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Google Scholar indexed articles: goo.gl/hZF14

**A. JOURNAL ARTICLES**

(72 published + 6 under review/revision;
peer-reviewed if not otherwise stated)

In press

1. Fader M, Rulli MC, Carr J, Dell'Angelo J, D'Odorico P, Gephart J, **Kummu M**, Magliocca N, Porkka M, Prell C, Puma MJ, Ratajczak Z, Seekell DA, Suweis S, Tavoni A. In press. Past and present biophysical redundancy of countries as a buffer to changes in food supply. *Environment Research Letters*.
2. Guillaume JHA, Arshad M, Jakeman AJ, Jalava M, **Kummu M**. In press. Robust discrimination between uncertain management alternatives by iterative reflection on crossover point scenarios: Principles, design and implementations. *Environmental Modelling and Software*.

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3. Jalava M, Guillaume JHA, **Kummu M**, Porkka M, Siebert S, Varis O. 2016. Water use reduction potential of changing diet and food loss reduction: impact on water scarcity. *Earth's future* 4. doi: 10.1002/2015EF000327
4. Kattelus M, Salmivaara A, Mellin I, Varis O, **Kummu M**. 2016. An evaluation of drought indices for assessing inter-annual rice yield variability in Ganges-Brahmaputra-Meghna region. *Journal of Climatology*. 36: 2210–2222. doi: 10.1002/joc.4489
5. **Kummu M**, de Moel H, Salvucci G, Viviroli D, Ward PJ, Varis O. 2016. Over the hills and further away from coast: global geospatial patterns of human and environment over the 20th century. *Environmental Research Letters* 11: 034010. Doi: 10.1088/1748-9326/11/3/034010

6. Munia H, Guillaume JHA, Mirumachi N, Porkka M, Wada Y, **Kummu M**. 2016. Water stress in global transboundary river basins: significance of upstream water use on downstream stress. *Environmental Research Letters* 11: 014002. Doi: 10.1088/1748-9326/11/1/014002
7. Porkka M, Gerten D, Schaphoff S, Siebert S and **Kummu M**. 2016. Causes and trends of water scarcity in food production. *Environmental Research Letters* 11: 015001. Doi: 10.1088/1748-9326/11/1/015001
8. Zheng X, Wang C, Cai W, **Kummu M** and Varis O. 2016. The vulnerability of thermoelectric power generation to water scarcity in China: Current status and future scenarios for power planning and climate change. *Applied Energy* 171: 444-55. Doi: 10.1016/j.apenergy.2016.03.040

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9. Guillaume JHA, **Kummu M**, Eisner S, Varis O. 2015. Transferable principles for managing the nexus: lessons from historical global water modelling of Central Asia. *Water* 7(8): 4200-4231. doi: 10.3390/w7084200
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11. Heino M, **Kummu M**, Makkonen M, Mulligan M, Verburg PH, Jalava M, Räsänen TA. 2015. Forest Loss in Protected Areas and Intact Forest Landscapes: A Global Analysis. *PLoS ONE* 10: e0138918
12. Jägermeyr J, Gerten D, Heinke J, Schaphoff S, **Kummu M**, Lucht W. 2015. Water savings potentials of irrigation systems: dynamic global simulation. *Hydrology and Earth System Sciences* 19, 3073-3091, doi: 10.5194/hess-19-3073-2015.

