

Patrick Samuelsson, Publication List 2003-2016

Peer-reviewed articles

- Andersson, L., Samuelsson, P. and Kjellström, E. 2011: Assessment of climate change impact on water resources in the Pungwe river basin. *Tellus* 63A. doi: 10.1111/j.1600-0870.2010.00480.x
- Bowling, L.C., Lettenmaier, D.P., Nijssen, B., Graham, L.P., Clark, D.B., El Maayar, M., Essery, R., Goers, S., Gusev, Y.M., Habets, F., van den Hurk, B., Jin, J., Kahan, D., Lohmann, D., Ma, X., Mahanama, S., Mocko, D., Nasonova, O., Niu, G-Y., Samuelsson, P., Shmakin, A.B., Takata, K., Verseghy, D., Viterbo, P., Xia, Y., Xue, Y., and Yang, Z-L. 2003: Simulation of high-latitude hydrological processes in the Torne/Kalix basin: PILPS Phase 2(e): 1: Experiment description and summary intercomparisons. *Global Planetary Change*, 38, 1-30.
- Carril, A.F., Menendez, C.G., Remedio, A.R.C., Robledo, F., Sörensson, A., Tencer, B., Boulanger, J.P., de Castro, M., Jacob, D., Le Treut, H., Li, L.Z.X., Penalba, O., Pfeifer, S., Rusticucci, M., Salio, P., Samuelsson, P., Sanchez, E., Zaninelli, P. 2012: Performance of a multi-RCM ensemble for South Eastern South America. *Climate Dynamics*. 39, 2747-2768, doi: 10.1007/s00382-012-1573-z
- Jacob, D., Petersen, J., Eggert, B., Alias, A., Christensen, O.B., Bouwer, L.M., Braun, A., Colette, A., Déqué, M., Georgievski, G., Georgopoulou, E., Gobiet, A., Menut, L., Nikulin, G., Haensler, A., Hempelmann, N., Jones, C., Keuler, K., Kovats, S., Kroner, N., Kotlarski, S., Kriegsmann, A., Martin, E., van Meijgaard, E., Moseley, C., Pfeifer, S., Preuschmann, S., Radermacher, C., Radtke, K., Rechid, D., Rounsevell, M., Samuelsson, P., Somot, S., Soussana, J.-F., Teichmann, C., Valentini, R., Vautard, R., Weber, B. and Yiou, P., 2014. EURO-CORDEX: new high-resolution climate change projections for European impact research. *Reg Environ Change* 14. 563–578. DOI 10.1007/s10113-013-0499-2
- Jennings, E., Allott, N., Pierson, D.C., Schneiderman, E.M., Lenihan, D., Samuelsson, P. and Taylor D. 2009: Impacts of climate change on phosphorus loading from a grassland catchment: Implications for future management. *Water Research*, 43, 4316-4326.
- Marengo, J.A., Chou, S., Mourao, C., Solman, S., Sanchez, E., Samuelsson, P., da Rocha, R.P., Li, L., Pessacg, N., Remedio, A.R.C., Carril, A.F., Cavalcanti, I.F.A., Jacob, D. 2013: Simulation of the drought of Amazonia in 2005 using a suite of seven regional climate models from the CLARIS LPB project *Climate Dynamics*. 41, 2937-2955. doi:10.1007/s00382-013-1919-1
