



Newsletter

WHO Collaborating Centre for Housing and Health
 Baden-Württemberg State Health Office



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Editorial

Noise in residential areas

The World Health Organisation (WHO) reviewed scientific evidence on health impacts of noise in residential areas, and provided recommendations for exposure limits to protect public health in the WHO Guidelines on community noise (1999) and night noise guidelines for Europe (2009).^{i,ii} More recently, the WHO estimated that more than one million healthy life-years are lost from noise from traffic in roads, railways and airways in the western European cities.ⁱⁱⁱ

Neighbourhood noise generated by air-conditioning units, ventilation, radios, hi-fis, televisions, maintenance work, hobbies, lawn mowing, parties, etc. is a common cause of complaints. In residential areas close to traffic routes, traffic noise from automobiles, motor-bikes, mopeds, trains and aircrafts, etc. are sources of noise pollution. In addition, sport, entertainment, commercial and social activities in residential areas can generate levels of noise ranging from being a nuisance to actually damaging people's health.

Annoyance and sleep disturbance are two important adverse effects of noise on health and well-being. Annoyance is the main effect of noise during daytime. A definition of annoyance is "a feeling of displeasure associated with any agent or condition, known or believed by an individual or group to adversely affect them". Annoyance may be accompanied with a variety of negative emotions. Social and behavioural effects of noise in residential areas include changes in overt everyday behaviour patterns (e.g. closing windows, not using balconies, turning TV and radio to louder levels, writing petitions, complaining to authorities); adverse changes in social behaviour (e.g. aggression, unfriendliness, disengagement, non-participation); adverse changes in social indica-

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tors (e.g. residential mobility, hospital admissions, drug consumption, accident rates); and changes in mood (e.g. less happy, more depressed). According to the WHO Large Analysis and Review of European housing and health Status (LARES), chronically strong annoyance due to neighbourhood noise increases the risks of various cardiovascular and musculoskeletal disorders, well as depression and migraine.^{iv}

Sleep disturbance is the predominant effect during nighttime. People are least tolerant of neighbourhood noise audible in the bedroom. Aircraft noise produces stronger annoyance and sleep disturbance than road or railway traffic noise. Stronger reactions have been observed when noise is accompanied by vibrations and contains low-frequency components such as wind-turbine noise. Because chronic sleep disturbance has adverse effects on health and well-being, noise in residential areas should be considered a public health issue as well as an environmental nuisance.

From the viewpoint of housing and health, a good noise insulation of dwellings can reduce sound levels substantially. However, noise insulation is not always effective because a large

part of the population sleeps with windows partially open. A more effective measure is the location of noise-sensitive rooms on the quiet side of a dwelling. Zoning by urban planners is an ultimate instrument to keep noise-sensitive land uses away from noisy areas. Noisy areas could be a good choice for location of commercial activities and offices, where there will be no people at night, or where it is a physical impossibility to sleep with the windows open (fully air-conditioned buildings, for example, hotels and

sometimes hospitals). National and local housing and health authorities are advised to comply with the guideline values recommended by the WHO in order to protect population health from the harmful effects of noise in residential areas.

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- ^{iv} Niemann H, Maschke C, Hecht K. Noise induced annoyance and morbidity. Results from the pan European LARES-survey. [Bundesgesundheitsblatt Gesundheitsforschung Gesundheitsschutz](#). 2005 Mar;48(3):315-28. [Article in German]

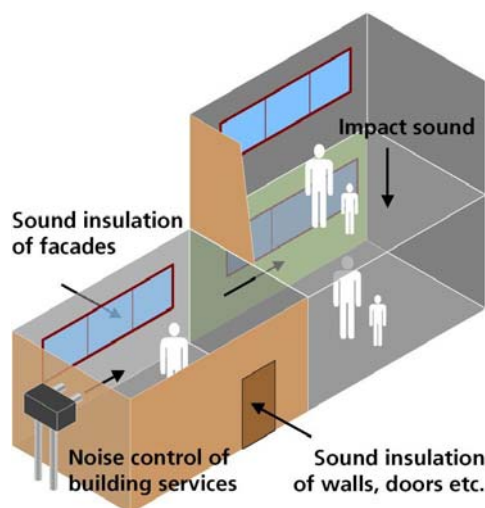
Acoustical performance of residential buildings

