# Alan D. Ziegler | Curriculum Vitae

#### **Professor**

Faculty of Fisheries Technology and Aquatic Resources Mae Jo University 61 Mu 3 Bo Hin, T. Sanpapao, A. Sansai Chiang Mai 50210 THAILAND tel +66 93 169 3747

thaihawk@gmail.com • www.adziegler.com

Born: 16 February 1965 | Madison, Kansas USA (USA Citizenship)

Permanent Address: c/o M.K. Curry - 1710 Alabama St, Lawrence, Kansas 66044 USA, +1 785 841 2918

Languages: English (native); Thai (intermediate); French (reading); Khmer, Persian, & Mandarin Chinese (beginning)

https://orcid.org/0000-0001-5305-2136; WoS ID: AAA-5406-2022 (publons); skype ID: thaihawk

#### Research Interests

Faculty of Fisheries Technology and Aquatic Resources My research addresses the interactions of physical, ecological and human systems, with water resources serving as a nexus. The work typically involves developing environmental monitoring programs that facilitate understanding catchment processes as they vary both naturally and anthropogenically over different spatial and temporal scales. I am looking for new graduate students who have interest in various aspects of water resource management, environmental health, and natural hazards in the context of human-environment interaction. In particular, I am interested in exploring the risks of rural populations in developing areas to contaminated drinking water, anthropogenic contaminants (heavy metals and pesticides), water-borne pathogens (e.g., parasites, bacteria), and fluvial hazards (floods, debris flows, landslides). This type of research requires extended fieldwork in foreign countries, language training, and interaction with local populations. The research is a trans-disciplinary balancing act, grounded in science.

#### **Brief summary**

Research Area: water resources; hydro-geomorphological processes; medical hydrology, hazards Publications: 190 international journal articles | H-index = 60 | 12,400 citations (Google Scholar) Grants: 42 grants for a total of \$7,162,000.

Supervision: 3 Research Fellows; 7 PhD students; 9 MSc students; and 30 Honors students

Teaching: Water Resources, Human-Environmental Systems, Global Change, Earth Surface Processes

### **Education**

1993 - 2000	PhD, Geography, University of Hawai'i at Manoa, Honolulu, Hawai'i, USA
1988 - 1991	MA, Geography, University of Kansas, Lawrence, Kansas, USA
1985 - 1988	BS, Mathematics & Computer Science, University of Kansas, USA
Employment	
2020 – pres	Professor. Faculty of Fisheries and Aquatic Resources, Mae Jo University, Thailand
2022 – pres	Environmental Scientist. Water Resources Research Center. University of Hawaii USA
2021 – pres	Advisor. Center for Excellence for Mekong Giant Catfish, MJU, Thailand
2013 - 2020	Professor. Geography, National University Singapore, Singapore
2016 - 2019	Adjunct Research Professor. East-West Center, Honolulu, Hi, USA
2015 - 2018	Senior Research Affiliate, Tropical Marine Science Institute, NUS, Singapore
2009 - 2012	Associate Professor. Geography, National University Singapore, Singapore
2004 - 2019	Adjunct Assistant Professor. Geography, University of Hawaii, USA
2007 - 2010	Affiliate Researcher. START Southeast Asia Regional Centre, Bangkok, Thailand
2006	JSPS Fellow. Disaster Prevention Research Institute, Kyoto University, Japan
2004 - 2006	Affiliated Research Associate. University of Hawaii, USA
2003 - 2004	Research Fellow. Geography. National University Singapore, Singapore
2000 - 2002	Research Associate. Environmental Engineering & Water Resources, Princeton University, USA
1994	Intern. Pakistan Institute for Environment-Development-Action Research, Islamabad, Pakista

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### Recent Awards

NUS FASS Research Excellence award (2017): for work on Hazards FASS Excellent Performance in Research (2012; 2014; 2015; 2016; 2017) NUS FASS Research Excellence award (2012): for work on Demise in Swidden Agriculture in SE Asia NUS FASS Annual Teaching Award (2010, 2011, 2012)

#### Research Grants

Lead name is the primary grant author; PIs are indicated; all other personnel are Co-PI;

#### Current

- Srinuansom K (PI), Alan D Ziegler (Co-PI). 2020-2023. Persistent and Emerging Contaminants in the Water Resources of the Ping River Catchment in Northern Thailand. Lien Environmental Fellowship (NTU Singapore); S\$ 89,791: Thailand
- 2. Srinuansom K (PI), Alan D Ziegler. 2023-2024. Strengthening livelihood resilience through community-based aquaculture in rural northern Thailand. Asia Pacific Network; \$79,000: Thailand
- Ziegler, AD (PI), Khajornkiat Srinuansom (Co-PI). 2023-2026. Boosting Food and Livelihood Security in Marginalized Communities in Nan Province Thailand during the Post-COVID-19 Recovery: Knowledge Transfer and Training using Agroecology Principals. S\$150,000: Thailand.
- 4. He Xiaogang (PI), Kei Yoshimura (Co-PI), Alan D Ziegler (Co-PI). 2023-2025. Sustainable Pathways to Expand ASEAN Renewables. E-Asia Joint Research Program. \$521,755: SE Asia.

#### Past

- Srinuansom K (PI), R Petkum, N Whangchai, AD Ziegler. 2020-2022. Effects of buserelin acetate (LHRHa), human
  chorionic gonadotropin (hCG) and maturation inducing hormone (MIH) on oocyte development and final maturation
  in gravid and non-gravid female swamp eel (Monopterus albus) broodstock during spawning season. Mae Jo University
  (\$1,000): Thailand.
- 2. Ramchunder, S (PI), ... AD Ziegler. 2020. Capture of heavy metals in roadside tree bark. National University of Singapore (\$\$5,000): Singapore.
- 3. Ziegler, AD. S.J. Ramchunder. 2017-2019. Natural and Anthropogenic Drivers of Stream Acidification in Singapore Streams. NPARKS (R-109-000-225-490); \$\$248,520.00: Singapore.
- Webb EL, LR Carrasco, M Rao, AD Ziegler. 01/2016-016/2019. Reconciling agricultural expansion and forest conservation in the new Myanmar Ministry of Education (MOE) Academic Research Fund (AcRF, MOE2015-T2-1-131; S\$626,045): Myanmar.
- 5. Ziegler, AD (PI, NUS). 2015-2017. Surface and subsurface elemental dynamics in threatened mangroves of SE Asia (FY2014-FRC4-003) Faculty Research Fund (AcRF, R-109-000-192-112; S\$97,000): Vietnam, Thailand.
- Ziegler, AD (PI, NUS). 2014-2016. Reconstruction of palaeoflood histories on mainland SE Asian Rivers (R-109-000-174-646). NUS, HSS Strategic budget (\$32,000): Thailand
- Liong, S-Y (PI), E Clews, DL Higgitt, HTW Tan, DCJ Yeo, AD Ziegler. 2013-2016. Nee Soon Swamp forest biodiversity and hydrology baseline studies – Phase 2 (R347-000-198-490) NParks Singapore (\$487,000): Singapore.
- 8. Ziegler, AD. D Taylor (PI, NUS). 2013-2016. Developing and maintaining a state-of-the-art Earth Systems Science. NUS Office of the present / FASS, Strategic Initiative (\$448,000): Singapore.
- 9. Ziegler, AD (PI, NUS). Anthropogenic and Natural Controls on Stream Chemistry at Multiple Scales. 2012-2015. Ministry of Education (MOE) AcRF, R-109-000-134-112), Singapore (\$388,000): Thailand, Singapore.
- 10. Ziegler, AD (PI, NUS). 2013-2015. Identification of at-risk rural communities to protozoan diarrheal illnesses in Thailand. Faculty Research Fund (R109-000-157-112) (\$80,000): Thailand.
- 11. Ziegler, AD (PI, NUS), Sunsanee Rajchagool (Intercountry Centre for Oral Health, ICOH). Origin and consequences of high fluoride concentrations in ground water wells in the Chiang Mai and Lamphun areas of northern Thailand (2012-2014) Monsoon Foundation (\$25,000): Thailand.
- 12. Hu Jiangyong (PI, NUS), Chew Soon Hoe; Ong Bee Lian; Chui Ting Fong, May; Lim Han She; Alan D. Ziegler; Lee Lai Yoke. 2011-2014. Noble bioretention systems development for sustainable stormwater management. Public Utilities Board (\$269,000): Singapore.
- 13. Ziegler, AD (PI, NUS), RJ Wasson. 2012-2013. FASS Faculty Research Support Scheme. Singapore Ministry of Education (MOE) Academic Research Fund (AcRF) Tier 1 (c-109-000-222-091) (\$5,000): Singapore.

- Ziegler, AD (PI, NUS). 2012-2013. ODPRT Grant for Research Excellence (R-109-000-158-646). Faculty of Arts and Social Sciences (\$4,000): Singapore.
- 15. DL Higgitt (PI, NUS), M Chui (NUS), AD Ziegler (NUS), Lim HS (NUS), R Wasson (Charles Darwin, Australia), G Brierly (U Auckland). 2011-2013. River Rehabilitation: An integrated approach to flood hazard management in Asian cities. NUS Global Asia Institute (\$179,000): Singapore, China, India.
- 16. Ziegler AD (PI, NUS), PA Todd (PI, NUS), T Bouma (PI, NIOO-CEME), PMJ Herman (NIOO-CEME). 2009-2012. Toward designing innovative coastal protection using ecosystem-based approaches; deriving underlying ecological knowledge. SDWI/Eco-Shape/Building with Nature grant (R-303-001-020-414), Singapore & The Netherlands (\$477,000): Thailand.
- 17. Fox, JM (PI, E/W Center, Hawaii), TW Giambelluca (Co-PI, UHM), Qi Chen (Co-PI, UHM), AD Ziegler (Co-PI, UHM). The expansion of rubber and its implications for water and carbon dynamics in Montane Mainland Southeast Asia. 2008-2012. NASA project #NNX08AL90G (\$960,000): Laos, Thailand, Cambodia
- 18. Ziegler, AD. Block grant supporting FASS Geography students to attend The 6th Mathematics and Physical Science Graduate Conference in Kuala Lumpur, Dec 2012. FASS Deans office (\$1,000): Thailand
- 19. Ziegler AD (PI). 2009-2012. Landslide initiation mechanisms and fate of sediment in a headwater catchment in Thailand. NUS FASS Start-up grant (R-109-000-092-133) (\$20,000): Thailand.
- 20. Ziegler AD (PI), Lu XiXi (NUS). 2011-2012. FASS Faculty Research Support Scheme. Singapore Ministry of Education (MOE) Academic Research Fund (AcRF) Tier 1 (c-109-000-222-091) (\$5,000): Singapore.
- 21. Ziegler AD (PI). 2010-2012. Environmental Modeling Reading Group. NUS Office of the Deputy President, Research and Technology, project #R109-000-109-646 (\$3,000): Singapore.
- 22. Ziegler AD (PI). 2011. FASS Environment Research Facilitation Workshop. Singapore Ministry of Education (MOE) Academic Research Fund (AcRF) Tier 1 (FY2010-FRC3-003; R-109-000-115-112) (\$8,000): Singapore.
- 23. Ziegler AD (PI, NUS/UHM), RC Sidle (Kyoto), S Wood (BSU), XX Lu (NUS), A Snidvongs. 2009-2010. Sediment Dynamics in Tropical Streams Affected by Land-cover/Land-use & Climatic Change. Asia Pacific Network, grant no #ARCP2008-01CMY (\$40,000): Thailand, Vietnam, China, India.
- 24. Lu Xi Xi (PI, Singapore), M Bird (Scotland), A Chen (Taiwan), D Higgitt (Singapore), M Kummu (Finland), R Robinson (UK), J Sarkkula (Lao PDR), AD Ziegler (NUS/UHM). 2008-2010. Sediment and carbon fluxes in large Asian rivers: Climate and human impacts. Ministry of Education (MOE) Academic Research Fund (AcRF), Singapore (\$200,000): South and SE Asia.
- 25. Giambelluca, TW (PI, UHM), RA Sutherland (Co-PI, UHM), ADZ (NUS), K Nanko (Tsukba), Q Chen (UHM). 2007-2008. Hydrological Impacts of *Miconia calvescens* in Hawaii. US Fish and Wildlife Service. (\$57,000): Hawaii.
- 26. Lu Xi Xi (PI, Singapore), M Bird (Scotland), A Chen (Taiwan), D Higgitt (Singapore), M Kummu (Finland), R Robinson (UK), J Sarkkula (Lao PDR), AD Ziegler (UHM). 2008-2010. Sediment and carbon fluxes in large Asian rivers: Climate and human impacts. National University of Singapore Bridge Funding, Singapore (\$25,000): Red, Mekong, and Chao Phraya Rivers.
- 27. Ziegler AD (PI, UHM), RC Sidle (Kyoto), S Wood (BSU), XX Lu (NUS), A Snidvongs. 2007-2008. Sediment Dynamics in Tropical Streams Affected by Land-cover/Land-use & Climatic Change. Asia Pacific Network, grant no #ARCP2007-01CMY (\$40,000): Thailand, Vietnam, China, India.
- 28. Liem T. Tran (U Tennessee), Dan Phuoc Nguyen (PI, HoChiMihn Tech), AD Ziegler (UHM) 2007-2008. Regional Water & Carbon Cycles in the context of Human-Environment Interaction, Mekong Basin, Vietnam. South Asia Regional Committee for START, award no 95/01/CW-005 (\$30,000) Lower Mekong Delta, Vietnam.
- 29. Ziegler AD (PI, UHM), Tantasarin C (PI, Thailand), XX Lu (Singapore), DL Higgitt (Singapore), S Benner (Boise State), TW Giambelluca. 2007-2008 Sediment and nutrient dynamics in a headwater tributary in SE Asia: Building a foundation for investigating impacts of future anthropogenic change. South Asia Regional Committee for START, award no. 95/01/CW-005 (\$15,000), northern Thailand.
- Ziegler AD (PI) (UHM), R.C. Sidle (Kyoto), S. Wood (BSU), X.X. Lu (Singapore), A. Snidvongs (Bangkok). 2006-2007. Sediment Dynamics in Tropical Streams Affected by Land-cover/Land-use & Climatic Change – Thailand Phase. Asia Pacific Network, grant no #ARCP2006-06NMY (\$40,000): Thailand.
- 31. Fox JM (PI, E-W Center), TW Giambelluca (UHM), B Njissen (U Arizona), S Walsh (UNC), O Sen (Turkey), AD Ziegler (UHM). 2004-2007. Role of land-cover change in montane mainland Southeast Asia in altering regional hydrological processes under a changing climate. NASA (NNG04GH59G) (\$900,000): SE Asia.
- 32. Ziegler AD (Co-PI, UHM), TW Giambelluca (PI UHM) (UHM), RA Sutherland (Co-PI, UHM). 2000-2003. Hydrological and Erosion Impacts of Road Networks vs. Agricultural Activities in Mountainous Tropical Watersheds. National Science Foundation (EAR-0000546) (\$240,000): northern Thailand.

