

1- Personal Information

Name : Abdirashid Elmi
Nationality : Canadian
College : Life Sciences
Academic Dept. : Environmental Science

2- Academic Qualifications

Doctorate degree:

Ph.D. in Environmental Soil Science, McGill University, Montreal, Canada, 09/2002

Ph.D. Thesis Title: Denitrification and Nitrous Oxide Emissions in the Soil Profile under Two Cropping Systems

Master's degree:

M.Sc. Environmental Science (Soil & Water Resources)
McGill University, Montreal, Canada, 06/1998

M.Sc. Thesis Title: Denitrification in sandy loam soil as influenced by water table depth and nitrogen fertilization rate

Bachelor's degree:

B.Sc. in Soil Science
Somali National University, Somalia, 08/1989

3- Professional History

March 2011-Present	Associate Professor College Life Sciences, Kuwait University, Kuwait
Nov. 2011 –Nov. 2015	Vice Dean for Academic, Research and Graduate Studies, College Life Sciences, Kuwait University, Kuwait
20 – 25/ 2014	Acting Dean, College of Life Sciences, Kuwait University, Kuwait
21/7 – 9/8/ 2013	Acting Dean, College of Life Sciences, Kuwait University, Kuwait
1-5/4/2013	Acting Dean, College of Life Sciences, Kuwait University, Kuwait

2-9/3/2013	Acting Dean, College of Life Sciences, Kuwait University, Kuwait
Sept. 2009- 2011	Department Chairman Environmental Technology Management Dept. College Life Sciences, Kuwait University, Kuwait
09/2005- 06/2011	Assistant Professor Environmental Technology Management Dept. College Life Sciences, Kuwait University, Kuwait
01/2005- 05/2005	NSERC (Natural Science and Engineering Research Council of Canada) Post-Doctoral Visiting Fellow Environmental policy program, Agriculture and Agri-Food Canada Canada
03/2003- 12/2004	Post-Doctoral Research Associate and Lecturer Dept. of Engineering, Nova Scotia Agricultural College Canada
06/2000-02/2003	Research Associate and Session Lecturer Brace Center for Water Resources Management, McGill University, Montreal, Canada

Relevant Experiences

Dr. Elmi has 20+ years of experience with fieldwork-based research concerning climate change causes, mitigation, and climate adaptation strategies in both developed and developing countries, including Canada, Kuwait, and Somalia. These include:

- 1) 01/2023 – 3/2023 DANIDA (Danish International Development Agency).
 - Prepared climate change component of the 5-year strategic framework for the Danish government support for Somalia/Somaliland
- 2) 08/2021 – 11/2021 HIPS (Heritage Institute for Policy Studies)
 - Country environmental profile analysis to assess the state of environment in Somalia.
 - Comprehensive report on climate change impacts on food security <https://heritageinstitute.org/https-heritageinstitute-orgwp-content-uploads-2021-12-food-security-andclimate-change-1-1-pdf/publications/report>

4- Academic Activities Towards Promotion

Papers in refereed journals:	45
Citations (as per Nov 2023)	1050
H-Index:	16
Papers currently being reviewed:	01
Chapters in books – refereed:	03
Conference proceedings and technical reports:	35

a. Published research papers: Total = 45

Number of times cited (Google Scholar) in square brackets, as of Dec. 2022

- 1) Elmi, A., Anwar, S.A., Al-Dashti, H. Measurements and regional climate modeling of soil temperature under arid environment Can soil temperature outperform air temperature as a climate change indicator? *Environ Model Assess* (In Press). <https://link.springer.com/article/10.1007/s10666-023-09945-7>.
- 2) Majda K. Suleiman, Anisul Islam, N. R. Bhat, S. Jacob, R. R. Thomas, M. T. Sivadasan, and **Abdirashid Elmi** (2023) Planting Methods Influence Revegetation Success of Native Species in an Arid Environment. *Canadian J Forest Research*. 53 (9): 667-687. <https://doi.org/10.1139/cjfr-2022-0018>.
- 3) Alolayan, M, Alsanad, A, Latifa I. Aljallal, L, **Elmi**, A (2023) Municipal solid waste characteristics and segregation efficiency of in-house direct sampling in Kuwait. *Int. J. Environ Waste Management*. 31: 467-480. <https://doi.org/10.1504/IJEW.2022.10035171>.
- 4) Habib Diop, Leanne Ejack, **Abdirashid A. Elmi**, and Joann K. Whalen (2022) Earthworm distribution around tile drainage in agricultural fields of southwest Quebec, Canada. *Canadian J Soil Science*.103: 377-380 <https://doi.org/10.1139/CJSS-2022-0059>.
- 5) Al-Huwaishel, A.S., **Elmi**, A., Mukhopadhyay: A. (2022) Aquifer Storage of Treated Wastewater for Subsequent Recovery as a Strategy for Sustainable Water Resources Management. *Water Science and Technology: Water Supply*: **22 No 2, 2067** doi: <https://doi.org/10.2166/ws.2021.296> [3]
- 6) Suleiman, MK., Islam, MA., Bhat, NR., Jacob, S., Rachel, R., Thomas, RR., **Elmi**, A. 2022. Effects of Salinity on Native Shrubs and -one near Extinct Tree Species of Kuwait: Potentials for Restoring Degraded Desert Ecosystem. *Plant Biosystems*.156: 242-251. <https://doi.org/10.1080/11263504.2020.1851791>.
- 7) Ahmad, A, and **Elmi**, A. (2021) Air pollutants are negatively associated with vitamin D-synthesizing UVB radiation intensity on the ground. *Scientific Reports*: 11:21480 <https://doi.org/10.1038/s41598-021-00980-6> [Cited 9]
- 8) **Elmi**, A., Jiao, Y., Benslim, H., Mawof, A., Shiv O Prasher, S.O., Whalen, JK. (2021) Fertilizing with composted cattle manure to meet agro-environmental targets in continuous corn and corn-soybean agroecosystems in southern Quebec. *Canadian J Soil Science* 101: 480–493. <https://doi.org/10.1139/CJSS-2021-0013> [Cited 1].
- 9) Mohamed F. Yassin, Nawaf S. Alhajeri, Abdirashid A. **Elmi**, Marium J. Malek, Musaed Shalash. 2021. Numerical simulation of gas dispersion in urban environments under changes in atmospheric thermal stability. *Environmental Monitoring and Assessment*. 193:22 <https://doi.org/10.1007/s10661-020-08798-x>. [Cited 7].
- 10) Whalen, J.K., Benslim, H., **Elm**, A., Barry R. Husk, B.R. (2021) Earthworm populations are stable in temperate agricultural soils receiving wood-based biochar. *Pedosphere* 31: 398-404 [https://doi.org/10.1016/S1002-0160\(20\)60080-7](https://doi.org/10.1016/S1002-0160(20)60080-7). [Cited 9].

