



# Green and Blue Urban Infrastructure Innovation for Northern Eurasia

Transfer, Regionalisation, Planning Strategies and  
Development Directions

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## Report

Saint-Petersburg, 2021

Compiled by Olga Likhacheva and Anton Shkaruba

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# Green and Blue Urban Infrastructure Innovation for Northern Eurasia

Transfer, Regionalisation, Planning Strategies and Development Directions

April 19-20, 2021, St. Petersburg, Russia

The workshop « Green and Blue Urban Infrastructure Innovation for Northern Eurasia. Transfer, Regionalisation, Planning Strategies and Development Directions» took place on the venue of Park Inn by Radisson Pulkovskaya Hotel (St.-Petersburg, Russia) on April 19-20, 2021. For the detail program, see Annex.



*During the workshop, the talk by Igor Shchukin (Perm National Research Polytechnic University)*

More than 40 representatives of various stakeholder groups, involved with urban planning, urban green management, spatial planning, green and blue infrastructure development, natural resource management and policies in the urban issues, attended the seminar. Participants represented academic community, project designers, regional and local authorities, NGOs from Russia, Estonia, Latvia, Slovakia, Poland and Hungary (for the list of speakers see Annex).



*Talks by Olesya Butserova (Moscow Institute of Electronic Technology), Elena Shelyagina (Moscow Circular) and Nikolai Bobylev (Saint Petersburg State University)*



*Viktar Kireyeu and Aleksandr Sergunin (Saint Petersburg State University) moderate the session*

Thanks to cooperation between universities, the organizers were able to attract experts from famous Russian universities and research centers such as M.V. Lomonosov Moscow State University, Tyumen State University, V.B. Sochava Institute of Geography, Siberian Branch of the Russian Academy of Sciences, RUDN University, Primakov National Research Institute of World Economy and International Relations, Northern Arctic Federal University, Arctic Research Center for the Yamalo-Nenets Autonomous District, Peter the Great St. Petersburg Polytechnic University, The Russian Presidential Academy of National Economy and Public Administration. The event was also attended by MSc and PhD students from Saint Petersburg State University.

The aim of the workshop was to take stock of innovation related to green and blue infrastructure (GBI) in Russian cities, and to understand the factors of success and failures of such innovation projects given a variety of biophysical and socioeconomic contexts across the country. The other one was to understand what other innovation projects successfully implemented in the EU have their chance in Russia, what kind of projects would be useful and relevant in terms of sustainability transition in Russia, and what barriers need to be considered to ensure their success.

The first day of the seminar was devoted to discussing various examples of green and blue innovations and steps to those innovations as well as failures happened during the implementation of the green projects in the urban environment. Speakers representing academic and non-academic institutions from across Russia, who have relevant GBI experience and reflections, shared it with the audience.



*Talks by Aleksandr Sergunin (Saint Petersburg State University) and Oksana Klimaniva (M.V. Lomonosov Moscow State University)*



*Talks by Viktor Korotych (MLA+) and Maria Frolova (Northern Arctic Federal University)*

The second objective was achieved through an exercise where specific GBI innovation recently implemented in the EU were presented to the audience by our EU partners (Slovak University of Agriculture, Wrocław University of Environmental and Life Sciences, Estonian University of Life Sciences, Centre for Economic and Regional Studies of Hungarian Academy of Science) involved in these innovative projects. The audience was asked to give a short structured feedback reflecting on their academic, professional or regional experience which was done in written form and then orally during the final discussion, moderated by Hanna Skrygan (Belorussian-Russian University).



*Comments by Maria Frolova (Northern Arctic Federal University)*



*Hanna Skrygan (Belorussian-Russian University) moderates the discussion*



*Talk by Aleksey Sayanov (Association Landscape Engineers Guild)*



*Remarks by Olga Zhiltsova during the discussion*



# Green and Blue Urban Infrastructure Innovation for Northern Eurasia

Transfer, Regionalisation, Planning Strategies and  
Development Directions

Workshop and roundtable

St.-Petersburg, 19-20 April 2021

Инновации для зеленой и голубой  
инфраструктуры городов Северной Евразии

Трансфер, регионализация, планировочные стратегии и  
направления развития

Семинар и круглый стол

С.-Петербург, 19-20 апреля 2021 г.