13. Kattelus M, **Kummu M**, Keskinen M, Salmivaara A, Varis O. 2015. China's South-bound Transboundary River Basins – A Case of Asymmetry. *Water International* 40: 113-138. doi: 10.1080/02508060.2014.980029
 14. Keskinen M, Someth P, Salmivaara A, **Kummu M**. 2015. Water-Energy-Food Nexus in a Transboundary River Basin: The Case of Tonle Sap Lake, Mekong River Basin. *Water* 7: 5416. Doi: 10.3390/w7105416
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 16. Räsänen T, Joffre O, Someth P, Cong TT, Keskinen M and **Kummu M**. 2015. Model-based assessment of water, food and energy trade-offs in a cascade of multi-purpose reservoirs - A case study from the Sesan tributary of the Mekong River. *Journal of Water Resources Planning and Management (ASCE)* 141: 05014007. doi: 10.1061/(ASCE)WR.1943-5452.0000459
 17. Salmivaara A, **Kummu M**, Keskinen M, Varis O. 2015. Finding spatial patterns in socio-economic data: case from Cambodia's Tonle Sap Lake area. *Applied Spatial Analysis and Policy*. Doi: 10.1007/s12061-015-9157-z
 18. Salmivaara A, Porkka M, **Kummu M**, Keskinen M, Guillaume JHA, Varis O. 2015. Exploring the Modifiable Areal Unit Problem in spatial water assessments: a case of water shortage in Monsoon Asia. *Water* 7(3): 898-917. doi: 10.3390/w7030898
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 22. Arias ME, Piman T, Lauri H, Cochrane TA, **Kummu M**. 2014. Dams on Mekong Tributaries as significant contributors of hydrological alterations to the Tonle Sap Floodplain in Cambodia. *Hydrology and Earth System Sciences* 18: 5303-5315. doi: 10.5194/hess-18-5303-2014
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 24. **Kummu M**, Tes S, Yin S, Adamson P, Jozsa J, Koponen J, Richey JE and Sarkkula J. 2014. Water balance analysis for the Tonle Sap lake – floodplain system. *Hydrological Processes* 28(4): 1722–1733. doi: 10.1002/hyp.9718
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 31. Ward PJ, Eisner S, Flörke M, Dettinger MD and **Kummu M**. 2014. Annual flood sensitivities to El Niño Southern Oscillation at the global scale. *Hydrology and Earth System Sciences* 18: 47–66. doi: 10.5194/hess-18-47-2014
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36. Holtgrieve GW, Arias ME, Irvine KN, Lamberts D, Ward EJ, **Kummu M**, Koponen J, Sarkkula J, Richey JE. 2013. Patterns of ecosystem metabolism in the Tonle Sap Lake, Cambodia with links to freshwater fisheries. *PLoS One* 8(8): e71395. doi: 10.1371/journal.pone.0071395.
37. Meybeck M, **Kummu M** and Dürr HH. 2013. Global hydrobelts and hydroregions: improved reporting scale for water-related issues? *Hydrology and Earth System Sciences* 17: 1093-1111. doi: 10.5194/hess-17-1093-2013
38. Porkka M, **Kummu M**, Siebert S and Varis O. 2013. From food insufficiency towards trade dependency: A historical analysis of global food availability. *PLoS One* 8(12): e82714. doi: 10.1371/journal.pone.0082714
39. Räsänen TA and **Kummu M** 2013. Spatiotemporal influences of ENSO on precipitation and flood pulse in the Mekong River Basin. *Journal of Hydrology* 476: 154-168. doi: 10.1016/j.jhydrol.2012.10.028
40. Räsänen TA, Lehr C, Mellin I, Ward PJ, and **Kummu M**. 2013. Palaeoclimatological perspective on river basin hydrometeorology: case of the Mekong Basin. *Hydrology and Earth System Sciences* 17: 2069-2081. doi: 10.5194/hess-17-2069-2013
41. Salmivaara A, **Kummu M**, Varis O and Keskinen M. 2013. Using Global Datasets to Create Environmental Profiles for Data-poor Regions: a case from the Irrawaddy and Salween River Basins. *Environmental Management* 51(4): 897-911. doi: 10.1007/s00267-013-0016-x

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44. Keskinen M, **Kummu M**, Käkönen M, and Varis O. 2012. [Synopsis; not peer-reviewed] Mekong at the crossroads: next steps for impact assessment of large dams. *Ambio* 41(3): 319-324. doi: 10.1007/s13280-012-0261-x
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51. Varis O and **Kummu M** 2012. The Vulnerability Analysis of Central Asian River Basins with a Comparison to the Major River Basins in Asia-Pacific. *International Journal of Water Resources Development* 28(3): 433-452. doi: 10.1080/07900627.2012.684309
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- Forthcoming (under review/revision)*
- i. Darby et al. Under revision. Shifting tropical-cyclone activity forces declining fluvial sediment supply to a mega-delta. Submitted to *Nature* on Feb 2016.
 - ii. Hoang LP, Lauri H, **Kummu M**, Koponen J, van Vliet MTH, Supit I, Leemans R, Kabat P, Ludwig F. 2015. Mekong River flow and hydrological extremes under climate change. *Hydrol. Earth Syst. Sci. Discuss* 12: 11651-87
 - iii. Marchand P et al. Under review. The interaction of reserves and trade as determinants of exposure to food supply shocks. Submitted to *Environment Research Letters* on Feb 2016.

