## Contact

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## **University Degrees**

2015 Habilitation and Venia Legendi

2001 *PhD* in Hydrology, University of Freiburg, Hydrological Drought – a study across Europe.

1997 MSc in Hydrology, University of Freiburg, Impact of large-scale weather patterns on low flows.

#### **Positions**

Since 8/2016	Professor for Environmental Hydrological Systems, University of Freiburg
	(DFG Heisenberg professorship)
2014 -2016	Interim/Acting Professor for Environmental Hydrology, University of Freiburg
2010-2014	Research Scientist, Institute of Hydrology, University of Freiburg
2008-2010	Research Scientist, University of Oslo, Norway (50%), Univ. of Freiburg (50%)
2004-2007	Postdoctoral Fellow, Dept of Geography, University of British Columbia, Canada
2002-2003	German Research Foundation Scholar, Dept Geosciences, Oregon State University, USA
1998-2001	PhD Student/Research Assistant, Institute of Hydrology, University of Freiburg, Germany
2002-2003	German Research Foundation Scholar, Dept Geosciences, Oregon State University, USA

# **Advising and Teaching**

## PhD students:

Current: Erik Tijdemann and Benedikt Heudorfer (Freiburg); Daphné Freudiger (Freiburg/Zürich);

Graduated: Veit Blauhut, Freiburg (Nov 2015)

Maria Staudinger, Zürich (Dec 2014); Michael Stölzle, Freiburg (June 2014);

José Agustin Breña Naranjo, Freiburg (June 2012): Past and future changes in forest ecosystems: connections between watersheds characteristics, forests and low flows. Lukas Gudmundsson, Oslo (Sep 2011): Large-scale hydrology in Europe – observed

patterns and model performance.

## *MSc/Diplom in Hydrology (main supervisor):*

18 theses supervised and students graduated 6 resulting in conference or published papers

#### Courses:

MSc courses, annually: Global Hydrology (since 2008), 10-day Field Trip (2011-2014); Statistics and Regionalisation (2008-2012), Hydrohazards (2015, 2016)

BSc courses: Introduction to Hydrology (WS2014/15); River Ecology (co-taught, SS2014); Current Topics in Hydrology (Seminar; incl. Introduction to presentation skills, WS 2012, 2013, 2014)

PhD student workshops, regularly since 2009: Scientific presentation, Paper review, Abstract writing International Summer Schools on Hydroclimatology and Hydrological Change: Syros, GR

(DROUGHT.R&SPI, 2014), ITCP Trieste Italy (EU-WATCH, 2008), Rabat Morocco (EU TEMPUS, 2006), Wageningen NL (EU Accompan. Measure, 2003).

## **Publication Record Summary**

H-Index=21 (Thomson Reuters, Researcher ID I-8138-2012); 29 (Google Scholar),

Peer reviewed articles in ISI listed journals: 41 published/accepted, 3 in review/revision

Commentaries/Articles in National Journals with minor or only editorial review: 8

Conference proceedings papers: 20

Chapters in edited volumes: 7 (incl. two textbook chapters)

Project reports: 17 (12 published on-line or in print)

## **Conference Presentations and Organisation Summary**

49 oral and poster presentations at international conferences and nat. colloquia since 2001 (12 invited) >50 oral or poster presentations as a co-author (since 2001)

Session convenor: Regional streamflow analysis. American Geophysical Union (AGU) Fall Meeting: 2011 (36 contributions) and 2012 (40 contributions).

Scientific Committees: Leonardo Conference EGU 2014; GDIS (Global Drought Information System) workshop 2014/15; German Hydrology Days 2012

Organisation Committees: German Hydrology Days 2012 (>200 participants), various smaller workshops and intl. project or network meetings (10-20 participants), Weekly colloquium at University of British Columbia and University of Freiburg

**Editor** Hydrology and Earth System Sciences (since 2013)

#### Reviewer

<u>Journal articles:</u> Nature, Nature–Geosciences, Environ. Research Letters, Geophysical Research Letters, Hydrological Sciences Journal, Water Resources Research, Journal of Hydrology, Hydrology and Earth System Sciences, Hydrological Processes, Nordic Hydrology, Water International, International Journal of Climatology, Atmosphere – Ocean, Journal of Climate, Journal of Applied Meteorology and Climatology, Journal of Hydrometeorology, Theoretical and Appl. Climatology, Journal of Applied Ecology, International Journal of Wildland Fire, International Negotiation

