

Directorate

CURRICULUM VITAE

Leen HORDIJK
Director



PERSONAL DATA

Name: Leen Hordijk
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EDUCATION

1973 Doctorandus, Econometrics, Erasmus University, Rotterdam
1991 Doctorate in Economics, Free University, Amsterdam

EMPLOYMENT HISTORY

1970-1973 Assistant Mathematical Economics, Erasmus University, Rotterdam (EUR)
1973-1978 Assistant Professor, Theoretical Regional Economics, EUR
1978-1984 Head, Economic-Technological Department, Institute for Environmental Studies, Free University, Amsterdam (IVM/VU)
1981-1983 Acting Director, IVM/VU
1984-1987 Leader, Acid Rain Project, International Institute for Applied Systems Analysis (IIASA), Laxenburg, Austria
1984-1985 Acting Leader Environment Program, IIASA
1987-1989 Deputy Head, Laboratory for Waste Research and Emissions, National Institute for Public Health and Environment (RIVM), Bilthoven, Netherlands
1989 Head, Centre for Mathematics, RIVM
1989-1991 Founder and Head, Environmental Assessment Office, RIVM
1991-2002 Director, Wageningen Institute for Environment and Climate Research (WIMEK), Wageningen University, Netherlands
1991-1998 Professor, Environmental Systems Analysis, Wageningen University, Netherlands
1998 Visiting Scholar, Kennedy School of Government, Harvard University, Cambridge MA, USA
2002 - Director, IIASA

ACTIVITIES

Member Faculty Committee for Research, EUR, 1972-1975
Member Council for Environment and Nature Research (RMNO), 1981-1983
Member Committee for Environmental Impact Assessment (MER), 1982-present
Chairman Advisory Committee, IIASA Environment Program, 1988-1991
Chairman Steering Committee, IIASA Global Environment Change Programme, 1991-1996
Chairman Task Force on Integrated Assessment Modelling; UN-Economic Commission for Europe, 1988-1993
Chairman Scientific Review Panel, Finnish National Acidification Research Programme HAPRO, 1990.
Chairman Scientific Review Panel, Finnish National Climate Change Research Programme SILMU, 1992, 1996
Reviewer National Acid Precipitation Assessment Program, USA, 1986-1994

ACTIVITIES (continued)

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| Chairman | Jury for Teylers Museum Environment prize, Haarlem, Netherlands 1991-1997 |
| Member | International Advisory Board of the IMAGE Model, RIVM, 1993-1998 |
| Member | Social Science Research Council of Netherlands Foundation for Scientific Research (NWO), 1996-1998 |
| Member | Standing Committee for the Social Sciences, European Science Foundation, Strasbourg, 1998-2001 |
| Chairman | Social Science Research Council (NWO) June 1998-September 2001 |
| Chairman | Programme Committee, National Research Programme on Global Air Pollution and Climate Change (NOP), 1996-2001 |
| Member | Governing Council (on behalf of NWO) IIASA, October 2001-June 2002 |
| Member | Review Panel Finnish National Research Program on Global Change FIGARE, 2002 |

EDITORIAL TASKS

Editorial Board, *Environmental and Resource Economics*
Editorial Board, *International Journal of Environment and Pollution*
Editorial Board, *Environmental Modelling and Assessment*
Editorial Board, *Systems Analysis Modelling Simulation*
Guest-editor, *Environment*
Editorial Board, *International Society for Knowledge and Systems Sciences (ISKSS)*

RECENT CONFERENCE PRESENTATIONS

Interdisciplinary research: Is it possible? Presentation at *Conferencia Espacial Internacional FIDAE 2006*, Santiago de Chile, 28 March 2006.

On the Future Role of Environmental Systems Analysis. Keynote Speech 3 at the *IFSR World Congress*, Kobe, Japan, 14-17 November 2005.

IIASA – Science for Global Insight. Presentation at Alpbach Forum, in Working Group 8: *European Strategies for International Research-Cooperation*, Alpbach, Austria, 26 August, 2005.