Prof. Dr.-Ing. Philip Leistner, Fraunhofer IBP and University of Stuttgart, Germany.
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The individual assessment of heard environment is based on the total balance of acoustical stimuli, which are present almost everywhere and constantly. The sense of hearing is permanently challenged, since acting as an 'alarm sensor' it cannot be switched off. Moreover, it is not only a matter of loudness or quietness, as even hardly audible noise will cause dramatic reactions, if certain contents are transferred. The respective intensity, dose and characteristics of these sound events as well as a series of accompanying factors produce an overall effect, which exceeds the tolerable degree more and more often. At the same time, technically caused noise does not decrease, acoustically appropriate rooms and buildings are not at all the rule, and nobody wants to renounce conscious hearing, be it a sonorous experience or communication. Against this background of increasingly rare places of silence the apartment as a room of acoustical retreat is gaining in importance.

The acoustical performance of residential buildings is dependent on a variety of parameters, which have an impact on various sound transmission paths. The significant parameters of noise control in buildings comprise the sound insulation of facades and roofs etc. against external noise and of walls, ceilings and doors with regard to noise transmission from and to adjacent rooms as well as impact sound insulation and noise control of building services.

Fundamental aspects of the acoustical performance of residential buildings. Further quality characteristics concern e.g. sound insulation between rooms of one dwelling.



In accordance to these aspects a relatively unclear collection of sound levels (impact sound, noise emissions from systems) and sound level differences (sound insulation) is used to specify requirements. DIN 4109 of 1989 contains binding building regulations to avoid unacceptable stress due to noise. The related so-called minimum or basic sound insulation, however, does no longer comply with modern expectations of the quality of living spaces. VDI 4100, which offers a three-stage model, can be applied as a measure to meet higher demands. Differentiated and especially higher goals of noise control can be arranged on this basis.

Furthermore, certification systems are recently available to design and assess the acoustical performance of residential buildings. The Deutsche Gesellschaft für Akustik (DEGA) favors a multi-stage acoustical performance certificate comparable to the energy performance certificate. The very detailed formulation and reasonable consideration of further acoustical aspects for example in the private residential area should be emphasized as special characteristics. Within the context of a holistic consideration of the quality of living spaces also the system of the Deutsche Gesellschaft für Nachhaltiges Bauen (DGNB, German Sustainable Building Council) contains a criterion for noise control. The partly ambitious quality classifications revert to the DEGA acoustical performance certificate, but do without its specification.

Without any doubt, it is reasonable to consider the acoustical quality of living spaces in the context of energy efficiency, ecology and economy. This similarly applies to future residential buildings as well as to the great number of apartments in already existing buildings with inadequate sound insulation. To focus on sophisticated sound insulation is as unilateral as it is negligent to neglect it. Thus, sensitization and explanations to make for example the quality of noise control comprehensible are still top-priority tasks of all those involved in building besides the constant further development of adequate building technologies.

Publications and Resources

Canada to Study Health Effects of Wind Turbine Noise

OTTAWA, Canada, July 12, 2012 (ENS) - Canadian health and statistics agencies are planning to explore the impact of wind turbine noise on the health of people living near wind power developments. Saying that reported health effects are "poorly understood due to limited scientific research in this area," Health Canada, in collaboration with Statistics Canada, will conduct a two-year study of noise-related health problems in communities near the rapidly multiplying number of wind farms across the country. To design the study Health Canada has brought in experts outside the agency who specialize in noise, health assessment, clinical medicine and epidemiology. The design methodology will be peer-reviewed by the World Health Organization and by multidisciplinary experts in conference settings. Publication of the study results is scheduled for 2014.

[Canada to Study Health Effects of Wind Turbine Noise](#)

WHO review: Health effects of black carbon

Black carbon is a good indicator of combustion-related air pollution, and was only recently recognized as a short-lived climate-forcer, which contributes to warming the Earth's atmosphere.