<u>Research proposals</u> from NERC (UK), NSERC (Canada), BC Forest Science Programme (Canada) <u>Positions:</u> Professor of Hydrology at the University of Oslo, Norway; Canada Research Chair Tier 1

#### **Current Research Networks**

FRIEND: Flow Regimes from International Experimental and Network Data, UNESCO IHP, active member EDC: European Drought Centre, founding and core group member

#### **Current Grants**

- *TrenDHy Tracing Trends and Changes of Drought in Hydrosystems.* DFG Sachbeihilfe. **PI** (EUR 385K, 9/2016-9/2019)
- DRIeR Drought impacts, processes and resilience: making the invisible visible, Wassernetzwerk Baden-Württemberg, Lead PI with J. Lange, Partners: Freiburg, Heidelberg, Tübingen (Total EUR 1.9M, 2016-2021)
- Climate Change impacts on groundwater and low flows. Bundesamt für Umwelt (BAFU). **Project Partner.** With PIs J. Seibert, Uni Zürich, Philipp Brunner, Uni Neuchatel (SFR 145K to Freiburg, SFR 650K total, 10/2013-9/2016).
- DrIVER Drought Impacts: Vulnerability thresholds in monitoring and Early-warning Research. Belmont Forum/G8HORCs, Lead PI, Partners CEH Wallingford, The Open University, US National Drought Mitigation Centre USA, CSIRO AU (EUR 385K for Freiburg, total EUR 1.6M, 9/2013-8/2016).
- ASG Rhein: glacier and snow runoff contributions to streamflow along the River Rhine, The International Commission on the Hydrology of the Rhine Basin (KHR/CHR), **PI and coordinator**, Partners J. Seibert, Univ. Zürich; K.Gerlinger HYDRON GmbH (EUR 300K total, 12/2012-11/2015).

## **Past Grants and Project Experience**

- 2012-2015 Fostering European Drought Research and Policy Interfacing, (DROUGHT-R&SPI) EU FP-7 Project, Partner and WP3 lead
- 2010-2014 Early Recognition of Drought in Switzerland (DROUGHT-CH), NFP61 Swiss National Fund, Co-PI, Partners ETH Zürich, Uni Zürich, WSL Zürich.
- 2012 *Das hydrologische Extremjahr 2011:* Dokumentation, Einordnung, Ursachen und Zusammenhänge. Bundesanstalt für Gewässerkunde.
- 2009-2010 *Wirkungsbezogene Analyse von Klimadaten: Hitze und Dürre in der Regio*, MWK BaWü startup Projekt, Partner: Meteorologisches Institut Freiburg.
- 2008-2009 *Vulnerability of water allocation treaties in intl. river basins*, World Bank Project, (research contract with Oregon State University)
- 2008-2009 A low flow hazard model for British Columbia, Canada, Natural Resources Canada Mountain Pine Beetle Project
- 2007-2010 *Water and climate change (WATCH)*, FP6 integrated EU-Project (employment in Oslo, Work Block 4: Extremes)
- 2007-2008 Detection and attribution of streamflow changes in British Columbia, Collaboration with UNBC and Environment Canada (without funding)
- 2007 Bark beetle response to climate change: a landscape-level stochastic risk model for British Columbia, Forest Science BC Project (employment at UBC/UNBC)
- 2005-2006 *Climate change and low flows: influence of glaciers and groundwater*, Climate Action Fund Project. (employment at UBC)
- 2004-2005 Mountain pine beetle outbreaks in Western Canada: coupled influences of climate variability and stand development, Climate Action Fund Project. (employment at UBC)

2002-2003 Conflict and cooperation in international river basins: influence of hydroclimate, DFG Forschungsstipendium carried out at OSU (USA).