IIASA – An International Global Change Research Institute. Presentation at the Workshop on *African Network for Global Environmental Change Research*, Nairobi, Kenya, 22 September 2005.

Food Security and Sustainable Livelihoods – Facing the 21st Century Challenge. Speech at the *Delhi Sustainable Development Summit 2004*, New Delhi, India, 5 February 2004.

Food Security and Sustainable Livelihoods. Keynote speech at *FIDAE 2004 International Conference on Space and Water: Towards Sustainable Development and Human Security*, Santiago de Chile, 30 March 2004.

Past, present and future of IIASA. Presentation at IIASA-RITE International Symposium “*Global Warming; Impacts, Adaptation and Mitigation*”, Tokyo, Japan, February 2004.

Integrated Assessment Used in Support of Decision Making for the Convention on Long-range Transboundary Air Pollution, Lecture at the *Roundtable on Science and Technology Workshop*, via teleconferencing, Washington, DC, March 2003.

Integrated environmental assessment: two examples from IIASA. Lecture at the New Energy and Industrial Development Organization (NEDO), Tokyo, Japan, 27 February 2003.

On the need for new concepts and tools in environmental systems analysis. Lecture at the Engineering Academy of Japan (EAJ), Tokyo, Japan, 28 February 2003.

IIASA's role in systems analysis for global change. Lecture at the International Committee of the Japan Society for Science Policy & Research Management (JSSPRM), Tokyo, Japan, 28 February 2003.

Systems analysis in global change science. Keynote lecture at the final conference of the *Finnish National Research Program on Global Change (FIGARE)*, Helsinki, Finland, 9 December 2002.

Keynote lecture at the Conference on *Human Security and Food Security*, Vienna International Center, Vienna, Austria, 3 December 2002.

The challenges for systems and operational research and the role of IIASA. Keynote lecture at the Conference “*Operations and systems research in the face of the challenges of the 21st century*”, Warsaw, Poland, 26 September 2002.

CONFERENCE PRESENTATIONS (continued)

COOL: An integrated assessment project for climate change, Keynote lecture, *Final Conference of the Dutch national Program on Climate Change and Global Air Pollution*, Noordwijkerhout, November 2001.

Interactive communication on global change research, *Challenges of a Changing Earth*, IGBP/IHDP/WCRP, Amsterdam, Netherlands, July 2001.

COOL: An integrated assessment project for climate change, *COOL Conference*, Amersfoort, Netherlands, May 2001.

RAINS-ASIA: A tool for environmental policy, *Industry and Environment in Vietnam*, Ho Chi Minh City, Vietnam, April 2001.

Potential contribution of renewable energy sources to air pollution abatement in China and India, *Fifth World Conference on Acid Rain*, Tsukuba, Japan, December 2000.

Results of the EU-INCO project on renewables in China and India, *Workshop on the role of renewable energy in air pollution abatement in Asia*, Beijing, China, May 2000.

PUBLICATIONS

1974

L. Hordijk (1974), Spatial correlation in the disturbances of a linear interregional model, *Regional and Urban Economics* 4, pp. 117-140.

1976

L. Hordijk, J.H.P. Paelinck (1976), Spatial econometrics, some contributions, in: J. Paelinck (ed.), *Actes des Tables Rondes 1974-1975 de l'Association de Science Regionale de Langue Française*, Rotterdam, pp. 125-143.

L. Hordijk, A.P. Mastenbroek, J. Paelinck (1976), Estimation d'élasticités de préférence relatives, une approche par simulation, *Revue d'Economie Politique* 86, pp. 516-534.

J. Paelinck, A. van Delft, L. Hordijk, A.P. Mastenbroek (1976) On multiregional modelling, in: M. Chatterji and P. van Rompuy (Eds), *Environment, Regional Science and Interregional Modelling*, Springer Verlag, Berlin, pp. 168-183.

L. Hordijk, J. Paelinck (1976) Some principles and results in spatial econometrics, *Recherches Economiques de Louvain* 42, 175-197.

