

Publications relevant to IIASA-South African collaborations (2008-2014)

The publication list contains only publications authored by IIASA-affiliated researchers and:

1. About South Africa, or
2. the IIASA author is a national of South Africa, or
3. the IIASA author has collaborated with a researcher based at an institute in South Africa.

2015

1. Landi, P., Hui, C., Dieckmann, U. Fisheries-induced disruptive selection (2015) *Journal of Theoretical Biology*, 365, pp. 204-216.

2014

2. Dhansay T, de Wit MJ & Patt A (2014). An evaluation for harnessing low-enthalpy geothermal energy in the Limpopo Province, South Africa. *South African Journal of Science*, 110(3-4):20130282 (March/April 2014) (Published online 27 March 2014).
3. Ebi, K.L., Hallegatte, S., Kram, T., Arnell, N.W., Carter, T.R., Edmonds, J., Kriegler, E., Mathur, R., O'Neill, B.C., Riahi, K., Winkler, H., van Vuuren, D.P., Zwickel, T. A new scenario framework for climate change research: Background, process, and future directions (2014) *Climatic Change*, 122 (3), pp. 363-372.
4. Fang, D., Fath, B.D., Chen, B., Scharler, U.M. Network environ analysis for socio-economic water system (2014) *Ecological Indicators*, 47, pp. 80-88.
5. Kimemia D, Vermaak C, Pachauri S & Rhodes B (2014). Burns, scalds and poisonings from household energy use in South Africa: Are the energy poor at greater risk? *Energy for Sustainable Development*, 18:1-8 (February 2014)(Published online 18 December 2013).
6. Kriegler, E., Edmonds, J., Hallegatte, S., Ebi, K.L., Kram, T., Riahi, K., Winkler, H., van Vuuren, D.P. A new scenario framework for climate change research: The concept of shared climate policy assumptions (2014) *Climatic Change*, 122 (3), pp. 401-414.
7. Mainali B, Pachauri S, Rao ND & Silveira S (2014). Assessing rural energy sustainability in developing countries. *Energy for Sustainable Development*, 19:15-28 (April 2014)(Published online 21 February 2014).
8. Mukherjee J, Scharler UM, Fath BD & Ray S (2014). Measuring sensitivity of robustness and network indices for an estuarine food web model under perturbations. *Ecological Modelling*, Article in press(Published online 20 October 2014).
9. Nakicenovic N, Krey V, Kolp P et al. (Contributors) (2014). Pathways to Deep Decarbonization: Interim 2014 Report. Preliminary findings of the Deep Decarbonization Pathways Project (DDPP). SDSN & IDDRI, Paris, France (July 2014).

10. Pfenninger, S., Gauché, P., Lilliestam, J., Damerau, K., Wagner, F., Patt, A. Potential for concentrating solar power to provide baseload and dispatchable power (2014) *Nature Climate Change*, 4 (8), pp. 689-692.
11. van Vuuren, D.P., Kriegler, E., O'Neill, B.C., Ebi, K.L., Riahi, K., Carter, T.R., Edmonds, J., Hallegatte, S., Kram, T., Mathur, R., Winkler, H. A new scenario framework for Climate Change Research: Scenario matrix architecture (2014) *Climatic Change*, 122 (3), pp. 373-386.

2013

12. Dube S, Scholes RJ, Nelson GC, Mason-D'Croz D & Palazzo A (2013). South African food security and climate change: Agriculture futures. *Economics: The Open-Access, Open-Assessment E-Journal*, 7:2013-35(2 September 2013).
13. Fath, B.D., Scharler, U.M., Baird, D. Dependence of network metrics on model aggregation and throughflow calculations: Demonstration using the Sylt-Rømø Bight Ecosystem (2013) *Ecological Modelling*, 252 (1), pp. 214-219.
14. Paasonen, P., Asmi, A., Petäjä, T., Kajos, M.K., Äijälä, M., Junninen, H., Holst, T., Abbatt, J.P.D., Arneth, A., Birmili, W., Van Der Gon, H.D., Hamed, A., Hoffer, A., Laakso, L., Laaksonen, A., Richard Leaitch, W., Plass-Dülmer, C., Pryor, S.C., Räisänen, P., Swietlicki, E., Wiedensohler, A., Worsnop, D.R., Kerminen, V.-M., Kulmala, M. Warming-induced increase in aerosol number concentration likely to moderate climate change (2013) *Nature Geoscience*, 6 (6), pp. 438-442.
15. Prado-Lopez V, Stewart T, Makowski M & von Winterfeldt D (2013). Value measurement analysis of energy tradeoffs in South Africa. In: Bilec M & (Eds) J Choi (eds), *Proceedings of the International Symposium on Sustainable Systems and Technologies (ISSST)*, Vol.1. 18-21 May 2013, Oakland, CA, USA (2013).

