Yadu Pokhrel

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EDUCATION

2011	**Ph.D.**	**Civil Engineering**	The University of Tokyo, Japan (**Advisor: Taikan Oki**)
2008	**M.Eng.**	**Civil Engineering**	The University of Tokyo, Japan
2005	**B.Eng.**	**Civil Engineering**	Tribhuvan University, Nepal

APPOINTMENTS

2020-present	**Michigan State University**, East Lansing, Michigan *Associate Professor*, Department of Civil and Environmental Engineering
2020-present	*Co-Director* for Education, Center for Intelligent Water Resources Engineering", Michigan State University.
2020-2021	The University of Tokyo, Tokyo, Japan *Associate Research Fellow*, Department of Civil Engineering
2014-2020	**Michigan State University**, East Lansing, Michigan *Assistant Professor*, Department of Civil and Environmental Engineering
2014-2015	**Rutgers University**, New Brunswick, New Jersey *Visiting Assistant Research Professor*, Dept. of Earth and Planetary Sciences
2014	**Rutgers University**, New Brunswick, New Jersey *Assistant Research Professor*, Department of Earth and Planetary Sciences
2012-2014	**Rutgers University**, New Brunswick, New Jersey *Postdoctoral Research Associate*, Department of Earth and Planetary Sciences
2011-2012	**Hokkaido University**, Sapporo, Hokkaido, Japan *Postdoctoral Research Fellow*, Faculty of Engineering
2005-2006	**Maccaferri (Nepal) Pvt. Ltd.**, Kathmandu, Nepal *Consulting/Design Engineer*, Slope Stability and River Bank Protection
2005-2006	**Pioneer Consulting Engineers**, Kathmandu, Nepal *Consulting Engineer* (Part time), Small/Micro Hydropower Survey/Design
2005	**Tribhuvan University, Institute of Engineering**, Kathmandu, Nepal *Consulting Engineer*, Department of Civil Engineering

ACADEMIC HONORS AND AWARDS

- "**2020-2021 Lilly Teaching Fellow**", Michigan State University (MSU).
- "**2019-2020 Teacher-Scholar Award**", MSU.
- "**2020 University Communications Fellow**", MSU.
- "**2019 Withrow Distinguished Scholar Award**", MSU.
- 2018 National Science Foundation (NSF) **Early Career (CAREER) Award**.
- 2016 Asia Oceania Geoscience Society (AOGS) Distinguished Lecture (**Early Career Researcher Award; Beijing, 2016**).

- 2016 Fellow for the **Academy for Global Engagement**, Michigan State University, 2016.
- 2013 Fellow for the **Dissertation Initiative for the advancement of Climate Change ReSearch (DISCCRS) VIII Multidisciplinary Climate Symposium, 2013** (disccrs.org).
- **Japan Government Scholarship (MEXT: Monbukagakusho),** for doctoral study at the University of Tokyo, Japan (2009 – 2011).
- **Asian Development Bank's Japan Scholarship Program** (ADB-JSP), for Master of Engineering at the University of Tokyo, Japan (2006 – 2008).
- **"Kul Ratna Tuladhar Award," Gold Medal** for *First Class - First Position,* Diploma in Engineering, Institute of Engineering, Tribhuvan University, Nepal, (2000).
- **Academic Excellence Award** for *First Class - First Position,* Department of Civil Engineering, Institute of Engineering, Tribhuvan University, Nepal, (2005*).*
- **Academic Scholarship,** Government of Nepal, for Bachelor of Engineering, Civil Engineering Department, Pulchowk Campus, Tribhuvan University, Nepal (2001 – 2005).

OTHER AWARDS

- 2018 American Geophysical Union (AGU) **Editor's Citation for Excellence in Refereeing** for *Geophysical Research Letters* (GRL).
- **AGU Outstanding Student Paper Award,** for the presentation in the American Geophysical Union (AGU) Fall Meeting 2011, San Francisco, December 2011.
- **HESSS2 Paper Award** for best presentation in the "Second Hydrology delivers Earth System Science to Society conference", the University of Tokyo, Tokyo, Japan, 2010.

EDITORIAL ROLE

- Associate Editor, *Water Resources Research* (2021-present)
- Associate Editor, *Journal of Hydrology* (2019-present).
- Associate Editor, *Scientific Reports* (2019-2021).
- Special Issue Editor, *Water* (2019-2021).
- Special Issue Editor, *Remote Sensing* (2019-2021).
- Special Issue Editor, *Atmosphere* (2019-2021).

ADVISING

ADVISOR/COMMITTEE CHAIR:

Current Students and postdocs:

Postdoctoral Associate	Amar Deep Tiwari	(to start in Spring 2022)
PhD student	Ahmed Elkouk	(2021 Spring -)
PhD student	Tanjila Akhter	(2021 Fall -)
PhD student	Huy Dang	(2020 Fall -)
PhD student	Omid Bagheri	(2019 Fall -)
PhD student	Tamanna Kabir	(2019 Spring -)
Linked BS-MS	Austin Scott Devries	(2020 Fall -)
Undergraduate	Jac Stelly	(2021 Spring – 2022 Spring)
Linked BS-MS	Phyllis Feldpausch	(2021 Fall -)

Past Postdocs and Students:

Postdoctoral Associate	Farshid Felfelani	(2020 Spring – 2021 Summer)
Postdoctoral Associate	Sanghoon Shin	(2019 Fall – 2021 Spring)
PhD	Suyog Chaudhari	(2017 Fall – 2021 Spring)
PhD	Farshid Felfelani	(2015 Fall – 2019 Fall)
PhD	Sanghoon Shin	(2015 Fall – 2019 Summer)
MS	Ida Ghebi	(2019 Fall – 2020 Spring)

MS	Mateo Burbano	(2017 Fall – 2019 Spring)
MS	Nanhang Jiang	(2016 Fall – 2018 Spring)
MS	Suyog Chaudhari	(2015 Fall – 2017 Spring)
Undergraduate	Thitiwat Niramol	(2020 Spring – 2020 Fall)
Undergraduate	Benjamin Cady	(2019 Fall – 2020 Summer)
Undergraduate	Faisal Shahin	(2019 Spring – 2019 Summer)
Undergraduate	Jonathan Mahut	(2018 Spring – 2019 Fall)
Undergraduate	Kaitlyn Dann	(2016 Fall – 2017 Fall)

Past Visiting Scholars:

MS Student	Daiki Takeuchi	(Fall 2014)
Visiting Scientist	Yusuke Satoh	(2016 Summer)
PhD Student	Yaoliang Chen	(2016-2017)
Undergraduate	Quoc Khanh Nguyen	(2019 Summer)

DISSERTATION/THESIS COMMITTEE MEMBER:

PhD Dissertation[1]/Qualifying Exam[2] Committees:

[1]Ammar Safaie (2017)	Department: CEE	Advisor: Phanikumar Mantha
[1]Guoting Kang (2018)	Department: CEE	Advisor: Phanikumar Mantha
[1]Zachary Kurtis (2018)	Department: CEE	Advisor: Shuguang Li
[1]Qiu Han (2019)	Department: CEE	Advisor: Phanikumar Mantha
[2]Charifa Hejase (2018)	Department: CEE	Advisor: Vlad Tarabara
[1]Min Gon Chung (2020)	Department: Geography	Advisor: Jack Liu
[1]Zihan Lin (2021)	Department: Geography	Advisor: Jiaguo Qi
[1]Siddharth Shukla (2018)	Department: CEE	Advisor: Annick Anctil
[1]Yachen Xie	Department: Geography	Advisor: Jiaguo Qi
[1]Leo Pham	Department: Forestry	Advisor: Lifeng Luo
[1]Abhijeet Abhishek	Department: CEE	Advisor: Phanikumar Mantha
[1]Myung Sik Cho	Department: Geography	Advisor: Jiaguo Qi
[1]Xin Lan	Department: Geography	Advisor: Lifeng Luo
[1]Saeed Memari	Department: CEE	Advisor: Phani Mantha
[1]Amelia Grose	Department: EES	Advisor: Jay Zarnetske

MS Thesis Committees:

Abhijeet Abhishek (2018)	Department: CEE	Advisor: Phanikumar Mantha
Jacob Roush	Department: EES	Advisor: David Hyndman

STUDENT AWARDS/HONORS

Name	Award Title	Year
Farshid Felfelani (PhD Student)	Outstanding Civil Engineering PhD Student Award, MSU	Feb. 2019
Farshid Felfelani (PhD Student)	"Best Poster Award in Sustainability and Environment" at the Graduate Engineering Symposium, MSU	March 2019
Farshid Felfelani (PhD Student)	"Outstanding Student Poster Award – First Place", Engineering Graduate Research Symposium, MSU	March 2018
Suyog Chaudhari (PhD Student)	"Environmental Science and Policy Program (ESPP) Graduate Summer Fellowship", MSU	Summer 2019

Farshid Felfelani (PhD Student)	"Delia Koo Global Student Scholarship Award", Asian Studies Cent, MSU	Summer 2019
Sanghoon Shin (PhD Student)	"Delia Koo Global Student Scholarship Award", Asian Studies Cent, MSU	
Suyog Chaudhari (PhD Student)	"Outstanding Student Poster Award – Second Place", Engineering Graduate Research Symposium, MSU	March 2018
Suyog Chaudhari (MS Student)	"Jerry McCowan Endowed scholarship", MSU	Spring 2017
Sanghoon Shin (PhD Student)	National Water Center (NWC) Summer Institute Fellowship, Consortium of Universities for the Advancement of Hydrologic Science, Inc. (CUAHSI)	Summer 2017

PUBLICATIONS

Manuscripts Submitted, Under Revision, or In Preparation

Under Revision

(1) Chaudhari, Suyog and **Yadu Pokhrel** (2022), Alteration of river flow and flood dynamics by hydropower dams in the Amazon River basin, *Water Resources Research*, (**Under Revision**).

(2) Elkouk, Ahmed, Yadu Pokhrel, Yusuke Satoh, Lhoussaine Bouchaou (2022), Changes in Drought Risk as the Climate and Socioeconomic Development Changes, *Journal of Environmental Management*, (**Under Revision**).

(3) Shen, Zexi, Qiang Zhang, Vijay P. Singh, **Yadu Pokhrel**, Jianping Li, Chong-Yu Xu (2022), Drying in the low-latitude Atlantic Ocean attributed to terrestrial water storage depletion across Eurasia, *Nature Communications* (**Under Revision**).

Submitted

(4) Vanderkelen, Inne, Shervan Gharari, Naoki Mizukami, Martyn P. Clark, David M. Lawrence, Sean Swenson, Yadu Pokhrel, Naota Hanasaki, Ann van Griensven, and Wim Thiery (2022), Implementation and evaluation of a reservoir parametrisation in a vector-based global routing model for Earth System Model coupling, (*Geoscientific Model Development*).

(5) Dang Huy**, Yadu Pokhrel, Sanghoon Shin, and Jac Stelly (2022), Hydrologic balance and inundation dynamics of Southeast Asia's largest inland lake altered by hydropower dams in the Mekong River basin, *Science of the Total Environment* (**Under Review**).

(6) McDermid, S., M. Nocco, P Lawston-Parker, **Y. Pokhrel**, et al. (2022), Recent advances and needs for understanding the role of irrigation in the Earth system, *Science*, (**Under Review**).

(7) Lin, Zihan, **Yadu Pokhrel**, Sanghoon Shin, Feng Zhang, and Jiaquo Qi (2022), Hydro-dam impacts on greenhouse gas emissions of the Tonle Sap Lake Floodplain, *Environmental Research*, (**Under Review**).