1977

C.P.A. Bartels, L. Hordijk (1977) On the power of the generalized Moran coefficient in testing for spatial autocorrelation among regression disturbances, *Regional Science and Urban Economics* 7, pp. 83-101.

L. Hordijk, P. Nijkamp (1977) Dynamic models of spatial autocorrelation, *Environment and Planning A* 9, pp. 505-519.

L. Hordijk, H.B. Roos (1977) A model for establishing parking tariffs (in Dutch), *Verkeerskunde* 8, pp. 370-372.

1978

L. Hordijk, A.P. Mastenbroek (1978) Simultaneous equations estimation, some remarks, *Regional Science and Urban Economics* 8, pp. 195-200.

L. Hordijk, P. Nijkamp (1978) Estimation of spatio-temporal models, in: A. Karlqvist, L. Lundquist, F. Snickars, J. Weibull (Eds), *Spatial Interaction Theory and Planning Models*, North-Holland, Amsterdam, pp. 177-199.

1979

L. Hordijk, J. Paelinck (1979) Spatial econometrics, some further results, in: R. Courbis (Ed.), *Modèles Régionaux et Modèles Régionaux-Nationaux*, Editions Cujas, Paris, pp. 275-285.

L. Hordijk (1979) Problems in estimating econometric relations in space, *Papers of the Regional Science Association* 42, 99-115.

PUBLICATIONS (continued)

1980

L. Hordijk (1980) Marl mining does not guarantee employment (in Dutch), *Natuur en Milieu* 80-7/8, pp. 14-19.

L. Hordijk (1980) Interregional migration models: a matter of taste? (in Dutch) in: P.H.L. Bovy *et al.* (Eds), *Mobiliteit, Ruimtelijke Interactie en Vervoerssysteemgebruik*, Delft, The Netherlands.

1982

H. Aiking, P. Ester, L. Hordijk, H.E. van de Veen (Eds) (1982) *Mosaic of Environmental Problems* (in Dutch), VU Boekhandel/Uitgeverij, Amsterdam.

L. Hordijk (1982) Margraten: employment in the cement industry (in Dutch), in: H. Aiking *et al.*, pp. 81-94.

J.W. Arntzen, L. Hordijk (1982) Integration of environmental aspects in physical planning (in Dutch), in: H. Aiking *et al.*, pp. 13-31.

L. Hordijk, H.M.A. Jansen, A.A. Olsthoorn, J.B. Vos (1982) Calculation and Information System for Environment (RIM) (in Dutch), in: F. van Oostvoorn (Ed.) *Integrale Energiescenario's en Modellen voor Nederland*. Publicatie ESC-22, Stichting Energieonderzoek Centrum Nederland, Petten, Netherlands, pp. 63-76.

H. van de Berg, S.M.A. Hoekstra, L. Hordijk, C.K. Kramer, B.J. van der Linde, G. van der Lugt, P. Rietveld, F. Suurmond, K. Veling (1982) *Energy and Policy* (in Dutch), De Vuurbaak, Groningen.

1983

G.A. van der Knaap, L. Hordijk (1983) Linear regression analysis (in Dutch), in: F.M. Dieleman *et al.* (Eds), *Techneken voor Ruimtelijke Analyse*, Romen, Weesp, pp. 111-131.

L. Hordijk, H.M.A. Jansen, A.A. Olsthoorn, J.B. Opschoor, H.F.M. Reijnders, J.H.A. Stapel, J.B. Vos (1983) Economic structure and the environment: production, pollution and energy consumption in the Netherlands 1973/1985, in: T.R. Lakshmanan, P. Nijkamp (Eds), *Systems and Models for Energy and Environmental Analysis*, Gower, Aldershot, pp. 91-123.

1984

F.M. Brouwer, J.-P. Hettelingh, L. Hordijk (1984) An integrated model for economic-ecologic-demographic-facility interaction, *Papers of the Regional Science Association* 52, pp. 87-103.

