

Anish Ratna Shakya

E: anish_shakya@tamu.edu

EDUCATION

Texas A&M University, Galveston, Texas, USA

Aug 2024-present

Ph.D. Student, Marine and Coastal Environmental Science

University of Twente, Enschede, The Netherlands

Aug 2018-Jun 2020

Master of Science, Geoinformation Science and Earth Observation (spec. in Natural Hazards and Disaster Risk Reduction)

Thesis: "Modelling of cascading hazards in naturally dammed lakes" (<https://purl.utwente.nl/essays/85295>)

CGPA- 8.37/10 passed with Cum Laude

Kathmandu University, Dhulikhel, Nepal

Aug 2012-Jul 2016

Bachelor of Science, Environmental Science

Thesis: "Assessing macroinvertebrates diversity along altitudinal gradient in Kali Gandaki River"

CGPA- 3.88/4 passed with distinction

RESEARCH AND PROFESSIONAL EXPERIENCES

Texas A&M University, Galveston, Texas, USA

Graduate Assistant Research

Infrastructure Resilience Planning Framework (IRPF) Project (Supervisor: Dr. Meri Davlasheridze)

Aug 2024-Sep 2025

- Inventoried and mapped the critical infrastructures in the City of Houston.
- Reviewed literature on different methods to assess interdependencies between critical infrastructures.
- Prepare a case study on assessment of critical infrastructures interdependencies including visualization.
- Documentation of the technical reports and meetings with different stakeholders.

Geoinformatics Center, Asian Institute of Technology, Pathum Thani, Thailand

Research Associate

Feb 2021-Jul 2024

- Led the assessment of multi-hazard risks in two municipalities of Nepal.
- Modeled natural hazards using physically based and statistical models for various projects.
- Assessed the multi-hazard vulnerability, loss and risk for different elements-at-risks.
- Tested and documented the bugs for the Guided User Interface (GUI) version of the home built multi-hazard risk analysis tool called 'RiskChanges' (<http://riskchanges.org/>).
- Conceptualized the diagnostic indicators for application of nature-based solutions in agricultural landscape.
- Trained the delegates of governmental agencies about digital technologies on disaster risk management in Mongolia, Nepal, Sri Lanka and Bhutan.
- Documented the project Expression of Interests (EOIs), proposals, inception reports and technical reports.

Geoinformatics Center, Asian Institute of Technology, Pathum Thani, Thailand

Research Intern

Nov 2019-Feb 2020

- Prepared landslide inventories for project titled 'Multi-hazard risk assessment in Tajikistan'.
- Modeled landslide using statistical method for Gorno-Badakhshan region of Tajikistan.
- Delineated the potential outburst hazardous lakes in Gorno-Badakhshan region of Tajikistan.
- Assessed and compiled the multi-hazard loss and risk results for technical report and web-portal system (<http://tajirisk.ait.ac.th/>).

Lalitpur Metropolitan City Office, Lalitpur, Nepal

Environmental Associate for Output-based Aid (OBA) Project for Municipal Solid Waste Management Aug 2017-Jul 2018

- Trained the communities about occupational health and solid waste management.
- Mapped and digitized the geospatial information associated with solid waste management
- Conceptualized the environmental quality studies, protocols, and standards.

Lalitpur Metropolitan City Office, Lalitpur, Nepal

Research Intern for Improvement of Solid Waste Management Practices Project (ISWMPP)

Feb 2017-Jul 2017

- Facilitated the communities of solid waste management awareness training.
- Monitored and digitized the terrace garden sites in the communities.
- Documented the project and technical reports.

Forum of Natural Resource Managers (FONAREM), Kathmandu, Nepal

Field Assistant

Sep 2016-Dec 2016

- Sampled the macroinvertebrates along the Kali Gandaki and Babai rivers.
- Analyzed the biological, physical, and chemical parameters of the river water.
- Documented the technical reports.

SKILLS

Languages: Newari, Nepali, and English.

Geospatial: ArcMap, QGIS, ArcGIS Pro, ArcGIS Online, ArcGIS Experience Builder, Google Earth Engine, Cartography

Statistical: STATA

Hazard Modelling: ILWIS, OpenLISEM Hazard, HEC-RAS, Flow-R, SCOOPS-3D, RiskChanges

Programming/Scripting: Python, JavaScript

Others: Microsoft Office Packages, Adobe Illustrator

PUBLICATIONS

Abstract

van Westen, C., Hazarika, M., Dahal, A., Kshetri, T., Shakya, A., and Nashrullah, S. The RiskChanges tool for multi-hazard risk-informed planning at local government level, EGU General Assembly 2022, Vienna, Austria, 23–27 May 2022, EGU22-3026, <https://doi.org/10.5194/egusphere-egu22-3026>.

In progress

Shakya, A.R., and Davlasheridze, M. Analyzing Post-Harvey Recovery through Nighttime Lights: A Case Study of Harris County, Texas

PRESENTATIONS

Conference/Symposium Presentations

Shakya, A.R., and Davlasheridze, M. Assessing the Impact of Post-Disaster Financial Assistance and Nighttime Lights on the Recovery after Hurricane Harvey. 16 April 2025, TAMUG Graduate Symposium 2025, Galveston, Texas, USA.

Shakya, A.R., van Westen, C., and Hazarika, M., Multi-hazard risk assessment of Godawari Municipality, Nepal, in Proceedings of the OHOW: The 1st International Symposium on One Health, One World, Amari Pattaya Hotel, 8-10 December 2022, MDPI: Basel, Switzerland. <https://sciforum.net/paper/view/13599>

AWARDS

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| • Research and Graduate Studies Scholarship, TAMUG, USA | 2024-present |
| • Orange Knowledge Program Fellowship from Dutch Ministry of Foreign Affairs, Netherlands | 2018-2020 |
| • Full academic scholarship for undergraduate degree (full tuition fee waived), Nepal | 2012-2016 |

REFERENCES

Academic

Dr. Meri Davlasheridze, Associate Professor
Dept. of Marine and Coastal Environmental Science
Texas A&M University, Galveston, Texas
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Dr. Ashley Ross, Associate Professor
Dept. of Marine and Coastal Environmental Science
Texas A&M University, Galveston, Texas

ashleydross@tamug.edu

Dr. Cees Van Westen, Professor
ITC Faculty of Geoinformation Science and Earth Observation
University of Twente, Enschede, The Netherlands
c.j.vanwesten@twente.nl

Work

Dr. Manzul K. Hazarika, Director
Geoinformatics Center
Asian Institute of Technology, Pathum Thani, Thailand
manzul@ait.asia