



Perspectives on Transportation Noise Policies Worldwide

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What is CAETS NCTC?

CAETS is the International Council of Academies of Engineering and Technological Sciences.

- It is a consortium of 26 national academies (12 in the EU)—one academy per country.
- The Japanese member academy is the Engineering Academy of Japan.
- NCTC is the CAETS' Noise Control Technology Committee.



Introduction

International noise policies have been ineffective for many years. An OECD report 20 years ago, "Fighting Noise in the 1990s," illustrates this:

"More and more people in OECD countries are exposed to high and potentially harmful levels of noise, chiefly from growing road traffic. Although governments have adopted policy objectives at the national and international levels, little real progress to reduce exposure to noise has been made in recent years."

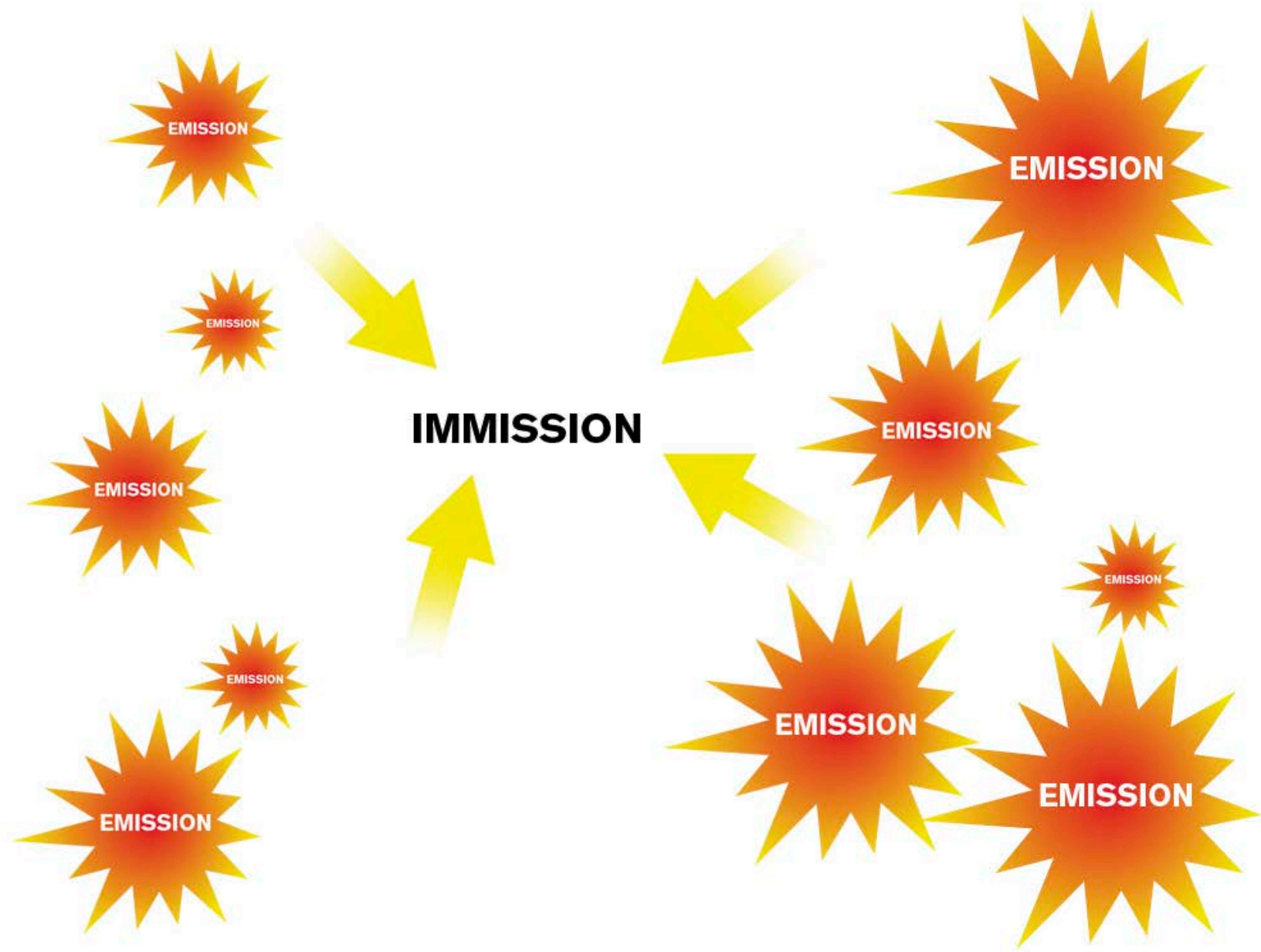


The situation is no better today

- No government has yet to effectively handle the issue of excessive environmental noise.
- Health impacts of traffic noise are second only to those of air pollution according to a recent WHO/E report, "Burden of Disease from Environmental Noise."
- Severe non-auditory effects of traffic noise are principally to the cardio-vascular system (hypertension and heart attacks).
- The threat to public health is real and is now, 20 years later, well-documented.