- McGinnity, P., Jennings, E., deEyto, E., Allott, N., Samuelsson, P., Rogan, G., Whelan, K. and Cross, T. 2009: Impact of naturally spawning captive-bred Atlantic salmon on wild populations: depressed recruitment and increased risk of climate-mediated extinction. *Proc. R. Soc. B.*, 276, 3601–3610. doi:10.1098/rspb.2009.0799.
- Menéndez, C.G., de Castro, M., Boulanger, J.P., D'Onofrio, A., Sanchez E., Sörensson A.A., Blazquez J., Elizalde A., Hansson, U., Le Treut, H., Li, Z.X., Núñez, M.N., Pfeiffer, S., Pessacg, N., Rojas, M., Samuelsson, P., Solman, S.A., Teichmann, C. 2009: Downscaling extreme month-long anomalies in southern South America. *Climatic Change*, doi: 10.1007/s10584-009-9739-3.
- Moore, K., Pierson, D., Pettersson, K., Schneiderman, E. and Samuelsson, P. 2008: Effects of warmer world scenarios on hydrologic inputs to Lake Mälaren, Sweden and implications for nutrient loads. *Hydrobiologia* 599: 191-199.
- Nijssen, B., Bowling, L.C., Lettenmaier, D.P., Clark, D.B., El Maayar, M., Essery, R., Goers, S., Gusev, Y.M., Habets, F., van den Hurk, B., Jin, J., Kahan, D., Lohmann, D., Ma, X., Mahanama, S., Mocko, D., Nasonova, O., Niu, G-Y., Samuelsson, P., Shmakin, A.B., Takata, K., Verseghy, D., Viterbo, P., Xia, Y., Xue, Y., and Yang, Z-L. 2003: Simulation of high latitude hydrological processes in the Torne/Kalix basin: PILPS Phase 2(e): 2: Comparison of model results with observations. *Global Planetary Change*. 38, 31-54.
- Nikulin, G., Jones, C., Giorgi, F., Asrar, G., Buchner, M., Cerezo-Mota, R., Christensen, O.B., Deque, M., Fernandez, J., Hansler, A., van Meijgaard, E., Samuelsson, P., Sylla, M.B., Sushama, L. 2012: Precipitation Climatology in an Ensemble of CORDEX-Africa Regional Climate Simulations. *J. Climate*. 25, 6057-6078, doi: 10.1175/JCLI-D-11-00375.1
- Pessacg, N.L., Solman, S.A., Samuelsson, P., Sanchez, E., Marengo, J., Li, L., Remedio, A.R.C., da Rocha, R.P., Mourão, C. and Jacob, D. 2013: The surface radiation budget over South America in a set of regional climate models from the CLARIS-LPB project. *Climate Dynamics*. 43, 1221-1239, doi: 10.1007/s00382-013-1916-4
- Rutter, N. et al. 2009: Evaluation of forest snow processes models (SnowMIP2). *J. Geophys. Res.* 114, D06111, doi:10.1029/2008JD011063.
- Räisänen, J., Hansson, U., Ullerstig, A., Döscher, R., Graham, L.P., Jones, C., Meier, H.E.M., Samuelsson, P., Willen, U. 2004: European climate in the late twenty-first century: regional simulations with two driving global models and two forcing scenarios. *Climate Dynamics*, 22, 13-32.

