



Pathways linking uncertainties in model projections of climate and its effects (PLUMES)

Publications list (23 August 2019)

Peer reviewed publications with direct acknowledgement to PLUMES

Journal articles

1. Hoffmann H, Zhao G, Van Bussel LGJ, Enders A, Specka X, Sosa C, Yeluripati J, Tao F, Constantin C, Raynal H, Teixeira E, Grosz B, Doro L, Zhao Z, Wang E, Nendel C, Kersebaum K-C, Haas E, Kiese R, Klatt S, Eckersten H, Vanuytrecht E, Kuhnert M, Lewan E, Rötter R, Roggero PP, Wallach D, Cammarano D, Asseng S, Krauss G, Siebert S, Gaiser T, Ewert F. (2015) Variability of effects of spatial climate data aggregation on regional yield simulation by crop models. *Climate Research* 65, 53-69, [doi:10.3354/cr01326](https://doi.org/10.3354/cr01326)
2. Jylhä K., J. Jokisalo, K. Ruosteenoja, K. Pilli-Sihvola, T. Kalamees, T. Seitola, H. Mäkelä, R. Hyvönen, M. Laapas and A. Drebs (2015) Energy demand for the heating and cooling of residential houses in Finland in a changing climate. *Energy and Buildings* 99, 104-116, [doi:10.1016/j.enbuild.2015.04.001](https://doi.org/10.1016/j.enbuild.2015.04.001)
3. Jylhä K., K. Ruosteenoja, J. Jokisalo, K. Pilli-Sihvola, T. Kalamees, H. Mäkelä, R. Hyvönen, and A. Drebs (2015) Hourly test reference weather data in the changing climate of Finland for building energy simulations. *Data in Brief* 4, 162-169, [doi:10.1016/j.dib.2015.04.026](https://doi.org/10.1016/j.dib.2015.04.026)
4. Neuvonen, M., T. Sievänen, S. Fronzek, I. Lahtinen, N. Veijalainen and T.R. Carter (2015) Vulnerability of cross-country skiing to climate change in Finland - an interactive mapping tool. *Journal of Outdoor Recreation and Tourism* 11, 64–79, [doi:10.1016/j.jort.2015.06.010](https://doi.org/10.1016/j.jort.2015.06.010)
5. Pirttioja, N., T.R. Carter, S. Fronzek, M. Bindi, H. Hoffmann, T. Palosuo, M. Ruiz-Ramos, F. Tao, M. Trnka, M. Acutis, S. Asseng, P. Baranowski, B. Basso, P. Bodin, S. Buis, D. Cammarano, P. Deligios, M.-F. Destain, B. Dumont, F. Ewert, R. Ferrise, L. François, T. Gaiser, P. Hlavinka, I. Jacquemin, K.C. Kersebaum, C. Kollas, J. Krzyszczak, I.J. Lorite, J. Minet, M.I. Minguez, M. Montesino, M. Moriondo, C. Müller, C. Nendel, I. Öztürk, A. Perego, A. Rodríguez, A.C. Ruane, F. Ruget, M. Sanna, M. Semenov, C. Slawinski, P. Stratonovitch, I. Supit, K. Waha, E. Wang, L. Wu, Z. Zhao and R.P. Rötter (2015) Temperature and precipitation effects on wheat yield across a European transect: a crop model ensemble analysis using impact response surfaces. *Climate Research* 65, 87–105, [doi:10.3354/cr01322](https://doi.org/10.3354/cr01322)
6. Tao, F., Rötter, R.P., Palosuo, T., Höhn, J., Peltonen-Sainio, P., Rajala, A., Salo, T. (2015) Assessing climate effects on wheat yield and water use in Finland using a super-ensemble-based probabilistic approach. *Climate Research* 65, 23-37, [doi:10.3354/cr01318](https://doi.org/10.3354/cr01318)
7. Aalto, J., P. Pirinen, and K. Jylhä (2016) New gridded daily climatology of Finland: Permutation-based uncertainty estimates and temporal trends in climate. *J. Geophys. Res. Atmos.* 121, 3807-3823, [doi:10.1002/2015JD024651](https://doi.org/10.1002/2015JD024651)
8. Hällfors, M.H., S. Aikio, S. Fronzek, J.J. Hellmann, T. Rytteri and R.K. Heikkinen (2016) Assessing the need and potential of assisted migration using species distribution models. *Biological Conservation* 196, 60–68, [doi:10.1016/j.biocon.2016.01.031](https://doi.org/10.1016/j.biocon.2016.01.031)
9. Ruosteenoja K., Jylhä K., Kämäräinen M. (2016) Climate projections for Finland under the RCP forcing scenarios. *Geophysica* 51, 17-50, http://www.geophysica.fi/pdf/geophysica_2016_51_1-2_017_ruosteenoja.pdf
10. Kivinen, S., S. Rasmus, K. Jylhä, M. Laapas (2017) Long-Term Climate Trends and Extreme Events in Northern Fennoscandia (1914–2013). *Climate* 5, 16, [doi:10.3390/cli5010016](https://doi.org/10.3390/cli5010016)
11. Ruosteenoja K., K. Jylhä, J. Räisänen, and A. Mäkelä (2017) Surface air relative humidities spuriously exceeding 100% in CMIP5 model output and their impact on future projections. *J. Geophys. Res. Atmos.* 122, 9557-9568, [doi:10.1002/2017JD026909](https://doi.org/10.1002/2017JD026909)