This report presents the results of a systematic review of evidence of the health effects of black carbon in ambient air. Epidemiological studies provide sufficient evidence of the association of cardio-pulmonary morbidity and mortality with exposure to black carbon. Toxicological studies suggest that black carbon may operate as a universal carrier of a wide variety of chemicals of varying toxicity to the human body. Although black carbon may not be a major, directly toxic component of fine particulate matter, reducing people's exposure to particulate matter containing black carbon should reduce its effects on their health, as well as helping to mitigate climate change.

This review is of particular interest to environmental health professionals concerned with assessing and reducing the health effects of air pollution, as well as to those who use scientific evidence in support of climate change mitigation policies.

[WHO/Europe | Health effects of black carbon](#)

Report Housing and Health - now available in English

In the scope of the survey "Monitoring Health and Environment", parents of fourth graders of selected schools in Baden-Württemberg, Germany, were asked for housing related issues (type and age of the building, building environment, dampness and mould, domestic accidents, behaviour and lifestyle of the residents, etc.) through parental questionnaire in winter 2007/08 and winter 2009/10. The survey was carried out by Landesgesundheitsamt Baden-Württemberg, Stuttgart, Germany, and has now been released in English.

http://www.gesundheitsamt-bw.de/MLS/Documents/WHOCC_Report_Housing+Health_2007-08_2009-10.pdf

Drinking water quality: More safety in buildings in Germany

Since November 1st 2011, the examination of drinking water installation systems for Legionella has become mandatory also in commercially used homes in Germany, such as apartment buildings. So far, this obligation was only stipulated for public buildings. Technical rules for the construction and operation of new drinking water supply systems also became binding. This avoids technical failures in the drinking water installation that may lead to Legionella growth or dissolution of harmful substances from inappropriate material. The new regulation applied to facilities that pool more than 400 litres or store more than 3 litres in the water pipe. Dangerous amounts of Legionella can occur in the warm water, if, for example, by structural defects in the equipment, the required temperature (cold water <25 and hot water > 55 ° C) is not met.

Moreover, Germany is the first country in the EU that introduced a threshold for the heavy metal uranium in drinking water. In the future, the upper limit for uranium in drinking water will be at 10 micrograms per litre of water.

http://www.gesetze-im-internet.de/trinkwv_2001/BJNR095910001.html 

<http://www.umweltbundesamt.de/uba-info-medien/4083.html> 

<http://www.umweltdaten.de/publikationen/fpdf-l/3983.pdf> 

<http://www.umweltbundesamt.de/uba-info-medien/4193.html> 

New guideline VDI 4302 for indoor air odour tests

People spend much of their time inside of buildings. This is why the quality of indoor air is important for human health and well-being. The new guideline VDI 4302, pages 1 and 2, released by VDI and DIN Commission on Air Pollution Prevention describes the performance of indoor odour tests by trained or untrained examiners.

[Innenraumlufte](#) 

Declaration of ecological standards of building materials

Users of building materials have so far not been informed about pollutants that may be released, as the European CE label does not comprise information on harmful substances. This will change soon.


On behalf of Umweltbundesamt (UBA), the German Cement Works Association and the Institute for Building Research, RWTH Aachen, have carried out validation tests for a new European leaching test and confirmed its robustness. Once the new method will be published in 2013, its use is recommended both in the context of the new EU Regulation (No 305/2011) for building materials as well as for voluntary labelling. The new method provides a solid basis to ensure the harmlessness of building material for soil and water.

<http://www.umweltbundesamt.de/uba-info-medien/4153.html> 

<http://www.umweltbundesamt.de/produkte/bauprodukte/eg-bauproduktenrichtlinie.htm> 

Report "Accessible neighbourhoods"

Neighborhoods without barriers are possible. This is the result of the analysis of 20 case studies in the ExWoSt research field "Innovations for family- and senior-friendly neighbourhoods".

http://www.bbsr.bund.de/BBSR/DE/FP/ExWoSt/Forschungsfelder/InnovationenFamilieStadtquartiere/06_Sondergutachten_BarrierefreieSTQ.html 

<http://www.vbg.de/SharedDocs/Downloads/DE/Broschueren/VBG->

[Fachinformation Akustik im Buero BGI GUV-I 5141-Version 1 0 2011-06 .html](http://www.vbg.de/SharedDocs/Downloads/DE/Broschueren/VBG-Fachinformation_Akustik_im_Buero_BGI_GUV-I_5141-Version_1_0_2011-06_.html) 

Acoustics in the office

Support for the acoustic designing of offices

An acoustically well-designed office environment contributes significantly to undisturbed and concentrated work. A balanced acoustic design of the rooms promotes productivity, job satisfaction and well-being in the office and is thus an important factor for motivation and success in office work.

