

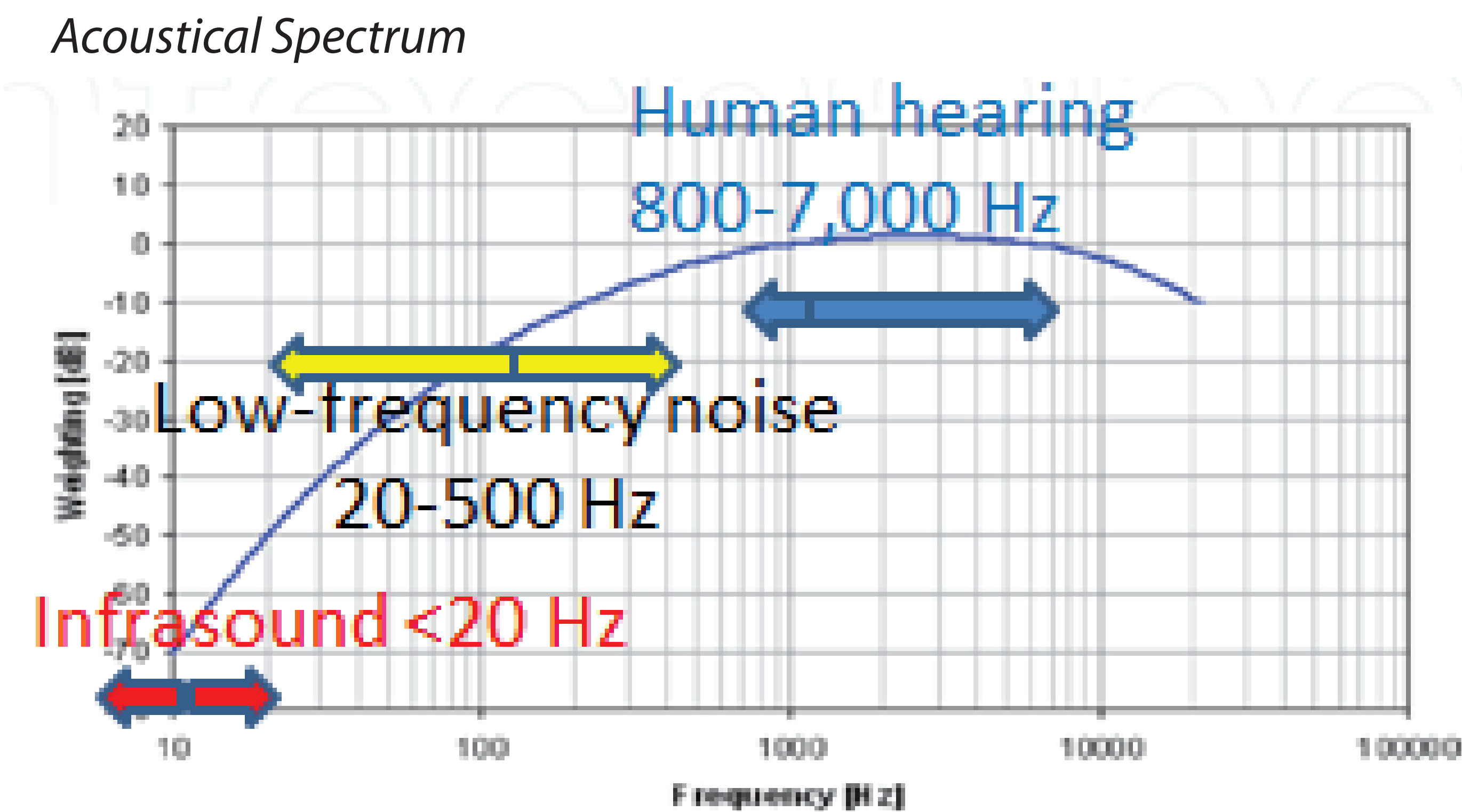
HEALTH EFFECTS REPORTED from EXPOSURE to WIND TURBINE NOISE

David Boleneus

DO WIND TURBINES and INDUSTRIAL NOISES CAUSE DISEASE?

1. Wind Turbine Syndrome
2. Vibroacoustic Disease

...MOST noise from wind turbines is known as infrasound and low-frequency noise (ILFN) and lies outside the range of human hearing (see acoustical spectrum)



Cary and Karen Shindelcker at new home with three, 476-ft tall wind turbines nearby, Mason County, Michigan (see story "WIND TURBINE NOISE--A HUMAN TRAGEDY" at right). A total of 56 wind turbines are within one mile of Shindelcker's home.

