



行政院環境保護署
Environmental Protection Administration
Executive Yuan, R.O.C. (Taiwan)

Development and the Regulations of the Noise Control of the Republic of China (Taiwan)

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Content



- Introduction
- The development of noise control regulations
- The implementation of various noise control measures
- The future work



Introduction



Department of Health, Executive Yuan



Environment Protection Administration



- ◇ Low frequency noise control
- ◇ Transport System Noise Control Standards

1971

1982

1987

1991

2001

2011



Environmental Protection Bureau

- ◇ Noise Control Act
- ◇ Amendment to Noise Control Standards



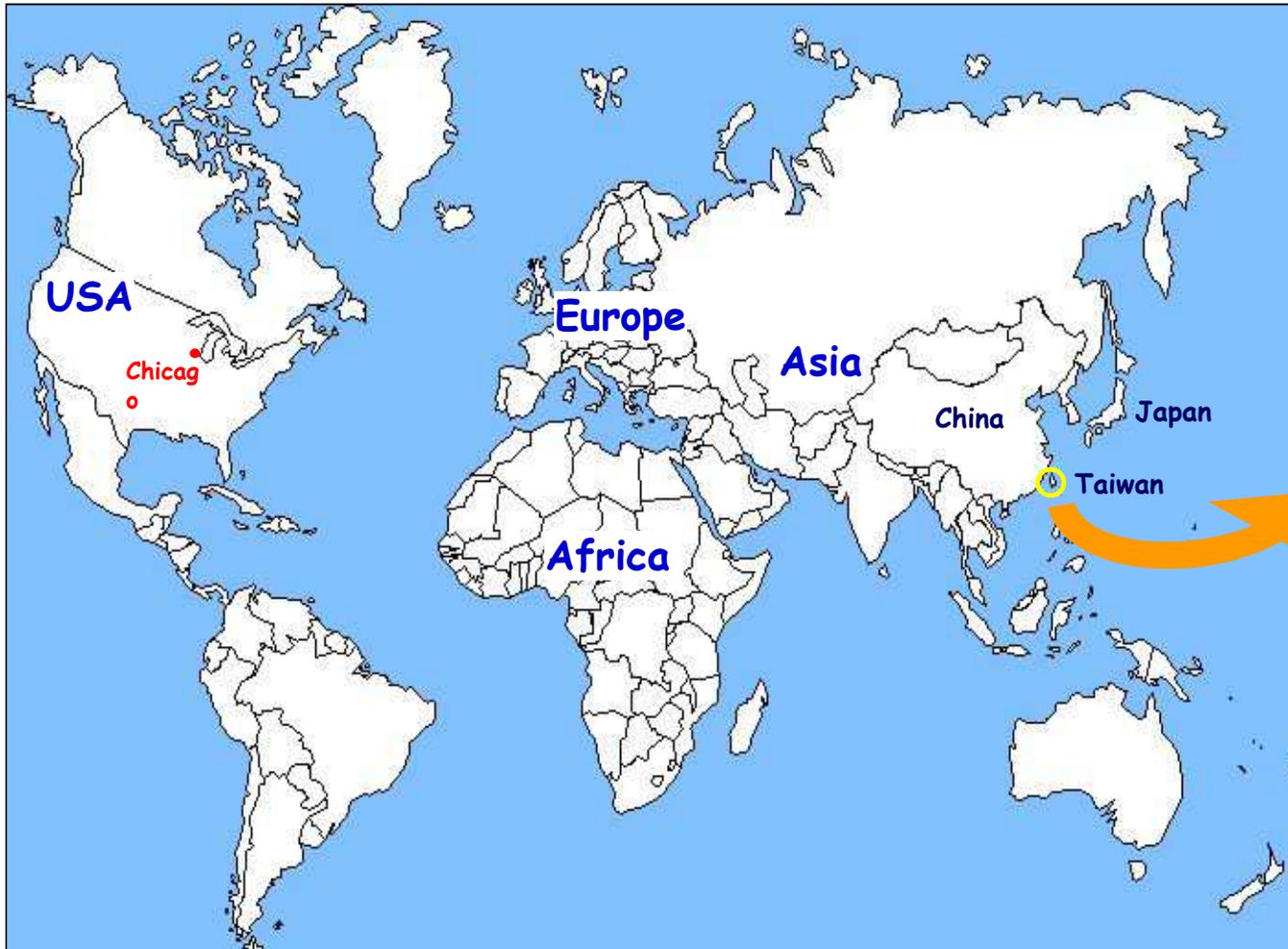
environmental sound volume standard



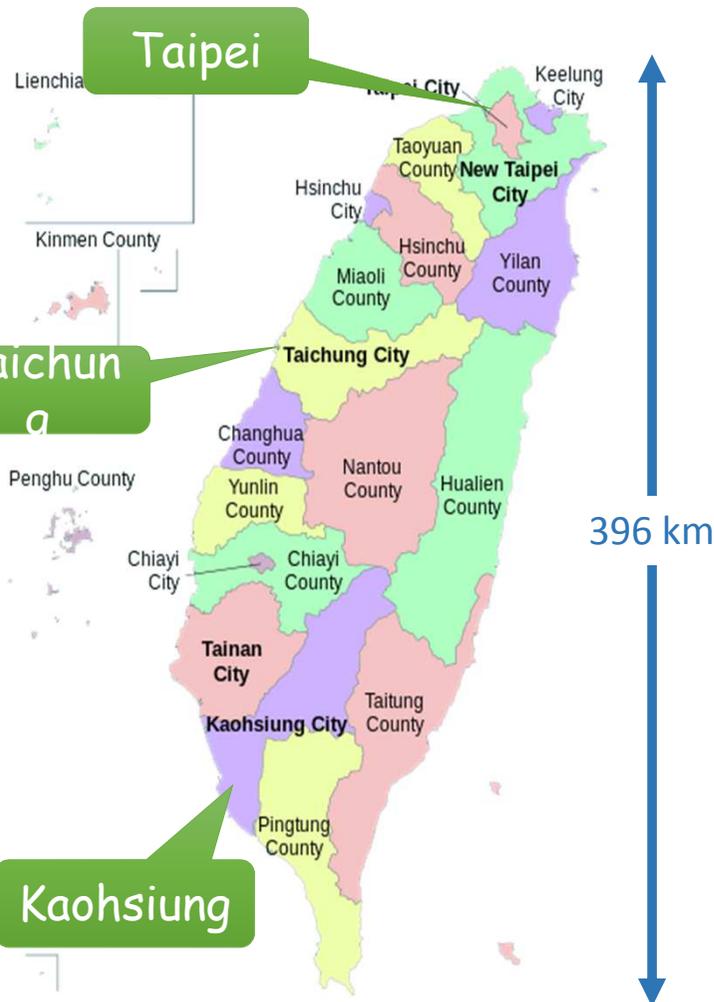
Construction Projects Noise Control plan



Introduction



Introduction



- Area : 36,191 km²
- Population: 23 millions (2017)
- Population density:
All over: 650 persons/km² in 2017
Taipei City: 6,891 persons/km² in 2017

- Central authority:
Environmental Protection Administration, EPA
Department of Air Quality Protection and Noise Control is assigned responsibility for noise control duties.
- Local government authorities: 20 EPBs
- For environmental issues: 0800-066-666
(24 hours hot-line)