<http://www.vbg.de/SharedDocs/Downloads/DE/Broschueren/VBG->

[Fachinformation Akustik im Buero BGI GUV-I 5141-Version 1 0 2011-06 .html](http://www.vbg.de/SharedDocs/Downloads/DE/Broschueren/VBG-Fachinformation_Akustik_im_Buero_BGI_GUV-I_5141-Version_1_0_2011-06_.html) 

NCHH releases new findings showing window replacement delivers lead benefits up to 12 years

A new NCHH study compared window replacement to window repair as a strategy for reducing lead paint hazards evaluating homes that either replaced or repaired windows 12 years ago. The study examined which strategy resulted in lower lead dust levels on floors and windowsills. It found significantly lower amounts of lead dust in homes where all windows were replaced compared to homes where windows had been repaired.

<http://www.nchh.org/tabid/139/default.aspx?ContentID=143>

Final report „Emissions from building components“

BBSR (Bundesinstitut für has recently released the final report of the research project “Emissions from building components”, with a special focus on emissions from windows. All windows and window elements tested comply with the decision criteria of the AgBB system.

[Forschungsinitiative Zukunft Bau](http://www.forschungsinitiative-zukunft-bau.de) 

Retrospect

Symposium Housing and Health held at Baden-Wuerttemberg State Health Office, Stuttgart on March 30, 2012

How can healthy living be measured? Against the background of this question, the Baden-Wuerttemberg State Health Office in its function as a WHO Collaborating Centre for Housing and Health invited several multidisciplinary experts from the housing sector to a symposium on housing and health. As an aim of this symposium, healthy housing should be addressed from different sites in an integrative manner.

Matthias Braubach (WHO European Centre for Environment and Health, Bonn), gave an overview of the most important “healthy homes principles” (dry, clean, ventilated, pest-free, safe, contaminant-

free, maintained) from WHO point of view. He showed the unequal distribution of healthy housing conditions and stressed environmental health inequalities in Europe. In addition, he critically questioned the LEED (Leadership in Energy and Environmental Design) certification (“housing label”) as an example for the attempt of quantifying healthy housing, which provides, according to its website “independent, third-party verification that a building, home or community was designed and built using strategies aimed at achieving high performance and key areas of human and environmental health...”.

Legislations demands energy saving building constructions, and many buildings lack in natural ventilation. The resulting accumulation of moisture, microorganisms and chemicals from building products and furnishings, such as formaldehyde, wood preservatives, flame retardants and plasticizers may affect human health, particularly as people spend more than 90 % of their time indoors. The broad variety of noxious indoor substances, as well as further influencing, also psychosocial factors related with housing, was shown by Prof. Dr med Gerhard A. Wiesmüller (Umweltmedizinische Beratungsstelle, Köln).

Among the chemical air contaminants, flame retardants play an increasingly important role as many home appliances are equipped with these substances. Harold Neubrand (COPRUS COGNITO, Sachverständigengemeinschaft für Immobilien, Bauen und Umwelt, Bad Boll) gave an overview of the different substances and the relevant indoor sources.

State building codes, that rule the stability of a building, fire protection requirements, and also hygiene, health and ecology, were presented by MR Dr.-Ing. G. Scheuermann (Ministerium für Umwelt, Klima und Energiewirtschaft Baden-Württemberg).

A critical view on energy refurbishment measures was made by Oliver Kulpanek (Baugenossenschaft Esslingen). Tight houses save a lot of energy, but they require a strict ventilation regime - otherwise dampness, mould and accumulating chemicals may damage the building and affect human health.



