

Dr. Priyamitra Munoth

Assistant Professor

Department of Civil Engineering

MANIT Bhopal,

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Education

- **B.Tech (Honours)-Civil Engineering (2012, Govt. Engineering College, Jhalawar, Rajasthan)**
- **M.Tech-Remote Sensing and GIS (2014, NIT Surathkal, Karnataka)**
- **PhD-Application of Remote Sensing and GIS in Hydrology (2020, MNIT Jaipur, Rajasthan)**

Work Experience

- Worked as **Senior Research Fellow** from 19th Feb. 2020 to 21st May 2022 in "Ministry of Jal Shakti, Govt. of India and Indian National Committee on Climate Change (INCCC)" research project titled "**Impact of Climate Change on Water Resources of Tapi Basin**" and completed this project.
- Worked as **Project Research Associate-I** in DST funded research project titled "**Transforming Aandhi village in Rajasthan towards a Zero waste Model through Green technology Interventions**" from 23rd May 2022 to 21st September 2023.
- Worked as **RS & GIS Consultant** in **Water Resources Department, Govt. of Rajasthan Under World Bank funded National Hydrology Project** from 22nd September 2023 to 28th December 2023.

Research Area and Interest

Remote Sensing and GIS application in Hydrology, Hydrological Modelling, Soil Moisture Estimation, Climate Change Impacts on Water Resources

Technical Expertise

- Worked with software such as MS Office, ArcGIS, QGIS, ERDAS Imaging, ENVI, ArcSWAT, QSWAT, Google Earth Pro and MATLAB.

Research Guidance

- M.Tech student supervised as Co-guide: 3 (Completed)
- B. Tech student supervised as Co-guide: 3 (Completed)

Publications in SCI/Scopus Indexed Journals

h-index-8; i10-index-7 with 270 Citations as per Google Scholar

International Journals:

1. **Munoth, P.**, Ghelot, L., Patel, P.L., Khandelwal, S., Timbadiya, P.V. and Goyal, R. (2023). Integrated hydrological modelling of two contrasting watersheds with a terminal reservoir in Upper Tapi basin in India. **Water Supply**, Volume 23, (12) pp 4891-4906. SCI (Impact factor 1.7). <https://doi.org/10.2166/ws.2023.314>.
2. Kumawat, G., **Munoth, P.** and Goyal, R. (2023). Improving Prediction of Missing Rainfall Data by Identifying best Artificial Neural Network Model. Journal of Earth System Science. **Journal of Earth Syst. Sci. Springer**. Volume132, (192) pp 1-12. <https://doi.org/10.1007/s12040-023-02203-0>. SCI (Impact factor 2.0).
3. **Munoth, P.** and Goyal, R. (2022). Effects of area threshold values and stream burn-in process on runoff and sediment yield using QSWAT model. **ISH Journal of Hydraulic Engineering, Taylor and Francis**. Volume 28, Issue 1, pp 40–48. <https://doi.org/10.1080/09715010.2019.1670107>. ESCI/Scopus (Impact factor: 2)
4. **Munoth, P.** and Goyal, R. (2020). "Hydromorphological analysis of Upper Tapi River Sub-basin, India, using QSWAT model". **Model. Earth Syst. Environ**,

Springer. Volume 6, Issue 4, pp 2111–2127. <https://doi.org/10.1007/s40808-020-00821-x>. ESCI/Scopus (Impact factor: 3.2)

