shifts, continual variation in meal times disrupts the digestive system. In recognition of this, several countries have adopted special regulations for shift workers' meals. French law stipulates special food arrangements. The U.S.S.R. also requires a free or subsidized meal for its night workers. Many other countries have food arrangements by collective agreement (6).

Another common problem is inadequate sleep. Noise tends to be greater during the day, and sunlight can impede sleep. The continually disturbed circadian rhythms of rotating shift workers make it generally more difficult to fall asleep during the day. As a result, they often sleep less well and for a shorter time than their daytime counterparts. This can lead to drowsiness on the job, stress, and damage to the health of the workers.

France is unique in addressing the problem of the quality and quantity of sleep for night workers, establishing a multiministerial committee which has provided special arrangements for night workers' housing. Not only do night workers get priority in obtaining nationally directed funding for housing, but they also receive 6 percent more money than other workers to soundproof and lightproof their houses. People who soundproof or lightproof their old dwellings can get 50 percent of the expenses back from the government and qualify for special loans to help with the balance (6).

France's multiministerial committee has also taken steps to arrange leisure activities for night workers. Because most recreational and entertainment activities are organized around daytime schedules, many night workers are forced to engage in solitary pursuits for entertainment. Night workers frequently complain about being on the fringe of society and often suffer from isolation, which may play an important role in causing biological and psychological problems. Thus, the French committee has provided for rebroadcasts of certain television programs for night workers. A few other countries have also made arrangements to facilitate leisure activities for shift workers. In other countries, nonstatutory arrangements exist, such as collective agreements for leisure programs and facilities (6).

Public bus and train services often cut backer eliminate operations at night. Getting to and from work after hours can be difficult. Special transportation arrangements usually come from collective agreements, such as those in

Australia and Canada, entitling some categories of female night workers to free transportation between home and the workplace (two provinces in Canada, certain jobs in Australia). In Mauritius and Swaziland, employers must either provide or pay for transportation for all night workers (6).

In summary, the amount and kind of support countries offer their shift workers vary widely. In most cases, hours of work and pay rates are regulated. A few countries have made efforts to extend their services further. In particular, France has adopted extensive policies to alleviate the problems of its night workers, who make up almost one-seventh of its labor force.

Women's Night Work

Restrictions on shift work are protective in nature. They are designed to protect the worker from exposure to unreasonable dangers or strain and to prevent employers from taking advantage of workers. Predictably, then, much of the legislation on shift work applies to women and children, who are traditionally the focus of protective labor legislation. Many countries have stricter labor restrictions on women than men in all aspects of work including maximum overtime, daily working hours, rest periods, and so on. Most countries also limit young people's work, but these limits are not nearly as controversial as those on women, because most people accept the necessity of protecting young people.

The first national ban on women's night work was passed in England in 1844. Other countries soon followed suit. The bans were prompted by government recognition of and concern about the exploitation of women and children in factories, but they were eventually applied to other areas of work as well. In 1890, the International Congress for the Protection of Workers adopted a resolution against women working at night. In 1906, the Berne Convention met and proposed a ban on women's night work in an industry if the employer had more than 10 workers. Thirteen countries signed the ban. The ILO has had three conventions against industrial night work for women (6).

At one time in the United States, 20 States had laws against women working at night, but by the 1970s all of them had been repealed. In 1924, the Supreme Court upheld the constitutionality of prohibiting women's night work (12), but the Equal Employment Opportunity Commission has decided that such laws are discriminatory under Title VII of the Civil Rights Act (29 CFR 1990 ed. 1604.2(b)(1)).

