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## Factors Contributing to Dust Emissions in Clark County, Nevada Quarterly Progress Report: Period Ending July 15, 2006

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## QUARTERLY PROGRESS REPORT

University of Nevada, Las Vegas  
Period Ending July 15, 2006

Task Agreement Number FAA010017  
Assessing Factors Contributing to Dust Emissions from Public Lands  
On Air Quality in Areas of Clark County, Nevada

### Executive Summary

- Hiring of post-doctoral scholar is currently being finalized.
- Modification to task agreement has been processed.

### Hiring

As noted in our last quarterly report, the search for a post-doctoral scholar to direct the dust emissions research commenced in December 2005, and until that position is filled there has been no activity toward the deliverables, to date.

The review of applications began on February 15, 2006. An offer has been made to a highly qualified applicant with extensive experience in dust emissions research, Dr. Dirk Goossens (*see attached vitae*), who lives in Belgium and will require a visa in order to work in the United States. The paperwork to secure his J-1 visa is in progress. Dr. Goossens anticipated start date is December 1, 2006.

### Task Agreement Modification

The university has submitted a formal modification to the task agreement (*see attached*) to allow a no-cost time extension due to the delays in hiring the post-doctoral scholar to conduct the research. As proposed in the modification, the agreement is being extended by one year, through 10/21/08. This will allow Dr. Goossens two years to complete the deliverables once his employment commences.

The task agreement modification was submitted to CESU Administrator Nora Devoe in the Nevada BLM office on May 10, 2006. Dr. Devoe forwarded the document to Susan Kaller, BLM contracting officer, for signature on May 22, 2006. As of the date of this report, the university has not yet received a signed copy of the modification.

## **Principal Investigator**

The aforementioned modification also amends the principal investigator for the project. Previously, Dr. Patrick Drohan and Dr. Brenda Buck were named as co-principal investigators. Dr. Drohan has left UNLV to accept another position back East, and Dr. Buck will continue as sole principal investigator.

Submitted by:

\_\_\_\_\_  
Project Administrator

July 6, 2006  
Date

**Task Agreement  
Modification Request**

## Great Basin Cooperative Ecosystem Studies Unit Justification for Task Agreement Modification

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ASSISTANCE AGREEMENT NO: FAA010017    MODIFICATION NO.: 01    COOPERATIVE AGREEMENT NO.: H8R07010001    EFFECTIVE DATES: 10/21/05 thru 10/21/07

RECIPIENT: University of Nevada, Las Vegas

PROJECT TITLE: "Assessing factors contributing to dust emissions from public lands on air quality in areas of Clark County, Nevada."

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**MODIFICATION:**

**A. Modify Section IV – Term of Task Agreement as follows:**

**IV. Term of Task Order:** This task order shall become effective on the date of signature by the AO and shall remain in effect for a period of ~~two~~ **three** years, unless terminated in accordance with the provisions of 43 CFR Subpart F, Section 12.961.

**B. Modify Section IX.D – UNLV Project Managers as follows:**

Remove Patrick Drohan, Ph.D., as co-principal investigator. Brenda Buck, Ph.D., will serve as sole principal investigator.

**RATIONALE:**

The University of Nevada, Las Vegas initiated an employment search for a post-doctoral scholar to conduct the dust emissions research as stipulated in Assistance Agreement # FAA010017 immediately following the AO's signature on 10/21/05 and the university's assignment of an account number on 11/15/05. The review of candidate applications began February 1, 2006. In April 2006, the university search committee made a recommendation to hire a highly qualified international scholar from Belgium. This individual is not available to accept the position until January 1, 2007. Based on this individual's unique and extensive qualifications to conduct the stipulated research, the university is requesting that the term of the task agreement be extended from two years to three years. The proposed, new effective dates would be 10/21/05 through 10/21/08.

The change in principal investigators is being requested because Dr. Drohan has accepted a position at another university on the East Coast and will be leaving the University of Nevada, Las Vegas effective June 30, 2006. Dr. Brenda Buck, Ph.D., will serve as sole principal investigator for this project.

All other conditions of the task agreement would remain as-is, with no changes to the previously approved budget.

