

CV

TARIQ MUNIR

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PROFESSIONAL SUMMARY

- 2010-Present As an Instructor or Adjunct Faculty with Geography, at the University of Calgary, Dr. Munir taught, mentored, or supervised undergraduate and graduate students, and has demonstrated a strong track record of 25+ publications in high-quality journals. Currently, Tariq is editing a special issue related to Ecosystems Services and Climate Change in "*Plants*". Many positive student reviews of teaching are received by him.
- 2019-2021 As a Postdoctoral Fellow with the Department of Geography & Planning, University of Saskatchewan, Dr. Munir partnered with Beavers to restore stream/river function and adapt to climate change in Alberta Rocky Mountains.
- 2015-2016 As a Lead, Wetland Engineer with the Department of Environment – Imperial Oil Resources/Exxon Mobil, Tariq coordinated projects on the reclamation of decommissioned oil well pads in Cold Lake, AB and coordinated the modelling of water treatment wetlands in Fort McMurray, AB.
- 2010-2015 Dr. Munir completed a PhD in Physical Geography from Geography, the University of Calgary in 2014. Wetland Soils Biogeochemistry and Productivity under climate change scenarios were investigated and modelled for spatial and temporal scales.
- 2002-2009 Obtained a diverse field and laboratory research/coordination experience: As a Graduate Research Assistant with Renewable Resources, University of Alberta (2009), Tariq supported undergrad and grad students in their greenhouse experiments aimed at restoring disturbed ecosystems in the boreal forest. As an Environmental Supervisor / Manager with Shell Canada (2005-2009) and EnviroTest Labs (2002-2004), Tariq gained extensive experience in the management of Ecological sites.
- 1999-2002 As a Technical Services Officer with Engro Chemical Pakistan Ltd., Tariq demonstrated how soils meet or exceed their productivity with balanced fertilization in the field in order to help sustain food security in Pakistan.
- 1994-1999 Served Pakistan as Assistant Research officer and Agricultural Extension Officer to help and advise growers for increasing their crop production with the least cost/benefit ratio, while sustaining soil health.

AFFILIATIONS

- 2016-Present Adjunct Faculty, Geography, University of Calgary
- 2019-2021 Postdoctoral Fellow, Global Institute for Water Security, Centre for Hydrology, Geography & Planning, University of Saskatchewan
- 2018-2019 Mentor (Graduate Student), Wetland Ambassador Program, Society of Wetland Scientists, USA
- 2015-2022 Registered Professional Agrologist, Alberta Institute of Agrologists, Edmonton, AB
- 2020-2022 Guest Editor, special issue related to [Ecosystems Services and Climate Change](#) in *"Plants"*
- 2015-Present Member Planning Committee and/or Session Chair – Forest, Wetland & Riparian Areas, Alberta Soil Science Workshop
- 2009-2018 Registered Environmental Professional, Environmental Career Organization, Alberta
- 2009 Graduate Research Assistant, Department of Renewable Resources, University of Alberta

EDUCATION/TRAINING

- 2019-2021 Postdoctoral Fellow (Wetland Ecohydrology)
Global Institute for Water Security, Geography and Planning, University of Saskatchewan
Supervisor: Professor Cherie Westbrook
Project: partnering with beavers to restore stream function and adapt to climate change in Alberta Rockies.
- 2015-2016 Postdoctoral Fellow (Wetland Engineer)
Environment – Oil Sands Development and Research Imperial Oil Resources, Calgary, AB
Supervisor: Dr. Michelle Young
Project: Micrometeorological, C-sequestration Monitoring of reclaimed/restored wetlands in Cold Lake and, treatment function modelling of a treatment wetland in Fort McMurray
- 2010-2015 PhD, Physical Geography
University of Calgary, AB
Supervisor/committee: Professors Maria Strack, Greg McDermid / Darren Sjogren, Dr. Jagtar Bhatti
Thesis title: Peatland biogeochemistry and plant productivity responses to field-based hydrological and temperature simulations of climate change
- 1984-1994 BSc-H & MSc-H, Soil Science (Agriculture)
Department of Soil Science
University of Agriculture, Faisalabad, Pakistan
Supervisor/committee: Professors Atta M. Ranjha / Akhtar Hussain, Ejaz Rasool
Thesis title: Physical, chemical, and nutritional status of soils under citrus orchards

