

International conference to raise awareness about needs to adapt transport systems to climate change

Assessment of climate change impacts: Deployment of new technologies and materials for maintaining nominal road quality during adaptation of transport infrastructure to climate change

Moscow (in person and online formats), 15-16 November 2021

Russian Transport Week – 2021

Draft program (15.11.2021)

10:00 – 10:30 Opening and introduction

Welcome:

Mr. Stanislav Naboko – *CEO, FAI "ROSDORNII", Ph.D of economics.*

Mr. Konstantinos Alexopoulos, *Chief, Transport Facilitation and Economics, Sustainable Transport Division, United Nations Economic Commission for Europe (UNECE)*

Dr. Stephanie Hänsel, *Acting Chair, UNECE Group of Experts on assessment of climate change impacts and adaptation for inland transport, Manager, Deutscher Wetterdienst, Germany*

Setting the scene:

10:30 – 10:45 Climate change mitigation, adaptation to climate change in view of observed changes and projected trends – **Dr. Stephanie Hänsel**, *Acting Chair, UNECE Group of Experts on assessment of climate change impacts and adaptation for inland transport, Manager, Deutscher Wetterdienst, Germany*

10:45-11:00 Climate variability and change, observed changes and projected trends in the Russian Federation – **Ms. Oksana Lipka**, *Leading Researcher, Institute of Global Climate and Ecology (Lead Author of the 6th Assessment Report of the Intergovernmental Panel on Climate Change, Working Group 2 - Impact, Adaptation, Vulnerability)*

11:00 – 13:15 Implications for transport due to climate variability and change, techniques to assess the impacts

11:00 – 11:15 Enhancing sustainability of transport infrastructure: theory and practice – **Prof. Hui Li**, *Tongji University*

11:15 – 11:30 Why consideration of physical climate change risks is important in transport planning and operational processes – **Dr. Andrew Quinn**, *Reader in Atmospheric Science and Engineering, University of Birmingham*

11:30-11:45 Climate change and issues of vehicle operation in the context of the Central Asia region – **Prof. Yusufzhan Shadimetov**, *Tashkent State Transport University*

11:45-12:00 Assessment of climate risks at transport infrastructure facilities – **Dr. Yuri Trofimenko**, *Moscow Automobile and Road Construction State Technical University (MADI), Professor-Academician, International Academy of Transport*

12:00 – 12:15 Sustainability and adaptation of transport infrastructure to climate change – Prof. Yvonne Andersson-Scheldt, Environment and Transport, VTI, Sweden

12:15 – 12:30 Coffee break

12:30-12:45 Impact of global warming on asphalt pavement in China – Prof. Yinghao Miao, National Center for Materials Service Safety, University of Science and Technology, Beijing

12:45-13:00 Techniques for assessment of future climate impacts - Dr. Paul Bowyer, Senior Scientist, Climate Service Center, Germany

13:00-13:15 Techniques for assessing criticality of transport infrastructure – Mr. Lennart Meine, BAST, BMVI Network of Experts, Germany

13:15 – 14:45 Lunch break

14:45 – 16:00 Analysis of climate impact on the important transport corridor connecting Europe and Asia / Discussion moderator - Piet de Wildt, former Senior Advisor, Ministry of Infrastructure and Water Management of the Netherlands, former Vice-chair of the Group of Experts

14:45-15:00 Investigating climate impacts in the UNECE region: experience from the UNECE Expert Group – Dr. Paul Bowyer, Senior Scientist, Climate Service Center Germany

15:00-15:15 Weather and climatic factors in ensuring functional and environmental safety of land transport - Dr. Irina Karapetyants, Professor, Director of the Institute of International Transport Communications of the Russian University of Transport

15:15-15:30 Analysis of climatic risks for road network - Sergey Ilyin, Deputy Director, Department of Design, Technical Policy and Innovative Technologies, State Company "Avtodor"

Discussion participants:

- *Mrs. Syeda Hashmi, University of Birmingham,*
- *Mr. Andrzej Maciejewski, TEM Project Manager, Poland*
- *Prof. Qiang Du, Dean, Professor/Doctoral supervisor Chang'an University*
- *Prof. Hui Li, Professor, Tongji University,*
- *Prof. Yinghao Miao, Professor National Center for Materials Service Safety, University of Science and Technology, Beijing*
- *Mr. Vladislav Rumyantsev, Academician, Chief of St. Petersburg Scientific Center of the Russian Academy of Science, Russia*
- *Mr. Vyacheslav Rybkin, President of the Scientific Council on Integral Transport Infrastructure of St. Petersburg Scientific Center of the Russian Academy of Sciences, Russia*
- *Experts of SOVTRANSTEH company*
- *Will be continued*

16:00 – 16:20 Coffee break

16:20 - 17:15 Prevention of negative socio-economic impacts of climate change/Discussion moderator – Mr. Nickolai Denisov, ZOINET

16:20-16:35 Socio-economic assessment of climate change consequences, in the context of the Russian Federation climate features - Mikhail Ivannikov, Chief, Data Processing and Analysis Department, FAI "ROSDORNII"

16:35-17:00 Exchange of ideas on measures to prevent negative socio-economic impacts on international road E 20/ E 30 and railway line C-E 24

Discussion participants:

- *Mr. Sergey Smirnov, President of the Scientific and Educational Center of Innovative Development of Passenger Rail Transportation of St. Petersburg State University of Railway, Russia*
- *Ms. Malgorzata Kopczynska, TER project Manager, Poland*
- *Mr. Andrzej Maciejewski, TEM Project Manager, Poland*
- *Mr. Benoit Lebot, Chargé de mission affaires internationales, Direction Générale des Infrastructures, des Transports et de la Mer, France*
- *Will be continued*

17:00 - 17:15 - Platform to regularly exchange information on work on adaptation of transport to climate change – *Mr. Lukasz Wyrowski, Economic Affairs Officer, Sustainable Transport Division, United Nations Economic Commission for Europe (UNECE)*

Draft program (16.11.2021)

10:00 - 11:30 Transport infrastructure adaptation. Deploying best practices

10:00-10:15 All spectrum of adaptation measures - structuring adaptation options – *Dr. Lara Klippel, Deutscher Wetterdienst, Germany*

10:15-10:30 Relevant directions of international scientific and technical cooperation in the field of sustainable development of Eurasian international transport corridors – *Mr. Stanislav Mamulat, Head of the Research Innovation Center under the Executive Committee of the Transport Coordination Board of the Commonwealth of Independent States, Advisor to the President of the SIBERIAN STATE AUTOMOBILE AND HIGHWAY UNIVERSITY, Russia*

10:30-10:45 Road industry accelerator. How global trends influence deployment of new technologies – *Ms. Julia Oganova, Chief, Acceleration Department, FAI ROSDORNII*

10:45-11:00 Consequences of climate change for land transport in the Russian Federation - *Marina Klyueva, Leading Specialist, Federal State Budgetary Institution "Main Geophysical Observatory named after A.Voeikov"*

11:00-11:15 Necessity to take into account regional, natural and climatic conditions for designing, constructing and operating highways - *Dr Sergey Efimenko, Dean, Faculty of Road Construction, Department of Highways, Tomsk State University of Architecture and Civil Engineering*

11:15-11:30 Sustainability and asset management – *Prof. Adam Zofka, Research Institute of Roads and Bridges of Poland (IBDiM)*

11:30 – 12:00 Coffee break

12:00 – 13:00 Technologies and solutions supporting climate mitigation and adaptation action

12:00-12:15 Climate adaptation: meteorological protection of transport infrastructure from catastrophic floods – *Mr. Arkady Koldaev, Scientific Director, Federal State Budgetary Institution "Central Aerological Observatory"*