1997-2001 Assessment of the regional impact of drought in Europe (ARIDE), FP4 EU-Project. (employment in Freiburg)

## **Awards and Scholarships**

- 2015 DFG Heisenberg Professorship (EUR 300K for the first phase)
- 2002 DFG Research Scholarship (EUR 50K) to Oregon State University, USA for a study on *Conflict and cooperation in international river basins: influence of hydroclimate.*
- 2000 European Geophysical Society (now EGU) travel grant
- 1994 Scholarship within the University Freiburg Brock University Exchange Program

## **Publication List**

## JOURNAL ARTICLES (ISI LISTED, PEER-REVIEWED)

- Heudorfer, B. & **Stahl**, **K**. (2016) Comparison of Different Threshold Level Methods for Drought Propagation Analysis in Germany. *Hydrology Research*. In press.
- Bachmair, S., **Stahl, K**., Collins, K., Hannaford, J., Acreman, M., Svoboda, M., Knutson, C., Smith, K., Wall, N., Fuchs, B., Crossman, N., Overton, I. (2016) Drought indicators revisited: the need for a wider consideration of environment and society. *Wiley Interdisciplinary Reviews: Water*. Early view. doi:10.1002/wat2.1154.
- Blauhut, V., **Stahl, K**., Stagge, J. H., Tallaksen, L. M., De Stefano, L., and Vogt, J. (2016) Estimating drought risk across Europe from reported drought impacts, drought indices, and vulnerability factors, *Hydrol. Earth Syst. Sci.*, 20, 2779-2800, doi:10.5194/hess-20-2779-2016.
- Bachmair, S., Svensson, C., Hannaford, J., Barker, L. J., **Stahl, K**.: A quantitative analysis to objectively appraise drought indicators and model drought impacts. *Hydrol. Earth Syst. Sci.*, 20(7), 2589–2609, doi:10.5194/hess-20-2589-2016, 2016
- **Stahl, K.**, Kohn, I., Blauhut, V., Urquijo, J., De Stefano, L., Acácio, V., Dias, S., Stagge, J. H., Tallaksen, L. M., Kampragou, E., Van Loon, A. F., Barker, L. J., Melsen, L. A., Bifulco, C., Musolino, D., de Carli, A., Massarutto, A., Assimacopoulos, D., Van Lanen, H. A. J.: Impacts of European drought events: insights from an international database of text-based reports *Nat. Hazards Earth Syst. Sci.*, 16, 801-819, doi:10.5194/nhess-16-801-2016
- Stagge, J.H., Kohn, I., Tallaksen, L.M., **Stahl, K**. (2015) Modeling drought impact occurrence based on meteorological drought indices in Europe, *Journal of Hydrology*, 530: 37–50. doi:10.1016/j.jhydrol.2015.09.039.
- Bachmair, S., Kohn, I., **Stahl, K**. (2015) Exploring the link between drought indicators and impacts *Nat. Hazards Earth Syst. Sci.*, 15: 1381-1397: DOI: 10.5194/nhess-15-1381-2015
- Blauhut V., Gudmundsson, L., **Stahl, K**. (2015): Towards pan-European drought risk maps: quantifying the link between drought indices and reported drought impacts *Environ. Res. Lett.*, 10 (014008) DOI: 10.1088/1748-9326/10/1/014008.
- Fleig, A. K., Tallaksen, L. M., James, P., Hisdal, H., **Stahl, K**. (2015) Attribution of European precipitation and temperature trends to changes in synoptic circulation *Hydrol. Earth Syst. Sci.*, 19: 3093-3107. doi:10.5194/hess-19-3093-2015
- Stagge, J.H., Tallaksen, L.M., Gudmundsson, L., van Loon, A., **Stahl, K**. (2015) Candidate Distributions for Climatological Drought Indices (SPI and SPEI) *International Journal of Climatology*, 35: 4027–4040. DOI: 10.1002/joc.4267
- Staudinger, M., **Stahl K**., Seibert, J. (2014) A drought index accounting for snow. *Water Resources Research*, 50: 7861–7872. doi: 10.1002/2013WR015143
- Stoelzle, M., **Stahl, K.**, Morhard, A, Weiler, M (2014) Streamflow sensitivity to drought scenarios in catchments with different geology *Geophysical Research Letters*, 17: 6174–6183, doi: 10.1002/2014GL061344
- Tallaksen, L.M. and **Stahl, K**. (2014) Spatial and temporal patterns of large-scale droughts in Europe: model dispersion and performance. *Geophysical Research Letters*, 41, 429-434. doi:10.1002/2013GL058573
- Allen D.M., **Stahl K**., Whitfield P.H., Moore R.D. (2014) Trends in groundwater levels in British Columbia. *Canadian Water Resources Journal / Revue canadienne des ressources hydriques*. 39: 15-31. doi:10.1080/07011784.2014.885677