TO AVOID WIND TURBINE INFRASOUND NOISE

...Rule of thumb: a barrier needed to protect people from infrasound or low-frequency noise (ILFN) must be a thickness at or above the wavelength of the sound. ...To protect against ILFN at 20 hertz (hz) requires a 17.1 m (55 ft) thick barrier; or 52.5 m (171 ft) at 6.3 hz (table)

Wavelength of airborne sound at	is	Range of sound
4000 Hz	is	0.08 m Audible
3000 Hz	is	0.11 m Audible
500 Hz	is	0.68 m Low Freq.
100 Hz	is	3.43 m Low Freq.
20 Hz	is	17.1 m Infrasound
6.3 Hz	is	52.5 m Infrasound

Dr. Mariana Pereira - Video: SPEAKS to RISK of INFRASOUND and LOW-FREQUENCY NOISE (ILFN) as a CAUSE of VIBROACOUSTIC (VAD)



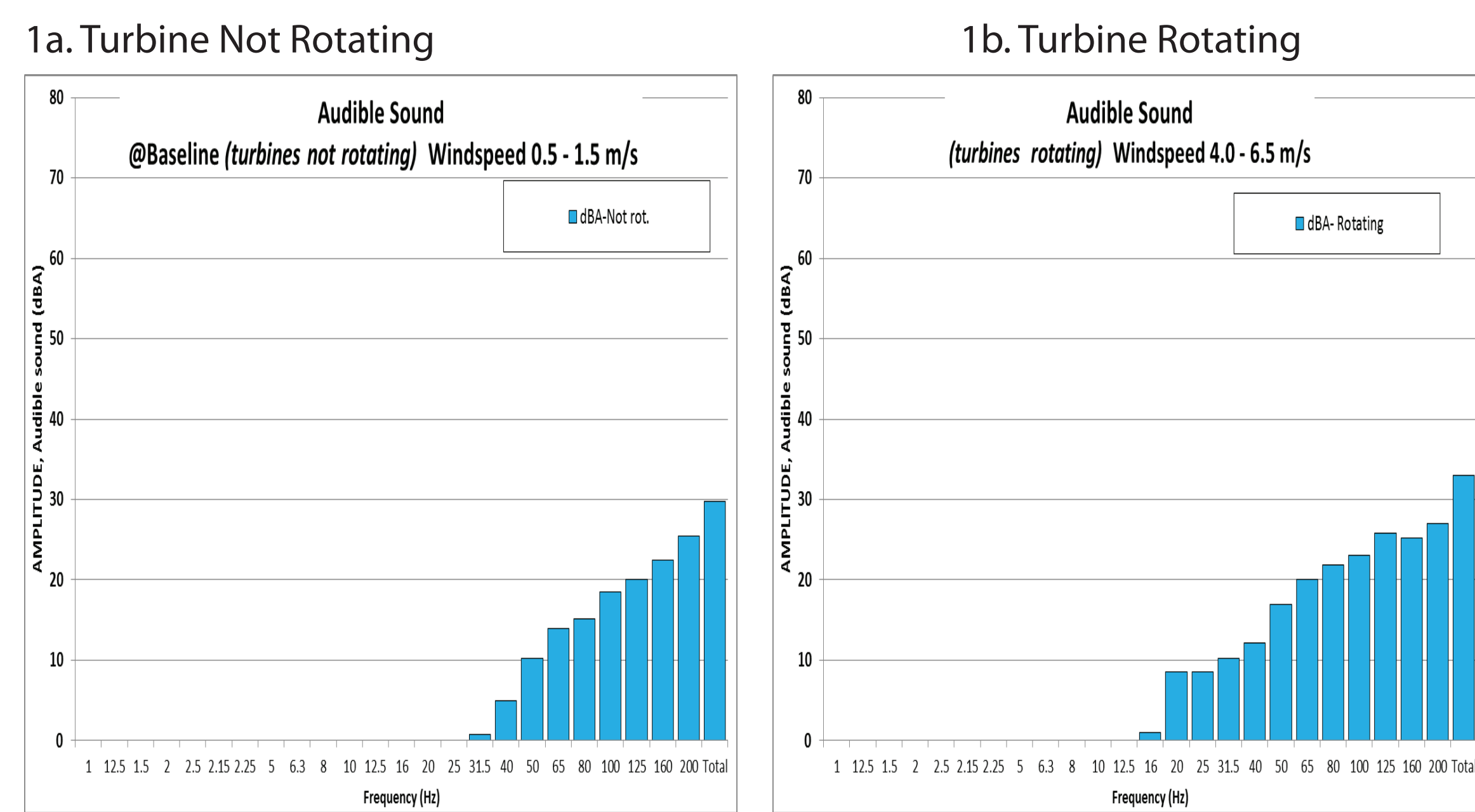
INFRASOUND AND LOW FREQUENCY NOISE - Ljubljana 2018

INFRASOUND AND LOW FREQUENCY NOISE
 - Lecture, Ljubljana 2018 Mariana Pereira, PhD
<https://youtu.be/ZXCZ3OyKlRE>
 BS Physics SUNY MS Biomedical engineering Drexel Univ
 Ph. D. Environ Sciences

