
**Integration of Arctic research to
curriculum: development: courses on
“Environmental Economics” and
“Sustainability Governance”**

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professor MSU named by M.V. Lomonosov
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Indicators of sustainable development in selected countries:

- 1) Adjusted net savings (% of GNI).
 - 2) Human Development Index.
 - 3) Ecological footprint (ha per person).
 - 4) Index of human happiness.
 - 5) Energy efficiency (GDP per unit of energy, kg / ee).
 - 6) Share of fossil fuels (% of total).
 - 7) Share of renewable energy sources (% of total).
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Indicators of sustainable development in selected countries:

- 8) Emissions of carbon dioxide per capita (tonnes).
 - 9) Urban pollution (mg/ m³).
 - 10) Depletion of natural resources (% of GNI).
 - 11) Wooded areas (% of the territory).
 - 12) Satisfaction with actions to protect the environment (% satisfied).
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How to include the environmental factor in the evaluation of investment projects?

Projects A, B, C

How to integrate the elements of a "green" economy into the Arctic macroregion?

- 1) renewable energy sources (solar, wind, biofuel, etc.);
- 2) "green" buildings and structures (active and passive houses) (energy-saving technologies in construction and architecture);
- 3) clean transport (alternative fuels, development of public transport, hybrid / electric cars;
- 4) water resources management (water treatment, saving of water consumption, use of rainwater, etc.);

How to integrate the elements of a "green" economy into the Arctic macroregion?

- 5) utilization of garbage and industrial waste (reuse (recycling), production of self-decomposing packaging, etc.);
 - 6) land management (urban forestry and parks, organic agriculture, forest restoration, soil restoration);
 - 7) bioeconomics and biotechnology;
 - 8) ecological tourism and recreational areas.
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Ecosystem services (EC) are the benefits that humanity derives from ecosystems.

- 1) Providers (food, water, forest, raw materials).
 - 2) Regulatory (impact on climate, natural disasters, water quality).
 - 3) Cultural (recreation, spiritual and aesthetic values).
 - 4) Supporting (soil formation, photosynthesis, cycling of various substances).
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Are there and can we create appropriate markets?

There are 4 categories of ecosystem services for which compensation payments and creation of markets are realistic:

- 1) Provision of fresh water.
 - 2) Absorption of carbon.
 - 3) Conservation of biodiversity.
 - 4) Preservation of aesthetic properties of the landscape.
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General scientific direction of Moscow State University?

"Sustainable Development of Territories" -
leaders: professor Bobylev Sergey Nikolaevich;
professor Nikonorov Sergey Mikhailovich;
professor Sheresheva Marina Yuryevna.

Terms: 2019 - 2021.

Current and ongoing projects:

1. RFBR grant "Theoretical and methodological foundations of sustainable urban development" (2016 - 2018).
 2. RFBR grant "Theoretical and methodological foundations of sustainable development of regions (on the example of the Volga region)" (2017 - 2019).
 3. RFBR grant "Influence of socio-economic processes on ecosystems and ecological and economic value of the Baikal natural territory" (2018 - 2020).
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Current and ongoing projects:

4. Research "Calculation of the Sustainable Development Rating of Companies Operating in the Arctic Zone of Russia" ("Polar Index 1.0").
 5. Research "Calculation of the Rating of Sustainable Development of the Regions of the Arctic Zone of Russia" ("Polar Index 2.0").
 6. Research "Best available technologies" (implementation in the Company of Russia (2019 - 2021)).
 7. Research "Strategy of development of Vodokanal St. Petersburg until 2035" (2018).
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Planned projects:

- 1. The grant of the RNF "Socio-ecological and economic models of sustainable development of the territories of Russia" (2019 - 2021).
- 2. *RFBR grant "Tourism in Russia" (2019 - 2021).*
- 3. **Research work "Barents-Index" (Companies) (2019).**
- 4. **Research work "Barents Index" (Regions) (2019).**
- 5. **Research "Ecological and economic approaches to the water purification system in Russia and the ASEAN countries" (2019).**
- 6. Research "Green finance in Russia" (2019).
- 7. Research "Development of ecotourism in Russia (2019).

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- THANK YOU
 - BEHIND
 - YOUR ATTENTION
 - READY TO ANSWER YOUR QUESTIONS
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