TEACHING EXPERIENCE

2010-2023 Sessional Instructor / Adjunct Assistant Professor
Geography, University of Calgary, AB

PREPARED & TAUGHT

- Geog 415 (physical hydrology)
- Geog 313 (soils and vegetation)
- Geog 413/Arky 413 (Soil Character and Formation)
- Geog 326 (Geographies of Canada – Web-based)
- Geog 310 (Landforms and Soils)
- Geog 352 (Political, Economic & Urban Geography)
- ENSC 504 (Peatland Ecohydrology)
- Geog 516 (Ecohydrology) – Labs only

MENTORED UNDERGRADUATE OR PhD STUDENT/THESIS, e.g.,

- a) Peatland vegetation functional groups affected by climate warming and water table drawdown (Mendel Perkins, 2012),
- b) Peatland vegetation functional groups affected by climate change (Emily Kaing, 2013), and
- c) Peatland soil-plant-atmosphere C-flux across a range of peatland well-pad restoration treatments in Peace River, Alberta (Arohi Dixit, 2017-2018)
- d) Individually Trained, mentored, or supervised 12 undergrad or grad students for biogeochemical (e.g., CO₂, CH₄, DOC, Nutrients), biophysical (e.g., vegetation surveys), hydrological, and environmental research at various research sites in Alberta.

2013-2016 Sessional Instructor / Adjunct Assistant Professor,
Geology, St. Mary's University, Calgary

PREPARED & TAUGHT

- Geog 381 (Canada: Regional Geography)
- Geog 203 (Human Environment)

RESEARCH/EXPERIENCE

2019-2021 POSTDOCTORAL FELLOW
Geography and Planning, University of Saskatchewan, SK

- Reviewed, analyzed, and published multiple research works related to the stream restoration function of beavers and beaver dam analogues
- Supported graduate students with their research projects and data/statistical analyses
- Designed and conducted multiple experiments on wetland hydrology and biogeochemistry in Alberta Rockies

- 2015-2016 WETLAND ENGINEER (Postdoc, Environment – Oil Sands Development & Research)
Imperial Oil Resources Ltd. (Exxon Mobil), Calgary, Alberta
- TEAM LEAD
- Coordinated modelling of a contaminated water treatment wetland ecosystem for the possible release of quality water to the Athabasca River watershed
 - Wrote and received external funding and, designed and developed a project to remotely monitor the success of reclamation of restored well pads using the Eddy Covariance technique and evaluation of C-sequestration by vegetation or plant species
 - Reviewed technology proposals on area fugitive emissions and, recommended COSIA's GHG workgroup.
 - Coordinated SSHE representatives across Imperial to synergize common goals
- 2010-2014 PhD SCHOLAR / GTA / GRA
Geography, University of Calgary, AB
- Led 10 field trips/year (each trip week-long) to boreal forest, Alberta.
 - Installed, maintained, and operated numerous micrometeorological equipment, and created climate change simulations
 - Measured greenhouse gases (CO₂, CH₄), dissolved organic carbon and nutrient cycling at natural and disturbed sites.
 - Handled, analyzed, and empirically modelled large data sets using Excel and SPSS, Minitab, SigmaPlot, JMP and other software.
- 2009 GRADUATE RESEARCH ASSISTANT
Department of Renewable Resources
University of Alberta
- Supported field teams for their greenhouse experiments in Smokey Lake, AB
 - Helped to monitor the germination, propagation, and growth of boreal native plants
- 2005-2009 MANAGER HEALTH, SAFETY & ENVIRONMENT (HSE)
Shell Canada Products Ltd.
Alberta & British Columbia
- Management of gasoline inventories, monitoring of gas & water piezometers to sustain the quality of surface- and groundwater
 - Used due-diligence approaches to protect human health and the environment in compliance with Alberta EPEA and Water Act and reported to senior management
 - Provided 18, on-site group training related to human and environmental health and safety
- 2002-2004 LABORATORY SUPERVISOR (Agriculture & Environment)
EnviroTest Labs, Calgary, AB
- Supervised analyses of contaminated soil, water, and plant samples.
 - Provided consultancy services for remediation, reclamation, revegetation, and restoration of environmentally sensitive ecosystems

- Monitored QA/AC, and reported into lab information management system
- Authored analyses and technical reports for clients and senior management

1999-2002 TECHNICAL SERVICES OFFICER
Engro Chemical Pakistan Ltd.