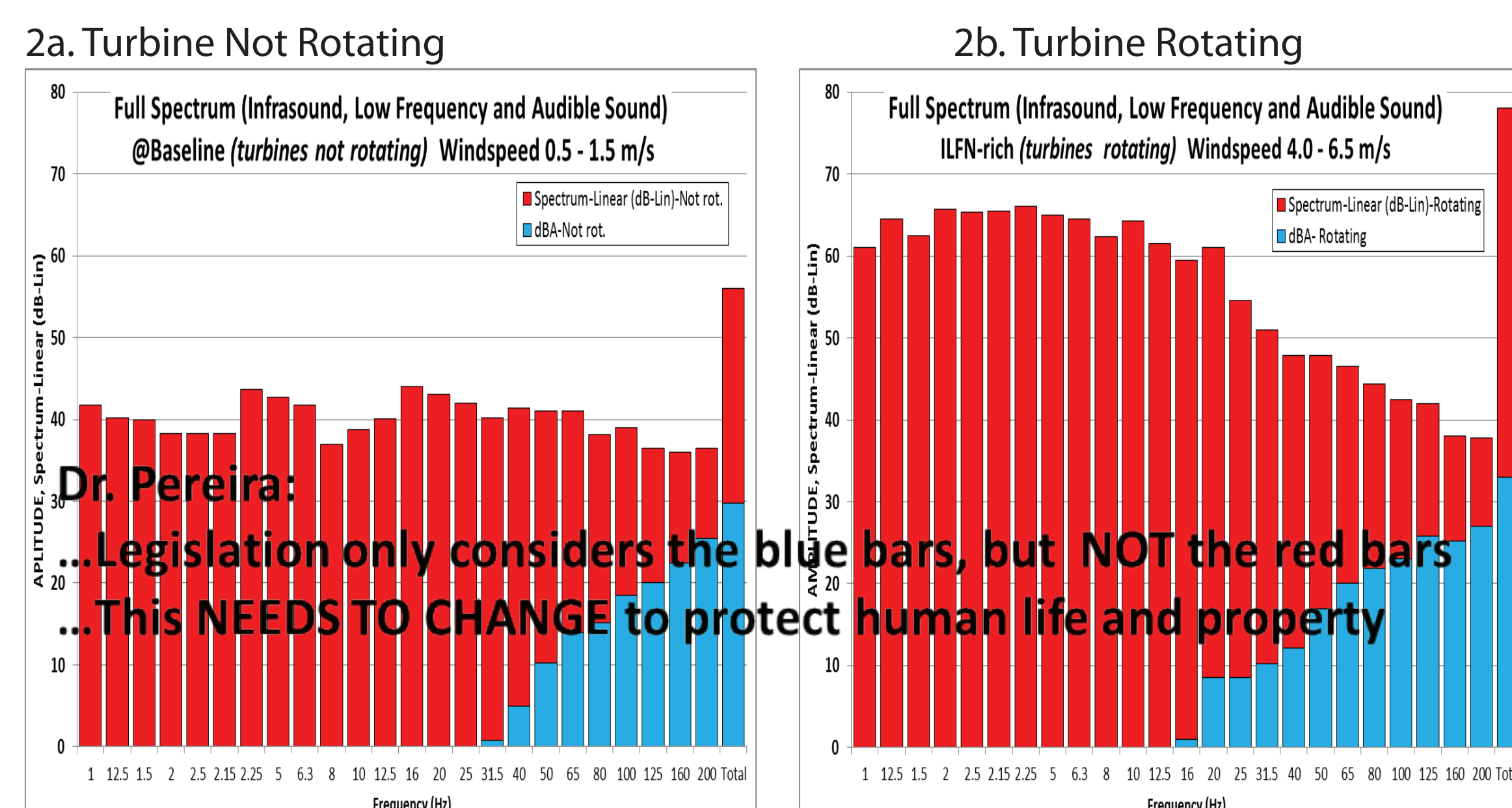
Dr. Pereira...

...Current legislation uses: deciBel-A-metric (dBA) to protect hearing
 ...Problem: The dBA measurement system is completely inadequate for measuring low-frequency & infrasound
 ...Legislation must change to: Use of full spectrum dB-linear measurement

1. Below is the range of human hearing recording using dBA metric at a wind turbine:



2. Below is infrasound and low-frequency noise recorded (red) using dB-full spectrum at a wind turbine:



Dr. Pereira:

...Legislation only considers the blue bars, but NOT the red bars
 ...This NEEDS TO CHANGE to protect human life and property

PROBLEMS, CONCERNS with WIND TURBINE NOISE

...Sound falls outside normal range of human hearing
 ...Sound is felt, not heard, so no cannot perceive danger
 ...To avoid: people re-locate to basements; abandon homes
 ...Cannot "tune out" turbine noise, so cannot avoid
 ...Low frequency infra sound travels >10 miles
 ...German research results: Infrasound and low-frequency noise poses cardiac health risk, respiratory disease risk, sleeplessness, brain lesions
 ...The Max Planck Institute: identified visible, proven change in brain activity
 ...World Health Organization: wind turbine noise is a serious health hazard, and liability
 ...Infrasound is not detected using conventional acoustical methodologies

...Dr. Riina Bray MD, Letter to Ontario Premier Doug Ford: Industrial wind turbine's can adversely affect human health