**Post-doctoral Scholar  
Curriculum Vitae**

# CURRICULUM VITAE

**GOOSSENS, Dirk Michiel Ferdinand Ghislenus**

**PLACE AND DATE OF BIRTH:** Genk (Belgium), 9<sup>th</sup> May 1958

**NATIONALITY:** Belgian

**RESEARCHER AT:** Physical and Regional Geography Research Group, Katholieke Universiteit Leuven, Redingenstraat 16bis, B-3000 Leuven, Belgium

Tel.: +32 16 32 64 33 (secr.); Fax: +32 16 32 64 00; e-mail: Dirk.Goossens@geo.kuleuven.be

**UNIVERSITY STUDIES:** Geography (Katholieke Universiteit Leuven, Belgium, 1977-1980)

**ADDITIONAL COURSES:**

- "*Soil Erosion and Soil Conservation*" (Belgian National. Fund for Scientific Research, 1981-1982)

- "*Pollutant Dispersal*" (von Karman Institute for Fluid Dynamics, 1985)

- "*Wind energy*" (Working Group on Technology "Dialog", 1986)

- "*Boundary Layer Simulation Methodology in Transsonic Wind Tunnel Testing*" (von Karman Institute

for Fluid Dynamics, 1988)

- "*Planetary landscapes*" (Belgian Astronomical Society, 1990)

- "*Scientific Text Editing*" (Post-graduate programme, Katholieke Universiteit Leuven, 2005-2006)

**ACADEMIC DEGREES:**

- M.Sc. (Geography), Katholieke Universiteit Leuven, Belgium, 1980

- Ph.D. (Sciences), Katholieke Universiteit Leuven, Belgium, 1987

**ADDITIONAL CERTIFICATES:** "Soil Erosion and Soil Conservation", Certificate of the Belgian National Fund for Scientific Research, 1982

**EMPLOYMENT:**

01/10/1980 - 31/07/1981: Assistant, Katholieke Universiteit Leuven (ad interim)

01/10/1981 - 31/12/1987: Research Assistant, Belgian National Fund for Scientific Research

23/03/1987 - 27/06/1987: Assistant, Katholieke Universiteit Leuven (ad interim)

01/10/1987 - 30/09/1989: Senior Research Assistant, Belgian National Fund for Scientific Research

01/10/1989 - 30/09/1990: Researcher, K.U.Leuven Research Fund (Katholieke Universiteit Leuven)

01/10/1990 - 30/09/1994: Senior Research Assistant, Belgian National Fund for Scientific Research

01/11/1994 - present : Researcher, Katholieke Universiteit Leuven

During the following periods I was, besides to the Katholieke Universiteit Leuven, also connected to several foreign institutions:

01/09/1995 - 31/05/1996: Lector, Hoppers Verlag, Aachen (Germany)

17/01/1998 - 30/06/2001: Researcher, Wageningen University and Research Centre (The Netherlands)

01/11/2002 - 15/07/2003: Researcher, Wageningen University and Research Centre (The Netherlands)

01/03/2004 - 30/04/2004: Researcher, Wageningen University and Research Centre (The Netherlands)

01/05/2004 - 31/07/2004: Guest Professor, Université de Paris 12 (France)

01/08/2004 - 31/05/2005: Associated Researcher, Centre National de la Recherche Scientifique (France)

01/06/2005 - 31/07/2005: Guest Professor, Université de Paris 7 (France)

01/03/2006 - 30/11/2006: Associated Researcher, Centre National de la Recherche Scientifique (France)

**SCIENTIFIC RESEARCH DOMAINS:** geomorphology, meteorology, sedimentology, eremology

*key words:* wind, wind tunnel, atmospheric dust, aerosols, erosion, transport, sedimentation, desert, loess

