

List of Publications Tobias Kuemmerle

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Geography Department, Humboldt-Universität zu Berlin,
Unter den Linden 6, 10099 Berlin, Germany
tobias.kuemmerle@geo.hu-berlin.de, phone: +49 (30) 2093 9372

PEER-REVIEWED JOURNAL ARTICLES AND BOOK CHAPTERS

Published or in press

- 51 Griffiths, P., **Kuemmerle, T.**, Baumann, M., Radeloff, V.C, Abrudan, I.V., Lieskovsky, J., Munteanu, C., Ostapovicz, K., and Hostert, P. (2013): Forest disturbances, forest recovery, and changes in forest types across the Carpathian ecoregion from 1985 to 2010 based on Landsat image composites. *Remote Sensing of Environment*, accepted.
- 50 Sieber, A., **Kuemmerle, T.**, Prishchepov, A. V., Wendland, K. J., Baumann, M., Radeloff, V. C., Baskin, L. M., and Hostert, P. (2013): Landsat-based mapping of post-Soviet land-use change to assess the effectiveness of the Oksky and Mordovsky protected areas in European Russia. Submitted to *Remote Sensing of Environment*, accepted.
- 49 Griffiths, P., van der Linden, S., **Kuemmerle, T.**, and Hostert, P. (2013): A pixel-based Landsat compositing algorithm for large area land cover mapping. *IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing*, accepted.
- 48 Knorn, J., **Kuemmerle, T.**, Radeloff, V.C., Keeton, W.S., Gancz, V., Biriş, I.-A., Svoboda, M., Griffiths, P., Hagatis, A., Hostert, P. (2013): Continued loss of temperate old-growth forests in the Romanian Carpathians despite an increasing protected area network. *Environmental Conservation*, accepted.
- 47 Brandt, J., Haynes, M., **Kuemmerle, T.**, Waller, D.M., and Radeloff, V.C. (2013): Regime shift on the roof of the world: Alpine meadows converting to shrublands in the southern Himalayas. *Biological Conservation*, 158, 116–127.
- 46 Radeloff, V. C., Beaudry, F. C., Brooks, T. M., Butsic, V., Dubinin, M., **Kuemmerle, T.**, and Pidgeon, A. M. (2012): Hot moments for biodiversity conservation. *Conservation Letters*, 6, 58–65.
- 45 **Kuemmerle, T.**, Hickler, T., Olofsson, J., Schurgers, G., and Radeloff, V. C. (2012): Refugee species conservation: which historic baseline should inform conservation planning? *Diversity & Distributions*, 18, 1258–1261
- 44 Piquer-Rodriguez, M., **Kuemmerle, T.**, Alcaraz-Segura, D., Zurita-Milla, R., Cabello, J. (2012): Future land use effects on the connectivity of protected area networks in Southeastern Spain. *Journal of Nature Conservation*, 20, 326– 336.
- 43 Butsic, V., Radeloff, V.C., **Kuemmerle, T.**, and Pidgeon, A., (2012): Analytical solutions to trade-offs between size of protected areas and land-use intensity. *Conservation Biology*, 26, 883-893.
- 42 Gavier-Pizarro, G. I., **Kuemmerle, T.**, Hoyos, L. E., Stewart, S. I., Huebner, C. D., Keuler, N. S., and Radeloff, V. C. (2012): Monitoring the invasion of an exotic tree (*Ligustrum lucidum*) from 1983 to 2006 with Landsat satellite data and a support vector machine in Córdoba, Argentina. *Remote Sensing of Environment*, 122, 134-145.
- 41 Alix-Garcia, J., **Kuemmerle, T.**, Radeloff, V.C. (2012): Prices, land tenure institutions, and geography: A matching analysis of farmland abandonment in post-Socialist Eastern Europe. *Land Economics*, 88, 425-443.
- 40 Alcantara, C., Radeloff, V.C., Prishchepov A.V., and **Kuemmerle, T.** (2012): Mapping abandoned agriculture with multi-temporal MODIS satellite data. *Remote Sensing of Environment*, 124, 334–347.
- 39 Baumann, M., Ozdogan, M., **Kuemmerle, T.**, Wendland, K. J., Esipova, E., Radeloff, V.C. (2012): Using the Landsat record to detect forest-cover changes during and after the collapse of the Soviet Union in the

