

## Curriculum Vitae

### PAOLO D'ODORICO

Thomas J. Graff Professor of Water Resources  
Department of Environmental Science, Policy, and Management  
Department of Civil and Environmental Engineering  
University of California, Berkeley  
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#### Education

May 1998 Ph.D., Hydraulic Engineering, University of Padova, Italy.  
March 1994 M.S. (Laurea), Civil Engineering, University of Padova, Italy.

#### Academic Appointments

2021- Thomas J. Graff Endowed Chair in the College of Natural Resources, University of California, Berkeley.  
2019-2022 Chair, Department of Environmental Science, Policy, Management, University of California, Berkeley, USA.  
2018-2019 Chair, Ecosystem Science Division in the Environmental Science, Policy, Management Department, University of California, Berkeley, USA.  
2021- Professor of Civil & Environmental Engineering, University of California, Berkeley, USA.  
2016- Professor, Environmental Science, Policy & Management Dept., University of California, Berkeley, USA.  
2010-2016 Ernest H. Ern Professor of Environmental Sciences, University of Virginia, Charlottesville, USA.  
2015 Sabbatical Fellow, National Center for Social Environmental Synthesis, University of Maryland USA.  
2011 Visiting Professor, Ecole Polytechnique Fédérale de Lausanne – EPFL – Lausanne, Switzerland.  
2006-2010 Associate Professor, Department of Environmental Sciences, University of Virginia, USA.  
2001-2006 Assistant Professor, Department of Environmental Sciences, University of Virginia, USA.  
1999-2001 Assistant Professor, Department of Civil Engineering, Texas A&M University, College Station, USA.  
1999 Research Associate, Department of Civil and Operations Research, Princeton University, USA.  
1997-1998 Research Associate, Department of Civil Engineering, Texas A&M University, College Station, USA.

#### Honors and Awards

2023 *Hydrological Science Medal*, American Meteorological Society  
2023 *Fellow*, American Meteorological Society  
2022 *Fellow*, American Association for the Advancement of Science.  
2016 *Paul Witherspoon Lecture*, American Geophysical Union.  
2016 *Fellow*, American Geophysical Union.  
2013 *Maury-Tice Environmental Prize*, University of Virginia.  
2013 *Distinguished Investigator Award*, University of Virginia  
2011 *Guggenheim Fellow*, John Simon Guggenheim Memorial Foundation.  
2011 *Fulbright Distinguished Lecturer*, J. William Fulbright Foreign Scholarship Board.  
2009 *Sustainability Science Award*, Ecological Society of America.  
2004 *Lagrange Fellow*, Fondazione CRT and Fondazione ISI, Torino, Italy.  
2003 *University of Virginia Teaching Fellow*, Charlottesville, Virginia.  
1998-1999 *Prof. Aldo Gini Fellowship* for studies and research abroad, Gini Foundation, Padua, Italy.  
1998 *Prof. Emanuele Guggino Dissertation Prize*, CSEI, Mediterranean Polytechnic Foundation, CT, Italy.  
1994 *Magna Cum Laude* distinction, University of Padua, Italy.

#### Editorial Boards

- **Editor**, *Reviews of Geophysics* (2019-)
- **Editor-in-Chief**, *Advances in Water Resources* (2014-2021)
- **Editorial Board**, *Oxford Encyclopedia of Environmental Sciences* (2014-)
- **Associate Editor**, *Frontiers in Sustainable Food Systems* (2017-)
- **Editor**, *Geophysical Research Letters*, 2009-2013

- **Editorial Board**, *Advances in Water Resources*, 2012-
- **Associate Editor**, *Water Resources Research*, 2004-2009

### Research Interests

Eco-hydrology, water sustainability, surface hydrology, stochastic modeling of hydrologic processes, soil moisture dynamics, regional water cycle, soil erosion, desertification, water and food security, water justice.

**Publications** ( [\*] denotes publications with my advisees)

**291 Articles** in peer-reviewed journals & **5 Books**

**H-Index:** *Google Scholar* =89 (23,490 citations); *ISI-Web of Knowledge* =67 (10,068 citations)

### Books

**P. D’Odorico**, A. Porporato, C.W. Runyan (Editors), *Dryland Ecohydrology* 2<sup>nd</sup> Edition, Springer, 594 pp., 2019.