1985

L. Hordijk (1985) Technical review of the USA case-studies, in: T.R. Lakshmanan, B. Johansson (Eds), *Large-Scale Energy Projects: Assessment of Regional Consequences*, North-Holland, Amsterdam, pp. 118-124.

F.M. Brouwer, L. Hordijk, P. Nijkamp (1985) Integrated regional economic-environmental modelling, in: D.O. Hall *et al.* (Eds), *Economics of Ecosystems Management*, Junk Publishers, Dordrecht, pp. 19-29.

L. Hordijk (1985) A model for evaluation of acid deposition in Europe, in: A. Sydow, M. Thoma, R. Vichnevetsky (Eds), *Systems Analysis and Simulation 1985 (II)* Pergamon Press, Oxford, pp. 30-39.

J. Alcamo, L. Hordijk, J. Kämäri, P. Kauppi, M. Posch, E. Runca (1985) Integrated analysis of acidification in Europe, *Journal of Environmental Management* 21, pp. 47-61.

In Russian in: USSR Academy of Sciences, *Systems Research, Methodological Problems*. Yearbook 1987, pp. 352-368.

1986

R.J. Bennett, L. Hordijk (1986) Regional econometric and dynamic models, in: E.S. Mills, P. Nijkamp (Eds), *Handbook of Regional and Urban Economics*, North-Holland, Amsterdam, pp. 407-441.

PUBLICATIONS (continued)

L. Hordijk (1986) Towards a targeted emission reduction in Europe, *Atmospheric Environment* 20, 2053-2058.

L. Hordijk (1986) Acid rain abatement strategies in Europe, in: T.Schneider (Ed.), *Acidification and its Policy Implications*, Elsevier, Amsterdam, pp. 295-305.

L. Hordijk (1986) Acid rain in Europe - an energy environmental impact study, *Papers of the Regional Science Association* 60, 107-123.

J.-P. Hettelingh, L. Hordijk (1986) Environmental conflicts: the case of acid rain in Europe, *Annals of Regional Science* 20 (3), 38-52.

1987

J. Alcamo, M. Amann, J.-P. Hettelingh, M. Holmberg, L. Hordijk, J. Kämäri, L. Kauppi, P. Kauppi, G. Kornai, A. Mäkelä (1987) Acidification in Europe: a simulation model for evaluating control strategies, *Ambio* 16 (5), pp. 232-245.

L. Hordijk (1987) Acidification in Europe, what can be done? (in Dutch) in: Schone technologie, doen wat je niet laten mag. Verslag OSTs Symposium, Universiteit Twente, pp. 21-27.

L. Hordijk (1987) Air pollution and forest decline in Europe: a causal relationship? *Environment* 29 (9), p.1 (editorial).

L. Hordijk (1987) Acid rain in Europe, Proceedings of the Conference Umweltenschutz, Fremdenverkehr und Denkmalpflege, Coburg Germany, July 1987, pp. 53-71.

1988

L. Hordijk (1988) A model approach to acid rain, *Environment* 30 (2), 16-20.

L. Hordijk (1988) Acid rain: Modelling its risk to the European environment, in: M.L. Richardson (Ed.), *Risk Assessment of Chemicals in the Environment*, Royal Society of Chemistry, London, pp. 298-311.

S. Batterman, M. Amann, J.-P. Hettelingh, L. Hordijk, G. Kornai (1988) Optimal SO₂ abatement policies in Europe: some examples, *Systems Analysis - Modelling - Simulation* 5, pp. 533-559.

1989

L. Mermet, L. Hordijk (1989) On getting simulation models used in international negotiations, in: F. Mautner-Markhof (Ed.), *Processes of International Negotiations*, Westview Press, Boulder CO, pp. 427-448.

J.-P. Hettelingh, L. Hordijk (1989) Acid rain in Europe: Modelling regional and national implications, in: L. Kairiukstis, A. Buracas, A. Straszak (Eds), *Ecological Sustainability of Regional Development*, Polish Academy of Sciences, Warsaw, pp. 71-83.