Important concepts





EMISSION

EMISSION

IMMISSION

EMISSION

EMISSION

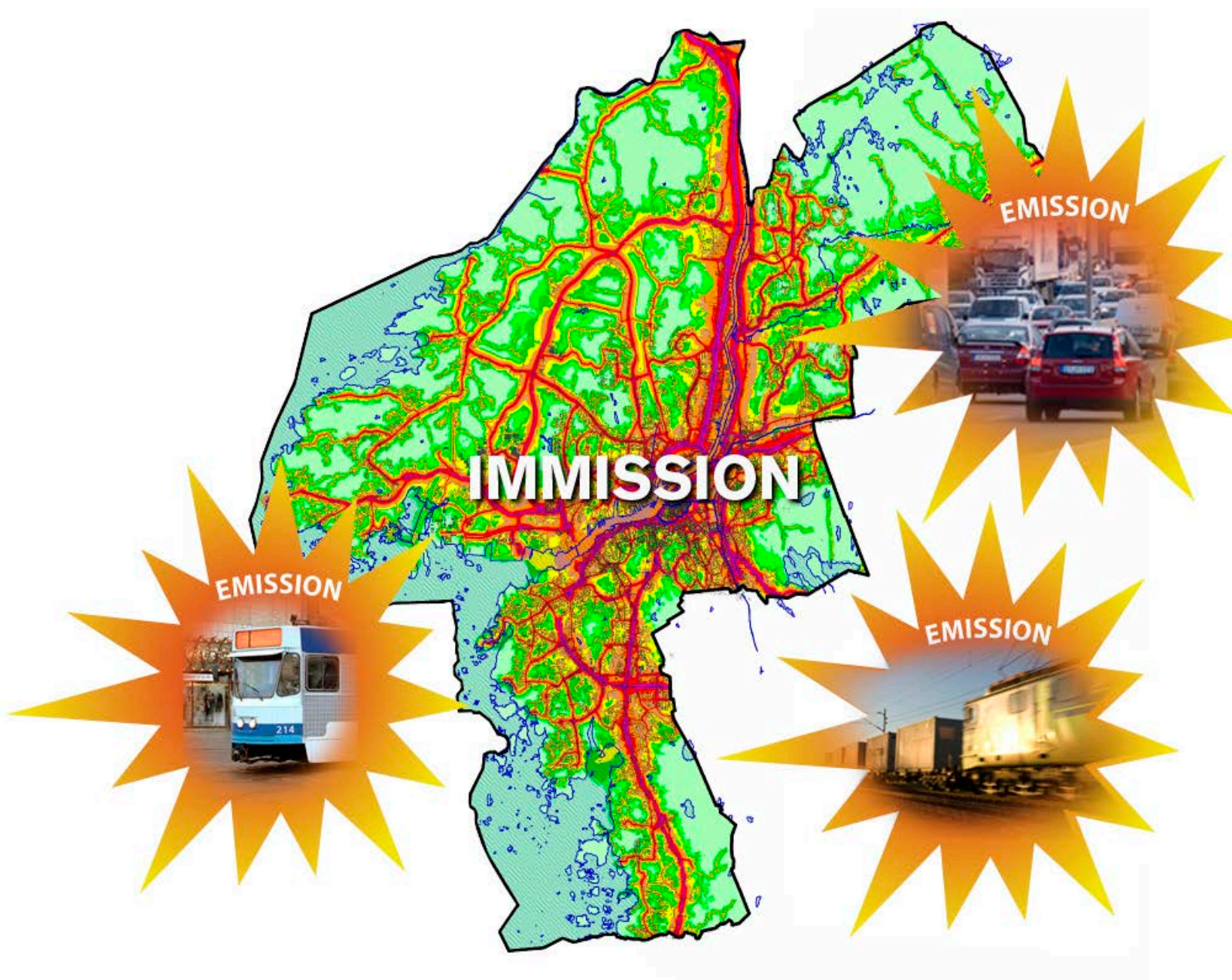
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Environmental noise policies

Two major groups of governmental noise policies are needed:

- Those that pertain to the immissions
- Those that pertain to the sources

These should be strongly coupled, but currently they are not.



The Gap [1]

- The effects of noise on the citizens are linked to the immission levels.
- The immission levels are determined by the strengths of the noise sources and their number and locations in the environment.
- Emission levels are regulated by internationally-agreed-to limits.
- Given present noise levels, no planning in the world can provide a healthy environment for all of the exposed populations.



The Gap [2]

- Most noise sources are too loud.
- There is a gap between allowed emissions and the possibility to assure the citizens a healthy environment.
- This gap is approximately 20 dB for all types of transportation noise sources.
- Emission limits must be greatly reduced to ensure healthy urban noise climates.



Emission and immission policies must be effectively linked

The way the policies are linked varies from country to country

- In the US there is no linkage (*Bill*)
- In the EU there is some linkage (*Tor*)
- In Japan there are examples of good linkage

But no country has a completely satisfactory system



US policies

- There are no federal noise regulations on surface vehicle emissions.
- All that states can do is build barriers and use low-noise pavements.



EU policies

- WHO guidelines on immissions were adopted in the Environmental Noise Directive.
- Guideline values are exceeded in many Member States and, in most cases, have resulted in palliative measures that do not reduce noise at the source.



Japanese policies

- The linkage between immission guidelines and emission reductions is, in several cases, effective because Japan's consensus culture is exceptional.
- Immission guidelines have resulted in emission reductions.
- The Japanese model cannot be exported.



A new approach is needed

- The same problems described by OECD in 1991 still exist.
- Emission and immission policies have failed.
- Effective international agreements on emission limits are needed.



Concerted action is needed [1]

- The countries concerned with citizens' health and quality of life should take collective action to close the gap.
- Candidate countries could include Japan, France, Germany, UK, Netherlands, Norway, and Denmark.
- A 5 dB reduction is available today, but the remaining 15 dB reduction must be achieved through the supported efforts of noise control engineers.
- Noise limits need to be driving the technology, not slowly following.



Concerted action is needed [2]

- CAETS' objective is to assist policymakers in improving national and international policies to reduce the emissions of dominant noise sources.
- This can be done by providing independent information about the technological options and support to counteract lobbying from industry.
- What is needed are well informed policymakers who can challenge the industry, set up stringent limits, and find market-driving tools.



Thank you