There were many reasons for placing women under stricter night work regulations than men. Women were thought to need more protection because they were thought to be physically and psychologically weaker than men. They were thought to need protection by law

because they were unable to fight for themselves individually. In addition, it was also feared that allowing women to work at night might take them away from their traditional domestic duties, such as rearing children and keeping house. Safety was also cited as a greater concern when women worked at night, especially during the travel to and from work. Increased opportunity for moral degeneracy was even cited as a reason to prevent women from working at night. Sometimes men were afraid that women would take their jobs. In other cases, male workers seem to have been planning to use a ban on women's night work as the first step toward a general ban on night work. All these factors led to the widespread ban on women's work at night (6). In many countries, these conditions still hold and the same arguments are still advanced.

Algeria, Argentina, Austria, Bolivia, Cape Verde, Costa Rica, Czechoslovakia, Ecuador, Egypt, Germany (manual workers), Indonesia, Peru, Philippines, Saudi Arabia, Thailand, Turkey, and Venezuela currently restrict night work by women. Algeria, Argentina, Bolivia, Indonesia, Austria, and many other nations categorically ban women's night work. Some countries, such as Denmark, Norway, and Sweden, ban night work by both male and female workers, but it is much easier for men to obtain exemptions. There are also exceptions to the ban on women's night work. For example, in most countries, managerial workers, including women, are excluded from the ban. In Austria, Ghana, Nigeria, Greece, and other countries, the prohibition on women night workers is suspended for certain seasonal tasks such as harvests. In Austria, Angola, Switzerland, Iraq, and other countries, women are permitted to work at night in emergencies. In Zaire, Saudi Arabia, and other countries, one or more persons in the government are authorized to issue exemptions at their own discretion (6).

Some countries, such as Ethiopia, Singapore, and Chile, prohibit pregnant women from working at night. Germany, Mongolia, and Luxembourg prohibit nursing mothers from working at night. Hungary and Mongolia prohibit mothers with children under the age of 1 from working at night, and Bulgaria extends the ban to the age of 3. In Bulgaria, mothers with a handicapped child or a child between 3 and 6 years old may refuse to work the night shift. In Poland, pregnant women and women with children under 1 year old may refuse night work assignments.

In recent years, attitudes toward women's night work have changed. Recent evidence indicates that women are no more susceptible to physiological or medical harm from night work than men (4), prompting the United Nations to pass a resolution recently calling for equality between the sexes. The ILO has issued a convention on equal pay, and several nations have denounced the ILO's convention prohibiting women from working at night.

The reason for the change in opinion is partly social and partly economic. Many countries are finding it necessary to employ women at night in order to be competitive. The United Kingdom, France, and Luxembourg have all declared that prohibitions on women's night work impair economic efficiency. Some countries that have repealed such prohibitions are Barbados, Canada, Guyana, Ireland, Israel, New Zealand, Sri Lanka, and Surinam (6).

Some parties argue that the proper way to achieve equality is not by lifting the ban on women but extending it to men. Workers' organizations in Finland, France, and Germany have called for extending the night work ban to men. Some workers in Japan, Netherlands, Switzerland, and Britain also demand a prohibition on night work for men. Others argue for the preservation of the status quo. When Sri Lanka was considering abolishing restrictions on women's night work, for example, the Ceylon Mercantile Union argued unsuccessfully for the preservation of the ban because the adverse effects of night work are harsher on women, who also have family responsibilities. In many developing countries, ingrained social and economic conditions make it almost impossible for women to work at night.

In any case, there is almost unanimous agreement that pregnant women should not work at night. In 1978, the ILO Tripartite Advisory Meeting on Night Work unanimously called for the prohibition of pregnant women in night jobs.

Types of Regulations

In countries where regulations exist, they take four basic forms:

- national collective agreements, where a union representing all or most of the workers in a country negotiates the contract with an employer's group, resulting in consistency of working conditions across the nation and fields;
- national government legislations, where the national government sets the rules;
- local collective agreements, where small-scale bargains are struck; and
- local legislation (e.g., State laws in the United States), 'where smaller bodies than the national government set the standards.