## Agenda / Программа

# Green and Blue Urban Infrastructure Innovation for Northern Eurasia

## Transfer, Regionalisation, Planning Strategies and Development Directions Workshop and roundtable

St.-Petersburg, 19-20 April 2021

Co-organised by / организован:



St.-Petersburg State University / С.-Петербургский  
государственный университет

Pskov State University / Псковский государственный  
университет

Estonian University of Life Sciences / Эстонский  
университет естественных наук

Erda Research, Technology, Education



# Инновации для зеленой и голубой инфраструктуры городов Северной Евразии

Трансфер, регионализация, планировочные стратегии и направления развития

## Семинар и круглый стол

С.-Петербург, 19-20 апреля 2021 г.

*The workshop and the roundtable are organised under the project Erasmus+ CBHE SUNRAISE - Sustainable Natural Resource Use in Arctic and High Mountainous Areas (<http://sunraise.sfu-kras.ru>) and Erasmus+ Jean Monnet Project TERRA - Transboundary European Regionalisation in Russia and Eastern Partnership: European Dimension and Environmental Drivers (<https://pskovsu.com/terra>)*

## Background, objectives and methodology

The workshop and roundtable are organized around two objectives.

- One is to take stock of innovation related to green and blue infrastructure (GBI) in Russian cities, and to understand the factors of success and failures of such innovation projects given a variety of biophysical and socioeconomic contexts across the country.
- The other one is to understand what other innovation projects successfully implemented in the EU have their chance in Russia, what kind of projects would be useful and relevant in terms of sustainability transition in Russia, and what barriers need to be considered to ensure their success.

To achieve the first objective, we are inviting speakers representing academic and non-academic institutions from across Russia, who have relevant GBI experience and reflections to share. Moderated discussions will follow.

The second objective will be achieved through an exercise where specific GBI innovation recently implemented in the EU will be presented to the audience by our EU partners involved in these innovative projects. The audience will be asked to give a short structured feedback reflecting on their academic, professional or regional experience.

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## Контекст, задачи и методы

Семинар и круглый организуются для решения следующих задач:

- Получить представление о характере инноваций, связанных с внедрением проектов зеленой и голубой инфраструктуры (ЗГИ) в российских городах, а также о факторах успеха или провала подобных проектов в различных физико-географических и социально-экономических условиях страны.
- Понять какие успешно реализованные в городах ЕС инновационные проекты в сфере ЗГИ могут быть реализованы в России, в том числе с точки зрения значимости подобных проектов для достижения целей устойчивого развития, а также различного рода барьеров, которые необходимо учесть.

Для достижения первой задачи, мы планируем пригласить докладчиков, представляющих различные организации, компании и учреждения со всех уголков России, которые обладают интересным опытом по теме мероприятия, и готовы им поделиться. Доклады будут сопровождаться модерированными обсуждениями.

Вторая задача будет достигнута при помощи семинара, в котором конкретные инновации в сфере ЗГИ, реализованные в ЕС, будут представлены европейскими партнерами, вовлеченными в данные проекты. Участникам будет предложено дать структурированные отзывы на представленные инновации, в том числе с точки зрения их профессионального, научного или регионального опыта.