- iv. Räsänen TA, Lindgren V, Guillaume JHA, Buckley BM, **Kummu M**. 2015. On the spatial and temporal variability of ENSO precipitation and drought connection in mainland Southeast Asia. *Climate of the Past Discuss* 11: 5307-5343. doi: 10.5194/cpd-11-5307-2015
- v. Räsänen TA et al. Under review. Observed river discharge changes due to hydropower operations in the Upper Mekong Basin. Submitted to *Journal of Hydrology* on Feb 2016.
- vi. Ward PJ, **Kummu M**, Lall U. Under revision. Flood durations and their response to El Niño Southern Oscillation: global analysis. Submitted to *Journal of Hydrology* on Dec 2015.
- B. BOOK CHAPTERS (7; all peer-reviewed)**
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1. Varis O, **Kummu M**, Härkönen S, and Huttunen J. 2012. Greenhouse gas emissions from reservoirs. In: Tortajada C, Altinbilek D, Biswas AK (Eds.), *Impacts of large dams: A Global Assessment*, pp. 69-94. Springer, Berlin.
 2. Keskinen M, **Kummu M**, Käkönen M, & Varis O. 2012. Mekong at the Crossroads: Alternative Paths of Water Development and Impact Assessment Politics and Development in a Transboundary Watershed. In J. Öjendal, S. Hansson & S. Hellberg (Eds.), *Politics and Development in Transboundary Watershed: The Case of the Lower Mekong Basin*, pp. 101-126. Springer, Netherlands.
 3. Sarkkula J, Keskinen M, Koponen J, **Kummu M**, Richey JE and Varis O. 2009. Hydropower in the Mekong region: What are the impacts on fisheries? In Molle F, Foran T and Käkönen M (Eds.), *Contested Waterscapes in the Mekong Region: Hydropower, Livelihoods and Governance*, pp. 227-251. Earthscan, London.
 4. **Kummu M**, Varis O and Sarkkula J. 2009. Impacts of land surface changes on regional hydrology - Mainland Southeast Asia. In: L. Lebel, A. Snidvongs, C.-T.A. Chen and R. Daniel (Eds.), *Critical states: Environmental challenges to development in monsoon Southeast Asia*, pp. 221-238. Gerakbudaya, Kuala Lumpur, Malaysia.
 5. Lustig T, Fletcher R, **Kummu M**, Pottier C and Penny D. 2008. Did the traditional cultures live in harmony with nature? Lessons from Angkor. In: **Kummu M**, Keskinen M and Varis O (Eds.), *Modern Myths of the Mekong - A Critical Review of Water and Development Concepts, Principles and Policies*, pp. 81-94. Water and Development Publications, Helsinki University of Technology, Finland.
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- C. CONFERENCE PUBLICATIONS (33; of which 10 peer-reviewed)**
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1. Ketelsen, T., Ward, P., **Kummu M**, Tran Than Cong, Truong Hong and Someth, P. 2011. Sediment dynamics: The missing link for integrated catchment planning in highly managed transboundary watersheds. Paper presented at the 3rd International Forum on Water and Food. CGIAR Challenge Program on Water and Food.
 2. Arias, M.E, Cochran, T.A., Caruso, B., Killeen, T. and **Kummu M** 2011. A landscape approach to assess impacts of hydrological changes to vegetation communities of the Tonle Sap Floodplain. In: 34th IAHR World Congress, Brisbane, June 2011.
 3. Fletcher R, Pottier C, Evans D, **Kummu M** 2008. 18th Congress of the Indo-Pacific-Prehistory-Association. Manila, PHILIPPINES, MAR 20-26, 2006. Indo-Pacific Prehist Assoc. Bulletin of the Indo-Pacific Prehistory Association, 28. 57-66.
 4. Keskinen M, Koponen J, **Kummu M**, Käkönen, M., Sarkkula J and Varis O 2008. Mekong at the Crossroads – water development and its impacts. In: *Mekong Management at a Watershed – IWRM in the global water crisis?* Symposium on 09/2008 at School of Global Studies, Gothenburg University.
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9. **Kummu M**, Yin, S., Virtanen, M., Koponen J and Sarkkula J 2006. The origins of Tonle Sap Lake floods – a water balance study. AOGS Conference in Singapore on July 2006.
10. Lamberts D., Keskinen M, Koponen J, **Kummu M**, Richey, J., Sarkkula J, Say, S., Pech, S. and Varis O 2006. Mekong River Basin Development and Tonle Sap Lake Productivity: Current Knowledge and Future Challenges, Proceedings of the Second International Symposium on Sustainable Development in the Mekong River Basin, organised on September 2006 in Phnom Penh, Cambodia.
11. **Kummu M**, Koponen J, Veijalainen, N., Sarkkula J and Keskinen M 2006. Modelling Interconnected Mekong River and Nam Songkhram watershed system, Thailand. APHW Conference in Bangkok, October 2006.
12. Keskinen M, **Kummu M** and Varis O 2006. Tonle Sap Lake, Cambodia: Nature's affluence meets human poverty, paper presented in the World Water Week 2006 on August 2006 in Stockholm, Sweden.
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2. **Kummu M**, Keskinen M and Varis O (Eds.). 2008. Modern Myths of the Mekong - A Critical Review of Water and Development Concepts, Principles and Policies. Water & Development Publications - Helsinki University of Technology. Finland. ix+187 p.
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- F. ACADEMIC THESES AND DISSERTATIONS (2)**
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- G. SCIENTIFIC PUBLICATIONS IN FINNISH (9)**
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H. POSTERS IN CONFERENCES (11)