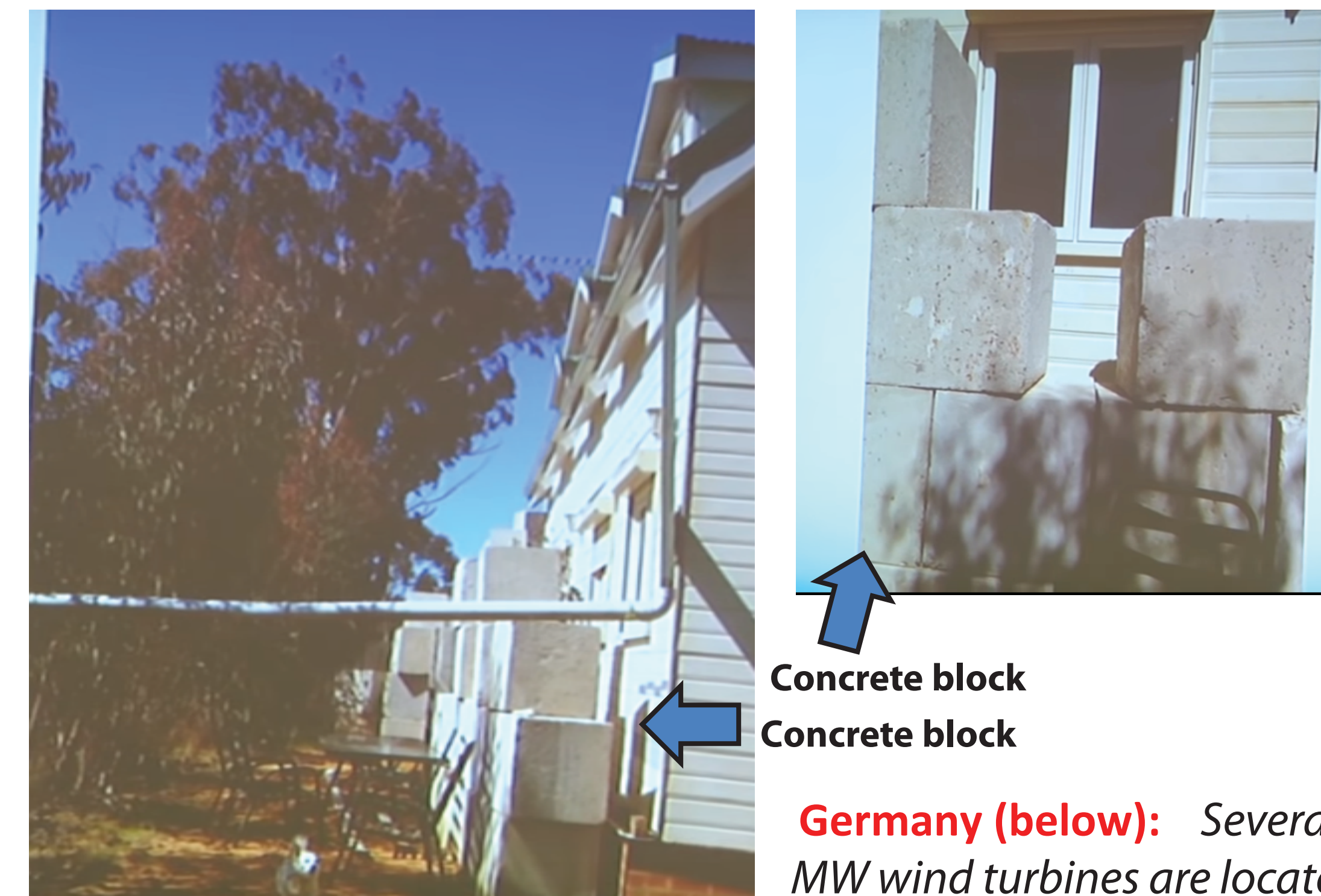


Dr. Riina Bray, M.D., Medical Director, Womens College Hospital, Asst. Prof. Univ. of Toronto

...Dr. Bray reports: infrasound, dirty electricity and ground current contribute to ill-health of residents nearby;
 ...Cites research: The combination of low-frequency noise and infra-sound may produce, in patients, "represent a set of symptoms that include depression, irritability, aggressiveness, cognitive dysfunction, sleep disorder, fatigue, chest pain/pressure, headaches, joint pain, nausea, dizziness, vertigo, tinnitus, stress, heart palpitations, and other symptoms."
 Cites research: U.S. Military research also demonstrated that acoustic infrasound can have dramatic and serious effects on human physiology

