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The project “New Master’s Degree Curricula for Sustainable Bioeconomy in Uzbekistan” (BioEcUz)

No 619294-EPP-1-2020-1-LV-EPPKA2-CBHE-JP

THE SECOND BIOECONOMY FORUM IN UZBEKISTAN

Ongoing bioeconomy related knowledge development initiatives and results achieved in Uzbekistan

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Tashkent, Uzbekistan, 2 May 2023



New master level curricula «Bioeconomy» (120 ECTS) elaborated

Study module No. 1: Sustainable production and use of bioresources:

1. Bioeconomy development and policy
2. Sustainable crop and livestock production and consumption
3. Sustainable forestry
4. Sustainable aquaculture and water management

Study module No. 2: Bio-resources based manufacturing and processing:

1. Bioproducts and bio-based value chains
2. Sustainable food production and consumption
3. Environmental economics

Study module No. 3: Bio-resources based engineering:

1. Circular economy
2. Renewable energy production and use

Study module No.4: Policy, research and technological development, innovations and markets of bio-based products:

1. Bio-based RTD, innovations and business models
2. Markets and international trade of bio-based products
3. Sustainable logistics

Study module No.5: Research approaches in the bioeconomy:

1. Bioeconomy research design and methods
2. Bioeconomy data analysis and statistics
3. Scientific writing and reporting



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New curricula «Bioeconomy» officially approved

On June 15, 2022, the President of the Republic of Uzbekistan has issued an order in quotas to be assigned for each of four involved Uzbekistan's universities:

- *Tashkent State Agrarian University (TSAU)*
- *Tashkent Institute of Irrigation and Agricultural Mechanization Engineers (TIAME)*
- *Samarkand branch of Tashkent State Agrarian University (SAMTSAU)*
- *Bukhara State University (BukhSU)*

Распоряжение Президента Республики Узбекистан «О параметрах государственного заказа по приему на учебу в государственные высшие образовательные учреждения в 2022/2023 учебном году» от 15.06.2022 г. № P-60 — <https://lex.uz/uz/docs/6069608>

Academic staff of the involved Uzbekistan's universities trained for the new curricula sustainability

Training in contemporary pedagogic skills

24 academic staff trained!

Topics:

- Approaches to learning
- Interactive learning – digital tools
- Learning design process
- Introducing competence-based team works
- University industry cooperation
- Using videos in teaching and learning
- Involvement of students to entrepreneurship and innovations

Trainings included practising various teaching methods, as well introduction to modern learning analytics.

Training was done by JAMK University of Applied Sciences (Finland)

Training in thematic areas

28 already trained teachers!

Topics:

- Bioeconomy development and policy
- Sustainable crop and livestock production and consumption
- Sustainable food production and consumption
- Environmental economics
- Renewable energy production and use
- Bio-based RTD, innovations and business models
- Circular economy

Training was done by

- ***Latvia University of Life Sciences and Technologies (Latvia)***
- ***Vytautas Magnus University (Lithuania)***
- ***JAMK University of Applied Sciences (Finland)***



European Union countries knowledge and experience shared and provided

Latvia (21 participants)

- **LBTU structural units:** Biotechnologies Laboratory, Laboratory of Plant biology and protection, Technology and Knowledge Transfer Office etc.
- **Public authorities:** Ministry of Agriculture, Rural Support Service, Agricultural Data Centre
- **Research entities:** Institute of Food Safety, Animal Health and Environment Institute „BIOR”, Institute of Horticulture, Institute for Environmental Solutions
- **NGOs:** Latvian Agricultural Organization Cooperation Council
- **Municipal and private companies:** biogas production, aquaculture using biogas, energy from waste, production vegetables using own-produced energy), food production and processing etc.

