

VICTORIA V. MILES

PhD. Research Scientist
Climate Dynamics and prediction group
Nansen Environmental and Remote Sensing Center,
Bergen, Norway

ORCID 0000-0003-3036-7199
<https://www.nersc.no/staff/victoria-miles>
<https://app.cristin.no/persons/show.jsf?id=399992>
Jahnebakken 3,
N-5007, Bergen, Norway
(tel) +47 55 20 58 00
victoria.miles@nersc.no

1998 PhD: Department of Geography, St. Petersburg State University, Russia
1993 Master Sc.: Forestry and Landscape design, St. Petersburg Forestry Academy,
 Russia

CURRENT AND PREVIOUS POSITIONS

2009 – Nansen Environmental and Remote Sensing Center: Bergen, Norway: Research
 Scientist
2004 – 2009 [Maternity leave]
2002 – 2004 Nansen Environmental and Remote Sensing Center: Bergen, Norway: Research
 Scientist
1998 – 2001 Nansen International Environmental and Remote Sensing Center, St. Petersburg,
 Russia: Research Scientist
1997 & 2000 Joint Research Centre of the European Commission, Space Application Institute,
 Ispra, Italy: Visiting scientist
1997 Nansen Environmental and Remote Sensing Center, Bergen, Norway: Visiting
 Ph.D. student
1995 – 1998 Nansen International Environmental and Remote Sensing Center, St. Petersburg,
 Russia: Nansen Fellowship Ph.D. candidate.
1992 – 1995 Institute for Lake Research, Russian Academy of Science, Laboratory of Complex
 Problems of Environmental Protection, St. Petersburg, Russia: Junior Scientist

SUMMARY

Dr. Victoria Miles has 25 years of experience with the environmental studies, remote sensing and GIS. Her most recent works are related to local and regional vegetation change under the anthropogenic and climatic change issues (Miles and Esau, 2016; Miles et al, 2019), the effects of the Arctic urban climate (Miles and Esau, 2017; 2020) and a high-resolution environmental impact assessment and management (Esau et al., 2019, 2021). She has worked in several significant EU projects (EON +Nature2000), the Belmont Forum HIARC and SERUS projects on ecosystems and social adaptation to the climatic and anthropogenic disturbances.

SKILLS AND EXPERTISE

Satellite Data, Satellite Image Analysis, Geographic Information Systems, Environmental Impact Assessment, Environmental Monitoring, Vegetation Mapping, Vegetation Analysis.

MAJOR COLLABORATIONS

The international Pan-Eurasian Experiment (PEEX; <https://www.atm.helsinki.fi/peex/>), Helsinki University, Finland; Department of Biology, University of Bergen, Norway; Department of Atmospheric Sciences, University of Alaska Fairbanks; Department of Environmental Sciences, University of Virginia, USA; George Washington University, Washington, USA; Department of Satellite Monitoring Technologies, Space Research Institute, Moscow, Russia; Tyumen State University, Tyumen, Russia; Moscow State University, Moscow, Russia; Dept. of Energy & Technology, Swedish University of Agricultural Sciences, Uppsala, Sweden; Norwegian Research Centre NORCE, Bergen, Norway.

TRACK RECORD

List of the topmost recent publications:

H Lappalainen, T Petäjä, T Vihma, J Räisänen, A Baklanov, S Chalov, ... **V. Miles**,.....,2022: Overview: Recent advances on the understanding of the Northern Eurasian environments and of the urban air quality in China-Pan Eurasian Experiment (PEEX) program perspective *Atmospheric Chemistry and Physics Discussions*, 1-106

Esau, I., Bobylev, L., Donchenko, V., Gnatiuk, N., Lappalainen, H. K., Konstantinov, P., Kulmala, M., Mahura, A., Makkonen, R., Manvelova, A., **Miles, V.**, Petäjä, T., Poutanen, P., Fedorov, R., Varentsov, M., Wolf, T., Zilitinkevich, S., Baklanov, A. 2021: An enhanced integrated approach to knowledgeable high-resolution environmental quality assessment. *Environmental Science and Policy*, 122, 1–13.

I Esau, **V Miles**, A Soromotin, O Sizov, M Varentsov, P Konstantinov., 2021: Urban heat islands in the Arctic cities: an updated compilation of in situ and remote-sensing estimations. *Advances in Science and Research* 18, 51-57

Miles, V., Esau, I., 2020: Surface urban heat islands in 57 cities across different climates in northern Fennoscandia, *Urban Climate*, <https://doi.org/10.1016/j.uclim.2019.100575>.

Beamish A., Raynolds M.K., Epstein H., Frost G.V. Macander M.J., Bergstedt H., Bartsch A., Kruse S., **Miles V.**, Tanis C.M., Heim B., Fuchs M., Chabrillat S., Shevtsova I., Verdonen M., Wagner J. M.: 2020, Recent trends and remaining challenges for optical remote sensing of Arctic tundra vegetation: A review and outlook, *Remote Sens. Environ.*, <https://doi.org/10.1016/j.rse.2020.111872>.

Kukkonen I.T., Suhonen E., Ezhova E., Lappalainen H., Gennadinik V., Ponomareva O., Gravis A., **Miles V.**, Kulmala M., Melnikov V., Drozdov D., 2020: Observations and modelling of ground temperature evolution in the discontinuous permafrost zone in Nadym, north-west Siberia, *Permafrost and Periglacial Processes*. <https://doi.org/10.1002/ppp.2040>.

Miles, M. W., **Miles, V.**, Esau, I., 2019: Varying climate response across the tundra, forest-tundra and boreal forest biomes in northern West Siberia. *Environ. Res. Letters*. <https://doi.org/10.1088/1748-9326/ab2364>.