**CURRENT RESEARCH THEMES:**

- Mechanics of aeolian erosion, aeolian transport and aeolian sedimentation of natural sediments
- Relationships between meteorological conditions and the occurrence and behaviour of airborne dust particles
- Interrelationships between surface topography and aeolian erosion, deposition and accumulation of atmospheric dust
- Short-term and long-term effects of aeolian dust accumulation in arid and semi-arid areas
- The role of atmospheric dust in the desert ecosystem
- Effect of rock fragments on the deposition and accumulation of aeolian dust in desert areas
- Effect of airborne dust on solar collector reflectivity and photovoltaic solar cell productivity
- Transport and deposition of atmospheric dust over buildings and urban street configurations
- Interpretation of aeolian palaeo-deposits from a fluid dynamical point of view
- Sedimentological and meteorological study of dust storms
- Study of aeolian landforms
- Sources of aeolian dust production on agricultural land
- Development and calibration of meteorological and sedimentological equipment
- Techniques to reactivate the aeolian activity in stabilised drift-sand areas

**SCIENTIFIC STAYS ABROAD:**

- Department of Geography, University College of London, England: Nov 1985
- Laboratoire de Météorologie Dynamique, Université de Paris 5, France: Oct 1987
- The Jacob Blaustein Institute for Desert Research, Sede Boqer Campus, Israel: Dec 1987 - Jan 1988
- The Jacob Blaustein Institute for Desert Research, Sede Boqer Campus, Israel: Mar-Apr 1988
- Centre d'Etudes et de Rech.s Eco-Géographiques, Univ. Louis Pasteur, Strasbourg, France: Oct 1988
- Observatoires du Pic-du-Midi et de Toulouse, Univ. P. Sabatier, Bagnères-de-Bigorre, France: Oct 1988
- Applied Physical Geography Unit, Ruhr-Universität Bochum, Germany: Mar 1989
- Gansu Society on Landslide and Debris Flow, Lanzhou, China: May-Jun 1989.
- Applied Physical Geography Unit, Ruhr-Universität Bochum, Germany: Aug 1989
- Lab.of Physical Geography and Soil Science, Universiteit van Amsterdam (Netherlands): Sep 1989
- The Jacob Blaustein Institute for Desert Research, Sede Boqer Campus, Israel: Dec 1989
- Adam Mickiewicz University, Poznan, Poland: May 1990
- Department of Engineering, University of Aberdeen, Scotland: Mar 1991
- The Jacob Blaustein Institute for Desert Research, Sede Boqer Campus, Israel: Mar 1992
- The Jacob Blaustein Institute for Desert Research, Sede Boqer Campus, Israel: Apr-May 1993
- Laboratory for Geomorphology, Bar-Ilan University, Tel Aviv, Israel: May 1993
- Department of Theoretical Statistics, University of Aarhus, Denmark: Jul 1993
- The Jacob Blaustein Institute for Desert Research, Sede Boqer Campus, Israel: Sep-Oct 1993
- Laboratory for Geomorphology, Bar-Ilan University, Tel Aviv, Israel: Oct 1993
- The Jacob Blaustein Institute for Desert Research, Sede Boqer Campus, Israel: Mar 1994
- Avdat Experimental Runoff Farm, Avdat, Israel: Mar-Apr 1994
- Avdat Experimental Runoff Farm, Avdat, Israel: Nov 1994
- Hoppers Verlag, Aachen, Germany: Sep 1995-May 1996
- Institut für Bodentechnologie, Niedersächsisches Landesamt für Bodenforschung, Germany: Jan-Feb 1998
- Wageningen University and Research Centre, Wageningen, The Netherlands: Jan 1998 - Jun 2001
- Avdat Experimental Runoff Farm, Avdat, Israel: May 1998
- The Jacob Blaustein Institute for Desert Research, Sede Boqer Campus, Israel: Sep 1998



- Avdat Experimental Runoff Farm, Avdat, Israel: Mar 1999
- Institut für Bodentechnologie, Niedersächsisches Landesamt für Bodenforschung, Germany: Feb 2000
- Wageningen University and Research Centre, Wageningen, The Netherlands: Nov 2002 - Jul 2003
- The Jacob Blaustein Institute for Desert Research, Sede Boqer Campus, Israel: Feb-Mar 2003
- Wageningen University and Research Centre, The Netherlands: Mar-Apr 2004
- Lab. Interuniv. des Systèmes Atmosphériques, Université de Paris 12, France: May 2004 - July 2005
- Institut de Recherche pour le Développement, Niamey, Niger: Apr-May 2005
- Lab. Interuniv. des Systèmes Atmosphériques, Université de Paris 12, France: Mar 2006 - Nov 2006

