

CURRICULUM VITAE – NISCHAL KARKI

CONTACT

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EDUCATION

Master of Science in Water Resources Engineering **April 2020 - September 2022**
Institute of Engineering, Pulchowk Campus
Tribhuvan University, Nepal
Thesis : Comparative Performance of Regionalization Methods for Model Parameterization in Ungauged Himalayan Basins

Bachelor of technology in Environmental Engineering **October 2014 - October 2018**
School of Science, Kathmandu University
Dhulikhel, Nepal

SKILLS

Programming Languages : R, Python, JavaScript, Fortran
Spatial Analysis : QGIS, ArcGIS, GDAL, Whitebox, Google Earth Engine
Models : GR4J, SPHY, SWAT, HEC-HMS, HEC-RAS
Document Processing : L^AT_EX, Rmarkdown, Quarto, Microsoft Word
Languages : English (TOEFL : 108/120 [29L 27W 27R 25S]), Nepali

PROFESSIONAL EXPERIENCE

Research Associate **October 2022 - Present**
Centre for Disaster Studies (CDS)
Institute of Engineering, Pulchowk Campus

Projects Involved :

- Monitoring river planform dynamics and flood hazard using satellite remote sensing in rivers of Nepal.
 - Developed inundation maps in flood-prone rivers of Nepal from Sentinel-1 SAR imagery using Google Earth Engine
 - Extracted planform dynamics of rivers in southern Nepal using Landsat imagery.
 - Evaluated geomorphic effects of monsoon floods in rivers of Nepal.
- **Tomorrow's Cities** : Hydrologic and hydrodynamic modeling of flood hazard in West Rapti river basin, Nepal
 - Pre-processed hydro-climatic input data, and worked in SWAT model set-up and run for hydrologic simulation.
 - Performed 2D rain on grid flood inundation modeling with SWAT inputs in HEC-RAS.

Research Intern **January 2022 - September 2022**
Water Resources Research and Development Centre (WRRDC)
Ministry of Water Resources, Energy and Irrigation
Government of Nepal

- Received internship support for M.Sc. Thesis
- Major responsibilities : conducting research and results dissemination in national/international journals and conferences

PEER-REVIEWED PUBLICATIONS

Karki, N., Shakya, N. M., Pandey, V. P., Devkota, L. P., Pradhan, A. M. S., & Lamichhane, S. (2023). Comparative performance of regionalization methods for model parameterization in ungauged Himalayan watersheds. *Journal of Hydrology : Regional Studies*, 47, 101359, doi : [10.1016/j.ejrh.2023.101359](https://doi.org/10.1016/j.ejrh.2023.101359).

[Under Review] Lamichhane, S., Bista, S., Khatri, D., Devkota, N., **Karki, N.**, Dawadi, S., Pradhan, A. M. S. Application of Multi-Criteria Decision-Making Technique to Prioritized the Irrigation Projects in Southern Nepal. *Journal of Irrigation and Drainage Engineering*

CONFERENCE
PRESENTATIONS

Karki, N., Shakya, N. M., & Tamrakar, J. (2022, December). Comparative Performance of Regionalization Methods for Model Parameterization in Ungauged Himalayan Basins. *AGU Fall Meeting 2022*.

Karki, N., Shakya, N. M., & Pradhan, A. M. S. (2022, October). A Proxy Basin Approach for Hydrological Modelling in Ungauged Snow-fed Basin of Nepal. *Proceedings of 12th IOE Graduate Conference, Vol. 12*.

Luitel, B., **Karki, N.**, Kafle, H. (2019, October). Agricultural Drought Monitoring in Nepal and India using remotely sensed data. *4th International Conference - Mountains in the changing world (MoChWo)*.

WORKSHOPS
& TRAINING

Teaching Assistant [Climatematic Academy](#) : Computational Tools for Climate Science, July 17-28, 2023.

Participant Training on AquaCrop for Crop Water Requirement and Crop Yield Modeling, jointly organized by Water Resources Research and Development Centre (WRRDC), International Water Management Institute (IWMI) and Centre for Disaster Studies (CDS), January 18-23, 2023.

Participant Training on Hydrological Modeling Using Soil and Water Assessment Tool (SWAT), jointly organized by Water Resources Research and Development Centre (WRRDC) and Centre for Disaster Studies (CDS), December 19-23, 2022.

Participant Training on Hydrological Modeling Using Soil and Water Assessment Tool (SWAT), jointly organized by Water Resources Research and Development Centre (WRRDC) and Centre for Disaster Studies (CDS), December 19-23, 2022.

Participant Training on Flood Hazard Mapping using HEC-RAS 2D, jointly organized by Water Resources Research and Development Centre (WRRDC) and Centre for Disaster Studies (CDS), December 11-15, 2022.

Participant Geographical Information Science and Earth Observations, ERASMUS+ Workshop, jointly organized by Kathmandu University, Nepal and Interfaculty Department of Geoinformatics, University of Salzburg, Austria, June 5-10, 2018.