- 33. Ziegler AD (UHM), TW Giambelluca (PI) (UHM). 2000-2001. Model Acquisition and Validation of DHSVM: pilot study of the impacts of land-cover change on watershed hydrology. Office of Research Admin, UHM. (\$14,000): O`ahu, Hawai`i.
- 34. Ziegler AD (UHM). 1997. Determination of soil chemical properties on Kaho`olawe Island. Kaho`olawe Island. Reserve Commission (\$1000): Kaho`olawe Island, Hawai`i.
- 35. Ziegler AD. (UHM), T.W. Giambelluca (UHM). 1997. Investigation of the hydrologic effects of forest fragmentation. Alumni Relations UHM (\$1,000): Vietnam.
- 36. Ziegler AD (UHM), TW Giambelluca (PI) (UHM), RA Sutherland (UHM). 1997–2000. Hydrologic change and accelerated erosion in mountainous tropical watersheds: the impact of rural roads. National Science Foundation (9614259) (\$300,000): northern Thailand.
- 37. Fox JM (E-W Center), Rambo TA (PI) (E-W Center), TW Giambelluca (UHM), D Donovan (E-W Center), AD Ziegler (UHM), LT Tran (UHM). 1997–1999. Influence of forest fragmentation on watershed function in northern Vietnam. National Science Foundation/EPA (DEB-9613613) (\$123,000): northern Vietnam.
- 38. Ziegler AD (UHM), TW Giambelluca (PI) (UHM). 1996. Measuring and modeling erosion on unpaved roads, Oahu, Hawai`i. Office of Research Administration, UHM (\$14,000): O`ahu, Hawai`i.
- 39. Ziegler AD. 1996. Measuring and modeling erosion on unpaved roads in mountainous tropical watersheds. Horton Hydrology Research Grant from the AGU (\$12,000): Hawai`i and Thailand.
- 40. Ziegler AD. 1996-1998. Measuring and modeling erosion on unpaved roads in mountainous tropical watersheds. Environmental Protection Agency Star Fellowship (\$88,000): Hawai`i & Thailand.
- 41. Ziegler AD (UHM), TW Giambelluca (UHM). 1996. Pilot investigation of erosion on unpaved roads in mountainous tropical watersheds. Office of Alumni Relations UHM (\$2,000): Hawaii and Thailand.

### **PUBLICATIONS**

\*Indicates a student of ADZ

### Nature/Science Papers

- 1. Jin, Y., Hu, S., Ziegler, A. D., Gibson, L., Campbell, J. E., Xu, R., ... & Zeng, Z. (2023). Energy production and water savings from floating solar photovoltaics on global reservoirs. *Nature Sustainability*, 1-10.
- 2. Xu, R., Zeng, Z., Pan, M., Ziegler, A. D., Holden, J., Spracklen, D. V., ... & Wood, E. 2023. A global-scale framework for hydropower development incorporating strict environmental constraints. *Nature Water* 1:113-122.
- 3. Zhou, J. AD Ziegler, D Chen, G NcNicol, P Ciais, X Jiang, C Zhen, J Wu, Z Lin, X He, LE Brown, J Holden, Z Zhang, SJ Ramchunder, A Chen, Z Zheng. 2022. Rewetting global wetlands effectively reduces major greenhouse gas emissions. *Nature Geoscience* 11(11): 842-847.
- 4. Feng Y, Z Zeng, TD Searchinger, AD Ziegler, J Wu, D Wang, X He, PR Elsen, P Ciasis, R Xu, Z Guo. 2022. Doubling of annual forest carbon loss over the tropics during the early twenty-first century. *Nature Sustainability* 444-51.
- 5. Feng, Y, AD Ziegler, PR Elsen, Y Liu, X He, D Spracklen, J Holden X Jiang, C Zheng, Z Zeng. 2021. Upward expansion and acceleration of forest clearance in the mountains of Southeast Asia. *Nature Sustainability*: 1-8.
- 6. Zeng, Z, D Wang, L Yang, J Wu, AD Ziegler, et al. 2021. Deforestation-induced warming over tropical mountain regions regulated by elevation. *Nature Geoscience* 14: 23-29.
- 7. Liu, X., Y Huang, X Xu,..., AD Ziegler., et al. 2020. High-spatiotemporal-resolution mapping of global urban change from 1985 to 2015. *Nature Sustainability*, 1-7.
- 8. Zeng, Z, AD Ziegler, A Chen, T Searchinger, et al. 2019. A reversal in global terrestrial stilling and its implications for wind energy production. *Nature Climate Change*.
- 9. Zeng, Z, L Estes, AD Ziegler, A Chen, T Searchinger, F Hua, K Gaun, A Jintrawet, EF Wood. 2017. Highland cropland expansion and forest loss in Southeast Asia in the twenty-first century. *Nature Geoscience* 11 (8): 556
- 10. Sidle, RC, AD Ziegler. 2012. The dilemma of mountain roads. Nature Geoscience 5, 437–438
- 11. Webb, EL, J Phelps\*, ..., AD Ziegler. 2012. Environment friendly reform in Myanmar. Science 336: 295.
- 12. Ziegler, AD, HS Lim, NR Jachowski\*, RJ Wasson. 2012. Reduce urban flood vulnerability. Nature 481: 145.
- 13. Ziegler, AD, RH Andrews, C Grundy-Warr, P Sithithaworn, TN Petney. 2011. Fighting liverflukes with food safety education. *Science* 331: 282-283.
- 14. Ziegler, AD, PP Wong, C Grundy-Warr. 2009 Still vulnerable to killer tsunamis. Science 326: 1188-1189.
- Ziegler, AD, JM Fox, J Xu. 2009. The rubber juggernaut. Science 324: 1024-1025. DOI: 10.1126/science.117383

#### Short Communications and commentaries

- 16. Ziegler, AD, HS Lim, RJ Wasson, F Williamson. 2021. Flood mortality in SE Asia: can palaeo-historical information help save lives? *Hydrological Processes* 35 (1): e13989.
- 17. Ziegler, AD, J Gillen. 2015. De-mythologizing faculty-postgraduate writing in geography. Geoforum 59: 129-132.
- 18. Gillen, MJ, DA Friess, RJ Wasson, AD Ziegler. 2014. Geography's Role in Nurturing Postgraduate Students in an Era of Interdisciplinarity. *Geographical Journal* 181 (4): 427-431. doi: 10.1111/geoj.12100.
- 19. Ziegler, AD, RJ Wasson, A Bhardwaj\*, YP Sundriyal, SP Sati, N Juyal, V Natival, P Srivastava, MJ Gillen, U Saklani. 2014. Pilgrims, progress, and the political economy of disaster preparedness. *Hydrological Processes* 28(24): 5985-5990. DOI: 10.1002/hyp.10349.
- Ziegler, AD, JP Terry, GJH Oliver, DA Friess, TWL Chow, CJ Chuah\*, RH Wasson. 2014. Increasing Singapore's Resilience to Drought. Hydrological Processes 28: 4543-4548. doi: 10.1002/hyp. 10212.
- Ziegler AD, TN Petney, RH Andrews, C Grundy-Warr, IG Baird, RJ Wasson, P Sithithaworn. 2013. Dams and disease triggers on the Mekong River. PLoS Neglected Tropical Diseases 7(6):1-4.
- Ziegler, AD, J Gillen, B Newell, C Grundy-Warr, RJ. Wasson. 2013. Comprehensive Research in Geography. Area DOI: 10.1111/area.12021.
- 23. Ziegler, AD, HS Lim, C Tantasarin, N Jachowski\*, RJ Wasson. 2012. Floods, False Hope, and the Future. *Hydrological Processes* 26: 1748-1750.
- 24. Sithithaworn, P, AD Ziegler, C, Grundy-Warr, RH Andrews, T Petney. 2012. Alterations to the lifecycle of liverflukes: dams, roads, and ponds. *The Lancet Infections Disease* 12(8): 588.
- Nakao, P., J.L. Perry, A.A. Chun-Smith, T.W. Giambelluca, A.D. Ziegler. 1997. Status of Erythrina sandwicensis in the NifTAL experiment site, Kahoʻolawe, Hawaiʻi: A reassessment. Newsletter of the Hawaiian Botanical Society 36(3/4): 57-63.

### **Research Articles**

- 26. Xu, J., Zou, J., Ziegler, A. D., Wu, J., & Zeng, Z. (2023). What drives the change of capacity factor of wind turbine in the United States? *Environmental Research Letters* ##: ##-##.
- 27. He, X., Ziegler, A. D., Elsen, P. R., Feng, Y., Baker, J. C., Liang, S., ... & Zeng, Z. (2023). Accelerating global mountain forest loss threatens biodiversity hotspots. *One Earth*, 6(3), 303-315.
- 28. Chen, M., Carrasco, G., Zhao, N., Wang, X., Lee, J. N., Tanzil, J. T., ... & Boyle, E. A. (2023). Boundary exchange completes the marine Pb cycle jigsaw. *Proceedings of the National Academy of Sciences*, 120(6), e2213163120.
- 29. Liang, S., Ziegler, A. D., Li, L. Z., Wu, J., Wang, D., & Zeng, Z. 2022. Interplay of greening and ENSO on biosphere–atmosphere processes in Australia. *Geoscience Letters* 9(1): 1-14.
- 30. Jiang, X., Ziegler, A. D., Liang, S., Wang, D., & Zeng, Z. 2022. Forest Restoration Potential in China: Implications for Carbon Capture. *Journal of Remote Sensing* 2022: 0006.
- 31. Goh TA, SJ Ramchunder, AD Ziegler. 2022. Low presence of potentially toxic elements in Singapore urban garden soils. *CABI Agriculture and Bioscience* 3(1): 1-29.
- 32. Yi L, Z Zeng, R. Xu, AD Ziegler, S Jerez, D Chen, C Azorin-Molina, et al. 2022. Increases in China's wind energy production from the recovery of wind speed since 2012. *Environmental Research Letters* 17(11): 114035.
- 33. Zhou, L, H Liu, X Jiang, AD Ziegler, C Azorin-Molina, J Liu, Z Zeng 2022. An artificial intelligence reconstruction of global gridded surface winds. Science Bulletin 67(20: 2060-2063. https://doi.org/10.1016/j.scib.2022.09.022
- 34. Liang, S, D Wang, AD Ziegler, LZ Li, Z Zeng. 2022. Madden–Julian Oscillation-induced extreme rainfalls constrained by global warming mitigation. *npj Climate and Atmospheric Science* 5(1):1-9.
- 35. Nguyen, CTT, P Moss, RJ Wasson, P Stewart, AD Ziegler. 2021. Environmental change since the Last Glacial Maximum: palaeo-evidence from the Nee Soon Freshwater Swamp Forest, Singapore. *Journal of Quaternary Science* 37(4): 707-719. https://doi.org/10.1002/jqs.3403.
- 36. Huang, X, D Wang, AD Ziegler, X Liu, H Zeng, Z Xu, Z Zeng. 2022. Influence of urbanization on hourly extreme precipitation over China. *Environmental Research Letters* 17: 044010.
- 37. Liu, Y., AD Ziegler, J Wu, S Liang, D Wang, R Xu, D Duangnamon, H Li, Z Zeng. 2022. Effectiveness of protected areas in preventing forest loss in a tropical mountain region. *Ecological Indicators* 136: 108697.
- 38. Yi, L., R Xu, AD Ziegler, Z Zeng. 2022. Stronger winds increase sand-dust storm risk in northern China. *Environmental Science: Atmospheres*. DOI: 10.1039/d2ea00058j