ACTIONS TAKEN to AVOID WIND TURBINE NOISE

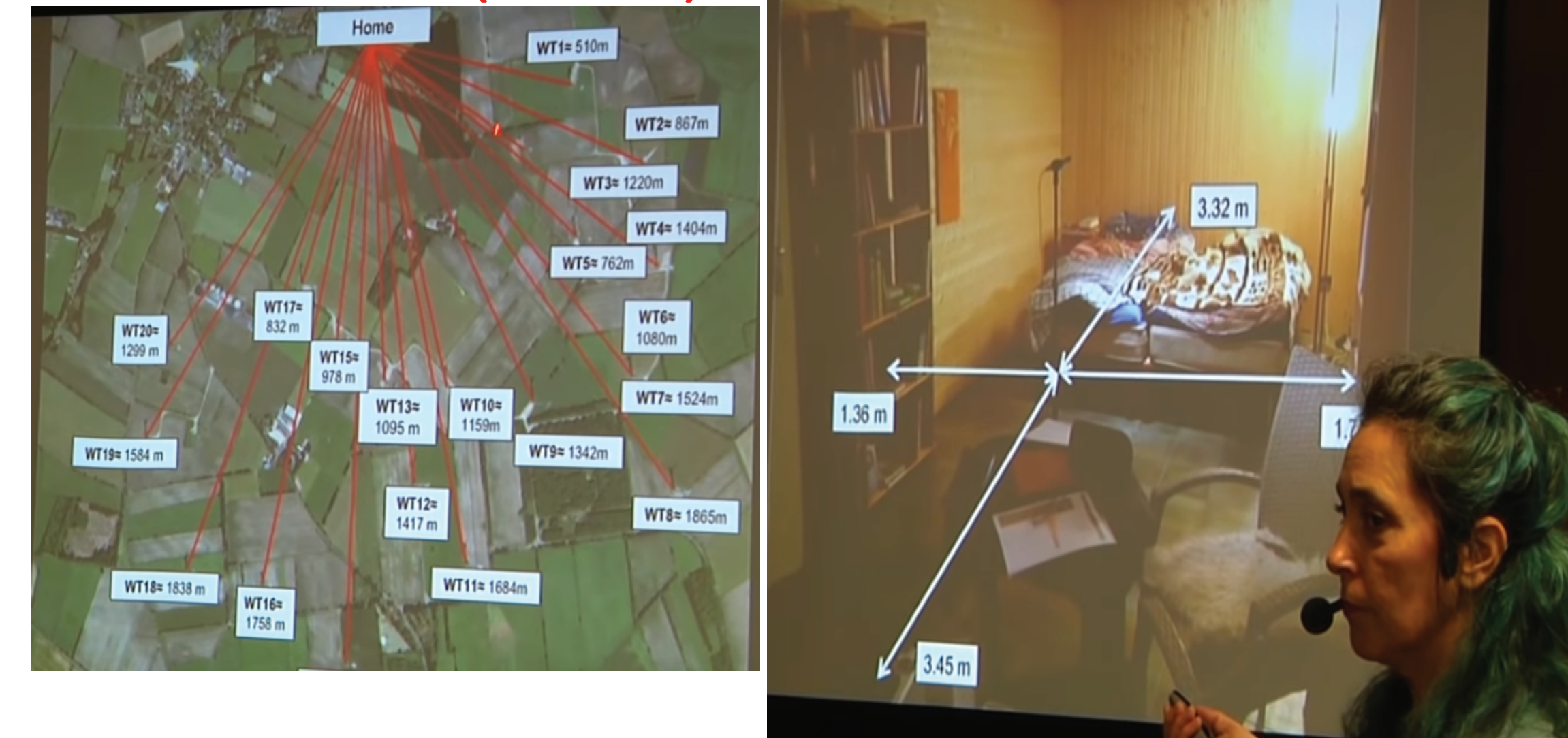
Australia: Owner stacked concrete blocks to dampen noise



Concrete block
Concrete block

Germany (below): Several 2.3 MW wind turbines are located within 1900 m. of home. Residents sleep in "bunker bedroom" to avoid noise from turbines.

Germany: Home with bunker bedroom from wind turbines (red lines)