(8) Cui, Wenhui, Junguo Liu, Jinlin Jia, Zhenzhong Zeng, and Yadu Pokhrel (2022), Severe 1998-2002 drought in the Upper Indus River basin attributed to compounding climate effects, *Environmental Research Letters*, (**Under Review**).

(9) Kumar, Amit, Simon N Gosling, Matthew F Johnson, Jamal Zaherpour, Guoyong Leng, Hannes Muller Schmied, Jenny Kupzig, Lutz Breuer, Naota Hanasaki, Qiuhong Tang, Rohini Kumar, Sebastian Ostberg, Tobias Stacke, Yadu Pokhrel, Yoshihide Wada, and Yoshimitsu Masaki (2022), Cross-scale evaluation of catchment- and global-scale hydrological model

simulations of drought characteristics across eight large river catchments, *Advances in Water Research*, (**Under Review**).

(10) Yokohata, T. T. Kinoshita, G. Sakurai, S. Fujimori, **Y. Pokhrel**, A. Ito, Y. Satoh, E. Kato, M. Okada, K. Tachiiri, K. Matsumoto, S. Emori, and K. Takahashi (2022), Impacts of socio-economic and climate changes on water, food, bioenergy, land use, and ecosystems, *Earth's Future* (**Submitted**).

(11) Hunt, Julian David, **Yadu Pokhrel**, Suyog Chaudhari**, André Luiz Amarante Mesquita,Ted Veldkamp, Yusuke Satoh, Andreas Nascimento, Behnam Zakeri, Walter LealFilho, Marcos Aurelio Vasconcelo de Freitas, Frank Sperling, Marcus Thompson, Aline C. Soterroni, Marcel Fortuna Biat, Nivalde Castro, Marcelo Augusto de Felippes, Maurício Antônio Lopes, Yoshihide Wada (2021), *Scientific Reports* (**Under Review**).

In Preparation

(12) Shin et al. (2022), Interactions between dams and climate change in tropical regions (*Nature or Science*).

(13) Felfelani et al. (2022), Nutrient transport in the Community Land Model version 5 (JAMES).

(14) Bagheri et al. (2022), Amazonian hydrology altered by historical land use and land cover change (*Science of the Total Environment*).

(15) Dahal, P., A. Shakya, NH Kirat, S. Gajurel, J. Panthi, **Y. Pokhrel**, D. Pradhananga, and ML Shrestha, Vegetation Dynamics and Ecosystem Service Values Changes at National and Provincial Scales in Nepal from 2000 to 2017, *Water*, (in preparation).

(16) Chauahari, Suyog et al. (2022), Amazon hydrology increasingly modulated by large dams (*Frontiers in Water* – to be submitted soon).

Published Peer-Reviewed Journal Articles

(64) Satoh, Y., K. Yoshimura, **Y. Pokhrel**, H. Shiogama, T. Yokohata, N. Hanasaki, H. Kim, Y. Wada, P. Burek, E. Byers, H. M. Schmied, D. Gerten, S. Ostberg, S. N. Gosling, J. E. S. Boulange, and T. Oki (2022), The timing of unprecedented hydrological drought under climate change, *Nature Communications* (**Conditionally Accepted**).

(63) Kabir, Tamanna, **Yadu Pokhrel**, and Farshid Felfelani (2022), On the Precipitation-Induced Uncertainties in Process-Based Hydrological Modeling in the Mekong River Basin, *Water Resources Research*, (**Accepted**).

(62) Liu, J., D. Chen, G. Mao, M. Irannezhad, and **Y. Pokhrel** (2021), Past and Future Changes in climate and water resources in the Lancang-Mekong River Basin: current understanding and future research directions, *Engineering*, (**Accepted**).

(61) Arantes, Caroline C., Juliana Laufer, Mac David da Silva Pinto, Emilio F. Moran, Maria Claudia Lopez, Jynessa Dutka-Gianelli, Danielle Mendonça Pinto, Suyog Chaudhari**, **Yadu Pokhrel**, Carolina R. C. Doria (2021), Functional responses of fisheries to hydropower dams in the Amazonian Floodplain of the Madeira River, *Journal of Applied Ecology*, (**Accepted**).

(60) Linli An, Jida Wang, Jianping Huang, **Yadu Pokhrel**, Romain Hugonnet, Yoshihide Wada, Denise Cáceres, Hannes Müller Schmied, Chunqiao Song, Etienne Berthier, Haipeng Yu, and Guolong Zhang (2021), Divergent Causes of Terrestrial Water Storage Decline Between Drylands and Humid Regions Globally, *Geophysical Research Letters*, 48, e2021GL095035.

(59) Boulange, Julien, N., Hanasaki, Y, Satoh, T. Yokohata, H., Shiogama, P. Burek, W. Thiery, D., Gerten, H. Schmied, Y. Wada, S. Gosling, **Y. Pokhrel**, and N. Wanders (2021), Validity of estimating flood and drought characteristics under equilibrium climates from transient simulations, *Environmental Research Letters*, 16, 104028.

(58) Satoh, Y., H. Shiogama, N. Hanasaki, **Y. Pokhrel**, J. Boulange, P. Burek, S. Gosling, M. Grillakis, A. Koutroulis, and H. M. Schmied (2021), A quantitative evaluation of the issue of drought definition: a source of disagreement in future drought assessments, *Environmental Research Letters*, 16 104001.

(57) Chung, Min Gon, Kenneth Frank, **Yadu Pokhrel**, Tom Dietz, and Jianguo Liu (2021), Uncovering relationships between built infrastructure and watershed conservation to sustain freshwater ecosystem services for global cities, *Nature Sustainability*, 4, 1068-1075.

(56) Shrestha, Sangam, Bae Deok-hyo, Panha Hok, Suwas Ghimire, and **Yadu Pokhrel** (2021), Future Hydrology and Hydrological Extremes under Climate Change in Asian River Basins, *Scientific Reports*, 11, 17089.

(55) Vanderkelen, I., N. V. Lipzig, B. Sacks, D. Lawrence, M. Clark, N. Mizukami, **Y. Pokhrel**, and W. Theiry (2021), The impact of global reservoir expansion on the present-day climate, *Journal of Geophysical Research Atmospheres*, 126, e2020JD034485.

(54) Elkouk, Ahmed**, Zine El Abidine El Morjani, **Yadu Pokhrel**, Abdelghani Chehbouni, Abdelfattah Sifeddine, and Lhoussaine Bouchaou (2021), Abdelghani Chehbouni, and Lhoussaine Bouchaou, Severe soil moisture droughts in North Africa and the Sahel region under 1.5, 2, and 3 °C global warming, *Climatic Change*, 167:52.

(53) Wang, J., X. Yun, **Y. Pokhrel**, D. Yamazaki, Q. Zhao, and A. Chen (2021), Modeling Daily Floods in the Lancang-Mekong River Basin Using an Improved Hydrological-Hydrodynamic Model, *Water Resources Research*, e2021WR029734.

(52) Kang, Guoting, Lifeng Luo, **Yadu Pokhrel**, David Lusch, and Mantha Phanikumar (2021), Quantifying the Spatiotemporal Dynamics of Recharge in a Composite Great Lakes Watershed using a High-Resolution Hydrology Model and Multi-Source Data, *Journal of Hydrology*, 601, 126594.

(51) Chaudhari, S**, E. Brown, R. Quispe-Abad, E. Moran, N. Mueller, and **Y. Pokhrel** (2021), In-stream turbines for rethinking hydropower development in the Amazon basin, *Nature Sustainability*, 4, 680-687.

(50) Telteu, C. E., H. Müller Schmied, W. Thiery, G. Leng, P. Burek, X. Liu, J. E. S. Boulange, L. Seaby Andersen, M. Grillakis, S. N. Gosling, Y. Satoh, O. Rakovec, T. Stacke, J. Chang, N. Wanders, H. L. Shah, T. Trautmann, G. Mao, N. Hanasaki, A. Koutroulis, **Y. Pokhrel**, L. Samaniego, Y. Wada, V. Mishra, J. Liu, P. Döll, F. Zhao, A. Gädeke, S. Rabin, and F. Herz (2021), Understanding each other's models: a standard representation of global water models to support improvement, intercomparison, and communication. *Geosci. Model Dev.*, 14, 3843–3878.

(49) Wang, Zifeng, Junguo Liu, Jinbao Li, Ying Meng, **Yadu Pokhrel**, and Hongsheng Zhang (2021), Basin-scale high-resolution extraction of drainage networks using 10-m Sentinel-2 imagery, *Remote Sensing of Environment*, 255, 112281.

(48) Gudmundsson, L., J. Boulange, H. X. Do, S. N. Gosling, M. G. Grillakis, A. G. Koutroulis, M. Leonard, J. Liu, H. Müller Schmied, L. Papadimitriou, **Y. Pokhrel**, S. I. Seneviratne, Y. Satoh, W. Thiery, S. Westra, X. Zhang, and F. Zhao (2021), Globally observed trends in mean and extreme river flow attributed to climate change, *Science*, 371, 1159-1162.

(47) Shin, S., **Y. Pokhrel**, R. Talchabhadel, and J. Panthi (2021), Spatio-temporal dynamics of hydrologic changes in the Himalayan River basins of Nepal using high-resolution hydrological-hydrodynamic modeling, *Journal of Hydrology*, 126209.

(46) **Pokhrel, Y.**, F. Felfelani**, and Co-authors (2021), Global Terrestrial Water Storage and Drought Severity under Climate Change, *Nature Climate Change*, 11, 226–233.

(**News coverage by >130 outlets; Top 5% Altmetric Attention Score**: https://nature.altmetric.com/details/97464475/news).

Tweeted by United Nations Office of Disaster Risk Reduction (UNDRR).

Highlighted on the World Economic Forum's website.

(45) Boulange, Julien, Naota Hanasaki, Dai Yamazaki, and **Yadu Pokhrel** (2021), Role of dams in reducing global flood exposure under climate change, *Nature Communications*, 12, 417.

(44) Reinecke, R., H. Muller Schmied, T. Trautmann, P. Burek, M. Florke, S.N. Gosling, M. Grillakis, A. Kourroulis, **Y. Pokhrel**, L. Seaby, W. Theiry, Y. Wada, Y. Satoh, and P. Doll (2021), Uncertainty of simulated groundwater recharge at different global warming levels: A global-scale multi-model ensemble study, *Hydrology and Earth System Sciences*, 25, 787–810.

(43) Felfelani, Farshid**, David Lawrence, and **Yadu Pokhrel** (2021), Representing Inter-cell Lateral Groundwater Flow and Aquifer Pumping in the Community Land Model, *Water Resources Research* , 56, e2020WR027531.

(42) Gädeke, Anne, Valentina Krysanova Aashutosh Aryal, Jinfeng Chang, Manolis Grillakis, Naota Hanasaki, Aristeidis Koutroulis, **Yadu Pokhrel**, Yusuke Satoh, Sibyll Schaphoff, Hannes Müller Schmied, Tobias Stacke, Qiuhong Tang, Yoshihide Wada, Kirsten Thonicke (2021), Performance evaluation of global hydrological models in six large Pan-Arctic watersheds, *Climatic Change*, 163(3), 1329-1351.

(41) Krysanova, Valentina, Jamal Zaherpour, Iulii Didovets, Simon Gosling, Dieter Gerten, Naota Hanasaki, Hannes Müller Schmied, **Yadu Pokhrel**, Yusuke Satoh, Qiuhong Tang, Yoshihide Wada (2021), How evaluation of global hydrological models can help to obtain more credible projections of river discharge under climate change, *Climatic Change* , 163(3), 1353-1377.