- 39. Ramchunder SJ, DD Voutchkova, ES Estrada, CJ Chuah, J Evaristo, D Ng, Y Cai, RY Koh, AD Ziegler. 2022. Flowpath influence on stream acid events in tropical urban streams in Singapore. *Hydrological Processes* 36(1):e14467.`
- 40. Sharma CP, Chahal P, Kumar A, Singhal S, Sundriyal YP, Ziegler AD, Agnihotri R, Wasson RJ, Shukla UK, Srivastava P. (2022). Late Pleistocene–Holocene flood history, flood-sediment provenance and human imprints from the upper Indus River catchment, Ladakh Himalaya. *GSA Bulletin* (1-2):275-92.
- 41. Zhou, L, Z Zeng, C Azorin-Molina, Y Liu, J. Wu, D Wag, D Li, AD Ziegler, L Dong. 2021. A continuous decline of global seasonal wind speed range over land since 1980. *Journal of Climate* 34 (23): 9443-9461.
- 42. Ziegler, AD., RJ Wasson, Y Sundriyal, P Srivastava, G Sasges, RJ Ramchunder et al. (2021). A call for reducing tourism risk to environmental hazards in the Himalaya. *Environmental Hazards*. https://doi.org/10.1080/17477891.2021.1984196.
- 43. Jiang X, S Liang, X He, AD Ziegler et al. 2021. Rapid and large-scale mapping of flood inundation via integrating spaceborne synthetic aperture radar imagery with unsupervised deep learning. *ISPRS Journal of Photogrammetry and Remote Sensing* 178, 36-50.
- 44. Wasson RJ, AD Ziegler, HS Lim, D Rittenour, KN Ramdzan, CJ Chuah, AK Singhvi. 2021. Episodically volatile high energy non-cohesive river-floodplain systems: New information from the Ping River, Thailand, and a global review. *Geomorphology* 382:107658.
- 45. Ramchunder, RJ, AD Ziegler. 2021. Promoting sustainability education through hands-on approaches: a tree carbon sequestration exercise in a Singapore green space. *Sustainability Science*: 1-15.
- 46. Mosavi, A, Golshan, M, Choubin, B., Ziegler, AD, Khalighi S., Zhang, F, Dineva, AA. 2021. Fuzzy clustering and distributed model for streamflow estimation in ungauged watersheds. *Scientific Reports* 11 (1): 1-14.
- 47. Woon\* SHJ, K Srinuansom, CJ Chuah, Sorain J Ramchunder, J Promya, AD Ziegler. 2021. Pre-closure assessment of elevated arsenic and other potential environmental constraints to developing aquaculture and fisheries: The case of the Mae Moh mine and power plant in Lampang, Thailand. *Chemosphere*. 128682
- Wijedasa LS, A Jain, AD Ziegler, TA Evans, T Fung. 2021. Estimating carbon biomass in forests using incomplete data. Biotropica 53: 397–408.
- Bhardwaj\*, A., RJ Wasson, WTL Chow, AD Ziegler. 2021. High-intensity monsoon rainfall variability and its attributes: a case study for Upper Ganges Catchment in the Indian Himalaya during 1901–2013. Natural Hazards 105: 2907-2936.
- 50. Lim HS, E Segovia, AD Ziegler AD. 2021. Water quality impacts of young green roofs in a tropical city: a case study from Singapore. *Blue-Green Systems* 3(1):145-63.
- 51. Hu S, Wang D., ... AD Ziegler, Z Zeng. 2021. Aerosol presence reduces diurnal temperature change: An interval when the COVID-19 pandemic reduced aerosols revealed the climate effect. *Environmental Science: Atmospheres* DOI: 10.1039/D1EA00021G
- 52. Taillardat, P, C Marchand, DA Friess, D Widory, F David, N Ohte, T Nakamura, TV Vinh, TN Nguyen, AD Ziegler. 2020. Respective contribution of urban wastewater and mangroves on nutrient dynamics in a tropical estuary during the monsoon season. *Marine Pollution Bulletin* 160, 111652.
- 53. Delalay M, AD Ziegler, MS Shrestha, V Gopal. 2020. Methodology for future flood assessment in terms of economic damage: Development and application for a case study in Nepal. *Journal of Flood Risk Management*, e12623
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#### Corrections

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### **Book Chapters & Proceedings**

- 194. Ziegler, AD, D Borstein, JQ Yuen. 2017. The viability of swidden agriculture. In M Cairns (Ed), *Shifting Cultivation Policies: Balancing Environmental and Social Sustainability*. CABI. 194 p.
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- 197. Ziegler, AD. TW Giambelluca, RA Sutherland. 2001. Modeling road sediment transport with KINEROS2. Soil Erosion Research for the 21st Century, Proceedings, 699-702.
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# Other

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- Ziegler AD. 2010. Tillage erosion in developing countries in Asia. Vignettes: Key Concepts in Geomorphology. http://serc.carleton.edu/vignettes/collection/42228.html
- 3. Ziegler, A.D., T.W. Giambelluca. 2003. First-order analysis of overland flow buffering in an ungauged fragmented upland basin. *IAHS Publication* 279: 216-223.
- 4. Ziegler, A.D., J. Sheffield, E.F. Wood, E.P. Maurer, B. Nijssen, D.P. Lettenmaier. 2002. Detection of intensification of the global water cycle: the potential role of FRIEND. *IAHS Publication* 274: 51-57.
- Ziegler, A.D., T.W. Giambelluca, R.A. Sutherland. 2002. Estimation of basin sediment flux in the Pang Khum Experimental Watershed in northern Thailand: the contributions of roads and agricultural lands. Case study 28. Land-Water Linkages in Rural Watersheds. 18 Sept - 28 Oct 2000. Land & Water Development Division, FAO.
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#### References

Jefferson Fox. Research Program Director. East-West Center. Honolulu HI, USA. Tel: +1 808.944.7248;

Email: Fox@EastWestCenter.org

Spencer H. Wood. Emeritus Professor. Geology and Geophysics, Geosciences Dept., Boise State University, 1910 University Drive, Boise, Idaho 83725, USA. Tel: +1 208-426-3629; Email: spen\_wood@hotmail.com

Robert I. Wasson. Emeritus Professor, ANU; Adjunct Professor, UKM and JCU; Adjunct Senior Research Fellow NUS.

Email: wasson.robertj@gmail.com

Roy C. Sidle. Director, Mountain Societies Research Institute, Professor of Earth and Environmental Sciences, School of Arts and Sciences. University of Central Asia. 155 Qimatsho Imatshoev Street, Khorog, GBAO, 736000, Republic of Tajikistan, Tel: +992 4464 08 220. Email: rsidle@usc.edu.au

Thomas W. Giambelluca. Professor. Geography Dept., 2424 Maile Way #412 Social Science,

University of Hawai'i, Honolulu HI 96822 (USA). Tel: +1 808 956 7683; Fax +1 808 956 3512; email: thomas@hawaii.edu

Ross A. Sutherland. Professor. Geomorphology Lab, Geography Department, 2424 Maile Way #422 Social Science, University of Hawai`i, Honolulu HI 96822 (USA). Tel: +1 808 956 3524; Email: <a href="mailto:sutherla@hawaii.edu">sutherla@hawaii.edu</a>

#### STUDENT SUPERVISION

### Graduate students under supervision (\*joint supervision)

### PhD Students Supervised

**Lucy G Gillis.** 2010-2014. PhD: Facilitation beyond diversity: self-facilitation of mangrove-seagrass-coral ecosystems; enrolled at NIOZ (The Netherlands).

**Chuah Choon Joon**. 2011-2016. PhD: The Assessment of the Quality of Water Resources in Northern Thailand: Towards Safe Drinking Water Access for Populations.

**Anne Lau.** 2014-2016. PhD: Assessing Coastal Hazards with High-Energy Wave-Deposited Boulders: Case Studies from Three Tropical Pacific Islands.

Tien Trinh Nguyen Canh. 2014-2017. PhD: Heavy metal distribution in Nee Soon Swamp

Alok Bhardwaj. 2013-2017. PhD: Extreme rainfall and landslide occurrence in the Uttarakhand.

Pierre Taillardat. 2014-2018. PhD: Mangrove nutrient cycling in Vietnam. Co-supervised with Dan Friess.

Marie Delalay. 2015-2019. PhD. Improved Flood Forecasting Models.

### MSS/MSc Students Supervised

- Rachel Yan Ting Koh. 2016-2019. Drivers of stream acidification in forested catchments on Singapore.
- Chui Ho Man. 2016-2017. MSc (Environmental Management): Management options for Nee Soon Freshwater Swamp Forest.
- Khairun Nisha Bte Mohamed Ramdzan. 2014-2016. MSS: Application of Palaeoflood Sedimentology to Identify Changes to the Fluvial Environments and to Reconstruct Peak Discharges in the Upper Ping River, Chiangmai.
- Yuen Jiaqi. 2012-2015. MSS: Uncertainty in above and belowground carbon biomass in major land covers in Southeast Asia.
- Ng Xiao Qian Serene. 2013-2015. MSS: Social Memories of Floods: The Making of Hazardscapes in Ayutthaya.
- Rutger Hofste. 2013-2014. MSc. Comparative analysis among near-operational evapotranspiration products for the basin based on earth observations. Double Master of Science in Hydraulic Engineering and Water Resources Management at the Delft University of Technology and the National University of Singapore (Co-supervised with Wim Bastiaanssen, Delft University of Technology).
- **James Bramonte**. 2012-2104. MSS: Quantifying recent trends in seagrass cover and biomass in a stressed environment, Pulau Semakau, Singapore.
- Mohammad Shamraz Anver. 2011-2014. MSS. Accuracy of filling streamflow gaps using artificial intelligence.
- Quak Song Yun Michelle. 2011-2014. MSS: Provenance of seagrass sediments on Yao Yai Island, Pang Nga, Thailand.

### BSS Honors students supervised

- 1. **Angus Sham.** 2010. ISM Thesis: The influence of land-cover changes on saturated hydraulic conductivity in three forest land-covers in northern Thailand.
- Alvin Yeo. 2010. ISM Thesis: Variation in soil physical characteristics in three forest soils in Mae Sa Catchment, Thailand.
- 3. **Quak Song Yun Michelle**. 2011. Honors Thesis: Above-ground biomass of a *Rhizophora*-dominated mangrove ecosystem, Ranong, Thailand.
- 4. **Yuen Jiaqi**. 2011. Honors Thesis: Unfriendly roads: the effect of land use on heavy metal accumulation in road-deposited sediments in Singapore.
- 5. **Norman B Md Shah**. 2011. Honors Thesis: Impacts of shrimp farming in southern Thailand: a study in water quality management.
- 6. Song Si Hui Mandy. 2012. Honors Thesis: Biophysical impacts of elephant trampling in Thailand.
- 7. **Ng Xiao Qian Serene**. 2012. Honors Thesis: Flooding effects on location of Wat Wiang Khum Kam, Chiang Mai, Thailand. Won FASS Outstanding Undergraduate Researcher (OUR) Prize for 2011/2012.
- 8. Ang Zuo Jin. 2012. Honors Thesis: Sediment Fingerprinting in Mae Sa Catchment, Chiang Mai, Thailand.
- 9. **Kelvin Ho**. 2013. Honors Thesis: Role of grain size and organic matter in affecting sediment-turbidity hysteresis patterns in a Thai river.
- 10. Kitson Tan. 2013. Honors Thesis: Stream chemistry and hydrograph separation in Mae Sa River, Thailand.