Runyan, C.W. and **P. D’Odorico**. *Global Deforestation*, Cambridge University Press, New York, 248 pp., 2016.

Hornberger, G. M., P. L. Wiberg, J. Raffensberger, and **P. D’Odorico**. *Elements of Physical Hydrology*, 2<sup>nd</sup> ed., Baltimore, Maryland: Johns Hopkins Press, 2014.

Ridolfi, L., **P. D’Odorico**, and F. Laio, *Noise-induced Phenomena in the Environmental Sciences*, Cambridge University Press, New York, 314pp., 2011.

**P. D’Odorico** and A. Porporato (Editors), *Dryland Ecohydrology*, Springer, 2006.

### Peer-reviewed journal articles

1. Dell’Angelo, J., M.C. Rulli, and **P. D’Odorico** (2023). “Will war in Ukraine escalate the global land rush?”, *Science*, 379(6634), 752-755.
2. Wolde S.G., **P. D’Odorico**, and M.C. Rulli (2023). “Environmental drivers of human migration in Sub-Saharan Africa”, *Global Sustainability*, y 6, e9, 1–33. <https://doi.org/10.1017/sus.2023.5>.
3. Sardo, M., I. Epifani, **P. D’Odorico**, N. Galli, and M.C. Rulli (2023). “Exploring the water-food nexus reveals the interlinkages with urban human conflicts in Central America”, *Nature Water*, doi 10.1038/s44221-023-00053-0.
4. Tu, C., **P. D’Odorico**, Z. Li, S. Suweis (2023). “The emergence of cooperation from shared goals in the governance of common pool resources”, *Nature Sustainability*, <https://doi.org/10.1038/s41893-022-01008-1>.
5. Hartman, S., M. Farfan, J. Hoogesteger, **P. D’Odorico** (2022), “Mapping the widespread expansion of berry greenhouses onto Mexico’s ejido lands”, *Environmental Research Letters*, 17 (2022) 115004, doi.org/10.1088/1748-9326/ac9ac8.
6. Wang, L., W. Jiao, N. MacBean, M.C. Rulli, S. Manzoni, G. Vico, and **P. D’Odorico** (2022), “Dryland productivity under a changing climate”, *Nature Climate Change*, Nature Climate Change, 12, 981–994 (2022). <https://doi.org/10.1038/s41558-022-01499-y>.
7. Beltran- Peña, A. and **P. D’Odorico** (2022). “Future Food Security in Africa under Climate Change”, *Earth’s Future*, 10, e2022EF002651, <https://doi.org/10.1029/2022EF002651>.
8. Ricciardi, L., **P. D’Odorico**, N. Galli, D.D. Chiarelli, M.C. Rulli (2022). “Hydrological implications of large-scale afforestation in tropical biomes for climate change mitigation”. *Phil. Trans. R. Soc. B* 377: 20210391. <https://doi.org/10.1098/rstb.2021.0391>.
9. Tathego, M., D.D. Chiarelli, M.C. Rulli, **P. D’Odorico** (2022). “The value generated by irrigation in the command areas of new agricultural dams in Africa “, *Agric. Water. Management.*, 264, 107517, doi.org/10.1016/j.agwat.2022.107517.
10. Bhattachan, A, K. Dintwe, M. Tathego, **P. D’Odorico**, and G.S. Okin (2022), “Evaluation of dust production efficiencies in sandy sediments”, *Earth Surface Processes and Landforms*, 1–9. <https://doi.org/10.1002/esp.5312>
11. Chiarelli, D.D., **P. D’Odorico**, M. Müller , N. Mueller , K. Davis , J. Dell’Angelo , G. Penny , Maria Cristina Rulli (2022), “Competition for water induced by transnational land acquisitions for agriculture”, *Nature Communications*, **13**, 505. <https://doi.org/10.1038/s41467-022-28077-2>.
12. Hartman, S., D.D. Chiarelli, M.C. Rulli, and **P. D’Odorico** (2022), “A Growing Produce Bubble: United States produce tied to Mexico’s unsustainable agricultural water use”, *Environm. Res. Lett.*, 16, 105008.
13. Abolhasani, A., Zehtabian, G., Khosravi, H., Rahmati, O., Alamdarloo, E. H., and **D’Odorico, P.** (2022). A new conceptual framework for spatial predictive modelling of land degradation in a semiarid area. *Land Degradation & Development*, 33( 17), 3358– 3374. <https://doi.org/10.1002/ldr.4391>
14. Tathego, M., and **P. D’Odorico**, (2022). “Are African irrigation dam projects for large-scale agribusiness or small-scale farmers?”, *Environm. Res, Comm.*, 4, 015005.