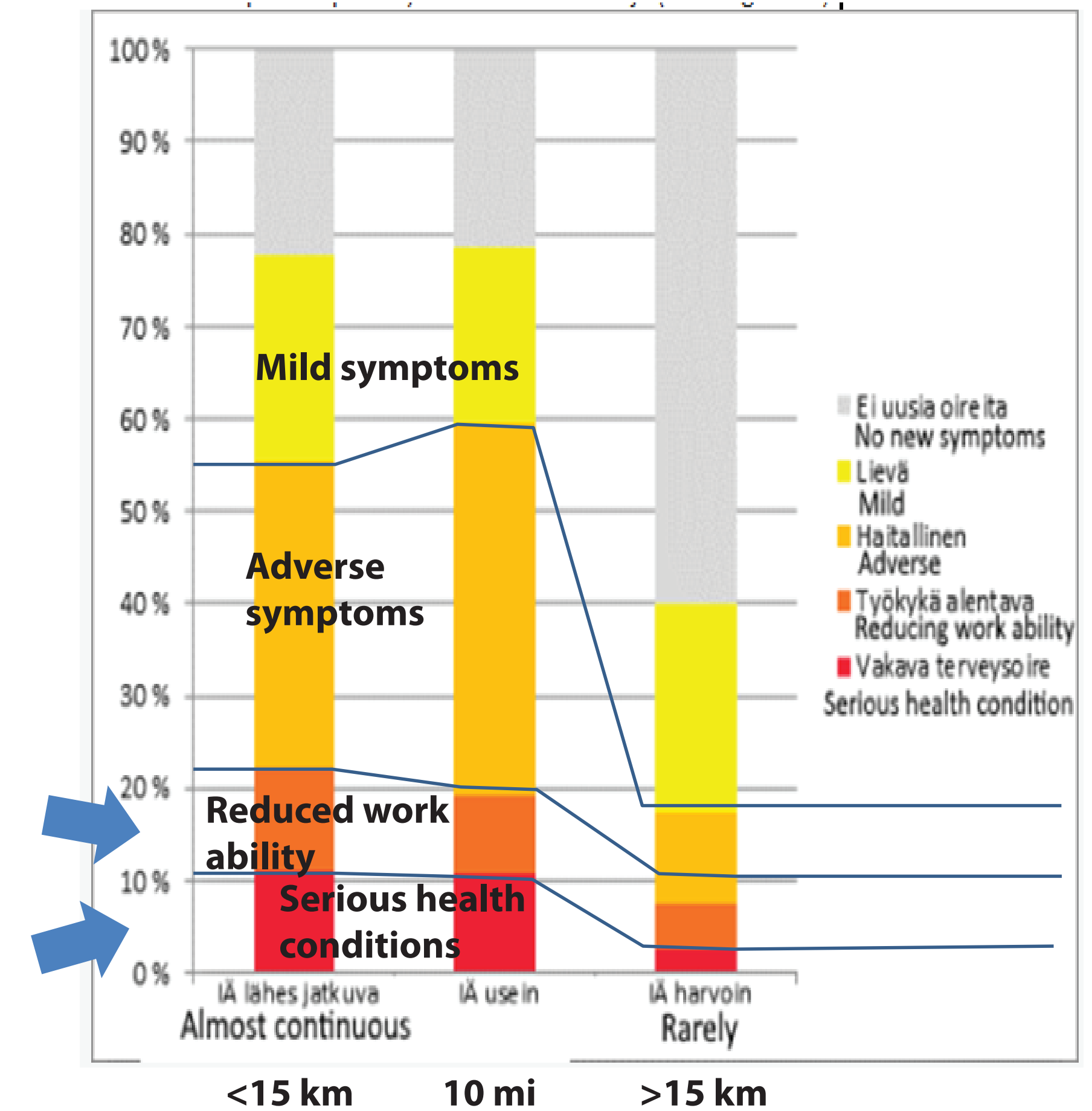
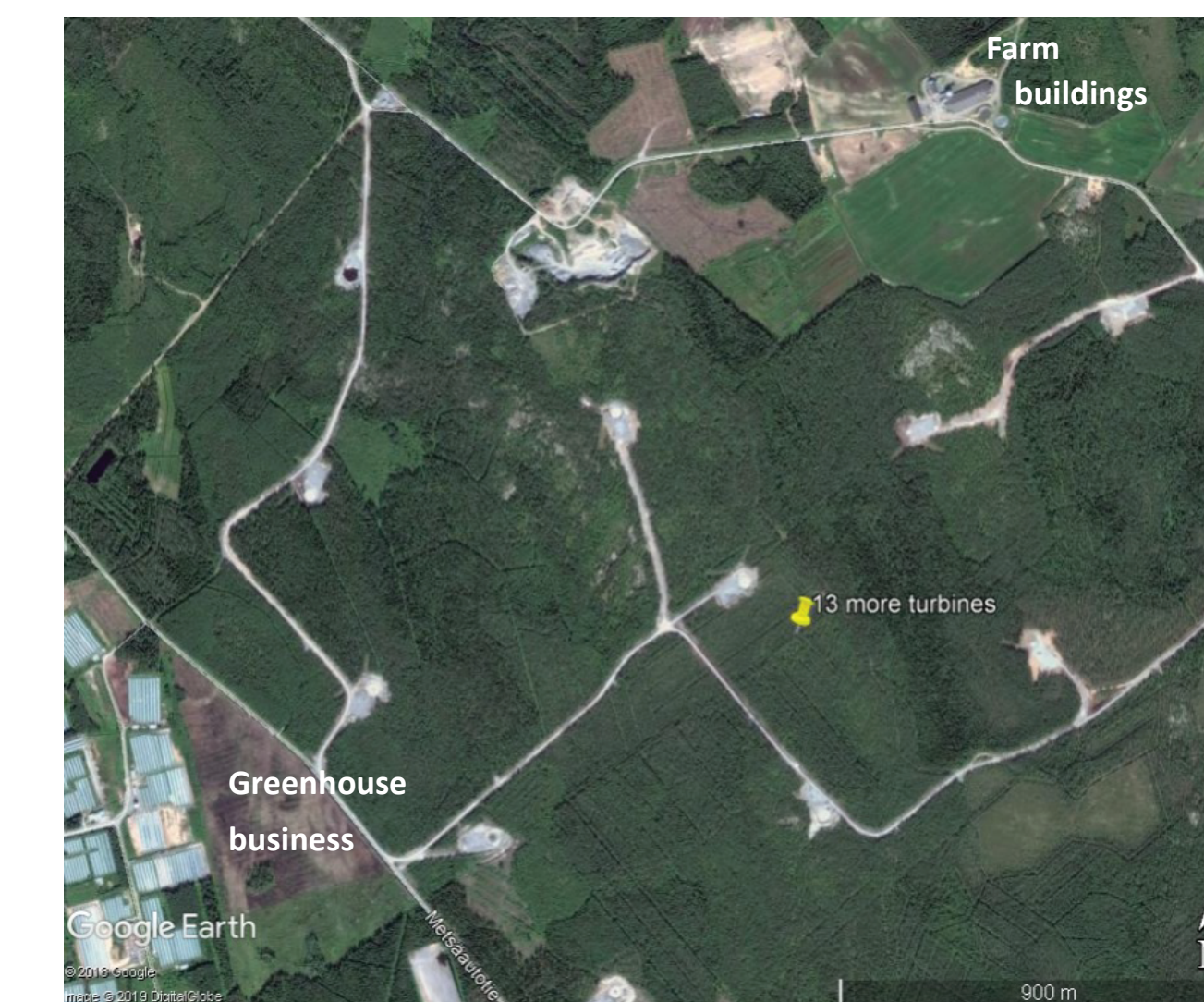