- temperate zone of European Russia. *Remote Sensing of Environment*, 124, 174-184.
- 38 Prishchepov A.V., Radeloff, V.C., Baumann, M. and **Kuemmerle, T.** (2012): Effects of institutional changes on land use: agricultural land abandonment during the transition from state-command to market-driven economies in post-Soviet Eastern Europe. *Environmental Research Letters*, 7, 024021.
- 37 Fischer, J., Hartel, T., and **Kuemmerle, T.** (2012): Conservation policy in traditional farming landscapes. *Conservation Letters*, 5, 167–175.
- 36 von Wehrden, H., Fischer, J., Brandt, P., Wagner, K., Kümmerer, K., **Kuemmerle, T.**, Nagel, A., Olsson, O., and Hostert, P. (2012): Consequences of nuclear accidents for biodiversity and ecosystem services. *Conservation Letters*, 5, 81-89.
- 35 Griffiths, P. **Kuemmerle, T.**, Kennedy, R.E., Abrudan, I.V., Knorn, J., and Hostert, P. (2012): Using annual time-series of Landsat images to assess the effects of forest restitution in post-socialist Romania. *Remote Sensing of Environment*, 118, 199-214.
- 34 Brandt, J., **Kuemmerle, T.**, Haomin, L., Guopeng, R., Jianguo, Z., and Radeloff, V.C. (2012): Using Landsat imagery to map forest change in southwest China in response to the national logging ban and ecotourism development. *Remote Sensing of Environment*, 121, 358-369.
- 33 Estes, A., **Kuemmerle, T.**, Kushnir, H., Radeloff, V.C. and Shugart, H. H. (2012): Land-cover change and human population trends in the Serengeti ecosystem, Tanzania from 1984-2003. *Biological Conservation*, 147, 255-263.
- 32 Rounsevell, M.D.A., Pedroli, B., Erb, K.-H., Gramberger, M., Gravsholt Busck, A., Haberl, H., Kristensen, S., **Kuemmerle, T.**, Lavorel, S., Lindner, M., Lotze-Campen, H., Metzger, M. J., Murray-Rust, D., Popp, A., Pérez-Soba, M., Reenberg, A., Vadineanu, A., Verburg, P., and Wolfslehner, B. (2012): Challenges for land system science: a European perspective. *Land Use Policy*, 29, 899-910.
- 31 Ziólkowska, E., Ostapowicz, K., **Kuemmerle, T.**, Perzanowski, K., Radeloff, V.C., and Kozak, J. (2012): Potential habitat connectivity of European bison (*Bison bonasus*) in the Carpathians. *Biological Conservation*, 146, 188-196.