5. **Munoth, P.** and Goyal, R. (2019). Effects of DEM Source, Spatial Resolution and Drainage Area Threshold Values on Hydrological Modeling. **Water Resources Management, Springer**. Volume 33, Issue 9, pp 3303–3319. <https://doi.org/10.1007/s11269-019-02303-x>. SCI (Impact factor 4.3).
6. **Munoth, P.** and Goyal, R. (2019). Impacts of Land Use Land Cover Change on Runoff and Sediment Yield of Upper Tapi River Sub Basin, India. **Int. J. of River Basin Management, Taylor and Francis**. Volume 18, Issue 2, pp 177–189. <https://doi.org/10.1080/15715124.2019.1613413>. ESCI/Scopus (Impact factor 2.5)
7. Garg, A., **Munoth, P.** and Goyal, R. (2017). A Comparative Study of VH400 Sensor Readings with Gravimetric Moisture Contents Using Different Dielectric Equations." **Life Sciences International Research Journal Vol 4, Spl Issue, 18-23**.
8. Goyal, R., Tiwari, K. and **Munoth, P.** (2016). "Estimation of Crop Coefficients Using Remote Sensing and GIS: A Case Study of Khuskera-Bhiwari Neemrana Investment Region, Rajasthan, India". **Environmental Science & Technology 2016 Vol. 2, 326-332**.
9. Tiwari, K., Goyal, R., Sarkar, A. and **Munoth, P.** (2015). "Integrated water resources management with special reference to water security in Rajasthan, India". **Discovery, 41(188), 93-101**.

International Conferences:

1. Choudhary, R., **Munoth, P.** and Goyal, R., "Assessing the Accuracy and Suitability of Digital Elevation Models through Integrated GNSS System: A Comparative Analysis for Terrain characteristic in Aandhi Village, Rajasthan, India". **HYDRO-2023, 28th International Conference on Hydraulics, Water Resources and River Engineering, NIT Warangal, Dec. 21-23, 2023. (Accepted)**.
2. Choudhary, R., **Munoth, P.** and Goyal, R., "Comparative Analysis of Digital Elevation Models for Assessing Watershed Characteristics and Stream

Networks in a Watershed of Aandhi Village, Rajasthan, India”. **HYDRO-2023, 28th International Conference on Hydraulics, Water Resources and River Engineering, NIT Warangal, Dec. 21-23, 2023. (Accepted).**

3. Agarwal, S., Choudhary, R., Munoth, P. Sarkar, A. and Goyal, R., “Development of Rating Curve using ADCP for Mej River in the Semi-Arid Chambal Basin of Rajasthan, India”. **HYDRO-2023, 28th International Conference on Hydraulics, Water Resources and River Engineering, NIT Warangal, Dec. 21-23, 2023. (Accepted).**
4. Goyal, R. and Munoth, P., "Identification of Relationships among Morphometric Parameters and QSWAT Model Output". **International SWAT Conference, Vienna, Austria, BOKU, 17-19 July 2019.**
5. Munoth, P. and Goyal, R., "Hydrological Modeling of Upper Tapi River Sub Basin India using QSWAT Model and SUFI-2 Algorithm". **International SWAT conference, India, IIT Madras, January 10-12, 2018.**
6. Munoth, P. and Goyal, R., "Morphometric analysis of Upper Tapi River Basin: a GIS approach". **International Conference on Emerging Trends in Water Resources and Environmental Engineering, MVGR College of Engineering, Vizianagaram, AP, India. March 30th – April 1st 2017.**
7. Munoth, P., Goyal, R. and Garg, A., “Estimation of Soil Moisture and Its Application to Irrigation Water Allocation: A Review”. **21st International Conference on Hydraulics, Water resources & Environmental Engineering. CWPR, Pune, Dec. 8-10, 2016, pp 331-342.**
8. Garg, A., Munoth, P. and Goyal, R., “Application of Soil Moisture Sensors in Agriculture A Review”. **21st International Conference on Hydraulics, Water resources & Environmental Engineering. CWPR, Pune, Dec. 8-10, 2016, pp 1662-1672.**
9. Munoth, P. Tiwari, K. and Goyal, R., “Fluoride and Nitrate Groundwater Contamination of Rajasthan, India: A Review”. **HYDRO-2015, 20th International Conference on Hydraulics, Water Resources and River Engineering. IIT Roorkee, December 17th -19th, 2015.**

