

PERSONAL INFORMATION

Günther Fischer



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 [State personal website\(s\)](#) n/a

 Replace with type of IM service n/a

Sex M | Date of birth 10/12/1950 | Nationality Austrian

PROPOSED POSITION

Expert on impacts on land use and social impacts of EU biofuels consumption

WORK EXPERIENCE

2011 - present

Senior Research Scholar, Food and Water

IIASA, Laxenburg

- Research on climate-water-food-energy nexus, water futures and solutions, biofuels and food security, global agro-ecological zoning.

Business or sector Research Institution, Non-Profit

1995 - 2010

Program Leader, Land use change and agriculture program

IIASA, Laxenburg

- Research on global, regional, national issues of food security, agriculture, land use change, land and water use, climate change impacts.

Business or sector Research Institution, Non-Profit

2009 - 2011

Consultant

MCA4climate

- A practical framework for planning pro-development climate policies; Adaptation Theme Report: Reducing Agricultural Output Losses, UNEP, Paris.

Business or sector Research Institution, Non-Profit

1976 - 1995

Research Scholar, Food and Agriculture Program

IIASA, Laxenburg

- Applied general equilibrium modeling framework; implementation and application of a global model of the world food systems. Major studies: On welfare implications of trade liberalization in agriculture (Towards Free Trade in Agriculture, 1988); on poverty and hunger (Hunger: Beyond the Reach of the Invisible Hand, 1991); on climate change and world agriculture (Climate Change and World Food Supply, Demand and Trade, 1993).

Business or sector Research Institution, Non-Profit

1974 - 1975

Research assistant

Computer Sciences

- IIASA, Laxenburg

Business or sector Research Institution, Non-Profit

EDUCATION AND TRAINING

- 1974 **(Diplom-Ingenieur) in Technical mathematics, information and data-processing**
 Technical University, Vienna, Austria
 ▪ Principal subjects: Mathematics, Statistics, Informatics, Functional analysis, Numerical analysis.

- 1972 **Diploma (1. Staatsprüfung, with honors) in Technical Mathematics**
 Technical University, Vienna, Austria
 ▪ Principal subjects: Mathematics, Statistics, Probability theory, Algebra

- 1969 **Abitur (Matura with honors)**
 Bundesrealgymnasium, Moedling, Austria

PERSONAL SKILLS

Mother tongue(s) German

Other language(s)

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	C2	C2	C2	C2	C2
Replace with name of language certificate. Enter level if known.					
Italian, French, Latin	B1	B1	B1	B1	B1
Replace with name of language certificate. Enter level if known.					

Levels: A1/2: Basic user - B1/2: Independent user - C1/2 Proficient user
 Common European Framework of Reference for Languages

Communication skills ▪ excellent communication skills gained through my experience as project and program leader

Organisational / managerial skills ▪ leadership (lead a research program including more than 15 people)

Job-related skills ▪ unique skills in programming and modelling as well as analysis of mathematical models for future scenario outcomes.