15. Zhang, X., G. Yao, S. Vishwakarma, C. Dalin, Adam M. Komarek, D. R. Kanter, K.F. Davis, K. Pfeifer, J. Zhao, T. Zou, **P. D'Odorico**, C. Folberth, F. Galeana, J. Fanzo, L. Rosa, W. Dennison, M. Musumba, A. Heyman, E. A. Davidson (2021), "Tracking global agricultural sustainability at the national scale", *One Earth*, 4 (9), 1262-1277.
16. Huang, H., C. Tu, and **P. D'Odorico** (2021), "Ecosystem complexity enhances the resilience of plant-pollinator systems", *One Earth*, 4 (9), 1286-1296.
17. Jenkins, W., L. Rosa, J. Schmidt, L. Band, A. Beltran-Peña, A. Clarens, S. Doney, R. Emanuel, A. Glassie, J. Quinn, M. C. Rulli, W. Shobe, L. Szeptycki, and **P. D'Odorico** (2021), "Values-Based Scenarios of Water Security: Rights to Water, Rights of Waters, and Commercial Water Rights", *Bioscience*, 20, biab088, <https://doi.org/10.1093/biosci/biab088>
18. Jiao, W., L. Wang, W. K. Smith, Q. Chan, H. Wang, **P. D'Odorico** (2021), "Observed increasing water constraint on vegetation growth over the last three decades", *Nature Communications*, doi: 10.1038/s41467-021-24016-9.
19. Huang, H., P.A. Tuley, J. Zinnert, I. Rodriguez-Iturbe, **P. D'Odorico** (2021), "Microclimate feedbacks sustain power law clustering of encroaching coastal woody vegetation", *Comm. Biol.*, 4:745, <https://doi.org/10.1038/s42003-021-02274-z>, [www.nature.com/commsbio](http://www.nature.com/commsbio).
20. Nagaraj, D., E. Proust, A. Todeschini, M.C. Rulli, and **P. D'Odorico** (2021). "A new dataset of global irrigation areas from 2001 to 2015", *Adv. Water. Resour.* 152, 103910, <https://doi.org/10.1016/j.advwatres.2021.103910>.
21. Rulli, M.C., **P. D'Odorico**, N. Galli, and D.T. Hayman (2021). "Land use change and livestock revolution as contributors to Coronavirus emergence risk", *Nature Food*, <https://doi.org/10.1038/s43016-021-00285-x>.
22. Rosa, L., M.C. Rulli, S. Ali, D. Chiarelli, J. Dell'Angelo, N. Mueller, A. Scheidel, G. Siciliano, and **P. D'Odorico**, (2021). "Energy implications of the 21st century agrarian transition", *Nature Communications*, 12 (1), 1-9.
23. Müller M., G. Penny, M. T. Niles, V. Ricciardi, D. D. Chiarelli, K.F. Davis, J. Dell'Angelo, **P. D'Odorico**, L. Rosa, M.C. Rulli, N. D. Mueller (2021). "Impact of Transnational Land Acquisitions on Local Food Security and Dietary Diversity", *Proc. Natnl. Acad. Sci. USA*, 118 (4) e2020535118; DOI: 10.1073/pnas.2020535118.
24. Tu, C., **P. D'Odorico**, and S. Suweis (2021). "Dimensionality reduction of complex dynamical systems", *iScience*, 24, 101912.
25. Rosa, L., D.L. Sanchez, G. Realmonde, D. Baldocchi, **P. D'Odorico** (2021). "The water footprint of carbon capture and storage technologies", *Renewable & Sustainable Energy Reviews*, 138, <https://doi.org/10.1016/j.rser.2020.110511>.
26. Chiarelli, D.D., **P. D'Odorico**, K.F. Davis, R. Rosso, and M.C. Rulli, (2020) "Large scale land acquisition as a potential driver of slope instability", *Land Degradation & Development*, 1-13, doi.org/10.1002/ldr.3826.