(40) Yokohata, T., T. Kinoshita, G. Sakurai, **Y. Pokhrel**, A. Ito, M. Okada, Y. Satoh, E. Kato, T. Nitta, S. Fujimori, F. Felfelani**, Y. Masaki, T. Iizumi, M. Nishimori, N. Hanasaki, K. Takahashi, Y. Yamagata, and S. Emori (2020), MIROC-INTEG1: A global bio-geochemical land surface model with human water management, crop growth, and land-use change, *Geoscientific Model Development*, 13, 4713–4747.

(39) Chen, J., B. Tapley, M. Rodell, K-W. Seo, C. Wilson, B. Scanlon, and **Y. Pokhrel** (2020), Basin-scale river runoff estimation from GRACE gravity satellites, climate models and in situ observations: a case study in the Amazon basin, *Water Resources Research*, 56, e2020WR028032.

(38) Vanderkelen, I., N. P. M. van Lipzig, D. M. Lawrence, B. Droppers, M. Golub, S. N. Gosling, A. B. G. Janssen, R. Marcé, H. Müller Schmied, M. Perroud, D. Pierson, **Y. Pokhrel**, Y. Satoh, J. Schewe, S. I. Seneviratne, V. M. Stepanenko, Z. Tan, R. I. Woolway, and W. Thiery (2020), Global Heat Uptake by Inland Waters, *Geophysical Research Letters*, 47, e2020GL087867.

(37) Shin, S.**, **Y. Pokhrel**, D. Yamazaki, X. Huang, N. Torbick, J. Qi, S. Pattanakiat, T. Ngo-Duc, and T. D. Nguyen (2020), High Resolution Modeling of River-floodplain-reservoir Inundation Dynamics in the Mekong River Basin, *Water Resources Research*, 56, e2019WR026449.

(36) Burbano, M.**, S. Shin**, N. Khanh**, and **Y. Pokhrel** (2020), Hydrologic Changes, Dam Construction, and the Shift in Dietary Protein in the Lower Mekong River Basin, *Journal of Hydrology*, 581 (124454).

(35) Yamada, T.J. and Y. Pokhrel (2019), Effect of Human-Induced Land Disturbance on Subseasonal Predictability of Near-Surface Variables using an Atmospheric General Circulation Model, *Atmosphere*, 10(11), 725.

(34) Baniya, B., Q. Tang, **Y. Pokhrel**, and Ximeng Xu (2019), Vegetation Dynamics and Ecosystem Service Values Changes at National and Provincial Scales in Nepal from 2000 to 2017, *Environmental Development*, 32 (100464).

(33) Chaudhari, S.**, **Y. Pokhrel**, E. Moran, and G. Miguez-Macho (2019), Multi-decadal Hydrologic Change and Variability in the Amazon River Basin: Understanding Terrestrial

Water Storage Variations and Drought Characteristics, *Hydrology and Earth System Sciences*, 23, 2841-2862.

(32) Schewe, J., S. Gosling , C. Reyer , F. Zhao , P. Ciais , J. Elliott , L. François , V. Huber , Heike Lotze , S. Seneviratne , M. van Vliet , R. Vautard , Y. Wada , L. Breuer , M. Büchner , D. Carozza , J. Chang , M. Coll , D. Deryng , A. de Wit , T. Eddy , C. Folberth , K. Frieler , A. Friend , D. Gerten , L. Gudmundsson , N. Hanasaki , A. Ito , N. Khabarov , H. Kim , P. Lawrence , C. Morfopoulos , C. Müller , H. Müller Schmied , R. Orth , S. Ostberg , **Y. Pokhrel** , T. Pugh , G. Sakurai , Y. Satoh , E. Schmid , T. Stacke , J. Steenbeek , J. Steinkamp , Q. Tang , H. Tian , D. Tittensor , J. Volkholz , X. Wang , and L. Warszawski (2019), State-of-the-art global models underestimate impacts from climate extremes, *Nature Communications*, 10 (1005).

(31) Shin**, S, **Y. Pokhrel**, and G. Miguez-Macho (2019), High Resolution Modeling of Reservoir Release and Storage Dynamics over the Continental US, *Water Resources Research*, 55, 787-810.

(30) Liu, Xingcai, W. Liu, H. Yang, Q. Tang, M. Flörke, Y. Masaki, H. Müller Schmied, S. Ostberg, **Y. Pokhrel**, Y. Satoh, and Y. Wada (2019), Multimodel assessments of human and climate impacts on mean annual streamflow in China, *Hydrology and Earth System Sciences*, 23, 1245–1261 (DOI: doi.org/10.5194/hess-2018-525).

(29) Felfelani**, F., **Y. Pokhrel**, K. Guan, and D. Lawrence (2018), Utilizing SMAP Soil Moisture Data to Constrain Irrigation in the Community Land Model, *Geophysical Research Letters*, 45, 12,892–12,902.

(28) **Pokhrel, Y.**, S. Shin**, J. Lin, D. Yamazaki, and J. Qi (2018), Potential Disruption of Flood Dynamics in the Lower Mekong River Basin Due to Upstream Flow Regulation, *Scientific Reports*, 8, 17767.

(27) Hanasaki, N., S. Yoshikawa, **Y. Pokhrel**, and S. Kanae (2018), A quantitative investigation of the thresholds for two conventional water scarcity indicators using a state-of-the-art global hydrological model with human activities, *Water Resources Research*, 54, 8279–8294.

(26) Zaherpour, Jamal, S. Gosling, N Mount, H. Schmied, H. Kim, TIE Veldkamp, R. Dankers, S. Eisner, D. Gerten, L. Gudmundsson, I. Haddeland, N. Hanasaki, H. Kim, G. Leng, J. Liu, Y. Masaki, T. Oki, **Y. Pokhrel**, Y. Satoh, J. Schewe, and Y. Wada (2018), Worldwide evaluation of mean and extreme runoff from six global-scale hydrological models that account for human-influences, *Environmental Research Letters*, 13, 065015.

(25) Wartenburger, Richard, Co-authors, **Y. Pokhrel** and Co-authors (2018), Evapotranspiration simulations in ISIMIP2a - Evaluation of spatio-temporal characteristics with a comprehensive ensemble of independent datasets, *Environmental Research Letters*, 13, 075001.

(24) Veldkamp, T.I.E., F. Zhao, P.J. Ward, H. de Moel, J.C.J.H. Aerts, H. Muller Schmied, F.T. Portmann, Y. Masaki, **Y Pokhrel**, X. Liu, Y. Satoh, D. Gerten, S. Gosling, J. Zaherpour, Y. Wada (2018), Human impact parameterization in global hydrological models improves estimates of monthly discharges and hydrological extremes: a multi-model validation study, *Environmental Research Letters*, 13, 055008.

(23) Chaudhari**, S, F. Felfelani**, S. Shin**, and **Y. Pokhrel** (2018), Climate and Anthropogenic Contributions to the Desiccation of the Second Largest Saline Lake in the Twentieth Century, *Journal of Hydrology*, 560, 342–353.

(22) **Pokhrel, Y.**, M. Burbano**, J. Roush, H. Kang, V. Sridhar, and D. Hyndman (2018), A Review of the Integrated Effects of Changing Climate, Land Use, and Dams on Mekong River Hydrology, *Water*, *10*(3), 266. **[Editor's Choice Article]**

(21) Hanasaki, N., S. Yoshikawa, **Y. Pokhrel**, and S. Kanae (2018), A global hydrological simulation to specify the sources of water used by humans, *Hydrology and Earth System Sciences, 22, 789-817*.

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(19) Chen**, Y., D. Lu, L. Luo, **Y. Pokhrel**, K. Deb, J. Huang (2018), Detecting irrigation extent, frequency and timing in a heterogeneous arid agricultural region using MODIS time series and ancillary data, *Remote Sensing of Environment*, 204, 197-211.

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(17) Wada, Y, M. F. P. Bierkens, A. de Roo, P. A. Dirmeyer, J. S. Famiglietti, N. Hanasaki, M. Konar, J. Liu, H. Müller-Schmied, T. Oki, **Y. Pokhrel**, M. Sivapalan, T. J. Troy, A. I. J. M. van Dijk, T. van Emmerik, M.H.J. Van Huijgevoort, H. A. J. Van Lanen, C. J. Vörösmarty, N. Wanders, and H. Wheater (2017), Human-water interface in hydrological modeling: Current status and future directions, *Hydrology and Earth System Sciences, 21, 4169-4193.*

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(15) Zhao, F. , T.I.E. Veldkamp , K. Frieler , J. Schewe , S. Ostberg , S. Willner , B. Schauberger, S. Gosling , H. Müller Schmied, F.T. Portmann , G. Leng , M. Huang , X. Liu, Q. Tang, N. Hanasaki, H. Biemans, D. Gerten, Y. Satoh, **Y. Pokhrel**, T. Stack, P. Ciais , J. Chang, A. Ducharne, M. Guimberteau,Y. Wada, H. Kim, and D. Yamazaki (2017), The critical role of the routing scheme in simulating peak river discharge in global hydrological models, *Environmental Research Letters*, 12 (7), 075003.

(14) **Pokhrel, Y.N.**, T. Yamada, F. Felfelani**, S. Shin**, and Y. Satoh (2017), Modeling large-scale human alteration of land surface hydrology and climate, *Geoscience Letters*, 4: 10.

(13) **Pokhrel, Y. N.**, N. Hanasaki, Y. Wada, H. Kim (2016), Recent progresses in incorporating human land-water management into global land surface models toward their integration into Earth system models, *WIREs Water*, 3: 548-574.

(12) Inatsu, M, T. Sato, T.J. Yamada, R. Kuno, S. Sugimoto, M.A. Farukh, **Y. N. Pokhrel**, S. Kure (2015), Multi-GCM by multi-RAM Experiments for Dynamical Downscaling on Summertime Climate Change in Hokkaido, *Atmospheric Science Letters*, 16: 297–304.

(11) **Pokhrel, Y. N.**, S. Koirala, P. J.-F. Yeh, N. Hanasaki, L. Longuevergne, S. Kanae, and T. Oki (2015), Incorporation of groundwater pumping in a global Land Surface Model with the representation of human impacts, *Water Resources Research*, 51, 78–96.

(10) Yamada, T.J., M.A. Farukh, T. Fukushima, M. Inatsu, T. Sato, **Y.N. Pokhrel**, T. Oki (2014), Extreme precipitation intensity in future climates associated with the Clausius-Clapeyron-like relationship, *Hydrological Research Letters* , 8(4), 108–113.

(9) **Pokhrel, Y. N.**, Y. Fan, and G. Miguez-Macho (2014), Potential Hydrologic Changes in the Amazon by the End of the 21st Century and the Groundwater Buffer, *Environmental Research Letters*, 9, 084004.

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(7) Yamahara, K., T. J. Yamada, and **Y. Pokhrel** (2013), Sub-seasonal Hydrological Forecast Skills of Extreme Events Using Land Initialization with the Influence of Human Activity in an Atmosphere General Circulation Model, *Journal of Hydraulic Engineering*, JSCE, 57, I_1807-I_1812 (In Japanese with English Abstract).

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(5) **Pokhrel, Y. N.**, N. Hanasaki, P. J.-F. Yeh, T. Yamada, S. Kanae, and T Oki (2012), Model Estimates of Sea Level Change due to Anthropogenic Impacts on Terrestrial Water Storage, *Nature Geoscience*, 5, 389-392.

(4) **Pokhrel, Y.**, N. Hanasaki, S. Koirala, J. Cho, H. Kim, P. J.-F. Yeh, S. Kanae and T. Oki (2012), Incorporating anthropogenic water regulation modules into a land surface model. *Journal of Hydrometeorology*, 13, 255–269.

(3) Cho, J., H. Komatsu, **Y. Pokhrel**, P. J.-F. Yeh, T. Oki, and S. Kanae (2011), The Effects of Annual Precipitation and Mean Air Temperature on Annual Runoff in Global Forest Regions. *Climatic Change Letters*, 108, 401-410, DOI: 10.1007/s10584-011-0197-3.