- Developed and ran a soil, water, plant, and fertilizer testing laboratory
- Collaborated agricultural research and extension projects with growers and provincial government for adaptation to drought and warming
- Developed and led programs for nutrient management and sustainable crop yields

1991-1999 AGRICULTURAL OFFICER (Research & Extension)
Government of the Punjab, Pakistan

- Conducted field and laboratory research for sustainable soil health and crop yields
- Analyzed and published results of agricultural research and extension
- Collaboratively developed and ran a sustainability program for surface and groundwater quality

RECOGNITIONS, HONOURS, GRANTS & SCHOLARSHIPS, SOCIAL SERVICES

2017-2022 Member, Planning Committee, and/or session chair – Alberta Soil Science Workshop

2015-2022 Licensed Professional Agrologist – Alberta Institute of Agrologists, AB

2020 Member Technical Review for Fox Creek Wetlands – NAIT, AB

2017-2018 Wetland Ambassador Mentor – (with funding to a PhD student and research completed in Peace River, AB) Society of Wetland Scientists, USA

2017 Scholarly Teaching Activity Grant – Geography, University of Calgary, AB

2012-2014 Teaching Fellow – Geography, University of Calgary, AB

2013 TOP-Best Presentation Award – Alberta Biological Solutions Forum & CCEMC, AB

2011-2014 Queen Elizabeth II Doctoral Scholarship – Geography, University of Calgary, AB

2011-2012 John D. Petrie Memorial Bursary – University of Calgary, AB

2012 [Dr. Karl C. Ivarson Scholarship - Agricultural Institute of Canada Foundation](#)

2009-2018 Environmental Professional – Environmental Career Organization (ECO), Canada

1991 Sir William Robert Talent Scholarship – University of Agriculture, Faisalabad, Pakistan

VOLUNTEER – PROFESSIONAL OR SOCIAL SERVICE

2015-Present Guest Editor for *Plants*, or Referee for 25+ high-quality journals or publishers, for example, Wiley, Wiley-Blackwell, Elsevier, MDPI, IOP Publishing, Springer Science + Business Media.

2020-2021	Doorstep Food delivery (COVID-19; Pak-Canada Association)
2016	Social Worker (WINS; Women in Need Society)
2015	Reception & Ticket Scanning (Imperial Cup Spruce Meadows)
2015	Registration Desk Services (Imperial Oil; Live Art Auction for Charity)

PROFESSIONAL TRAINING & CERTIFICATIONS

2021	<u>University of Calgary, AB</u> <ul style="list-style-type: none"> ▪ Harassment and Violence Awareness Training
2019-2020	<u>University of Saskatchewan</u> <ul style="list-style-type: none"> ▪ Cyber Security Awareness Course ▪ Health & Safety Course ▪ Time Management Course – Mitacs EDGE ▪ Business Writing for Today’s Professional ▪ Developing Research Profile ▪ Leading Change & Negotiating for Success
2019-2021	Standard First Aid & CPR/AED Level C. (due for renewal)
2015-2016	<u>Imperial Oil Resources, Calgary, AB</u> <ul style="list-style-type: none"> ▪ Cyber Security Awareness (CSA) ▪ WHMIS for Imperial Oil ▪ Records Management & Protection ▪ Frequent Driver Safety – Mentally Active Driving & Fleet Safety ▪ Upstream Operations Integrity Management System (OIMS) ▪ Workforce Security Awareness ▪ Experimental Gate Process Following & Project Files Managing ▪ Gas Alarm Responding To ▪ Imperial Oil Field Operations Working With ▪ Materials & Equipment - QA & QC ▪ Research Projects - Decommissioning ▪ Risk Screening & Management of Change for Experiments ▪ Job Safety Analysis (JSA) & Pre-Job Planning ▪ Hazard Severity & MSDS and, Hazardous Materials Ordering, Receiving & Disposing ▪ Protective Clothing & Equipment + Eye Wash Units ▪ Working or Travelling Alone ▪ Technical Level Risk Assessment for Risk Screeners ▪ Project Leader - One-Time Training