27. Rosa, L., D.D. Chiarelli, M. Sangiorgio, A.A. Beltran-Peña, M.C. Rulli, **P. D'Odorico**, and I. Fung (2020). "Potential for sustainable irrigation expansion in a 3C warmer climate", *Proc. Natnl. Acad. Sci. USA*, <https://doi.org/10.1073/pnas.2017796117>.
28. **D'Odorico, P.**, D.D. Chiarelli, L. Rosa, A. Bini, D. Zilberman, and M.C. Rulli (2020). "The global value of water in agriculture", *Proc. Natnl. Acad. Sci. USA*, 17(36) 21985-21993, [www.pnas.org/cgi/doi/10.1073/pnas.2005835117](http://www.pnas.org/cgi/doi/10.1073/pnas.2005835117).
29. Chiarelli, D.D., C. Passera, L. Rosa, K. F. Davis, **P. D'Odorico**, and M. C. Rulli (2020). Global gridded dataset of crop-specific green and blue water requirements, the WATNEEDS model. *Scientific Data*. 7, 273.
30. Davis, K., H Koo, J. Dell'Angelo, **P. D'Odorico**, L. Estes, L. Kehoe, M. Kharratzadeh, T. Kuemmerle, D. Machava, A. Pais, N. Ribeiro, M.C. Rulli, and M. Tathego (2020). "Tropical forest loss enhanced by large-scale land acquisitions", *Nature Geosciences*, 13, 482-488.
31. Beltran-Peña, A. A., L. Rosa, and **P. D'Odorico**, (2020). "Global food self-sufficiency in the 21st century under sustainable intensification of agriculture", *Environm. Res. Lett.*, 15(9) 095004.
32. Huang, H., L.D.L. Anderegg, T.E. Dawson, M. Mote, and **P. D'Odorico** (2020). "Critical transition to woody plant dominance through microclimate feedbacks in North American coastal ecosystems", *Ecology*, 101(9): e03107. [10.1002/ecy.3107](https://doi.org/10.1002/ecy.3107)
33. Rosa, L., J.A. Reimer, M. Went, and **P. D'Odorico** (2020). "Hydrological limits to carbon capture and storage", *Nature Sustainability*, <https://doi.org/10.1038/s41893-020-0532-7>.
34. Brelsford, C., M. Dumas, E. Schlager, B. Dermody, M. Aiuvalasit, M. Allen-Dumas, J. Beecher, U. Bhatia, **P. D'Odorico**, M. Garcia, P. Gober, D. Groenfeldt, S. Lansing, K. Madani, L. E. Méndez-Barrientos, E. Mondino, M. Müller, F. O'Donnell, P. Mbullo Owuor, J. Rising, M. Sanderson, F. Arguello de Souza, S. Zipper (2020), Developing a sustainability science approach for water systems, *Ecology and Society*, 25(2):23. <https://doi.org/10.5751/ES-11515-250223>.
35. Kinnunen, P., J. H. A. Guillaume, M. Taka, **P. D'Odorico**, S. Siebert, M. J. Puma, M. Jalava, M. Kummu (2020). "Local food crop production can fulfil demand for less than one-third of population", *Nature Food*, 1, 229-237.
36. Rosa, L., D.D. Danilo Chiarelli, M.C. Rulli, J. Dell'Angelo, and **P. D'Odorico** (2020). "Global agricultural economic water scarcity", *Science Advances*, 6: eaaz6031.
37. Chiarelli, D., C. Passera, M.C. Rulli, L. Rosa, and **P. D'Odorico** (2020), "Hydrological consequences of natural rubber plantations in Southeast Asia", *Land Degradation and Development*, 31:2060-2073. <https://doi.org/10.1002/ldr.3591>.
38. Tu, C., S. Suweis, and **P. D'Odorico**, "Critical slowing down associated with critical transition and risk of collapse in cryptocurrency", *Royal Society Open Science*, 7: 191450. <http://dx.doi.org/10.1098/rsos.191450>.

