

WARSAW UNIVERSITY OF TECHNOLOGY

ZAKŁAD INFORMATYKI I BADAŃ JAKOŚCI ŚRODOWISKA



Noise prevention policy in Poland. Where are we ?

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Noise

Unpleasant, undesirable, annoying or harmful mechanical vibrations of elastic material, affecting hearing and other body parts through the air

- **Noise of**

- traffic : [the most dangerous]

- » road

- » rail

- » air

- industry

- neighbourhood: [the main cause of interventions]

Effects of long exposition to noise

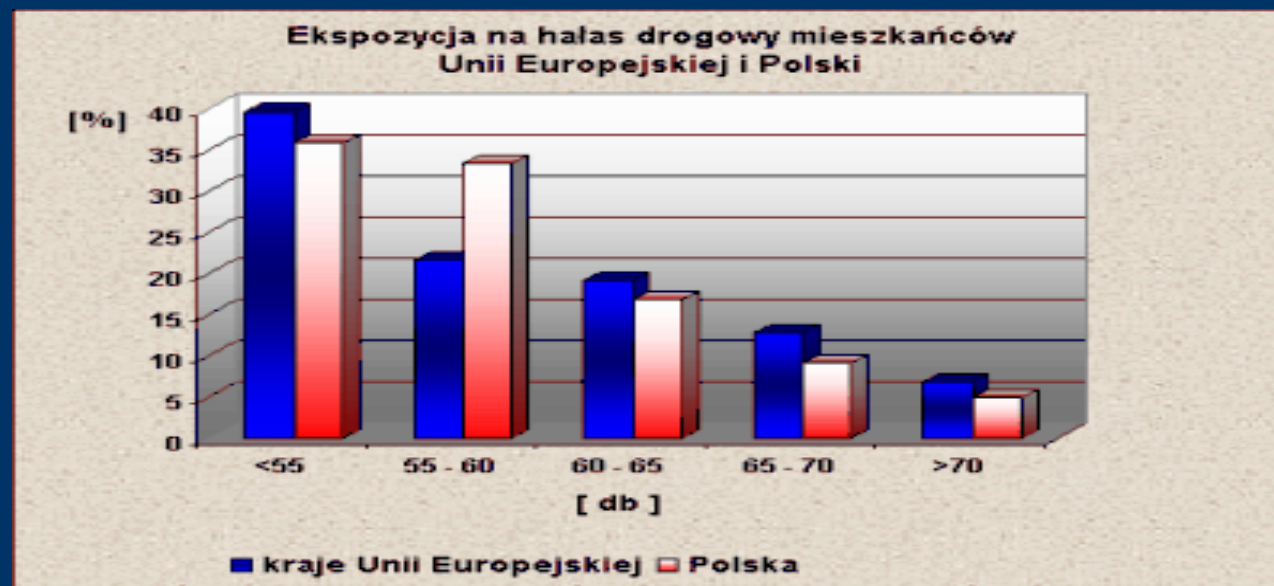
- **~55 dB:**
 - Annoyance and disturbances to rest, sleep and work
- **~65 dB:**
 - Neurosis
 - Hearing regeneration hindered
- **~75 dB:**
 - Permanent damage to hearing organ
 - Permanent deafness
 - Other (cardiovascular & metabolism disorders)

Europe: noise & people

- Ca. **450 million Europeans (65% of the population)** are subject to a noise of intensity of **55 dB**, (unease, stress, sleep disorder) for 24 h /day.
- Ca. **113 million people (17% of the population)** are subject to a noise of intensity of **over 65 dB**, (severe harmful effects on health).
- Ca. **10 million people** live in an environment where noise **exceeds the level of 75 dB** for 24 hours / day. It is unacceptable.
- The percentage of citizens exposed to noise of harmful intensity is twice to thrice greater in large cities than in other areas.

Traffic noise

- A dominant source of noise in the urban areas (especially road traffic)
- An upward trend in the past years
 - An increase of traffic intensity
 - City expansion – a threat of noise in previously quiet areas
 - Lengthening of exposition time for excessive noise
 - Increasingly frequent infringement of accepted night time noise levels



Standards of acoustic quality of environment

- Act of 27th April 2001 – the Environment Protection Law (POŚ, Dz.U. 2001, nr 62, poz. 627) (z p. zm.),
- Act of 20th July 1991 on the Environment Protection Inspection (Dz.U. 91.77.335 z dnia 29 sierpnia 1991 r.)
- Acceptable levels of noise in the environment from specified noise source groups: Directive of the Minister of Environment of 29th July 2004 On Accepted Levels of Noise in the Environment (Dz. U. Nr 178, poz.1841)

The regulation specifies acceptable levels of noise depending on:

- Type of the noise source
- Time of the day
- Planned land use of noise area

DIRECTIVE 2002/49/EC of 25th June 2002

relating to the assessment and management of environmental noise

Environment noise protection plans

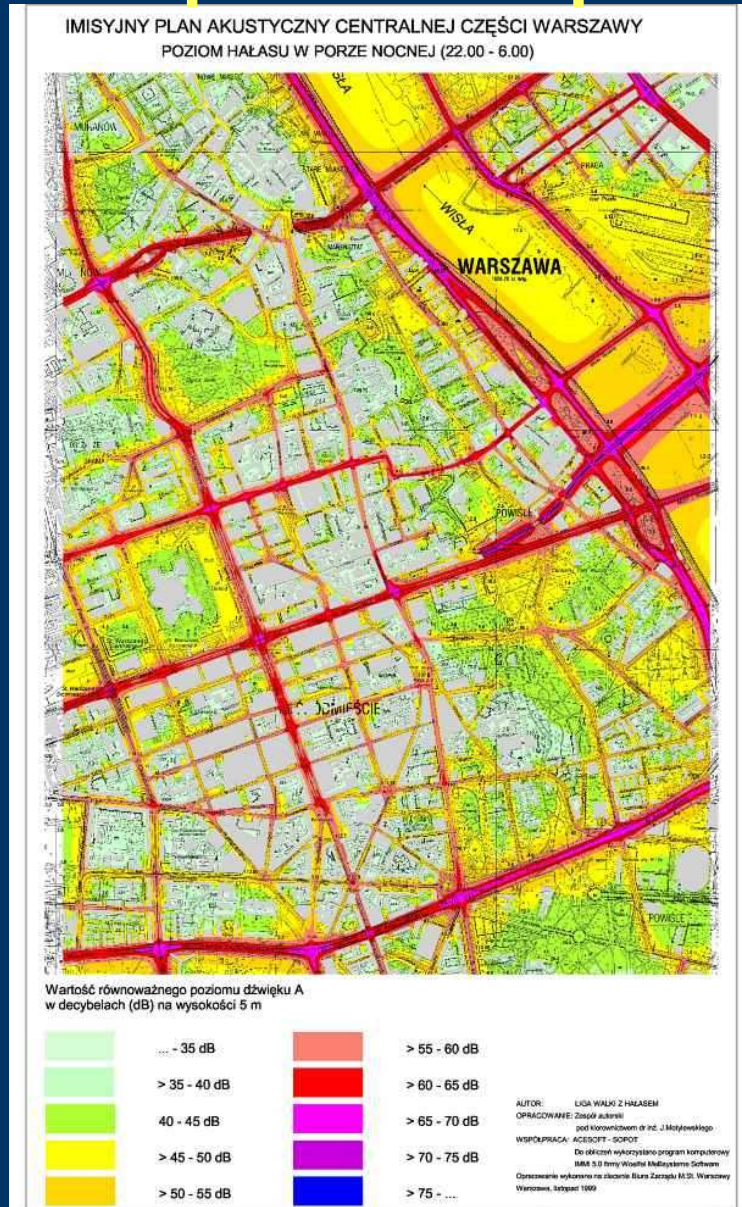
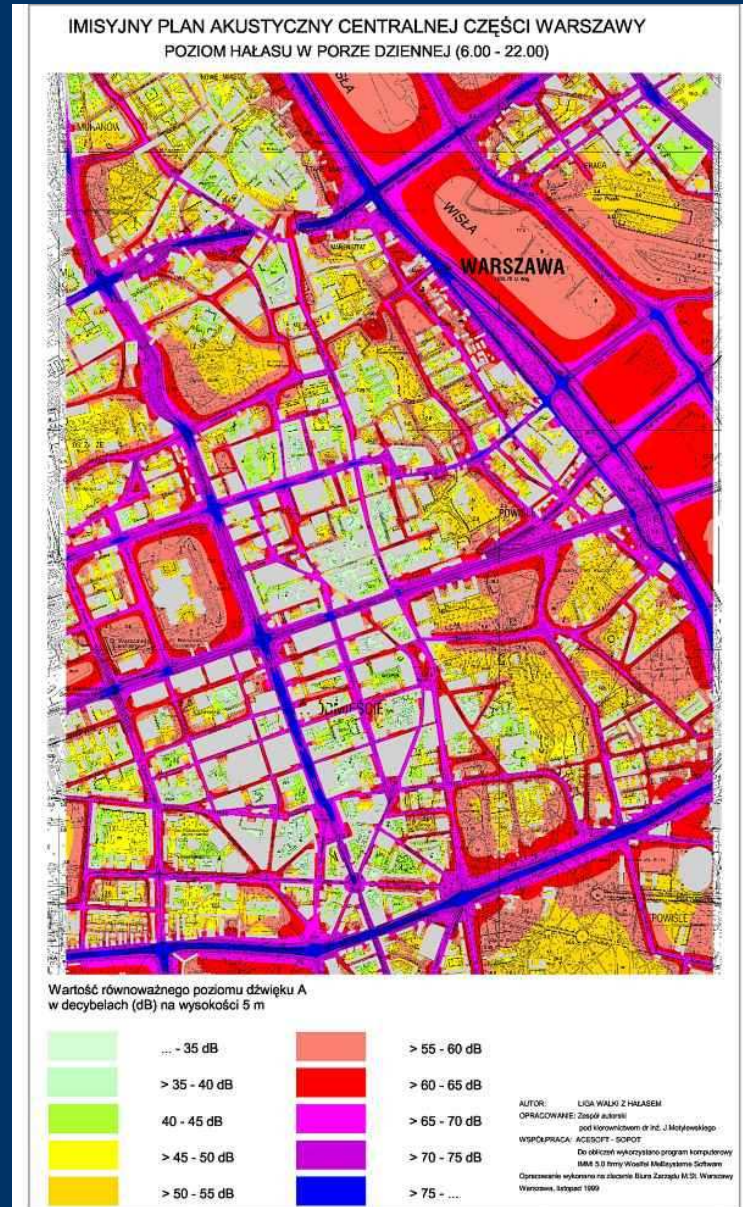
- POŚ contains a new approach on **traffic noise**: a complex intervention into the transportation network of the city or into a functionally separable part of the system.
- County foremen (starostowie) compose **acoustic (noise) maps**: maps of agglomerations and areas with noise exceeding acceptable levels. Agglomeration mapping is compulsory.
- **The management of road, rail and airport infrastructure** will also be obliged to map the areas, where operation results in exceeding acceptable levels of noise every 5 years .