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2. **Kummu M**, de Moel H, Porkka M, Siebert, S., Varis O and Ward PJ Global Use of Freshwater, Cropland and Fertilizer Resources for Food Product Losses and Waste. World Water Week, Stockholm, Sweden. August 2012.
3. Ward PJ, Eisner, S., Flörke, M., and **Kummu M** Impacts of ENSO on global hydrology. EGU General Assembly 2012, Vienna, Austria on April 2012.
4. TKK & SEA START RC. 2009. Water and Climate Change in the Lower Mekong Basin: Diagnosis & recommendations for adaptation – Series of 5 posters. HENVI conference, Helsinki, Finland.
5. Darby, S., Sarkkula J, Koponen J & **Kummu M** 2007. Simulating the Fluvial Erosion of Fine-Grained River Banks. American Geophysical Union Fall Meeting, San Francisco, California, December 2007.
6. Sarkkula J, M. Keskinen, J. Koponen, M. **Kummu M** Käkönen, O. Varis and N. Veijalainen, 2006. Development of a portfolio of computational and participatory tools for Lower Mekong Basin. World Water Week 2006, Stockholm, Sweden.
7. Varis O, Keskinen M, **Kummu M** 2006. A Bayesian DSS Approach to IWRM Policy Analysis: The Mekong Case. World Water Week 2006, Stockholm, Sweden.
8. Sarkkula J, J. Koponen, M. M. Keskinen, **Kummu M** 2006. WUP-FIN Lower Mekong Basin Modelling project – for integral assessment. World Water Forum 2006, Mexico City, Mexico.
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10. **Kummu M**, J. Sarkkula and O. Varis. 2004. Sedimentation and Mekong Upstream Development: Impacts on the Lower Mekong Basin. IAG 2nd Yangtze Fluvial Conference, Shanghai, China.
11. Sarkkula J, Koponen J, **Kummu M** and Keskinen M 2003 Effects of water control schemes. Nairobi baseline conference of Challenge Program, Nairobi, Kenya.
2. At “EMECS-8 Congress”, Shanghai, China. October 2008, Suspended sediment dynamics at the Mekong floodplains: data analysis.
3. [Invited] At “International conference of Ecohydrological Processes and Sustainable Floodplain Management”, Lodz, Poland. May 2008. Hydrology and ecology of the Tonle Sap Lake: impacts of the Mekong upstream development.
4. At “The Third International Conference on Climate and Water”. Helsinki, Finland. September 2007. A global estimation of greenhouse gas emissions from reservoirs.
5. At 5th IWHA Conference “Past and future of waters”. June 2007. Organised by International Water History Association. Tampere, Finland. Human impacts on hydrology in the Mekong Basin – present, future and reflections from the past.
6. At “Mekong at the cross-roads” workshop. May 2007. Organised by Helsinki University of Technology and USER. Chiang Mai, Thailand. Tonle Sap flooded forest threatened: impact of Mekong upstream development.
7. At "Angkor - Landscape, City and Temple" conference. July 2006. University of Sydney. From natural rivers to channels and reservoirs – where and when water flowed in Angkor?
8. At 3rd annual AOGS meeting. July 2006. Singapore. The origins of Tonle Sap Lake floods – a water balance study.
9. [Invited] At Workshop on River Basin Dynamics in the Humid Tropics, July 2006. National University of Singapore. Remote sensing study of Mekong River bank location in Vientiane-Nong Khai area.
10. At Workshop on Sediment Management in South and Southeast Asia, April 2006. Asian Institute of Technology, Thailand. Dredging the Tonle Sap Lake for navigation - a model study.
11. At Workshop on Sediment Management in South and Southeast Asia, April 2006. Asian Institute of Technology, Thailand. Sediment balance in Tonle Sap Lake: Importance of sediment for lake's productivity.
12. At EMSB symposium, First International Symposium on Evaluation of Mechanisms Sustaining the Biodiversity in Lake Tonle Sap, Cambodia. December 1 - 2, 2005. Phnom Penh, Cambodia. Flood pulsing and productivity factors in Tonle Sap system.
13. At IASWS 2005, 10th International symposium on the interactions between sediment and water, August 2005. Bled, Slovenia. Modelling Sediment and Ecosystem in Tonle Sap Lake for Impact Assessment.
14. At International Symposium of Role of water sciences in Transboundary River Basin Management, March 2005. Ubon Ratchatani, Thailand. Assessing Impacts of the Mekong development in the Tonle Sap Lake.