39. Heslin, A., M. Puma, P. Marchand, J.A. Carr, J. Dell'Angelo, **P. D'Odorico**, J. A. Gephart, M. Kummu, M. Porkka, M.C. Rulli, D. A. Seekell, S. Suweis, A. Tavoni, "Simulating the cascading effects of an extreme agricultural production shock: global implications of a contemporary US Dust Bowl event", *Frontiers in Sustainable Food Systems*, 4(26).
40. Huang, H., Y. Feng, K. Yu, and **P. D'Odorico** (2020). "CAM plant expansion favored indirectly by asymmetric climate warming and increased rainfall variability", *Oecologia*, 193, 1-13.
41. Borsato, E., L. Rosa, P. Tarolli, F. Marinello, and **P. D'Odorico**, (2020). "Weak and Strong Sustainability of Irrigation: A Framework for Irrigation Practices Under Limited Water Availability", *Front. Sustain. Food Syst.* 4:17. doi: 10.3389/fsufs.2020.00017
42. Huang, H., **P. D'Odorico**, (2020) "Critical transitions in plant-pollinator systems induced by positive inbreeding-reward-pollinator feedbacks", *iScience* (2020), doi: <https://doi.org/10.1016/j.isci.2020.100819>.
43. Tatlhago M., A. Bhattachan, G. S. Okin, **P. D'Odorico** (2020). "Mapping areas of the Southern Ocean where productivity likely depends on dust-delivered iron", *J. Geophys. Res.–Atmospheres*, 125, e2019JD030926; [doi.org/10.1029/2019JD030926](https://doi.org/10.1029/2019JD030926).
44. Hassani A., A. Azapagic, **P. D'Odorico**, A. Keshmiri, N. Shokri, (2020). "Desiccation crisis of saline lakes: A new decision-support framework for building resilience to climate change", *Science of Total Environment*, 703(10), 134718.
45. Wang, L., and **P. D'Odorico** (2019). "Water limitations to large-scale desert agroforestry projects for carbon sequestration", *Proceedings of the National Academy of Science U.S.A.*, [pnas.org/cgi/doi/10.1073/pnas.1917692116](https://doi.org/10.1073/pnas.1917692116).
46. Rosa, L., D. Chiarelli, C. Tu, M.C. Rulli, and **P. D'Odorico**, (2019). "Global unsustainable virtual water flows in agricultural trade", *Environm. Res. Lett.*, 14, 114001.
47. Webb, N., G.S. Okin, A. Bhattachan, **P. D'Odorico**, K. Dintwe, M. Tatlhago (2019), " Ecosystem dynamics and aeolian sediment transport in the southern Kalahari" *African Journal of Ecology*, 2019;00:1–8. <https://doi.org/10.1111/aje.12700>.
48. Huang, H., K. Yu, Y. Fan, and **P. D'Odorico** (2019), "The competitive advantage of C4 grasses over CAM plants under increased rainfall variability", *Plant and Soil*, 442(1–2), 483–495.
49. Tu, C., S. Suweis, and **P. D'Odorico**, (2019). "Impact of globalization on the resilience and sustainability of natural resources", *Nature Sustainability*, 2, 283–289.
50. Meyer, T., P. Holloway, T.B. Christiansen, J.A. Miller, **P. D'Odorico**, and G. S. Okin, (2019). "An Assessment of Multiple Drivers Determining Woody Species Composition and Structure: A Case Study from the Kalahari, Botswana", *Land*, 8(8), 122; <https://doi.org/10.3390/land8080122>.
51. Saha, M.V., **P. D'Odorico**, and T.M. Scanlon, (2019). "Kalahari wildfires drive continental post-fire brightening in sub-Saharan Africa", *Remote Sens.* 2019, 11, 1090; doi:10.3390/rs11091090.
52. Yu, K., **P. D'Odorico**, S. L. Collins, D. Carr, A. Porporato, W. R. L. Anderegg, W. P. Gilhooly III, L. Wang, A. Bhattachan, M. Bartlett, S. Hartzell, J. Yin, Y. He, W. Li, M. Tatlhago, and J. D. Fuentes (2019). The competitive advantage of a constitutive CAM species over a C4grass species under drought and CO<sub>2</sub> enrichment, *Ecosphere* 10(5):e02721. [10.1002/ecs2.272](https://doi.org/10.1002/ecs2.272).
53. **D'Odorico P.**, J.A. Carr, K. F. Davis, J. Dell'Angelo, DA Seekell (2019). "Food inequality, injustice, and rights", *BioScience*, 69(3), 180-190, <https://doi.org/10.1093/biosci/biz002>.
54. **D'Odorico, P.**, J.A. Carr, C. Dalin, J. Dell'Angelo, M. Konar, F. Laio, L. Ridolfi, L. Rosa, S. Suweis, M. Tuninetti, (2019). Global virtual water trade and the hydrological cycle: Patterns, drivers, and socio-environmental impacts, *Environmental research Letters*, 14, 053001. <https://doi.org/10.1088/1748-9326/ab05f4>.
55. Rulli, M.C., S. Casirati, J. Dell'Angelo, K.F. Davis, C. Passera, **P. D'Odorico**, (2019). "Interdependencies and telecoupling of oil palm expansion at the expense of Indonesian rainforest", (2019). *Renewable & Sustainable Energy Reviews*, 105: 499-512, <https://doi.org/10.1016/j.rser.2018.12.050>.
56. Fan, Y., X. Li, H. Huang, X. Wu, K. Yu, J. Wei, Junqi, C. Zhang, P. Wang, Pei, X. Hu, **P. D'Odorico**, (2019). "Does phenology play a role in the feedbacks underlying shrub encroachment?", *Science of Total Environment*, 657: 1064-1073, [10.1016/j.scitotenv.2018.12.125](https://doi.org/10.1016/j.scitotenv.2018.12.125).
57. Rosa, L and **P. D'Odorico** (2019). "The water-energy-food nexus of unconventional oil and gas extraction in the Vaca Muerta Play, Argentina", *J. Cleaner Production*, 207:743-750. <https://doi.org/10.1016/j.jclepro.2018.10.039> .[\*]
58. Saha, M., T.M. Scanlon, and **P. D'Odorico**, (2019). "Climate seasonality as an essential predictor of global fire activity", *Global Ecol. Biogeogr.* 29(2), 198-210. DOI: 10.1111/geb.12836. [\*]
59. Pivato, M., L. Carniello, I. Moro, and **P. D'Odorico**, (2019). "On the feedback between water turbidity and microphyto-benthos growth in shallow tidal environments", *Earth Surface Processes & Landforms*, 44, 1192–1206, <https://doi.org/10.1002/esp.4567>.
60. **D'Odorico, P.** (2018), The challenges of meeting future food, energy, and water needs, *Eos*, 99, <https://doi.org/10.1029/2018EO098891>.
61. Seekell, D.A., **P. D'Odorico**, and G.K. MacDonald, 2018. "Food, trade, and the environment", *Environm. Res. Lett.*, 13(10), 100201.
62. Rosa., L., M.C. Rulli, K.F. Davis, D. Chiarelli, C. Passera, **P. D'Odorico**, 2018. "Closing the yield gap while ensuring water sustainability", *Environm. Res. Lett.*, 13 104002.[\*]