Introduction



Factory



Traffic



neighbor



Traditional custom



Construction Projects



Low frequency

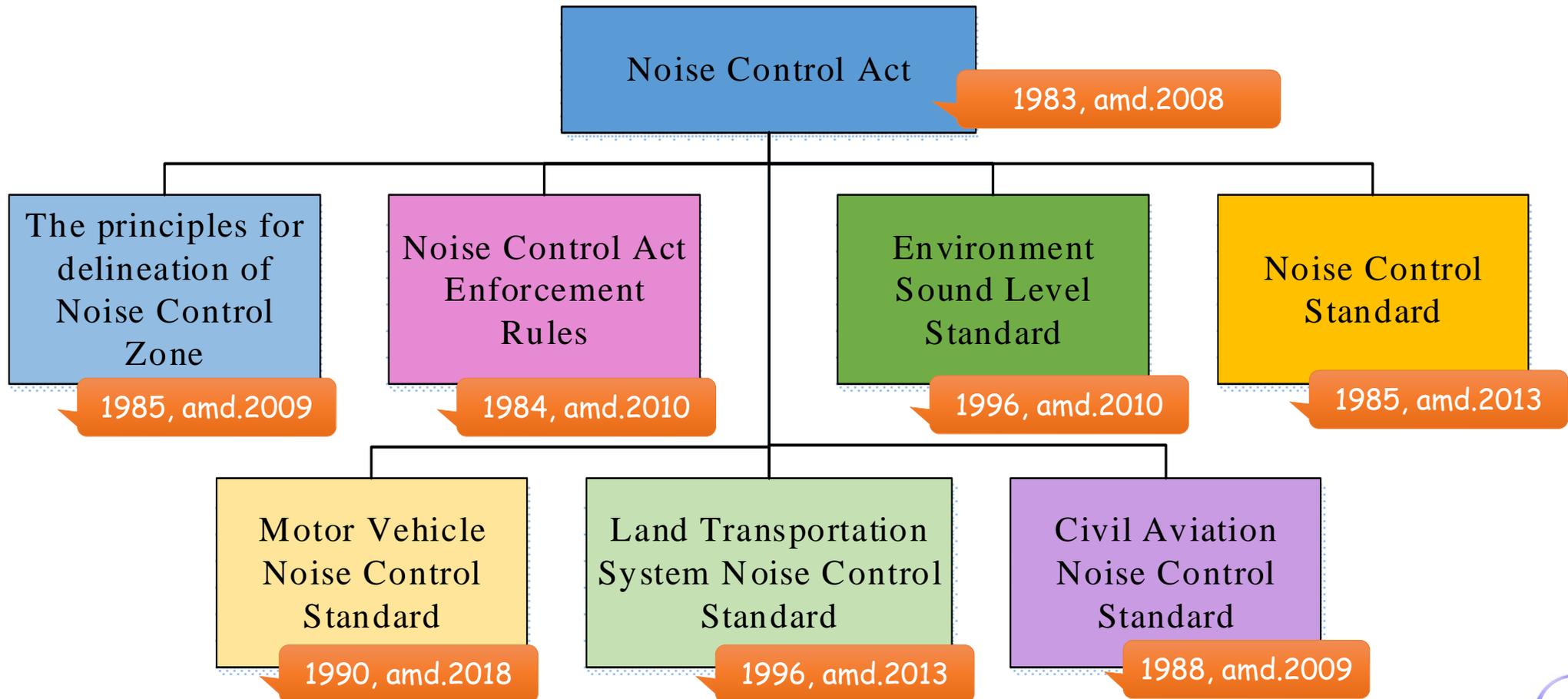
The Development of Noise Control Regulations



- 1975, a public pollution polls showed that the severest public pollution was noise pollution.
- 1977-1981, a series of research projects were conducted.
- 1983, the Noise Control Act was issued.
- 1984, the Noise Control Act Enforcement Rules was formulated.
- 1985, the Noise Control Standard enforced, the noise emitted from
 - factory plants,
 - entertainment and business premises,
 - construction projects,
 - public announcement facilitiesshall not exceed the Noise Control Standard within each noise control zones.
- 1988, the Civil Aircraft Noise Control Standards was issued.
- 1991, the Motor Vehicle Noise Control Standards was issued.



The Development of Noise Control Regulations



*amd. is short for amendment.

The framework of Noise Control Act



The Development of Noise Control Regulations



● Noise Control Act Enforcement Rules

- The Rules were promulgated in 1984 and have been amended five times and the last revised in 2010.
- The definition of traffic noise and noise improvement plan, the contents of the subsidy plan, the procedures of the approved plan, the time limit, the handling method, and the overdue processing and other relevant provisions.
- The **calculation method** and **measurement conditions** for day and night levels of **aviation noise are defined**.
- In addition, it is stipulated that personnel **must pass training and receive a certificate** before entering the public or private places to inspect or identify noise conditions.



The Development of Noise Control Regulations



● Noise Control Zone

Noise Control Zones are designated by local governments.

Class 1 For the areas which need very quiet environment

Class 2 The areas which for residential use mainly

Class 3 Residential and commercial area mixed

Class 4 Industrial area

Noise control zone of Taipei



The Development of Noise Control Regulations



● Noise Control Standards

factory plants/ business premises/ construction projects

20Hz-20kHz Time Interval Limit Category	Daytime, dB(A)	Evening, dB(A)	Nighttime, dB(A)
Class 1	50/55/67	45/50/47	40/40/47
Class 2	57/57/67	52/52/57	47/47/47
Class 3	67/67/72	57/57/67	52/52/62
Class 4	80/80/80	70/70/70	65/65/65



The Development of Noise Control Regulations



● Noise Control Standards Low frequency noise control factory plants/ business premises/ construction projects

20Hz-200Hz			
Time Interval limit category	Daytime, dB(A)	Evening, dB(A)	Nighttime, dB(A)
Class 1	39/	32/	44
Class 2	39/	37/	44
Class 3	44/	37/	46
Class 4	47/	40/	49



The Development of Noise Control Regulations

● Environmental Sound Level Standards

It represents the environmental quality of various types of noise control zones.



