

**Bills Committee on  
Occupational Deafness (Compensation)(Amendment) Bill 2002**

**The Administration's Response**

**Introduction**

This paper provides information requested by members of the Bills Committee at the meeting held on 27 January 2003 on the following aspect -

Excess risk of noise-induced hearing impairment under different levels of noise exposure between 85dB(A) and 90dB(A) as determined by the International Organization for Standardization.

**Noise Control Limit**

2. Countries such as UK, Ireland, Italy, USA, Mexico, Malaysia, India and Thailand have set the level of daily exposure of 90dB(A) as the limit in the control of noise in workplaces. However, some less densely populated countries like Sweden, Finland and Australia have set the level at 85dB(A).

3. Hong Kong has followed the practice of most countries in adopting 90dB(A) as the level in the control of noise at work. Under the Factories & Industrial Undertakings (Noise at Work) Regulation, the proprietor should ensure as far as is practicable that -

- (a) the area within the workplace where the employees will likely be so exposed is demarcated and identified as an ear protection zone by means of signs and notices sufficient to indicate that the employees should wear suitable approved ear protectors while in the zone;
- (b) an employee should wear a suitable approved ear protector; and
- (c) the noise generated is reduced at source.

4. The level of daily personal noise exposure of 90dB(A) is also adopted in determining the list of specified noisy occupations for the purpose of occupational deafness compensation in Hong Kong.

### **Excess Risk of Noise-induced Hearing Impairment**

5. According to the ISO 1999 of the International Organization for Standardization which is the latest internationally accepted model available for determination of occupational noise exposure and estimation of noise-induced hearing impairment, the excess risk of hearing impairment measuring against different age, periods and levels of noise exposure is as follows:

Age, Period of Noise Exposure	Age 60, 40 years	Age 55, 20 years	Age 55, 10 years
Hearing Impairment Averaged at 1,2&3 kHz	40dB	40dB	40dB
Average Noise Exposure (dB(A))			
89	4%	<1%	0%
88	3%	0%	0%
87	2%	0%	0%
86	2%	0%	0%
85	1%	0%	0%
80	0%	0%	0%

6. When compared with a person of the same age who has not been exposed to an equivalent noise exposure level at work for the same period of time, the excess risk for a person at different levels of noise exposure of developing noise-induced hearing impairment of 40 dB averaged over 1 000, 2 000 and 3 000 Hz is as follows -

- (a) a person at the age of 55 after having been exposed for 10 years to a daily noise level between 85dB(A) and 89dB(A), will not be subject to excess risk.

- (b) Even if the period of noise exposure is doubled to 20 years, a person at the age of 55 after having been exposed to a daily noise level between 85dB(A) and 88dB(A) will not be subject to excess risk. Moreover, such a person will only have negligible (less than 1%) excess risk when exposed to a daily noise level of 89 dB(A) for the same period.

### **The Administration's view**

7. Having considered the standards adopted by most countries and the negligible excess risk of developing noise-induced hearing loss at noise exposure levels below 90dB(A), we consider that the current noise control limit in the workplace in Hong Kong is reasonable. We also consider that adoption of the same standard in specifying noisy occupations for the purpose of compensation under the Occupational Deafness (Compensation) Ordinance is reasonable and has no plans to change the standard.

Labour Department

February 2003