63. Dell'Angelo, J., **P. D'Odorico**, and M.C. Rulli, (2018). "The neglected costs of water peace", *WIREs Water*, 5(6), e1316. <https://doi.org/10.1002/wat2.1316>.
64. Huang, H., J.C. Zinnert, L.K. Wood, D.R. Young, and **P. D'Odorico**, 2018. "A non-linear shift from grassland to shrubland in temperate barrier islands", *Ecology*, 99(7): 1671-1681, ECY2383, doi: 10.1002/ecy.2383.[\*]
65. Davis, K.F., A. Bhattachan, **P. D'Odorico**, and S. Suweis, 2018, "A universal model for predicting human migration under climate change: Examining future sea level rise in Bangladesh", *Environm. Res. Lett.*, 13, 064030, <https://doi.org/10.1088/1748-9326/aac4d4>.
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67. **D'Odorico, P.**, K.F. Davis, L. Rosa, J.A. Carr, D. Chiarelli, J. Dell'Angelo, J.A. Gephart, G.K. MacDonald, D.A. Seekell, S. Suweis, M.C. Rulli, 2018. "The global food-energy-water nexus", *Reviews of Geophysics*, 56, 456–531, <https://doi.org/10.1029/2017RG000591>
68. Okin, G., **P. D'Odorico**, and J. Liu, 2018. "A mechanism of land degradation in turf-mantled slopes of the Tibetan Plateau", *Geophys. Res. Lett.* 45(9), 4041-4048.
69. Rosa, L., K.F. Davis, M.C. Rulli, and **P. D'Odorico**, 2018. "The water-energy nexus of hydraulic fracturing: a global hydrologic analysis for shale oil and gas extraction", *Earth's Future*, 6, <https://doi.org/10.1002/2018EF000809>.[\*]
70. Getz, W., C. Marshall, C. Carlson, L. Giuggioli, S. Ryan, S. Romanach, C. Boettiger, S. Chamberlian, L. Larsen, **P. D'Odorico**, D. O'Sullivan, 2018. "Making ecosystems models adequate", *Ecology Letters*, DOI: 10.1111/ele.12893.
71. Chiarelli, D., L. Rosa, M.C. Rulli, and **P. D'Odorico**, 2018. "The water-food nexus of natural rubber production", *J. Cleaner Production*, 172, 1739-1747.
72. Dell'Angelo, J., **P. D'Odorico**, and M.C. Rulli, 2018. "The Global Water Grab Syndrome", *Ecological Economics*, 143, 276-285.
73. Calabrese, S., A. Porporato, F. Laio, **P. D'Odorico**, and L. Ridolfi, 2017. "Age distribution dynamics with stochastic jumps in mortality", *Proc. R. Soc. Lond. A*, 473(2207), DOI: 10.1098/rspa.2017.0451.
74. Davis, K.F., M.C. Rulli, A. Seveso, and **P. D'Odorico**, 2017. "Increase in food production and reduction in water use through optimized crop distribution", *Nature Geosciences*, doi.org/10.1038/s41561-017-0004-5.[\*]
75. **D'Odorico P.**, J.L. Natyzak, E. A. Castner, K. F. Davis, K. Emery, J.A. Gephart, A. Leach, M.L. Pace, and J.N. Galloway, 2017. "Ancient water supports today's energy needs", *Earth's Future*, 5(5), 515-519, doi:10.1002/2017EF000544.
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## Teaching