Prof. Dr.-Ing. Philip Leistner (Fraunhofer UBP, University of Stuttgart) outlined the significance of the acoustic quality of buildings. He presented the structural requirements for noise protection, however, he stressed that some norms may be out-of-date and the acoustic quality of housing depends on various factors, which must be considered in the context of energy efficiency, ecology and economy.

Consumers and do-it-yourselfers face a bewildering variety of labels, which are awarded for ecological and health aspects of building products and their emissions. This broad field of labels, their reliability were addressed by Dr. Frank Kuebart (eco-INITIUT). Here, the criteria of the German Committee for Health-related Evaluation of Building Products (AgBB), laid down in the AgBB-Schema and presented on the symposium by Christine Däumling (UBA), are an essential basis for the development of harmonized standards in Europe.

The presentations and the closing panel discussion showed the complexity of the subject. A major point of discussion was the possibility for the compilation of a checklist for healthy homes. Even though a short and all-embracing checklist would be desirable, this approach was considered as unrewarding. Recommendations for improving housing conditions should be tailored to the needs and options of the different stakeholders (tenants, homeowners, architects etc.) and respond to practical measures. For processing the checklist and developing of guidelines for healthy housing, a working group is intended.

Further information of the symposium, including the presentations (in German), are available on the website of the WHO CC for Housing and Health (www.whocc-stuttgart.de).

Literature

In this section we will provide a collection of recent housing and health publications from a variety of backgrounds. Literature published in German or French, respectively, is indicated with the German flag  or the French flag .

If you have suggestions for interesting journals that we should screen for the literature collection, please let us know!

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Allergies and Respiratory Diseases

[Ambient particulate air pollution, environmental tobacco smoking, and childhood asthma: interactions and biological mechanisms.](#)

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Am J Respir Crit Care Med. 2011 Dec 15;184(12):1325-7.

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[Prenatal and passive smoke exposure and incidence of asthma and wheeze: systematic review and meta-analysis.](#)

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[\[House dust mite allergy\].](#)

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[Early-life indoor environmental exposures increase the risk of childhood asthma.](#)

Chen YC, Tsai CH, Lee YL.

Int J Hyg Environ Health. 2011 Dec;215(1):19-25.

[\[Allergies to animals and fungi\].](#)

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Ther Umsch. 2012 Apr;69(4):253-9. 

[Enhancing ventilation in homes of children with asthma: cost-effectiveness study alongside randomised controlled trial.](#)

Edwards RT, Neal RD, Linck P, Bruce N, Mullock L, Nelhans N, Pasterfield D, Russell D, Russell I, Woodfine L.

Br J Gen Pract. 2011 Nov;61(592):e733-41.

[Dissecting the Causes of Atopic Dermatitis in Children: Less Foods, More Mites.](#)

Fuiano N, Incorvaia C.

Allergol Int. 2012 Feb 25;0(0).

[The 8-year follow-up of the PIAMA intervention study assessing the effect of mite-impermeable mattress covers.](#)

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[Traffic-related air pollution and development of allergic sensitization in children during the first 8 years of life.](#)

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J Allergy Clin Immunol. 2012 Jan;129(1):240-6.

[Genetic and epigenetic influence on the response to environmental particulate matter.](#)

Ji H, Khurana Hershey GK.

J Allergy Clin Immunol. 2012 Jan;129(1):33-41. *Review.*

[Prevalence of chronic obstructive pulmonary disease in rural women of Tamilnadu: implications for refining disease burden assessments attributable to household biomass combustion.](#)

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Glob Health Action. 2011;4:7226. *Free Article.*

[The indoor air and asthma: the role of cat allergens.](#)

Kelly LA, Erwin EA, Platts-Mills TA.

Curr Opin Pulm Med. 2012 Jan;18(1):29-34. *Review.*

[Exposure to biomass smoke as a cause for airway disease in women and children.](#)

Kodgule R, Salvi S.