- 11) **Elmi, A., Meshari Al-Harbi, Mohamed F. Yassin, Mosaab M. Al-Awadhi.** (2021) Modeling Gaseous Emissions and Dispersion of Two Major Greenhouse Gases from Landfill Sites in Arid Hot Environment. *Environmental Science and Pollution Research*: 28:15424–15434. <https://doi.org/10.1007/s11356-020-11760-6> [Cited 2].
- 12) **Elmi, A., Asma'a Al-Khaldy, Mohamed Alolayan.** 2020. Sewage sludge land application: Balancing act between agronomic benefits and environmental concerns. *Journal of Cleaner Production* 250: 119512. [Cited 37].
- 13) **Elmi, A., Anderson, A.K., Albinali, A.S.** 2019. Comparative study of conventional and organic vegetable produce quality and public perception in the state of Kuwait. *Kuwait Journal of Science* 46: 120-127. [Cited 3].
- 14) **Elmi, A.** (2018) Risks to critical environmental resources and public wellbeing from climate change in the eyes of public opinion in Kuwait. *Environmental Progress & Sustainable Energy* 37: 232-239. [Cited 4].
- 15) **Elmi, A.** (2017) Feeding Ten Billion and beyond: Why Technology May or May not Save Us? Review Article. *Agriculture Research & Technology Journal* 6 (2): 1-4. DOI: 10.19080/ARTOAJ.2017.06.555684.
- 16) **Al-Harbi, M., Anderson, A., Elmi, A.** (2017). Evaluation of Microbial Contamination in Frequently Used Fomites in Kuwait. *Biodiversity International Journal* 1 (3):1-7. [Cited 12].
- 17) **Fawas Al-Anzi, M Sarfraz, A Elmi, AR Khan** (2017) Design Transformation to Reduce Cost in Irrigation Using Value Engineering. *World Academy of Science, Engineering and Technology (WASET)* 11: 2210-2219 [Cited 7].
- 18) **Elmi A., Hassan Al-Dashti** (2017). Recent Trends in Soil Temperature Under Arid Agro-Ecosystem in Kuwait as a Prelude to the Gulf Region: Can Root-Zone Soil Temperature Be Predicted from Ambient Air Temperature? *J. Earth Sci. Clim. Change* 8 (2): 1-6. DOI: 10.4172/2157-7617.1000387.
- 19) **Elmi, A., Al-Zenki, S., Alomairah, H.** (2016). Framework for Sustainable Agro-Ecosystems in Support of Gulf Cooperation Council (GCC) Countries' Food Security. *Arab Gulf Journal of Scientific Research* 34: 97-105 [Cited 3].
- 20) **Elmi, A.** (2015). Monitoring of Carbon Dioxide (CO₂) and Methane (CH₄) From Four Locations in the Densely Populated Kuwait City in the State of Kuwait. *International Journal of Chemical, Environmental & Biological Sciences (IJCEBS)*, 3: 4-6.
- 21) **Elmi, A.** (2015) Short Communication: Agricultural Soil Profile Temperature in Hot and Arid Ecosystem: Can it be a useful indicator of environmental change? *Journal of Environmental Indicators*, 9:35-36.
- 22) **Al-Harbi, M., Alshaiban, A., Yassin, M.F. and Elmi, A.** (2013) Kinetic Analysis and Modelling of Thermal Degradation of Perspex (Pmma) and Perspex Blend Plastic Waste. *Canadian Journal of Chemical Engineering*. 91: 1281-1288 [Cited 4].
- 23) **Al Rifai, N., Elmi, A. and Khan, A.** (2012), Tailpipe emissions from passenger cars of different models: What are the main influencing factors? *Environmental Progress & Sustainable Energy*. 32 (2): 335–343 (DOI: 10.1002/ep.11602) [Cited 2].
- 24) **Elmi, A.** 2012. Investigation of Public Opinion on Global Environmental Changes and Potential Risks in the Arabian Gulf Region. *Energy Education Science and Technology Part A: Energy Science and Research*. 30 (Special Issue 1): 631-640.
- 25) **Elmi, A., Al-Rifai, N.** (2012) Pollutant Emissions from Passenger Cars in Traffic Congestion Situation in the State of Kuwait: Options and Challenges. *Clean Technologies & Environmental Policy*. 14 (4): 619-624 (DOI 10.1007/s10098-011-0421-x) [Cited 17].
- 26) **Elmi, A., J. S. Abou Nohra, C. A. Madramootoo, W. Hendershot.** 2012. Estimating Phosphorus Leachability in Re-constructed Soil Columns Using HYDRUS-1D

