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# Sustainable Natural Resource Use in Arctic and High Mountainous Areas

## Устойчивое использование природных ресурсов в арктических и высокогорных регионах



## Massive open online course

# SDGs for the Arctic and High Mountains, with implications for policy, management and planning

## Отражение целей устойчивого развития в политике, управлении и планировании развития арктических и высокогорных регионов



*The course is jointly developed by Russian State Hydrometeorological University, Gorno-Altai State University and Siberian Federal University with the involvement of leading Russian-speaking specialists in the field of sustainable development*

**Sustainable Development Goals (SDGs)** is a set of global development objectives brought up and agreed by all the United Nations member states in 2015 as a core component of the 2030 Agenda for sustainable development (<https://sdgs.un.org/2030agenda>).

Each SDG includes several specific targets operationalizing it and ensuring monitoring and progress assessment. The authors of this course have made an attempt to use several cases to show how the work to achieve the SDGs in the Arctic and high mountain regions is being built.



# The MOOC has 11 topics:

- ▶ **Sustainable Development Goals and ESG – objectives and instruments for greening economic development of Russia**
  - ▶ **Svalbard Archipelago as a case for the international cooperation over sustainable Arctic**
  - ▶ **Development of green economics models in real life socio-economic conditions**
  - ▶ **Role of protected areas in the conservation of local and global biodiversity (case of the Katunsky Biosphere Reserve)**
  - ▶ **Carbon polygons as an instrument for carbon sequestration assessment for the Arctic ecosystems in Krasnojarsk Kraj**
- 

- ▶ **Localizing Sustainable Development Goals in the Arctic Region: Voluntary Local Review**
  - ▶ **Russian Forests in terms of carbon deposit: science, practice, policies**
  - ▶ **Water regime of Arctic zone rivers in Western Siberia**
  - ▶ **Strategic Planning of Russian Arctic Regional Development: Ecological Aspect**
  - ▶ **Ecosystem services of urban green infrastructure: demand and supply for sustainable development**
  - ▶ **Key Findings and New Tools of the IPCC Sixth Assessment Report on Climate Change, 2021**
- 

# Every topic includes:

Sustainable Development  
17 goals,  
169 targets,  
231 indicators

UN Sustainable Development Goals are a part of 2030 Agenda for SD  
<https://www.un.org/sustainabledevelopment/sustainable-development-goals/>



- ▶ Online lecture
- ▶ Questions for self-control
- ▶ List of references and additional resources for self-guided study

Серия вебинаров SUNRAISE – Лекция 9. Саночкая Н.А.

SUNRAISE Sustainable Natural Resource Use in Arctic and High Mountainous Areas

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Надежда Саночкая

### Водный режим арктических рек Западной Сибири

Саночкая Надежда Александровна, к.ф.-м.н.  
доцент кафедры водно-технических изысканий, Российский государственный гидрометеорологический университет  
с.н.с. Отдела гидрологии устьев рек и водных ресурсов,  
Арктический и антарктический научно-исследовательский институт

00:17:30:39 Санкт-Петербург, 2 ноября 2021

# Video lecture Видеолекции

youtube.com/watch?v=Pv7132EOx0

YouTube



**Цели устойчивого развития (17 ЦУР, 2015)**

- 6** Обеспечение наличия и рационального использования водных ресурсов и санитарии для всех
- 7** Обеспечение доступа к недорогим, надежным, устойчивым и современным источникам энергии для всех
- 12** Обеспечение рациональных моделей потребления и производства
- 13** Принятие срочных мер по борьбе с изменением климата и его последствиями

Лекция 1 - Шварц Е.А. (Центр ответственного природопользования Института географии РАН)

👍 НРАВИТСЯ    🗨 НЕ НРАВИТСЯ    ➦ ПОДЕЛИТЬСЯ    ➕ СОХРАНИТЬ    ...



< 1 > ⋮ Google Slides

Доклад о человеческом развитии в Российской Федерации

Лекция 1 - Шварц В.А.

# Presentations and links

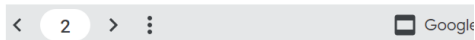
1. Цели устойчивого развития, экологическое, социальное и корпоративное управление (SDG и ESG): цели и инструменты экологизации экономического развития России

## DEFINITION

### "Sustainable development

is development that meets the needs of the present without compromising the ability of future generations to meet their own needs."

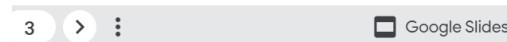
*Report of the World Commission on Environment and Development  
Our Common Future*



1. Цели устойчивого развития, экологическое, социальное и корпоративное управление (SDG и ESG): цели и инструменты экологизации экономического развития России

## DEFINITION

Watch the video about sustainable development



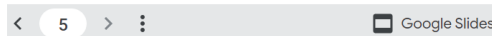
1. Цели устойчивого развития, экологическое, социальное и корпоративное управление (SDG и ESG): цели и инструменты экологизации экономического развития России

## Human Development Reports

The Human Development Report (HDR) is an annual Human Development Index report published by the Human Development Report Office of the United Nations Development Programme (UNDP).



