

Studies concerning the specific problem of traffic emissions/immissions and health in the alpine area of Tyrol

A-EXPOSURE STUDIES

Emission/Immissions from road and rail traffic

Knoflacher, H. Problems caused by the motorway/railway freight traffic share in the Tyrol. P I Mech Eng F-J Rai 2001; 215 (1): 45-51.

EEA. Road freight transport and the environment in mountainous areas. Case studies in the Alpine region and the Pyrenees. European Environment Agency, Copenhagen, 2001.

Chapter 2. In: Heimann D, de Franceschi M, Emeis S, Lercher P, Seibert P (eds) Air Pollution, Traffic Noise and Related Health Effects in the Alpine Space - A Guide for Authorities and Consultants. **ALPNAP** comprehensive report. Università degli Studi di Trento, Dipartimento di Ingegneria Civile e Ambientale, Trento, Italy, 2007

Traffic noise exposure in alpine areas

Kurze UJ. Lärm im Alpenraum durch Straßen- und Schienenverkehr. Bericht Nr. 48674 - erstellt im Auftrag der Alpen-Initiative, Müller BBM, Oktober 2001.

Van Renterghem T, Botteldooren D, Lercher P. Comparison of measurements and predictions of sound propagation in a valley-slope configuration in an inhomogeneous atmosphere. J Acoust Soc Am 2007;121:2522-2533.

Chapter 5. In: Heimann D, de Franceschi M, Emeis S, Lercher P, Seibert P (eds) Air Pollution, Traffic Noise and Related Health Effects in the Alpine Space - A Guide for Authorities and Consultants. **ALPNAP** comprehensive report. Università degli Studi di Trento, Dipartimento di Ingegneria Civile e Ambientale, Trento, Italy, 2007

Traffic air pollution exposure in alpine areas

Wotawa G, Seibert P, Kromp-Kolb H, Hirschberg M.-M. Verkehrsbedingte Stickoxid-Belastung im Inntal: Einfluss meteorologischer und topographischer Faktoren.

Institut für Meteorologie und Physik, Universität für Bodenkultur Wien, Oktober 2000.

Thudium J, Siegrist F, Maly P. Beiträge zu einer immissionsklimatisch abgestützten Lenkung der Verkehrsströme auf der Inntalautobahn. OEKOSCIENCE AG, Chur, 9.9.2001.

F. Siegrist, J. Thudium. Zusammenstellung von immissionsklimatischen Erkenntnissen in der Umgebung von Alpentransitachsen: Brenner, San Bernardino, Gotthard. OEKOSCIENCE AG, Chur, 29.11.2002.

Thudium J. Evaluation Tempo 100 auf der Unterinntalautobahn im Winter 2006/07. OEKOSCIENCE AG, Chur, 29.4.2007.

More governmental studies on the Web:

<http://www.tirol.gv.at/themen/umwelt/luft/nachtfahrverbot/nachtfahrverbot-studien>

Chapter 4. In: Heimann D, de Franceschi M, Emeis S, Lercher P, Seibert P (eds) Air Pollution, Traffic Noise and Related Health Effects in the Alpine Space - A Guide for Authorities and Consultants. **ALPNAP** comprehensive report. Università degli Studi di Trento, Dipartimento di Ingegneria Civile e Ambientale, Trento, Italy, 2007

B-EFFECT STUDIES ON HEALTH & WELL BEING

Specific Tyrol studies (peer reviewed publications)

Traffic air pollution and health

Lercher, P., Schmitzberger, R., Kofler, W. Perceived traffic air pollution, associated behavior and health in an alpine area. *The Science of the Total Environment* 1995; 169, 71-74.

Chapter 6.2.5 In: Heimann D, de Franceschi M, Emeis S, Lercher P, Seibert P (eds) *Air Pollution, Traffic Noise and Related Health Effects in the Alpine Space - A Guide for Authorities and Consultants. ALPNAP comprehensive report.* Università degli Studi di Trento, Dipartimento di Ingegneria Civile e Ambientale, Trento, Italy, 2007

Noise pollution and health

Lercher P, Kofler WW. Komplexe Antworten auf Umweltbelastungen am Beispiel der Österreichischen Transitverkehrsstudie. *Bundesgesundheitsblatt*, 38/3 (1995): 95-102.

Lercher P, Kofler WW. Behavioral and health responses associated with road traffic noise along alpine through-traffic routes. *The Science of the Total Environment* 1996; 189/190:85-89.

