

Erdenebayar Munkhtsetseg

**Cirriculum Vitae (CV) Assoc.Prof Dr.
E.Munkhtsetseg**

Personal information

Birth date: 29 Mar 1976

Birth place: Govi-Altai, Western Mongolia

Current position: Assoc. Professor

Contact Information

Department of Applied Mathematics

National University of Mongolia

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Professional Appointments

2021–today	Assoc. Professor at National University of Mongolia
2018–2021	Professor at National University of Mongolia (Appointed/contracted in the professor position)
2019–today	Head of Laboratory for Meterology, Hydrology and Permafrost
2018–2020	Head of StartUP Education Programme for Climatology
2013–2019	Team head of Education Programmes for Meterology and Hydrology
2013–2017	Associate professor at National University of Mongolia
2012–2013	Senior lecturer at National University of Mongolia
2011–2012	Senior researcher at Institute of Meteorology, Hydrology and Environment (IMHE), Mongolia
2010–2011	Scientific secretary at IMHE, Mongolia
2007–2010	GCOE Postdoctoral fellow, Tottori University
2001–2003	Researcher at Institute of Meteorology, Hydrology and Environment, Mongolia
1999–2000	Agrometeorology engineer at IMHE, Mongolia
1998–1999	Assistant researcher at IMHE, Mongolia

Education

2004–2007	PhD in Agriculture (Natural Environmental Science), Tottori University, Japan.
1999–2000	MSc in Physics (Agrometeorology), National University of Mongolia.
1994–1998	BSc in Physics (Meteorology), National University of Mongolia.

Languages

Mongolian	Mother tongue
English	Excellent
Japanese	Good

Publications

Thesis

2007	Erdenebayar Munkhtsetseg. <i>Interactions between vegetation activity and land surface processes</i> . PhD thesis, Tottori University, 2007
2000	Erdenebayar Munkhtsetseg. Prediction of pasture yield using mathematical model. Master's thesis, National University of Mongolia, Ulaanbaatar, 2000

Books

2022	Erdenebayar Munkhtsetseg, <i>Agrometeorology Textbook</i> , 355pages /in Mongolian/.
2020	Erdenebayar Munkhtsetseg, <i>Climate data quality analysis and techniques</i> , 75pages /in Mongolian/.

SCI papers

2017	Erdenebayar Munkhtsetseg, Masato Shinoda, Masahide Ishizuka, Masao Mikami, Reiji Kimura, and George Nikolich. Anthropogenic dust emissions due to livestock trampling in a mongolian temperate grassland. <i>Atmospheric Chemistry and Physics</i> , 17(18):11389, 2017
2016	Erdenebayar Munkhtsetseg, Masato Shinoda, John A Gillies, Reiji Kimura, James King, and George Nikolich. Relationships between soil moisture and dust emissions in a bare sandy soil of mongolia. <i>Particuology</i> , 28:131–137, 2016
2013	Eun-Hee Lee, Erdenebayar Munkhtsetseg, Seung-Bum Kim, Jong-Chul Ha, Sang-Sam Lee, and Youngsin Chun. Numerical simulation and evaluation of asian dust events observed in mongolia in spring 2011. <i>Asia-Pacific Journal of Atmospheric Sciences</i> , 49(1):111–120, 2013
2010	M Shinoda, R Kimura, M Mikami, M Tsubo, E Nishihara, M Ishizuka, Y Yamada, E Munkhtsetseg, D Jugder, and Y Kurosaki. Characteristics of dust emission in the mongolian steppe during the 2008 duvex intensive observational period. <i>Sola</i> , 6:9–12, 2010
2007	E Munkhtsetseg, R Kimura, J Wang, and M Shinoda. Pasture yield response to precipitation and high temperature in mongolia. <i>Journal of arid environments</i> , 70(1):94–110, 2007
2005	Yinsheng Zhang, E Munkhtsetseg, T Kadota, and T Ohata. An observational study of ecohydrology of a sparse grassland at the edge of the eurasian cryosphere in mongolia. <i>Journal of Geophysical Research: Atmospheres</i> , 110(D14), 2005