- Model. **Environmental Earth Sciences**. 65: 1751-1758 (DOI: 10.1007/s12665-011-1154-1) [Cited 24].
- 27) N. Al-Rifai, **A. Elmi**, A. Khan. 2011. Exploring Possible Seasonal Trends in Mortality Rate in Relation to Age, Gender, and Environmental Condition in Kuwait: A Preliminary Analysis. **The Journal of Engineering Research** 8: 19-27 [Cited 5].
- 28) Yassin, M.F. and **A. Elmi**. 2011. Stochastic Analysis of Concentration Field in a Wake Region. **Environmental Science and Pollution Research Journal**. 18: 270-281 (DOI: 10.1007/s11356-010-0372-5) [Cited 1].
- 29) **Elmi**, A. C. Madramootoo, P. Handyside, G. Dodds. 2010. Water Requirements and Subirrigation Technology Design Criteria for Cranberry Production in Quebec, Canada. **Canadian Biosystems Engineering Journal**. 52: 1.1-1.8 [Cited 9].
- 30) **Elmi, A.**, B. Mehdi, C. Madramootoo, R. Dam and D.L Smith. 2009. Long-term Effect of Conventional and No-Tillage Production Systems on Nitrous Oxide Fluxes from Corn (*Zea mays* L) Field in Southwestern Quebec. **American Journal of Environmental Sciences**. 5: 238-246 [Cited 14].
- 31) M. S. Mkhabela, A. Madani, R. Gordon, D. Burton, **A. Elmi** and W. Hart. 2008. Gaseous and Leaching Nitrogen Losses from No-Tillage and Conventional Tillage Systems Following Surface Application of Cattle Manure. **Soil & Tillage Res. Journal**. 98:187-19 [Cited 113].
- 32) Mkhabela, M.S., R. Gordon, D. Burton, A. Madani, W. Hart, **A. Elmi**. 2006. Ammonia and nitrous oxide emissions from two acidic soils of Nova Scotia fertilized with liquid hog manure mixed with or without dicyandiamide. **Chemosphere**. 65: 1381-1387 [Cited 37].
- 33) **Elmi, A.**, A. Madani, R. Gordon, P. MacDonald, G. W. Stratton. 2005. Nitrate concentrations in the soil profile and drainage water following manure and mineral fertilizer application in a barely-carrots production system in Nova Scotia. **Water, Air and Soil Pollution**. 160: 119-132 [Cited 19].
- 34) Gordon, R., **A.A. Elmi**, T. Hauser, A. Madani, V. Rodd, P. Leblanc. 2005. Nitrate and pesticide leaching from processing carrot production systems in Nova Scotia. **Canadian Journal of Plant Science**. 85: 205-211 [Cited 10].
- 35) **Elmi, A.**, T. Astatkie, C. Madramootoo, R. Gordon, D. Burton. 2005. Assessment of Denitrification Gaseous End-products in the Soil Profile under Two Water Table Management Practices Using Repeated Measures Analysis. **Journal of Environmental Quality**. 34: 446-454 [Cited 19].
- 36) **Elmi, A.**, D. Burton, R. Gordon, C. Madramootoo. 2005. Impacts of water table management on N₂O and N₂ from a sandy loam soil in southwestern Quebec, Canada. **Nutrient Cycling in Agroecosystems**. 72: 229 – 240 [Cited 41].
- 37) **Elmi, A.**, R. Gordon, C. Madramootoo, A. Madani. 2005. Water table management practice for reducing nitrate accumulation in the soil profile under corn production. **Canadian Biosystems Engineering**. 47:23-28 [Cited 7].
- 38) **Elmi, A. A.**, C. Madramootoo, M. Egeh, C. Hamel. 2004. Water and fertilizer nitrogen management to minimize nitrate pollution from a cropped soil in southwestern Quebec, Canada. **Water, Air and Soil Pollution**. 151: 117-134 [Cited 79].
- 39) Hamel, C., Landry, C., **Elmi, A. A.**, Liu, A and Spedding, T. 2004. Nutrient dynamics utilizing biotic-abiotic interactions for improved management of agricultural soils. **Journal of Crop Improvement**. 11:209-248 [Cited 10].
- 40) **Elmi, A.**, C. Madramootoo, C. Hamel, A. Liu. 2003. Denitrification and nitrous oxide to nitrous oxide plus dinitrogen ratios in the soil profile as influenced by tillage systems and crop residue in a sandy loam soil. **Biology and Fertility of Soils**. 38: 340-348 [Cited 136].