1990

J. Alcamo, R.W. Shaw, L. Hordijk (Eds) (1990), *The RAINS Model of Acidification: Science and Strategies in Europe*. Kluwer Academic Publishers, Dordrecht.

J. Alcamo, R.W. Shaw, L. Hordijk (1990) The RAINS model: overview and findings, in: J. Alcamo *et al.* (1990), pp. 1-20.

J. Alcamo, R.W. Shaw, L. Hordijk (1990) Introduction, in: J. Alcamo *et al.* (1990), Chapter 1, pp. 21-30.

L. Hordijk, R.W. Shaw, J. Alcamo (1990) Background to acidification in Europe, in: J. Alcamo *et al.* (1990), Chapter 2, pp. 31-60.

R.W. Shaw, J. Alcamo, L. Hordijk (1990) Strategy development and assessment using RAINS, in: J. Alcamo *et al.* (1990), Chapter 9, pp. 319-370.

L. Hordijk (1990) The RAINS model is being used! (in Dutch) *Wetenschap & Samenleving* 42 (2), pp. 49-51.

PUBLICATIONS (continued)

R.W. Shaw, J. Alcamo, M.J. Chadwick, L. Hordijk (1990) Integrated assessment models for developing strategies for reducing regional acidification, in: M.J. Chadwick, M. Hutton (Eds), *Acid Deposition in Europe: Environmental Effects, Control Strategies, and Policy Options*, Stockholm Environment Institute, Stockholm, pp. 275-318.

L. Hordijk (1990) Social sciences and environmental research after the National Environmental Policy Plan (in Dutch), in: *Geïntegreerd Milieuonderzoek*, Koninklijke Nederlandse Academie van Wetenschappen, Amsterdam, pp. 5-18.

J. Bezemer, J. Blokland, D.A. Dral, L. Hordijk, R.W. Meilof, A.H. Poelman, G. Ypenga (1990) *Traffic on the Move* (in Dutch), Vuurbaak, Barneveld.

1991

L. Hordijk (1991) Integrated environmental economic systems analysis, in: J.B. Opschoor, D.W. Pearce (Eds), *Persistent Pollutants: Economics and Policy*, Kluwer Academic Publishers, Dordrecht, pp. 105-114.

L. Hordijk (1991) Use of the RAINS model in acid rain negotiations in Europe, *Environmental Science & Technology* 25, pp. 596-603.

H.J.M. de Vries, L. Hordijk (1991) Models in environmental science (in Dutch), in: J.J. Boersema, J.W. Copius Peereboom, W.T. de Groot (Eds), *Basisboek Milieukunde*, Boom, Meppel, Netherlands, pp. 353-382.

A.H. Bakema, K.F. de Boer, J.W. Erisman, G.J. Heij, J.-P. Hettelingh, K.W. van den Hoek, N.J.P. Hoogervorst, L. Hordijk, R. Thomas, W. de Vries (1991) Acidification (in Dutch), in: *Nationale Milieuverkenning 1990-2010*, National Institute for Public Health and Environmental Protection (RIVM), Bilthoven, Netherlands, pp. 184-213.

L. Hordijk (1991) *Environmental models: the role of systems analysis in environmental science* (in Dutch), Inaugural Lecture, Agricultural University, Wageningen, Netherlands.

L. Hordijk (1991) Baltic pollution, a European problem, *Framtider International* 1, pp. 21-23.

1992

M. Amann, L. Hordijk, G. Klaassen, W. Schöpp, L. Sorensen (1992) Economic restructuring in Eastern Europe and acid rain abatement strategies, *Energy Policy* 20, pp. 1186-1197.

J.-P. Hettelingh, R.H. Gardner, L. Hordijk (1992) A statistical approach to the regional use of critical loads, *Environmental Pollution* 77, pp. 177-183.

L. Hordijk (1992) Environmental policy (in Dutch), in: J. Huijgen et al. *Laat niet als dank ...* GSEV Publicatie 24, De Vuurbaak, Barneveld.