12:15-12:30 Potential of transport planning to reduce emissions of climate gases - *Mr. Dmitry Kazmin, Chief, Department of Methodological Support for Transport Planning, FAI "ROSDORNII"*

12:30-12:45 2) Emission Influence and future impacts of climate change on Europe-Asia transport corridor (or its sections) development – *Ms. Julia Zvorykina, Deputy CEO, Autonomous Nonprofit Organization "Research and Expertise Institution of Vnesheconombank", Russia*

12:45-13:00 Approaches to tackling climate change and adaptation measures - *Alexander Bobkov, Deputy Head, Department for Development of Sectoral Estimated Standards, FAI "ROSDORNII"*

13:00 – 14:30 Lunch break

14:30 – 15:30 Impact of extreme hydrometeorological events on transport infrastructure of Europe and Asia: Is it possible to make transport system resilient to extreme climatic events (discussion).
Introduction by Dr. Stephanie Hänsel, Manager, Deutscher Wetterdienst, Germany

14:30 - 14:45 Operational technologies of meteorological support and numerical weather forecasting, including forecasts of extreme atmospheric events: current state in future conditions of changing climate – Dr. Gdaliy Rivin, Head of the Laboratory for Numerical Weather Forecast of the Federal State Budgetary Institution "Hydrometeorological Center of Russia", Professor of the Department meteorology and climatology of the Moscow State University; Dr. Inna Rozinkina, Head of the Laboratory of Medium-Range Hydrodynamic Weather Forecasting, Federal State Budgetary Institution "Hydrometeorological Center of Russia"

14:45 – 15:00 Impact of climate change on transport sector of the Republic of Armenia – Dr. Prof. Yeghiazar Vardanyan, Candidate of Technical Sciences, Associate Professor Valerik Harutyunyan, Prof. Chinar Nersesyan, National University of Architecture and Construction of Armenia

15:00 – 15:15 Flooding and destruction of transport infrastructure in Western Europe in the early summer of 2021: can the transport system be made resilient to extreme events - Dr. Stephanie Hänsel Acting Chair, UNECE Group of Experts on assessment of climate change impacts and adaptation for inland transport, Manager, Deutscher Wetterdienst, Germany

Discussion participants:

- *Mr. Benoit Lebot, Chargé de mission affaires internationales, Direction Générale des Infrastructures, des Transports et de la Mer, France*
- *Will be continued*

15:30– 16:00 Coffee break

16:00 - 17:15 Permafrost thaw: how to adapt (discussion)

Discussion moderator – Mr. Victor Dosenko, President of the International Transport Academy
Introduction by Professor Guy Doré, Department of Civil Engineering and Water Engineering, Université Laval, Canada

16:00 - 16:15 Transifrost engineering – Prof. Guy Doré, Department of Civil Engineering and Water Engineering, Université Laval, Canada

16:15 - 16:30 Methods for adapting transport infrastructure facilities to predicted climatic changes in permafrost regions - Dr. Yuri Trofimenko, Moscow Automobile and Road Construction State Technical University (MADI), Professor-Academician of the International Academy of Transport

16:30 – 16:45 Design for road and airfield pavements made of local soils and materials reinforced with modified mineral binders, taking into consideration climatic features of Siberia and the Far East - Dr. Victor Vtorushin, General Director of JSC "NTK Aerotechnical Center"

16:45 – 17:00 Innovation technologies for bridge and tunnel construction in the areas of permafrost soils of the Far East and the Arctic taking into consideration global climate change – Mr. Yuri Savchenko, Academician of the International Academy of Transport, Russia

Discussion participants:

- *Mr. Michael Zheleznyak, Permafrost Institute named after Pavel Melnikov, Siberian Department of the Russian Academy of Sciences, Yakutsk*

- *Mr. Yuri Savchenko, Academician of the International Academy of Transport, Russia*
- *Will be continued*

17:15 – 17:30 Closure