- Data Integrity Assurance Management System (DIAMS)
- H₂S and Hydrocarbon Gases-Handling, Storing, and Disposing (S-2000)
- Risk Assessment and Management for Decision Makers
- Safety Management System (SMS)
- Forest and Rangeland Management – Alberta Institute of Agrologists
- Wetland Management – Alberta Institute of Agrologists

2010-2014 University of Calgary

- University Teaching Certificate
- Instructional Skills Workshop
- Occupational Health & Safety

2009 University of Alberta

- Green Defensive Driving

2005-2009 Shell Canada Products Ltd.

- Food Sanitation & Hygiene – Section 32, Calgary Health Region, AB
- Emergency Response Scenarios
- Health, Safety, Security & Environment

JOURNAL PUBLICATIONS

2022 **Munir TM**, Westbrook CJ. 2022. Comparison of Soil Nutrient Supply Patterns among Full and Drained Beaver Ponds and Undisturbed Peat in a Rocky Mountain Fen. *Wetlands*, 42: 1-13.

Ahmad I, Malik SA, Saeed S, Rehman A, **Munir TM**. 2022. Phytoremediating a Wastewater-Irrigated Soil Contaminated with Toxic Metals: Comparing the Efficacies of Different Crops. *Soil Systems*, 6:77.

2021 **Munir TM**, Westbrook CJ. 2021. Thermal characteristics of a beaver dam analogues equipped spring-fed creek in the Canadian Rockies. *Water*, 13: 990.

Kumar S, Meena RS, Singh RK, **Munir TM**, Datta R, Danish S, Yadav GS, Kumar S. 2021. Soil microbial and nutrient dynamics under different sowing environments of Indian mustard (*Brassica juncea* L.) in a rice-based cropping system. *Scientific Reports*, 11:5289.

Bengtsson F, Rydin H, Baltzer JL, Bragazza L, Bu ZJ, Caporn SJ, Dorrepaal E, Flatberg KI, Galanina O, Gałka M, Ganeva A, Goia I, Goncharova N, Hájek M, Haraguchi A, Harris L I, Humphreys E, Jiroušek M, Kajukalo K, Karofeld E, Koronátova NG, Kosykh NP, Laine AM, Lamentowicz M, Lapshina E, Limpens J, Linkosalmi M, Ma JZ, Mauritz M, Mitchell EA, **Munir TM**, Natali S M, Natcheva R, Payne RJ, Philippov DA, Rice SK, Robinson S, Robroek BJ, Rochefort L, Singer D, Stenøien HK, Tuittila ES, Vellak K, Waddington JM, and Granath G. 2021. Environmental drivers of Sphagnum growth in mires across the Holarctic region. *Journal of Ecology*, 109: 417-431.

Ahmad I, Malik SA, Saeed S, Rehman A, **Munir TM**. 2022. Phytoextraction of Heavy Metals by Various Vegetable Crops Cultivated on Different Textured Soils Irrigated with City Wastewater. *Soil Systems*, 5:35.

2020

Munir TM, Westbrook CJ. 2020. Beaver dam analogue configurations influence stream and riparian water table dynamics of a degraded spring-fed creek in the Canadian Rockies. *River Research and Applications*, 37:330-342.

Ahmed N, Habib U, Younis U, Irshad I, Danish S, Rahi AA, **Munir TM**. 2020. Growth, chlorophyll content and productivity responses of maize to magnesium sulphate application in calcareous soil. *Open Agriculture*, 5:792-800.

Idrees M, Anjum MA, Mirza JI, Ahmad I, **Munir TM**. 2020. Potassium humate amendment regulates soil NPK supply and growth parameters of potato (*Solanum tuberosum* L.) In a calcareous soil. *Pakistan Journal of Botany*, 52(5): 1647-1653.

Zafar-ul-Hye M, Wasim MM, **Munir TM**, Aon M, Shaaban M, Abbas M, Hussain M, Ahmad M. 2020. 2020. Co-application of sugarcane bagasse biochar, farmyard manure and mineral nitrogen improved growth indices of corn grown in alkaline calcareous soil. *Journal of Plant Nutrition*, 43(9): 1293-1305.