12. Ruuhela, R., K. Jylhä, T. Lanki, P. Tiittanen, A. Matzarakis (2017) Biometeorological Assessment of Mortality Related to Extreme Temperatures in Helsinki Region, Finland, 1972–2014. *Int J Environ Res Public Health* 14(8), 944, [doi:10.3390/ijerph14080944](https://doi.org/10.3390/ijerph14080944)
13. Tao, F., Rötter, R.P., Palosuo, T., Díaz-Ambrona, C., Mínguez, M.I., Semenov, M.A., Kersebaum, K.C., Nendel, C., Cammarano, D., Hoffmann, H., Ewert, F., Dambreville, A., Martre, P., Rodríguez, L., Ruiz-Ramos, M., Gaiser, T., Höhn, J.G., Salo, T., Ferrise, R., Bindi, M., Schulman, A.H. (2017) Designing future barley ideotypes using a crop model ensemble. *European Journal of Agronomy* 82, 144-162, [doi:10.1016/j.eja.2016.10.012](https://doi.org/10.1016/j.eja.2016.10.012)
14. Chen, Y., Z. Zhang, F. Tao, T. Palosuo, R.P. Rötter (2018) Impacts of heat stress on leaf area index and growth duration of winter wheat in the North China Plain. *Field Crops Research* 222, 230-237, [doi:10.1016/j.fcr.2017.06.007](https://doi.org/10.1016/j.fcr.2017.06.007)
15. Chen, Y., Zhang, Z., Tao, F., Palosuo, T., Rötter, R.P. (2018) Impacts of heat stress on leaf area index and growth duration of winter wheat in the North China Plain. *Field Crops Research* 222, 230-237, [doi:10.1016/j.fcr.2017.06.007](https://doi.org/10.1016/j.fcr.2017.06.007)
16. Fronzek, S., N. Pirttioja, T.R. Carter, M. Bindi, H. Hoffmann, T. Palosuo, M. Ruiz-Ramos, F. Tao, M. Trnka, M. Acutis, S. Asseng, P. Baranowski, B. Basso, P. Bodin, S. Buis, D. Cammarano, P. Deligios, M.-F. Destain, B. Dumont, F. Ewert, R. Ferrise, L. François, T. Gaiser, P. Hlavinka, I. Jacquemin, K.C. Kersebaum, C. Kollas, J. Krzyszczak, I.J. Lorite, J. Minet, M.I. Mínguez, M. Montesino, M. Moriondo, C. Müller, C. Nendel, I. Öztürk, A. Perego, A. Rodríguez, A.C. Ruane, F. Ruget, M. Sanna, M. Semenov, C. Slawinski, P. Stratonovitch, I. Supit, K. Waha, E. Wang, L. Wu, Z. Zhao and R.P. Rötter (2018) Classifying multi-model wheat yield impact response surfaces showing sensitivity to temperature and precipitation change. *Agricultural Systems* 159, 209-224, [doi:10.1016/j.agsy.2017.08.004](https://doi.org/10.1016/j.agsy.2017.08.004)
17. Hoffmann, M., Haakana, M., Asseng, S., Höhn, J., Palosuo, T., Ruiz-Ramos, M., Fronzek, S., Ewert, F., Gaiser, T., Kassie, B., Paff, K., Rezaei, E.F., Rodríguez, A., Semenov, M., Srivastava, A.K., Stratonovitch, P., Tao, T., Chen, Y., Rötter R.P. (2018) How does inter-annual variability of attainable yield affect the magnitude of yield gaps for wheat and maize? An analysis at ten sites. *Agricultural Systems* 159, 199-208, [doi:10.1016/j.agsy.2017.03.012](https://doi.org/10.1016/j.agsy.2017.03.012)
18. Kim S, Sinclair VA, Räisänen J, Ruuhela R (2018) Heat Waves in Finland: Present and Projected Summertime Extreme Temperatures and Their Associated Circulation Patterns. *International Journal of Climatology* 38, 1393-1408, [doi:10.1002/joc.5253](https://doi.org/10.1002/joc.5253)
19. Korhonen, P., Palosuo, T., Persson, T., Höglind, M., Jegou, G., Van Oijen, M., Belanger, G., Gustavsson, A., Virkajärvi, P. (2018) Modelling grass yields in northern climates – a comparison of three growth models for timothy. *Field Crops Research* 224, 37-47, [doi:10.1016/j.fcr.2018.04.014](https://doi.org/10.1016/j.fcr.2018.04.014)
20. Marshall, G.J., S. Kivinen, K. Jylhä, R.M. Vignols, W.G. Rees (2018) The accuracy of climate variability and trends across Arctic Fennoscandia in four reanalyses. *International Journal of Climatology* 38, 3878-3895, [doi:10.1002/joc.5541](https://doi.org/10.1002/joc.5541)