(2) **Pokhrel, Y.**, N. Hanasaki, S. Koirala, S. Kanae, and T. Oki (2010), Extreme River Discharge Under Present and Future Climate Conditions Using High-Resolution Climate Model Data. *Journal of Hydraulic Engineering*, JSCE, 54, 97-102.

(1) **Pokhrel, Y. N.**, T. Oki, S. Kanae (2008), A grid based assessment of global theoretical hydropower potential. *Journal of Hydraulic Engineering*, JSCE, 52, 7-12.

Other Products/Datasets:

(1) Gosling, Simon; Müller Schmied, Hannes; Betts, Richard; Chang, Jinfeng; Ciais, Philippe; Dankers, Rutger; Döll, Petra; Eisner, Stephanie; Flörke, Martina; Gerten, Dieter; Grillakis, Manolis; Hanasaki, Naota; Hagemann, Stefan; Huang, Maoyi; Huang, Zhongwei; Jerez, Sonia; Kim, Hyungjun; Koutroulis, Aristeidis; Leng, Guoyong; Liu, Xingcai; Masaki, Yoshimitsu; Montavez, Pedro; Morfopoulos, Catherine; Oki, Taikan; Papadimitriou, Lamprini; **Pokhrel, Yadu**; Portmann, Felix T.; Orth, Rene; Ostberg, Sebastian; Satoh, Yusuke; Seneviratne, Sonia; Sommer, Philipp; Stacke, Tobias; Tang, Qiuhong; Tsanis, Ioannis; Wada, Yoshihide; Zhou, Tian; Büchner, Matthias; Schewe, Jacob; Zhao, Fang (2017): ISIMIP2a Simulation Data from Water (global) Sector. GFZ Data Services. http://doi.org/10.5880/PIK.2017.010 (http://dataservices.gfz-potsdam.de/pik/showshort.php?id=escidoc:2762900).

Books/Chapters (Peer-reviewed)

(1) Pail, R., **Y. Pokhrel** et al. (2015), Observing Mass Transport to Understand Global Change and Benefit Society: Science and User Needs, An international multi-disciplinary initiative for IUGG; in: Pail, R. (eds.) Deutsche Geodätische Kommission der Bayerischen Akademie der Wissenschaften, Reihe B, Angewandte Geodäsie, Vol. 2015, Heft 320, Verlag der Bayerischen Akademie der Wissenschaften in Kommission beim Verlag C.H. Beck, ISBN (Print) 978-3-7696-8599-2, ISSN 0065-5317, 2015 (available at http://www.dgk.badw.de/fileadmin/docs/b-320.pdf).

(2) **Pokhrel Y. N.**, T. Oki, and S. Kanae (2012). Policy Frameworks for Climate Smart Development: The Case of Hydropower. [*Chapter 10 in Srinivasan et al., 2012 Eds.*, Climate Smart Development in Asia: Transition to Low Carbon and Climate Resilient Economies. *Routledge, Earthscan Publishers*, London].

News/Magazine Articles:

(1) **Pokhrel, Yadu** and Farshid Felfelani (2021), Climate change could double global threat of extreme drought, *The Environment*, Issue: May 2021 (London, The UK).

(2) **Pokhrel, Yadu** and Farshid Felfelani (2021), Two-thirds of Earth's land is on pace to lose water as the climate warms – that's a problem for people, crops and forests, *The Conversation*, US (January 11, 2021). Available at: https://theconversation.com/two-thirds-of-earths-land-is-on-pace-to-lose-water-as-the-climate-warms-thats-a-problem-for-people-crops-and-forests-151984

Conference Proceedings (Peer-reviewed)

(1) Takeuchi, D., T.-J. Yamada**, Y. Pokhrel,** Study of the atmospheric circulation and river basin water budget by using an AGCM with the representation of human impacts, *Japan Society of Civil Engineerins, Global Environment Symposium*, 2015.

(2) Yamahara, K., T. J. Yamada, **Y. Pokhrel,** Development of an Atmospheric General Circulation Model Including Human Impact Modules, *Proceedings of Hokkaido Chapter of the JSCE*, No. 69, B-03, 2013. (in Japanese)

(3) Kouno, T., T. J. Yamada, **Y. N. Pokhrel**, Development of a Land Surface Model With Human Impact Modules for Hokkaido Area, *Proceedings of the JSCE Global Environment Symposium (Tohoku University)*, No. 21, 2013. (In Japanese with English Abstract)

(4) **Pokhrel Y. N.**, N. Hanasaki, S. Kanae, and T. Oki. Simulating historical and future global river discharge using High-Resolution climate model data. Proceedings of the *Sixth International Scientific Conference on the Global Energy and Water Cycle and the Second Integrated Land Ecosystem-Atmosphere Study (iLEAPS) Science Conference*, Melbourne, Australia, 2009.

(5) **Pokhrel Y. N.**, T. Oki, and S. Kanae. Hydropower: A Source of Clean Energy for the Sustainable Future. Proceedings of the international conference on *Environment, Energy and Water in Nepal: Recent Researches and Direction for Future* Kathmandu, Nepal, 2009.

(6) **Pokhrel Y. N.**, T. Oki, and S. Kanae. Impact of climate change on global hydropower potential. Proceedings of the *4th Conference of The Asia Pacific Hydrology and Water Resources*, Beijing, 2008.

(7) **Pokhrel, Y. N.**, T. Oki, S. Kanae. Global hydropower potential in the 21st century, Proceedings of the *Conference of Japan Society of Hydrology and Water Resources*, Tokyo, 2008.

PRESENTATIONS

Seminars and Lectures

1. Pokhrel, Y. (2021), Modeling Coupled Natural-Human Hydrologic Systems in Managed Landscapes, *University of Science and Technology of Hanoi (USTH)*, April 15, 2021. (**Invited Seminar; Virtual**)
2. **Pokhrel, Y.** (2021), Terrestrial water storage under changing climate and implications on future droughts, *Southern Institute of Science and Technology (SUSTech), Shenzhen, China* (Feb. 2, 2021). (**Invited Seminar; Virtual**)
3. **Pokhrel, Y.** (2020), Modeling Coupled Natural-Human Hydrologic Systems in a Changing Environment, *College of the Biological and Environmental Sciences, University of Rhode Island* (October 30, 2020). (**College Seminar Series**)
4. **Pokhrel, Y.** (2020), Interactions among Hydrological, Socio-economic, and Ecological Systems in the Mekong River Basin, *MSU ESPP* (Nov. 4, 2020). (**ESP 801 Guest Lecture**)
5. **Pokhrel, Y.** (2020), Opportunities & Challenges in Regional to Global Scale Water Research, *Pokhara University, Pokhara, Nepal* (June 14, 2020). (**University Seminar**)

6. **Pokhrel, Y.** (2019), Humans, Water, and Climate: Modeling Water-Energy-Food (WEF) Systems in Managed Landscapes, *Southern Institute of Science and Technology (SUSTech), Shenzhen, China* (August 2019). (**Seminar**)
7. **Pokhrel, Y.** (2018), Humans, Water, and Climate: Modeling Water-Energy-Food (WEF) System in Managed Landscapes, *International Institute for Applied Systems Analysis (IIASA), Vienna, Austria*, August 2nd, 2018. (**Seminar**)
8. **Pokhrel**, Y.N., Progresses in Large-scale Water Cycle Modeling in a Changing World, *13th Annual Meeting of the Asia Oceania Geosciences Society*, Beijing, China, August 2016. (**Early Career Researcher Distinguished Lecture**)
9. **Pokhrel, Y.N.**, Human-induced water cycle change over large scales, Institute of Geographic Sciences and Natural Resources, *Chinese Academy of Sciences*, Beijing, China, August 2016. (**Seminar**)
10. **Pokhrel, Y. N.**, Study of global water cycle using a land surface model with the representations of human impacts. *National Institute for Environmental Studies*, Tsukuba, Japan, Sept. 6, 2011. (**Seminar**)

Invited Presentations

11. Shrestha, S., D. Bae, S. Ghimire, and **Y. Pokhrel**, Future Changes in Hydro-climatic Extremes in the South Asian River Basins: Evidence from the Modeling Studies, *AGU Fall Meeting 2021, Dec. 13-17*, New Orleans (**Invited**).
12. Pokhrel, Yadu, Huy Dang, Tamanna Kabir, and Jiaguo Qi, Climate Change, Dams, and Hydrologic Impacts in the Lower Mekong River Basin (2021), *Mekong Virtual Symposium* (October 22, 2021). (**Invited**)
13. **Pokhrel, Yadu**, Sanghoon Shin, Suyog Chaudhari, and Dai Yamazaki, Toward hyper-resolution reservoir modeling at the continental scale, *AGU Fall Meeting, San Francisco*, December, 2019 (**Invited**).
14. **Pokhrel, Yadu** and Farshid Felfelani, Simulating climate-groundwater-human interactions in the major US aquifers using Community Land Model version 5 (CLM5), *AGU Chapman Conference on "Quest for Sustainability of Heavily Stressed Aquifers at Regional to Global Scales"*, Valencia, Spain, 21-24 October, 2019 (**Invited**).
15. Baniya, B, Q. Tang, **Y. Pokhrel**, and X. Xu (2019), Vegetation Dynamics and the Implications on Ecosystem Service Values Changes Using Satellite Derived MODIS NDVI in Nepal, *International (SAARC) Youth Scientific Conference (IYSC) on Science and Technology for Prosperity: "Connecting Lives with Land, Water and Environment*", 5-6 June, 2019, Kathmandu, Nepal (**Invited**).
16. Hanasaki, N., S. Yoshikawa, **Y. Pokhrel**, and S. Kanae (2017), Enhancing the water management schemes of H08 global hydrological model to attribute human water use to six major water sources, *AGU Fall Meeting 2017,* New Orleans, Dec 2017 (**Invited**).
17. **Pokhrel, Y.** and T.J. Yamada, Large-scale human alteration of land surface hydrology and climate, Asia Oceania Geosciences Society (AOGS), 14th Annual Meeting, Singapore, August 2017 (**Invited**).
18. **Pokhrel, Y.N.**, S. Shin, and F. Felfelani, Global, Regional, and Local-scale Assessment of the Impacts of Irrigation and Reservoir Operation on Land Hydrology and Climate, Japan Geoscience Union, Makuhari, Japan, May 2017 (**Invited**).
19. **Pokhrel, Y.N.**, T. Yamada, S. Shin, L. Luo, D. Lu, K. Deb, Modeling Impacts of Irrigation on Land Surface Hydrology and Subseasonal Forecast, *American Geophysical Union, Fall Meeting*, San Francisco, Dec. 2016 (**Invited**).