Peer reviewed papers

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| 2000 | Erdenebayar Munkhtsetseg. Prediction of pasture vegetation production. <i>Papers in Meteorology and Hydrology</i> , 22:106–114, 2000 |
| 2002 | E Munkhtsetseg and N Natsagsuren. Heat stress effect on plant growth. <i>Papers in Meteorology and Hydrology</i> , 24:124–130, 2002 |
| 2008 | Erdenebayar Munkhtsetseg, Masato Shinoda, and Reiji Kimura. Effect of environmental variables on stomatal conductance and its relation to water vapor flux over a sand dune field in a coastal area planted with soybean. <i>Sand Dune Research</i> , 54:121–132, 2008 |
| 2012 | Erdenebayar Munkhtsetseg, Masato Shinoda, Reiji Kimura, Nikolich George, and King James. Windblown necro leaves along with litter advances dust emissions with decreased threshold friction velocity in mongolia. <i>Papers in Meteorology and Hydrology</i> , 32:155–161, 2012 |

Books

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| 2020 | Munkhtsetseg E. <i>Climate data quality controls and techniques</i> . EMOU Studio (in Mongolian), 2020 |
| 2019 | Munkhtsetseg E. <i>The success diary and time management</i> . NUM press (in Mongolian), 2019 |

Proceedings and Conference presentations

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| 2019 | <p>Erdenebayar Munkhtsetseg, Masato Shinoda, John Gillies, and Reiji Kimura. Sand fluxes and its vertical distribution in the southern mongolia. In <i>Joint International Symposium on Sustainable Development and Environmental Issues</i>, 17-19 December, 2019</p> <p>Buyanaa Naranzaya and Erdenebayar Munkhtsetseg. Heat and water regime for plant growth stages in western mongolian grasslands. In <i>The Sixth AGRIMBA-AVA Congress</i>, Ulaanbaatar, 16-17 June, 2019</p> <p>Purev Tamir and Erdenebayar Munkhtsetseg. Agroclimatological zones and their potentials of mongolia. In <i>The Sixth AGRIMBA-AVA Congress</i>, Ulaanbaatar, 16-17 June, 2019</p> <p>N Nandintsetseg, A Dashtseren, D Sandelger, T Nakano, and Erdenebayar Munkhtsetseg. Climate-environmental conditions for land surface temperature in the shiljiree valley. In <i>The Sixth AGRIMBA-AVA Congress</i>, Ulaanbaatar, 16-17 June, 2019</p> <p>Erdenebayar Munkhtsetseg. Overview of satellite meteorology. In <i>The Knowledge Web</i>, Mongolian Academy of Sciences. Mongolian Youth Scientists Association, Ulaanbaatar, 9 May, 2019</p> |
| 2018 | Erdenebayar Munkhtsetseg, , John Shinoda, M and Gillies, and R Kimura. The relationship between dust emission and land surface conditions in mongolia. In <i>The 1st International Conference on Climate Change and Environment in Central and North-east Asia</i> , Ulaanbaatar, 5-7 Sep, 2018 |

- 2017 E Munkhtsetseg, John Shinoda, M and Gillies, R Kimura, G Nikolich, M Ishizuka, and K Mikami, M and James. Anthropogenic dust emission due to livestock trampling in a temperate grassland. In *The International Workshop on Asian Dust, Bioaerosols and Environmental Regime Shift*, Nagoya university, Japan 3-5 Nov, 2017
- 2016 Erdenebayar Munkhtsetseg, M Shinoda, G Chuluunbaatar, and S Otgonsuren. Sand fluxes and its vertical distribution in the southern mongolia. In *The 9th Meeting of WG (I) for Joint Research on Dust and Sand Storms among Mongolia, China, Korea and Japan*, Jeju-do, Korea 30 Nov- 2 Dec, 2016
- E Munkhtsetseg, John Shinoda, M and Gillies, R Kimura, and K Nikolich, G and James. Relationship between soil moisture and dust emissions in a bare sandy soil of mongolia. In *The Joint Workshop between WGI and WGII for Joint Research on Dust and Sandstorms*, Tokyo, Japan. 27-28 Feb, 2016
- Erdenebayar Munkhtsetseg. Plant-animal interactions in mongolian semi-arid ecosystem. Rakuno Gakuen University. Sapporo, Japan 13 Dec, 2016., 2016
- 2015 E Munkhtsetseg, John Shinoda, M and Gillies, R Kimura, G Nikolich, M Ishizuka, and K Mikami, M and James. A livestock trampling function for emission rate of wind-blown dust in mongolia. In *The 8th Meeting of WG (I) for Joint Research on Dust and Sand Storms among Mongolia, China, Korea and Japan*, Fukuoka, Japan 1 Dec, 2015
- 2014 E Munkhtsetseg, John Shinoda, M and Gillies, R Kimura, G Nikolich, M Ishizuka, and K Mikami, M and James. A dust emission model elaborated by dust parameters as soil moisture functions in mongolia. In *The 1st JSPS seminar for Collaborative Research between Mongolia, China and Japan on Outbreaks of Asian Dust and Environmental Regime Shift*, Nagoya University, Japan 4-5 August, 2014
- 2013 Erdenebayar Munkhtsetseg, Park Soon Ung, Lee Masato, Shinoda and Eun Hee, and Dulam Jugder. Simulation results of mgladam for dss 2011-01 and future research plan on dust modeling. In *The 6th Meeting of WG (I) for Joint Research on Dust and Sand Storms among Mongolia, China, Korea and Japan*, Seoul, Korea 28-29 November, 2013
- 2012 E Munkhtsetseg. Dss observation system in mongolia. In *The 5th Meeting of WG (I) for Joint Research on Dust and Sand Storms among Mongolia, China, Korea and Japan*, Fukuoka, Japan 19-20 November, 2012
- Lee Eun Hee, Erdenebayar Munkhtsetseg, Dulam Jugder, and Park Soon Ung. Mgladam (mongolian adam) and simulation of asian dusts using mgladam. In *Oral ppt for The 5th Meeting of WG (I) for Joint Research on Dust and Sand Storms among Mongolia, China, Korea and Japan*, Fukuoka, Japan 19-20 November, 2012