2,271: anti-wind websites www.quixoteslaststand.com; and more... www.epaw.org European Platform for Windfarms; www.aveo.org; www.ontario-wind-resistance.com; www.stopthesethings.com; www.joannova.com (Australia); www.masterresource.com; Energy Matters: www.euanmearns.com; www.heartland.org; www.notrickszone.com; Energy Probe www.ep.probeinternational.org

FINNISH ASSOC. of ENVIRONMENTAL HEALTH FINDINGS: UNSAFE TO LIVE within 15 km (10 mi.) of a WIND TURBINE

Study: Carried out in spring 2016 in Ostrobothnia and Oulu area. Includes 200 persons from 50 families
Findings: Serious and unsafe health effects were three times more harmful or more serious symptoms were detected within a distance of 15 km (10 mi.) of wind turbines. Symptoms decreased if residents lived at a distance greater than 15 km (10 mi).

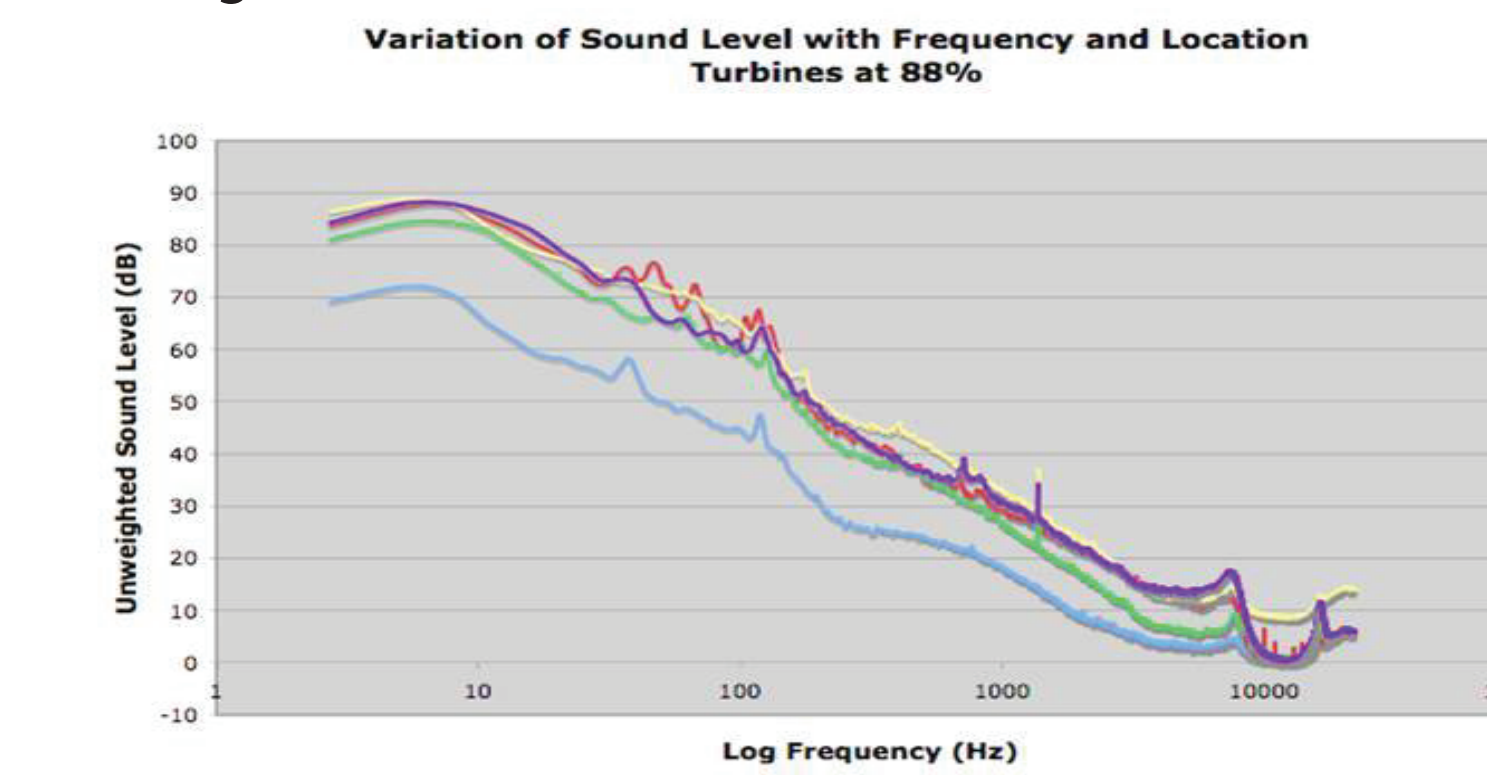
Wind Turbine Sites in Finland



ONTARIANS NEAR WIND TURBINES EXPERIENCE TRAUMATIC CARDIAC INSTABILITY

Evidence Based Study of Noise Impacting Annoyance
 William K.G. Palmer B.A.Sc. P. Eng.
<http://ontario-wind-resistance.org/noise/>

Conclusions: Low-frequency noise and infrasound in homes near wind turbines is consistently 15 to 20 dB higher than at homes remote from wind turbines



Ontarians living too close to wind turbines experience cardiac instability

28 October 2018 To: Christine Elliott, Minister of Health and Long Term Care
 CC: Doug Ford, Premier, Greg Rickford, Minister of Energy
<http://ontario-wind-resistance.org/>

...Four peoples' homes surrounded by industrial wind turbines have experienced traumatic cardiac instability episodes in their homes.
 ...Substations have been sited too close to their homes.
 ...Diagnoses have ruled out typical causative factors for cardiac problems

Images: European Platform Against Windfarms www.epaw.org

WIND TURBINE NOISE: A HUMAN TRAGEDY

Wind Turbine Noise Makes Life a Living Hell for Neighbours: Michigan Farmers Driven From Homes

<https://stopthesethings.com/2018/01/20/wind-turbine-noise-makes-life-a-living-hell-for-neighbours-michigan-farmers-driven-from-homes/>
 Michigan Wind Farm Cost a Family Its Health, Home In the Shadow of Wind Farms - GateHouse Media Emily Le Coz and Lucille Sherman

...Cary Shindelcker awoke in a panic. His heart pounded as he raced through his house, flipping on light after light, in search of the intruder he would never find.