National Conferences:

1. **Munoth, P.**, Goyal, R. and Tiwari, K., "Sensor Based Irrigation System: A Review". **National Conference on Advances in Civil Engineering, Poornima University, Jaipur, Rajasthan. April 1-2, 2016.**
2. **Munoth, P.** and Shetty, A., "Solar Radiation Mapping of Karnataka Using Remote Sensing and GIS." Proceedings **-National Conference on Emerging Trends in Environment and Energy Management. SMVITM, Udupi, Karnataka, October 18th -19th, 2013 pp 89-93.**

Book Chapter

- Sharma, V., **Munoth, P.**, Goyal, R. (2023). Comparison of Different Climate Models Projections for Watershed Using Soil and Water Assessment Tool: A Case Study of Middle Tapi Sub-basin. In: Hydrology and Hydrologic Modelling. Lecture Notes in Civil Engineering, vol 312, 1-22. Springer, Singapore.
https://doi.org/10.1007/978-981-19-9147-9_1

Professional Services

- **Delivered Expert lectures on "Satellite Data Downloading, Basic Image Processing and Basic SWAT Modeling" in Training Program on Remote Sensing & GIS basics and its application in Water Resources for Engineers of WRD, Rajasthan at Skill Development Lab, WRD, Jaipur, 16-20 Jan. 2023; 20-24 Feb. 2023; 13-17 Mar. 2023 and 20-24 Mar. 2023.**
- **Delivered Expert lectures on "Introduction of QGIS and ERDAS Imagine Software" in two days workshop at JIET Jodhpur, 16-17 Dec. 2022.**
- Managed various sessions in **"Refresher Training Program for Newly Recruited Assistant and Junior Engineers of PHED, Rajasthan"** held during December 2016 to July 2017.
- Managed various sessions in Training Program on **"Remote Sensing & GIS basics and its application in Water Resources organized for engineers of WRD, Rajasthan"** from 17-21 July 2017.

- Conducted hands on exercise on **"Introduction to GIS, DEM and Drainage Delineation"** in training program on **"Basic Hydrology"** for the Engineers of WRD, Rajasthan held from 21-25 Aug. 2017.
- Conducted hands on exercise on **"Basic SWAT Modeling"** in training program on "Advance Remote Sensing & GIS basics and its application in Water Resources organized for engineers of WRD, Rajasthan from 21-25 Jan. 2018.
- **Reviewer of International Journals:**
 - Journal of Hydrology- Elsevier
 - Science of Total Environment- Elsevier
 - Scientific World Journal- Hindawi
 - Cogent Food & Agriculture- Taylor and Francis
 - Geo Journal- Springer Nature
 - International Journal of River Basin Management

Professional Training Received/Short-Term Courses Attended

Training Year	Nature of Training	Duration	Organization where training was provided
2021	Training Course on Climate Change and Hydrological Impact Assessment	1 Week	NIH Roorkee, India
2019	Training Course on Hydrologic Modeling Using SWAT	2 Weeks	NIH Roorkee, India
2018	STTP on Hydraulic and Hydrologic Modelling: Concepts and Applications	1 Week	SVNIT, Surat, India
2017	GIAN Course on Emerging Hydrometric Techniques for Discharge Estimation and Rating Curve Development	1 Week	IIT Roorkee, India
2016	Refresher Course on Mountain Hydrology and Climate Change	2 Weeks	GBPUA&T, Pantnagar and NIH Roorkee, India

2016	GIAN Course on Land Use/ Land Cover Change Modelling and Prediction	1 Week	MNIT Jaipur, India
2016	GIAN Course on Hydroinformatics for Integrated Water Resources Management	2 Weeks	IIT Madras, India
2015	Tier-II Training Programme on Aquifer information System and Aquifer Management Plan	1 Week	CGWB Rajasthan, India
2015	STTP on Recent Trends in Surveying Technology: Remote Sensing, GIS and GPS Perspective	1 Week	MANIT Bhopal, India
2015	STTP on Monsoon School on Urban Floods	1 Week	IISc Balgalore, India
2013	Land Use Land Cover Change Analysis of Raichur Taluk Using Remote Sensing and GIS	45 Days	KSRSAC, Bangalore, India
2011	Construction of Hostel Building	45 Days	PWD, Ajmer, India