L. Hordijk (1992) Improving management of the earth (in Dutch), in: J. van der Jagt et al., *Politiek mozaïek*, De Vuurbaak, Barneveld.

L. Hordijk, M. Lange, S. Pietilä, J. Routti (1992) *Interim Evaluation of the Finnish Research Programme on Climate Change*, Publications of the Academy of Finland 6/92, VAPK Publishing, Helsinki.

1993

L. Hordijk (1993) Results from integrated assessment modelling analysis of sulphur abatement strategies. *The State of Transboundary Air Pollution; 1992 Update*. Air Pollution Studies No. 9, United Nations Economic Commission for Europe, New York, pp. 27-37.

G. Carmichael, ..., L. Hordijk, ... (1993) Acid rain and emission reduction in Asia. *Proceedings of the International Conference on Regional Environment and Climate Changes in East Asia*, Global Change Centre, National Taiwan University, pp. 328-333.

PUBLICATIONS (continued)

1994

M. Amann, L. Hordijk, G. Klaassen, W Schöpp (1994) Reduction of SO₂ emissions in Europe: a combination of the BAT and the Critical Loads concepts, in: E.C. van Ierland (Ed), *International Environmental Economics*, Elsevier Publishers, Amsterdam, pp. pp. 65-292.

1995

J.M. Bloemhof-Ruwaard, P. van Beek, L. Hordijk, L.N. van Wassenhove (1995) Interactions between operational research and environmental management, *European Journal of Operational Research* 85, pp. 229-243.

L. Hordijk (1995) Integrated assessment models as a basis for air pollution negotiations, *Water, Air and Soil Pollution* 85, pp. 249-260.

W. Foell, M. Amann, G. Carmichael, M. Chadwick, J.-P. Hettelingh, L. Hordijk and D. Zhao (1995) RAINS-ASIA: An Assessment Model for Air Pollution in Asia. World Bank, Washington DC.

W. Foell, C. Green, M. Amann, S. Bhattacharya, G. Carmichael, M. Chadwick, T. Haugland, J.-P. Hettelingh, L. Hordijk, J. Shah, R. Shrestha, D. Streets, D. Zhao (1995) Energy use, emissions, and air pollution reduction strategies in Asia, *Water, Air and Soil Pollution* 85, pp. 2277-2282.

1996

P. van Beek, L. Fortuin, L.N. van Wassenhove, L. Hordijk (1996) OR and the environment: a fruitful combination, in: L. Fortuin, P. van Beek, L.N. van Wassenhove (Eds.) *OR at work, Practical Experiences of Operational Research*, Taylor & Francis, London, pp. 269-286.

L. Hordijk (1996) Climate policy can start now. *Change* 33, November, pp. 5-8.

L. Hordijk, C. Kroeze, J. Alcamo, T. Davies, D.J. Drewry, D. Ford, L. Mearns, R.F. Wright (1996) Evaluation of the Finnish Research Programme on Climate Change SILMU, Publications of the Academy of Finland 7/96, Helsinki.

J.P. Okx, L. Hordijk, A. Steijn (1996) Managing soil remediation problems, *Environmental Science and Pollution Research* 3, pp. 229-235.

M. Hisschemöller, M. Faure, L. Hordijk, R. Bruel (1996) Improving knowledge on the effectiveness of environmental treaties. Report to the IHDP Commission, Netherlands Organization for Scientific Research (NWO).

1997

L. Hordijk, C. Kroeze (1997) Integrated assessment models for acid rain, *European Journal of Operational Research* 102 (3), pp. 405-417.

E.A. van Lenthe, E.M.T. Hendrix, L. Hordijk (1997) Optimale afzet van mestoverschotten in Nederland, *MILIEU* 12, pp. 145-153.

1998

L. Hordijk, W. Tuinstra, M. Hisschemöller, M.M. Berk, B. Metz, M. Kok (1998) Climate options for the long term (COOL). Abstract, NOP symposium, Garderen, The Netherlands.