20. **Pokhrel, Y.N.** and T. Oki, Estimating global groundwater withdrawal and depletion using an integrated hydrological model, GRACE, and in situ observations, *GEWEX Workshop on " Including Water Management in Large Scale Models*", Gif-sur-Yvette, France, Sep, 2016 (**Keynote Speech Presented by Oki**).
21. **Pokhrel, Y. N.**, S. Koirala, N. Hanasaki, P. J.-F. Yeh, S. Kanae, T. Oki, Estimating global groundwater withdrawal and depletion using an integrated hydrological model, GRACE, and in situ observations, *American Geophysical Union (AGU) Fall Meeting 2012*, San Francisco, USA, 2012 (**Invited**).
22. T. Oki, Y. Satoh, K. Yoshimura, **Y.N. Pokhrel**, H. Kim, Impacts of anthropogenic water management on the changes in hydrological drought under climate change, *International Conference on Water Resources and Environment Research—Water and Environmental Dynamics*, Kyoto, Japan, 2016 (**Invited**).
23. Miguez-Macho, G., Y. Fan, A. Martínez de la Torre, B. Gomez, **Y. Pokhrel**, Climate modeling and Groundwater: the key role of the water table in the terrestrial water cycle, *AGU Fall Meeting,* San Francisco, *2014* (**Invited**).
24. Oki, T., Y. Satoh, **Y. Pokhrel**, H. Kim, K. Yoshimura, Impacts of Autonomous Adaptations on the Hydrological Drought Under Climate Change Condition, *AGU Fall Meeting,* San Francisco, *2014* (**Invited**).
25. Fan, Y., G. Miguez-Macho, E. Jobaggy, H. Li, **Y. N. Pokhrel**, Some Large-Scale Patterns in Groundwater-Ecosystem Coupling, *AGU Fall Meeting,* San Francisco, *2014* (**Invited**).
26. T. Oki, Y. Satoh, **Y. Pokhrel**, H. Kim, K. Yoshimura, How Autonomous Adaptation can Mitigate the Impacts of Climate Change on Water Scarcity? *11th Annual Meeting of the Asia Oceanic Geosciences Society* (AOGS), Sapporo, Japan, 28 Jul-01Aug, 2014 (**Invited**).
27. T. Oki, **Y. Pokhrel**, N. Hanasaki, Y. Satoh, H. Kim, K. Yoshimura, Changes in land and water infrastructure impacting water availability and resources, *7th International Scientific Conference on the Global Water and Energy Cycle (GEWEX)*, Hague, The Netherlands, 14-17 July, 2014 (**Invited**).
28. **Pokhrel, Y.N.**, S. Koirala, N. Hanasaki, P. J.-F. Yeh, S. Kanae, T. Oki, Overview of the integrated model HiGW-MAT (Human impacts and GroundWater representations in MATSIRO), *Global Soil Wetness Project Phase 3 (GSWP-3), Kickoff Meeting*, The University of Tokyo, Japan, 26-27 Feb., 2014 (**Invited**).
29. Y. Fan, **Y. N. Pokhrel**, H. Li, G. Miguez-Macho, Groundwater influence on vegetation: pathways and global patterns, *AGU Fall Meeting 2013* (**Invited**).
30. Y. Fan, H. Li, **Y. N. Pokhrel**, Gonzalo Miguez-Macho, Understanding patterns in global water table depth: the enormous data challenges, *AGU Fall Meeting 2013* (**Invited**).
31. T. Yamada, **Y. N. Pokhrel**, K. Yamahara, N. Hanasaki, S. Koirala, P. J. Yeh, S. Kanae, T. Oki, Subseasonal forecast skill of the 1988 U.S. drought linked to human activities, *AGU Fall Meeting 2013* (**Invited**).
32. Oki, T., **Y. N. Pokhrel**, N. Hanasaki, S. Koirala, S. Kanae, Non-renewable water use on the globe and its implication to sea level change, *AGU Fall Meeting 2012*, San Francisco, USA, 2012 (**Invited**).
33. Kanae, S., N. Hanasaki, **Y. Pokhrel** et al., Modeling the impact of irrigation area changes and anthropogenic water regulation on terrestrial hydrological cycle, WRCP Open Science Conference, Denver, Colorado, Oct. 23-28, 2011 (**Invited**).
34. Oki, T., T. Kondo, **Y. Pokhrel**, and N. Hanasaki, Characterization factors for water footprint considering the scarcity of green and blue water sources, *AGU Fall Meeting*, 13-17 Dec. 2010, San Francisco, USA (**Invited**).

35. Oki, T., **Y. Pokhrel**, P. J. Yeh, S. Koirala, S. Kanae, and N. Hanasaki, Identifying the hotspots of non-renewable water use using HiGW-MAT: A new land surface model coupled with human interventions and ground water reservoir, *AGU Fall Meeting*, 13-17 Dec. 2010, San Francisco, USA (**Invited**).

Contributed Conference Presentations/Posters

1. Felfelani, F. and **Y. Pokhrel**, Modeling of riverine transport and reaction of anthropogenic nitrate in the Great Lakes Basin, *AGU Fall Meeting 2021, Dec. 13-17*, New Orleans (Oral; Virtual).
2. Elkouk, A., **Y. Pokhrel**, Y. Satoh, and L. Bouchaou, Implications of climate and socioeconomic change for future drought risk, *AGU Fall Meeting 2021, Dec. 13-17*, New Orleans (Oral; Virtual).
3. Dang, H. and **Y. Pokhrel**, Impact of Hydropower Dams in the Mekong on the Tonle Sap Lake's Hydrodynamics, *AGU Fall Meeting 2021, Dec. 13-17*, New Orleans (Oral; Virtual).
4. Kabir, T. and **Y. Pokhrel**, Groundwater Dynamics in the Mekong River Basin: Response to Climate Change and Human Activities, *AGU Fall Meeting 2021, Dec. 13-17*, New Orleans (Poster; Virtual).
5. Vanderkelen, I., **Y. Pokhrel** et al., Implementing Reservoir Operation in a Global River Routing Model for Integration in Earth System Model, *AGU Fall Meeting 2021, Dec. 13-17*, New Orleans (Oral; Virtual).
6. Satoh, Y., **Y. Pokhrel** et al., The timing of unprecedented hydrological drought under climate change, *AGU Fall Meeting 2021, Dec. 13-17*, New Orleans (Oral; Virtual).
7. Lan, X, L. Luo, and **Y. Pokhrel**, Potential effects of climate change on historical streamflow and water temperature in the Southwest US, *AGU Fall Meeting 2021, Dec. 13-17*, New Orleans (Oral; Virtual).
8. Bagheri, O. and Y. Pokhrel, Impacts of Land Use and Land Cover Change on Terrestrial Water Cycle of the Amazon River Basin, *AGU Fall Meeting 2021, Dec. 13-17*, New Orleans (Oral; Virtual).
9. Shakya, Aashna, Y. Pokhrel et al., Spatiotemporal analysis of drought characteristics in Western Nepal using the Standardized Precipitation Index, *AGU Fall Meeting 2021, Dec. 13-17*, New Orleans (Oral; Virtual).
10. **Pokhrel, Y**. and the Co-authors: Terrestrial water storage under changing climate and implications on future droughts, EGU General Assembly 2021, online, 19–30 Apr 2021, EGU21-738 (Oral).
11. Boulange, J., Hanasaki, N., Yamazaki, D., and Pokhrel, Y.: Quantifying the effect of dams in reducing global flood exposure under climate change, EGU General Assembly 2021, online, 19–30 Apr 2021, EGU21-10453 (Oral).
12. Vanderkelen, I., van Lipzig, N. P. M., Sacks, W. J., Lawrence, D. M., Clark, M., Mizukami, N., **Pokhrel, Y.**, and Thiery, W.: The impact of global reservoir expansion on the present-day climate, EGU General Assembly 2021, online, 19–30 Apr 2021, EGU21-723 (Oral).
13. Satoh, Y., Shiogama, H., Hanasaki, N., **Pokhrel, Y.**, Boulange, J., Burek, P., Gosling, S., Grillakis, M., Koutroulis, A., Schmied, H., Thiery, W., and Yokohata, T.: Decomposing the uncertainties in global drought projection, EGU General Assembly 2021, online, 19–30 Apr 2021, EGU21-6780 (Oral).
14. Chaudhari, S., Brown, E., Quispe-Abad, R., Moran, E., Mueller, N., and **Pokhrel, Y.**: In-stream turbines for sustainable hydropower development in the Amazon river basin, EGU General Assembly 2021, online, 19–30 Apr 2021, EGU21-3781 (Oral).
15. Felfelani, F., **Y. Pokhrel**, D. Lawrence (2021), Representing Inter-cell Lateral Groundwater Flow and Aquifer Pumping in the Community Land Model, *CESM Land Model and Biogeochemistry Working Group Meeting*, Feb 23-25 (Virtual, Oral).

16. Vanderkelen, I., **Y. Pokhrel** et al. (2021), The impact of global reservoir expansion on the present-day climate, *CESM Land Model and Biogeochemistry Working Group Meeting*, Feb 23-25 (Virtual, Oral).
17. Vanderkelen, Inne, Nicole P. M. van Lipzig, David M. Lawrence, William B. Sacks, Martyn Clark, Naoki Mizukami, **Yadu Pokhrel**, Wim Thiery (2021), The impact of global reservoir expansion on the present day climate, *EGU General Assembly, 19-30 April, 2021*. (Virtual)
18. Felfelani, F. and **Y. Pokhrel** (2021), Inter-model agreements and differences in reproducing global terrestrial hydrologic fluxes and storages in ISIMIP simulations, I*nter-sector Impact Model Intercomparison Project (ISIMIP) Workshop*, Jan 11, 2021. (Virtual; oral)
19. **Pokhrel, Y.** et al. (2020), Impacts of climate change on global terrestrial water storage and the implications on future droughts, *American Geophysical Union (AGU) Fall Meeting* , Dec. 7-11(Virtual).
20. Felfelani, F. and **Y. Pokhrel** (2020), Large-scale riverine reaction and transport of anthropogenic nitrate in the Community Land Model (2020), *American Geophysical Union (AGU) Fall Meeting* , Dec. 7-11(Virtual; Poster).
21. Shin, S. and **Y. Pokhrel** (2020), Compounded Effects of Climate Change and Cascade Hydropower Development on the Flood and Sediment Regimes in the Mekong River Basin, *American Geophysical Union (AGU) Fall Meeting* , Dec. 7-11(Virtual; Poster).
22. Chaidhari, S. and **Y. Pokhrel** (2020), Assessing the hydrological impacts of hydropower boom in the Amazon River basin using high resolution modeling, *American Geophysical Union (AGU) Fall Meeting* , Dec. 7-11(Virtual).
23. Bagheri, O. and **Y. Pokhrel** (2020), Hydrological thresholds for sustainable land use and land cover change in Amazon River basin, *American Geophysical Union (AGU) Fall Meeting* , Dec. 7-11(Virtual; Poster).
24. Kabir, T. and **Y. Pokhrel** (2020), Hydrologic Sensitivity to Climate Forcing and Spatial Resolution: A Study on the Mekong River Basin Using the Community Land Model (CLM5.0), *American Geophysical Union (AGU) Fall Meeting* , Dec. 7-11(Virtual; Poster).
25. Yokohata, T., T. Kinoshita, G. Sakurai, **Y. Pokhrel** et al. (2020), Future projection of land use change and its impacts on water re-sources and ecosystems investigated with MIROC-INTEG-LAND: a global bio-geophysical land surface model with human components, *American Geophysical Union (AGU) Fall Meeting* , Dec. 7-11(Virtual).
26. Vanderkelen, I., N.P.M. van Lizig, D. Lawrence, B. Sacks, M. Clark, N. Mizukami, A. van Grinsven, **Y. Pokhrel**, and W. Theiry (2020), The impact of global reservoir expansion on the present day climate, *American Geophysical Union (AGU) Fall Meeting* , Dec. 7-11(Virtual).
27. Telteu, C-E., **Y. Pokhrel**, et al. (2020), Similarities and differences among ten global water models in modelling water use, *Japan Geoscience Union (JpGU) 2020*, (Virtual, May 2020).
28. Satoh, Y., T. Yokohata, **Y. Pokhrel**, et al. (2020), Multi-type global drought projection using multi-model hydrological simulations, *Japan Geoscience Union (JpGU)*, (Virtual, May 2020).
29. Yokohata, T., **Y. Pokhrel** et al. (2020), Impacts of climate and socio-economic changes on water, food, bio-energy and land use investigated with an integrated land surface model (MIROC-INTEG), *Japan Geoscience Union (JpGU)*, (Virtual, May 2020).
30. Elkouk, A, Z.E.A. El Morjani, **Y. Pokhrel**, A. Chehbouni, A. Sifeddine, and L. Bouchaou (2020), *The cross-sectoral ISIMIP workshop 2020, Potsdam Institute for Climate Impact Research (PIK), Germany* (June 2020).
31. **Pokhrel, Y.** (2020), Global Terrestrial Water Storage and Drought Severity under Climate Change, *The cross-sectoral ISIMIP workshop 2020, Potsdam Institute for Climate Impact Research (PIK), Germany* (June 2020).
32. Lin, Z., F. Zhang, **Y. Pokhrel**, S. Shin, and J. Qi (2020), Influence of hydropower dams on greenhouse gas emission from the seasonally-inundated forest in the Tonle Sap Lake floodplain, Cambodia, *ASPRS Annual Conference at Geo Week* (Virtual).