Younis U, Danish S, Malik SA, Ahmad N, Khalid R, **Munir TM**. 2020. Role of cotton sticks biochar in immobilization of Nickel under induced toxicity condition and growth indices of *Trigonella corniculata* L. *Environmental Science and Pollution Research*, 27:1752-1761.

2019

Danish S, Kiran S, Ahmad N, Ali MA, Tahir FA, Rasheed MK, Shahzad K, Li X, Wang D, Mubeen M, Abbas S, **Munir TM**, Hashmi MZ, Adnan M, Saeed B, Saud S, Khan MN, Ullah A, Nasim W. 2019. Alleviation of chromium toxicity in maize by iron toxicity and chromium tolerant ACC deaminase producing plant growth promoting rhizobacteria. *Ecotoxicology and Environmental Safety*, 185: 109706.

Hashmi S, Younis U, Danish S, **Munir TM**. 2019. Pongamia pinnata L. leaves biochar increased growth and pigments syntheses in *Pisum sativum* L. exposed to nutritional stress. *Agriculture*, 9(7): 153.

Zafar-ul-Hye M, Danish S, Abbas M, Ahmad M, **Munir TM**. 2019. ACC Deaminase producing PGPR *Bacillus amyloliquefaciens* and *Agrobacterium fabrum* along with biochar improve wheat productivity under drought Stress. *Agronomy*, 9(7): 343.

Strack M, **Munir TM**, Khadka B. 2019. Shrub abundance contributes to shifts in dissolved organic carbon concentration and chemistry in a continental bog exposed to drainage and warming. *Ecohydrology*, 12(5): e 2100.

- Bechtold M, De Lannoy GJM, Koster RD, Reichle RH, Mahanama SP, Bleuten W, Bourgault MA, Brümmer C, Burdun I, Desai AR, Devito K, Grünwald T, Grygoruk M, Humphreys ER, Klatt J, Kurbatova J, Lohila A, **Munir TM**, Nilsson MB, Price JS, Röhl M, Schneider A, Tiemeyer B. 2019. PEAT-CLSM: A specific treatment of peatland hydrology in the NASA catchment land surface model. *Journal of Advances in Modeling Earth Systems*, 11(7): 2130-2162.
- 2018 Ahmad I, Bibi F, Ullah H, **Munir TM**. 2018. Mango fruit yield and critical quality parameters respond to foliar and soil applications of zinc and boron. *Plants*, 7(4): 97.
- Granath G, Rydin H, Baltzer JL, Bengtsson F, Boncek N, Bragazza L, Bu Z-J, Caporn SJM, Dorrepaal E, Galanina O, Gařka M, Ganeva A, Gillikin DP, Goia I, Goncharova N, Hájek M, Haraguchi A, Harris19 LI, Humphreys E, Jiroušek M, Kajukařo K, Karofeld E, Koronatova NG, Kosykh NP, Lamentowicz M, Lapshina E, Limpens J, Linkosalmi M, Ma J-Z, Maurit M, **Munir TM**, Natali SM, Natcheva R, Noskova M, Payne RJ, Pilkington K, Robinson S, Robroek BJM, Rochefort L, Singer D, Stenøien HK, Tuittila E-S, Vellak K, Verheyden A, Waddington JM, Rice SK. 2018. Environmental and taxonomic controls of carbon and oxygen stable isotope composition in sphagnum across broad climatic and geographic ranges. *Biogeosciences*, 15: 5189-5202.
- 2017 **Munir TM**, Khadka B, Xu B, Strack M. 2017. Mineral nitrogen and phosphorus pools affected by water table lowering and warming in a boreal forested peatland. *Ecohydrology*, 10(8): 1-15. e1893.
- Munir TM**, Khadka B, Xu B, Strack M. 2017. Partitioning forest-floor respiration into source-based emissions in a boreal forested bog: responses to experimental drought. *Forests*, 8: 1-17.
- 2016 Khadka B, **Munir TM**, Strack M. 2016. Dissolved organic carbon in a constructed and natural fens in the Athabasca oil sands region, Alberta, Canada. *Science of the Total Environment*, 557 – 558: 579-589.
- Munir TM**, Khadka B, Jamro GM, Ullah H. 2016. Black spruce productivity and foliar C:N ratio responses to peatland water-table level: A climate change standpoint. *Science International*, 28:4043-4048.
- 2015 Khadka B, **Munir TM**, Strack M. 2015. Effect of environmental factors on production and bioavailability of dissolved organic carbon from substrates available in a constructed and reference fens in the Athabasca oil sands development region. *Ecological Engineering*, 84: 596-606.
- Munir TM**, Perkins M, Kaing E and Strack M. 2015. Carbon dioxide flux and net primary production of a boreal treed bog: Responses to warming and water-table-lowering simulations of climate change. *Biogeosciences*, 12(4): 1-21.
- 2014 **Munir TM**, Strack M. 2014. Methane Flux Influenced by Experimental Water Table Drawdown and Soil Warming in a Dry Boreal Continental Bog. *Ecosystems*, 17(7): 1271-1285.