Stoelzle, M, Weiler, M, **Stahl, K**, Morhard, A, Schuetz, T (2014) Is there a superior conceptual groundwater model structure for baseflow simulation? *Hydrological Processes*, doi: 10.1002/hyp.10251

- Kohn I., Rosin K., Freudiger D., Belz J.U., **Stahl K**., Weiler M. (2014) Niedrigwasser in Deutschland 2011. Low flow in Germany in 2011. *Hydrologie und Wasserbewirtschaftung*, 58, 4-17. doi: 10.5675/HyWa 2014,1 1
- Hannaford, J., Buys, G., **Stahl, K**., and Tallaksen, L. M. (2013) The influence of decadal-scale variability on trends in long European streamflow records, *Hydrol. Earth Syst. Sci.*, *17*,2717-2733, doi:10.5194/hess-17-2717-2013.
- Stoelzle, M., **Stahl, K**., and Weiler, M., (2013) Are streamflow recession characteristics really characteristic?, *Hydrol. Earth Syst. Sci.*, 17, 817-828, doi:10.5194/hess-17-817-2013.
- Breña Naranjo, J.A., **Stahl, K**., Weiler, M., (2012) Evapotranspiration and land cover transitions: long term watershed response in recovering forested ecosystems. *Ecohydrology* 5(6): 721–732. doi:10.1002/eco.256.
- **Stahl, K**., Tallaksen, L. M., Hannaford, J., and van Lanen, H. A. J.: Filling the white space on maps of European runoff trends: estimates from a multi-model ensemble, *Hydrol. Earth Syst. Sci.*, 16, 2035-2047, doi:10.5194/hess-16-2035-2012, 2012.
- Gudmundsson, L., Tallaksen, L. M., **Stahl, K**., Clark, D. B., Dumont, E., Hagemann, S., Bertrand, N., Gerten, D., Heinke, J, Hanasaki, N, Voß, F. and Koirala, S. (2012) Comparing Large-scale Hydrological Model Simulations to Observed Runoff Percentiles in Europe, *J. Hydrometeorol*, 13: 604-620, doi:10.1175/JHM-D-11-083.1.
- Sambaraju K.R., Carroll A.L., Zhu J., **Stahl K**., Moore R.D. and Aukema B. (2012) Climate change could alter the distribution of mountain pine beetle outbreaks in western Canada. *Ecography* 35(3): 211-223, doi:10.1111/j.1600-0587.2011.06847.x
- De Stefano, L., Duncan, J., Dinar, S., **Stahl, K**., Strzepek, K.M. and Wolf, A.T. (2012) Climate change and the institutional resilience of international river basins. *Journal of Peace Research*. 49(1), 193–209, DOI: 10.1177/0022343311427416.
- Breña Naranjo, J. A., Weiler, M., and **Stahl, K**. (2011) Sensitivity of a data-driven soil water balance model to estimate summer evapotranspiration along a forest chronosequence, *Hydrol. Earth Syst. Sci.*, 15, 3461-3473, doi:10.5194/hess-15-3461-2011.
- Staudinger, M., **Stahl, K.**, Seibert, J., Clark, M. P., and Tallaksen, L. M. (2011) Comparison of hydrological model structures based on recession and low flow simulations, *Hydrol. Earth Syst. Sci.*, 15, 3447-3459, doi:10.5194/hess-15-3447-2011.
- **Stahl, K**. Tallaksen, L.M., Gudmundsson, L., Christensen, J.H. (2011) Streamflow data from small basins: a challenging test to high resolution regional climate modeling. *Journal of Hydrometeorology* 12, 900-912. doi: 10.1175/2011JHM1356.1
- Gudmundsson, L., Tallaksen, L. M., **Stahl, K.**, and Fleig, A. K. (2011) Low-frequency variability of European runoff. *Hydrol. Earth Syst. Sci.*, 15, 2853-2869, doi:10.5194/hess-15-2853-2011.
- Gudmundsson, L., Tallaksen, L.M., **Stahl, K**. (2011) Comparing spatial cross-correlation patterns to investigate the coupling of annual low, mean and high flows across Europe. *Hydrological Processes*. 25, 1034–1045. Doi:10.1002/hyp.7807
- **Stahl, K**., Hisdal, H., Hannaford, J., Tallaksen, L.M., van Lanen, H.A.J., Sauquet, E., Fendekova, M., Jordar, J. (2010) Streamflow trends in Europe: evidence from a dataset of near-natural catchments. *Hydrology and Earth System Sciences*. 14, 2367–2382. doi:10.5194/hess-14-2367-2010.
- Fleig, A.K., Tallaksen, L.M. Hisdal, H., **Stahl, K**., Hannah, D.M. (2010) Inter-comparison of weather and circulation type classifications for hydrological drought. *Physics and Chemistry of the Earth*, 35, 507–515. doi:10.1016/j.pce.2009.11.005.
- Déry, S. J., **Stahl, K**., Moore, R. D., Whitfield, P. H., Menounos, B. and Burfords, J.E. (2009) Detection of runoff timing changes in pluvial, nival and glacial rivers of Western Canada. *Water Resour. Res.*, 45, W04426, doi:10.1029/2008WR006975.
- Shea, J., Moore, R.D., **Stahl, K**. (2009) Melt Factors for regional modeling of glacier Mass Balance. *Journal of Glaciology* 55(189): 123-130.
- Moore R.D., Fleming S.W., Menounos B., Wheate R., Fountain A., **Stahl K**., Holm K., and Jakob M. (2009) Glacier Change in Western North America: Influences on Hydrology, Geomorphic Hazards and Water Quality. *Hydrological Processes* 23, 42 61. DOI: 10.1002/hyp.7162
- Burn D., Buttle J., McCollough G., Spence, C, **Stahl, K**. (2008) The processes, patterns and impacts of low flows across Canada. *Canadian Water Resources Journal*. 33: 107-122.
- Aukema, B.H., Carroll, A.L., Zheng, Y., Zhu, J., Raffa, K.F., Moore, R.D., **Stahl, K**., and Taylor, S.W. (2008) Movement of outbreak populations of mountain pine beetle: influences of spatiotemporal patterns and climate. *Ecography* 31: 348-358. doi: 10.1111/j.2006.0906-7590.04445.x

