

SANDHYA FARSWAN

G E O S P A T I A L A N A L Y S T



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<https://sandhyafarswan.github.io/>

INTERESTS

- Remote Sensing
- Geospatial Science
- GIS
- Sustainable Environment
- Climate Change

EDUCATION

MASTER OF SCIENCES (REMOTE SENSING & GIS APPLICATIONS)

2009 - 2012

School of Earth Sciences,
Hemwati Nandan Bahuguna Garhwal
University, Srinagar Garhwal,
Uttarakhand, India

M.Sc Dissertation thesis at Indian
Institute of Remote Sensing (IIRS) on:
'DEM Generation Using Satellite Stereo
Data for a part of Patna District, Bihar'

Summer Training (2 months) at Oil and
Natural Gas Corporation Ltd. (ONGC):

- Digital Image Processing (DIP) of
Landsat (ETM+) satellite imagery
- Land use land cover & change
detection (LULCC) mapping

BACHELOR OF SCIENCES (BOTANY, ZOOLOGY & CHEMISTRY)

2006 - 2009

Faculty of Sciences, Birla Campus,
Hemwati Nandan Bahuguna Garhwal
University, Srinagar Garhwal,
Uttarakhand, India

**Advance Diploma in Software
Engineering (ADSE)** from APTECH
Computer education (2006-2008).

PROFILE

I am a geospatial data analyst with nine years of experience in remote sensing and GIS research domain. Strong creative and analytical skills with an interest in developing and exploring environmental sciences through geomatics visualization.

EXPERIENCE

INFORMATION OFFICER

July 2015 - Present

School of Environmental Sciences, Jawaharlal Nehru University

- Geospatial data collection, compilation, processing and GIS mapping
- Information dissemination of spatial or non-spatial data and publication related to environment and climate change
- Working on thematic area and mandates 'Geodiversity and Impact on Environment' under Ministry of Environment, Forest & Climate Change (MoEF&CC), Govt. of India.

RESEARCH ASSISTANT

January - April 2014

Center for the Study of Regional Development (CSRD),
Jawaharlal Nehru University

- Study of Chambal basin & watershed analysis using DEM dataset
- Worked under project funded by the Indian Council of Social Science Research (ICSSR) on: 'Socio-Economic factors affecting land degradation & its impact on sustainable rural development: A case study of Chambal region, India'

JUNIOR RESEARCH FELLOW

July 2012 - July 2013

Center for the Study of Regional Development (CSRD),
Jawaharlal Nehru University

- Study of Parvati basin in the western Himalayan valley, Himachal Pradesh.
- Land use land cover, change detection and geomorphology mapping
- Watershed analysis using DEM dataset & field survey done under project funded by Digital Terrain modeling Research Laboratory (DTRL), Defence Research and Development Organization (DRDO), Ministry of Defence.

TRAINING COORDINATOR - GIS & DRR

February 2012 - June 2012

Appropriate Technology India, Guptkashi, Uttarakhand, India

- Community-managed Disaster Risk Reduction (CMDRR) - the identified solution measures integrated with GIS & the organic agricultural value chain, livelihood activities in the Himalayan valleys of Uttarakhand, India.

SKILLS

- ESRI ArcGIS/INFO
- QGIS
- ERDAS Imagine
- Google Earth Engine
- R
- Content writing
- Graphic design
- Project & Data Management

ONLINE TRAINING CERTIFICATE

- 1 **Nature-based Solutions for Disaster and Climate Resilience** by UN Environment Programme (UNEP). (November 2022)
- 2 **Fundamentals on REDD+** by UN-REDD Programme, (September 2022)
- 3 **Geospatial Information Technology (GIT) in Fragile Contexts** by United Nations Institute for Training and Research (UNITAR), (July 2022)
- 4 **Integrating Climate Risk Information into NAPs** by World Meteorological Organization. (July 2022)
- 5 **Understanding Phenology with Remote Sensing** by NASA - National Aeronautics and Space Administration. (July 2020)
- 6 **An Inside Look at how NASA Measures Air Pollution** by NASA - National Aeronautics and Space Administration. (May 2020)

PUBLICATIONS

- 2023
- Mina, U., Dimri, A.P. and **Sandhya Farswan** (2023) 'Forest fires and climate attributes interact in central Himalayas: an overview and assessment'. *Fire Ecology*, 19, 14. DOI: 10.1186/s42408-023-00177-4
- Sandhya Farswan** and Swati Singh (2023) 'A Review on Disaster: Causes, Mitigation and Adaptation'. *EIACP: Geodiversity & Impact on Environment*, Vol-27 (4), 2023 (ISSN: 0974-1364).
- 2019
- Sandhya Farswan**, Vishwakarma, C.A., Mina, U., Kumar, V., Mukherjee, S. (2019) 'Assessment of rainwater harvesting sites in a part of North- West Delhi, India using Geomatic tools'. *Environmental Earth Sciences*, 78:329. DOI: 10.1007/s12665-019-8332-y.
- 2019
- Singh, S., **Sandhya Farswan**, Meena, R., Ramanathan, AL. (2019) Landfill: Solution or a Bigger Problem to the Environment. *ENVIS: Geodiversity & Impact on Environment*, Vol-24 (2), 2019 (ISSN: 0974-1364).
- 2018
- Singh, S., **Sandhya Farswan**, Mina, U., Ramanathan, AL. (2018) An Indian Perspective of Reducing Emission from Deforestation and Forest Degradation (REDD+). *ENVIS: Geodiversity & Impact on Environment*, Vol-23 (3), 2018 (ISSN: 0974-1364).
- 2017
- Singh, S., **Sandhya Farswan**, Mina, U., Ramanathan, AL. (2017) Waste and Waste Management in India. *ENVIS: Geodiversity & Impact on Environment*, Vol-22 (4), 2017 (ISSN: 0974-1364).
- 2016
- Kumar, M., Ramanathan, AL., Tripathi, R., **Sandhya Farswan**, Kumar, D., Bhattacharya, P. (2016) A study of trace element contamination using multivariate statistical techniques and health risk assessment in groundwater of Chhaprola Industrial Area, Gautama Buddha Nagar, Uttar Pradesh, India. *Chemosphere*. 166:135-145. DOI 10.1016/j.chemosphere.2016.09.086.

OFFLINE WORKSHOPS / CONFERENCES

- 1 **Machine Learning and Big Data Analytics- Application to Remote Sensing** by Sikkim University & IEEE Geoscience and Remote Sensing Society (GRSS). (August 19-20, 2019)
- 2 **Artificial Intelligence in Governance and Disaster Management** by Special Centre for Disaster Research (SCDR), Jawaharlal Nehru University. (March 11-13, 2019)
- 3 **Google Earth Engine hands-on technical training** by Google India at Jawaharlal Nehru University (February 23, 2018)
- 4 **Disaster Resilient Infrastructure in the Himalayas: Opportunities and Challenges** by Uttarakhand State Disaster Mgmt. Authority (USDMA), at Dehradun. (November 21-22, 2017)
- 5 **Glaciers and Water Resource Management** by Global Initiative on Academic Network course (GIAN), Ministry of Human Resource & Development (MHRD), Govt. of India, at Jawaharlal Nehru University. (July 25-31, 2016)
- 6 **Tropical Ecosystems in a Changing World : Tropical Ecology Congress** by School of Environmental Sciences, Jawaharlal Nehru University. (December 10-12, 2014)