- Lye Han Rui. 2014. Honors Thesis: The F word: groundwater fluoride contamination in Chiang Mai, northern Thailand.
- 12. **Chiam Gui Ping.** 2014. Honors Thesis: Geologic controls of drainage systems and channel morphology in Doi Suthep metamorphic core complex, northern Thailand.
- Soh Jia Yun Candice. 2014. Honors Thesis: Rainfall partitioning in a montane bamboo-dominated stand, northern Thailand.
- 14. **Tan Jin Hui Aricia**. 2014. Honors Thesis: Limitations to using neodymium, strontium, and lead isotopes for sediment tracing in small catchments: a case study of Mae Sa Catchment, northern Thailand.
- 15. **Anna Yeo**. 2014. Honors Thesis: Biogeochemistry of aluminum in the acidified streams of Bukit Timah Nature Reserve Singapore
- Rachel Yan Ting Koh. 2014. A sedimentary record of land use change and heavy metal deposition in Nee Soon Swamp Forest, Singapore.
- 17. Lim Wan Lin. 2015. Honors Thesis: Heavy metals in household dust in Singapore
- 18. Lim Jia Ai Dawn. 2015. Honors Thesis: Macro-invertebrates as indicators of river health in Thailand
- 19. **Esther Kee Hwee Tan**. 2015. Honors Thesis: Hydrological controls on the presence of *Burkholderia psuedomallae* in northeast Thailand—implications for Melioidosis.
- 20. Nabila Bte Mukhaidin. 2015. Honors Thesis: Parasites in dairy versus free-ranging cattle in northern Thailand
- 21. **Teo Wei Tian Charlen**e. 2016. Assessment of Soil Heavy Metal Concentrations within the Nee Soon Swamp Forest.
- 22. Loh Zhi Yang. 2016. Influence of localised sources and vertical profile of heavy metals in household dust in Singapore.
- 23. **Kho Yee Theng Rachel**. 2016. Impacts of different types of vegetation cover on soil hydraulic characteristics in Nee Soon Swamp Forest, Singapore.
- Muhammad Herzad B Mohd Rahman. 2016. Soil Organic Carbon Stocks in the Nee Soon Swamp Forest.
- 25. **Ong Miao Xiang**. 2016. A Sedimentary record of past land use, heavy metal deposition and movement of sediments in the Nee Soon Swamp Forest, Central Catchment Singapore.
- Lim Jian De Jaron. 2017. Investigation of Freshwater Crab Habitat Characteristics within Nee Soon Swamp Forest.
- 27. **Jocelyn Lim Shi Hui.** 2017. Discovery of Cryptotephra in Freshwater Swamp: Invisible Clues into Past Volcanic Eruptions.
- 28. Goh Tiong Ann. 2018. Heavy metal contamination in Singapore community gardens.
- Woon Shi Hui Joelynn. 2018. Arsenic threat in streams surrounding the Mae Moh Power Generation Plant, Lampang Thailand.
- 30. Veronica Tan Yi Ying. 2018. Characteristics of newly found loess deposits in northern Thailand.

### Internal Examiner

• Wang Jianjun. June 2010. National University of Singapore. Satellite remote sensing of suspended sediment concentrations in turbid rivers.

### **NUS Thesis Committee**

• Ran Lishan. 2013 projected. National University of Singapore.

### External Examiner

- Daryl RuiXiang LAM. May 2017. PhD Dissertation. Extreme Flood Events in South East Queensland: Evidence and Implications. Dissertation, University of Queensland.
- Sharif Ahmed Mukul. Nov 2015. PhD Dissertation Shifting cultivation in the upland secondary forests of the Philippines: Biodiversity and carbon stock assessment, and ecosystem services trade-offs in land-use decisions
- Sarah Hobgen. May 2015. PhD. Thesis. Understanding sediment sources to inform management in data poor regions: An example from Sumba, eastern Indonesia. Charles Darwin University.
- Sibylle Kathrin Hassler. April 2013. PhD Thesis: Saturated Hydraulic Conductivity in the humid tropics: Sources of variability, implications for monitoring, and effects on near-surface hydrological flow paths. University of Potsdam, Faculty of Mathematics and Natural Sciences.
- Wang Yi. Aug 2012. Depart of Biological Sciences, National University of Singapore. MS Thesis: Changes of land use, associated livelihood, plant biodiversity in traditional tea agroforestry in Yunnan China.

- Sunita Ragni Lata. Jan 2010. MA thesis: Impacts of different land use activities on water quality in the Lower Signatoka River Catchment, Viti Levu, Fiji. University of South Pacific.
- Andrew Wilson. 2010. MPhil. Australian National University. Thesis: Hydrological effectiveness and rural community perception of upland afforestation in Yunnan Province, southwest China. Dissertation Committee Outside Member.
- David Burwell. March 5, 2001. Department of Marine Science, University of South Florida. Dissertation: Modeling Spatial Variation in Estuary Residence Times: Eulerian vs. Lagrangian Approaches. Dissertation Committee Outside Member.

#### **TEACHING**

#### Awards

2010: FASS Faculty teaching award 2011: FASS Faculty teaching award 2012: FASS Faculty teaching award

**Teaching Philosophy:** Student learning is unique. Ability not only reflects intelligence, it is affected by academic preparation, cultural influences, and current life situations. Teaching and assessment strategies must be diverse to reach as many students as possible. Reaching troubled students often involves understanding why they are struggling and building from that reference point. Learning should be enjoyable and rewarding. I encourage creativity and the questioning of accepted dogma—including my own. I allow inquiry to drive discussion; and I allow student interest to influence class direction. Thus, learning is dynamic and two-way.

My role as a teacher is not different from that of a coach: the end goal is making all students perform to the best of their abilities, not simply making the stars shine brighter. This is challenging at elite universities like NUS where the best students tend to be rewarded over and over again while many of the rest become discouraged. I relish finding the sleepers who will one day exceed expectations. I also encourage class interaction by breaking into groups where strong students work alongside struggling ones. In this sense, the teaching and learning become an interactive process—one in which students learn the value of selflessness and leading by example.

### University of Hawaii

- Physical geography laboratory: F 1993; SP 1994; F 1994; SP 1995; F 1995
- Agricultural climatology teaching assistant: SP 1996;
- Climate lab assistant: F 1996.

## University of Kansas, Computer Science Department

- Introduction to computing: Fall 1988 (2x); SP 1989 (2x)
- Pascal programming: F 1989 (2x); SP 1990 (2x); F 1991 (2x); SP 1991 (3x)

**Teaching interests:** (1) watershed hydrology / water resources; (2) process geomorphology; (3) measuring/modeling earth surface processes; (4) microclimatology; (5) environmental change / land degradation; (6) field instrumentation for environmental research; and (7) statistics and spatial analysis techniques for experimental research; (8) natural hazards; (9) physical geography of SE Asia.

### Workshops/symposia taught:

- \* Instructor: MOE training classed for National Geography Talent Development Programme (TDP): Landform, Landuse, and Resources lecture (2012-2016). The Singapore team placed first in the 9th International Geography Olympiad (iGeo) held in Cologne, Germany, from 21- 26 Aug 2012; the team was also champions of iGeo2012.
- \* Instructor: graduate writing workshop @ Utown (July, 2012; 7 pax)
- \* Instructor: Field course on measuring stream discharge, suspended sediment, and bedload. Faculty of Forestry, Kasetsart University (Oct 2004)
- \* Assistant Field Instructor. Soil survey and classification. Chiang Mai University (2002-2003)
- \* Instructor: Workshop on climate station installation, operation, and maintenance, Department of Land Development, Chiang Mai Thailand (June, 2000).
- \* Instructor: Workshop on rainfall simulation techniques to investigate runoff generation, sediment transport, and pesticide mobilization, Department of Land Development and Highland Development Project Thailand (Jan-Feb, 2002).

CURRICULUM VITAE [17] updated: 7 May 2023

### **Educational Leadership**

Designed, GE4222, Earth Surface Processes and Landforms Help design joint DBS/geography minor in aquatic ecology (2012)

Instruction @ National University of Singapore

c o de	credits	year	student	teaching	total	percentage	overall
			numbers	award noms	responses	nominating	ffectiveness
GE1101E	4	2013	115	0	74	0%	3.73
GE1101E	4	2014	113	0	71	0%	3.94
GE1101E	4	2015	135	0	82	0%	3.87
GE1101E	4	2016	136	0	86	0%	3.92
GEK1101	4	2013	194	1	135	1%	3.55
GEK1101	4	2014	69	1	47	2%	3.81
GEK1101	4	2015	75	0	45	0%	3.68
GEK1101	4	2016	95	1	57	2%	3.79
GET1001	4	2017	68	0	56	0%	4.10
GE3230A	8	2009	44	18	33	55%	4.57
GE3230A	8	2010	44	9	30	30%	4.57
GE3230A	8	2011	44	8	30	27%	4.40
GE3230A	8	2012	42	11	30	37%	4.63
GE3230A	8	2013	47	11	35	31%	4.89
GE3230A	8	2014	49	12	28	43%	4.61
GE3230A	8	2015	45	13	38	34%	4.61
GE3230A	8	2016	44	7	28	25%	4.54
GE3230A	8	2017					
GE3240	4	2012	55	0	34	0%	4.00
GE3240	4	2013	74	2	53	4%	3.91
GE3240	4	2014	81	3	48	6%	4.02
GE3240	4	2015	89	1	62	2%	3.94
GE3240	4	2016	84	3	57	5%	4.09
GE3240	4	2017	68	9	56	16%	4.10
GE4211	4	2009	37	2	19	11%	
GE4211	4	2010	40	7	23	30%	4.26
GE4880	4	2011	32	11	22	50%	4.48
GE5211	4	2010	6	1	3	33%	5.00
GE5211	4	2011	7	1	6	17%	4.67
GE5211	4	2012	5	0	6	0%	4.50
GE5211	4	2015	5	0	4	0%	4.50
GE5211	4	2017	10	10	10	100%	4.95
TOTALS			1952	142	1308	18%	4.25

GE1101 & QEK1001: PLACE, ENVIRONMENT AND SOCIETY (Introduction to Geography for majors and non-majors).

GET1001: Seeing the world through maps
GE3230A: Field studies is a split human/physical course for which I only interact extensively with half of the students. GE3240: Geographical research: developing ideas (Honors thesis prep course for human and physical geographers);

GE4211: Catchment processes and management

GE4880: Topics in geomorphology

### **SERVICE**

### (a) University Service

NUS Faculty of Arts and Social Science, Faculty Research Award (FRA) Committee (2014-2018)

NUS Faculty of Arts and Social Science, Environmental Cluster Steering Committee Head (2012-2018)

NUS Faculty of Arts and Social Science, Environmental Cluster Steering Committee (2010-2018)

NUS Faculty of Arts and Social Science, Faculty Research Committee (2011-2015)

### (b) Department Service

NUS Geography Department, Safety Committee (2015-2019)

Singapore Journal of Tropical Geography, Advisory Board (2010 - 2019)

NUS Geography Department, GEOLAB Supervisor (2011 – 2019)

NUS Geography Department, Honors Coordinator & Level 4000 module coordinator (2011-2018)

NUS Geography Department, Tropical Environmental Cluster Deputy Chair (2013 – 201)

NUS Geography Department, Undergraduate Research Committee (2013-2015)

NUS Geography Department, Research Committee, (2013-2017,02019)

NUS Geography Department, Tropical Environmental Cluster Chair (2010 – 2012, 2019)

NUS Geography Department, Ethics and Standards Sub-Committee (ESSC) (2010 - 2012)

NUS Geography Department, Seminar Committee (2009 - 2012)

### (c) Conference/workshop Service (since 2009)

Chair, Panel on Global Climate Change Adaptation for Urban Resilience. Conference on RESILIENT CITIES FOR HUMAN FLOURISHING GOVERNING THE ASIA-PACIFIC URBAN TRANSITION IN THE ANTHROPOCENE. Hosted by the Asia Research Institute, National University of Singapore, 2-3 March 2017.

Invited speaker. Smart Villages and Resilience to Natural Disasters. 5 May 2016. Joint workshop by the Asia Research Institute, National University of Singapore, and the Smart Villages Initiative. Asia Research Institute, NUS, Singapore.

Organizer: Future Floods. An Exploration of Cross-Disciplinary Approaches to Flood Risk Forecasting. Cosponsored by NUS FASS Environment Cluster & Institute of Water Policy, Lee Kuan Yew School of Public Policy & Aon Asia Pte Ltd. 26-27 February 2015.

Organizer: NUS FASS Environment Cluster International Workshop. Holocene Climate Reconstructions and Understanding Flood Histories. 27-28 January 2014. NUS, Singapore

Session Chair. Emplacing Climate Change: Reconstructions of Changing Environmental Realities, Science Technology and Society Cluster Workshop. FASS National University of Singapore, 6 Nov 2013.

Panel Chair: Research Questions. FLOOD RISK IN MONSOON ASIA: HAZARD AND VULNERABILITY IN THE PAST AND FUTURE. A Planning Workshop 24 - 25 Sep 2013, Asia Research Institute, Singapore.