**Stahl, K.,** R. D. Moore, J. M. Shea, D. Hutchinson, and A. J. Cannon (2008), Coupled modelling of glacier and streamflow response to future climate scenarios, *Water Resour. Res.*, 44, W02422, doi:10.1029/2007WR005956.

- **Stahl K**. and Moore, R.D. (2006) Influence of watershed glacier coverage on summer streamflow in British Columbia, Canada. Water Resources Research 42, W06201, doi:10.1029/2006WR005022.
- **Stahl, K**., Moore, R.D., Floyer, J.A., Asplin, M.G, and McKendry, I. G. (2006) Comparison of approaches for spatial interpolation of daily air temperature in a large region with complex topography and highly variable station density. Agricultural and Forest Meteorology 139: 224-236. doi: 10.1016/j.agrformet.2006.07.004.
- McKendry, I., **Stahl, K**., Moore, R.D. (2006) Validation of surface synoptic types generated by a general circulation model: implications for downscaling. International Journal of Climatology 26: 1727–1736. doi: 10.1002/joc.1337.
- **Stahl, K**., Moore, R.D., and McKendry, I.G. (2006) Climatology of winter cold spells in relation to Mountain Pine Beetle outbreaks in British Columbia, Canada. Climate Research 32: 13-23.
- **Stahl, K.**, Moore, R.D., McKendry, I.G. (2006) The role of synoptic climatology in the linkage between large-scale ocean-atmosphere indices and winter surface climate in British Columbia, Canada. International Journal of Climatology 26: 541-560. doi: 10.1002/joc.1268.
- **Stahl, K**. (2005) Influence of hydroclimatology and socio-economic conditions on water-related international relations. Water International. 30 (3), 270-282.
- Yoffe, S., Fiske, G., Giordano, M., Giordano, M., Larson, K., **Stahl, K**., Wolf, A.T. (2004) The geography of international water conflict and cooperation: datasets and applications. Water Resources Research 40, W05S04, doi:10.1029/2003WR002530.
- Hisdal, H., **Stahl, K**., Tallaksen, L.M. & Demuth, S. (2001) Have streamflow droughts in Europe become more severe or frequent? International Journal of Climatology 21:317-333.
- **Stahl, K**. & Demuth, S. (1999) Linking streamflow drought to the occurrence of atmospheric circulation patterns. Hydrological Sciences Journal 44(3): 467-482.