- 30 Knorn, J., **Kuemmerle, T.**, Szabo, A., Mindrescu, M., Keeton, W.S., Radeloff, V.C., Abrudan, I., Griffiths, P., Gancz, V., and Hostert, P. (2012): Forest restitution and the protected area effectiveness in post-socialist Romania. *Biological Conservation*, 146, 204-212.
- 29 **Kuemmerle, T.**, Hickler, T., Olofsson, J., Schurgers, G., and Radeloff, V. C. (2011): Reconstructing range dynamics and range fragmentation of European bison for the last 8000 years. *Diversity & Distributions*, 18, 47-59.
- 28 Pflugmacher, D., Krankina, O.N., Cohen, W.B., Friedl, M.A., Sulla-Menashe, D., Kennedy, R.E., Nelson, P., Loboda, T., **Kuemmerle, T.**, Dyukarev, E., Elsakov, V., and Kharuk, V.I. (2011): Comparison and assessment of coarse resolution land cover maps for Northern Eurasia. *Remote Sensing of Environment*, 115, 3539–3553.
- 27 Fischer, J., Batary, P., Brussaard, L., Chappell, M. J., Clough, Y., Daily, G.C., Dorrough, J., Hartel, T., Jackson, L. E., Klein, A. M., Kremen, C., **Kuemmerle, T.**, Lindenmayer, D. B., Perfecto, I., Philpott, S. M., Tscharrntke, T., Vandermeer, J., Wanger, T. C., and von Wehrden, H. (2011): Conservation: Limits to land sparing, *Science*, 334, 593.
- 26 Hostert, P., **Kuemmerle, T.**, Prishchepov, A., Sieber, A., Lambin, E.F., and Radeloff, V.C (2011): Rapid land use changes after socioeconomic disturbances: Chernobyl and the collapse of the Soviet Union. *Environmental Research Letters*, 6, 045201.
- 25 **Kuemmerle, T.**, Radeloff, V.C, Perzanowski, K., Kozlo, P., Sipko, T., Khoyetskyy, P., Bashta, A.-T., Chikurova, E., Parnikoza, I., Baskin, L., Angelstam, P. and Waller, D. M. (2011): Predicting potential European bison habitat across its former range. *Ecological Applications*, 21, 830-843.
- 24 Schueler, V., **Kuemmerle, T.** and Schroeder, H. (2011): Impacts of surface gold mining on land use systems in Western Ghana. *Ambio*, 40, 528-539.
- 23 Olofsson, P., **Kuemmerle, T.**, Griffiths, P., Knorn, J., Baccini, A., Gancz, V., Blujdea, Houghton, R.A., Abrudan, I.A., and Woodcock, C.E. (2011): Carbon implications of the forest transition in post-socialist Romania. *Environmental Research Letters*, 6, 045202.
- 22 Sonnenschein, R., **Kuemmerle, T.**, Udelhoven, T., Stellmes, M. and Hostert, P. (2011): Differences in Landsat-based trend analyses in drylands due to the choice of vegetation estimate. *Remote Sensing of*