- E Munkhtsetseg, John Shinoda, M and Gillies, R Kimura, and K George, N and James. A study of soil moisture effect on dust emissions using pi-swerl portable wind generator. In *Proceedings for The 18th International Joint Seminar on Regional Deposition Processes in the Atmosphere and Climate Change*, Ulaanbaatar, Mongolia 29–31 October, 2012
- 2011 Lee Eun Hee, Chun Youngsin, Dulam Jugder, and Erdenebayar Munkhtsetseg. Modeling research using mgladam between korea and mongolia. In *The 4th Meeting of WG (I) for Joint Research on Dust and Sand Storms among Mongolia, China, Korea and Japan*, Beijing, 11–12 November, 2011
- 2010 E Munkhtsetseg, M Shinoda, R Kimura, N George, and K James. Soil moisture effect on dust emissions in mongolia. In *The 3rd Meeting of WG (I) for Joint Research on Dust and Sand Storms among Mongolia, China, Korea and Japan*, Jejudo, Korea, 8-10 November, 2010
- E Munkhtsetseg, R Shinoda, M and Kimura, and K George, N and James. Soil moisture effect on dust emissions in mongolia. In *Abstracts for the The 3rd Meeting of Soil Moisture Workshop*, page 142, Tokyo, Japan, Mar 2010
- 2009 M Mikami, M Shinoda, M Ishizuka, R Kimura, B Tsubo, E Munkhtsetseg, Y Kurosaki, E Nishihara, and Y Yamada. An intensive observation of physical process of the yellow dust emissions in the mongolia grassland for 2008. In *Abstracts for the The Spring Meeting of Meteorological Society of Japan Meeting*, page 142, 2009
- M Shinoda, R Kimura, M Mikami, B Tsubo, E Nishihara, M Ishizuka, Y Yamada, E Munkhtsetseg, and Y Kurosaki. An intensive observational study of physical processes of the dust outbreak in the mongolia grassland for 2008. In *Abstracts for the The Spring Meeting of Meteorological Society of Japan Meeting*, page 142, 2009
- 2006 E Munkhtsetseg, R Kimura, M Kamichika, and N Takayama. Pasture yield response to precipitation and high temperature in southern mongolia. In *The Joint meeting on Environmental Engineering in Agriculture*, Sapporo, Japan, 2006
- 2005 E Munkhtsetseg, R Kimura, M Kamichika, and N Takayama. Relationships between vegetation and climate in southern mongolia. In *The 18th Annual Meeting of the Society of Agricultural Meteorology of the Chugoku and Shikoku branch*, 2005
- 2004 M Ishikawa, T Kadota, E Munkhtsetseg, D Oyunbaatar, T Ohata, and Yinsheng Zhang. Observational study of hydrological land-surface processes on semi-arid grassland underlain by warm permafrost in mongolia. In *Abstracts for the 6th International GAME Conf*, volume 3, page 5, 2004
- 2004 Yinsheng Zhang, M Ishikawa, T Kadota, E Munkhtsetseg, D Oyunbaatar, and T Ohata. Observational study of hydrological land-surface processes on semi-arid grassland underlain by warm permafrost in mongolia. In *Proceedings of the 6th international study conference on GEWEX in Asia and GAME*, pages 3–5, 2004

