

# HAUNANI H KANE

Assistant Professor, Department of Earth Sciences  
University of Hawai'i  
Email- hkane@hawaii.edu  
Phone (808) 295-7490  
themegalab.org

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## EDUCATION

2019 Ph.D. in Earth and Planetary Sciences, University of Hawaii at Manoa (UHM)  
2014 M.S. in Geology and Geophysics, UHM  
2010 B.S. in Global and Environmental Sciences, UHM

## PROFESSIONAL EXPERIENCE

January 2023- Assistant Professor, School of Earth Sciences, University of Hawai'i at Mānoa  
2021-2022 Assistant Professor, School of Geographical Sciences & Urban Planning,  
Arizona State University  
2019-2021 National Science Foundation Postdoctoral Research Fellowship in Biology,  
University of Hawaii at Hilo  
2019 Postdoctoral researcher and instructor, Mauka to Makai summer bridge  
program, Oceanography Department, UHM  
2010-2019 Research Assistant, Department of Earth Sciences, UHM

## TEACHING EXPERIENCE

2023: EARTH104 Volcanoes in the sea (Fall 2023), Instructor, Dept of Earth Sciences  
UHM  
ERTH 420/620 Beaches, Reefs, and Climate Change (Fall 2023), Co-instructor  
2022: Geography of Oceania, Instructor, Arizona State University  
Landform Processes, Instructor, Arizona State University  
2019: OCN 201 Science of the Sea, co-instructor, Mauka to Makai Summer Bridge, UH  
Mānoa

## ACADEMIC ADVISING

ASU 2022-  
Kainalu Steward PhD student in the School of Geographical Sciences and Urban Planning.  
Expected graduation date Spring 2026.

UH Hilo 2020-2022  
Since 2020 I have mentored 3 Native Hawaiian students (Aloha Kapono, Lauren Kapono, and  
Kainalu Steward) at UH Hilo. Together we developed research proposals and secured funding  
for all students graduate research through fellowships (Hau'oli Mau Loa, MCC) and grants. Two  
students graduated in spring of 2022, and third will graduate in the fall of 2022.

SOEST Maile Mentoring Bridge 2015-2019

As a mentor I was paired with three undergraduate students in GES and NREM (Kealohi Sabate, Kristian McDonald, and Kanani Pali).

## PEER REVIEWED PUBLICATIONS

1. Harmon, K.C., Winter, K.B., Kurashima, N., Fletcher, C.H., **Kane, H.H.**, Price, M.R. 2021. The role of indigenous practices in expanding waterbird habitat in the face of rising seas. *Anthropocene* 34: 100293. <http://doi.org/10.1016/j.ancene.2021.100293>
2. **Kane, H.H.**, Fletcher, C.H. 2020. Rethinking reef island stability in relation to anthropogenic sea level rise. *Earth's Future* 8(10). <https://doi.org/10.1029/2020EF001525>
3. La Selle, S.P., Richmond, B.R., Jaffe, B., Nelson, A., Griswold, F., Arcos, B., Chagues, C., Bishop, J., Bellanova, P, **Kane, H.**, Lunghino, B., Gelfendbaum, G., 2019. Sedimentary Evidence of Distant Source Tsunamis in the Hawaiian Islands. *Sedimentology* *sed*12623. <http://doi.org/10.1111/sed.12623>
4. **Kane, H.H.**, Fletcher, C.H., Cochrane, E.E., Mitrovica, J.X., Habel, S., Barbee, M., 2017. Coastal plain stratigraphy records tectonic, environmental, and human habitability changes related to sea-level drawdown: 'Upolu, Sāmoa. *Quaternary Research* 18: 246-257. <https://doi.org/10.1017/qua.2017.2>
5. Cochrane, E.E., **Kane, H.**, Fletcher, C.H., Horrocks, M., Mills, J., Barbee, M.M., Morrison, A.E., Matavai Tautunu, M., 2015. Lack of suitable coastal plains likely influence Lapita (~2800 cal. BP) settlement of Samoa: Evidence from south-eastern Upolu. *The Holocene* 26: 126-135. <https://doi.org/10.1177/0959683615596841>
6. **Kane, H.H.**, Fletcher, C.H., Frazer, L.N., Anderson, T., Barbee, M., 2015. Modeling sea-level rise vulnerability of coastal environments using ranked management concerns. *Climatic Change* 131: 349-361. [10.1007/s10584-015-1377-3](https://doi.org/10.1007/s10584-015-1377-3)
7. **Kane, H.H.**, Fletcher, C.H., Frazer, N, Barbee, M., 2015. Critical elevation levels for flooding due to sea-level rise. Regional Environmental Change. *Regional Environmental Change* 15: 1679-1687. [10.1007/s10113-014-0725-6](https://doi.org/10.1007/s10113-014-0725-6)
8. **Kane, H.H.**, Fletcher, C.H., Romine, B.M., Anderson, T.R., Frazer, L.N., Barbee, M., 2012. Vulnerability assessment of Hawaii's cultural assets attributable to erosion using shoreline trend analysis techniques. *Journal of Coastal Research* 28: 533-539. <https://doi.org/10.2112/JCOASTRES-D-11-00114.1>