Computer skills ▪ Microsoft Office, fortran, C++, R, SPSS, GAMS, GIS,

Other skills ▪ n/a

Driving licence ▪ B

ADDITIONAL INFORMATION

Publications

- Bruckner M, Fischer G, Tramberend S & Giljum S (2015). Measuring telecouplings in the global land system: a review and comparative evaluation of land footprint accounting method. *Ecological Economics*, 114:11-21 (June 2015).
- Fan D, Ding Q, Tian Z, Sun L & Fischer G (2015). Simulating the adaptive measures of soybean production to climate change in China: based on cross-scale model coupling. In: Huang C & et al (Eds) (eds), *Emerging Economies, Risk and Development, and Intelligent Technology: Proceedings of the 5th International Conference on Risk Analysis and Crisis Response*. June 1-3, 2015, Tangier, Morocco pp. 143-149 (2015).
- Tian Z, Liang Z, Sun L, Zhong H, Qiu H, Fischer G & Zhao S (2015). Agriculture under climate change in China: mitigate the risks by grasping the emerging opportunities. *Human and Ecological Risk Assessment*, 21(5):1259-1276 (July 2015).
- Wang X, Li X, Fischer G, Sun L, Tan M, Xin I & Liang Z (2015). Impact of the changing area sown to winter wheat on crop water footprint in the North China Plain. *Ecological Indicators*, 57:100-109 (October 2015) (Published online 14 May 2015).
- Purohit P & Fischer G (2014). Second-generation Biofuel Potential in India: Sustainability and Cost Considerations. UNEP Riso Centre on Energy, Climate and Sustainable Development, Technical University of Denmark (June 2014).
- Welsch M, Hermann S, Howells M, Rogner H-H, Young C, Ramma I, Bazilian M, Fischer G, Alfstad T, Gielen D, Le Blanc D, Roehrl RA, Steduto P, Mueller A (2014). Adding value with CLEWS - Modelling the energy system and its interdependencies for Mauritius. *Applied Energy*, 113:1434-1445 (January 2014) (Published online 27 September 2013).
- Tian Z, Zhong H, Sun L, Fischer G, van Velthuizen HT, Liang Z (2013). Improving performance of Agro-Ecological Zone (AEZ) modeling by cross-scale model coupling: An application to japonica rice production in Northeast China. *Ecological Modelling*, Article in press (Published online 26 December 2013).
- Tian Z, Yang X, Sun L, Fischer G, Liang Z, Pan J (2013). Agroclimatic conditions in China under climate change scenarios projected from regional climate models. *International Journal of Climatology*, Article in press (Published online 28 December 2013).
- Tian Z, Liang Z, Zhong H, Qiu H, Sun L, Fischer G, van Velthuizen HT, Cao G, Zhao S (2013). Upside potential versus downside risk in Chinese agriculture under climate change. *Intelligent Systems and Decision Making for Risk Analysis and Crisis Response: Proceedings, RACR 2013*, C. Huang, C. Kahraman (Eds), 27-29 August 2013, Istanbul, Turkey pp.291-297.
- Howells M, Hermann S, Welsch M, Bazilian M, Segerström R, Alfstad T, Gielen D, Rogner H, Fischer G, van Velthuizen H, Wiberg D, Young C, Roehrl RA, Mueller A, Steduto P, Ramma I (2013). Integrated analysis of climate change, land-use, energy and water strategies. *Nature Climate Change* 3, 621-626 (Published online 25 June 2013).
- Fischer G, Hizsnyik E, van Velthuizen H, Wiberg D, Hermann S (2013). Climate, Land, Energy & Water Strategies: A case study of Mauritius. *Agro-ecological assessment, methodology and results*. International Institute for Applied Systems Analysis, Laxenburg, Austria.
- Teixeira E, Fischer G, van Velthuizen H, Walter C, Ewert F (2013). Global hot-spots of heat stress on agricultural crops due to climate change. *Agricultural and Forest Meteorology*, 170:206-215 (15 March 2013) (Published online 5 October 2011).
- Cuypers D, Geerken T, Gorissen L, Lust A, Peters G, Karstensen J, Fischer G, Hizsnyik E, Prieler S, van Velthuizen H (2013). The impact of EU consumption on deforestation: Comprehensive analysis of the impact of EU consumption on deforestation. Study funded by the European Commission, DG ENV Contract N° 070307/2010/577031/ETU/E2 Final Report, Technical Report - 2013 – 063.
- Ermolieva T, Ermoliev Y, Obersteiner M, Makowski M, Fischer G (2013). Dams and catastrophe risk: Discounting in long term planning. In *Integrated Catastrophe Risk Modeling: Supporting Policy Processes*, A Amendola, T Ermolieva, J Linnerooth-Bayer, R Mechler (eds). Springer, Dordrecht pp.73-92
- Fischer G, Winiwarter W, Cao G-Y, Ermolieva T, Hizsnyik E, Klimont Z, Wiberg D, Zheng XY (2012). Implications of population growth and urbanization on agricultural risks in China. *Population & Environment*, 33(2-3):243-258 (March 2012) (Published online 10 May 2011)
- Prieler S, Fischer G, van Velthuizen H (2013). Land and the food – fuel competition: Insights from Modelling. (Published online 10 October 2012). *Wiley Interdisciplinary Reviews: Energy and Environment*. WIREs Energy Environment, 2(2):199-217 (March/April 2013).
- Fischer G, Winiwarter W, Ermolieva T, Cao G-Y, van Velthuizen H, Klimont Z, Schoepp W, van Veen W, Wiberg D, Wagner F (2012). Sustainable agriculture in China: Estimation and reduction of nitrogen impacts. In *Managing Safety of Heterogeneous Systems*, Y. Ermoliev, M. Makowski, K. Marti (eds). Springer-Verlag, Heidelberg, Germany pp.327-350 (February 2012).
- Tian Z, Zhong H, Shi R, Sun L, Fischer G, Liang Z (2012). Estimating potential yield of wheat production in China based on cross-scale data-model fusion. *Frontiers of Earth Science*, 6(4):364-372 (December 2012) (Published online October 2012).