- 41) Liu, A., C. Hamel, **A. A. Elmi**, T. Zhang, D. L. Smith. 2003. Reduction of the available phosphorus pool in soil field soils growing maize genotypes with extensive mycorrhizal development. **Canadian Journal of Plant Science**. 83: 737-744 [Cited 22].
- 42) **Elmi, A. A.**, C. A. Madramootoo, C. Hamel, M. Egeh, A. Liu. 2002. Environmental and agronomic implications of water table and nitrogen fertilization management. **Journal of Environmental Quality**. 31:1858-1867 [Cited 87].
- 43) **Elmi, A. A.**, C. A. Madramootoo, M. Egeh, G. Dodds, C. Hamel. 2002. Water table management as a natural bio-remediation techniques of nitrate pollution. **Water Quality Research Journal of Canada**. 37: 563-576 [Cited 21].
- 44) Liu, A., C. Hamel, **A. A. Elmi**, C. Costa, B.L Ma, and D. L. Smith. 2002. Concentrations of K, Ca and Mg in maize colonized by arbuscular mycorrhizal fungi under field conditions. **Canadian Journal of Soil Science**. 82: 272-278 [Cited 132].
- 45) **Elmi, A. A.**, C. Madramootoo, C. Hamel. 2000. Influence of water table and nitrogen management on residual soil NO_3^- -N and denitrification rate under corn (*Zea mays* L.) production in sandy loam soil in Quebec. **Agriculture, Ecosystem and Environment**. 79: 187-197 [Cited 46].

b. Conference proceedings and technical reports: **Total = 35**

- 1) Elmi, A. 2022. Gaseous Emissions from Waste Disposal Landfill over Residential Environment (keynote Presentation). 5th INTERNATIONAL CONFERENCE ON ENVIRONMENTAL SUSTAINABILITY AND CLIMATE CHANGE November 07-08, 2022, PARIS, FRANCE. pp18-20.
<https://crgconferences.com/environmental/2022/programschedule>
- 2) Elmi, A. 2021. Prospects of Food Security in Somalia Under Looming Climatic Changes. <https://heritageinstitute.org/https-heritageinstitute-org-wp-content-uploads-2021-12-food-security-and-climate-change-1-1-1-pdf/>
- 3) Elmi, A. 2019. Thoughts in sustainability as a way of lifestyle: potential possibilities and obstacles. International Conference on Civil and Environmental Engineering (I2C2E) Melbourne, Australia 24th-25th October 2019. Paper ID: RW-I2C2EMELB-24109-12458
- 4) Elmi, A. 2018. Clean and Green: Environmental sustainability in the eyes of public opinion. 4th Gogreen summit, Kuala Lumpur, Malaysia.
- 5) Elmi, A and Amna S. Albinali. How organic is the Kuwait agricultural farming? Assessment of selected vegetables crops and public perception. 3rd International Conference on Sustainable Agriculture and Environment September 26-28, 2017. Warsaw, Poland. pp41. http://www.3rdicsae.org/documents/Abstract_Book.pdf
- 6) F.S. Al-Anzi , M. Sarfraz, A. Elmi , and A.R. Khan. Using Scrap Tires to Fight Desertification and Ration Water by Value Engineering Approach. 3rd International conference on Innovative Engineering Technologies (ICIET'2016) August 5-6, 2016 Bangkok (Thailand), pp 48-51. <http://dx.doi.org/10.15242/IIIE.E0816027>
- 7) **Elmi, A.** The Soil Profile Temperature under Agricultural and Natural Ecosystems. **Seventh International Conference on Climate Change: Impacts and Responses**". University of British Columbia, Vancouver, British Columbia, 10-11 April 2015.
<http://on-climate.com/the-conference>
- 8) **Elmi, A.** Monitoring of carbon dioxide (CO₂) and methane (CH₄) from four locations in the densely populated Kuwait City in the State of Kuwait. International Scientific Academy of Engineering & Technology Conferences ISAET, Jan. 3-4, 2015, Kuala

- Lumpur, Malaysia. pp 62-63. In Saji Baby and Shih-Chuan Yeh (ed), ISBN 978-93-84468-13-2
- 9) Meshari Al-Harbi, **Abdirashid A. Elmi**, Mosaab M. Al-Awadhi, Mohamed F Yassina, Assessment of Gaseous Dispersion from Landfill over Residential Area. **2013. Pp457-471** In Hong Kong International Conference on Engineering and Applied Science (**HKICEAS-784**), 2013, pp ISBN:978-986-87417-4-4.
 - 10) **Elmi, A.** Pollutant emissions from passenger cars in traffic congestion situation in the State of Kuwait: options and challenges. *Keynote Speaker*. The 2nd International Conference on Pollution and Treatment Technology (PTT 2013), July 14 to 16, 2013, Beijing, China.
 - 11) **Elmi, A.** Environmental and traffic implications of cheap energy: Case study in the State of Kuwait. **First International Conference on “ENERGY & ENVIRONMENT: bringing together Economics and Engineering”**, Porto, Portugal, 09-10 May 2013
 - 12) **Elmi, A.** Analysis of public opinion on global environmental changes and potential risks in the State of Kuwait. Kuwait University Poster Day Conference, March 18, 2013.
 - 13) **Elmi, A.** Phosphorus Leaching Potentials from Re-constructed Soil Columns Using HYDRUS-D Model. **4th International Hydrus Conference**, Hydrus Software Applications to Subsurface Flow and Contaminant Transport Problems, Prague, Czech Republic, March 18-21, 2013.
 - 14) **Elmi, A** and N. Al-Rifai. 2012. Urban Air Pollution from Passenger Cars under Heavy Traffic Condition in Kuwait City, Kuwait. Proceedings of the **2nd International Conference on Environmental Pollution and Remediation**, Montreal, Quebec, Canada, 28-30 August 2012.
 - 15) **Elmi, A.** 2012. What People think of Environmental Quality and Resources Sustainability: Case Study in the State of Kuwait. **Second Asian Conference on Sustainability, Energy & the Environment** (ACSEE 2012), Osaka, Japan, from May 3-6, 2012.
 - 16) N. Al-Rifai and **A. Elmi**. 2012. Analysis of challenges and potential solutions for traffic congestion situation in the State of Kuwait. International Conference on “**Planet under Pressure: New knowledge towards solutions**”, 25-29 March 2012, London, UK.
 - 17) **Elmi, A** and N. Al-Rifai. Measurements of Selected Pollutants from Passenger Cars and Potential solutions in the state of Kuwait. Poster Day Presentation, Kuwait University, Kuwait, March 12, 2012.
 - 18) **Elmi, A.** 2011. Assessing Public Climate Change Knowledge and Potential Impacts in the State of Kuwait. **International Conference on Climate Change & Social Issues** (CCSI2011)” 13-15 December 2011, Colombo, Sri Lanka.
 - 19) **Elmi, A.** C. Madramootoo, P. Handyside, and G. Dodds. 2010. Water resources management for cranberry production in Quebec, Canada. **World Academy of Science, Engineering and Technology** (WASET), Tokyo, ICSWRM 2010 : International Conference on Sustainable Water Resources Management, May 26-28, 2010, pp**1319-1327**. In Cemal Ardil (ed).
 - 20) **Elmi, A.** 2009. Water table management: A successful technology for water quality and crop production. 2009 Conference of American Society of Engineering Education, Northeastern Section (ASEE NE). April 3-4, 2009, University of Bridgeport, CT, USA.