#### **GRANTS AND FELLOWSHIPS RECEIVED:**

- N.F.W.O. Research grant, National Fund for Scientific Research, Belgium: 1987
- Research Grant Flemish Community, Belgium: 1988
- N.F.W.O. Research grant, National Fund for Scientific Research, Belgium: 1992
- L.S.F. Fellowship, Jacob Blaustein Institute for Desert Research, Israel: 1993
- N.F.W.O. Research grant, National Fund for Scientific Research, Belgium: 1994
- L.S.F. Fellowship, Jacob Blaustein Institute for Desert Research, Israel: 1999
- PE&RC Research Fellowship, Wageningen University, the Netherlands: 2002
- A.R.I. Fellowship, Blaustein International Center for Desert Studies, Israel: 2003

#### **EDITORIAL ACTIVITIES:**

- Editor of the journal *Geomorphology*
- Reviewer for the following journals: *Earth Surface Processes and Landforms*, *Atmospheric Environment*, *Journal of Hydrology*, *Soil and Tillage Research*, *Geomorphology*, *Journal of Geophysical Research*, *Sedimentology*, *Catena*, *Geoderma*.

#### **PUBLICATIONS**

##### **A. Books**

- Goossens D. (1984): *Inleiding tot de geologie en geomorfologie van België*. Van de Berg, Enschede, 228 pp.
- Goossens D. (Ed.) (1989): *De derde planeet. Fysische, biologische en evolutionaire aspecten van de Aarde en het leven*. Standaard Uitgeverij, Antwerpen, 360 pp.
- Poesen J., G. Govers & D. Goossens (Eds.) (1995): *Experimental Geomorphology and Landscape Ecosystem Changes*. Catena Special Volume 25, Elsevier, Amsterdam, 418 pp.
- Goossens D. & M. Riksen (Eds.) (2004): *Wind Erosion and Dust Dynamics: Observations, Simulations, Modelling*. ESW Publications, Wageningen UR, Wageningen, 197 pp.

##### **B. International peer-reviewed journal articles and peer-reviewed chapters in books**

- Goossens D. (1983): "Periodic fluctuations in the temperatures of Western Europe during the last three and a half centuries." *Journal of Meteorology* **8**, 120-125.
- Goossens D. (1985): "The granulometrical characteristics of a slowly-moving dust cloud." *Earth Surface Processes and Landforms* **10**, 353-362.
- Goossens D. (1985): "A diffusion model for a settling non-consolidated dust mass." *Catena* **12**, 373-402.
- Goossens D. (1987): "A drag coefficient equation for natural, irregularly shaped particles." *Catena* **14**, 73-99.
- Goossens D. (1987): "Interference phenomena between particle flattening and particle rounding in free vertical sedimentation processes." *Sedimentology* **34**, 155-167.
- Goossens D. (1987): "Dust deposition as a flow visualisation technique." *Physical Geography* **8**, 378-389.
- Goossens D. (1988): "The effect of surface curvature on the deposition of loess: a physical model." *Catena* **15**, 179-194.
- Goossens D. & Z.I. Offer (1988): "Loess erosion and loess deposition in the Negev Desert: theoretical modelling and wind tunnel simulations." The Jacob Blaustein Institute for Desert Research, *Desert Meteorology Papers*, Ser. A, No. **13**, 65 pp.
- Goossens D. (1988): "Scale model simulations of the deposition of loess in hilly terrain." *Earth Surface Processes and Landforms* **13**, 533-544.