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16. Bindraban, P.S., van der Velde, M., Ye, L., van den Berg, M., Materechera, S., Kiba, D.I., Tamene, L., Ragnarsdóttir, K.V., Jongschaap, R., Hoogmoed, M., Hoogmoed, W., van Beek, C., van Lynden, G. Assessing the impact of soil degradation on food production (2012) *Current Opinion in Environmental Sustainability*, 4 (5), pp. 478-488.
17. Cofala J, Bertok I, Borken-Kleefeld J, Heyes C, Klimont Z, Rafaj P, Sander R, Schoepp W & Amann M (2012). Emissions of Air Pollutants for the World Energy Outlook 2012 Energy Scenarios. Final Report, submitted to the International Energy Agency, Paris, France (September 2012).
18. Fath BD, Jørgensen SE, Scharler U. 2012. Ecological Modeling in Environmental Management: History and Applications. *Treatise on Estuarine and Coastal Science*. Springer. Vol. 9, pp. 23–33.
19. Lim, S.S., Vos, T., Flaxman, A.D., Danaei, G., Shibuya, K., Adair-Rohani, H., Amann, M., Anderson, H.R., Andrews, K.G., Aryee, M., Atkinson, C., Bacchus, L.J., Bahalim, A.N., Balakrishnan, K., Balmes, J., Barker-Collo, S., Baxter, A., Bell, M.L., Blore, J.D., Blyth, F., Bonner, C., Borges, G., Bourne, R., Boussinesq, M., Brauer, M., Brooks, P., Bruce, N.G., Brunekreef, B., Bryan-Hancock, C., Bucello, C., Buchbinder, R., Bull, F.,

- Burnett, R.T., Byers, T.E., Calabria, B., Carapetis, J., Carnahan, E., Chafe, Z., Charlson, F., Chen, H., Chen, J.S., Cheng, A.T.-A., Child, J.C., Cohen, A., Colson, K.E., Cowie, B.C., Darby, S., Darling, S., Davis, A., Degenhardt, L., Dentener, F., Des Jarlais, D.C., Devries, K., Dherani, M., Ding, E.L., Dorsey, E.R., Driscoll, T., Edmond, K., Ali, S.E., Engell, R.E., Erwin, P.J., Fahimi, S., Falder, G., Farzadfar, F., Ferrari, A., Finucane, M.M., Flaxman, S., Fowkes, F.G.R., Freedman, G., Freeman, M.K., Gakidou, E., Ghosh, S., Giovannucci, E., Gmel, G., Graham, K., Grainger, R., Grant, B., Gunnell, D., Gutierrez, H.R., Hall, W., Hoek, H.W., Hogan, A., Hosgood III, H.D., Hoy, D., Hu, H., Hubbell, B.J., Hutchings, S.J., Ibeanusi, S.E., Jacklyn, G.L., Jirasaria, R., Jonas, J.B., Kan, H., Kanis, J.A., Kassebaum, N., Kawakami, N., Khang, Y.-H., Khatibzadeh, S., Khoo, J.-P., Kok, C., Laden, F., Lalloo, R., Lan, Q., Lathlean, T., Leasher, J.L., Leigh, J., Li, Y., Lin, J.K., Lipshultz, S.E., London, S., Lozano, R., Lu, Y., Mak, J., Malekzadeh, R., Mallinger, L., Marcenes, W., March, L., Marks, R., Martin, R., McGale, P., McGrath, J., Mehta, S., Mensah, G.A., Merriman, T.R., Micha, R., Michaud, C., Mishra, V., Hanafiah, K.M., Mokdad, A.A., Morawska, L., Mozaffarian, D., Murphy, T., Naghavi, M., Neal, B., Nelson, P.K., Nolla, J.M., Norman, R., Olives, C., Omer, S.B., Orchard, J., Osborne, R., Ostro, B., Page, A., Pandey, K.D., Parry, C.D.H., Passmore, E., Patra, J., Pearce, N., Pelizzari, P.M., Petzold, M., Phillips, M.R., Pope, D., Pope III, C.A., Powles, J., Rao, M., Razavi, H., Rehfuess, E.A., Rehm, J.T., Ritz, B., Rivara, F.P., Roberts, T., Robinson, C., Rodriguez-Portales, J.A., Romieu, I., Room, R., Rosenfeld, L.C., Roy, A., Rushton, L., Salomon, J.A., Sampson, U., Sanchez-Riera, L., Sanman, E., Sapkota, A., Seedat, S., Shi, P., Shield, K., Shivakoti, R., Singh, G.M., Sleet, D.A., Smith, E., Smith, K.R., Stapelberg, N.J.C., Steenland, K., Stöckl, H., Stovner, L.J., Straif, K., Straney, L., Thurston, G.D., Tran, J.H., Van Dingenen, R., Van Donkelaar, A., Veerman, J.L., Vijayakumar, L., Weintraub, R., Weissman, M.M., White, R.A., Whiteford, H., Wiersma, S.T., Wilkinson, J.D., Williams, H.C., Williams, W., Wilson, N., Woolf, A.D., Yip, P., Zielinski, J.M., Lopez, A.D., Murray, C.J.L., Ezzati, M. A comparative risk assessment of burden of disease and injury attributable to 67 risk factors and risk factor clusters in 21 regions, 1990-2010: A systematic analysis for the Global Burden of Disease Study 2010 (2012) *The Lancet*, 380 (9859), pp. 2224-2260.
20. Scharler, U.M., Fath, B.D. Core network compartments: Relative importance of ecosystems players in moving energy through the system (2012) *iEMSs 2012 - Managing Resources of a Limited Planet: Proceedings of the 6th Biennial Meeting of the International Environmental Modelling and Software Society*, pp. 285-292.