- 21) **Elmi, A.** 2008. Collective responsibility for water resources management: Watershed approach to improve agricultural water quality. Great Lakes of the World and Rift Valley Lakes: Sustainability, Integrity and Management, Adis Ababa, Ethiopia.
- 22) **Elmi, A.**, and N. Al-Rai. 2006. Assessment of Freshwater Ecosystem in Kuwait **p.57**. *In:* The 1st International Conference on the State of the Gulf Ecosystems: Future and Threats, March 5-7, UAE University, Al-Aian, United Arab Emirates.
- 23) N. Al-Rai, **A. Elmi** and A. Khan. 2006. Assessment of Air Quality in Kuwait in Relation to Human Mortality Rate: A Preliminary Study **p.35**. *In:* The 1st International Conference on the State of the Gulf Ecosystems: Future and Threats, March 5-7, UAE University, Al-Aian, United Arab Emirates.
- 24) **Elmi, A.** 2004. Water Resources Use and Allocation under Climate Change Scenarios. Bridging the knowledge gap and joint learning with partners for improved, low-cost water supply, sanitation and hygiene in developing countries. IRC International Water and Sanitation Centre, Sept. 17-19, 2004, Hague, the Netherlands.
- 25) A. Madani, **A. A.Elmi**, R. Gordon and G. Stratton. 2004. Quality of drainage water in Nova Scotia, Canada. Proceedings of the 6th International Conference on Hydro-Science and Engineering (ICHE-2004), May 30-June 3, Brisbane, Australia
- 26) **Elmi, A.A.**, R. Gordon, A. Madani and C. Madramootoo. 2004. Water table management impacts on nitrogen transformations in the soil profile: an environmental perspective. **Paper No. 042184**, August 1-4, 2004- Ottawa, ON
- 27) S. C. Tattrie, **A.A. Elmi**, R. Gordon, R.C. Jamieson, A. Madani, G.W. Stratton, Dale Hebb and Keith Fuller. 2004. Integrated Surface Water Quality Assessment of a Rural Watershed in Nova Scotia, Canada. **Paper No. 042007**, ASAE Annual Meeting, August 1-4, 2004- Ottawa, ON.
- 28) **Elmi, A. A.** 2002. Greenhouse gases and water management. **Source Newsletter**. Volume 2, Issue 1, **p.5**. May 2002. <http://www.mcgill.ca/brace/publications/> (November 2002).
- 29) **Elmi, A. A.**, C. Madramootoo, C. Hamel. Mitigating nitrate pollution by water table management without increase in nitrous oxide emissions under corn production system. **p.56**. *In:* 18th Congress of International Commission on Irrigation and Drainage. July 21-28, 2002. Montreal, Quebec, Canada
- 30) **Elmi, A. A.**, C. Madramootoo, C. Hamel. Nitrate leaching and nitrous oxide emissions under irrigation and drainage systems. **p.51**. *In:* National conference on the effects of agricultural nutrients on rural water quality. April 28-30, 2002. Waterloo, Ontario.
- 31) **Elmi, A. A.**, C. Madromootoo, C. Hamel. Water table management and greenhouse gas emissions. **p.30**. *In:* Canadian Society of Agricultural Engineers (CSAE) annual international meeting. July 8-11, 2001. Guelph, Ontario, Canada. **Paper No: 01-112**.
- 32) **Elmi, A. A.**, C. Madromootoo, C. Hamel. 1999. Reduction of nitrate pollution potential in the soil profile by water table management. *In:* American Society of Agricultural Engineers/Canadian Society of Agricultural Engineers (ASAE/CSAE) annual international meeting. July 18-21, 1999. Toronto, Ontario. **Paper No: 99-2081**. St. Joseph, MI.
- 33) **Elmi, A. A.**, C. Hamel, C. Madromootoo. 1999. Nitrogen dynamics in agricultural soils as influenced by tillage systems. **p.19**. *In:* Canadian Society of Soil Science Annual Meeting. August 8 - 11, 1999. Volume 12, Issue 2 ISSN 0843-9206. Charlottetown, Prince Edward Island.