## Meeting agenda / Программа мероприятия

*Titles of talks are provided as they have been submitted by participants / Названия докладов представлены в том виде, в котором они были заявлены при регистрации*

**All sessions will take place in / место проведения всех сессий:**

Park Inn by Radisson Pulkovskaya Hotel, Krasnyi Room D / Красный зал D

Monday, 19<sup>th</sup> of April / Понедельник, 19 апреля

Opening and keynote speeches / Открытие и пленарные доклады

*Chair / Председатель: Nikolai Bobylev / Николай Бобылев*

9:00 – 11:00

First author / other authors	Affiliation of the first author	Country	Paper title
Alexander Sergunin	St.-Petersburg State University, Department of International Relations	Russia	Planning for Innovation and Sustainability: An Emerging Blue Economy in Russia' Coastal Arctic?
Olga Maximova	The Russian Presidential Academy of National Economy and Public Administration	Russia	The implementation of the European Landscape Convention. Basic model
Timur Nizamutdinov, Denis Alexeev	Saint-Petersburg State University, Russian State Hydrometeorological University	Russia	Linking green infrastructure to urban air quality and human health risk mitigation in Russia
Oxana Klimanova	Lomonosov Moscow State University	Russia	Urban Green Infrastructure: what does it mean this approach in real urban planning in Russia?
Jurijs Kondratenko (online)	D-0 Ltd. / Riga Technical University - water research and environmental biotechnology laboratory	Latvia	Practical experience with implementing green and blue infrastructure solutions in Latvia
Igor Esau and the SERUS project team (online)	Nansen Center	Norway	Urban heat island in Northern Eurasian cities: Climatic overview
Anton Shkaruba (online)	Estonian University of Life Science	Estonia	Green and Blue Urban Infrastructure Innovation for Northern Eurasia – Transfer, Regionalisation, Planning Strategies and Development Directions. Concept, workflow, outcomes

**Coffee break / перерыв на кофе**

11.00-11.30

**The city and water / Город и вода**

*Chair / Председатель: Tatiana Vasileva / Татьяна Васильева*

11:30 – 12:30



First author / other authors	Affiliation of the authors	Country	Paper title
Olga Illarionova (online)	Lomonosov Moscow State University	Russia	The influence of riparian zones on the urban environment: the case study of Nizhniy Novgorod
Jurijs Kondratenko (online)	D-O Ltd. / Riga Technical University - water research and environmental biotechnology laboratory	Latvia	Policy best practice and recommendations for sustainable and integrated stormwater management
Roman Rudoj	The Russian Presidential Academy of National Economy and Public Administration	Russia	Rivers, community and production of space
Igor Shchukin	Perm National Research Polytechnic University	Russia	Application of raingardens for surface runoff treatment in moderate climate
Julia Lednova, Mikhail Shilin	Peter the Great St. Petersburg Polytechnic University, Civil Engineering Institute, Russian State Hydrometeorological University and St.-Petersburg State University	Russia	Environmental situation assessment in the area of the airport Bronka construction based on indicator-index approach
Discussion and session conclusions / Обсуждение и выводы			

### Lunch break / перерыв на обед

12.30-13.30

### GBI innovation in the High North / Инновации ЗГИ (зеленая и голубая инфраструктура) для полярных территорий и заполярья

Chair / Председатель: Denis Alexeev / Денис Алексеев

13:30 – 14:30

First author / other authors	Affiliation of the authors	Country	Paper title
Yulia Pechkina, Vera Kuklina, Roman Fedorov, Oleg Sizov	Arctic Research Center for the Yamalo-Nenets Autonomous District	Russia	Blue, green and white spaces of the city of Nadym as an example of the use of natural infrastructure in Arctic conditions
Andrey Todorov	Primakov National Research Institute of World Economy and International Relations, RAS	Russia	How implementation of the Polar Code and other relevant instruments could contribute to the green economy in the Arctic
Maria Frolova	Northern Arctic Federal University	Russia	Ecologically green material in the Arctic conditions
Ramil Guliev	Northern Arctic Federal University	Russia	Prospects of Using Renewable Energy Sources in the High North
Dmitry Astanin	Vologda State University	Russia	Typology of Settlement Patterns in the Northern Territories
Discussion and session conclusions / Обсуждение и выводы			

### Green and blue infrastructure for the delivery of ecosystem services and comfortable living / Голубая и зеленая инфраструктура для обеспечения экосистемных услуг и комфортного проживания (part 1 / часть 1)