- Goossens D. (1988): "Sedimentation characteristics of natural dust in the wake of symmetrical hills." *Zeitschrift für Geomorphologie* **32**, 499-502.
- Goossens D. (1989): "Height distortion and the sedimentation of dust on topographic scale models: considerations and simulations." *Earth Surface Processes and Landforms* **14**, 655-667.
- Goossens D. (1989): "The effect of topography on aeolian dust deposition: laboratory experiments and field observations." *Geoöko-Plus* **1**, 107.
- Offer Z.I. & D. Goossens (1990): "Airborne dust in the northern Negev Desert (January-December 1987): general occurrence and dust concentration measurements." *Journal of Arid Environments* **18**, 1-19.
- Goossens D. & Z.I. Offer (1990): "A wind tunnel simulation and field verification of desert dust deposition (Avdat Experimental Station, Negev Desert)." *Sedimentology* **37**, 7-22.
- Goossens D. (1991): "Aeolian dust ripples: their occurrence, morphometrical characteristics, dynamics and origin." *Catena* **18**, 379-407.
- Goossens D. (1991): "Superposition of aeolian dust ripple pattern as a result of changing wind directions." *Earth Surface Processes and Landforms* **16**, 689-699.
- Offer Z.Y., D. Goossens & M. Sachak (1992): "Aeolian deposition of nitrogen to sandy and loessial ecosystems in the Negev Desert." *Journal of Arid Environments* **23**, 355-363.
- Goossens D. (1992): "The simulation of dust storms in a dust tunnel: simulation requirements and some applications." *Lanzhou University Journal, Suppl.* 1992, 1-20.
- Goossens D., Z.Y. Offer and A. Zangvil (1993): "Wind tunnel experiments and field investigations of eolian dust deposition on photovoltaic solar collectors." *Solar Energy* **50**, 75-84.
- Goossens D. & Z.Y. Offer (1993): "Eolian deposition of dust over symmetrical hills: an evaluation of wind tunnel data by means of terrain measurements." *Zeitschrift für Geomorphologie* **37**, 103-111.
- Offer Z.Y. & D. Goossens (1994): "The use of topographic scale models in predicting eolian dust erosion in hilly areas: field verification of a wind tunnel experiment." *Catena* **22**, 249-263.
- Goossens D. & Z.Y. Offer (1994): "An evaluation of the efficiency of some eolian dust collectors." *Soil Technology* **7**, 25-35.
- Goossens D. (1994): "Effect of rock fragments on eolian deposition of atmospheric dust." *Catena* **23**, 167-189.
- Goossens D. (1994): "Effect of rock fragment eccentricity on eolian deposition of atmospheric dust." *Catena* **23**, 227-251.
- Goossens D. & Z. Offer (1995): "Comparisons of day-time and night-time dust accumulation in a desert region." *Journal of Arid Environments* **31**, 253-281.
- Goossens D. (1995): "Field experiments of eolian dust accumulation on rock fragment substrata." *Sedimentology* **42**, 391-402.
- Offer Z.Y. & D. Goossens (1995): "Wind tunnel experiments and field measurements of aeolian dust deposition on conical hills." *Geomorphology* **14**, 43-56.
- De Ploey J., J. Moeyersons & D. Goossens (1995): "The De Ploey erosional susceptibility model for catchments, Es." *Catena* **25**, 269-314.
- Smits K. & D. Goossens (1995): "Wind tunnel simulations of aeolian dust deposition on thermic solar collectors." *Applied Solar Energy* **30**, 75-89.
- Goossens D. (1996): "Wind tunnel experiments of eolian dust deposition along ranges of hills." *Earth Surface Processes and Landforms* **21**, 205-216.
- Goossens D. (1996): "Research facilities in aeolian geosciences: an inventory." *Earth Surface Processes and Landforms* **21**, 1041-1047.
- Goossens D. (1996): "Meteorological and sedimentological analysis of the severe dust storm in the Negev Desert on 2 November 1994." *Journal of Meteorology* **21**, 273-286.
- Goossens D. (1997): "Long-term aeolian loess accumulation modelled in the wind tunnel: the Molenberg case (central loess belt, Belgium)." *Zeitschrift für Geomorphologie* **41**, 115-129.
- Goossens D. & Z.Y. Offer (1997): "Aeolian dust erosion on different types of hills in a rocky desert: wind tunnel simulations and field measurements." *Journal of Arid Environments* **37**, 209-229.
- Govers G., J. Poesen, P.J.J. Desmet, T.A. Quine, B. Van Wesemael & D. Goossens (1997): "Interactions between water and tillage erosion in two contrasting environments." *Journal of Soil and Water Conservation* **52**, 305.
- Goossens D. & E. Vankerschaever (1999): "Aeolian dust deposition on photovoltaic solar cells: the effects of wind velocity and airborne dust concentration on cell performance." *Solar Energy* **66**, 277-289.
- Goossens D. (2000): "Dry aeolian dust accumulation in rocky deserts: A medium-term field experiment based on short-term wind tunnel simulations." *Earth Surface Processes and Landforms* **25**, 41-57.
- Goossens D. & Z.Y. Offer (2000): "Wind tunnel and field calibration of six aeolian dust samplers." *Atmospheric Environment* **34**, 1043-1057.
- Goossens, D. Z.Y. Offer & G. London (2000): "Wind tunnel and field calibration of five aeolian sand traps." *Geomorphology* **35**, 233-252.