21. Peltonen-Sainio, P., Palosuo T., Ruosteenoja, K., Jauhiainen, L., Ojanen, H. (2018) Warming autumns at high latitudes of Europe: an opportunity to lose or gain in cereal production?. *Regional Environmental Change* 18, 1453-1465, [doi:10.1007/s10113-017-1275-5](https://doi.org/10.1007/s10113-017-1275-5)
22. Peltonen-Sainio, P., T. Palosuo, K. Ruosteenoja, L. Jauhiainen, H. Ojanen (2018) Warming autumns at high latitudes of Europe: an opportunity to lose or gain in cereal production?. *Regional Environmental Change* 18, 1453–1465, [doi:10.1007/s10113-017-1275-5](https://doi.org/10.1007/s10113-017-1275-5)
23. Ruiz-Ramos, M., Ferrise, R., Rodríguez, A., Lorite, I.J., Bindi, M., Carter, T.R., Fronzek, S., Palosuo, T., Pirttioja, N., Baranowski, P., Buis, S., Cammarano, D., Chen, Y., Dumont, B., Ewert, F., Gaiser, T., Hlavinka, P., Hoffmann, H., Höhn, J.G., Jurecka, F., Kersebaum, K.C., Krzyszczak, J., Lana, M., Mechiche-Alami, A., Minet, J., Montesino, M., Nendel, C., Porter, J.R., Ruget, F., Semenov, M.A., Steinmetz, Z., Stratonovitch, P., Supit, I., Tao, F., Trnka, M., De Wit, A., Rötter, R.P (2018) Adaptation response surfaces for managing wheat under perturbed climate and CO₂ in a Mediterranean environment. *Agricultural Systems* 159, 260-274, [doi:10.1016/j.agsy.2017.01.009](https://doi.org/10.1016/j.agsy.2017.01.009)
24. Ruosteenoja, K., T. Markkanen, A. Venäläinen, P. Räisänen and H. Peltola (2018) Seasonal soil moisture and drought occurrence in Europe in CMIP5 projections for the 21st century. *Climate Dynamics* 50(3-4), 1177–1192, [doi:10.1007/s00382-017-3671-4](https://doi.org/10.1007/s00382-017-3671-4)
25. Ruuhela, R., O. Hyvärinen and K. Jylhä (2018) Regional Assessment of Temperature-Related Mortality in Finland. *Int. J. Environ. Res. Public Health* 15(3), 406, [doi:10.3390/ijerph15030406](https://doi.org/10.3390/ijerph15030406)
26. Seidel, S., Palosuo, T., Thorburn, P., Wallach, D. (2018) Towards improved calibration of crop models – Where are we now and where should we go?. *European Journal of Agronomy* 94, 25-35, [doi:10.1016/j.eja.2018.01.006](https://doi.org/10.1016/j.eja.2018.01.006)
27. Tao, F., Rötter, R.P., Palosuo, T., Hernández Diaz-Ambrona, C.G., Mínguez, M.I., Semenov, M.A., Kersebaum, K.C., Nendel, C., Specka, X., Hoffmann, H., Ewert, F., Dambreville, A., Martre, P., Rodríguez, L., Ruiz-Ramos, M., Gaiser, T., Höhn, J., Salo, T., Ferrise, R., Bindi, M., Cammarano, D., Schulman, A.H. (2018) Contribution of crop model structure, parameters and climate projections to uncertainty in climate change impact assessments. *Global Change Biology* 24, 1291-1307, [doi:10.1111/gcb.14019](https://doi.org/10.1111/gcb.14019)
28. Wang, C., Z. Zhang, Y. Chen, F. Tao, J. Zhang and W. Zhang (2018) Comparing different smoothing methods to detect double-cropping rice phenology based on LAI products – a case study in the Hunan province of China. *International Journal of Remote Sensing*, [doi:10.1080/01431161.2018.1460504](https://doi.org/10.1080/01431161.2018.1460504)
29. Webber, H., F. Ewert, J.E. Olesen, C. Müller, S. Fronzek, A. Ruane, B. Ababaei, M. Bindi, M. Bourgault, R. Ferrise, R. Finger, N. Fodor, C. Gabaldón-Leal, T. Gaiser, M. Jabloun, K.-C. Kersebaum, J.I. Lizaso, I. Lorite, L. Manceau, P. Martre, M. Moriondo, C. Nendel, A. Rodríguez, M. Ruiz Ramos, M.A. Semenov, S. Siebert, T. Stella,

