

Noise training in Environmental Health programs in Australasia – Why are they disappearing and what is the impact?

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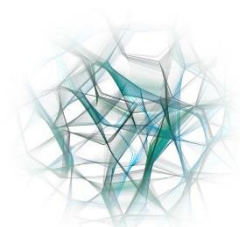
What is the most complained about form of pollution?

Environmental
NOISE



Background...

- Review of the undergraduate Environmental Health (EH) specialisation as part of revision of the degree that it sits in at Massey
- Opportunity to look more widely at what are the essential Environmental Health competencies
- Level of expertise of Environmental Health Officers (EHOs) in noise assessment in Australia has been decreasing
- Yet number of noise complaints in urban settings continues to rise and the complexity of noise issues EHOs are expected to deal with, has grown



Background

- Occupational Health and Safety (OHS) generally not considered part of EH in civilian Australasia
- Unlike many other recognised EH competencies, where an EHO is involved in only some stages of the process, for noise assessment, it is common for an EHO to do everything, from data collection to analysis, interpretation and reporting
- Like many areas of EH, there have been significant changes in noise assessment and wider recognition of the adverse health effects of excessive (environmental) noise



Review with respect to noise

1. The 'Environmental Health University Course Accreditation Policy' of Environmental Health Australia;
2. The International Federation of Environmental Health (IFEH) key competencies for EHOs; and
3. The recognition of qualifications in New Zealand, under the 'Environmental Health Officers Qualifications Regulations 1993'.



Australia

- Environmental Health Australia (EHA) are the accrediting body for University EH programs
- Have a 'Course Accreditation Policy' (revised Dec 2014)
- Contains a framework foundation for education of EHOs
- Universities required to map their program against the 55 *underpinning skills and knowledge* listed, and demonstrate capabilities in their graduates

Science

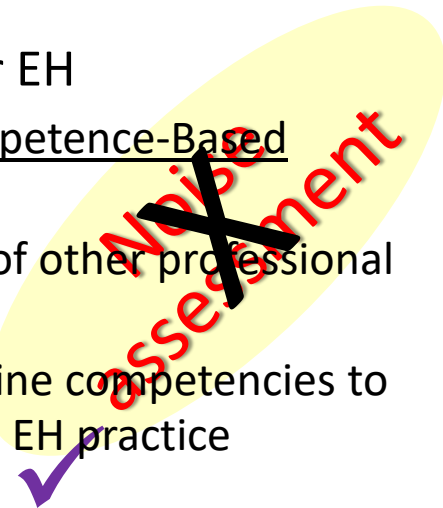
S1

Introduction to principles of physics as a basis for understanding physical hazards and **acoustics**.



IFEH & IEH Faculty Forum

- Network of environment, health professionals (& academics)
- Primary task - to promote the development of EH
- 1998 – Started develop of an international curriculum for EH
 - 2008 – Discussion Paper on developing an ‘International Competence-Based Curriculum’ for EH
 - 2009 – Considered too narrowly drawn ~ potential exclusion of other professional groups
 - 2010 – Revised report to Council ~ more broadly drawn baseline competencies to be displayed and maintained by those working within EH practice
 - 2010 – Africa Academy for EH (AAEH) – EH Curriculum





New Zealand

- Recognition of qualifications under the ‘Environmental Health Officers Qualifications Regulations 1993’
 - Pursuant to section 121 of the Health Act 1956
- Ministry of Health – administers the recognition of qualifications under the regulations
- All referenced back to the then, ‘National Diploma in Environmental Health Science’
- Curriculum of the diploma (1994)
 - SEH322 Noise Assessment and Control (125 hours)
 - Plus a large practical work requirement



Europe: Environmental Noise

- EU - Environmental Noise Directive (END) 2002/49/EC
 - Strategic noise mapping and noise action plans, human resources development through education and training in health risk assessment

“Environmental noise is a threat to public health, having negative impacts on human health and well-being”
- WHO Europe
 - 2009: Night noise Guidelines for Europe
 - 2011: Burden of disease from environmental noise

Noise & its Effects on People

– Why is it important?