## **JOURNAL ARTICLES (IN REVIEW)**

- Tijdeman E., Bachmair S., and **Stahl K**. Controls on hydrologic drought duration in near-natural streamflow in Europe and the USA. Hydrol. Earth Syst. Sci. Discuss. Pending minor revisions.
- Van Loon, A. F., Gleeson, T., Clark, J., Van Dijk, A. I. J. M., **Stahl, K**., Hannaford, J., Di Baldassarre, G., Teuling, A. J., Tallaksen, L. M., Uijlenhoet, R., Hannah, D. M., Sheffield, J., Svoboda, M., Verbeiren, B., Wagener, T., Rangecroft, S., Wanders, N., and Van Lanen, H. A. J.: Drought in a human-modified world: reframing drought definitions, understanding and analysis approaches, Hydrol. Earth Syst. Sci. Discuss., doi:10.5194/hess-2016-251, in review, 2016.
- Laaha, G., Gauster, T., Tallaksen, L. M., Vidal, J.-P., **Stahl, K.**, Prudhomme, C., Heudorfer, B., Vlnas, R., Ionita, M., Van Lanen, H. A. J., Adler, M.-J., Caillouet, L., Delus, C., Fendekova, M., Gailliez, S., Hannaford, J., Kingston, D., Van Loon, A. F., Mediero, L., Osuch, M., Romanowicz, R., Sauquet, E., Stagge, J. H., and Wong, W. K.: The European 2015 drought from a hydrological perspective, Hydrol. Earth Syst. Sci. Discuss., doi:10.5194/hess-2016-366, in review, 2016.

#### **BOOK CHAPTERS (PEER-REVIEWED)**

- Stahl, K. (2016) Kapitel 21: Hydrologie der Hochgebirge. IN: Fohrer et al (Eds). Hydrologie.
- Pinkswar I., Kundzewicz Z. W., Peduzzi P., Brakenridge G. R., **Stahl K.**, Hannaford J. (2012) Changing floods in Europe. In: Kundzewicz, Zbigniew W., (ed.) Changes in flood risk in Europe. Wallingford, *IAHS Press*, 83-96. (IAHS Special Publication, 10).
- Moore, R.D., Spittlehouse, D., Whitfield, P.H., **Stahl, K**. (2010) Chapter 2. Weather and Climate. In: Pike, R.G., T.E. Redding, R.D. Moore, R.D. Winker and K.D. Bladon (editors). Compendium of forest hydrology and geomorphology in British Columbia. B.C. Min. For. Range, For. Sci. Prog., Victoria, B.C. and FORREX Forum for Research and Extension in Natural Resources, Kamloops, B.C. *Land Manag. Handb.* 66. Available online: www.for.gov.bc.ca/hfd/pubs/Docs/Lmh/Lmh66.htm
- **Stahl, K**., van Lanen, H.A.J, Uhlenbrook, S. 2008. Chapter 4: Processes and Regimes. p.36-42. In: Manual on low flow estimation and prediction. (ed. by Gustard, A. and Demuth, S.) WMO publication, *WMO-no.1029, Operational Hydrology Report* No. 50, 136pp.
- **Stahl, K**. 2008. Chapter 13.4: Transboundary Rivers. In: Manual on low flow estimation and prediction. (ed. by Gustard, A. and Demuth, S.) World Meteorological Organization WMO publication, *WMO-no.1029*, *Operational Hydrology Report No.* 50, 136pp.

