Uddhab Bhandary

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OBJECTIVE

To continue academic career as an Assistant Professor in the field of environmental studies

PROFESSIONAL SPECIALTY

- Seven years of experience in teaching courses related to environmental design
- 15 years of experience in research and field work using Geograhic Information Technology
- Environmental hazards/risk analysis and mitigation
- Planning issues and methods of analysis, specifically the quantitative methods
- Green concepts and low impact delopement (LID) for urban planning and landscaping
- Storm water BMP's for flood mitigation and water quality control
- International experience in community planning
- Publication and review of articles in peer reviewed journals

EDUCATION

MS, Hydrology and Hydraulics (Jan 2009-May 2011)	University of Colorado Denver, CO
PhD, Design and Planning (Aug 2002-Aug 2007)	University of Colorado Denver, CO
MS, Regional Planning (Jan 2000-Aug 2001)	Asian Institute of Technology, Thailand
BE, Civil Engineering (Jul 1986-Jun 1990)	Indian Institute of Technology, Roorkee, India

RESEARCH

PhD dissertation	Vulnerability to natural hazards: Analysis of built environment for wildfire safe homes using IKONOS imageries and high resolution GIS data: I conducted research in a community that was burned by the Hayman Fire using remote sensing imageries taken by IKONOS satellite and GIS data. I tested planning variables that were directly related to burning a house by wildfire and proposed models that can be used to design a wildfire safe house and subdivision
Master's project	Seepage Flow Model for Porous Detention Basin Design for Low Impact Development in Denver, CO: In this research, I analyzed and explained how a porous detention basin of a square size of 20 ft. consisting of two layers - top layer of gravel and sand layer underneath - works to improve quality and control the quantity of storm water on-site. The technique is useful for Low Impact Development (LID)
Master's thesis	Computer aided poverty analysis and mapping for rural development planning in Nepal: A case study Kaski district: I collected data and information for 24 planning variables, prepared indices and mapped all variables and indices in GIS. The output and methodology is useful for planners and policy makers at the local level
Undergrad internship	Marsyangdi Hydro-power project of 69 MW

SOFTWARE SKILLS

EPA SWMM5, HEC-RAS, ArcGIS 10.2, Java, CUHP, Geo-SLOPE, MODFLOW, AQTESOLV, Visual Macro, ACAD, SPSS

PUBLICATIONS

- Bhandary, U. 2010. Vulnerability to natural hazards: Analysis of built environment for wildfire safe homes using IKONOS imageries and high resolution GIS data, VDM Verlag, ISBN- 9783639295863
- Bhandary, U. and Muller, B., 2009. Land use planning for wildfire risk mitigation: an analysis of wildfire-burned subdivisions using high-resolution remote sensing imageries and GIS data. Journal of Environmental Planning and Management, Vol 52 (7), pp 939-955
- Muller, B., Sulte, S. and Bhandary, U. 2006. Resort development and wildfire: Managing the accumulation of risk. In: T. Clark, A. Gill and R. Hartmann, eds. Mountain resort planning and development in an era of globalization. New York: Cognizant Communication Corporation, ch. 15, 234-247
- Bhandary, U. and Routray, J. 2002. Rural poverty analysis and mapping in Nepal. Rural Development, Gender and Resources Program, AIT Bangkok. ISBN – 9748202879
- Bhandary, U. 2005. Review of indices and indicators in development: An unhealthy obsession with numbers by Stephen Morse. Development Policy Review, 24 (2): 227 - 229
- Bhandary, U. 2007. Review of methods in development research: Combining qualitative and quantitative approaches by Jeremy Holland and John Campbell. Development Policy Review, 25(3): 393-394

SCHOLARSHIP AND AWARDS (Selected)

- Paper award by the Association of Collegiate Schools of Planning (ACSP), 2006
- Student paper award by the University Consortium for Geographic Information Sciences (UCGIS), 2006.
- Chancellor's award for excellence for outstanding graduate research by the University of Colorado, 2006
- Outstanding student award by the University of Colorado Denver, 2006
- The German Development Cooperation (GTZ) funded full scholarship for Master's degree in Thailand. Additional funding for research was provided by ICIMOD and NTNU
- The United Nations Development Program (UNDP) provided full Scholarship for Bachelor of Engineering