J.A. van Aardenne, C. Kroeze, L. Hordijk and M.P.J. Pulles (1998). Analysis of the uncertainties in the IPCC method for estimating N₂O emissions in agricultural soils. In: K. Chan, S. Tarantola and F. Campolongo (Eds.), *EC Joint Research Centre*, Ispra, Italy, pp. 305-308.

PUBLICATIONS (continued)

1999

J.A. van Aardenne, G.R. Carmichael, H. Levy II, D. Streets, and L. Hordijk, (1999) Anthropogenic NO_x emissions in Asia in the period 1990-2020. *Atmospheric Environment* 33, 633-646.

W. Tuinstra, L. Hordijk and M. Amann (1999) Using computer models in international negotiations. *Environment* 41 (9), 33-42.

M.M. Berk, L. Hordijk, M. Hisschemöller, M.T.J. Kok, D. Liefferink, R.J. Swart and W. Tuinstra, (1999) Climate OptiOns for the Long term (COOL). Interim Phase Report. NOP-RIVM, 410200028. pp. 1-120.

2000

J.A. van Aardenne, C. Kroeze, T. Pulles and L. Hordijk (2000). Uncertainties in the calculation of agricultural N₂O emissions in The Netherlands using the IPCC Guidelines. In: J. van Ham, A.P.M. Baede, L.A. Meyer and R. Ybema (Eds.), *Non-CO₂ Greenhouse Gases: Scientific Understanding, Control and Implementation*. Kluwer Academic Publishers, Dordrecht, The Netherlands, pp. 493-498.

S. Kruitwagen, H. Folmer, E.M.T. Hendrix, L. Hordijk, E.C. van Ierland (2000) Trading sulphur emissions in Europe: guided bilateral trade, *Environmental and Resource Economics* 16, pp. 423-441.

J.C. Pluimers, C. Kroeze, E.J. Bakker, H. Challa, L. Hordijk (2000) Quantifying the environmental impact of production in agriculture and horticulture in the Netherlands: Which emissions do we need to consider? *Agricultural Systems* 66, pp. 167-189.

J. Shah, R. Ramankutty, T. Nagpal, T. Johnson, M. Amann, G. Carmichael, W. Foell, C. Green, J. Hettelingh, L. Hordijk, J. Li, C Peng, Y Pu and D. Streets (2000) Integrated Assessment Model for Acid Rain in Asia: Policy Implications and Results of RAINS-ASIA Model, *Annual Review of Energy and Environment* 25, pp. 339-375.

J.C. Pluimers, E.J. Bakker, H. Challa, L. Hordijk, C. Kroeze (2000) Energy efficiency in Dutch tomato cultivation In: E.C. van Ierland, A. Oude Lansink, E. Schmieman (Eds.) *Sustainable Energy: new challenges for agriculture and implications for land use*, Wageningen, p. 10.

2001

J.C. Pluimers, C. Kroeze, E.J. Bakker, H. Challa, L. Hordijk (2001) Biogenic versus abiogenic emissions from agriculture in the Netherlands and options for emission control in tomato cultivation, *Nutrient Cycling in Agroecosystems* 60, pp. 209-218.

J.C. Brink, E.C. van Ierland, L. Hordijk, C. Kroeze (2001) Cost-effective emission abatement in Europe considering interrelations in agriculture, Proceedings 2nd International Nitrogen Conference on Science and Policy, *The Scientific World* 1, pp. 814-821.

L. Hordijk (2001) Regional air pollution information and simulation (RAINS), in: R.E. Munn (Ed.), *The Encyclopaedia of Global Environmental Change*, Vol. 4, John Wiley, New York.

2002

J.C. Boudri, L. Hordijk, C. Kroeze, M. Amann, J. Cofala, I. Bertok, Li Junfeng, Dai Lin, Zhen Shuang, Hu Runqing, T.S. Panwar, S. Gupta, D. Singh, A. Kumar, M.C. Vipradas, P. Dadhich, N.S. Prasad, L. Srivastava (2002), The potential contribution of renewable energy in air pollution abatement in China and India, *Energy Policy* 30, pp. 409-424.