33. Vanderkelen, I., **Y. Pokhrel**, et al. (2020), Global heat uptake by inland waters, *10th iEMSs Conference 2020*, Brussels, Belgium.
34. Vanderkelen, I., **Y. Pokhrel**, et al. (2020), Global heat uptake by inland waters, *European Geophysical Union (EGU) Assembly*, (Virtual, April 2020). https://doi.org/10.5194/egusphere-egu2020-18875
35. Telteu, C-E., **Y. Pokhrel** et al. (2020), Similarities and differences among fifteen global water models in simulating the vertical water balance, *European Geophysical Union (EGU) Assembly 2020*, (Virtual, April 2020). https://doi.org/10.5194/egusphere-egu2020-7549
36. Satoh, Y., T. Yokohata, **Y. Pokhrel** et al. (2020), Multi-type global drought projection using multi-model hydrological simulations, *European Geophysical Union (EGU) Assembly*, (Virtual). https://doi.org/10.5194/egusphere-egu2020-10748
37. Yokohata, Tokuta, T. Kinoshita, G. Sakurai, **Y. Pokhrel**, et al. (2019), Future projection of water, food, bio-energy, ecosystem and land investigated with an integrated Earth System Model (MIROC-INTEG), *Integrated Assessment Modeling Consortium (IAMC)*, Tokyo (Dec. 2019).
38. Felfelani, F. and Y. Pokhrel (2019), Implementing a prognostic groundwater scheme in the Community Land Model version 5, *AGU Fall Meeting*, 9-13 Dec, San Francisco. (Oral)
39. Hanasaki, N., S. Yoshikawa, Y. Pokhrel, and S. Kanae (2019), An investigation of the thresholds for two conventional water scarcity indicators using a global hydrological model with human activities, *AGU Fall Meeting*, 9-13 Dec, San Francisco. (Poster)
40. Telteu, C.E., **Y. Pokhrel**, and Co-authors (2019), Co-design of a Water Cycle Diagram to Discover Similarities and Differences among Global Water Impact Models, *AGU Fall Meeting*, 9-13 Dec, San Francisco. (Poster)
41. Kabir, T. and **Y. Pokhrel** (2019), Implication of Terrestrial Water Storage Changes on Hydrological Extremes in the Mekong River Basin, *AGU Fall Meeting*, 9-13 Dec, San Francisco. (Poster)
42. Chaudhari, S., **Y. Pokhrel**, E. Brown, R. Quispe-Abad, and N. Mueller (2019), Sustainable hydropower development in the Amazon river basin using In-stream Turbine technology, *American Geophysical Union, Fall Meeting*, 9-13 Dec, San Francisco. (Poster)
43. Nguyen, Khanh, Vu Ngoc Ut, and **Yadu Pokhrel** (2019), Effects of dam construction and ENSO on the relationship between hydrology, sediment transport, and fisheries in the Lower Mekong River basin, 9th ASEAN-FEN International Fisheries Symposium, Kuala Lumpur, Malaysia, 18-21 November (Oral).
44. Chaudhari, S., E. Brown, R. Quispe-Abad, E. Moran, N. Mueller, and **Y. Pokhrel** (2019), Sustainable hydropower development in the Amazon river basin using instream turbine technology, *Environmental Science and Policy Program (ESPP) Fall Symposium*, Michigan State University (Oct 28) (Oral).
45. Yokohata, T., Y. Satoh, T. Kinoshita, G. Sakurai, **Y. Pokhrel,** A. Ito, M. Okada, E. Kato, N. Hanasaki, T. Nitta and S. Emori, Interaction between water, food, bio-energy, land use in earth system investigated with MIROC-INTEG: a global land surface hydrological model with human components, *16th Annual Meeting of the Asia Oceania Geoscience Society (AOGS), Singapore*, 28 Jul-2 Aug, 2019 (Oral).
46. **Pokhrel, Y.,** S. Shin, S. Chaudhari, J. Qi, and D. Yamazaki, Interruption of Flood Dynamics due to Flow Regulation by Dams in Large River Basins, *27th IUGG General Assembly of the International Union of Geodesy and Geophysics (IUGG), Montreal*, 8-18 July 2019 (Oral).
47. **Pokhrel, Y.,** Variations in Global Terrestrial Water Storage under Climate Change and Implications on Sea Level Rise, *ISIMIP Workshop, Paris, France*, 3-7 June 2019 (Oral).
48. Gosling, Simon N., Jamal Zaherpour, Hannes Müller Schmied, Jacob Schewe, Nick Mount, Fred Hattermann, Rutger Dankers, Jinfeng Chang, Stephanie Eisner, Dieter Gerten, Lukas

Gudmundsson, Ingjerd Haddeland, Naota Hanasaki, Hyungjun Kim, Guoyong Leng, Junguo Liu, Yoshimitsu Masaki, Catherine Morfopoulos, René Orth, Taikan Oki, **Yadu Pokhrel**, Yusuke Satoh, Tobias Stacke, Ted I E Veldkamp, Yoshihide Wada and Fang Zhao, Evaluation of state-of-the-art global water models, *ISIMIP Workshop, Paris, France*, 3-7 June 2019 (Oral).

49. Satoh, Yusuke, J. Boulange, N. Hanasaki, K. Takata, **Y. Pokhrel**, T. Veldkamp, P. Burek, and T. Yokohata, Understanding the centennial-scale human-natural interactions using an integrated terrestrial model MIROC-INTEG under ISIMIP2b, *Japan Geoscience Union Meeting 2019, Makuhari, Japan*, May 2019 (Oral).
50. Yokohata, T, Y. Satoh, T. Kinoshita, G. Sakurai, **Y. Pokhrel,** A. Ito, E. Kato, M. Okada, N. Hanasaki, T. Nitta, and S. Emori, Future projection of global climate, water, food, bio-energy, and land investigated with MIROC-INTEG: a global bio-geophysical land surface model with human components, *Japan Geoscience Union Meeting 2019, Makuhari, Japan* (Oral).
51. Satoh, Y., J. Boulange, N. Hanasaki, **Y. Pokhrel**, T.I.E. Veldkamp, P. Burek, and T. Yokohata (2019), Understanding the centennial-scale human-natural interactions using an integrated terrestrial model MIROC-INTEG under ISIMIP2b, *European Geophysical Union (EGU) General Assembly 2019*, Vienna, Austria, 7-12 April, 2019 (Poster).
52. Telteu, C., H. M. Schmied, S. N. Gosling, W. Thiery, **Y. Pokhrel**, M. Grillakis, A. Koutroulis, Y. Satoh, Y. Wada, J. Boulange, L. P. Seaby, T. Stacke, X. Liu, A. Ducharne, G. Leng, P. Burek, T. Trautmann, J. Schewe, F. Zhao, A. Shmurak (2019), Understanding each other's models: a standard representation of global water models to support intercomparison, development, and communication, *European Geophysical Union (EGU) General Assembly 2019*, Vienna, Austria, 7-12 April, 2019 (Oral).
53. Yokohata, T., T. Kinoshita, G. Sakurai, **Y. Pokhrel**, Y. Sato, A. Ito, E. Kato, M. Okada, N. Hanasaki, T. Nitta, and S. Emori (2019), Interconnection of water, food, bio-energy, ecosystem and land investi-gated with MIROC-INTEG: a global bio-geophysical land surface model with human components, *European Geophysical Union (EGU) General Assembly 2019*, Vienna, Austria, 7-12 April, 2019 (Oral).
54. Gudmundsson, L., H. Do, S. Gosling, M. Grillakis, S. Seneviratne, A. Koutrouli, M. Leonard, J. Liu, H. Mueller, L. Papadimitriou, **Y. Pokhrel**, J. Schewe, W. Thiery, S. Westra, X. Zhang, and F. Zhao (2019) Detection of Human influence in global accounts of observed indicators of low, mean and high streamflow, *European Geophysical Union (EGU) General Assembly 2019*, Vienna, Austria, 7-12 April, 2019 (Oral).
55. **Pokhrel Y.**, S. Shin, Z. Lin, D. Yamazaki, and J. Qi (2018), Changes in Flood Dynamics in the Lower Mekong River Basin Due to Upstream Flow Regulation, *AGU Fall Meeting, Washington DC (December 2018)* (Poster).
56. Burbano, M. and **Y. Pokhrel** (2018), Water Resource Sustainability and Food Security in the Lower Mekong River Basin: Alternative Diets to Fish Protein Loss Caused by Dam Construction, *AGU Fall Meeting, Washington DC (December 2018)*. (Poster)
57. Felfelani, F., **Y. Pokhrel**, K. Guan, and D. Lawrence (2018), Utilizing SMAP Soil Moisture Data to Improve Irrigation Parameterizations in Land Surface Models, *AGU Fall Meeting, Washington DC (December 2018)* (Poster).
58. Shin, S. and **Y. Pokhrel** (2018), Technical Challenges in the Sophistication of Reservoir Operation Schemes in Hyper-resolution Global Hydrological Modeling, *AGU Fall Meeting, Washington DC (December 2018).* (Oral)
59. Peng, B., K. Guan, M. Chen, D. Lawrence, **Y. Pokhrel**, D. Lombardozzi (2018), Representing Agricultural Systems in Earth System Model: implementation, calibration, and multi-scale validation of CLM-AgSys, *AGU Fall Meeting, Washington DC (December 2018)*. (Oral)