Session Chair: Annual Conference for the Consortium of African and Asian Studies (28-30 Jan 2013; Singapore)

Organizer: NUS FASS Environment Cluster Workshop IV - "Global Change Issues in the Asian Region" (23-25 Jan 2013).

FASS representative: LSHTM & NUS joint-hosted International Workshop on "Use of systems dynamics in policy making" (21-25 Jan 2012; Singapore)

Organizer: NUS FASS Environment Cluster supported LUCIFS-ASIA. Workshop and Planning meeting for Landuse and Climate Impacts on Fluvial Systems in Asia (10-11 Nov 2012)

Organizer: NUS FASS Environment Cluster Workshop III. 5-10 Feb 2012.

Organizer: NUS FASS Environment Cluster Workshop II. 25-29 April 2011.

Facilitator: NUS FASS Joint Health and Environment Cluster Seminar, 'Life-Cycle, Livelihoods and Parasites: Human, Environment, and Health Dynamics of *Opisthorchis viverrini* in the Mekong Region', 10-12 March 2011.

Facilitator: NUS FASS Environment Cluster Research Seminar "Water and sediment discharge changes across the Chao Phraya River basin", 13-15 March 2011.

Organizer: NUS FASS Environment Cluster Research Facilitation Workshop I. 25-29 January 2011.

Promoter: 8th Mathematics and Physical Science Graduate Congress, December 2012, Bangkok, Thailand.

Promoter: 7th Mathematics and Physical Science Graduate Congress, December 2011, Singapore.

Promoter: 6th Mathematics and Physical Science Graduate Congress, December 2010, Kuala Lumpur, Malaysia.

Session chair: Panel 16 (Environment). The 4th Asian graduate forum on SE Asian Studies. Organized by Asia Research Institute, NUS. Singapore, 15-17 July 2009

Session chair: BIOFUELS: The impact of Oil Palms on Forest and Climate. 12-13 May 2009. Singapore, sponsored by Environmental Leadership and Training Initiative (ELTI) and NUS Department of Biological Sciences.

### (d) Editorial Service

- Editorial Board: Singapore Journal of Tropical Geography (2010 2019)
- Editor (with RC Sidle and M Tani) of special issue on Catchment Processes in SE Asia. Forest Ecology and Management, Volume 224, Issues 1-2.

### (e) Journal Reviewing

I review roughly one journal article a month: Nature, Forest Ecology and Management, Catena, Water Research, Natural Hazards, Global Environmental Change, Biogeochemistry, Hydrological Processes, Earth Surface Processes and Landforms, Journal of Hydrology, Journal of Hydrometeorology, Journal of Environmental Management, Journal of Transport Geography, Agriculture, Ecosystems, and Environment, Environmental Reviews, Environmental Management, Singapore Journal of Tropical Geography, Global and Planetary Change, Journal of Agriculture, Science and Technology, European Journal of Soil Science, Geoderma, Quaternary International, Biotropica, Landscape and Urban Planning, Journal of Hazardous Materials, Biomass and Biofuels, Transactions of the American Society of Agricultural and Biological Engineers, Journal of Geophysical Research, Biogeosciences, Conservation Letters.

#### (f) External grant reviewing

I have reviewed grants for the following agencies: National Science Foundation (USA), National Sciences and Engineering Research Council of Canada, National Geographical Society.

### Other Honors & support (not listed above)

#### Awards

Horton Hydrology Research Award, American Geophysical Union, Hydrology Section (1995) Most distinguished technical paper award (co-author), IECA 27th Annual Conference (Feb, 1996) Wein's Award, Department of Geography, University of Hawai'i (May 2000) Order of Omega Honor Society, Charter Member, University of Kansas (1991) Berelli Award of Excellence, National Chapter, Delta Chi (1990)

### Fellowship support

NSF Fellowship support: Hydrological/Geomorphological Road Impacts in Thailand (spring 1998 - spring 2000) NSF Fellowship support: Vietnam Forest Fragmentation project (1997-1998) Environmental Protection Agency STAR Fellowship (fall 1995 - summer 1998)

## Scholarships & Assistantships

Japan Society for the Promotion of Sciences (JSPS) Fellowship, Kyoto University (spring 2006)
International Agreements Fund Exchange Scholarship, study at Chiang Mai University (fall 1996- fall 1998)
National Research Council (USA) Travel Scholarship, 28th IGU Conf., The Hague, The Netherlands (Aug., 1996)
International Erosion Control Association travel scholarship, IECA Conference, Seattle WA (Feb, 1996)
Arts and Sciences Advisory Council Award to conduct research in SE Asia (summer, 1995, 1997)
American Meteorology Society Travel Scholarship, Global Climate Conference, Dallas, TX (Jan, 1995)
NOAA Scholarship, Colloquium on Environmental Prediction, Camp Springs, MD (summer, 1994)
Graduate Teaching Assistantship, Geography Department, University of Hawai'i (Aug, 1993 - Aug, 1995)
Graduate Teaching Assistantship, Computer Science, University of Kansas (Aug, 1988 - May, 1991)

### Memberships

AGU Life member (since 1993)

Re	fereed Journals	n times	ISI Journal Impact Factor	
1.	Nature	1	38.14	
2.	Science	4	36.66	
3.	The Lancet Infectious Disease	1	19.45	
4.	Nature Climate Change	1	19.18	
5.	Nature Geoscience	2	12.51	
6.	Global Change Biology	1	8.04	
7.	Global Environmental Change	5	7.48	
8.	Journal of Cleaner Production	1	5.65	
9.	Journal of Environmental Management	1	4.86	
10.	Conservation Biology	3	4.84	
11.	PLoS Neglected Tropical Diseases	1	4.69	
12.	Geochimica et Cosmochimica	1	4.69	
13.	Biological Conservation	1	4.66	
14.	Agriculture and Forest Meteorology	3	4.46	
15.	Journal of Hazardous Materials	1	4.33	
	Climatic Change	2	4.31	
<i>17</i> .	Geochimia et Cosmochimia Acta	1	4.25	
18.	Science of the Total Environment	2	4.10	
19.	Hydrology and Earth System Science	2	3.99	
20.	Coral Reefs	1	3.88	
21.	Atmospheric Research	1	3.78	
22.	Environmental Pollution	1	3.73	
23.	Frontiers in Marine Science	1	3.58	
24.	Journal of Climate	3	3,55	
25.	Water Resources Research	2	3.55	
26.	PLoS One	2	3.53	
27.	Marine Geology	1	3.50	
28.	Journal of Environmental Management	4	3.43	
29.	International Journal of Parasitology	1	3.39	
30.	Journal of the Geological Society of London	1	3.30	
	Journal of Geophysical Research - Atmospheres	1	3.30	
32.	Journal of Environmental Quality	2	3.25	
33.	Land Degradation & Development	4	3.09	
34.	Applied Geography	2	3.08	
<i>35</i> .	Agriculture, Ecosystem, & Environment	1	3.00	
36.	Geomorphology	8	2.88	
<i>37</i> .	Tree Physiology	1	2.86	
38.	Ecohydrology	3	2.85	
39.	Forest Ecology and Management	7	2.83	
40.	Journal of Hydrology	6	2.66	
41.	Sedimentary Geology	1	2.66	
42.	International Journal of Disaster Risk Reduction	1	2.59	
43.	Marine Ecology Progress Series	2	2.55	
44.	Water	1	2.52	
45.	Hydrological Processes	12	2.49	
46.	Hydrology Research	1	2.48	
<i>47</i> .	Ecohealth	1	2.45	
48.	Earth Surface Processes Landforms	4	2.43	
49.	Soil and Tillage Research	3	2.43	
50.	Estuarine, Coastal and Shelf Science	1	2.34	
51.	Geoderma	1	2.32	
52.	Soil Science Society of America Journal	1	2.18	
<i>53</i> .	Journal of Sea Research	1	2.15	
54.	Parasitology International	1	2.13	
55.	Applied Geochemistry	1	2.18	
56.	Biotropica	1	2.08	
<i>57</i> .	Ecological Modelling	1	2.07	
58.	Water Resource Management	1	2.05	
59.	International Journal of Disaster Risk Reduction	1	1.97	
60.	Natural Hazards	1	1.96	
61.	Geographical Journal	1	1.93	

62.	Catena	2	1.89
63.	Marine Chemistry	1	1.73
64.	Environmental Monitoring and Assessment	1	1.69
65.	Human Ecology	3	1.63
66.	Journal of Environmental Engineering	1	1.54
67.	Botanica Mariana	1	1.52
68.	Environmental Management	2	1.50
69.	Journal of Range Management	1	1.46
70.	Geoforum	1	1.40
71.	Area	1	1.38
<i>72</i> .	Transportation Research Part D: Trans & Environ	1	1.29
<i>73</i> .	IEEE Journal of STAEO&RS	1	1.14
74.	Journal of Applied Remote Sensing	1	1.11
<i>75</i> .	Sustainability Science	1	0.89
76.	Singapore Journal of Tropical Geography	1	0.87
<i>77</i> .	Communications in Soil Science & Plant Analysis	2	0.43
78.	Ecological Restoration	1	0.36
<i>79</i> .	Garden's Bulletin	1	$N \setminus A$
80.	Iranian Journal of Watershed Management Science and Engineering	1	N/A
81.	IOP Conf. Series: Materials Science and Engineering	1	$N \backslash A$

#### Other Publications

### **Proceedings**

- 1. Ziegler AD, TW Giambelluca, RA Sutherland. 2001. Modeling road sediment transport with KINEROS2. In: Ascough JC and DC Flanagan (Eds), Soil Erosion Research for the 21st Century, Proceedings: 699-702.
- 2. Sutherland RA, AD Ziegler, LT Tran. 1997. Rolled erosion control systems and their effect on sediment redistribution by rainsplash a laboratory investigation. *International Erosion Control Association Proceedings* 28: 427-443.
- 3. Sutherland RA, AD Ziegler. 1997. A field examination of rolled erosion control systems and their influence on runoff and sediment transport. *International Erosion Control Association Proceedings* 28: 427-443.
- 4. Sutherland RA, AD Ziegler. Geotextile effectiveness in reducing interill runoff and sediment flux. Erosion Control Technology Bringing it Home: Proceedings of Conference XXVII: 393-405.

### **Misc Publications**

- 1. Ziegler, A.D., R.A. Sutherland, and T.W. Giambelluca. 1999. Rainfall simulation experiments to investigate runoff generation and sediment transport on various landuse types in northern Thailand. *Geographical Journal*, Geographical Association of Thailand 24 (2): 1-34.
- **2.** Ziegler, A.D., and T.W. Giambelluca. 1997. Hydrologic change and accelerated erosion resulting from agriculture and road building in northern Thailand. *Explorations in Southeast Asian Studies* 1(1): 2-12.

### Foreign Language Publications

 Ziegler, A.D., T.W. Giambelluca, R.A. Sutherland, M.A. Nullet, S. Yarnasarn, J. Pinthong, S. Jaiarree. อุทกวิทยาและการ เปลี่ยนแปลงภูมิทัศน์ของพื้นที่ภูเขาภาคเหนือของประเทศไทย: ผลกระทบของถนน. (Hydrology and Landscape Evolution in Mountainous Tropical Watersheds: the Impact of Rural Roads) Kasetsart Science Journal.

### **Technical Reports**

- Ziegler, A.D., T.W. Giambelluca, R.A. Sutherland, T.T. Vana, D. Ko, P. Malaspino, and E. Lind. 1998. Erosion control effectiveness of a coral-based gravel surfacing material, Schofield Barracks, Oahu, Hawai'i. Technical Report 1998-AZ02, Geomorphological Laboratory, Geography, University of Hawai'i. Prepared for ITAM Range Division, US Army Schofield Barracks, O'ahu Hawai'i.
- 2. Ziegler, A.D and A.A. Chun Smith. Investigation of soil nutrients on Kaho`olawe Island. 1998. Technical Report 1998-AZ01, Geomorphological Laboratory, Department of Geography, University of Hawai`i Manoa. Prepared for Kaho`olawe Island Reserve Commission, Honolulu, HI.

- 3. Giambelluca, T.W., J.R. Egan, S.K. Garcia, R. Louis, J.L. Perry, F. Richardson, A. A. Chun-Smith, and A.D. Ziegler. 1997. Lessons learned: an assessment of previous revegetation efforts, Kaho`olawe Island, Hawai`i. Final Report. Kaho`olawe Island Reserve Commission, Honolulu, HI.
- Ziegler, A.D. 1994. Strengthening primary health care in rural areas: evaluation of the baseline survey, Sheikhupura pilot project. Internal Report. Pakistan Institute for Environment-Development Action Research (PIEDAR), Islamabad, Pakistan.