I. CONFERENCE PRESENTATIONS (26)

1. At “Water History Conference of the International Water History Association (IWHA)” Delft, The Netherlands, 16-19 June 2010. Is physical water scarcity a new phenomenon? Global assessment of water shortage over the last two millennia

15. At International Conference on Simulation & Modeling, SimMod'05, Bangkok, Thailand. January 2005. Integration of Socio-economic and Hydrological data in the Tonle Sap Lake, Cambodia.
16. At International Conference on Simulation & Modeling, SimMod'05, Bangkok, Thailand. January 2005. Modelling Sediment Transportation in Tonle Sap Lake for Impact Assessment.
17. At Workshop on IWRM on Tonle Sap Lake, February 2005, Phnom Penh, Cambodia. Ecosystem management of Tonle Sap Lake: integrated modelling approach.
18. [Invited] At International Conference on Deltas, Geological modelling and Management. Ho Chi Minh City, Vietnam. January 2005. Integrated modelling for impact assessment in Mekong Delta and Cambodian floodplains. Keynote speech.
19. At Geography seminar series 2004-2005 in Department of Geography, National University of Singapore. December 2004. Sediment and ecosystem of the Tonle Sap Lake.
20. At IAG 2nd Yangtze Fluvial Conference, Shanghai, China. June, 2004. Sedimentation and Mekong Upstream Development: Impacts on the Lower Mekong Basin.
21. At Computational Earth Science seminar, Finnish IT Centre for Science (CSC), May 2004. Modelling sediment transportation in alluvial system.
22. At IWHA conference, Egypt, December 2003. The Dynamics of Water Management of Angkor, Cambodia, 9th to 16th Century.
23. At ICGRHWE conference, China, September, 2003. Modelling Cultural and Natural Hydrology Using Radar Imaging at Angkor.
24. At ICGRHWE conference, China, September, 2003. Modelling flood, sedimentation processes, and water quality for environmental impact assessment and management support in the Tonle Sap Lake, Cambodia.
25. At World Archaeological Congress, Washington DC. June 2003. The Historical Water Management of Angkor, Cambodia.
26. At EFEO (École Française d'Extrême-Orient) in Siem Reap, Cambodia. June 2003. Waters of Angkor - Modelling the Cultural Hydraulics and Natural Hydrology.