- P. Stratonovitch, G. Trombi and D. Wallach (2018) Diverging importance of drought stress for maize and winter wheat in Europe. *Nature Communications* 9, 4249, [doi:10.1038/s41467-018-06525-2](https://doi.org/10.1038/s41467-018-06525-2)
30. Asseng, S, P. Martre, A. Maiorano, R.P. Rötter, G.J. O’Leary, G.J. Fitzgerald, C. Girousse, R. Motzo, F. Giunta, M.A. Babar, M.P. Reynolds, A.M. S. Kheir, P.J. Thorburn, K. Waha, A.C. Ruane, P.K. Aggarwal, M. Ahmed, J. Balkovic, B. Basso, C. Biernath, M. Bindi, D. Cammarano, A.J. Challinor, G. De Sanctis, B. Dumont, E. Eyshi Rezaei, E. Fereres, R. Ferrise, M. Garcia-Vila, S. Gayler, Y. Gao, H. Horan, G. Hoogenboom, R.C. Izaurralde, M. Jabloun, C.D. Jones, B.T. Kassie, K.-C. Kersebaum, C. Klein, A.-K. Koehler, B. Liu, S. Minoli, M. Montesino San Martin, C. Müller, S.N. Kumar, C. Nendel, J.E. Olesen, T. Palosuo, J.R. Porter, E. Priesack, D. Ripoche, M.A. Semenov, C. Stöckle, P. Stratonovitch, T. Streck, I. Supit, F. Tao, M. Van der Velde, D. Wallach, E. Wang, H. Webber, J. Wolf, L. Xiao, Z. Zhang, Z. Zhao, Y. Zhu and F. Ewert (2019) Climate change impact and adaptation for wheat protein. *Global Change Biology* 25(1), 155-173, [doi:10.1111/gcb.14481](https://doi.org/10.1111/gcb.14481)
 31. Benzie, M., T.R. Carter, H. Carlsen and R. Taylor (2019) Cross-border climate change impacts: implications for the European Union. *Regional Environmental Change* 19, 763–776, [doi:10.1007/s10113-018-1436-1](https://doi.org/10.1007/s10113-018-1436-1)
 32. Fronzek, S., T.R. Carter, N. Pirttioja, R. Alkemade, E. Audsley, H. Bugmann, M. Flörke, I. Holman, Y. Honda, A. Ito, V. Janes Bassett, V. Lafond, R. Leemans, M. Mokrech, S. Nunez, D. Sandars, R. Snell, K. Takahashi, A. Tanaka, F. Wimmer and M. Yoshikawa (2019) Comparing sensitivity to climate and socio-economic change across sectors and European regions. *Regional Environmental Change* 19, 679–693, [doi:10.1007/s10113-018-1421-8](https://doi.org/10.1007/s10113-018-1421-8)
 33. Lehtonen, I. and K. Jylhä (2019) Tendency towards a more extreme precipitation climate in the Coupled Model Intercomparison Project Phase 5 models. *Atmospheric Science Letters* 20(5), e895, [doi:10.1002/asl.895](https://doi.org/10.1002/asl.895)