- 34) Liu, A., C. Hamel, **A. A. Elmi**, B. Ma, C. Costa, B. Wang, S. B. Hussein, D. L. Smith. 1999. Effects of arbuscular mycorrhizae and P level on corn nutrient uptake and available soil P. **p.26**. *In*: Canadian Society of Soil Science Annual Meeting. August 8-11, 1999.
- 35) **Elmi**, A. A., M. H. Egeh, C. Madramootoo and C. Hamel. 1998. Water table and N fertilizer rate management effects on water quality and corn yield. Drainage in the 21st century: Food Production and Environment. Proc. 7th Annual Drainage Symposium, Orlando, Fl, March 8-10, 1998. Am. Soc. Of Agric. Eng., St. Joseph, MI.
- c. Other academic activities (e.g. Books, Unpublished papers, Other research, and Consulting activities):

Manuscripts under Review/Preparation

- 1) Elmi, A., Anwar, S.A., Al-Dashti, H. Measurements and regional climate modeling of soil temperature under arid environment. Environ Modeling and Assessment (Under review)

Book Chapters

1. Elmi A.A. (2017) Food Security in the Arab Gulf Cooperation Council States¹. *In*: Lichtfouse E. (eds) Sustainable Agriculture Reviews. Sustainable Agriculture Reviews, pp189-114. Springer, Cham. https://doi.org/10.1007/978-3-319-58679-3_3
2. Hamel, C., Landry, C., **Elmi, A. A.**, Liu, A and Spedding, T. 2005. Nutrient Dynamics: Utilizing Biotic-Abiotic Interactions for Improved Management of Agricultural Soils². **pp209-248**. *In* David R. Clements and Anil Shrestha (*ed*). **New Dimensions in Agroecology**. Halworth Press, 10 Alice street, Binghamton, NY 13904-1580, 2005, ISBN 1-56022-113-5.
3. **Elmi**, A. A., M. H. Egeh, C. Madramootoo and C. Hamel. 1998. Water table and N fertilizer rate management effects on water quality and corn yield. **pp. 380-386**. *In* L. C. Brown (*ed*.). Drainage in the 21st century: Food Production and Environment. Proc. 7th Annual Drainage Symposium, Orlando, FL, March 8-10, 1998. Am. Soc. Of Agric. Eng., St. Joseph, MI.

5- Community and University Services

a) **Contributions as Vice Dean: Academic, Research and Graduate Studies**

- ✓ Worked towards increasing the research productivity of faculty members at CLS. With the support and cooperation of faculty from all departments, the faculty productivity score stood at 0.53, second highest after HSC, among all colleges of KU.
- ✓ Compiled the list of research areas for the all the three departments of the College and worked with the RS for revising the list of priority research areas for Kuwait.
- ✓ Initiated public seminars series at the College on topics relevant to community needs. These seminars established a liaison between the College and the community and enhanced the visibility of the College in the Community.

- ✓ Facilitated the changes in the Curriculum of two departments (FSN) and CDS towards changing the College from the " College for Women" to the College of Life Sciences.
- ✓ Initiated the process for the accreditation of two programs at CLS.
- ✓ Represented the college in the RS funding committee meetings and in the University Academic Affairs Committee meetings.
- ✓ Organized the first international conference (**KICLS' 2014, April 6-8, 2014: Life Sciences for the Social Good**) under the dean's leadership.

b) **Student advisor (Sept. 2006 – Jan. 2011)**

- ✓ Monitoring progress of students who declared ETM as their major.
- ✓ Providing guidance for students interested in info about ETM in close coordination with the vice dean for student affairs office.
- ✓ Advising students, the kind of course they should take and which sequence.
- ✓ Giving students where available info about future prospects of environmental profession and job market related issues

c) Committees

Table 1: Committees at the Departmental, College, and University levels

1) Department level

Committee	Designate	Year
Scholarship committee	Member	2009-present
Student Advisory	Convener	2007- 2011
	Convener	2009-2011
	Member	2009-2018
Accreditation & Academic Assessment	Member	2006- 2015 2018-2020
	Convener	2009-2011
Recruitment and Contract renewal, CDS Dept.	Member	2018-2019 2020-2021
Scheduling Committee	Convener	2006- 2011
Scientific and Academic	Convener	2009-2017
		2019-2022
Student Affairs Committee	Convener	2007-2011

2)

College level

Committee	Designate	Year
Teaching Excellence Development	Member	2020-2021
Student Affairs Committee	Member	2007- 2011
Graduate, Research & Awards	Convener	2011- 2015
	Member	2018 -2022
Scientific/Academic	Convener	2011- 2015
Scientific/Academic	Member	2016-2020
Accreditation & Academic Assessment	Convener	2012-2016
Accreditation & Academic Assessment	Member	2018-2019
Strategic and Planning	Member	2008 - 2015
College Library Resources	Member	2006-2008
Student Portfolio Committee	Member	2006-2011