- Goossens D., J. Poesen, J. Gross & W. Spaan (2000): " Splash drift on light sandy soils: a field experiment." *Agronomie* **20**, 271-282.
- Offer Z.Y. & D. Goossens (2001): "Airborne particle accumulation and composition at different locations in the Negev desert." *Zeitschrift für Geomorphologie* **45**, 101-120.
- Offer Z.Y. & D. Goossens (2001): "Ten years of aeolian dust dynamics in a desert region (Negev desert, Israel): analysis of airborne dust concentration, dust accumulation and the high-magnitude dust events." *Journal of Arid Environments* **47**, 211-249.
- Goossens D., J. Gross & W. Spaan (2001): "Aeolian dust dynamics in agricultural land areas in Lower Saxony, Germany." *Earth Surface Processes and Landforms* **26**, 701-720.
- Goossens D. (2001): "The aeolian dust accumulation curve." *Earth Surface Processes and Landforms* **26**, 1213-1219.
- Sterk G., M. Riksen & D. Goossens (2001): "Dryland degradation by wind erosion and its control." *Annals of Arid Zone* **40**, 251-267.
- Goossens D. & J. Gross (2002): "Similarities and dissimilarities between the dynamics of sand and dust during wind erosion of loamy sandy soil." *Catena* **47**, 269-289.
- Goossens D. (2003): "On-site and off-site effects of wind erosion." In: *Wind Erosion on Agricultural Land in Europe* (Ed. A. Warren). European Commission, Directorate-General for Research. Office for Official Publications of the European Communities, Luxembourg, 29-38.
- Goossens D. (2004): "Effect of soil crusting on the emission and transport of wind-eroded sediment: field measurements on loamy sandy soil." *Geomorphology* **58**, 145-160.
- Offer Z.Y. & D. Goossens (2004): "Thirteen years of aeolian dust dynamics in a desert region (Negev desert, Israel): analysis of horizontal and vertical dust flux, vertical dust distribution and dust grain size." *Journal of Arid Environments* **57**, 117-140.
- Govers G., J. Poesen & D. Goossens (2004): "Soil erosion. Processes, damages and countermeasures." In: *Managing Soil Quality: Challenges in Modern Agriculture* (Eds. P. Schjønning, S. Elmholt & B.T. Christensen). CAB International, Wallingford, 199-218.
- Goossens D. & M.J.P.M. Riksen (2004): "Wind erosion and dust dynamics at the commencement of the 21<sup>st</sup> century". In: *Wind Erosion and Dust Dynamics: Observations, Simulations, Modelling* (Eds. D. Goossens & M. Riksen). ESW Publications, Wageningen UR, Wageningen, 7-13.
- Goossens D. (2004): "Wind erosion and tillage as a dust production mechanism on North European farmland." In: *Wind Erosion and Dust Dynamics: Observations, Simulations, Modelling* (Eds. D. Goossens & M. Riksen). ESW Publications, Wageningen UR, Wageningen, 15-40.
- Goossens D. (2004): "Net loss and transport of organic matter during wind erosion on loamy sandy soil." In: *Wind Erosion and Dust Dynamics: Observations, Simulations, Modelling* (Eds. D. Goossens & M. Riksen). ESW Publications, Wageningen UR, Wageningen, 81-102.
- Riksen M.J.P.M., D. Goossens & P.D. Jungerius (2005): The role of wind and water erosion in drift-sand areas in the Netherlands. *Tropical Resource Management Papers*. **50**, 97-128
- Goossens D. (2005): "Quantification of the dry aeolian deposition of dust on horizontal surfaces: an experimental comparison of theory and measurements." *Sedimentology* **52**, 859-873.
- Goossens D. (2005): "Effect of rock fragment embedding on the aeolian deposition of dust on stone-covered surfaces." *Earth Surface Processes and Landform* **30**, 443-460.
- Riksen M.J.P.M. & D. Goossens (2005): "Tilling techniques to reactivate aeolian erosion on inland drift-sand." *Soil and Tillage Research* **83**, 218-236.
- Goossens D. & Z.Y. Offer (2005): "Long-term accumulation of atmospheric dust in rocky deserts." *Zeitschrift für Geomorphologie* **49**, 335-352.
- Goossens D. (in press): "Aeolian deposition of dust over hills: the effect of dust grain size on the deposition pattern." *Earth Surface Processes and Landforms*.
- Riksen M.J.P.M., R. Ketner-Oostra, C. van Turnhout, M. Nijssen, D. Goossens, P.D. Jungerius & W. Spaan (in press): "Will we lose the last active inland drift sands of Western Europe? The origin and development of the inland drift-sand ecotype in the Netherlands." *Landscape Ecology*.
- Gross J. & D. Goossens (in press): "Bedeutung der Winderosion und der Bodenbearbeitung für den Austrag suspensionsfähiger Staubpartikel in Agrarlandschaften: Feldmessungen in NW Deutschland." *Geologisches Jahrbuch*.
- Verstraeten G. J. Poesen, D. Goossens, K. Gillijns, C. Bielders, D. Gabriëls, G. Ruyschaert, M. Van den Eeckhaut, T. Vanwalleghem, G. Govers, (in press): "Soil erosion in Belgium." In: *Soil Erosion in Europe* (Eds. J. Boardman and J. Poesen). Wiley, Chichester.
- Riksen M.J.P.M. & D. Goossens (submitted): "The role of wind and splash erosion in inland drift-sand areas in the Netherlands." *Geomorphology*.
- Sow M., D. Goossens & J.-L. Rajot (submitted): "Calibration of the MDCO dust collector and of four versions of the inverted frisbee dust deposition sampler." *Geomorphology*.
- Goossens D. (submitted): "Bias in grain size analysis of atmospheric dust due to the collection of particles in sediment catchers." *Catena*.