Lithuania (20 participants)

- **VMU structural units:** Faculty of Bioeconomy Development, Bioeconomy Research Institute etc.
- **Research entities:** Aquaculture Centre, Laboratory of Climate Change Impact to Forest Ecosystems, Laboratory of Agrobiotechnology, Laboratory of Biomass Treatment, Logistics and Solid Fuel Processes, Laboratory of Biogas
- **Municipal and private companies:** biogas production, waste water treatment, fish processing, pond fisheries, milk processing, farming
- **Business support organisations:** Business incubation – “Nemunas Valley” association, “Agronomas” (consulting for farmers)

Finland (22+2 participants)

- **JAMK structural units:** JAMK campus and laboratories, Institute of Bioeconomy, Business Economy Accelerator
- **Public authorities:** Regional Council of Central Finland
- **Research entities:** Institute of Bioeconomy laboratories and a biogas container and a heating plant, Laukaa fish research and fish farming facility, Natural Resources Institute Finland
- **Municipal and private companies:** plant breeding, modern dairy farming, strawberry and apple farming, bioproduct mill etc.

**2nd study visit round (LV, LT, FI):
20 May – 11 June 2023**



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Video conference classes created at the the involved Uzbekistan's universities

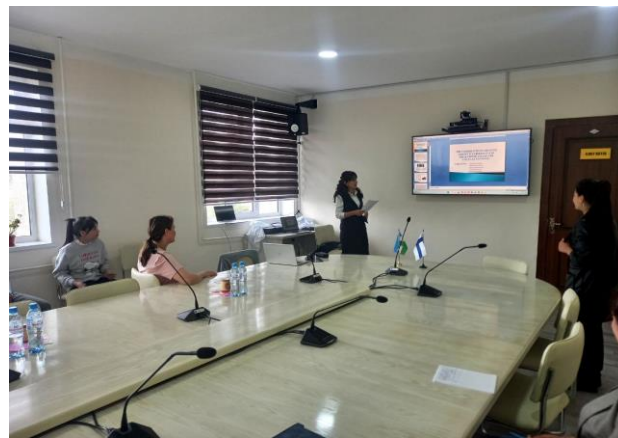
Tashkent - TSAU



Bukhara - BukhSU



Samarkand - SBTSEU



Tashkent - TIAME





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Students have been admitted and pilot group is following teaching courses, provided jointly by EU and Uzbekistan's academic staff

23 students admitted, of them:

- *Tashkent State Agrarian University - 7*
- *Tashkent Institute of Irrigation and Agricultural Mechanization Engineers - 5*
- *Samarkand branch of Tashkent State Agrarian University - 6*
- *Bukhara State University - 5*



Study process and progress:

- *Studies started from September 2022, three semesters*
- *Online and onsite lectures, practical and independent works*
- *Individual consultations provided by the academic staff*
- *Master theses selected*



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Bioeconomy's and the project promotion and awareness raising measures

29 April 2021

The event “Introduction of Uzbekistan’s stakeholders to the bioeconomy in Latvia, Lithuania and Finland” (online)

- 144 participants
- 26 external stakeholders
- 9 presentations

27-28 April 2022

The 1st Bioeconomy Forum (Samarkand)

- 213 participants
- 66 external stakeholders
- 16 presentations
- scientific conference focusing on bioeconomy sector topics integrated
- 14 students’ posters related to the bioeconomy prepared and presented, the best works awarded

About 100 publicity measures held, inter alias

15 TV and radio broadcasts on Uzbekistan’s audio-visual media

70 publications in Uzbekistan’s newspapers and internet

Project website created, more than 30 articles published

<http://bioecuz.tdau.uz/news/all>



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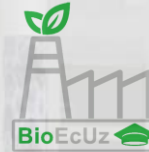


**Thank you to the project key staff
involved the most actively!**

- ***Tashkent State Agrarian University: Abduaziz Abduvasikov, Firuza Galimova***
- ***Tashkent Institute of Irrigation and Agricultural Mechanization Engineers: Sherzod Rakhmonov, Ikboljon Bozarov***
- ***Samarkand branch of Tashkent State Agrarian University: Shavkat Hasanov, Sherzod Babakholov***
- ***Bukhara State University: Makhmud Oripov***
- ***Vytautas Magnus University: Vilija Aleknevičienė***
- ***JAMK University of Applied Sciences: Kirsi Knuuttila***
- ***Ministry of Agriculture of the Republic of Uzbekistan: Umida Saidova***
- ***Latvia University of Life Sciences and Technologies: Līga Proškina, Umed Aslanov***



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Thank you for the attention!

More information about the BioEcUz project and results:

<http://bioecuz.tdau.uz/news/all>