3) University level

Committees	Designate	Year
Master program in Environmental Sciences (Joint degree)	Member	2017- 2018 2020-2021
Poster exhibition evaluation	Member	2013-2014
Research funding and Awards	Member	2012-2015
Environmental Science program (minor) review, College of Sciences	Member	2009- 2012

d) Senior Project/Thesis Supervised

- 1) Developing Coastal Ecosystem Health Indicators in the State of Kuwait, (M.Sc. Thesis), In progress
- 2) Evolution of environmental impact assessment (EIA) in the State of Kuwait during last 20 years, (M.Sc. Thesis), In progress
- 3) Developing air quality index for Shuwaikh industrial and residential areas in Kuwait City, (M.Sc. Thesis), Completed (2021).
- 4) Disposal of Wastewater Sludge as a Fertilizer for vegetable crops (M.Sc. Thesis), completed (2018).
- 5) Assessment of Organic Farming in Kuwait: Comprehensive analytical study on local vs. imported leafy vegetable (M.Sc. Thesis), completed (2016)
- 6) Study of Rheological Characterization of Different Type of Kuwaiti Dates (M.Sc. Thesis), completed (2016)
- 7) Assessing Methane (CH₄) and Carbon Dioxide (CO₂) Emissions from Kuwait Landfills: Environmental and Economic Implications. (M.Sc. Thesis), completed (2015)
- 8) Environmental Cost of Selected Petrochemicals Industrial Feedstock: Formalin, Acetone and Dimethyl Ether (M.Sc. project), completed (2015)
- 9) Greenhouse Gas Emission Assessment in Three Locations of Kuwait (M.Sc. project), 2015
- 10) Case study on Indoor Air Quality Indicators: Radon concentrations as affected by the age of the building (M.Sc. Project), completed (2014).

- 11) Soil Moisture and Temperature under climate Scenario (M.Sc. Thesis), completed (2014).
- 12) Comparison of ambient air quality in selected location in the state of Kuwait (M.Sc. Thesis), completed (2013)
- 13) Assessing Methane (CH₄) and Carbon Dioxide (CO₂) Emissions from Kuwait Landfills: Environmental and Economic Implications (M.Sc. project), completed (2013).

e) **Thesis Examination**

- 1) Thesis Title: Assessing the efficiency of supplemental irrigation to improve soil moisture in an arid ecosystem with an emphasis on climate change: A case study from the State of Kuwait (still pending)
- 2) Thesis Title: The Prevalence of lead toxicity and its association with cognitive function and vitamin D levels in adolescents, 2021.
- 3) Thesis Title: A Study of the Radioactivity of long-lived Gamma Emitters consumed in Fresh Seafood's in Kuwait and Estimates of Annual Effective Doses, 2020.
- 4) Analysis of Urbanization Dynamic Impacts and Driving Forces in the Gulf Cooperation Council (GCC) Region, 2018.

f) **Associate Editor:**

1. **Frontiers in Environmental Science: Interdisciplinary Climate Studies. 2014-2019.** <http://community.frontiersin.org/people/AbdirashidElmi/89060>
2. **Global Journal of Earth Science and Engineering. 2016-2020** <http://www.davidpublisher.org/Home/Journal/JEASE>
3. **Canadian Biosystems Engineering, Soil & Water Section: 2005-2009.** <http://www.engr.usask.ca/societies/csae/contact.html>

g) **Technical reviewer:**

1. Journal of Environmental Quality (JEQ),
2. Transactions of ASAE,
3. Agriculture, Ecosystems and Environment (AGEE),
4. Water, Air and Soil Pollution Journal,
5. Journal of Environmental Management (JEM)
6. Journal of Cleaner Production
7. Environmental Progress and Sustainable Energy
8. Environmental Earth Science
9. Environmental Pollution

RESEARCH PROJECTS IN KU:

a) **Principal Investigator**

- 1) WE01/13: Monitoring soil temperature and potential impacts on soil resources in the state of Kuwait (P.I: Abdirashid Elmi) (4000KD; ≈ USD \$15,000), **completed.**
- 2) WE01/07: Public Understanding about Climate Change from Kuwait Perspective: Meeting the Challenges Together (P.I: Abdirashid Elmi,; C.I: Nahla Al-Rifai), (4000KD; ≈ USD \$12,500), **completed.**

Co-Investigator

- 1) **P-KISR-19:** Pilot Study for Utilization of Modern Technologies in Sustainable Local Food Production in Support of Kuwait's Food Security (2018-2020). P.I: Dr. M. K. Suleiman et al., (3.5 million KD \approx USD \$11 million).
- 2) **FF03/19** Correlation between environmental pollutants in the atmosphere and ultraviolet B (UVB) radiation reaching the earth surface: implications for vitamin D deficiency in Kuwait. P.I: Dr. A/Rahman Ahmed, and Abdirashid Elmi (3,900KD, \approx USD \$12,500)
- 3) **KFAS:** Using Value Methodology for Deployment of Scrap Tires to Fight Desertification in Kuwait and Ration Water. P.I: Prof. Fawaz C.I: Muhammad Sarfraz, Abdirashid Elmi, and Abdul Rehman Khan (150,000KD, USD \$525,000), **completed**.
- 4) **RW01-15:** Investigating the benefits of Segregting Recyclable Materials from MSW in Houses in Kuwait. P.I: Dr. Mohamed Alolayan C.I: Abdalla Al-Sanad, Latifa Aljallal and Abdirashid Elmi (4,000KD, \approx USD \$12,500), **completed**.
- 5) **WE02/2012:** Assessment of Pollutant Emission from Passenger Car Exhaust in Kuwait. P.I: Nahla Al-Rifai, C.I: Abdirashid Elmi, and A. Khan, (7500KD; \approx USD \$24,000), **completed**.