### Other conference Proceedings

- Giambelluca, TW, RA Sutherland, K Nanko, R. Mudd, AD Ziegler. 2010. Effects of Miconia on Hydrology: A first approximation. Proceedings from the Pulling it all together 2009 International Miconia Conference, 4-7 May 2009, Maui, Hawaii.
- 2. Dan, N.P., Liem, TT, AD Ziegler, LD. Hiep. 2008. Assessment of change of land use on solid TOC into the Hau River. In proceeding "1st International Conference on Environment and Natural Resources, Ho Chi Minh City, Vietnam, March 17th-18th, 2008 that was organized by Swiss Federal Institute of Technology Lausanne (EPFL) and Vietnam National University HCMC and Institute for Environment and Resources. pp.90-100, ICENR 2008, with the theme" Environmental Protection for Urban and Industrial Zones to International Integration"
- 3. Negishi, J.N., A.D. Ziegler, S. Noguchi, R.C. Sidle, N. Abdul Rahin. 2004. Storm flow generation in a tropical headwater zero-order basin in peninsular Malaysia. In R.C. Sidle, M. Tani, N. Adbul Rahim, and Tewodros Ayele, (eds.) Forests and Water in Warm, Humid Asia, Proceedings of a workshop of the IUFRO Forest Hydrology Working Group (8.03.00), 10-12 July 2004, Kota Kinabalu, Sabah, Malaysia.
- 4. Ziegler, A.D., Negishi, J.N., R.C. Sidle, P. Preechanpanya, R.A. Sutherland, T.W. Giambelluca. 2004. Reduction of road-generated stream suspended sediment by a riparian buffer. In R.C. Sidle, M. Tani, N. Adbul Rahim, and Tewodros Ayele, (eds.) Forests and Water in Warm, Humid Asia, Proceedings of a workshop of the IUFRO Forest Hydrology Working Group (8.03.00), 10-12 July 2004, Kota Kinabalu, Sabah, Malaysia.
- **5.** Ziegler, A.D. and T.W. Giambelluca. 1998. A preliminary simulation of hydrologic change and accelerated erosion resulting from road expansion in northern Thailand. Proceedings of FORTROP'96, pp. 211-226, Kasetsart University, Bangkok, Nov. 23-29, 1996.
- **6.** Giambelluca, T.W., and A.D. Ziegler. 1998. Influence of long-term land cover change on river flow in northern Thailand. Proceedings of FORTROP'96, pp. 1-20, Kasetsart University, Bangkok, Nov. 23-29, 1996.
- 7. Ziegler, A.D. and T.W. Giambelluca. 1996. Horton overland flow generation on rural roads: A preliminary investigation of runoff and accelerated soil erosion in northern Thailand. In Montane Mainland Southeast Asia in Transition, pp. 206-232, The CMU-Consortium, Multiple Cropping Centre, Chiang Mai, University, Chiang Mai, Thailand.
- **8.** Giambelluca, T.W. and A.D. Ziegler. 1996. Climatological and hydrological implications of land cover change in highland Southeast Asia. In Montane Mainland Southeast Asia in Transition, pp. 181-205, The CMU-Consortium, Multiple Cropping Centre, Chiang Mai, University, Chiang Mai Thailand.

# **Conference Papers | Posters**

- A Kumar, P Sharma, P Chahal, S Singhal, Y Sundriyal, R Agnihotri, RJ Wasson, AD Ziegler, P Srivastava. 2018. Paleofloods records from Ladakh Himalaya: role of monsoon variability and quantification of sediment routing. AGU Fall Meeting, Washington, 10-14 December 2018..
- 2. Teo, EA., AD Ziegler, RJ Wasson, P Morthekai. 2018. Locating and Dating the Ping River's Journey Across the Chiang Mai Basin, Thailand. EGU General Assembly Conference, Vienna, 8-13 April, 2018.
- 3. Ziegler, AD, A Bhardwaj, RJ Wasson, W Chow. 2017. Estimating the characteristics of extreme rainfall events using a suitable precipitation product in the Garhwal Himalaya in India. EGU General Assembly, Vienna, 23-28 April.
- 4. Bhardwaj, A, AD Ziegler, RJ Wasson, W Chow, ML Sharma. 2017. Identification of trends in intensity and frequency of extreme rainfall events in part of the Indian Himalaya EGU General Assembly, Vienna, 23-28 April.
- Nguyen, TCT, SH WIN, MH Lim, K Pai, BMR Khairun Nisha, AD Ziegler, R Wasson, SI Cantarero. 2016. Hydrochemistry in the Tropical Forested River: A Case Study in Nee Soon Catchment Streams. AGU Fall Meeting, San Francisco, 12-16 December, 2016.
- 6. Tseng, H., E Wright, AD Ziegler, TW Giambelluca. 2015. Variations in annual stream hydrograph of montane watershed in northern Thailand: Mid-wet-season shift in runoff response observed in some years. AGU Fall Meeting, San Francisco, 14-18 December, 2015.

- 7. Nguyen, TTC, RA Wasson, SH Win, K Pai, MH Lim, AD Ziegler. 2015. Heavy Metal Distributions in a Tropical Forest Catchment. Presentation IG03-D3-PM2-329-009. Session IG03 Tropical Forest Ecology and Hydrology. 2015 AOGS. 2-7 August 2015, Singapore.
- 8. Win, SH, TTC Nguyen, K Pai, MW Lim, RA Wasson, AD Ziegler. 2015. Water Quality and Hydrologic Conditions in the Nee Soon Freshwater Swamp Forest, Singapore: Implications for Ecological Systems. Presentation IG03-D4-PM2-P-016. Session IG03 Tropical Forest Ecology and Hydrology. 2015 AOGS. 2-7 August 2015, Singapore.
- Win, SH., RA Wasson, T O'Dempsey, TTC Nguyen, AD Ziegler. 2015. History of Land Use / Land Cover Changes in the Nee Soon Swamp Forest, Singapore: Combined Inventory of Historical and Contemporary Mapping Products. Presentation IG03-D4-PM2-P-017. Session IG03 - Tropical Forest Ecology and Hydrology. 2015 AOGS. 2-7 August 2015, Singapore.
- **10.** Wasson, RA, AD Ziegler, K Pai, KNBM Ramdzan, RYT Koh, TTC Nguyen. 2015. Erosion and Recovery Regimes in the Nee Soon Swamp Forest Catchment, Singapore. Presentation IG03-D3-PM2-329-010. Session IG03 Tropical Forest Ecology and Hydrology. 2015 AOGS. 2-7 August 2015, Singapore.
- **11.** Wasson, RA, AD Ziegler, TTC Nguyen, K Pai, SH Win. 2015. Disturbance Regimes at the Interface of Geomorphology and Ecology at Nee Soon and Johor. Presentation IG03-D3-PM2-329-01. Session IG03 Tropical Forest Ecology and Hydrology. 2015 AOGS. 2-7 August 2015, Singapore
- 12. WILCOX, Bruce Alexander; ECHAUBARD, Pierre; FOX, Jeffrey; RICHTER, Carsten; SAKSENA, Sumeet; XU, Jianchu; ZIEGLER, Alan. Toward a Theory of Pathogenic Landscapes: Insights from Three Zooneses in the Mekong Region. 3rd GRF One Health Summit 2015. 04 07 October 2015. Davos, Switzerland
- 13. Ziegler, AD, C Grundy-Warr, YT Lee, MH Lim, JC Chuah, X Ong, P Echaubard, B Wilcox. A multidisciplinary investigation of Opisthorchis viverrini in Thailand. MTDASOA2014-Interdisciplinary Research on Liver Flukes, Khon Kaen Thailand, 16-17 September, 2014.
- 14. Lee, YT, C Grundy-Warr, AD Ziegler, L Laithevewat, W Wannasook, N Khuntikeo, P Sithithaworn. What do they know, and where did they hear it? Case study: Evaluating Opisthorchis viverrini (OV) knowledge in a Northeast Thai village. MTDASOA2014-Interdisciplinary Research on Liver Flukes, Khon Kaen Thailand, 16-17 September, 2014.
- **15.** Ziegler, AD.: Hydrological change in the humid tropics. Third International Tropical Hydrology Workshop (9-14 Feb 2014, Borneo).
- **16.** Ziegler, AD, E Velasco, KJJ Ho. Commuter exposure to black carbon, carbon monoxide, and noise in the mass transport khlong boats of Bangkok, Thailand. AGU Fall Meeting, 9-13 December 2013, San Francisco.
- 17. Wood HS, T Rittenour, AD Ziegler. Stratigraphy on the Mekong. 8th IAG/AIG International Conference on Geomorphology, 27-31 Aug 2013, Paris
- **18**. Ziegler, AD, HS Lim, SH Wood. Moving forward; Looking backwards. 8th IAG/AIG International Conference on Geomorphology, 27-31 Aug 2013, Paris
- 19. Ng, XQS, SH Wood, AD Ziegler. Rivers in Thai History Implications for Management. 8th IAG/AIG International Conference on Geomorphology, 27-31 Aug 2013, Paris
- **20.** Jia Qi Yuen, Alan D Ziegler, Edward L Webb. 2012. Review of below-ground root carbon biomass data for Southeast Asia: Limitations and uncertainties for REDD+ decision making. 8th Mathematics and Physical Science Graduate Congress, 12-14 December 2012, Bangkok, Thailand.
- 21. Anver, MS, AD Ziegler. Artificial Intelligence Approaches for Streamflow Modelling. 8th Mathematics and Physical Science Graduate Congress, 12-14 December 2012, Bangkok, Thailand.
- 22. Ziegler, AD, JC Chuah. The role of water use and management in the dynamics of water-borne pathogens in SE Asia NUS Geography's research directions. An Ecological, genetic, and geographical assessment of the dynamics of Opisthorchis viverrini and other water-borne trematodes in the Greater Mekong Subregion of Southeast Asia. International workshop 9-15 September 2012, Karlsruhe Institute of Technology, Karlsruhe Germany.
- 23. Yuen, JQ, AD Ziegler. Accumulation of Potentially Toxic Elements in Road Deposited Sediments in Residential and Light Industrial Neighborhoods of Singapore Paper # HS10-A022, AOGS - AGU (WPGM) Joint Assembly, Singapore, 13-17 Aug 2012.
- 24. Quak, SYM, NRA Jachowski, D Duangnamon, EL Webb, AD Ziegler. Carbon Biomass in a Rhizophora-dominated Mangrove in Thailand. Paper # G04-A005, AOGS AGU (WPGM) Joint Assembly, Singapore, 13-17 Aug 2012.
- 25. Song, SHM, XQS Ng, AD Ziegler. Toward Better Management of Elephant Trail Degradation. Poster # HS16-A033, AOGS AGU (WPGM) Joint Assembly, Singapore, 13-17 Aug 2012.
- Ang, ZJ, P Olin, S Benner, SH Wood, RA Sutherland, AD Ziegler. Geochemical Partitioning of Total Suspended Solids in a Tropical Catchment. Paper #HHS22-A007, AOGS-AGU (WPGM) Joint Assembly, Singapore, 13-17 Aug 2012.
- Ziegler, AD, NRA Jachowski, HS Lim, RJ Wasson. Floods, False Hopes, and the Future. Paper # HS22-A008, AOGS

   AGU (WPGM) Joint Assembly, Singapore, 13-17 Aug 2012.