Esau, I., **Miles, V.**, Varentsov, M. et al. 2019: Spatial structure and temporal variability of a surface urban heat island in cold continental climate, *Theor. Appl. Climatol*. <https://doi.org/10.1007/s00704-018-02754-z>.

Esau I., **Miles V.** 2018: Exogenous drivers of Surface urban heat island in northern west Siberia, *GES Journal* 11(3):83-99. <https://doi.org/10.24057/2071-9388-2018-11-3-83-99>.

Varentsov M., Konstantinov P., Baklanov A., Esau I., **Miles V. V.**, and Davy R., 2018 Anthropogenic and natural drivers of a strong winter urban heat island in a typical Arctic city, *Atmospheric Chemistry and Physics*, <https://doi.org/10.5194/acp-2018-569>.

Miles, V. V., and Esau, I., 2017: Seasonal and Spatial Characteristics of Urban Heat Islands (UHIs) in Northern West Siberian Cities. *Remote Sensing*, 9(10), DOI10.3390/rs9100989.

Miles, V. V., and Esau, I., 2016: Spatial heterogeneity of greening and browning between and within bioclimatic zones in northern West Siberia. *Environ. Res. Letters*. doi:10.1088/1748-9326/11/11/115002.

Esau, I., **Miles, V. V.**, Davy, R., Miles, M. W. and Kurchatova, A., 2016: Trends in normalized difference vegetation index (NDVI) associated with urban development in northern West Siberia. *Atmospheric Chemistry and Physics*. doi:10.5194/acp-2016-51.

Miles, V. V., Miles, M. W. and Johannessen, O. M., 2016: Satellite archives reveal abrupt changes in behavior of Helheim Glacier, southeast Greenland. *Journal of Glaciology* 62: doi: 10.1017/jog.2016.24.

Research monographs and any translations thereof:

Esau I., Varentsov M., Laruelle M., Miles M.W., Konstantinov P., Soromotin A., Baklanov A. A. and **Miles V. V.**, 2020: Warmer Climate of Arctic Cities, in monography "The Arctic: Current Issues and Challenges", Pokrovsky O., et al. (Eds), NOVA Publishers, ISBN: 978-1-53617-306-2 <https://novapublishers.com/shop/the-arctic-current-issues-and-challenges/>

OTHER RECENT HIGHLIGHTS

Research highlighted in Eos, 2020: Katz, C., 2020: Urban heat islands are warming the Arctic, Eos, 101, <https://doi.org/10.1029/2020EO142486>.

"Faraway cities are sending their heat to the Arctic's ecosystem", 2020.
<https://massivesci.com/articles/urban-heating-greening-climate-change-arctic/>

"Urban heat islands are warming the Arctic", 2020
<https://www.newsbreak.com/news/1545950427110/urban-heat-islands-are-warming-the-arctic>

Highlight speech "Warmer climate of Arctic cities", Bjerknes Annual Meeting, Bergen, Norway, 2019.

"Varying climate response of arctic and subarctic vegetation", 2019,
<https://bjerknes.uib.no/en/article/news/varying-climate-response-arctic-and-subarctic-vegetation>

Invited presentation "Remote sensing of ecosystem functional type diversity", Fjernmålingsseminar, Miljødirektoraret, Oslo, Norway, 2019.

Dataset: Martin Miles, **Victoria Miles**, and Igor Esau. 2019: Northern West Siberia Normalized Difference Vegetation Index (NDVI) and Climate Data, 2000-2016. Arctic Data Center. doi:10.18739/A28911Q99.

Dataset: **Victoria Miles**. 2020. Arctic surface Urban Heat Island (UHI), MODIS Land Surface Temperature (LST) data, 2000-2016. Arctic Data Center. doi:10.18739/A2TB0XW4T.

WebMap SERUS project <https://arcg.is/WjXzL0>

WebMap Bergen Puster <https://arcg.is/1Ou95Q>

Research highlighted by NASA, 2017: <https://earthobservatory.nasa.gov/images/92049/a-ring-of-green-around-surgut>

"A spread of green" NASA earth science research features, 2017
<https://earthdata.nasa.gov/learn/sensing-our-planet/a-spread-of-green#ed-sop-datatable>

"The changing colors of the Arctic: from greening to browning ", 2017
<https://www.luke.fi/en/blog/changing-colors-arctic-greening-browning/>

PROJECT MANAGEMENT EXPERIENCE

2001-2004 EON 2000+ Earth Observation for Nature 2000+

SERUS: Building Socio-Ecological Resilience through Urban Green, Blue and White Space.

FELLOWSHIPS AND AWARDS

1995-1998 Nansen Fellowship Ph.D. candidate. Nansen International Environmental and Remote Sensing Centre, St. Petersburg.

1998 Awards from Scientific Council of Ecological Safety of the St. Petersburg House of Scientists of Russian Academy of Sciences

1997 Awards from Council of Young Scientists at the St. Petersburg State University.

COMMISSIONS OF TRUST

Reviewer for Environmental Research Letters, Journal of Environmental Management, Journal of Atmospheric and Solar-Terrestrial Physics, Science of the Total Environment, Journal of Geophysical Research – Biogeosciences.

MEMBERSHIPS OF SCIENTIFIC SOCIETIES

1996- International Co-operative Programme on Assessment and Monitoring of Air Pollution Effects on Forests

2013- Bjerknes Centre for Climate Research

2015- PEEEX "Pan-Eurasian Experiment

2019- International Association for Urban Climate (IAUC).

2019- The Arctic Research Consortium of the U.S. (ARCUS)

ORGANISATION OF SCIENTIFIC MEETINGS

2016 Bjerknes Science days in Bergen. Organizing committee.