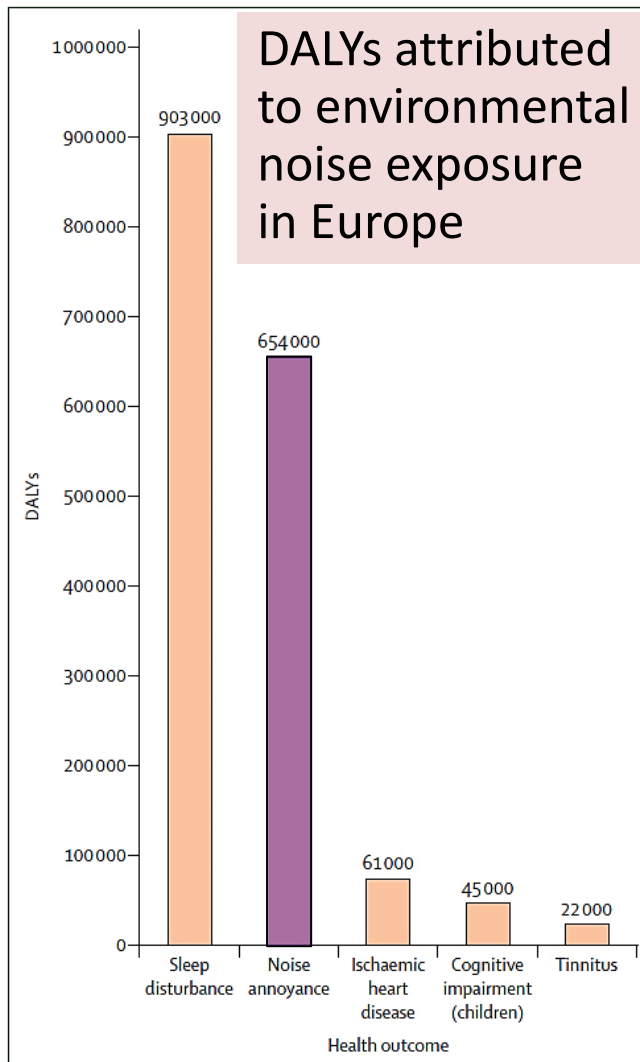
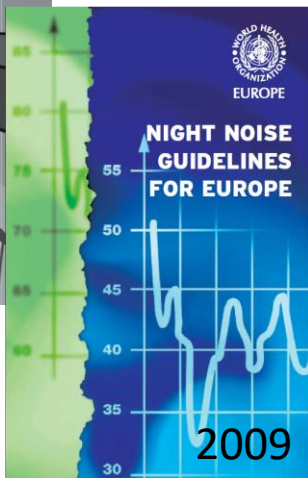
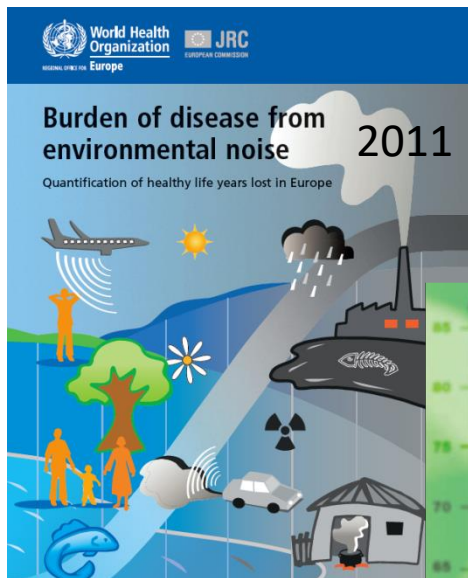
“Hearing loss caused by occupational or recreational noise exposure is highly prevalent and constitutes a public health threat needing preventive and therapeutic strategies.”

“...non-auditory health effects of environmental noise are manifold, serious and, because of the widespread exposure, very prevalent.”

Auditory and non-auditory effects of noise on health (The Lancet 2013)

www.thelancet.com/journals/lancet/article/PIIS0140-6736%2813%2961613-X/abstract

Environmental Noise



DALYs = Disability-adjusted life years

DALY = one lost year of "healthy" life



New Zealand Programs



Currently two NZ University undergraduate programs that are recognised by the Ministry of Health in meeting the EH Officers Qualifications Regulations 1993

1. Bachelor of Science (Health Protection) ~ Internal delivery
 - SCIE503 Biophysics ~ A first year course with a little bit of acoustics
 - Plus a 2-3 hour session by an acoustics consultant on EH noise assessment, usually done at third year
2. Bachelor of Health Science (Environmental Health) ~ Blended delivery
 - 214316 Biophysical Effects of Noise and Vibration (250 hours) ~ A full third year course with hands-on practice, field and project work

NZ: Why so vastly different ?

- Original National Diploma in EH was a Polytechnic program with a focus on practice, less on life-long learning and that EH is an evolving field of professional practice
- Incremental revision of programs
 - Each time a revision has been approved as equivalent to what was previously, it moves further away from the National Diploma
- Shortage of EH graduates – can pick up noise on the job (CPD)?
- Recognition of many, many, overseas qualification that do not contain noise assessment
- Universities: Expertise and Cost \$\$\$ of delivering noise courses

IFEH cf. IEHFF Curriculum

IFEH

- Clear from a practitioners point of view that noise assessment is a part of day-to-day practice of Local Authority EHOs
- Core knowledge, skills and competencies to be attained and maintained
- SIG (Special Interest Group) ~ Noise Pollution

IEHFF Draft Curriculum

- Trying to meet the needs of the increasingly wider EH community of (allied) professionals
- Can't cover everything...
- Prepare people with the capacity to learn



Australasia

What is the impact of (most) recognised tertiary EH programs not covering noise assessment?

- Ill prepared workforce
 - Can perform (the mechanics of) noise assessment but do not have a thorough understanding of the fundamentals
 - Easily confused/convinced by consultant reports
 - Lack of understanding of uncertainty in measurements
 - Can't explain in lay terms what and why...
 - Try taking legal action when it is not supported by the evidence or not taking action because of a lack of confidence (in the evidence)



Conclusions

- The need for EHOs competent in noise assessment and interpretation of noise reports, is greater than ever
- This need is not being met in most tertiary EH qualifications in Australasia
- Complexity of noise issues EHOs deal with, has grown
- CPD/Professional courses available, often miss-matched to need
- Adverse health effects of environmental noise are serious
- Exposure to the fundamentals of noise assessment as part of the initial tertiary qualification, especially if supported with hands-on practice, would seem preferable



Questions and comments

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