 34. Liu, B., P. Martre, F. Ewert, J.R. Porter, A.J. Challinor, C. Müller, A.C. Ruane, K. Waha, P.J. Thorburn, P.K. Aggarwal, M. Ahmed, J. Balkovic, B. Basso, C. Biernath, M. Bindi, D. Cammarano, G. De Sanctis, B. Dumont, M. Espadafor, E.E. Rezaei, R. Ferrise, M. Garcia-Vila, S. Gayler, Y. Gao, H. Horan, G. Hoogenboom, R.C. Izaurralde, C.D. Jones, B.T. Kassie, K.C. Kersebaum, C. Klein, A.-K. Koehler, A. Maiorano, S. Minoli, M. Montesino San Martin, S. Naresh Kumar, C. Nendel, G.J. O’Leary, T. Palosuo, E. Priesack, D. Ripoche, R. P. Rötter, M. A. Semenov, C. Stöckle, T. Streck, I. Supit, F. Tao, M. Van der Velde, D. Wallach, E. Wang, H. Webber, J. Wolf, L. Xiao, Z. Zhang, Z. Zhao, Y. Zhu and S. Asseng (2019) Global wheat production with 1.5 and 2.0°C above pre-industrial warming. *Global Change Biology* 25(4), 1428-1444, [doi:10.1111/gcb.14542](https://doi.org/10.1111/gcb.14542)
 35. Luomaranta, A., J. Aalto and K. Jylhä (2019) Snow cover trends in Finland over 1961–2014 based on gridded snow depth observations. *International Journal of Climatology* 39(7), 3147-3159, [doi:10.1002/joc.6007](https://doi.org/10.1002/joc.6007)
 36. Persson, T., M. Höglind, M. Van Oijen, P. Korhonen, T. Palosuo, G. Jégo, P. Virkajärvi, G. Bélanger and A-M. Gustavsson (2019) Simulation of timothy nutritive value: A comparison of three process-based models. *Field Crops Research* 231, 81-92, [doi:10.1016/j.fcr.2018.11.008](https://doi.org/10.1016/j.fcr.2018.11.008)
 37. Pirttioja, N., T. Palosuo, S. Fronzek, J. Räisänen, R.P. Rötter and T.R. Carter (2019) Using impact response surfaces to analyse the likelihood of impacts on crop yield under probabilistic climate change. *Agricultural and Forest Meteorology* 264, 213-224, [doi:10.1016/j.agrformet.2018.10.006](https://doi.org/10.1016/j.agrformet.2018.10.006)
 38. Rodríguez, A., M. Ruiz-Ramos, T. Palosuo, T.R. Carter, S. Fronzek, I.J. Lorite, R. Ferrise, N. Pirttioja, M. Bindi, P. Baranowski, S. Buis, D. Cammarano, Y. Chen, B. Dumont, F. Ewert, T. Gaiser, P. Hlavinka, H. Hoffmann, J.G. Höhn, F. Jurecka, K.C. Kersebaum, J. Krzyszczak, M. Lana, A. Mechiche-Alami, J. Minet, M. Montesino, C. Nendel, J.R. Porter, F. Ruget, M.A. Semenov, Z. Steinmetz, P. Stratonovitch, I. Supit, F. Tao, M. Trnka, A. de Wit, R.P. Rötter (2019) Implications of crop model ensemble size and composition for estimates of adaptation effects and agreement of recommendations. *Agricultural and Forest Meteorology* 264, 351-362, [doi:10.1016/j.agrformet.2018.09.018](https://doi.org/10.1016/j.agrformet.2018.09.018)