- Environment*, 115, 1408-1420.
- 21 Baumann, M., **Kuemmerle, T.**, Elbakidze, M., Ozdogan, M., Radeloff, V.C., Keuler, N., Prishchepov, A.V., Kruhlov, I., Hostert, P. (2011): Patterns and drivers of post-socialist farmland abandonment in Western Ukraine. *Land Use Policy*, 28, 552-562.
 - 20 **Kuemmerle, T.**, Olofsson, P., Chaskovskyy, O., Baumann, M., Ostapowicz, K., Woodcock C., Houghton, R. A., Hostert, P., Keeton, W. S., and Radeloff, V.C. (2011): Post-Soviet farmland abandonment, forest recovery, and carbon sequestration in western Ukraine. *Global Change Biology*, 17, 1335-1349.
 - 19 **Kuemmerle, T.**, Perzanowski, K., Akçakaya, H.R., Beaudry, F., van Deelen, T.R., Parnikoza, I., Khoyetskyy, P., Waller, D.M., and Radeloff, V.C. (2011): Cost-effectiveness of different conservation strategies to establish a European bison metapopulation in the Carpathians. *Journal of Applied Ecology*, 48, 317–329.
 - 18 Hoyos, L., Gavier-Pizarro, G., **Kuemmerle, T.**, Bucher, E.H., Radeloff, V.C. and Tecco, P. (2010): Invasion of glossy privet (*Ligustrum lucidum*) and native forest loss in the Sierras Chicas of Córdoba, Argentina. *Biological Invasions*, 12, 3261-3275.
 - 17 Dannenberg, P. and **Kuemmerle, T.** (2010): Farm size and land use pattern changes as indicators of structural change in Poland. *Professional Geographer*, 62, 1-14.
 - 16 **Kuemmerle, T.**, Perzanowski, K., Chaskovskyy, O., Ostapowicz, K., Halada, L., Bashta, A.-T., Hostert, P., Waller, D.M. and Radeloff, V.C. (2010): European bison habitat in the Carpathian Mountains. *Biological Conservation*, 143, 908-916.
 - 15 Björnson Gurung, A., Bokwa, A., Chelmicki, W., Elbakidze, M., Hirschmugl, M., Hostert, P., Ibsch, P., Kozak, J., **Kuemmerle, T.**, Matei, E., Ostapowicz, K., Pociask-Karteczka, J., Schmidt, L., van der Linden, S. and Zebisch, M. (2009): Global Change Research in the Carpathian Mountain Region. *Mountain Research and Development*, 29, 3.
 - 14 Main-Knorn, M., Hostert, P., Kozak, J. and **Kuemmerle, T.** (2009): How pollution legacies and land use histories shape post-socialist forest cover trends in the Western Carpathians. *Forest Ecology and Management*, 258, 60-70.
 - 13 **Kuemmerle, T.**, Chaskovskyy, O., Knorn, J., Kruhlov, I., Radeloff, V.C., Keeton, W.S. and Hostert, P. (2009): Forest cover change and illegal logging in the Ukrainian Carpathians in the transition period from 1988 to 2007. *Remote Sensing of Environment*, 113, 1194-1207.
 - 12 Knorn, J., Janz, A., Radeloff, V.C., **Kuemmerle, T.** and Hostert, P. (2009): Land cover mapping of large areas using chain classification of neighboring Landsat satellite images. *Remote Sensing of Environment*, 113, 957-964.
 - 11 **Kuemmerle, T.**, Hostert, P., St-Louis, V. and Radeloff, V.C. (2009): Using image texture to map field size in Eastern Europe. *Journal of Land Use Science*, 4, 85-107.
 - 10 Müller, D., **Kuemmerle, T.**, Rusu, M. and Griffiths, P. (2009): Lost in transition. Determinants of cropland abandonment in postsocialist Romania. *Journal of Land Use Science*, 4, 109-129.
 - 9 **Kuemmerle, T.**, Kozak, J., Radeloff, V.C. and Hostert, P. (2009): Differences in forest disturbance rates among land ownership types in Poland during and after socialism. *Journal of Land Use Science*, 4, 73 - 83.
 - 8 **Kuemmerle, T.**, Müller, M., Rusu, M. and Griffiths, P. (2009): Land use change in southern Romania after the collapse of socialism. *Regional Environmental Change*, 4, 85-107.
 - 7 **Kuemmerle, T.**, Hostert, P., Radeloff, V.C., Perzanowski, K. and Kruhlov, I. (2008): Post-socialist farmland abandonment in the Carpathians. *Ecosystems*, 11, 614-628.
 - 6 **Kuemmerle, T.**, Damm, A. and Hostert, P. (2008): A method to detect and correct single-band missing pixels in Landsat TM and ETM+ data. *Computers and Geosciences*, 34, 445-455.
 - 5 **Kuemmerle, T.**, Hostert, P., Radeloff, V.C., Perzanowski, K. and Kruhlov, I. (2007): Post-socialist forest disturbance in the Carpathian border region of Poland, Slovakia, and Ukraine. *Ecological Applications*, 15, 1279-1295.
 - 4 Röder, A., **Kuemmerle, T.**, Hill, J., Papanastasis, V. and Tsiourlis, G. (2007): Adaptation of a grazing gradient concept to heterogeneous Mediterranean rangelands using cost surface modelling. *Ecological Modeling*, 204, 387-398.
 - 3 **Kuemmerle, T.**, Radeloff, V.C., Perzanowski, K. and Hostert, P. (2006): Cross-border comparison of land cover and landscape pattern in Eastern Europe using a hybrid classification technique. *Remote Sensing of*