MEMBERSHIP IN PROFESSIONAL SOCIETIES

- 1) 7th GoGreen summit, International Review Committee Member, 2020-2021.
- 2) International Society of Environmental Relationship and Sustainability (ISERS) (2020-present)
- 3) Agricultural Institute of Canada (AIC), 2003 - Present
- 4) Canadian Society of Soil Science (CSSS), 1998 - 2015
- 5) International Association of Science and Technology for Development (IASTED), 2006 – Present

AWARDS, DISTICTIONS AND FELLOSHIPS

2020	The Kuwait University award for publishing in Q1 Journals.
2013	The Kuwait University award for publishing in Q1 Journals.
2006	Award for best paper: The Canadian Society for Horticultural Science has bestowed a "2006 Award for best paper published in the Canadian Journal of Plant Science" award to "Gordon, R., A.A. Elmi , T. Hauser, A. Madani, V. Rodd, P. Leblanc. 2005. Nitrate and pesticide leaching from processing carrot production systems in Nova Scotia . Canadian Journal of Plant Science. 85: 205-211".
2004-2005	Natural Sciences and Engineering Research Council (NSERC) of Canada
2000-2001	Frank P. Jones Bursary Fund, McGill University, Montreal, Canada
1999-2000	Blair Postgraduate Scholarship, McGill University, Montreal, Canada
1998-2001	Alma Mater Travel Fund, McGill University, Montreal, Canada

6- Teaching Activities

1. Undergraduate Courses at Kuwait University

1. Introduction to Environmental Science (1800-101)
2. Humans and Their Environment (1800-120)
3. Ethics and Practices (1800 - 130)
4. Introduction to Environmental Technology (1850-139)
5. Environmental Chemistry and Physics (1850 -201)
6. Environmental Management Systems (1850-210)
7. Social Perspective on Environmental Issues (1800-221)
8. Environmental Policy and Regulations (1850 -310)
9. Environmental Data Management (1850 -319)
10. Environmental Impact Assessment (1850-331)
11. Environmental Risk Assessment (1850-332)

2. Graduate Courses, College of Graduate Studies, Kuwait University

1. Foundations of Environmental Science (2040-500)
2. Environmental Impact Assessment (2040-504)
3. Air Pollution and Climate Change (2040-535)
4. Atmosphere and Climate (2040-572)
5. Topics in Environmental Sciences (2040-592)

3. Past teaching experience

a) Nova Scotia Agricultural College, Dalhousie University, Canada

ENGN2002 Introduction to Systems Analysis, Sept-Dec. 2004

- Developed and delivered this multidisciplinary course offered first time in the fall 2004. **Student evaluation was excellent** (6.2 out of 7 ~ 89%).

Guest Lecturer:

Nova Scotia Agricultural College, Dalhousie University, Canada,

ENGN5460 Special Topics in Soil and Water Quality Management, Jan.-Apr. 2004

- Lectured on soil physical and chemical processes, which are relevant to water movement, transport of pollutants (heavy metals, pathogens, nitrate) in the soil profile and their implications on environmental health.
- Global perspectives of water scarcity, soil and water conservation techniques in relation to food security were presented.

ENGN4000 Water and Water Quality Management, Jan.-Apr. 2004

b) Macdonald College, McGill University, Canada

i) Guest Lecturer

Soil Science 372- 602N: Chemistry and Fertility of Soils I, Emeritus Prof. Angus F. Mackenzie, Department of Natural Resource Sciences (1998/1999).

Soil Science 372- 603D: Chemistry and Fertility of Soils II, Emeritus Prof. Angus F. Mackenzie, Department of Natural Resource Sciences (1999/2000).

ii) *Teaching Assistant*

Department of Natural Resource Sciences, McGill University, Montreal, Canada

SOIL335 Soil Fertility and Fertilizer Management Sept.-Dec. 1999-2000

SOIL210 Principles of Soil Science, 1997-2001 (Fall and Winter Semesters)

4. Workshops attended, and other activities related to teaching

- 19 -25/01/2018: Advanced Teaching Excellence Colloquium: Capacity Building and Teachers' Development Workshop: A collaboration between CASES – University of California, Berkeley and Kuwait University under the auspices of KFAS.
- Teaching Excellence Workshop
 - Classroom Assessment and Evaluation of Learning
 - Educational Technology in Teaching
 - Bridging Teaching and Research in Undergraduate Education
- 15 – 19/2017: Teaching Excellence Workshop, Kuwait University
- 17-18/02/2013: Knowledge Management and Technology Transfer. Office of the Vice President for Research, Kuwait University.
- 31/03/2012: Scientific Writing and Publishing Workshop for Senior Research Staff. Dr. Dan Csontos, Science Editor & Project Manager, Nature Publishing Group. Office of the Vice President for Research, Kuwait University.
- 11/19/2007: Developing Outcome-based courses for Assessment, Continuous Improvement and Accreditation. College/GE/Program Learning Outcomes Workshop, Prof. Kassem Saleh, CFW, Kuwait University.
- 16 – 20/12/ 2006: Emerging Trends in Teaching and Assessment. Dr. Barbara Olds, Colorado School of Mines, USA.
- 14– 15/05/ 2006: "Ethics in Academia". Prof. Robert J. Rutland, Clemson University, USA.