PAPER REVIEWED

- Journal of Environmental Planning and Management - three wildfire related papers,
- International Journal of Remote Sensing - one wildfire related paper
- Journal of Environmental Planning – one ecological modeling

WORK EXPERIENCE

COVIDIEN Boulder, Co

Data analyst *Dec 2010 – Present*

- Analyze hourly-tracked manufacturing data of various medical devices to monitor the overall equipment efficiency (OEE)

UNIVERSITY OF COLORADO Boulder, CO

Research Assistant *Aug 2002 – May 2007*

Most of my research was based on the spatial analysis utilizing Geographic Information Technology, and statistics that intended to the better community planning:

- Completed community mapping/GIS-GPS mapping projects, Columbine and Stedman Elementary Schools, in Denver, CO and prepared neighborhood guidebook for children's active living
- Completed design of two residential development projects, Morrison and Jamestown in Colorado including Environmental Impact Statement (EIS) in accordance with NEPA guidelines
- Completed studies of the relationship between resort development and wildfire safety for Boulder, Eagle, Summit and Clear Creek Counties of the state of Colorado including analysis and impact of development patterns
- Developed wildfire safe community design models analyzing a wildfire burned subdivisions by the Hayman Fire in Colorado
- Developed a matrix of sustainability for Boulder County, Colorado including storm water management; five

master's degree students were working in this project
- Completed documentation of a study on land use change and its impact in climate change in Indonesia, Thailand, India and Vietnam

International work
- Completed the socioeconomic analysis of 40 US cities and 5 Canadian cities for the UN Urban Global Observatory's mission of improving slums of the world, the UN Millennium Development Goal# 7
- Finalized Urban Indicator Survey Toolkit prepared by the UN Habitat to be used as baseline survey toolkit for survey of the slums around the world. It was tested in Kisumu, a city in Kenya

Teaching *Aug 2004 – May 2011*
- Designed and taught two courses Geographic Information Systems (GIS) and Environmental Impact Assessment:
  - ❖ Environmental Impact Assessment course deals with the NEPA guidelines to systematically identify and evaluate impacts of the proposed project, program, or legislative actions on biophysical and socioeconomic components of the total environment. Students prepare environmental inventory, evaluate the impact of proposed projects and prepare the EIS of project of their interest and submit it at the end of the semester
  - ❖ GIS course deals with the introduction of basics of GIS, preparation of data for projects such as digitizing, importing CAD files, combining map data with socioeconomic data, etc. and completion of a project by each student individually

TRIBHUWAN UNIVERSITY
Lecturer *Jan 2002 –July 2002*
- Taught a course Rural Development Policy for master's degree; class capacity was of 150 students:
  - ❖ Course examined various development practices in the South Asia and South Asia Pacific Region

CARE INTERNATIONAL
Project Engineer/Team Leader *Aug 1995 –Dec 1999*
- Planed and scheduled activities in consultation with department heads and stakeholders
- Completed feasibility studies, design, construction drawing, construction supervision and preparation of construction specification of 15 drinking water supply systems, eight irrigation projects, and other conservation activities
- Completed water quality survey and bathymetric survey of two lakes fed by streams from the project area to monitor the overall impact of project activities
- Supervised 10 engineering technicians

SHARMA CONSTRUCTION PVT. LTD.
Engineer *Aug 1990 – July 1995*
- Completed feasibility study, survey and preparation of topographic map, and design of an irrigation project with 500 ha. of command area
- Supervised construction of two commercial and design and construction of five residential buildings
- Prepared cost estimates, construction schedules and drawings of several projects for contract bidding

SOCIAL AFFILIATION
- Member, American Planners Association
- Board of Directors, AITAA-USA chapter, 2005- present
- Board of Directors, Rocky Mountain Friends of Nepal, Colorado, 2005-07
- President, Asian Institute of Technology Nepalese Society, 2000-01
- Senator, Roorkee University Students Association (RUSA), 1987-88