### C. Articles in other journals and in proceedings

- Goossens D. (1981): "De dikte van het loessdek ten S.W. van Leuven." *Werkst. Nat. Centr. Geom. Ond.* **20**, 122-139.
- Goossens D. (1982): "A Pliocene River Deposit in Mid-Belgium." *Tijdschr. Belg. Ver. voor Geologie* **91**, 61-69.
- Goossens D. (1982): "De Noord-Amerikaanse stofstormen: oorzaken, gevolgen, en hun bestrijding." *De Aardrijkskunde* **6**, 179-203.
- Goossens D. (1982): "Hoe groot is de kans op een nieuwe ijstijd? Kritisch onderzoek aan de hand van temperatuurgegevens van 1634 tot 1980." *Tijdschr. Belg. Ver. voor Aandr. Studies* **51**, 235-264.
- Goossens D. (1983): "Thermoluminescentie als dateringsmethode in de geologie." *De Aardrijkskunde* **7**, 325-341.
- Goossens D. (1984): "Luik geteisterd door een aardbeving op dinsdag 8 november 1983." *Heelal* **29**, 50-53.
- Goossens D. (1984): *Geomorfologie van Midden- en Hoog-België*. Centrum voor Beroepsvervolmaking Vliebergh-Sencie, Groep Aardrijkskunde, Leuven, 40 pp.
- Goossens D. (1984): *Hydrografie en satellietfotografie toegepast op België*. Centrum voor Beroepsvervolmaking Vliebergh-Sencie, Groep Aardrijkskunde, Leuven, 28 pp.
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