- Borodina O, Borodina E, Ermolieva T, Ermoliev Y, Fischer G, Makowski M, van Velthuizen H (2012): Sustainable agriculture, food security, and socio-economic risks in Ukraine. In *Managing Safety of Heterogeneous Systems*, Y. Ermoliev, M. Makowski, K. Marti (eds). Springer-Verlag, Heidelberg, Germany pp.169-185 (February 2012)
- Fischer G (2011): How can climate change and the development of bioenergy alter the long-term outlook for food and agriculture. In *Looking Ahead in World Food and Agriculture: Perspectives to 2050*, P Conforti (ed.). FAO, Rome, Italy pp.95-155.
- Teixeira E, Fischer G, van Velthuizen H, van Dingeren R, Dentener F, Mills G, Walter C, Ewert F (2011). Limited potential of crop management for mitigating surface ozone impacts on global food supply. *Atmospheric Environment*, 45(15):2569-2576 (May 2011) (Published online 11 February 2011).
- Fischer G, Hizsnyik E, Prieler S, Wiberg D (2011): Scarcity and abundance of land resources: Competing uses and the shrinking land resource base. SOLAW Background Thematic Report - TR02, FAO, Rome, Italy.
- Tang X, Yang X, Tian Z, Fischer G, Sun L, Pan J (2011). Impacts of climate change on agro-climatic resources in China. *Resources Science*, 33(10):1962-1968 (2011).
- Fischer G, Ermolieva T, Sun L (2010): Planning sustainable agricultural development under risks. In *Coping with Uncertainty: Robust Solutions*, K. Marti, Y. Ermoliev, M. Makowski (eds), Springer-Verlag, Heidelberg, Germany pp.209-227.
- Fischer G, Prieler S, Velthuizen H.van, and Lensink SM, Londo M, Wit M.de, Biofuel production potentials in Europe: Sustainable use of cultivated land and pastures. Part I: Land productivity potentials; *Biomass and Bioenergy*, 34(2):159-172 (February 2010) (Published online 30 July 2009).
- Fischer G, Prieler S, Velthuizen HT van, and Berndes G, Faaij A, Londo M, Wit M de. Biofuel production potentials in Europe: Sustainable use of surplus cultivated land and pastures Part II: Land use scenarios. *Biomass and Bioenergy*, 34(2):173-187 (February 2010) (Published online 29 July 2009).
- Fischer G, Hizsnyik E, Prieler S, Shah M, Velthuizen H van (2009): Biofuels and Food Security. OFID/IIASA, Vienna/Laxenburg. Available at: <http://www.iiasa.ac.at/Research/LUC/luc07/Homepage-News/Highlights/Biofuels%20Report%20Final.pdf> , (accessed in July 2009)