The noise monitoring Screen for traffic noise at Taipei Station in 1978 and 2018



The Development of Noise Control Regulations



● Land transportation system noise control

Land transportation system noise control standard was issued in 2010 and revised in 2013. This standard was used to control the noise emitted by land transport vehicles or trains, such as expressways, highways, railways and mass rapid transit systems



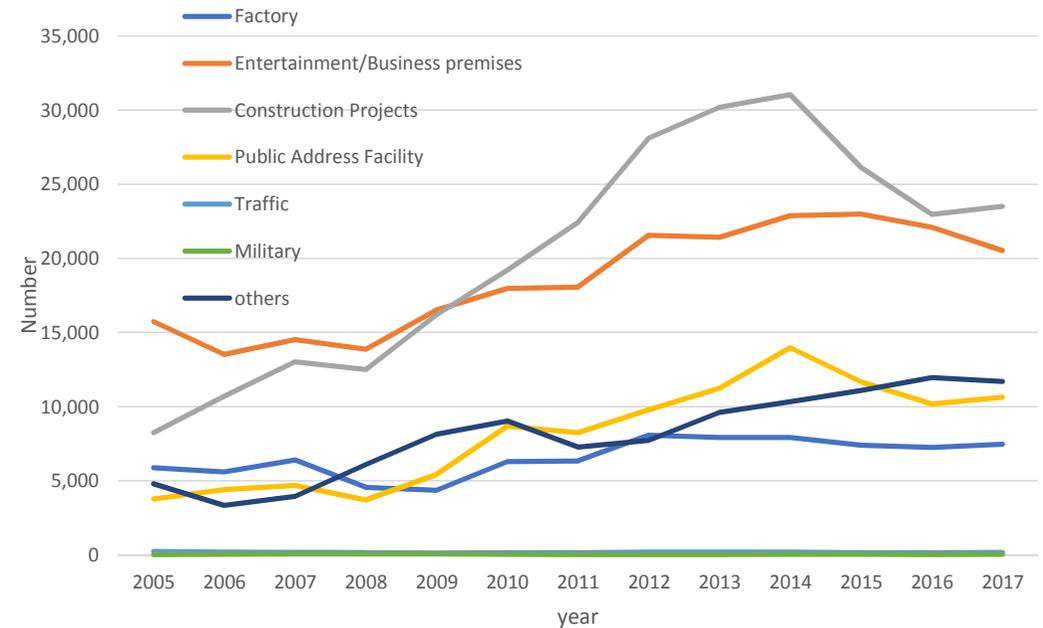
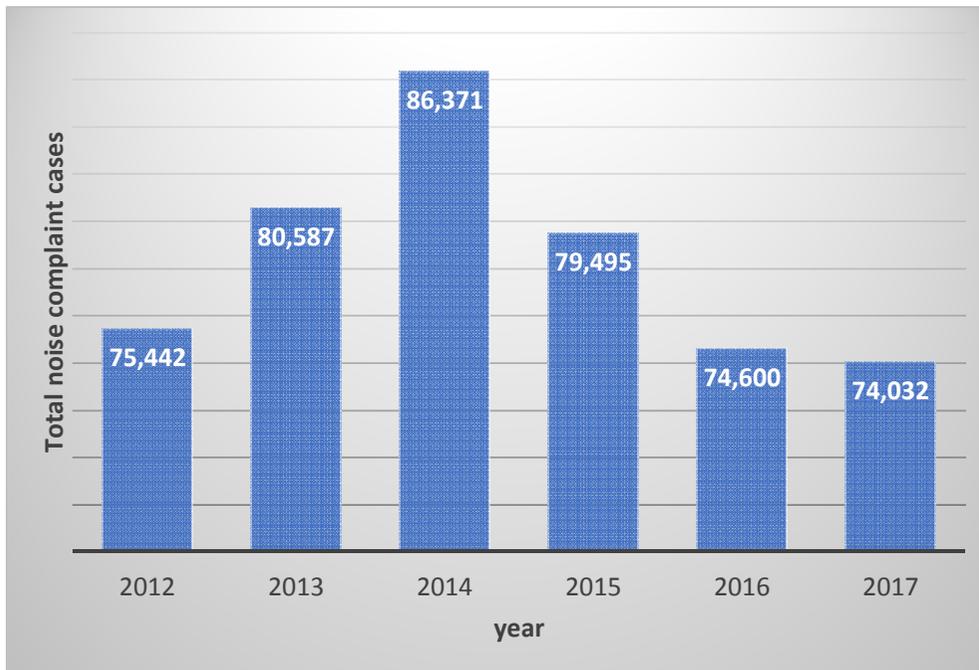
The monitoring of noise from of a passing Taiwan High Speed train