Combinations of the various methods are also used. In some countries, special systems have been set up to resolve labor disputes. In Australia, for example, wages are fixed by government-mandated court arbitration. The most common form of regulation is national legislation, followed by national collective bargaining. Unlike many local regulations, national regulations normally apply to all industries and to all workers; however, certain industries, e.g., transportation, mining, or hotels, are often governed by separate sets of regulations.

The International Labor Organization

The ILO, an agency of the United Nations, is made up of 150 member countries (as of 1989), including the United States. Among other things, it formulates conventions on working conditions (8). Many countries have modeled their protective labor regulations for work hours, children, and women on the ILO conventions. The first convention, enacted in 1919, fixed working hours at 8 hours per day and 48 hours per week. Other conventions address such topics as freedom of association, right to organize and bargain collectively, equal remuneration, asbestos, maritime regulations, medical care, insurance, and discrimination. No country is required to abide by a convention unless its government ratifies it. Once a nation ratifies a convention, however, it is bound by the convention as an international treaty and must report on its implementation to the ILO. The number of countries ratifying the conventions ranges from 0 to 128 (7). Although the ILO has no formal powers of enforcement, it can and does use unfavorable publicity to encourage nations to support the labor standards which they have ratified. The ILO aids in the implementation of labor standards through training, technical assistance, and special programs. This practice has been successful because the ILO enjoys the respect of many countries and its conventions are prominent factors in labor relations. In 1969, the ILO was awarded the Nobel Peace Prize.

Conventions are initiated by questionnaires polling governments' opinions. A preliminary set of proposals is drawn up on the basis of the responses to the questionnaires and introduced at the annual conference. The actual adoption process spans 2 years and also takes place at the conference. Each country sends four delegates to the conference: two government representatives, one employers' representative, and one workers' representative. The conventions are debated and discussed at the first conference and are adopted or rejected at the second. After a convention is adopted, each government is free to ratify or denounce it. A convention may be denounced after 10 years. If a government fails to denounce a convention, that government is bound for another 10 years, and the process is repeated. The ILO can also adopt a purely advisory recommendation which governments are free to follow or ignore.

In 1990, the 77th session of the International Labor Conference adopted convention 171. This convention institutes the first regulations on general night work. All previous night work conventions dealt with women, young persons, or specific industries. The conference also adopted recommendation 178 concerning general night work, along with a protocol which revised convention 89 regarding women's night work.

Convention 171, however, has not yet received the required number of ratifications to be entered into force.

For this reason, several pertinent, older conventions still control night and shift work. Convention number 47, adopted in 1937, reduced the working week to 40 hours. Conventions 14 and 106 provide for weekly rest. In 1979, convention 153 set guidelines on work and rest for road transport workers (7). Employment of workers under the

age of 18 in night work is prohibited by conventions 6,79, and 90 (6). Table A-2 illustrates which countries have ratified various conventions on night and other shift work.

Conventions 4, 41, and 89 prohibit industrial night work for women. Convention 89 is the current version and the one most widely accepted. It prohibits industrial night

Table A-2—International Labor Organization Conventions Related to Night and Other Shift Work and the Countries That Have Ratified Them

Country	ILO Convention ^a									
	1	14	20	30	47	79	89	90	106	153
Afghanistan		X			X					X
Albania										
Algeria		X					X			
Angola	x	x					x			x
Antigua and Barbuda		X								
Argentina	x	x	D	X		X		x		
Australia					x					
Austria	C			C			X			
Bahamas		X								
Bahrain		X					X			
Bangladesh	x	X					X	X	X	
Barbados								X		
Belgium	x	x					X			
Belize							X			
Benin		X								
Bolivia	X	X	X	X			X	X	X	
Botswana		x								
Brazil		X		X			X			X
Bulgaria	X	x	X			X				X
Burkina Faso		X								
Burma	x	X								
Burundi	x	x						x	x	
Belorussian SSR		x			x	x		x	X	X
Cameroon		x					X	X	X	
Canada	x	X								
Cape Verde										
Central African Republic	X									
Chad		X								
Chile	X	X	x	X						
China		X								
Colombia	X	X	X	X						X
Comoros	X	x					X			X
Congo		X					X			
Costa Rica	X	x					X	X	X	
Cuba	X	X	x	X		X	X	X	X	
Cyprus							X	X	X	
Czechoslovakia	X	X					X	X		
Democratic Yemen										
Denmark		x								X
Djibouti	X	X					X			X
Dominica		x								
Dominican Republic	X					x	X	X	X	
Ecuador										X
Egypt	X	x		X			X		X	X
El Salvador										
Equatorial Guinea	x	x		X						
Ethiopia										
Fiji										
Finland		x	D	x						
France	C	X					X	X	X	