Conference proceedings

1. Korhonen, P., Palosuo, T., Höglind, M., Persson, T., Jégo, G., Virkajärvi, P., Belanger, G., Gustavsson, A. (2015) Intercomparison of timothy models in northern countries. *The multiple roles of grassland in the European bioeconomy. Proceedings of the 26th General Meeting of the European Grassland Federation, Trondheim, Norway, 4-8 September 2016. NIBIO*
2. Ruuhela R, Jylhä K, Pirinen P, Simola H, Drebs A, Fortelius C (2016) Spatial Meteorological Information for Built Environment in the Changing Climate of Finland. *Proceedings of the CIB World Building Congress 2016 Vol IV: Understanding impacts and functioning of different solutions*, 619-230, <http://urn.fi/URN:ISBN:978-952-15-3744-8>

Non-refereed conference proceedings

1. Pirttioja, N., Fronzek, S., Bindi, M., Carter, T.R., Hoffmann, H., Palosuo, T. et al. (2014) Examining wheat yield sensitivity to temperature and precipitation changes for a large ensemble of crop models using impact response surfaces. *Abstract book of MACSUR 1st CropM International Symposium and Workshop: Modelling climate change impacts on crop production for food security, 10-12 February 2014, Oslo, Norway*, 18-19, http://www.macsur.eu/images/eventlist/meeting_docs/CropM_Oslo_Symposium_Abstract_Book.pdf
2. Pirttioja, N., T.R. Carter, S. Fronzek, M. Bindi, H. Hoffmann, T. Palosuo, M. Ruiz-Ramos, F. Tao, M. Trnka, M. Acutis, S. Asseng, P. Baranowski, B. Basso, P. Bodin, S. Buis, D. Cammarano, P. Deligios, M.-F. Destain, B.