- 28. Ng, XQS, SH Wood, AD Ziegler. Rivers in Thai History Implications for Management. Paper # HS22-A009, AOGS AGU (WPGM) Joint Assembly, Singapore, 13-17 Aug 2012.
- 29. Anver, MS, AD Ziegler. Artificial Intelligence Approaches for Streamflow Modelling. Paper # HHS16-A033, AOGS AGU (WPGM) Joint Assembly, Singapore, 13-17 Aug 2012.
- 30. Wasson RJ, B Newell, AD Ziegler, MJ Gillen. 2012. Making systems thinking mainstream. System Dynamics: System Dynamics Thinking and Modelling in Public Policy and Education. NUS-GAI Inaugural Signature Conference 2012. Transcending boundaries of geography and knowledge 28-29 June 2012.
- **31.** Quak SYM, Jachowski N, Friess DA, Duangnamon D, Webb EL, and Ziegler AD. Species importance and above-ground biomass of a Rhizophora-dominated Mangrove, Ranong, Thailand. 7th Mathematics and Physical Science Graduate Congress, NUS Singapore, 12-14th December 2011 Geological Science.
- 32. Yuen, JQ. AD Zielger, RA Sutherland. Accumulation of Potentially Toxic Elements in Road Deposited Sediments in Residential & Light Industrial Neighborhoods of Singapore. 7th Mathematics and Physical Science Graduate Congress, NUS Singapore, 12-14th December 2011.
- 33. Slaets J, P Schmitter, A Bürger, AD Ziegler, T Hilger, G Dercon, N. Huu Thanh, N Lam, T Duc Vien, G Cadisch. Tracing carbon fluxes with turbidity sensors: a time saving alternative for better understanding nutrient flows at the landscape level. International Symposium on Soil Organic Matter 2011: Organic matter dynamics from soils to oceans". It is in Leuven, Belgium from 11-14 July 2011.
- 34. Chu Ling, Hannah Chiang En Wan, Hakimah Nur Diniyah, Elva Segovia Estrada, Hector Erik Velasco, Alan D Ziegler, Variation in Nitrogen Compound Deposition in Different Ecosystems Along the Andaman Coast, The 6th Mathematics and Physical Science Graduate Congress 2010, 13-15 December 2010, University of Malaya, Malaysia.
- 35. Lee Jia En, Grace Zhang, Suliana Johani, James P Terry, Alan D Ziegler, Mangrove recovery and beach evolution following the 2004 Indian Ocean Tsunami. The 6th Mathematics and Physical Science Graduate Congress 2010, 13-15 December 2010, University of Malaya, Malaysia.
- 36. Implications of Rapid Land-cover/Land-use Change in Montane Mainland SE Asia, 2012. Sustainable Land Use and Rural Development in Mountainous Regions of Southeast Asia, 21-23 July 2010 Hanoi.
- 37. Nicholas Jachowski, Alan D. Ziegler, Lucy G. Gillis, Tjeerd Bouma. 2010. Mangrove resilience to the 2004 Indian Ocean Tsunami: evidence for inter-ecosystem facilitation on the Andaman Coast of Thailand. 6th APRU Research Symposium on Multi-Hazards around the Pacific Rim. 27-29 August, 2010, Beijing, China.
- **38.** Giambelluca, T.W. 2010. Cloud water interception and canopy water partitioning in tropical montane cloud forests in Hawai'i. Interdisciplinary Studies on Global Climate Change and the Ecology and Management of Tropical Montane Ecosystems. Cordillera Central, Dominican Republic, March 2010
- 39. Thomas Giambelluca, Ryan Mudd, Alan Ziegler, Maoyi Huang, Wen Liu, Michael Nullet, Qi Chen, Jefferson Fox. 2010. Preliminary estimates of evapotranspiration for a rubber plantation in Nong Khai, northeastern Thailand. Hydrology delivers Earth System Science to Society. GSWP/GLASS AsiaFlux/FLUXNET LandFlux-Val. 22-25 Junne 2010. Tokyo.
- **40.** Ziegler, AD. Sediment and nutrient dynamics in a SE Asian headwater catchment. 6<sup>Th</sup> Annual General Meeting of AOGS, Singapore, 11-5 August 2009.
- 41. Quek, SL, Wang, YC, Ziegler, AD. 6<sup>Th</sup> Annual General Meeting of AOGS, Singapore, 11-5 August 2009
- **42.** Dan, N.P., Liem, TT, AD Ziegler, LD. Hiep. 2008. Assessment of change of land use on solid TOC into the Hau River. In proceeding "1st International Conference on Environment and Natural Resources, Ho Chi Minh City, Vietnam, March 17th-18th.
- **43.** Dan, N.P., Liem, TT, AD Ziegler, LD. Hiep. Assessment of change of land use on solid TOC into the Hau River Regional Conference on Global Environment, Feb 2-3, 2009, Manila, Philippines.
- 44. Thomas W. Giambelluca, Ross A. Sutherland, Kazuki Nanko, Ryan Mudd, Alan Ziegler. Effects of Miconia on hydrology: A first approximation. Pulling it all Together 2009 International Miconia Conference May 4-7, 2009 Maui, Hawaii.
- 45. Guardiola-Claramonte, M, PA Troch, AD Ziegler, TW Giambelluca, JB Vogler, MA Nullet. 2006. The effects of introducing non-native vegetation on hydrological partitioning in a tropical catchment. 93<sup>rd</sup> ESA annual meeting, Milwaukee WI, 8 Aug 2008. <a href="http://eco.confex.com/eco/2008/techprogram/P12001.HTM">http://eco.confex.com/eco/2008/techprogram/P12001.HTM</a>.
- **46.** Ziegler, AD., C Tantasarin, S Benner, Lu Xixi, T Giambelluca, D Higgitt. 2007. Sediment and Nutrient Fluxes in a Tropical Headwater Stream in Northern Thailand. International Association of Geomorphologists, Koto Kinabalu, Sabah, Malaysia, 25-29 June 2007.
- 47. Benner, SG, AD Ziegler, C Tantasarin, Lu Xixi, T Giambelluca. 2006. Quantifying Stream Flux of Carbon Nitrogen and Phosphorus in a Tropical Watershed, Mae Sa Thailand. AGU Fall Meeting, Dec 2007, San Francisco.
- **48.** Ziegler, A.D. Nutrient Dynamics in a Headwater Basin in SE Asia: Building a Foundation for Investigation of the Impacts of Anthropogenic Change (preliminary results for project Project 95/01/C Southeast Asia Regional

- Committee for START (SARCS). Advanced Training workshop on SE Asia Regional Carbon and Water Issues, 14-25 Nov 2006, Chung-Li/Kaohsiung, Taiwan.
- 49. T.W. Giambelluca, A.D. Ziegler, E.D. Larkin, L. Cuo, M. Nullet, 2006. Radiation and water balances in a tropical catchment undergoing land-cover conversion in Northern Thailand. (ST1-37A38-499). 3rd APHW Conference, Bangkok Thailand 16-18 Oct. 2006.
- 50. Ziegler, A.D., T.W. Giambelluca, M. Nullet, C. Tantasarin. 2006. Throughfall distribution in a tropical forest (ST1-37-A38-286). 3rd APHW Conference, Bangkok Thailand 16-18 October 2006.
- 51. Ziegler, A.D., T.W. Giambelluca, R.A. Sutherland, M. Nullet, Soil translocation by weeding on swidden fields in northern Vietnam, Highland 2006 Symposium, Makelle, Ethiopia, 18-24 Sept. 2006.
- 52. Ziegler, A.D., Negishi, J.N., R.C. Sidle, P. Preechanpanya, R.A. Sutherland, T.W. Giambelluca. 2004. Reduction of road-generated stream suspended sediment by a riparian buffer. Forests and Water in Warm, Humid Asia: workshop of the IUFRO Forest Hydrology Working Group (8.03.00), 10-12 July 2004, Kota Kinabalu, Sabah, Malaysia.
- 53. Negishi, J.N., A.D. Ziegler, S. Noguchi, R.C. Sidle, N. Abdul Rahin. 2004. Storm flow generation in a tropical headwater zero-order basin in peninsular Malaysia. Forests and Water in Warm, Humid Asia: workshop of the IUFRO Forest Hydrology Working Group (8.03.00), 10-12 July 2004, Kota Kinabalu, Sabah, Malaysia.
- 54. Negishi, J.N., R.C. Sidle, S. Noguchi. A.R. Nik, A.D. Ziegler. 2003. Effects of forest Roads on internal biogeochemical pathways in tropical catchments. Paper H51A-06. 2003 AUG Fall Meeting, San Francisco, CA 9-13 Dec. 2003.
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- 56. Wood, S., J.P. McNamara, Alan D. Ziegler. 2003. Channel Initiation on slopes and roads in a tropical montane watershed in northern Thailand. Paper H51F-05. 2003 Fall Meeting, San Francisco, CA. 9-13 Dec. 2003.
- 57. Ziegler, A.D., T.W. Giambelluca, R.A. Sutherland, M.A. Nullet. 2003. Bedload transport in a tropical headwater catchment. Paper H51F-06. 2003 Fall AGU Meeting, San Francisco, CA. 9-13 Dec. 2003.
- 58. Ziegler, A.D., E.P. Maurer, B. Nijssen, J. Sheffield, E.F. Wood, D.P. Lettenmaier. Detection of Acceleration in the Global Water Cycle: The Potential Role of FRIEND. FRIEND 2002. 4th International Conference on FRIEND. UNESCO International Hydrology Programme Flow Regimes from International Experimental and Network Data. Cape Town, South Africa, 18-22 March 2002.
- 59. Jefferson Fox, Terry Rambo, Le Trong Cuc, Thomas Giambelluca, Alan Ziegler. Linking household and remotely sensed data for understanding forest fragmentation in Northern Vietnam. Linking Household and Remotely Sensed Data: Methodological and Practical Problems. January 2002. East-West Center, Honolulu HI USA. "
- **60.** Ziegler, A.D., T.W. Giambelluca, R.A. Sutherland M.A Nullet. Understanding the influence of roads on runoff generation in an upland watershed in Thailand. Chapman Conference on Hillslope Hydrology (AGU), Bend OR, Oct 8-12. 2001.
- 61. Ziegler, A.D., T.W. Giambelluca, TT Vana, M.A. Nullet. Alteration of hydrological flowpaths by landcover fragmentation in the Da River basin, Vietnam. Chapman Conference on Hillslope Hydrology (AGU), Bend Oregon, Oct 8-12, 2001.
- 62. Chen, Y., A.D., Ziegler, J. Sheffield, E.F., Wood, D.P. Lettenmaier, B Nijssen, R. Schnur. 2001. Correction of high-latitude anomaly in NCAR-NCEP reanalysis precipitation field. AGU Spring Meeting, Boston.
- 63. Sheffield, J., A.D. Ziegler, E.P. Maurer, B. Nijssen, E.F. Wood, D.P. Lettenmaier, A. Broccoli. Identifying Appropriate Temporal and Spatial Scales for Detecting Global Water Cycle Intensification. AGU Spring Meeting, 28 May 2 June, 2001, Boston. he
- 64. Ziegler, A.D., T.W. Giambelluca. Hydrological flowpath alteration by landcover fragmentation Case study: TatHamlet, Da River Basin northern Vietnam. Third International Conference on Land Degradation. Rio de Janeiro, Brazil, Sept 24-28, 2001.
- 65. Giambelluca, T.W., Ziegler, A.D., Nullet, M.A., Cuo, L. Energy and water fluxes at Pang Khum Experimental Watershed, Chiang Mai Province Thailand. GEWEX-Asian Monsoon Experiment annual meeting. March 13-17, 2000, Chiang Mai, Thailand.<sup>a</sup>
- 66. Ziegler, A.D., T.W. Giambelluca, R.A. Sutherland. 2001. Modeling road sediment transport with KINEROS2. Soil Erosion for the 21st Century An International Symposium, January 3-5, 2001, Honolulu, HI.
- 67. Ziegler, A.D., T.W. Giambelluca, R.A. Sutherland. Toward understanding road-related erosional impacts in mountainous watersheds in northern Thailand (poster). AGU Fall Meeting, 15-19 Dec., 2000, San Francisco.
- 68. Ziegler, A.D., R.A. Sutherland, T.W. Giambelluca. Surface preparation processes and sediment detachment by vehicular traffic on unpaved mountain roads in northern Thailand (poster). AGU Fall Meeting, 13-17 Dec., 1999, San Francisco.