J.A. van Aardenne, P.J.H. Builtjes, L. Hordijk, C. Kroeze, M.P.J. Pulles (2002) Using wind-direction-dependent differences between model calculations and field measurements as indicator for the inaccuracy of emission inventories, *Atmospheric Environment* 36, pp. 1195-2004.

E.C. Schmieman, W. de Vries, L. Hordijk, C. Kroeze, M. Posch, G.J. Reinds, E.C. van Ierland (2002) Dynamic cost-effective reduction strategies for acidification in Europe: an application to Ireland and the United Kingdom, *Environmental Modelling and Assessment* 7, pp. 163-178.

PUBLICATIONS (continued)

E.C. Schmieman, E.C. van Ierland, L. Hordijk (2002) Dynamic efficiency with multi-pollutants and multi-targets: the case of acidification and tropospheric ozone formation in Europe, *Environmental and Resource Economics* 23, pp. 133-148.

C. Brink, E.C. Van Ierland, L. Hordijk and C. Kroeze (2002) Cost-effective abatement of nitrous oxide and methane from European agriculture considering interrelations with ammonia abatement. In: J. Van Ham, A.P.M. Baede, R. Guicherit and J.G.F.M. Williams-Jacobse (Eds.). *Non-CO₂ Greenhouse Gases: Scientific understanding, control options and policy aspects*. Millpress, Rotterdam, the Netherlands. pp. 651-656.

2003

L Hordijk,., Options for Reducing Energy Related Pollution: The RAINS-ASIA Model. In: A.P.J. Mol, J. van Buuren, N.T. Viet (Eds), (2003). *Greening Industrialization in Asian Transitional Economies: China and Vietnam (Rural Economies in Transition)*, Rowman & Littlefield, Lanham, MD, USA [ISBN0739106082].

J.Jäger, W. Cramer, L. Hordijk, J. Sarukhan, (2003). Evaluation Report of the Finnish Global Change Research Programme (FIGARE), Publications of the Academy of Finland 7/03, 33 p. ISBN 951-715-460-7; ISSN 0358-9153.

2004

P.A.G.M. Scheren, C. Kroeze, F.J.J.G. Janssen, L. Hordijk, K.J. Ptasinski (2004). Integrated water pollution assessment of the Ebrié Lagoon, Ivory Coast, West Africa, *Journal of Marine Systems*, 44, pp. 1-17.

J. Cofala, M. Amann, F. Gyarfas, W. Schoepp, J.C. Boudri, L. Hordijk, C. Kroeze, J. Li, I. Dai, T.S. Panwar, S. Gupta (2004). Cost-effective control of SO₂ emissions in Asia, *Journal of Environmental Management*; 72, pp. 149-161.

2005

E. van Ierland, L. Hordijk and C. Kroeze (2005). Cost-effective emission abatement in agriculture in the presence of interrelations: cases for the Netherlands and Europe, *Ecological Economics*, 53, 1, pp. 59-74.

Jean-Paul Hettelingh, Bert de Vries and Leen Hordijk (2004). Integrated Assessment. Chapter 12 in: Boersema and Reijnders (Eds.), *Principles of Environmental Science*, Kluwer Academic Publishers (forthcoming).

2006

W. Jawjit, C. Kroeze, W. Soontaranun and Leen Hordijk (2006). An analysis of the environmental pressure exerted by the eucalyptus-based kraft pulp industry in Thailand, *Environment, Development and Sustainability*; 8/2, May 2006, pp. 289-311(23).

R. Maas, M. Amann, H. ApSimon, L. Hordijk, W. Tuinstra (2004) Integrated assessment modelling: the tool, in: J. Sliggers and W.J. Kakebeeke (Eds), *Clearing the Air*, United Nations, Geneva; Chapter 6, pp. 85-96.

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