Curr Opin Allergy Clin Immunol. 2012 Feb;12(1):82-90. *Review.*

[\[The revised guideline on Primary Allergy Prevention\].](#)

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[Perinatal cat and dog exposure and the risk of asthma and allergy in the urban environment: a systematic review of longitudinal studies.](#)

Lodge CJ, Allen KJ, Lowe AJ, Hill DJ, Hosking CS, Abramson MJ, Dharmage SC.

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[Impact of environmental controls on childhood asthma.](#)

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[Enhancing ventilation in homes of children with asthma: pragmatic randomised controlled trial.](#)

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Br J Gen Pract. 2011 Nov;61(592):e724-32.

Indoor Air

[Air pollution from household solid fuel combustion in India: an overview of exposure and health related information to inform health research priorities.](#)

Balakrishnan K, Ramaswamy P, Sambandam S, Thangavel G, Ghosh S, Johnson P, Mukhopadhyay K, Venugopal V, Thanasekaraan V.
Glob Health Action. 2011;4. *Review. Free Article.*

[Patterns and predictors of personal exposure to indoor air pollution from biomass combustion among women and children in rural China.](#)

Baumgartner J, Schauer JJ, Ezzati M, Lu L, Cheng C, Patz J, Bautista LE.
Indoor Air. 2011 Dec;21(6):479-88.

[High concentrations of cadmium, cerium and lanthanum in indoor air due to environmental tobacco smoke.](#)

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Sci Total Environ. 2012 Jan 1;414:738-41.

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Event Announcements

44. Jahrestagung des Fachverbandes für Strahlenschutz e.V.

44th Annual meeting of the Association for Radiation Protection

Date: September 17-20, 2012

Venue: Karlsruhe, Germany

Further Information: [Jahrestagung 2012 des Fachverbands für Strahlenschutz](#)

Klimagerechte Stadtentwicklung in der Praxis - Kongress

Climate-friendly urban development in practice - congress

Date: October 9-10

Venue: Berlin, Germany

Further Information: [Klimagerechte Stadtentwicklung in der Praxis](#)

International Congress "Urban Energies"

The Federal Ministry of Transport, Building and Urban Development

Date: October 11-12, 2012

Venue: Berlin, Germany

Further Information: [Nationale Stadtentwicklungspolitik - Urban Energies](#)

AIVC Conference - Air Infiltration and Ventilation

Date: October 10-11, 2012

Venue: Copenhagen, Denmark

Further Information: [AIVC - Air Infiltration and Ventilation Centre](#)

7. Deutscher Allergiekongress

7th German conference on allergies

Date: October 11-13, 2012

Venue: Munich, Germany

Further Information: [Deutscher Allergiekongress](#)

VDI Wissenforum: Schadstoffe in Gebäuden – Gesunde Innenraumluft

Pollutants in buildings - healthy indoor air

Date: October 23-24, 2012

Venue: Frankfurt / Main, Germany

Further Information: [VDI-Wissenforum: Schadstoffe in Gebäuden](#)

7th National Housing Conference - Brisbane 2012

Date: October 30 – November 2, 2012

Venue: Brisbane, Australia

Further Information: [Brisbane 2012 - National Housing Conference](#)

Intelligent Cities Expo 2012

Date: October 30 - November 1, 2012

Venue: San Francisco, USA

Further Information: [Intelligent Cities Expo 2012 | HOME](#)

Sport in der Stadt - Sports in the City

6. Jahrestagung der dvs-Kommission Sport und Raum

6th annual meeting of dvs-commission for sports and environment

Date: November 14-15, 2012

Venue: Frankfurt / Main, Germany

Further Information: [dvs | Deutsche Vereinigung für Sportwissenschaft: 12-20 | Sport und Raum 2012](#)

VDI Wissenforum: Bauprodukte und gesunde Innenraumluft

Building materials and healthy indoor air

Date: November 23-24

Venue: Düsseldorf, Germany

Further Information: [VDI-Wissenforum: Emissionen Bauprodukte](#)

6. Jahrestagung der Gesellschaft für Hygiene, Umweltmedizin und Präventivmedizin (GHUP)**4. GHUP-Workshop Schimmelpilze** **6th GHUP Annual Meeting / 4th GHUP Workshop on Moulds**