The Implementation of various noise control measures



● Noise complaint Cases Analysis



The Number of Noise Complaint Cases in recent years



The Implementation of various noise control measures



● Noise complaint Cases Analysis

- The noise complaints cases from entertainment, business premises construction projects were the most common noise source.
- The noise cases from construction projects significantly increased from 2012 to 2014 and then decreased because of the implementation of the construction noise control plan.
- Due to the elections and commercial activities, the use of political campaign cars, advertising cars and loud speaker made the cases of noise complaint increased.
- The noises from human activities (e.g., loud music, loud talking, shouting, and loud barking by domestic dogs) are usually intermittent or difficult to measure. In Taiwan, it can be handled and resolved by the police according to the Social Order Maintenance Act, or by the building code regulations.



The Implementation of various noise control measures



Noise Control Standards were announced in 1992 and implemented in accordance with the Noise Control Act.

● Low frequency noise - 20Hz~200Hz

2005 business and recreational premises

2008 factory plants and sites

2009 construction projects

2013 construction projects, business premises, and wind turbines facilities



The Implementation of various noise control measures



● Low frequency noise

The unqualified percentage of Low frequency noise complaint cases

Year	Total Cases	Unqualified cases	Unqualified Percentage
2010	6,953	750	10.8%
2014	3,678	453	12.3%
2015	2,791	269	9.6%
2016	2,028	118	5.8%

- In 2016, the number of unqualified low-frequency noise inspection was highest in business, entertainment premises, and construction projects, which together accounted for 60.1% of the total number of unqualified.



The Implementation of various noise control measures



● Quiet Sign

- To reduce the noise generated by social activities in public places as well as to promote the public awareness about the impacts of noise.
- The design features a house silhouette that encloses a smile face with a "please be quiet" hand gesture.
- The EPA produced a short promotion video that was broadcasted on TV.
- 20,000 copies of "Quiet Sign" stickers were made and distributed to all counties and cities. It also can be downloaded from EPA website.



Quiet Sign



The Implementation of various noise control measures

● Quiet Sign



The Quiet Sign in Public Places. (Left: at Museum Entrance, Right: on the Bus)



The Implementation of various noise control measures



● Vehicle Noise Control

- 21.7 million vehicles were registered in Taiwan at the end of 2017, of which 13.8 million were motorcycles. Vehicles installed with modified mufflers give rise to noise pollution that disturbs the environment and the public.



The Implementation of various noise control measures



● Vehicle Noise Control

The EPA's main measures to control the noise emitted from the improperly modified vehicle exhaust pipes are:

- (1) the enhancement of the joint inspection and ban program
- (2) the development of a report notification inspection mechanism
- (3) the promotion of public education and awareness
- (4) the development of test vehicle exhaust pipe certifications and posted qualified logos.

	roadside inspections	vehicles	inspections failed
2011	2,800	↑	31.90% ↑
2016	26,936	↑	63.60% ↑



The Implementation of various noise control measures

- **Vehicle Noise Control**



The Motor Vehicle Roadside Inspection and Testing



The Future work



For the future work, the EPA will implement the following topics to fulfill the mission of maintaining tranquil environment.

- Implement the "National Noise Control Plan"
 - Revised the noise control regulations
 - Strengthen the traffic noise control
 - Noise inspection, improvement and guidance
 - Promote the "Quiet Area"
- Continuing to research of the impact of noise on health
- Specifications for building construction regulations



Thank you so much for your attention

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