Dumont, F. Ewert, R. Ferrise, L. François, T. Gaiser, P. Hlavinka, I. Jacquemin, K.C. Kersebaum, C. Kollas, J. Krzyszczak, I.J. Lorite, J. Minet, M.I. Minguez, M. Montesino, M. Moriondo, C. Müller, C. Nendel, I. Öztürk, A. Perego, A. Rodríguez, A.C. Ruane, F. Ruget, M. Sanna, M. Semenov, C. Slawinski, P. Stratonovitch, I. Supit, K. Waha, E. Wang, L. Wu, Z. Zhao and R.P. Rötter (2015) Wheat yield sensitivity to climate change across a European transect for a large ensemble of crop models. *Climate Smart Agriculture 2015, Third Global Science Conference, 16-18 March 2015, Montpellier, France, abstracts of Parallel Session L1*, 64-65, [http://csa2015.cirad.fr/var/csa2015/storage/fckeditor/file/L1%20Regional%20Dimensions\(1\).pdf](http://csa2015.cirad.fr/var/csa2015/storage/fckeditor/file/L1%20Regional%20Dimensions(1).pdf)

3. Fronzek, S., N. Pirttija, T.R. Carter, M. Bindi, H. Hoffmann, T. Palosuo, M. Ruiz-Ramos, F. Tao, M. Trnka, M. Acutis, S. Asseng, P. Baranowski, B. Basso, P. Bodin, S. Buis, D. Cammarano, P. Deligios, M.-F. Destain, B. Dumont, F. Ewert, R. Ferrise, L. François, T. Gaiser, P. Hlavinka, I. Jacquemin, K.C. Kersebaum, C. Kollas, J. Krzyszczak, I.J. Lorite, J. Minet, M.I. Minguez, M. Montesino, M. Moriondo, C. Müller, C. Nendel, I. Öztürk, A. Perego, A. Rodríguez, A.C. Ruane, F. Ruget, M. Sanna, M. Semenov, C. Slawinski, P. Stratonovitch, I. Supit, K. Waha, E. Wang, L. Wu, Z. Zhao and R.P. Rötter (2016) Classifying simulated wheat yield responses to changes in temperature and precipitation across a European transect. In: Ewert, F., K.J. Boote, R.P. Rötter, P. Thorburn and C. Nendel (eds.) *Book of Abstracts iCROP 2016, 15-17 March, ICROP, Berlin, Germany*, 60-61

Doctoral dissertations

1. Ruuhela, R. (2018) Impacts of weather and climate on mortality and self-harm in Finland. *Finnish Meteorological Institute Contributions*, <https://helda.helsinki.fi/handle/10138/258658>

Master's thesis

1. Ihanamäki, S. (2017) Lasketteluelinkeino muuttuvassa ilmastossa – haavoittuvuuden tarkastelu Suomen alueella. *Pro gradu -tutkielma, Matemaattis-luonnontieteellinen*, 61, <https://www.utupub.fi/handle/10024/146213>
2. Räihä, J. (2018) Pitkittyneet kuivuus-, sade- ja hellejaksot Suomen muuttuvassa ilmastossa. *Pro gradu -tutkielma, Matemaattis-luonnontieteellinen*, 51, <http://hdl.handle.net/10138/273601>

Peer reviewed publications closely related to PLUMES

1. Ewert, F., Rötter, R.P., Bindi, M., Webber, H., Trnka, M., Kersebaum, K.C., Olesen, J.E., van Ittersum, M.K., Janssen, S., Rivington, M., Semenov, M.A., Walach, D., Porter, J.R., Stewart, D., Verhagen, J., Gaiser, T., Palosuo, T., Tao, F., Nendel, C., Roggero, P.P., Bartosová, L., Asseng, S. (2015) Crop modelling for integrated assessment of risk to food production from climate change. *Environmental Modelling & Software* 72, 287-303, [doi:10.1016/j.envsoft.2014.12.003](https://doi.org/10.1016/j.envsoft.2014.12.003)
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