Seminar/Workshop Attended

Title of the Program	From Date	To Date	Organized by
Global Data Processing using Python and Notebook in Geospatial Platform	25 Oct. 2023	27 Oct. 2023	National Water Academy, Pune under National Hydrology Project
INCCC Workshop 2019	15 Nov. 2019	16 Nov. 2019	Ministry of Jal Shakti, Govt. of India at IIT Bombay, India
Workshop on National Information System for Climate and Environment Studies and its activities	13 Mar 2018	13 Mar 2018	NRSC, Hyderabad and BISR Jaipur, India

International Workshop on Advanced SWAT (SWAT-CUP)	08 Jan 2018	09 Jan 2018	IIT Madras, India
Workshop on Introduction to River and Channel Modelling	31 Oct 2017	01 Nov 2017	JKLU Jaipur, India
National Programme for Capacity Building in Earthquake Risk Management	15 Feb 2013	17 Feb 2013	Govt. of Madhya Pradesh and MANIT Bhopal, India
Workshop on Geoinformatics for Natural Resource Management	30 Jan 2013	31 Jan 2013	KSTA, Bangalore and NIT Karnataka, India
Concrete Mix Design-Workshop	20 Mar 2012	20 Mar 2012	Ambuja Cement and GECJ Jhalawar, India

Conference Attended

Title	From Date	To Date	Organised at
SWAT-2018, International Conference at IIT Madras	10 Jan 2018	12 Jan 2018	IIT, Madras, India
International Conference on Emerging Trends in Water Resources and Environmental Engineering, MVGR College of Engineering	30 Mar 2017	01 Apr 2017	Vizianagaram, AP, India
HYDRO-2016, 21st International Conference on Hydraulics, Water Resources and Environmental Engineering	08 Dec 2016	10 Dec 2016	CW&PRS, Pune, India
National Conference on Advances in Civil Engineering.	01 Apr 2016	02 Apr 2016	Poornima University, Jaipur, India
HYDRO-2015, 20th International Conference on Hydraulics, Water Resources and River Engineering	17 Dec 2015	19 Dec 2015	IIT, Roorkee, India

National Conference on Emerging Trends in Environment and Energy Management	18 Oct 2013	19 Oct 2013	SMVITM, Karnataka, India
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Awards/Honours

- **Outstanding Paper Award (Third Prize)** in 8th Int. Conf. on Environmental Science and Technology 2016 organized by The American Academy of Science, Houston, Texas, USA, June 6-10.
- **Qualified the GATE-2012 exam** and got MHRD scholarship for M. Tech and Ph.D.
- **B.Tech Honours** in Civil Engineering

Membership of societies

- Life Member of Indian Society of Remote Sensing (ISRS) since 2021. Membership No.: L-5810.
- Life Member of International Association of Hydrological Sciences (IAHS) since 2023. Membership No.: 19868.
- Life Member of International Water Resources Association (IWRA) since 2023. Membership No.: 102548.

Personal Details

Name	Priyamitra Munoth
Date of Birth	13 th January 1987
Marital Status	Married
Language Known	English (Speak, Write, Read), Hindi (Native language)
Professional Page	Google Scholar https://scholar.google.co.in/citations?user=F-aS0KoAAAAJ&hl=en Scopus: https://www.scopus.com/authid/detail.uri?authorId=57209222815 Web of Science https://www.webofscience.com/wos/author/record/AAZ-3492-2021 ORCID: http://orcid.org/0000-0002-2786-8366