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21. Damerau, K., Williges, K., Patt, A.G., Gauché, P. Costs of reducing water use of concentrating solar power to sustainable levels: Scenarios for North Africa (2011) *Energy Policy*, 39 (7), pp. 4391-4398.
22. Kulmala, M., Asmi, A., Lappalainen, H.K., Baltensperger, U., Brenguier, J.-L., Facchini, M.C., Hansson, H.-C., Hov, Ø., O'Dowd, C.D., Pöschl, U., Wiedensohler, A., Boers, R., Boucher, O., De Leeuw, G., Denier Van Der Gon, H.A.C., Feichter, J., Krejci, R., Laj, P., Lihavainen, H., Lohmann, U., McFiggans, G., Mentel, T., Pilinis, C., Riipinen, I., Schulz, M., Stohl, A., Swietlicki, E., Vignati, E., Alves, C., Amann, M., Ammann, M., Arabas, S., Artaxo, P., Baars, H., Beddows, D.C.S., Bergström, R.,

Beukes, J.P., Bilde, M., Burkhart, J.F., Canonaco, F., Clegg, S.L., Coe, H., Crumeyrolle, S., D'Anna, B., Decesari, S., Gilardoni, S., Fischer, M., Fjaeraa, A.M., Fountoukis, C., George, C., Gomes, L., Halloran, P., Hamburger, T., Harrison, R.M., Herrmann, H., Hoffmann, T., Hoose, C., Hu, M., Hyvärinen, A., Hörrak, U., Iinuma, Y., Iversen, T., Josipovic, M., Kanakidou, M., Kiendler-Scharr, A., Kirkevåg, A., Kiss, G., Klimont, Z., Kolmonen, P., Komppula, M., Kristjánsson, J.-E., Laakso, L., Laaksonen, A., Labonnote, L., Lanz, V.A., Lehtinen, K.E.J., Rizzo, L.V., Makkonen, R., Manninen, H.E., McMeeking, G., Merikanto, J., Minikin, A., Mirme, S., Morgan, W.T., Nemitz, E., O'Donnell, D., Panwar, T.S., Pawlowska, H., Petzold, A., Pienaar, J.J., Pio, C., Plass-Duelmer, C., Prévôt, A.S.H., Pryor, S., Reddington, C.L., Roberts, G., Rosenfeld, D., Schwarz, J., Seland, O., Sellegrì, K., Shen, X.J., Shiraiwa, M., Siebert, H., Sierau, B., Simpson, D., Sun, J.Y., Topping, D., Tunved, P., Vaattovaara, P., Vakkari, V., Veefkind, J.P., Visschedijk, A., Vuollekoski, H., Vuolo, R., Wehner, B., Wildt, J., Woodward, S., Worsnop, D.R., Van Zadelhoff, G.-J., Zardini, A.A., Zhang, K., Van Zyl, P.G., Kerminen, V.-M., Carslaw, K.S., Pandis, S.N. General overview: European Integrated project on Aerosol Cloud Climate and Air Quality interactions (EUCAARI)-integrating aerosol research from nano to global scales (2011) *Atmospheric Chemistry and Physics*, 11 (24), pp. 13061-130143.

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25. Patt, A.G., Tadross, M., Nussbaumer, P., Asante, K., Metzger, M., Rafael, J., Goujon, A., Brundrit, G. Estimating least-developed countries' vulnerability to climate-related extreme events over the next 50 years (2010) *Proceedings of the National Academy of Sciences of the United States of America*, 107 (4), pp. 1333-1337.

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26. Baird, D., Fath, B.D., Ulanowicz, R.E., Asmus, H., Asmus, R. On the consequences of aggregation and balancing of networks on system properties derived from ecological network analysis (2009) *Ecological Modelling*, 220 (23), pp. 3465-3471.
27. Fischer G, van Velthuizen HT, Hizsnyik E, Wiberg D (2009) Potentially obtainable yields in the semi-arid tropics. *Global Theme on Agroecosystems, Report no. 54*. International Crops Research Institute for the Semi-Arid Tropics, Patancheru 502 324, Andhra Pradesh, India

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32. Shah M, Fischer G, van Velthuisen HT (2009) Food security and sustainable agriculture: The challenges of climate change in Sub-Saharan Africa. In: *Climate Change and Economic Development in Sub-Saharan Africa - AERC Senior Policy Seminar X*, Addis Ababa, Ethiopia, 7-9 April 2008: Seminar Papers, African Economic Research Consortium, Nairobi, Kenya

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