Environment noise protection plans

Noise in Warsaw

- The acoustic climate is shaped by traffic noise
 - Exceeding along 80% of national and regional roads
 - Exceeding in the central zone of the city
 - 30% of citizens exposed to noise levels from traffic exceeding acceptable levels
 - Exceeding of acceptable noise levels are observed both in day time and in night time

Environment noise protection plans



Environment noise protection plans

- The maps will be used as input to action plans, composed by the county councils for agglomerations and by the regional foremen (województwie) for other areas.
- POŚ also defines a term “**area endangered by noise**”. It is an area where noise level is exceeded to a degree requiring action in the primary stage.

Environment noise protection plans

- The act defines the deadline for certain tasks resulting from aforementioned regulations concerning mapping and action plan formulation.
 - **Noise maps for agglomerations:**
 - » *Over 250 000 population, the deadline was 30.06.2004, action plan – up to a year later*
 - » *Over 100 000 population: the deadline is 30.06.2009, action plan – up to a year later*
 - **Action plans for areas outside agglomerations and subject to noise from operation of transport infrastructure** – until 30.06.2005

Noise prevention

- **Limiting the noise at the source, e.g.:**
 - Low noise surfaces
 - Appropriate design (e.g. bogies of rail vehicles)
- **Technical means of noise suppression, e.g.:**
 - Construction of acoustic barriers
 - Isolation of living & office compartments
- **Appropriate localisation of noise-emitting and noise-vulnerable objects, e.g.:**
 - Channelling of the traffic outside of the cities
 - Residential land use planning

Land use planning

A very important tool of noise management!

- **Local Land-Use Plans**

- Appointment of areas of mixed function
- Appropriate standard of the acoustic quality of the environment
- Separation of acoustically annoying investments from other areas, especially residential, recreational, sanatorium etc.

Decision on acceptable noise levels

- Issued when noise in the environment exceeds the limits stated by the Directive of the Ministry of Environment
- Określa dopuszczalne poziomy hałasu dla zakładu – zakład ma obowiązek ich dotrzymania w ciągu 6 miesięcy
- Wartości dopuszczalne są określane odrębnie dla pory dnia i nocy
- **Obszar ograniczonego użytkowania**

Podsumowanie

- Problem wyeksponowania populacji Polaków na ponadnormatywny hałas jest znaczący i pogarsza się.
- Ustawodawstwo – zgodne z przepisami unijnymi i (z drobnymi zastrzeżeniami) jest odpowiednie.
- Działania będą realizowane wielokierunkowo:
 - Właściwe planowanie przestrzenne
 - Programy ochrony środowiska przed hałasem
 - Nowoczesne technologie + odpowiednia polityka transportowa w miastach
 - Nadzór rynku – kontrola wprowadzania nowych urządzeń mogących emitować hałas
- Kontrola Inspekcji Ochrony Środowiska i sankcje

Dziękuję za uwagę

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