**Stahl, K**. & Hisdal, H. (2004) Drought Hydroclimatology. p.19-51. In: HYDROLOGICAL DROUGHT – Processes and Estimation Methods for Streamflow and Groundwater (edited by Tallaksen, L.M. and van Lanen, H.A.J. *Development in Water Sciences* no. 48. Elsevier Publ. The Netherlands.

Demuth, S., Lehner, B., **Stahl, K**. (2000) Assessment of the vulnerability of a river system to drought, p.209-219. In: *Drought and Drought Mitigation in Europe* (ed. by J.V. Vogt and F. Somma), 209-219. Kluwer Academic Publishers, Dordrecht, The Netherlands.

## NAT. JOURNALS, PROCEEDINGS, COMMENTARIES (SIMPLIFIED-REVIEW)

- Van Lanen, H. A. J., Laaha, G., Kingston, D. G., Gauster, T., Ionita, M., Vidal, J.-P., Vlnas, R., Tallaksen, L. M., Stahl, K., Hannaford, J., Delus, C., Fendekova, M., Mediero, L., Prudhomme, C., Rets, E., Romanowicz, R. J., Gailliez, S., Wong, W. K., Adler, M.-J., Blauhut, V., Caillouet, L., Chelcea, S., Frolova, N., Gudmundsson, L., Hanel, M., Haslinger, K., Kireeva, M., Osuch, M., Sauquet, E., Stagge, J. H., Van Loon, A. F. (2016) Hydrology needed to manage droughts: the 2015 European case. Invited Commentary. *Hydrological Processes*. doi: 10.1002/hyp.10838.
- Van Loon, A. F., Gleeson, T., Clark, J., Van Dijk, A. I. J. M., Stahl, K., Hannaford, J., Di Baldassarre, G., Teuling, A. J., Tallaksen, L. M., Uijlenhoet, M, Hannah, D. M., Sheffield, J., Svoboda, M., Verbeiren, M., Wagener, T., Rangecroft, S., Wanders, N., Van Lanen, H. A. J. (2016) Drought in the Anthropocene. Commentary. *Nature Geoscience*, 9 (89–9) 9, 89–91, doi:10.1038/ngeo2646.
- **Stahl, K**., Kohn, I., De Stefano, L., Tallaksen, L.M., Rego, F.C., Seneviratne, S.I., Andreu, J. & Van Lanen, H.A.J. (2015) An impact perspective on pan-European drought sensitivity. In: Andreu, J. et al. (Eds.) Drought: Research and Science-Policy Interfacing. CRC press. Pp. 329–334. doi: 10.1201/b18077-56
- Blauhut, V., Kohn, I., **Stahl, K**. (2014) The dynamics of vulnerability to drought in Europe. In: Andreu, J. et al. (Eds.) Drought: Research and Science-Policy Interfacing. CRC press. Pp. 349-354
- Hannaford, J., Acreman, M., Stahl, K., Bachmair, S., Svoboda, M., Knutson, C.L., Crossman, N.D.,
  Overton, I.C., Colloff, M., Collins, K. Enhancing drought monitoring and early warning by linking indicators to impacts an international perspective. In: Andreu, J. et al. (Eds.) Drought: Research and Science-Policy Interfacing. CRC press, Pages 287–292, DOI: 10.1201/b18077-49.
- Van Lanen H.A.J., Tallaksen, L.M., Assimacopoulos, D., **Stahl, K**., Wolters, W., Andreu J., Seneviratne, S.I., De Stefano, L., Seidl, I., Rego, F.C., Massarutto, A. & Garnier, E. Fostering Drought Research and Science-Policy Interfacing: Achievements of the DROUGHT-R&SPI project. In: Andreu, J. et al. (Eds.) Drought: Research and Science-Policy Interfacing. CRC press. doi: 10.1201/b18077-3
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