- Samuelsson, P., Jones, C., Willén, U., Ullerstig, A., Gollvik, S., Hansson, U., Jansson, C., Kjellström, E., Nikulin, G. and Wyser, K. 2011. The Rossby Centre Regional Climate Model RCA3: model description and performance. *Tellus* 63A. doi: 10.1111/j.1600-0870.2010.00478.x
- Samuelsson, P., Kourzeneva, E. and Mironov, D., 2010: The impact of lakes on the European climate as simulated by a regional climate model. *Boreal Env. Res.* 15. 113–129.
- Samuelsson, P. 2010: Using Regional Climate Models to Quantify the Impact of Climate Change on Lakes. Chapter 2 in *The Impact of Climate Change on European Lakes*, Editor: D.G. George, Centre for Ecology and Hydrology, UK, Springer Verlag. doi: 10.1007/978-90-481-2945-4_2
- Samuelsson, P., Bringfelt, B. and Graham, L. P., 2003: The role of aerodynamic roughness for the relationship between runoff and snow evaporation in land-surface schemes. *Global Planetary Change*, 38, 93-99.
- Smith, B., Samuelsson, P., Wramneby, A. and Rummukainen, M. 2011: A model of the coupled dynamics of climate, vegetation and terrestrial ecosystem biogeochemistry for regional applications. *Tellus* 63A. doi: 10.1111/j.1600-0870.2010.00477.x
- Sánchez, E., Solman, S., Remedio, A. R. C., Berbery, H., Samuelsson, P., Da Rocha, R. P., Mourão, C., Li, L., Marengo, J., de Castro, M., Jacob, D., 2015: Regional climate modelling in CLARIS-LPB: a concerted approach towards twentyfirst century projections of regional temperature and precipitation over South America. *Climate Dynamics*. 45, 2193-2212, doi: 10.1007/s00382-014-2466-0
- Solman, S.A., Sanchez, E., Samuelsson, P., da Rocha, Li, L., Marengo, J., Pessacq, N.L., Remedio, A.R.C., Chou, S.C., Berbery, H., Le Treut, H., de Castro, M. and Jacob, D. 2013: Evaluation of an ensemble of regional climate model simulations over South America driven by the ERA-Interim reanalysis: model performance and uncertainties. *Clim. Dyn.*, doi: 10.1007/s00382-013-1667-2
- Sörensson, A.A., Menéndez, C.G., Ruscica, R., Alexander, P., Samuelsson, P., Willén, U. 2010: Projected precipitation changes in South America: a dynamical downscaling within CLARIS. *Meteorologische Zeitschrift*, Vol. 19, No. 4, 347-355.
- Sörensson, A.A., Menéndez, C.G., Samuelsson, P., Willén, U., Hansson, U. 2009: Soil-precipitation feedbacks during the South American Monsoon as simulated by a regional climate model. *Climatic Change*, doi: 10.1007/s10584-009-9740-x.
- Wang, S., Dieterich, C., Döscher, R., Höglund, A., Hordoir, R., Meier, H.E.M., Samuelsson, P. and Schimanke, S., 2015: Development and evaluation of a new regional coupled atmosphere-ocean model in the North Sea and the Baltic Sea. *Tellus A*, 67, 24284, <http://dx.doi.org/10.3402/tellusa.v67.24284>
- Wramneby, A., Smith, B. and Samuelsson, P. 2010: Hotspots of vegetation-climate feedbacks under future greenhouse forcing in Europe. *J. Geophys. Res.* 115, D21119, doi:10.1029/2010JD014307
- Wu, M., Schurgers, G., Rummukainen, M., Smith, B., Samuelsson, P., Jansson, C., Siltberg, J. and May, W., 2016: Vegetation-climate feedbacks modulate rainfall patterns in Africa under future climate change. *Earth Syst. Dyn.* 7, 627-647, doi:10.5194/esd-7-627-2016.
- Zhang, W., Jansson, C., Miller, P. A., Smith, B., and Samuelsson, P. 2014: Biogeophysical feedbacks enhance the Arctic terrestrial carbon sink in regional Earth system dynamics, *Biogeosciences*, 11, 5503-5519, doi:10.5194/bg-11-5503-2014
- Zhang, W., Smith, B., Miller, P. A., Jansson, C. and Samuelsson, P. 2015: Evapotranspiration feedback offsets albedo-mediated warming in the boreal zone and Arctic, *submitted*.

Articles in regional or national journals

- Samuelsson P., Gollvik S. and Ullerstig A. 2006. The land-surface scheme of the Rossby Centre regional atmospheric climate model (RCA3). Report in Meteorology 122. SMHI, SE-60176 Norrköping, Sweden, 25 pp.
- Samuelsson, P., Gollvik, S., Jansson, C., Kupiainen, M., Kourzeneva, E., van de Berg, W. J. (2014) The surface processes of the Rossby Centre regional atmospheric climate model (RCA4). Report in Meteorology nr 157, SMHI, SE-601 76 Norrköping, Sweden. ISBN 0283-7730.

Peer reviewed proceedings

- Menéndez C.G., Sorensson A.A., Samuelsson P., Willén U., Hansson U. 2007: Simulating soil-precipitation feedbacks in South America. Proceedings of the IPCC/TGICA Expert Meeting on Regional Climate Change and Response Options, 20-22 June 2007, Nadi, Fiji, p.155-164.