Follow the [link](#)






# Questions for self-control

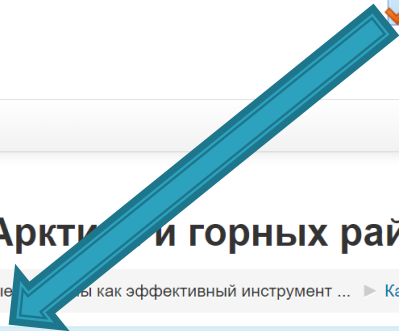
## Вопросы для самопроверки

### 5. Карбоновые полигоны как эффективный инструмент оценки потенциала депонирования углерода экосистемами Арктической зоны Красноярского края

 Лекция 5 - Прокушкин А.С.

 Карбоновые полигоны

Посмотрите видеолекцию и ответьте на вопросы теста.



RSHU-MOODLE Русский (ru) ▾

Нина Пахарькова  ▾

## Цели устойчивого развития для Арктики и горных районов

[В начало](#) ▶ [Проекты](#) ▶ [Проект SUNRAISE](#) ▶ [ЦУРдляАиГР](#) ▶ 5. Карбоновые полигоны как эффективный инструмент ... ▶ [Карбоновые полигоны](#) ▶ [Просмотр](#)

### НАВИГАЦИЯ ПО ТЕСТУ

[1](#) [2](#) [3](#) [4](#) [5](#)

[Закончить попытку...](#)


[Начать новый просмотр](#)

### Вопрос 1

Пока нет ответа

Балл: 1,00

 [Отметить вопрос](#)

 [Редактировать вопрос](#)

Какова основная цель создания сети карбоновых полигонов на территории РФ?

Выберите один или несколько ответов:

- а. чтобы увеличить выбросы углекислого газа
- б. чтобы уменьшить выбросы углекислого газа
- с. чтобы учитывать выбросы углекислого газа
- д. чтобы создать методику расчетов способности поглощения углерода окружающей средой из атмосферы

### НАВИГАЦИЯ

[В начало](#)

■ [Личный кабинет](#)  
▶ [Страницы сайта](#)

[Далее](#)

# The MOOC Moodle page

If you want to study the MOOC «SDGs for the Arctic and High Mountains, with implications for policy, management and planning», you need to receive login and password to get an access to e-learning system. Please submit your e-courses access inquiries to Anna Cheremnykh (RSHU, Head of Open and Distance Learning Center) to her e-mail: [cher@rshu.ru](mailto:cher@rshu.ru)

The screenshot shows a Moodle course page in Russian. The main title is "Цели устойчивого развития для Арктики и горных районов". The page is divided into several sections:

- НАВИГАЦИЯ** (Navigation): A sidebar menu with options like "В начало", "Личный кабинет", "Страницы сайта", "Текущий курс", "ЦУР/ЦДАиГП", "Новости", "Знаки", "Отражение целей устойчивого развития в политике...", "1. Цели устойчивого развития, экологическое, социальное...", "2. Архипелаг Шпицберген — Свальбард, пример между...", "3. Внедрение модели 'зеленой экономики' в реальность...", "4. Роль системы ООПТ в сохранении локального и глобального...", "5. Карбоновые полигоны как эффективный инструмент...", "6. Локализация целей устойчивого развития в Арктике...", "7. Леса России в депонировании углерода: наука, практика...", "8. Водный режим арктических рек Западной Сибири", "9. Стратегическое планирование развития регионов...", "10. Экологические услуги городской застройки...", "11. Основные выводы и новые инструменты Шестого ООПТ", "Мои курсы".
- Отражение целей устойчивого развития в политике, управлении и планировании развития арктических и высокогорных регионов**: A section with a grid of 17 icons representing the Sustainable Development Goals (SDGs) and a video player titled "Sustainable Development Goals" with the text "Do you know all 17 SDGs? Follow the link and learn more".
- ПОИСК ПО ФОРУМАМ** (Search): A search bar with a "Принять" button and a "Расширенный поиск" link.
- ПОСЛЕДНИЕ НОВОСТИ** (Latest News): A section with a "Добавить новую тему..." button and a "Поиск новостей (нет)" button.
- ПРЕДСТОЯЩИЕ СОБЫТИЯ** (Upcoming Events): A section with a "Параллельный календарь..." button and a "Новые события..." button.
- 1. Цели устойчивого развития, экологическое, социальное и корпоративное управление (SDG и ESG): цели и инструменты экологизации экономического развития России**: A section with a video player and a "Документ о человеческом развитии в Российской Федерации" link.
- 2. Архипелаг Шпицберген — Свальбард, пример международного устойчивого развития в Арктике**: A section with a "Лекция 2 - Евдокимов А.И." link, a "Лекция 2 - вопросы для самоконтроля" link, and a "Лекция 2 - литература и дополнительные учебные материалы" link.