Chair / Председатель: Olga Maximova / Ольга Максимова

14:30 – 15:30

First author / other	Affiliation of the first	Country	Paper title
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authors	author		
Nicolai Bobylev	Institute of Earth Sciences, Saint Petersburg State University	Russia	Green and Blue Urban Infrastructure supporting ecosystem services
Hanna Skryhan	Belarusian-Russian University	Belarus	Streamlining of ecosystem disservices for urban planning
Viktor Korotych, Anastasia Tsurkouskaya, Darya Eroshenkova, Angelina Filip, Gavriil Malyshev	MLA+ (Санкт-Петербург)	Russia	Voronezh Green Network: green infrastructure strategy and case study of implementing landscape ecology and ecosystem services concepts in the land use approach.
Viktar Kireyeu	Saint Petersburg State University, Institute of Earth Sciences	Russia	EU Experience of Using Joint Fact Finding in Urban Infrastructure Planning
Tatiana Vasileva	Department of Geography, Pskov State University	Russia	Comfortable urban environment: trends and organization problems
Discussion and session conclusions / Обсуждение и выводы			

### Coffee break / перерыв на кофе 15.30-16.00

## Green and blue infrastructure for the delivery of ecosystem services and comfortable living / Голубая и зеленая инфраструктура для обеспечения экосистемных услуг и комфортного проживания (part 2 / часть 2)

Chair / Председатель: Viktar Kireyeu / Виктор Киреев

16:00 – 17:30

First author / other authors	Affiliation of the first author	Country	Paper title
Dmitriy Marinskikh, Ivan Milyaev	University of Tyumen, Institute of Earth Sciences	Russia	Problems of designing green and blue infrastructure of the city of Tyumen
Liliia Sulkarnaeva	University of Tyumen, Institute of Earth Sciences	Russia	Mapping and assessment urban ecosystem services in the city of Tyumen
Victor Matasov	RUDN University, SUN-lab	Russia	Ecosystem services approach for landscaping project: the case of Metropolia Residential Complex
Elena Sheliagina	Moscow Circular	Russia	Opportunities and benefits of using local flora species in urban landscaping
Natalia Krasnoshtanova, Vera Kuklina	V.B. Sochava Institute of Geography, Siberian Branch of the Russian Academy of Sciences	Russia	Informal roads as a form of extended green urban infrastructure
Svetlan Gardt	Semren&Mansson	Russia	Eco-sustainable environment in modern residential areas. Experience in the implementation and adaptation of Scandinavian solutions in Russian projects on the example of the Leningrad region
Anastasia Konstantinova	Department of Landscape Design and Sustainable Ecosystems, RUDN University	Russia	Smart urban nature: modelling and evaluation of ecosystem services provided by urban soils and green infrastructures
Olesya Butserova	Moscow Institute of Electronic Technology,	Russia	University campuses as elements of the urban green-blue infrastructure



Department of  
Engineering Graphics and  
Design

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Discussion and session conclusions / Обсуждение и выводы

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## Plenary Discussion and Conclusions Day 1 / Пленарное обсуждение и выводы – первый день работы

*Chair / Председатель: Alexander Sergunin / Александр Сергунин*

17:30 – 18:00

### **Panelists (session chairs of the day) / Панелисты (председатели сессий первого дня работы):**

- Nikolai Bobylev / Николай Бобылев
- Tatiana Vasileva / Татьяна Васильева
- Denis Alexeev / Денис Алексеев
- Olga Maximova / Ольга Максимова
- Viktor Kireyev / Виктор Киреев

### **Conference dinner / Общий ужин**

Starting 18.30, the hotel's restaurant / Начало в 18.30, ресторан гостиницы

Tuesday, 20<sup>th</sup> of April / Вторник, 20 апреля

Sustainable energy, materials and planning / Устойчивая энергетика, материалы и планирование