Table A-2—International Labor Organization Conventions Related to Night and Other Shift Work and the Countries That Have Ratified Them—Continued

Country	ILO convention ^a									
	1	14	20	30	47	79	89	90	108	153
Gabon		x							X	
Germany										
Ghana	X	x		x			x	X	X	
Greece	X	X					X	X	X	
Grenada		X								
Guatemala	X	x		x		x	X	X	X	
Guinea		X					X	X		
Guinea-Bissau	X	X					X		x	
Guyana										
Haiti	x	x		X				X	X	
Honduras		X							X	
Hungary		X								
Iceland										
India	x	x					X	X		
Indonesia										X
Iran		x								X
Iraq	X	X		X			X		X	X
Ireland		X	D				D			
Israel	X	X	X	X		X		X	X	
Italy	C	X				X	x	X	X	
Ivory Coast		X								
Jamaica										
Japan										
Jordan									X	
Kampuchea										
Kenya		x								
Kuwait	x			x			X		X	
Laos							X			
Lebanon	x	x		x				x	X	
Lesotho		X					x			
Liberia										
Libya	X	X								
Luxembourg	X	X	X	X		X	X	X		
Madagascar		x					D			
Malawi										
Malaysia							X			
Mali		X								
Malta	X	X					X		X	
Mauritania		X					x	X		
Mauritius		x								
Mexico		x		X				x	X	X
Mongolia										
Morocco		X		X					X	
Mozambique	X	X		X						
Namibia										
Nepal		X								
Netherlands		X					D	X	X	
New Zealand	X	X		X	X		D			
Nicaragua	X	X	D	X						
Niger		X								
Nigeria										
Norway		X		X	X			X		
Pakistan	x	x					x	x	X	
Panama			X	X			X			
Papua New Guinea						X				
Paraguay	X	X		X		X	X	X	X	
Peninsular Malaysia										
Peru	X	X	X					X	X	
Philippines						X	X	X		
Poland		X						X		
Portugal	X	x					X		X	

Country	ILO convention									
	1	14	20	30	47	79	89	90	108	153
Qatar										
Romania	X	x					X			
Rwanda		X					X			
Sabah										
St. Lucia		X								
San Marina										
Sao Tome and Principe										
Sarawak		X								
Saudi Arabia	x	X		X			x	x	x	
Senegal		X					x			
Seychelles										
Sierra Leone										
Singapore										
Solomon Islands		X								
Somalia										
South Africa							X			
Soviet Union		X			X	X		X	X	
Spain	X	X	X	X		X	X	x	x	X
Sri Lanka							D	X	X	
Sudan										
Surinam									x	
Swaziland		X					x	X		
Sweden		X	D		X					
Switzerland		x					X			x
Syria	X	x					x		x	
Tanganyika										
Tanzania		x								
Thailand		x								
Togo		x								
Trinidad and Tobago										
Tunisia		x					X	X	X	
Turkey		x								
Uganda										
Ukranian SSR		x			X	X		X	X	
United Arab Emirates	X							X		
United Kingdom										
United States						X				
Uruguay	X	X					D	X	X	
Venezuela	x	x	D							X
Viet Nam		x					x			
Yemen		x								
Yugoslavia		x					x	X	X	
Zaire		x					x			
Zanzibar										
Zambia							x			
Zimbabwe		x								

NOTE: X—Ratified.
 C—Ratified conditionally.
 D—Denounced.