*Principles of Natural Resource Management* (DEVP227, Spring 2022)

*Terrestrial Hydrology* (ESPM c130, Spring 2020).

*Sustainable Water and Food Security* (ESPM177, Spring 2017; Spring 2018; Spring 2019), UC Berkeley.

*Forest Hydrology* (ESPM 130A, 2019), UC Berkeley.

*Environmental Hydrology* (ESPM 130A, 2018), UC Berkeley.

*Sustainable Water and Food Security* (EVSC 4995, Spring 2016), University of Virginia.

*Water on Earth* (EVSC 140 – Spring 2008, Spring 2009, Spring 2010), University of Virginia

*Collapse of Ecosystems and Societies in a Changing World* (USEM 180 – Fall 2008, 2009), University of Virginia

*Physical Hydrology* (EVSC 340 - 2002, 2002, 2004, 2006, 2013, 2014, 2016), University of Virginia.

*Introduction to Forest Hydrology* (EVSC 493 - Spring 2004, Spring 2007), University of Virginia.

*Hydrological Transport Processes* (EVHY 545 - 2003, 2004; 2006, 2008, 2010, 2012), University of Virginia.

*Dryland Ecohydrology* (EVHY 795 – Fall, 2006, Fall 2007, Fall 2009, Fall 2013)

*Fluvial Hydrology* (EVHY 795 - Fall 2002) , University of Virginia.

*Water Sustainability* (EVSC 459), University of Virginia

*Forest Hydrology* (EVHY 795 - Fall 2003, 2004, Spring 2006, 2008, 2010, 2012, 2013), University of Virginia.

*Global Food Security and the Environment* (Spring 2014, 4<sup>th</sup> year Undergraduate)

*Water Resources Engineering*. (CVEN 339 - Undergraduate, taught for 4 semesters), Texas A&M University.

*Surface Water Hydrology* (CVEN 627 - Graduate), Texas A&M University.

*Advanced Hydraulic Engineering* (CVEN 628 - Graduate), Texas A&M University.