60. Chaudhari, S. and **Y. Pokhrel** (2018), Examining decadal hydrologic shifts in the Amazon basin using Budyko framework, *AGU Fall Meeting, Washington DC (December 2018)* (Poster).
61. **Pokhrel, Y.**, Potential effects of dams on river-floodplain hydrodynamics in the Lower Mekong (2018), *Asia Water-Energy-Food (WEF) Nexus and Land Use/Land Cover Change Workshop*, 13-18 August, 2018, Vientiane, Laos (Oral).
62. **Pokhrel, Y.** (2018), Humans, Water, and Climate: Modeling Water-Energy-Food (WEF) System in Managed Landscapes, *Curriculum Development Workshop, Kalamazoo Valley Community College, Michigan* (August 2018) (Lecture).
63. Dahal, Piyush, J. Panthi, **Y. Pokhrel**, Rainwater harvesting suitability map using free data and tools - An application in mountainous basin in the Himalayas, *MtnClim 2018,* September 17 – 21, 2018 in Gothic, Colorado (Poster).
64. **Pokhrel, Y**., D. Yamazaki, Z. Lin, and J. Qi, Hydro-Ecological Impacts of the Changing Flood Pulse Dynamics in the Mekong River Basin, Asia Oceania Geoscience Society (AOGS) 2018, Honolulu, June 5-9, 2018 (Oral).
65. Yokohata, T., G. Sakurai, T. Kinoshita, **Y. Pokhrel**, Y. Satoh, A. Ito, N. Hanasaki, T. Nitta, Y. Masaki, M. Okada, and S. Emori, Interaction of climate, ecosystem, water resources, and land use investigated with Integrated Terrestrial Model: a bio-geophysical land surface model with human component, Japan Geoscience Union Meeting 2018, Makuhari, Japan, May 2018; https://confit.atlas.jp/guide/event/jpgu2018/subject/HCG21-P07/advanced. (Oral)
66. **Pokhrel, Y.**, Effects of Dams and Land Use Change on Surface Water Dynamics in the Mekong, NASA Land Cover and Land Use Change (LCLUC) Meeting, April 3-5, 2018, Gaithersburg, Maryland (Oral).
67. **Pokhrel, Y.** (2017), Modeling and Remote Sensing of Surface Water Dynamics in the Mekong River Basin, *AGU Fall Meeting 2017*, New Orleans, Dec 2017 (Poster).
68. Felfelani, F., **Y. Pokhrel** (2017), Improving irrigation and groundwater parameterizations in the Community Land Model (CLM) using in-situ observations and satellite data, *AGU Fall Meeting 2017*, New Orleans, Dec 2017 (Oral).
69. Shin, S., **Y. Pokhrel** (2017), High resolution modeling of reservoir storage and extent dynamics at the continental scale, *AGU Fall Meeting 2017*, New Orleans, Dec 2017 (Poster).
70. Chaudhari, S. and **Y. Pokhrel** (2017), Understanding the Amazon Hydrology for Sustainable Hydropower Development, *AGU Fall Meeting 2017*, New Orleans, Dec 2017 (Poster).
71. Zhao, F., Co-authors**,** Y. Pokhrel, and Co-authors (2017), The critical role of the routing scheme in simulating peak river discharge in global hydrological models, *AGU 2017, New Orleans, Dec 2017* (Oral).
72. Tokuta Yokohata, Akihiko Ito, Naota Hanasaki, Gen Sakurai, Tsuguki Kinoshita, Toshichika Iizumi, Yoshimitsu Masaki, Tomoko Nitta, **Yadu Pokhrel**, and Seita Emori (2017), Climate change risk assessment by Integrated Terrestrial Model: a bio-geophysical land surface model with human components, *Japan Geoscience Union, Makunari, Japan, May 2017*. (Oral)
73. Felfelani, F. and **Y. Pokhrel** (2017), Groundwater over-exploitation and terrestrial water storage change: A global analysis using hydrological models and GRACE, *Japan Geoscience Union, Makunari, Japan, May 2017*. (Poster)
74. **Pokhrel, Y.**, T. Yamada, S. Sanghoon (2017), Modeling Impacts of Irrigation on Land Surface Hydrology and Subseasonal Forecast, *Hydrology Delivers Earth System Science to Society (HESSS-4) Conference, Tokyo, Japan (May 17, 2017). (Oral)*
75. Yeh, P. J-F., M.-H. Lo, and **Y. Pokhrel**, Estimation Of Atmospheric Vapor Convergence Based On Grace Water Storage And Streamflow Data Over Global River Basins, *Asia Oceania Geosciences Society (AOGS), 14th Annual Meeting, Singapore, August 2017*. (Oral)

76. Hanasaki, N., S. Yoshikawa, **Y. Pokhrel**, and S. Kanae, Specifying sources of humans' water abstraction by using the H08 global hydrological model, *HESSS-4 Conference, Tokyo, May 2017*. (Oral)
77. Zhao, F., Co-authores, **Y. Pokhrel**, Co-authors, Choice of routing scheme considerably influences peak river discharge simulation in global hydrological models, *European Geoscience Union*, Vienna, Austria, April, 2017.
78. Veldkamp, T., **Y. Pokhrel** et al., Human impact parameterization in global hydrological models improves estimates of monthly discharges and hydrological extremes: a multi-model validation study, *European Geoscience Union*, Vienna, Austria, April, 2017.
79. Felfelani, F., **Y. Pokhrel**, Human-induced terrestrial water storage change: A global analysis using hydrological models and GRACE, *AGU Fall Meeting*, San Francisco, Dec. 2016.
80. Shin, S., **Y. Pokhrel**, High-resolution Continental Scale Land Surface Model incorporating Land-water Management in United States, *AGU Fall Meeting*, San Francisco, Dec. 2016.
81. Veldkamp, T.I.E., Y. Wada, Y. Satoh, **Y. Pokhrel**, Y. Masaki, P. Döll, S. Ostberg, T. Oki, S. N. Gosling, J. Liu, J.C.J.H. Aerts, and P.J. Ward, Assessing the trends of human impacts on global water scarcity in the late 20th and early 21st century: a multi-model and multi-forcing analysis, *AGU Fall Meeting*, San Francisco, Dec. 2016.
82. Chen, Y., D. Lu, J. Huang, L. Luo, **Y. Pokhrel**, K. Deb, A new approach to map cropland irrigation distribution using time series remote sensing and ancillary data in a heterogeneous semi-arid and arid region: a case study in Heihe watershed, *AGU Fall Meeting*, San Francisco, Dec. 2016.
83. Yeh, P.J.-F., M.-H. Lo, **Y. Pokhrel**, X. Peng, Correcting reanalysis atmospheric vapor convergence data based on GRACE water storage and observed streamflow data, *AGU Fall Meeting*, San Francisco, Dec. 2016.
84. Lu, D., Y. Chen, E. Moran, M. Batistella, L. Luo, **Y. Pokhrel**, K. Deb, Mapping cropland and crop-type distribution using time series MODIS data, *AGU Fall Meeting*, San Francisco, Dec. 2016.
85. **Pokhrel, Y.N.**, L. Luo, K. Deb, D. Lu, Regional Human-climate Interactions in Semi-arid Environment Using a Climate Model, Remote Sensing, and Machine Learning, *WaterCUBE Workshop*, Sep 29, 2016, Michigan State University.
86. **Pokhrel, Y.N.**, F. Felfelani, Terrestrial Water Storage Change over Global River Basins and Aquifer Systems, *Eric Wood Symposium, Princeton University*, June 2016.
87. **Pokhrel, Y.N.**, Natural and Human-induced Changes in Terrestrial Water Storage over the Indian Subcontinent, *Japan Geosciences Union*, 2016 (Makuhari, Japan).
88. Yokohata, Tokuta, Akihiko Ito, Naota Hanasaki, Gen Sakurai, Tsuguki Kinoshita, Toshichka Iizumi, Yoshimitsu Masaki, Tomoko Nitta, **Yadu Pokhrel**, Seita Emori, Development and application of land and ocean biogeochemistry components of Earth system models, *Japan Geosciences Union*, 2016 (Makuhari, Japan).
89. **Pokhrel, Y.N.**, Modeling and remote sensing of human induced water cycle change, *European Geophysical Union General Assembly*, Vienna, 2016.
90. Felfelani F. and **Y.N. Pokhrel**, Development of a continental-scale land hydrology model with human impacts, *Michigan State University Graduate Symposium* (2016), March 2016.
91. Shin S. and **Y.N. Pokhrel**, Development of a continental-scale land hydrology model with human impacts, *Michigan State University Graduate Symposium* (2016), March 2016.
92. **Pokhrel, Y.N.** and G. Miguez-Macho, Modeling water cycle change in the U.S.: Climate versus human drivers, *AGU Fall Meeting*, San Francisco, *2015*.
93. **Pokhrel, Y.N.**, G. Miguez-Macho, Climate versus human drivers of water cycle change: A modeling study, 12th Annual Meeting of the Asia Oceanic Geosciences Society, 2015 (Singapore).

94. Takeuchi, D., T.-J Yamada, **Y. N., Pokhrel**, C.R. Ferguson, Analysis of the human activities influence on the water cycle, Asia Oceanic Geosciences Society, 2015 (Singapore).
95. Satoh, Y., K. Yoshimura, Y. **Pokhrel**, H. Kim, T. Oki, The shift in onset of unprecedented hydrological drought as a response to different levels of global warming, European Geophysical Union, 2015 (Vienna, Austria).
96. **Pokhrel, Y. N.**, Y. Fan, G. Miguez-Macho, Potential Hydrologic Changes in the Amazon By the End of the 21st Century and the Groundwater Buffer, *AGU Fall Meeting*, San Francisco, *2014*.
97. Satoh, Y., K. Yoshimura, **Y. Pokhrel**, H. Kim, T. Oki, Time series analysis of hydrological drought under climate change with anthropogenic water management, *AGU Fall Meeting*, San Francisco, *2014*.
98. T. Yamada, **Y. Pokhrel**, N. Hanasaki, S. Koirala, P. Yeh, S. Kanae, and T. Oki, Global Hydrological Cycle Associated with Human Impact Modules in a Global Climate Model, 11th Annual Meeting of the Asia Oceanic Geosciences Society (AOGS), Sapporo, Japan, 28 Jul-01Aug, 2014.
99. P. J. Yeh, **Y. N. Pokhrel**, S. Koirala, Terrestrial Water Storage Variations from a Global Land Surface Model Simulation with the Anthropogenic Impacts on Hydrology, *AGU Fall Meeting* 2013.
100. Kanae, S., S. Yoshikawa, **Y. Pokhrel**, N. Hanasaki, and T. Oki, The applications of virtual water to managing water for food and energy security, *IISD-GWSP Conference on the Water-Energy-Food Security Nexus*, Winnepeg, Manitoba, Canada (May 2012).
101. **Pokhrel, Y. N.**, Y. Fan, G. Miguez-Macho, P. Yeh, S. Han, Role of surface water and groundwater on terrestrial water storage variation in the Amazon, *AGU Fall Meeting 2012*, San Francisco, USA, 2012.
102. Oki, T., **Y. N. Pokhrel**, and N. Hanasaki, Non-sustainable water use: Modeling the coupled Social Ecological Systems and Global Hydrological Cycles. Planet Under Pressure, March 26-29, 2012, London, UK.
103. Emori, S., T. Yokohata, A. Ito, N. Hanasaki, **Y. N. Pokhrel**, Y. Sato, K. Yoshimura, T. Oki, E. Kato, K. Takahashi, Y. Yamagata, Development of a terrestrial integrated model for the sustainable utilization strategy of land-water-ecosystems, *AGU Fall Meeting 2012*, San Francisco, USA, 2012.
104. Kure, S., T. Yamada, **Y. N. Pokhrel**, Development and Application of a Hybrid Downscaling Method over Hokkaido Region, Japan, *AGU Fall Meeting 2012*, San Francisco, USA, 2012.
105. Satoh, Y., K. Yoshimura, **Y. N. Pokhrel**, S. Koirala, A. Okazaki, H. Kim, T. Oki, Impact of Climate Change on drought with terrestrial hydrologic simulation considering anthropogenic factors, *AGU Fall Meeting 2012*, San Francisco, USA, 2012.
106. Inatsu, M., T. J. Yamada, T. Sato, K. Nakamura, N. Matsuoka, A. Komatsu, **Y. N. Pokhrel**, A new project on development and application of comprehensive downscaling methods over Hokkaido. European Geophysical Union, General Assembly 2012, Vienna, Austria, 22–27 April 2012.
107. Yamazaki, D., **Y. Pokhrel**, H. Kim, S. Kanae, and T. Oki, Impact of climate change on the flood risks in the Mekong River basin: prediction of future flooding extent using a continental-scale hydrodynamics model, European Geosciences Union (EGU), 2011 (Abstract).
108. **Pokhrel, Y.**, S. Koirala, T. Yamada, N. Hanasaki, P. Yeh, K. Yoshimura, S. Kanae, & T. Oki. Simulating the effects of irrigation pumping on global groundwater depletion. *WCRP Open Science Conference*, 24-28 October 2011, Denver, Colorado, USA.