## REPORTS & OTHER PUBLICATIONS

9. **Kane, H.**, 2019. Before building another telescope, learn from Hawaiian culture. *Science Advances* 3241.
10. Bishop, J.M, Richmond, B.R., Zaremba, N.J., Lunghino, B.D., and **Kane, H.H.**, 2016. Hurricane Sandy washover deposits on southern Long Beach Island, New Jersey: U.S. Geological Survey Open-File Report 2016-1090, 14p. <https://pubs.usgs.gov/of/2016/1090/ofr20161090.pdf>
11. **Kane, H.H.**, Fletcher, C.H., 2013. Temporal and Spatial Pattern of Sea-level Rise Impacts to Coastal Wetlands and Other Ecosystems. Pacific Island Climate Change Cooperative Grant # 6661281 Public Report, 33p. [http://piccc.net/piccc/wp-content/uploads/2015/05/KaneFletcherPICCC\\_FINAL\\_low\\_res.pdf](http://piccc.net/piccc/wp-content/uploads/2015/05/KaneFletcherPICCC_FINAL_low_res.pdf)

## GRANT ACTIVITY AND OTHER AWARDS

Current Research Support

8/2021-7/2024 NASA. Quantifying vulnerability to sea level rise across multiple coastal typologies. J Burns, H Kane, R Martin (\$535,000).

#### Past Research Support

8/2020-8/2022 Pacific Islands Climate Adaptation Science Center (PI-CASC). He ala aukai-The Path Near the Sea, Climate Inflictions Upon Intertidal Shorelines. L Kapono, H Kane, J Burns (\$49,999).

8/2020-2/2022 National Fish and Wildlife Foundation. Mitigating impacts from environmental stressors: early response to the Chondria outbreak at Pearl and Hermes Atoll, and Hurricane Walaka impacts at French Frigate Shoals. A. Sherwood, H Kane, A Kealoha, J Burns, C Smith. (\$299,890.90)

8/2021 Office of Hawaiian Affairs. Native Hawaiian research expedition to Papahānaumokuākea. H Kane (\$70,000).

8/2019-7/2021 NSF-BIO. NSF Postdoctoral Research Fellowship in Biology, He puko‘a kani ‘āina: assessing the impact of sea level and storms upon reef islands within Papahānaumokuākea Marine National Monument. H Kane (\$138,00).

## PROFESSIONAL ACTIVITIES

2023-- Uehiro Center for the Advancement of Oceanography, advisory council

2022-- Resilient Lalo (French Frigate Shoals, Papahānaumokuākea Marine National Monument Management) Advisory Committee

2022-- The Center for Indigenous Futures

2021-- Co-author, Fifth National Climate Assessment Hawaii and US Affiliated Pacific Islands

2021 -- Papahānaumokuākea Marine National Monument Management Research Advisory Council

2021-- Papahānaumokuākea Marine National Monument Management cultural working group

2021-- NSF GRFP Reviewer

2019-- Nā Kālai Wa‘a Holokai Program, Curriculum development and reef surveys, 2019-present

2014-- Polynesian Voyaging Society crew member