Date: November 22-23, 2012

Venue: Freiburg, Germany

Further Information: [GHUP Jahrestagung](#)**WISC 2012, XIII World Allergy Congress**

Date: December 6-9, 2012

Venue: Hyderabad, India

Further Information: [WAO International Scientific Conference 2012](#)**6. Kölner Schimmelpilzkonferenz - Expertentreffen für die Baupraxis** **6th Cologne conference on moulds - Experts meeting for the construction practice**

Date: December 7, 2012

Venue: Cologne

Further Information: [6. Kölner Schimmelpilz-Konferenz](#)**BAU 2013 - World's Leading Trade Fair for Architecture, Materials, Systems**

Date: January 14-19, 2013

Venue: Munich, Germany

Further Information: [BAU – World's Leading Trade Fair for Architecture, Materials, Systems](#)**WBCIB - World Building Congress 2013**

Date: May, 5-9, 2013

Venue: Brisbane, Australia

Further Information: [World Building Congress 2013 |](#)**Message Board**

In this section we will inform you about activities and projects related to housing and health that are being carried out by WHO or the WHO CC. This may relate to ongoing activities and projects, as well as invitations to participate in data collections or case study projects.

WHO work on indoor and built environments**New WHO report on environmental health inequalities in Europe**

On 14 February 2012, the WHO report on environmental health inequalities in Europe was launched at the Bonn office of the European Centre for Environment and Health. The report describes the magnitude of inequalities in environmental exposures and inequalities within the WHO European Region based on 14 inequality indicators, many of which relate to housing conditions (noise, green space access, tobacco smoke exposure at home, water and sanitation, crowding, dampness, and thermal comfort). The main findings of the assessment report indicate that socioeconomic and demographic inequalities in risk exposure are present in all countries and need to be tackled throughout the Region. However, the report also demonstrates that each country has a specific portfolio of inequalities, documenting the need for country-specific inequality assessments and tailored interventions on the national priorities.

The full report can be accessed through the WHO environmental inequality website at <http://www.euro.who.int/en/what-we-do/health-topics/environment-and-health/social-inequalities-in-environment-and-health> and executive summaries in German, French and Russian are available through that site as well.

A recent Lancet editorial has also covered the report and can be accessed at <http://download.thelancet.com/pdfs/journals/lancet/PIIS0140673612602918.pdf>

Summary of the Environmental Burden of Disease associated with inadequate housing report now available in Italian

The Italian NGO “Consortium for the Development of Sustainable Building Solutions” has translated the summary report of the EBD housing project into Italian. Translation into Slovak is underway.

The Italian summary can be accessed at

http://www.distrettobioedilizia.it/doc/2012/EBD_Summary_Report_IT_WEB.pdf

The original versions (full report / summary report) in English are available at

<http://www.euro.who.int/en/what-we-do/health-topics/environment-and-health/Housing-and-health/publications/2011/environmental-burden-of-disease-associated-with-inadequate-housing.-full-version>

CIB-WHO webinar on WHO Indoor Air Quality Guidelines and the burden of disease of inadequate housing

On 27 March, CIB and WHO offered a webinar to present and discuss about the relevance and implementation of WHO guidelines and housing-related health impact assessments. A recording of the webinar is available at

<https://inive.webex.com/inive/lsr.php?AT=pb&SP=EC&rID=46667107&rKey=4224B516F115B24C>

Expanded Bonn office of the European Centre for Environment and Health launched on 14 February 2012

In mid-February, Dr Norbert Röttgen (Minister of Environment), Mr Daniel Bahr (Minister of Health) and the Lord Mayor of Bonn (Mr Jürgen Nimptsch) opened, together with Zsuzsanna Jakab (Regional Director for the WHO European Region), the expanded office of the European Centre for Environment and Health in Bonn, Germany. The Center will concentrate the work on environment and health in the WHO European Region and has taken over several new working areas.

Further information can be found at <http://www.euro.who.int/en/what-we-publish/information-for-the-media/sections/latest-press-releases/who-launches-expanded-european-centre-for-environment-and-health-in-bonn,-germany-new-report-on-environmental-health-inequalities>

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