Grants and Projects

2019–2020	<i>Sand flux and its vertical gradient in Gobi desert</i> project funded by Asia Research Center, Koica (10 mill tugrugs)
2016–2017	<i>Isotopic analysis: Surface and ground water regimes in a area underlain by permafrost</i> project funded by Asian Development Bank and Ministry of Education, Culture and Science of Mongolia (28 mill tugrugs)
2016–2017	<i>Global warming: Plant water status and water balance changes over a permafrost area</i> project funded by Advanced Research Grant at National University of Mongolia (10 mill tugrugs)
2015–2016	<i>Aisan dust prediction and modeling approach</i> project funded by Advanced Research Grant at National University of Mongolia (6 mill tugrugs)
2007–2010	Postdoctoral fellowship funded by Global Center of Excellence(GCOE), Japan
2005–2007	Scholarship of MEXT-Monbukagakushou, Japan

Short term research visits and courses

China	Lanzhou university, Lanzhou, Jul 2017
Korea	APCC training on Regional Prediction using Dynamic Downscaling Scheme. APEC Climate Center, Busan. Jul 2015 Visiting Researcher, Department of Atmospheric Sciences, Busan University, Sep 2015
Japan	Tottori university, Follow-up fellowship funded by JASSO. Jun-Sep 2013
China	WMO International training course on McIDAS-V software application in satellite meteorology, CMA, Beijing, Jun 2012
Japan	Visiting researcher, Arid Land Research Center, Tottori, Japan. Funded by KAKENHI, MEXT, Japan. Jan-Feb 2011 Visiting researcher, National Institute of Environmental Studies, Tsukuba, Japan. Dec 2011
USA	Visiting researcher, Atmospheric sciences, Desert Research Institute, Nevada, USA, funded by Global Center of Excellence for Dryland Sciences. Oct-Dec 2008
Japan	1st Youth Course on Lidar Observations of Atmosphere, Graduate School of Environmental Studies, Nagoya, Nov 2002
Israel	The 11th International Postgraduate WMO Course in Crop-Weather Modeling, Bet Dagan, Mar-Apr 2000

Teaching experience

In Bachelor courses

2011–present	Agrometeorology Agrometeorological Forecasting and National Service
2016–present	General Climatology Climate Data Analysis
2012–2018	Satellite Meteorology
2014–2014	Synoptic Meteorology I
2012–2013	Economic Benefits of Meteorological Services
2012–2012	Ecology and Environmental Protection

In Master courses

2018–present	Mathematical modeling in Agroecosystems Environmental Biophysics Global warming and Green Development Climate Dynamics and Circulation
2012–present	Climate change
2017–2018	Water Resource Management in a River Basin Area Climate Data Analysis
2014–2016	Mathematical modeling of Physical Processes

Supervised students

Former supervised students (bachelor excluded)

2021–2022	Nyam-Osor Nandintsetseg. Study of Terrestrial Carbon Fluxes and Soil Respiration using Closed Chamber. Master's thesis, National University of Mongolia.
2020–2021	Buyanaa Naranzaya. Heat, Thermal and Water Regime changes of Grassland Plant Stages in Western Mongolia. Master's thesis, National University of Mongolia.
2020–2021	O Delgertsetseg. Solar and Terrestrial Radiation Regimes and Feedbacks to Urban Pollution, Ulaanbaatar. Master's thesis, National University of Mongolia.
2020–2021	E Khaliunaa. Running title: Soil Respiration Measured by Closed Chamber in Ulaanbaatar. Bachelor's thesis, National University of Mongolia.
2014–2018	Sh Amarbileg. Air particulate of PM10 and PM2.5 concentrations in Sainshand soum area. Master's thesis, National University of Mongolia.
2015–2016	S Javzmaa. Possible detection of perennial vegetation stages using remote sensing technique. Master's thesis, National University of Mongolia.
2015–2016	N Enkhdalai. Air pollution problems in Aerodrom, Buyant-Ukhua. Master's thesis, National University of Mongolia.
2014–2015	M Baasansuren. Relationship between climatic variables and the plague of Marmots in Uvurkhangai. Master's thesis, National University of Mongolia.
2013–2014	A Otgonnyam. Agroclimatic variables and their effects on pasture growth. Master's thesis, National University of Mongolia.