 ...The middle-aged father of two knew his fear was irrational, but it hijacked every sense in his body. He finished checking his house and yard anyway, then returned to bed where he lay awake for hours, angry.
 ...This had become an almost nightly ritual since Thanksgiving 2012, when 56 industrial turbines in the Lake Winds Energy Park started spinning outside Shindelcker's home in rural Mason County, Michigan.
 ...The closest turbine was 1,200 feet from their door.

continues...Go to ear specialist: along with Vertigo, Anger, Teeth grinding - break a tooth. Crying - no more sanctuary of home. Depression. Suicide plans. Call suicide hotline. How do you explain that you are being abused every day by a wind turbine!

The Hidden Human Tragedy Caused by Incessant Wind Turbine Noise - The Secret, Silent Wind Power Peril

<https://stopthesethings.com/2017/02/24/the-hidden-human-tragedy-caused-by-incessant-wind-turbine-noise/>

Helen Schwiesow Parker, PhD, is a Licensed Clinical Psychologist and a Past Clinical Supervisory Faculty member at the University of Virginia Medical School, and Neil Kelley, National Renewal Energy Laboratory

...Infrasound (inaudible) and low-frequency (audible) noise produced by industrial-scale Wind Turbines directly causes adverse health effects, experts stated. The disturbance from the turbines is often worse indoors than outside. "Far from becoming injured to the disturbance, people become increasingly sensitive to it over time."
 ...The wind industry insists that infrasound and low-frequency noise does not exist. They exclude the ILFN that are known to cause problems. They say neighbor "will get used to it," and deny that the victims' suffering has any basis in reality.
 ..."We reside in what used to be a wonderful home. After just two weeks of this machine running full tilt, I was a physical and emotional wreck! So tired. Headaches that do not go away. Dizzy and nauseous. Body functions go haywire - I start dropping things (can't close my hand) and fall down basement stairs. Heart palpitations. Continues at left...."

TRUMP: "If you have a windmill near your house, ...its value just went down 75 percent. And ...the noise causes cancer..." 4/3/2019
https://www.washingtonpost.com/politics/2019/04/03/trump-claims-that-wind-farms-cause-cancer-very-trumpian-reasons/?utm_term=.12eaea8315ad