Chair / Председатель: Olga Likhacheva / Ольга Лихачева

9:00 – 10:00

First author / other authors	Affiliation of the first author	Country	Paper title
Boris Gandelsman	Moscow Institute of Architecture (State Academy)	Russia	Prospects for the use of energy-efficient technologies for urban improvement reconstruction of small towns and local settlement systems on the Bezhetsky district in the Tver region example
Aleksey Sayanov	Association Landscape Engineers Guild	Russia	The sustainable approach in urban landscape planning
Yakov Kazakov	Department of pulp and paper and wood chemical production, Northern (Arctic) Federal University	Russia	Paper packaging materials in a circular economy
Olga Likhacheva	Pskov State University	Russia	Databases and GIS applications in urban green management
Discussion and session conclusions / Обсуждение и выводы			

### Coffee break / перерыв на кофе

10.00-10.30

“Is it going to fly or not?” – express-evaluation of the feasibility of EU GBI innovation in Russia / «Взлетит или не взлетит?» - экспресс-оценка реализуемости в России примеров инноваций в области зеленой и голубой инфраструктуры из стран ЕС

Chair / Председатель: Hanna Skryhan / Анна Скриган

10:30 – 12:30

On this session, 8 cases of GBI innovation implemented at EU member states will be presented by speakers involved in those projects. The audience will be asked to give a short structured feedback reflecting on their academic, professional or regional experience. Description of cases will be available from a dedicated brochure.

В течении данной сессии, при помощи наших партнеров, мы представим 8 примеров инноваций в сфере ЗГИ, реализованные в странах ЕС. Участникам будет предложено дать структурированные отзывы на данные инновации, в том числе с точки зрения их профессионального, научного или регионального опыта. Подробная информация по примерам инноваций будет представлена в отдельной брошюре.

Confirmed presenters / подтвержденные докладчики:

Name	Affiliation	Country
Mária Bihuňová	Slovak University of Agriculture, Faculty of Horticulture and Landscape Engineering	Slovakia
Justyna Rubaszek	Wrocław University of Environmental and Life Sciences, Institute of Landscape Architecture	Poland
Kalev Sepp	Estonian University of Life Sciences, Landscape and Environmental Management	Estonia
László Jóna	Centre for Economic and Regional Studies of Hungarian Academy of Science	Hungary

### Lunch break / перерыв на обед

12.30-13.30

### Plenary Discussion and Workshop & Roundtable Conclusions / Пленарное обсуждение и выводы по семинару и круглому столу

Chair / Председатель: Alexander Sergunin / Александр Сергунин, Viktor Kireyev / Виктор Киреев  
13:30 – 14:30

### Coffee break / перерыв на кофе

14.30-15.00

### Project meetings for TERRA and SUNRAISE projects / Встречи по проектам САНРЭЙЗ и ТЕРРА Only for participants of the projects / Только для участников данных проектов

15:00 – 17:00

#### **Chairs of the SUNRAISE session / Председатели сессии САНРЭЙЗ:**

**Natalia Iurkova / Наталья Юркова, Nina Pakharkova**

*Other participants / Другие участники: Igor Novorashenny (University of Bremen), Nina Kocheeva (Gorno-Altai State University), Nina Borisova, Irina Bezkorovinaia (Siberian Federal University), Eduard Podgaiskii, Denis Alexeev, Anastasiya Stepanova (Russian State Hydrometeorological University)*

#### **Chair of the TERRA session / Председатель сессии ТЕРРА: Olga Likhacheva / Ольга Лихачева**

*Other participants / Другие участники: Nikolai Bobylev, Viktor Kireyev (Saint Petersburg State University), Anton Shkaruba (Estonian University of Life Sciences), Tatiana Vasileva (Pskov State University)*

### Conference Venue / Место проведения:

St.-Petersburg, Park Inn by Radisson Pulkovskaya Hotel, 1 Pobedy Square /

С.-Петербург, Park Inn by Radisson Pulkovskaya Hotel, пл. Победы 1

<https://www.radissonhotels.com/ru-ru/hotels/park-inn-conference-st-petersburg-pulkovskaya>

Krasnyi Room D / Красный зал D