Munir TM, Xu B, Perkins M, Strack M. 2014. Responses of carbon dioxide flux and plant biomass to water table drawdown in a treed peatland in northern Alberta: a climate change perspective. *Biogeosciences*, 11: 807-820.

- 2013 **Munir TM**, Xu B, Perkins M, Strack M. 2013. Responses of carbon dioxide flux and plant biomass to drought in a treed peatland in northern Alberta: a climate change perspective. *Biogeosciences Discussions*, 10, 14999-15031.

BOOK CHAPTER, TECHNICAL REPORT OR SPECIAL ISSUE ARTICLE

Ingram R., **Munir, TM.**, and Xu B. 2021. Regional wetland status and sensitivity to disturbances near Fox Creek, Alberta; Geological Survey of Canada, Open File 8812, 66 p.
<https://doi.org/10.4095/328584>

Munir TM, Khadka B, Xu B, Strack M. 2018. Partitioning Forest-Floor Respiration into Source Based Emissions in a Boreal Forested Bog: Responses to Experimental Drought. In R. Jandl & M. Rodeghiero (Eds.), *Forest Soil Respiration under Climate Changing*: 146-162. Basel, Switzerland, MDPI.

Zafar-ul-Hye M, Danish S, Abbas M, Ahmad M, **Munir TM**. 2019. ACC Deaminase producing PGPR *Bacillus amyloliquefaciens* and *Agrobacterium fabrum* along with biochar improve wheat productivity under drought Stress. In JM Rosa (Ed.), *Biochar as Soil Amendment*: 123-138. Basel, Switzerland, MDPI.

CONFERENCE PRESENTATIONS (with or without Publications in Proceedings)

- 2019 Bechtold M, De Lannoy GJM, Koster RD, Reichle RH, Mahanama SP, Roose D, and the Team (**Munir TM**). 2019. Peatland hydrology in a global land surface modelling and data assimilation framework. European Geophysical Union General Assembly, April 7-12, Vienna, Austria.
- 2020 **Munir TM**, Westbrook C. 2020. Do beaver dam analogues (BDAs) influence downstream temperature regimes? Centre for Hydrology – Geography and Planning, University of Saskatchewan, Nov 2. Saskatchewan, Canada.
- 2017 **Munir TM**, Khadka B, Xu B, Strack M. 2017. Dissolved organic carbon production affected by warming and water-table lowering in a boreal forested bog: A climate impact perspective. Alberta Soil Science Workshop, Feb 15-17, Lethbridge, AB, Canada.
- Munir TM**, Greenhouse gases: Emission, monitoring and reporting. Alberta Professional Agriculture Association, Aug 13. Calgary, AB, Canada.
- 2016 **Munir TM** and Young MA. 2016. Carbon sequestration at reclaimed wetlands and modelling of treatment wetlands. COSIA, Feb 9, Calgary, AB, Canada.
- Munir TM**, Young M. 2016. Boreal peatland disturbance: Climate change, land use change and restoration. Well Pad Reclamation Workshop, Oct 21. Cold Lake, AB, Canada.