*Convention		Ratifications
1—Hours of work(industry)	1919	48
14-Weekly rest(industry)	1921	104
20-Nightwork(bakery)	1925	16
30-Hours of work(commerce and offices)	1930	16
47-40-hour week	1935	8
79-Nightwork of young persons (nonindustrial)	1946	16
89-Nightwork(women)	1948	62
90-Nightwork of young persons(industry)	1948	41
106-Weekly rest(commerce and offices)	1957	52
153-Hours of work and rest periods (road transportation)	1979	6

SOURCE: Office of Technology Assessment, 1991.

work by women except in family enterprises, managerial jobs, technical tasks, nonmanual health occupations, and nonmanual welfare work. Other exemptions include when an emergency arises, when night work is necessary to prevent deterioration of materials, and when a government declares a suspension in consultation with employers' and workers' organizations. Night is to be defined by each government, but it must be at least 11 hours long, 7 of which must fall between 10 p.m. and 7 a.m. As of November 1987, 62 countries had ratified convention 89; 73 nations were bound by one or more of the conventions prohibiting women's night work.

The protocol revising the prohibitions on night work for women retains the present restriction but allows it to be overridden by collective bargaining. In addition, the mandatory n-hour rest period may be varied by legislation, after due consultation with workers' and employers' organizations. Work at least 8 weeks before childbirth, and for a total of 16 weeks before and after childbirth, is prohibited except under special circumstances.

Convention 171's articles are as follows:

- Night work will be any work performed during a period of 7 or more hours, which includes the period from midnight to 5 a.m.
- A night worker will be a person whose job requires night work exceeding an hours limit established by competent authority following consultation with representative organizations of employers and workers or by collective agreements.
- The convention will apply to all workers, male and female, except those in agriculture, stock raising, fishing, maritime transport, and inland navigation.
- A country may exclude certain categories of workers if including them would cause substantial problems, but it must first consult the employers' and workers' organizations.
- A country must report such excluded categories to the ILO, explain the reasons for exclusion, and describe measures taken to progressively extend the convention to the workers concerned.
- Workers should have a right to free medical examination before starting the night work assignment and at periodic intervals during it.
- Workers should receive advice to facilitate their adaptation to night work, especially in regard to sleep, meals, and out-of-work activities.
- Safeguards must be provided for persons who have medical conditions that prevent them from engaging in night work for a given period.
- Measures shall be taken to provide alternatives to night work for pregnant female workers for a period of at least 16 weeks, 8 weeks of which must be provided before the expected date of childbirth.
- The maternity period may be extended for medical reasons.
- During maternity leave, the worker must be protected against dismissal or financial penalization.
- Compensation in pay, benefits, and working time must recognize the nature of night work.
- Appropriate social services should be provided for night workers.
- Adequate first aid and emergency medical transportation must be available.
- The provisions of the convention may be implemented by laws, regulations, collective agreements, work rules, arbitration, court decisions, a combination of these methods, or other appropriate methods.
- If the convention is implemented by laws or regulations, the employers' and workers' organizations should be consulted.

In addition, recommendation 178 adopts the following nonbinding propositions:

- Night work should not exceed 8 hours per 24-hour period.
- Weekly hours for night workers generally should be fewer than, and in any case should not exceed, the weekly hours for day workers doing the same task.
- A rest period of at least 11 hours should be guaranteed between shifts whenever possible.
- Overtime should be avoided for night workers.
- In tasks involving special hazards or heavy mental or physical strain, overtime should be prohibited except in emergencies.
- Double shifts should be prohibited except in emergencies.
- Night workers must be granted rest and meal breaks. The nature of night work's demands must be taken into account when designing the breaks.
- Night workers should be paid appropriately, and men and women should be paid equally for the same work or work of equal value.
- If night workers receive higher wages, those wages should be used to calculate vacation pay, holiday pay, other paid leave, social security contributions, and benefits.
- Where available, consultation with the occupational health services in regard to the consequences of various schedules for night work should be provided to the workers' and employers' representatives.
- Night workers' commuting time should be minimized. This can be achieved by coordinating work hours with public transportation services, providing transport where public transport is unavailable, helping workers obtain means of transport, and building housing near the workplace.
- Employers should compensate night workers for extra transportation expenses involved in traveling between work and home at night.
- Rooms suitable for resting must be provided.

- Facilities for meals must meet the special needs of night workers.
- Night workers should have a place to prepare or heat and eat the food they have brought.
- Where possible, employers should make appropriate food and beverages available to night workers.
- The extent to which night work is performed locally should be considered when establishing nursery facilities.
- Night workers should be considered when public authorities or employers are encouraging recreational, cultural, or sporting activities.
- When composing night crews in shift work, consideration should be given to the needs of older workers, workers with family duties, and workers in training.
- Paid educational leave and training opportunities, where available, should be arranged so that night workers can take part.
- After a certain number of years, night workers should receive priority for openings on the day shift for which they have the necessary qualifications, and any required training for day work should be provided.
- Night workers should have priority for early retirement programs, where available.
- Occupational safety at night should be equal to that during the day.
- Special attention should be given to toxic substances, noise, poor lighting, and high levels of mental or physical strain involved in night work. The effects of these factors should be minimized.
- Night workers who are trade union representatives should have the same rights as their daytime counterparts.
- The workers' representative should be consulted regularly regarding the organization of night work as it relates to personnel and to the undertaking.

Implementation of ILO conventions varies. Most conventions are not self-executing, therefore each government must act to promulgate each convention. The convention on general night work is likely to be implemented in a variety of ways (see the last two points of convention 171).

The United States and the ILO

The United States has not approved many ILO conventions. As of July 1989, it had ratified nine, almost all of which were maritime conventions. In fact, the United States withdrew from the ILO between 1977 and 1980. A combination of factors is responsible for the paucity of ratifications, but one justification has been that the United States already has sufficient protective legislation.

One factor to be considered when dealing with ILO conventions is the expanding multinational role of U.S. companies. In light of this trend, uniform labor standards

could be advantageous to American firms (2). However, if the general night work convention passes in its proposed form, the United States is unlikely to approve it. The restriction on pregnant women (article 10) is unacceptably discriminatory in the United States(2), and some of the provisions of the convention appear to be within the jurisdiction of the States, not the Federal Government (11).

Ratification rests ultimately with the U.S. Senate, but the evaluation process is handled by the President's Commission on the ILO, headed by the Secretary of Labor and composed of government, employers', and workers' representatives. Under this commission is the Tripartite Advisory Panel on International Labor Standards, which analyzes legal issues of the conventions and makes recommendations to the committee. The present policy regarding ILO conventions is that they will be ratified only if every Federal and State law is already in compliance with the convention in question (11).

Relevance of Foreign Regulations

A word of caution is in order about comparing data from other countries with U.S. policies. In many countries, the system of worker-employer-government relationships is different from the U.S. system. In Japan, for example, an agreement for limiting work is often based not on hours, but on production (1). In other words, a collective bargain in Japan could focus on the number of cars to be produced rather than the maximum number of hours to be worked. In Australia, wages and hours are set by a system of mandatory court arbitration. In Soviet and Eastern European countries, wages and hours are usually set by the government. Data from foreign countries, therefore, do not always fit into the framework of U.S. labor. Nevertheless, the data are useful because the physiological, psychological, and social problems faced by night workers are similar everywhere, and it may be instructive to examine the ways that other governments have dealt with the issues of shift work.

Appendix A References

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