- 69. Ziegler, A.D., T.W. Giambelluca, R.A. Sutherland. Estimation of basin sediment flux in the Pang Khum Experimental Watershed in northern Thailand: the contributions of roads and agricultural lands. Land-Water Linkages in Rural Watersheds. 18 Sept 28 Oct 2000. Land & Water Development Division, FAO.
- 70. Warren, S.D., Ziegler, A.D., T.W. Giambelluca, J.L. Perry. 2000. Revegetation strategies for Kaho`olawe Island, Hawaii. 54th Annual Meeting of the Society for Range Management, 17-23 February, Kailua-Kona, HI."
- 71. Giambelluca, T.W., Ziegler, A.D., Tran, L.T., Sutherland, R.A., and Nullet, M.A. How changing land-use is modifying hydrologic processes in mountainous areas of Southeast Asia. Environmental services and land use change: Bridging the gap between policy and research in SE Asia, 31 May-2 Jun 1999, Chiang Mai, Thailand.
- 72. Ziegler, A.D., Sutherland, R.A., and Giambelluca, T.W. Field rainfall simulation experiments to investigate runoff generation and sediment transport on mountainous roads in northern Thailand. To be presented at "Environmental services and land use change: Bridging the gap between policy and research in SE Asia," 31 May-2 June 1999, Chiang Mai, Thailand."
- 73. Giambelluca, T.W., A.D. Ziegler, and M.A. Nullet. Influences of landscape fragmentation on hydrological processes, Hoa Binh, Vietnam. 95th AAG Meeting, Honolulu, 23-29 Mar 1999."
- 74. Ziegler, A.D., R.A. Sutherland, and T.W. Giambelluca. Sediment Production on an Unpaved Road Surfaces in Northern Thailand: Initial Results of Field Rainfall Simulation. 95th AAG Meeting, Honolulu, 23-29 Mar 1999.
- 75. Ziegler, A.D., R.A. Sutherland, T.W. Giambelluca. Sediment Production on an Unpaved Road Surfaces in Northern Thailand: preliminary results of field rainfall simulation. Meeting the Challenges of Land Degradation in the 21st Century; Second Int Conference on Land Degradation. Khon Kaen, Thailand. Jan 24-29, 1999.
- 76. Ziegler, A.D., T.W. Giambelluca. A preliminary simulation of hydrologic change and accelerated erosion resulting from road expansion in northern Thailand. FORTROP'96, Kasetsart U, Bangkok, Nov. 23-29, 1996.
- 77. Giambelluca, T.W., and A.D. Ziegler. Influence of long-term land cover change on river flow in northern Thailand. FORTROP'96, Kasetsart University, Bangkok, Nov. 23-29, 1996."
- **78.** Ziegler, A.D. and T.W. Giambelluca. Runoff generation on mountainous roads in northern Thailand. 28th IGU Conference, The Hague, The Netherlands, Aug., 1996.
- 79. Sutherland, R.A. and A.D. Ziegler. Geomorphological effectiveness of erosion control blankets an interrill laboratory study. XXVII Conference of the International Erosion Control Association. Seattle, WA, Jan., 1996.
- **80.** Ziegler, A.D. and T.W. Giambelluca. Horton overland flow generation on rural mountain roads in northern Thailand. *Montane Mainland Southeast Asia in Transition Symposium*, Chiang Mai, Thailand, Nov., 1995.
- 81. Giambelluca, T.W. and A.D. Ziegler. Climatological and hydrological implications of land cover change in highland Southeast Asia. *Montane Mainland Southeast Asia in Transition Symposium*, Chiang Mai, Thailand, Nov., 1995."
- **82.** Ziegler, A.D., and R.A. Sutherland. Effectiveness of four erosion control geotextiles on interrill processes. IV Pacific Science Congress, Beijing, China, June 1995.

### Conference Participation

The Cultural Contexts of Disease Prevention: The Case of Cholangiocarcinoma in Mainland Southeast Asia. 713 November 2018, Khon Kaen, Thailand. <sup>a, k</sup>

The Cultural Contexts of Disease Prevention: The Case of Cholangiocarcinoma in Mainland Southeast Asia. 9-10 July 2018, Topland Hotel, Phitsanuloke. <sup>a, k</sup>

AOGS2015, 2015 AOGS. 2-76 August 2015, Singapore a

MTDASOA2014-Interdisciplinary Research on Liver Flukes, Khon Kaen Thailand, 16-17 September, 2014 a,k.

Third International Tropical Hydrology Workshop (9-14 Feb 2014, Borneo).

An Ecological, genetic, and geographical assessment of the dynamics of Opisthorchis viverrini and other water-borne trematodes in the Greater Mekong Subregion of Southeast Asia. International workshop 9-15 September 2012, Karlsruhe Institute of Technology, Karlsruhe Germany.

AOGS - AGU (WPGM) Joint Assembly, Singapore, 13-17 Aug 2012a,

Life-cycle, livelihoods and parasites: human, environment, and health dynamics of Opisthorchis viverrini in the Mekong Region. 10-12 March 2011. NUS Singapore<sup>c</sup>

Sustainable Land Use and Rural Development in Mountainous Regions of Southeast Asia, 21-23 July 2010 Hanoi <sup>a,h</sup> Science for Water Policy, Hydrology in a Changing Climate. Chiang Mai University, 16 July 2010 a

Forest-agriculture frontiers: impacts of land-use transitions on livelihoods and environment in the humid Tropics, Vientiane, Lao PDR, 2-6 Nov, 2009 <sup>k</sup>.

6<sup>Th</sup> Annual General Meeting of AOGS, Singapore, 11-5 August 2009, a,h

4th Asian Graduate Forum on SE Asia Studies, Asia Research Institute, NUS, Singapore, 15-17 July 2009 h

Biofuels: The Impact of Oil Palm on Forests and Climate, Singapore, May 12-13, 2009h.

Demise in Swidden Agriculture in SE Asia? Ha Noi, Vietnam, 2-7 March 2008 k.

International Association of Geomorphologists, Koto Kinabalu, Sabah, Malaysia, 25-29 June 2007 <sup>a</sup>

Mekong @ Crossroads, Chiang Mai, Thailand, 14-15 May 2007.

Workshop on SE Asia Regional Carbon & Water Issues, Chung-Li & Kaohsing, Taiwan, 14-25 Nov 2006 <sup>a</sup>

3<sup>rd</sup> APHW Conference, Bangkok Thailand, 16-18 Oct. 2006 <sup>a</sup>

HIGHLAND 2006 Symposium. Makelle, Ethiopia, 18-24 September, 2006 <sup>a</sup>

IUFRO Forests and Water in Warm, Humid Asia, Kota Kinabalu, Sabah, Malaysia, 10-12 July 2004 a,h,ij

American Geophysical Union Spring Meeting, San Francisco, CA, 9-13 Dec, 2003<sup>a,g,h,j</sup>

Fourth International Conference on FRIEND, Cape Town, South Africa, Mar 2002 <sup>a</sup>

Chapman Conference on Hillslope Hydrology (AGU), Bend OR USA, 8-12 Oct 2001<sup>a</sup>

Third International Conference on Land Degradation (ICLD3). Rio de Janeiro, Brazil, 24-28 Sept 2001<sup>a</sup>

American Geophysical Union Spring Meeting, 28 May – 2 June, 2001, Boston, MA<sup>a</sup>

Soil Erosion for the 21st Century - An International Symposium, 3-5 Jan 2001, Honolulu, HI<sup>a</sup>

American Geophysical Union Fall Meeting, 14-19 Dec 2000, San Francisco, CA<sup>a</sup>

Land-Water Linkages in Rural Watersheds. 18 Sep - 28 Oct 2000 (FAO WWW electronic conference)<sup>a</sup>

Forest-Water-People in the Humid Tropics, UNESCO Symposium, Kuala Lumpur, Malaysia, 30 Jul-4 Aug 2000

American Geophysical Union Fall Meeting, 13-17 Dec 1999, San Francisco, CA<sup>a</sup>

95th Annual Meeting of the Association of American Geographers, Honolulu HI, 23-29 Mar 1999<sup>a</sup>

Meeting the Challenges of Land Degradation in the 21st Century, Khon Kaen, Thailand, 22-31 Jan 1999<sup>a</sup>

FORTROP'96, Kasetsart University, Bangkok, Thailand, 25-29 Nov 1996<sup>a b</sup>

28th Annual International Geographical Union, Den Hague, The Netherlands, Aug. 1996<sup>a</sup> d

27th International Erosion Control Association Conf., Seattle, WA, Jan 1996  $^{d\ e}$ 

Hillside Farming: The Future of Soil?, Sponsored by Mae Jo University, Chiang Mai, Thailand, Dec 1995

Montane Mainland Southeast Asia in Transition Symposium, Chiang Mai, Thailand, Nov 1995<sup>a</sup>

IV Pacific Sciences Congress, Beijing, China, June 1995a d

American Geophysical Union, Spring Meeting, June 1995, Baltimore,  $MD^{df}$ 

UHM College of Social Sciences Student Conference, Honolulu, HI, Apr 1995 $^{\ell}$ 

Sixth Annual Global Change Conference, AMS, Dallas, TX, Jan 1995<sup>d</sup>

NOAA Colloquium on Environmental Prediction, Camp Springs, MA, June 1994<sup>d</sup>

<sup>a</sup>Presented paper/poster

**bRapporteur** 

<sup>c</sup>Member of the organizing committee

dReceived scholarship to attend

eRecieved Best Technical Paper Award

Received Horton Hydrology Award

gSession Organizer

hSession Chair

iPoster judge

Special Journal Editor

kInvited Panel Member

Collaborators/coauthors (current as of Jan 2012)

Name	Organization	coauthor	collaborator
Abdul Rahim Nik	FRIM, Kuala Lumpur (Malaysia)	X	
Andrews, RH	AUSTRALIA		x
Ang, ZJ	National University of Singapore	x	
Bech-Bruun, T	University of Copenhagen	X	
Bei, RT	China	X	
Benner, SB	Geological Sciences, Boise State University	X	X
Bouma, T	NIOO-CEME (The Netherlands);		X
Chen YB	China	X	
Cramb, RA	U Queensland	X	
Cuo L	Civil Engineering, U. Washington	X	
Dan Phuoc Nguyen	HoChiMihnCity University of Technology		X
Dao Minh Truong	CRES, Hanoi (Vietnam)	X	
de Neergarrd, A	University of Copenhagen	X	
Duangnamon, D	Kasetsart Univestity, Thailand	X	
El Swaify, S	NREM, U. Hawaii (retired)	X	
Evett, S	USDA ARS – Bushland TX	X	
Fox, JM	East-West Center, Honolulu Hawaii	X	X
Friesse, DA	National University of Singapore	X	
Giambelluca, TW	Geography, U. Hawaii (Ph.D. Advisor);	X	X
Gomi, T	DPRI – Kyoto University (Japan)	X	
Grundy-Warr	National University of Singapore		X
Grundy-Warr, C	National University of Singapore	x	x
Guardiola-Claramonte, M	U. Arizona	X	x
He, M	China	X	
Herman, PAJ	NIOO-CEME (The Netherlands);		X
Higgitt, DL	Geography, National University Singapore		X
Jachowski, NJ	National University of Singapore	x	
Kiatsopit, N	Khon Kaen University, Thailand	X	
Krishnaswamy J	ATREE, Bangalore (India)		X
Lathavewat, L	Khon Kaen University, Thailand	X	
Lawrence, D	U Virginia	X	
Le Trong Cuc	CRES, Hanoi (Vietnam)   retired		X
Lee, CT	NUT (Taipei Taiwan)	X	
Leiscz, S	Bishop Museum, Hawaii	X	X
Lettenmaeir, DP	Civil Engineering, U. Washington	X	
Li, S	China	X	
Lim, HS	Geography, National University Singapore		X
Lu, XX	Geography, National University Singapore		X
MacNamara, JP	Geosciences, Boise State University:	X	
Maurer, EP	Civil Engineering, Santa Clara University	X	
Mertz, O	U. Copenhagen	X	

Collaborators/coauthors (current as of Jan 2012)

Name	Organization	coauthor	collaborator
Negishi, JN	JAPAN	X	X
Newell, B	Australian National University	X	
Nguyen DP	Hochimihn City Technical University		x
Nguyen Thanh Lam	Hanoi Agricultural College		
Njissen, B	Hydrology, U. Arizona (formerly)	X	X
Nullet, MA	Geography, U. Hawaii   mnullet@hawaii.edu	X	X
Owen, J	Trent University, Canada		X
Padoch, C	New York Botanical Garden	X	
Padoch, C	New York Botanical Garden	X	
Petney, T	GERMANY		X
Phelps, J	National University of Singapore	X	
Pinthong, J	Chiang Mai University (retired)	X	X
Rambo, TA	Khon Kaen University, Thailand (retired)		X
Rerkesem, K	Chiang Mai University	X	
Schmidt-Vogt, D	AIT, Thailand	X	
Sen, O	Istanbul Technical University, Eurasia Institute of		
Sheffield, J	EEWR, Princeton University;	X	X
Sidle, RC	DPRI - Kyoto University (Japan);	X	x
Sithithawarn, P	Khon Kaen University, Thailand	X	
Slocum T	Geography, U Kansas (MS Advisor)		
Snidvongs A	Chulalongkorn University (Thailand)		X
Song, MSH	National University of Singapore	X	
Sripa, B	Khon Kaen University, Thailand	X	
Sutherland, RA	Geography, U. Hawaii	X	X
Tantasarin, C	Forestry, Kasetsart University (Thailand)	X	X
Tesana, S	Khon Kaen University, Thailand	X	
Todd, P	National University of Singapore;		x
Tran Duc Vien	CRES, Hanoi (Vietnam)	X	x
Tran, LT.	Geography, University of Tennessee	X	x
Troch, P	Hydrological Sciences, U. Arizona	X	x
Vogler, JB	East-West Center, Honolulu Hawaii	X	x
Wang, Y-C	Geography, National University Singapore		x
Wang, Y-C	National University of Singapore	X	
Warren, S	US Army CERL, Champaign IL	X	
Wasson, RJ	Charles Darwin University	X	
Webb, EL	National University of Singapore	X	
Wood, EF	EEWR, Princeton University	X	x
Wood, SH	Geological Sciences, Boise State University	X	X
XU, Jianchu	Kunming Institute of Botany   World Agroforestry	X	
Yarnasarn, S	Geography, Chiang Mai University	X	X
Zhou Yue	Kunming University of Science and Technology		X