Lercher P. Deviant dose-response curves for traffic noise in "sensitive areas"? In: *The New Zealand Acoustical Society Inc. (Ed.), Inter Noise 98 (Paper # 0242).*

Conference Proceedings on CD-ROM, Causal Productions, ISBN 0 473 054434, 1998.

Sukowski H, Meis M, Lercher P, Heydinger D, Schick A. Noise annoyance of children exposed to chronic traffic noise: results from the Tyrol School Study II.

In: *Contribution to psychological acoustics. Results of the 8th Oldenburg Symposium on psychological acoustics.* Bibliotheks- und Informationssystem der Universität Oldenburg: 571-580. Oldenburg 2000.

Evans GW, Lercher P, Meis M, Ising H, Kofler W. Typical community noise exposure and stress in children. *Journal of the American Acoustical Society* 2001; 109(3): 1023-1027.

Lercher P, Evans GW, Meis M, Kofler WW. Ambient neighbourhood noise and children's mental health. *Occupational and Environmental Medicine* 2002; 59: 380-386.

Lercher P, Evans GW, Meis M. Ambient noise and cognitive processes among primary school children. *Environment and Behaviour* 2003; 35:725-735.

Sukowski H, Meis M, Lercher P. Der Einfluss chronischer und akuter Verkehrslärmexposition auf das Lästigkeitsempfinden von Kindern für Geräusche. *Z Lärmbekämpfung* 2004; 51: 110-117.

More information about the Lower Inn Valley studies is available on the Web:

http://www.i-med.ac.at/sozialmedizin/en/applications/environment_health.html

Chapter 6. In: Heimann D, de Franceschi M, Emeis S, Lercher P, Seibert P (eds) *Air Pollution, Traffic Noise and Related Health Effects in the Alpine Space - A Guide for Authorities and Consultants. ALPNAP comprehensive report.* Università degli Studi di Trento, Dipartimento di Ingegneria Civile e Ambientale, Trento, Italy, 2007, 335 pp. Online available: http://www.alpnap.org/alpnap.org_ge.html

Specific Tyrol studies (other publications or reports)

Kofler W & Lercher P. Umweltverträglichkeitsprüfung Eisenbahnachse Brenner Zulaufstrecke Nord UNTERES INNTAL Band Nr. 9, Teilgutachten: Fachgebiet Hygiene Schutzgut Gesundheit - Wohlbefinden 1999. Available Online: http://www.i-med.ac.at/sozialmedizin/documents/applications/environment_health/einschaetzung_bewertung/uvp-gvp/uvp_unterinntaltrasse/gesamtgutachten/uvp-gutachten.zip

BBT Brenner Basistunnel-SE. Public Health Studie. Forschungsstudie der Medizinischen Universität Innsbruck Sektion für Sozialmedizin. Unpublished final report on DVD. Innsbruck, BBT-SE: 2006.

BBT Brenner Basistunnel-SE. Public Health Studie. Short report about the effect of the traffic scenarios. Available online: http://www.bbt-se.com/images/stories/showcase/light/service/projektdokumente/studien/Public%20Health_de.pdf

Information concerning the BBT-studies: available online: http://www.i-med.ac.at/sozialmedizin/uve/index_de.html

Eisenmann A. Verkehrslärm, lärmbezogene Gestörtheit, kognitive Leistung, Schlafqualität und Wohlbefinden bei Volksschulkindern im alpinen Raum. Dissertation an der Fakultät für Psychologie und Sportwissenschaft der Leopold-Franzens-Universität Innsbruck: Mai 2006.

Summary papers on BBT and ALPNAP-projects:

Lercher P, de Greve B, Botteldooren D, Baulac M, Defrance J. The effect on annoyance estimation of noise modeling procedures. In: Proceedings of ICBEN 2008 "Noise as a Public Health problem" on CD, ISBN 978-3-9808342-4-7. Mashantucket (Connecticut, USA): International Commission of the Biological Effects of Noise.

Lercher P, de Greve B, Botteldooren D, Rüdissler J. A comparison of regional noise-annoyance-curves in alpine areas with the European standard curves. In: Proceedings of ICBEN 2008 "Noise as a Public Health problem" on CD, ISBN 978-3-9808342-4-7. Mashantucket (Connecticut, USA): International Commission of the Biological Effects of Noise.

Lercher P, de Greve B, Botteldooren D, Dekoninck L, Oetl D, Uhrner U, Rüdissler J. Health effects and major co-determinants associated with rail and road noise exposure along transalpine traffic corridors. In: Proceedings of ICBEN 2008 "Noise as a Public Health problem" on CD, ISBN 978-3-9808342-4-7. Mashantucket (Connecticut, USA): International Commission of the Biological Effects of Noise.