109. **Pokhrel, Y. N.**, S. Koirala, T. Yamada, N. Hanasaki, P J.-F. Yeh, K. Yoshimura, S. Kanae, T. Oki, Modeling Irrigation Pumping and Groundwater Depletion in the High Plains Aquifer, USA, *AGU Fall Meeting*, 2011, San Francisco, USA.

110. **Pokhrel, Y. N.**, Human transformation of the terrestrial water cycle. Hokkaido University Sustainability Week, 2011, Nov. 5, 2011, Sapporo, Japan.

111. **Pokhrel, Y. N.**, N. Hanasaki, and T. Oki, Integrating an irrigation scheme into a Land Surface Model, JSPS International Conference on Climate Changes in Monsoon Asia (CCMA), Bangkok, Jan 2011.

112. **Pokhrel Y.**, N. Hanasaki, S. Koirala, S. Kanae & T. Oki. Incorporating anthropogenic water flow assessment modules into a Land Surface Model. *2nd International Conference on Hydrology delivers Earth System Science to Society*. Tokyo, Japan, June 2010.

113. **Pokhrel, Y.,** N. Hanasaki, S. Koirala, S. Kanae and T. Oki. Assessing the Influence of Human Activities on Global Water Resources Using an Advanced Land Surface Model. *AGU Fall Meeting*, San Francisco, 2010.

114. Yeh, P. J.-F, M. Yuan, H. Kim, S. Koirala, **Y. Pokhrel**, T. Oki, 2010, Characterization of Long-term Atmospheric and Terrestrial Hydrological Cycle Change Using Multiple Data Sources, *AGU Fall Meeting*, 13-17 Dec. 2010, San Francisco, USA.

INSTITUTIONAL SERVICE (at MSU)

Committee Member:

2021-present	Graduate Program Council (Environmental Science and Policy Program).
2021-present	Faculty Search Committee (Civil and Environmental Engineering department – CEE, Environmental Chemistry position).
2021-present	Advisory Committee, CEE Department.
2119-2020	Faculty Search Committee (Biosystems Engineering and CEE).
2019-2021	Computing Committee, College of Engineering.
2019-2021	Advisory Committee, CEE Department.
2019	Search Committee for Hydrology Teaching Specialist, Civil and Environmental Engineering (CEE) Department.
2018-2019	Web Committee, CEE Department.
2017-2018	Search Committee for the Director, Environmental Science and Policy Program (ESPP).
2017-2019	Faculty Advisory Committee (FAC), Environmental Science and Policy Program (ESPP).
Fall 2017	Undergraduate Curriculum Committee (UGCC), Civil and Environmental Engineering (CEE) Department.
2015-2016	Search committee for the chair of the Department of Civil and Environmental Engineering.

Judge/Evaluator/Panelist:

2015-2019	MSU Engineering Graduate Student Symposium.
2017-2018	MSU ESPP Research Symposium.
2018	MSU Mid-SURE Undergraduate Research Symposium.

Outreach:

2016-2019	Engineering Outreach Program (The High School Engineering Institute – HSEI).

Others:

2019	NSF CAREER Proposal Panelist (Office of Vice President for Research)
2019	Panelist for new faculty orientation.

SERVICE TO THE PROFESSION AND COMMUNITY

- **Proposal Reviewer/Panelist:**
  - 2021: NSF Hydrologic Sciences Program CAREER Proposal Panel.
  - 2019, 2020, 2021: NSF Proposal reviewer for Hydrologic Sciences program.
  - 2020: NSF panelist for Hydrologic Sciences program.
  - 2020: Panelist for USAID PEER program.
  - 2018: NSF proposal reviewer for Information and Intelligent Systems (IIS), Big Data program;
  - 2018: NSF CAREER proposal reviewer for Hydrologic Sciences program;
  - 2018: NSF CAREER proposal reviewer for CBET program;
  - 2018: proposal reviewer for the Natural Environment Research Council (NERC), the UK;
  - 2017: NSF proposal reviewer for Hydrologic Sciences program;
  - 2016: National Science Foundation (NSF) CAREER proposal reviewer (GSS program);
  - 2016: Proposal reviewer for German Federal Funding Program;
  - 2015: National Aeronautics and Space Administration (NASA) panelist for GRACE-FO.

- **Reviewer** for major disciplinary and interdisciplinary scientific journals, including:
  1. *Proceedings of the National Academy of Sciences (PNAS)*
  2. *Nature Climate Change*
  3. *Nature Sustainability*
  4. *Nature Energy*
  5. Science Advances
  6. *Water Resources Research*
  7. *Geophysical Research Letters*
  8. *Journal of Hydrology*
  9. *Journal of Hydrology – Regional Studies*
  10. *Journal of Geophysical Research-Atmospheres*
  11. *Climate Dynamics*
  12. *Climatic Change*
  13. *Journal of Hydrometeorology*
  14. *Hydrology and Earth System Sciences (HESS)*
  15. *Journal of Applied Meteorology and Climatology*
  16. *Earth System Dynamics*
  17. *Journal of Water Resources and Planning*
  18. *Ecohydrology*
  19. *Ecosystem Services*
  20. *Stochastic Environmental Research and Risk Assessment*
  21. *Remote Sensing*
  22. *Journal of Global Environmental Engineering*
  23. *Geoscientific Model Development*
  24. *Environmental Research Letters*
  25. *AGU Book Series*
  26. *Sustainability*
  27. *Journal of Modeling Advances in Earth Systems (JAMES)*
  28. *Springer-published Book Chapters*
  29. *Earth's Future*
  30. *Water*

31. *Scientific Reports*

- **Session Convener/Chair:**
  - ***AGU Fall Meeting 2021***, Oral and poster sessions on " Understanding Biogeochemical and Hydrological Processes in the Laurentian Great Lakes Basin Across Scales" (Hybrid).
  - ***AGU Fall Meeting 2020***, Oral and poster sessions on "Advances in Modeling and Remote Sensing of Integrated Climate–Hydrology–Human Interactions Toward Sustainable Food–Energy–Water Systems" (Virtual).
  - ***JpGU-AGU Joint Meeting 2020,*** Session on "Interdisciplinary approach to support climate change adaptation measures in regional scale", May 25, 2020 (Tokyo, Japan).
  - ***AGU Fall Meeting-2018***, Session on " H13A: Advances in Large-Scale Modeling and Remote Sensing of Climate–Hydrology–Human Interactions Toward Sustainable Land–Water Resource Management ", 2018 (*chaired two oral and one poster sessions*).
  - ***AGU Fall Meeting-2017***, Session on "Progress in Large-Scale Modeling and Remote Sensing of the Water Cycle Toward Better Human Water Management", 2017.
  - **JpGU-AGU Joint Meeting-2017**, Session on "Sustainable global groundwater management for human society", Tokyo, 2017.
  - ***AGU Fall Meeting-2016***, Session on "Progress in Water Cycle from Satellite Data and Modeling at Global, Regional and Catchment Scales in a Changing World", 2016.
  - ***AGU Fall Meeting-2015***, Session on "Remote Sensing and Modeling of Terrestrial Water Cycle in a Changing World", 2015 (*chaired one oral and two poster sessions*).
  - ***AGU Fall Meeting-2014***, Session on "Remote Sensing and Modeling of Terrestrial Water Cycle" (*co-chaired two oral and two poster sessions*).

- **Judge/Evaluator***:*
  - Award Committee Member, American Geophysical Union, Natural Hazards Graduate Research Award, **2015 and 2016**.
  - American Geophysical Union, Outstanding Student Presentation Award (OSPA) Judge **2014, 2015, 2016, 2017, 2018, 2019, 2020**.
  - Asian Oceania Geosciences Society, 13th Annual Meeting (Beijing, China) Student Poster Judge, **2016** and **2018**.

- **Project Team Member**:
  - Participating as one of the more-than-a-dozen global/regional modelers for the Inter-Sectoral Impact Model Intercomparison Project – 2 (ISIMIP2) (coordinated by PIK), a community-driven modeling effort with the goal of providing cross-sectoral global impact assessments (Funded by the European Union); Received travel funds to attend the project meeting in Zurich, Switzerland in Oct, 2015, Potsdam, Germany in October 2017, and Frankfurt, Germany in August 2018.

- **Outreach**:
  - Contribution to the "Superheroes of Science", Purdue University Outreach Program: "*Understanding droughts. Yes, there are going to be more!*", April 2021.
  - Contribution to the Michigan State University "High School Engineering institute", College of Engineering.
  - Contributed to the "**Curriculum Workshop**" for Community College Faculty on "**The Global Interface of Energy, Water, and Climate Change**" organized by the Midwest Institute at Kalamazoo Valley Community College (August 2018).

PROFESSIONAL AFFILIATIONS/MEMBERSHIPS

- **Member (Michigan State University Representative)** of the "*Consortium of Universities for the Advancement of Hydrologic Science*" (CUAHSI).

- **Member**, *Global Soil Wetness Project – Phase 3* (GSWP-3).
- **Member**, Working Group for "*Science requirements for the next GRACE satellite mission in hydrology*".
- **Member**, American Geophysical Union (**AGU**), European Geosciences Union (**EGU**), Japan Society of Civil Engineers (**JSCE**).

NEWS COVERAGE AND MEDIA INTERVIEWS

- Interview with Luisa Weiwgorra (Fox47, Lansing) about climate change in the Great Lakes region.
- Interview with mLive.com (Sheri McWhirter) about climate change message in the movie "Don't Look Up" that featured Michigan State University. The news was highlighted in many Michigan-based media outlets including the Flint Journal.
- Interview with Sarah Grimmer on "Climate change and rainfall extremes in Michigan", Fox47 News.
- Interview with James Dinneen on "Retrofitting dams and in-stream turbines", Yale 360.
- Interview with Andreas von Bubnoff, Germany: Mekong dams and downstream impacts.
- **News on 2021 Nature Climate Change Paper**: The Conversation, ABC News Australia, AFP France 24, Science Daily, WLNS TV Lansing, World Economic Forum, The Hindu Times, and **>130 other international outlets**.
    - TV Interview @ ABC News.
    - TV Coverage @ WLNS News, Michigan.
    - Coverage by many dozen state/local newspapers across the US.
    - Interviewed by numerous science and mainstream media outlets including NY Times.
- **BBC Radio Interview** (2018) on Mekong Flood Paper in Scientific Reports.
- **New on NSF CAREER Award: MSU Today.**
- **News on Mekong Flood Paper in Scientific Reports (2018)**: MSU Today; Science Daily; Phys.org.
- **News on Nature Communications Paper (**Co-authored): Science Daily; Phys.org.
- Contribution to *Technology Century Magazine*, Detroit (2015): "Groundwater Extremes" (page 23).
- **News on 2012 Nature Geoscience Paper:** The Guardian; Nature News; ABC Science; Scientific American; British Ecological Society; Japan Times; Nature Asia; The China Post; Zee News India; WWF Panda.org; Earthweek.com; News24.com; Water Conservation, South Africa; Climate Himalaya.

COMPUTATIONAL SKILLS

- **Numerical Computing:** Parallel Computing using High Performance Computing Systems; Advanced Data Analysis and Visualization using Python, Spyder, GrADS, and ArcGIS.
- **Operating System:** Unix/Linux, Windows, Mac OS-X.
- **Server Administration:** Unix/Linux.
- **Programming:** Fortran, Python, Shell, MATLAB.
- **Others:** ArcGIS, GrADS, Ferret, MS Office, LaTeX, Web Design Software, Photoshop, Adobe Illustrator.
- **Models and Other Research/Teaching Tools:** Community Land Model (CLM), MATSIRO Land Surface Model, Leaf-Hydro-Flood, CaMa-Flood Hydrodynamic model, Groundwater Modeling System (GMS) and MODFLOW, EPANET.

LANGUAGE SKILLS

- Nepali (Native), English, Japanese, and Hindi.