Environment, 103, 449–464.

- 2 **Kuemmerle, T.**, Röder, A. and Hill, J. (2006): Separating grassland and shrub vegetation by multivariate pixel-adaptive spectral mixture analysis. *International Journal of Remote Sensing*, 27, 3251-3271.
- 1 Röder, A., **Kuemmerle, T.** and Hill, J. (2005): Extension of retrospective datasets using multiple sensors; an approach to radiometric intercalibration of Landsat TM and –MSS Data. *Remote Sensing of Environment*, 95, 195-210.

Book chapters

- 4 Taff, G.N., Müller, D., **Kuemmerle, T.**, Ozdeneral, E. and Walsh, S.J. (2010): Reforestation in Central and Eastern Europe after the breakdown of socialism. In: Nagendra, H. and Southworth, J. (eds.): *Reforesting Landscapes: Linking Pattern and Process*, Springer, Amsterdam, New York, Berlin: 121-147.
- 3 Röder, A., Hill, J., **Kuemmerle, T.**, del Barrio, G., Papanastasis, V.P. and Tsiourlis, G.M. (2009): Geomatics-based characterization of spatial and temporal trends in heterogeneous Mediterranean rangelands of Northern Greece. In: Roeder, A. and Hill, J. (eds.): *Recent Advances in Remote Sensing and Geoinformation Processing for Land Degradation Assessment*. CRC Press, Boca Raton, London, New York, Leiden: 281-300.
- 2 Müller, D. and **Kuemmerle, T.** (2008): Cropland abandonment during the postsocialist transition in Southern Romania. In: Groisman, P.Y. and Ivanov, S.V. (eds): *Regional aspects of climate-terrestrial-hydrologic interactions in non-boreal Eastern Europe*. Springer, NATO Science Series, New York: 205-214.
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OTHER PUBLICATIONS

Conference proceedings

- 6 Hostert, P., **Kuemmerle, T.** and Main, M. (2007): Post-socialist forest disturbance in the Polish Carpathians. Proceedings of the FORESTSAT 2007 Conference, November 2007, Montpellier, France. [<http://forestsat.teledetection.fr>].
- 5 **Kuemmerle, T.**, Hostert, P., Radeloff, V.C. and Perzanowski, K. (2007): Effectiveness of protected areas in the Carpathians differs among countries in post-socialist times. In: Bunce, R.H.G., Jongman, R.G.H., Hojas, L. and Weel, S. (Eds.): *Proceedings of the 7th IALE World Congress*, July 2007, Wageningen, The Netherlands, p. 1101-1102.
- 4 **Kuemmerle, T.**, Radeloff, V.C. and Hostert, P. (2006): A transborder assessment of forest cover change in the Carpathians. In: Braun, M. (ed): *Proceedings of the 2nd EARSeL SIG Land-Use & Land-Cover Workshop*, September 2006, Bonn, Germany [http://www.zfl.uni-bonn.de/earsel/ws2006_bn.html].
- 3 **Kuemmerle, T.**, Radeloff, V.C. and Hostert, P. (2006): Mapping post-socialist agricultural fragmentation in Eastern Europe using texture measures. In: Braun, M. (ed): *Proceedings of the 2nd EARSeL SIG Land-Use & Land-Cover Workshop*, September 2006, Bonn, Germany. [http://www.zfl.uni-bonn.de/earsel/ws2006_bn.html].
- 2 **Kuemmerle, T.**, Hostert, P., Damm, A. and Radeloff, V., (2005): Cross-border monitoring of landscape dynamics in Eastern Europe. In: Erasmi, S., Cyffka, B. and Kappas, M. (eds): *1st Göttingen GIS and Remote Sensing Days*. Environmental Studies, Göttingen, October. Goltze Verlag, Göttingen, Germany, p.24-30.
- 1 Röder, A., **Kuemmerle, T.**, Hill, J., Del Barrio, G., Tsiourlis, G. and Papanastasis, V. (2005): Assessing rangeland degradation in heterogeneous Mediterranean environments. A case study in the County of Lagadas/Greece. In: Röder, A. and Hill, J. (eds): *Proceedings of the 1st International Conference on Remote Sensing and Geoinformation Processing in the Assessment and Monitoring of Land Degradation and Desertification (RGLDD)*, Trier, September, 2005. CD publication.

Miscellaneous publications

Prishchepov A. V., Radeloff V. C., Baumann M., **Kuemmerle T.**, and Müller D. (2012): Impact of institutional and socio-economic changes after the collapse of the USSR on agricultural land use in Eastern Europe. (In Russian). *Earth from Space – the Most Effective Solutions*. 14, 7-14.

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Buddenbaum, H. and **Kuemmerle, T.** (2001): Spatial Patterns in Opium Poppy Growing and Non-Growing Villages in Laos, In: ICMP Annual Opium Poppy Survey for Lao PDR, United Nations Drug Control Programme, Vienna, Austria.