- 2015 **Munir TM**, Young MA, Bekele A. 2015. Wetlands: Carbon gas flux monitoring and treatment function modelling. Conservation and Reclamation workshop, Sep 31-Oct 1, Imperial Oil Resources, Cold Lake, AB, Canada.
- Munir, TM** and Strack M. 2015. Responses of nutrient dynamics to warming and water-table lowering simulations of climate change in a northern treed bog. Alberta Soil Science Workshop, Feb 17-19, Edmonton, AB, Canada.
- Munir TM**, Khadka B, Strack M. 2015. Dissolved Organic Carbon concentration and chemistry affected by warming and water-table-lowering in a Boreal treed continental bog in Alberta. Canadian Geophysical Union, May 3-7, Montreal, QC, Canada.
- Munir TM**, Khadka B, Strack M. 2015. Responses of nutrient dynamics to warming and water-table-lowering in a northern treed bog in Alberta. Canadian Geophysical Union, May 3-7, Montreal, QC, Canada.
- Munir TM**, Young M. 2015. Remote monitoring of a reclaimed wetland at Cold Lake. Remote Sensing and Monitoring Workshop, May 12. Calgary, AB, Canada.
- Khadka B, **Munir TM**, Strack M. 2015. Evaluating the function of a constructed fen in Alberta's oil sands region using dissolved organic carbon concentration and chemistry. COSIA Oil Sands Water Conference and Workshops, Mar 11-13. Edmonton, AB, Canada.
- 2014 **Munir TM**, Kaing E, Strack M. 2014. Carbon dioxide flux and plant biomass affected by warming and water table drawdown in a boreal peatland in Alberta. Canadian Geophysical Union, May 4-7, Banff, AB, Canada.
- Munir TM**, Kaing E, Strack M. 2014. Carbon dioxide flux and plant biomass in a boreal peatland affected by warming and water table drawdown. Alberta Soil Science Workshop, Feb 12-14, Calgary, AB, Canada.
- Strack M, Hassanpour G, Zuback Y, Mahmood MS, Keith AM, **Munir TM**. 2014. Methane flux from Canadian restored cutover peatlands. Alberta Soil Science Workshop, Feb 12-14, Calgary, AB, Canada.
- Strack M, **Munir TM**. 2014. The potential impact of climate change on northern peatland carbon exchange. Peatland Ecology Research Group, Feb 19-20, University of Laval, Quebec, Canada.
- Bremer E, **Munir TM**, Strack M, Wood M, Macrae M, Nwaishi F, Petrone R, Devito K. 2014. Soil nutrient supply rates in natural and constructed wetlands of the oil sands region. Alberta Soil Science Workshop, Feb 12-14, Calgary, AB, Canada.
- 2013 **Munir TM**, Strack M. 2013. Peatland-atmosphere methane flux influenced by experimental warming and water table drawdown in northern Alberta. Biological Solutions Forum, Oct 9-10, Calgary, AB, Canada.
- Munir TM**, Xu B, Perkins M, Strack M. 2013. Responses of carbon dioxide flux and plant biomass to experimental drought in a treed peatland in northern Alberta: A climate change perspective. Canadian Geophysical Union, May 26-30, Saskatoon, SK, Canada.

Munir TM, Strack M. 2013. Potential Effects of climate change on Methane Dynamics of a Boreal Alberta Peatland. Alberta Soil Science Workshop, Feb 19-21. Lethbridge, AB, Canada.

Munir TM, Kaing E, Xu B, Strack M. 2013. Carbon dioxide flux and plant biomass at a boreal Alberta peatland affected by warming and water table drawdown. Alberta Soil Science Workshop, Feb 13. Calgary, AB, Canada.

2012 **Munir TM**, Perkins M, Xu B, Strack M. 2012. Effects of water table drawdown on carbon dynamics and plant biomass of a boreal Alberta peatland. Alberta Soil Science Workshop, Feb 15. Edmonton, AB.

REFERENCES

1. Dr. Maria Strack, Professor and Canada Research Chair, Geography and Environmental Management, University of Waterloo, ON
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Phone (519) 888-4567 ext. 30164
2. Dr. Bin Xu, NSERC Industrial Research Chair, Boreal Research Institute, NAIT, Peace River, AB
Email binx@nait.ca
Phone (780) 624-3257
3. Dr. Cherie Westbrook, Professor of Ecohydrology and Director – NSERC CREATE for Water Security, Centre for Hydrology, University of Saskatchewan
Email Cherie.Westbrook@usask.ca
Phone (306) 290-4991