# Students feedback:

"SDGs for the Arctic and High Mountains"

## A. GENERAL EVALUATION OF THE COURSE

- I was provided with sufficient information about the aims and the content of the course
  - Absolutely agree
  - Mostly agree
  - Mostly disagree
  - Absolutely disagree
- The length of the course was optimal
  - Absolutely agree
  - Mostly agree
  - Mostly disagree
- Assess the level of complexity of this course
  - The course was too complicated; my personal background knowledge was not sufficient to understand it
  - The course was rather difficult, but well developed, allowing me to study it at the required level
  - The course was quite easy, though some themes and the way they were taught aroused my interest
- Various forms and methods of teaching were used in this course
  - Absolutely agree
  - Mostly agree
  - Mostly disagree
- The course was interesting and useful for the further development of your skill professional
  - Absolutely agree
  - Mostly agree
  - Mostly disagree
  - Absolutely disagree
- What is your overall assessment of the course?
  - Excellent
  - Good
  - Not good enough
  - Satisfactory

Carbon polygons as an instrument for carbon sequestration assessment for the Arctic ecosystems in Krasnoyarsk Territory  
Development of green economies models in small life socio-economic conditions

8. Which theme(s) was the most difficult for understanding?  
- Sustainable Development Goals and ESS – objectives and instruments for growing economic development of Russia

9. Which practical task(s) was the most interesting?  
Think about theme that is most interesting for me and search for add info on this

10. Which practical task(s) was the most difficult to perform?  
To thinking about question for a webinars with difficult themes

11. Which tools and learning materials presented in the Moodle do you consider most useful for you in the process of blended learning (concerning this course)?

- PowerPoint Presentations
- Video lectures
- Preparation materials for seminars and practical assignments
- Examples of calculations
- Reference materials (links to official normative documents and additional literature)
- Tests
- All of the above mentioned

12. Does the Moodle platform help to improve the organization and control of the learning process?

- Yes, it does
- It does not affect the organization and control of the educational process

13. How effective do you think the use of video lectures in a blended learning model is as compared to traditional ones?

- Very effective, as it allows listening to them at your own pace and several times if necessary
- Proved to be an effective substitute for traditional lectures, though the students were deprived of the opportunity to ask clarifying questions directly during the lecture
- Do not exceed traditional lectures in their efficiency

14. Does this course require improvement? If so, in what part?

- Yes, it does
- No, it does not

15. Do you have any wishes or recommendations concerning this course?

No

Student: Trofimova T.  
Group: E02-M20-1-6

"SDGs for the Arctic and High Mountains"

## A. GENERAL EVALUATION OF THE COURSE

I was provided with sufficient information about the aims and the content of the course

- Absolutely agree
- Mostly agree
- Mostly disagree
- Absolutely disagree

2. The length of the course was optimal

- Absolutely agree
- Mostly agree
- Mostly disagree

3. Assess the level of complexity of this course

- The course was too complicated; my personal background knowledge was not sufficient to understand it
- The course was rather difficult, but well developed, allowing me to study it at the required level
- The course was quite easy, though some themes and the way they were taught aroused my interest

4. Various forms and methods of teaching were used in this course

- Absolutely agree
- Mostly agree
- Mostly disagree

5. The course was interesting and useful for the further development of your skills as a (future) professional

- Absolutely agree
- Mostly agree
- Mostly disagree
- Absolutely disagree

6. What is your overall assessment of the course?

- Excellent
- Good
- Not good enough
- Satisfactory

## B. EVALUATION OF THE COURSE CONTENT

7. Which theme(s) was the most interesting?

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## B. EVALUATION OF THE COURSE CONTENT

7. Which theme(s) was the most interesting?  
Svalbard archipelago - Svalbard, an example of international sustainable development in the Arctic

8. Which theme(s) was the most difficult for understanding?  
Carbon polygons as an effective tool for assessing the potential of carbon deposition by ecosystems of the Arctic zone of the Krasnoyarsk Territory

9. Which practical task(s) was the most interesting?  
Analysis of the questions of interest in the course of lectures

10. Which practical task(s) was the most difficult to perform?  
There were no difficulties in completing assignments

11. Which tools and learning materials presented in the Moodle do you consider most useful for you in the process of blended learning (concerning this course)?

- PowerPoint Presentations
- Video lectures
- Preparation materials for seminars and practical assignments
- Examples of calculations
- Reference materials (links to official operative documents and additional literature)
- Tests
- All of the above mentioned

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- Proved to be an effective substitute for traditional lectures, though the students were deprived of the opportunity to ask clarifying questions directly during the lecture
- Do not exceed traditional lectures in their efficiency

14. Does this course require improvement? If so, in what part?

- Yes, it does
- No, it does not

15. Do you have any wishes or recommendations concerning this course?

I think this course is very well composed

Group: E02-M20-1-6  
Student name: Zosima AI