



## MENVIPRO SUMMER SCHOOL EVALUATION

### INTRODUCTION

The Summer School “Environmental Science Education for Sustainable Human Health” organized by the European Erasmus+ project MENVIPRO in commemoration of Professor Armen Saghatelian took place on September 6-13, 2021. The event brought together the leading South Caucasian and European experts representing the broad spectrum of related disciplines and the international audience of MSc/PhD students for an exciting online event contributing to the education modernization journey the MENVIPRO project is driving since 2019.

### Goal

The goal of the Summer School was to complement the project’s Environment Protection curricula modernization efforts with such research-oriented and innovative form of training as an international Summer School. The event attracted both Bachelor, MSc and PhD students to enable exchange and promote scientific career tracks in the field of Environment Protection. It embraced the spectrum of topics starting from research-oriented core training modules through the transferable skills training to other complementary topics, such as research organization, publication opportunities, etc. The Summer School also fostered international spirit and culture, granted ECTS credits to participants and promoted innovative teaching and learning methods and environments. The event represented a substantial contribution to attaining the overall project goal – modernization of Environment Protection MSc and PhD studies in South Caucasus and strengthening of scientific collaboration in this field between the EC, Armenia and Georgia.

### Content and target learning outcomes

“Environmental Science Education for Sustainable Human Health” Summer School provided students with theoretical lessons and hands-on, field and laboratory experience to perform environmental sampling, analyses of environmental and food samples, and assessment of anthropogenic impacts on soils, vegetation, aerosols and foods. Students

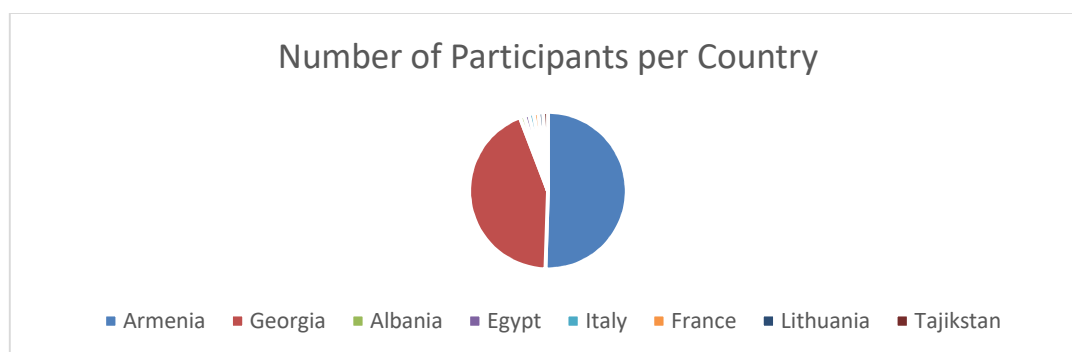
acquired analytical skills on the determination of organic, inorganic, and radioactive contaminants and will acquire skills on remote sensing techniques, environmental data mapping, and geographic information systems. At the end of the summer school, students had a better understanding of anthropogenic, climatic, and geographic factors that contribute to changes in our environment and the long-term implications of such changes, as well as the scientific methods to monitor and counteract them. Those students who fully completed the Summer School programme were awarded with 2 ECTS credits and the Certificate of Accomplishment.

### COVID-19 limitations

Due to the remaining restrictions linked to the COVID-19 pandemic, the event was organized in an online format.

### REGISTRATION

**Overall**, 103 participants registered for the summer school, out of which 52 participants were from Armenia, 45 from Georgia, 1 from Albania, 1 from Egypt, 1 from Italy, 1 from France, 1 from Lithuania, 1 from Tajikstan:



The HEIs and other intuitions the participants represented were as follows:

#### ***Armenia***

- CENS
- ISEC
- Different research organizations of NAS RA
- Yerevan State University
- Gavar State University
- Vanadzor State University
- National Poytechnic University of Armenia
- ICARE Foundation
- Project Harmony International



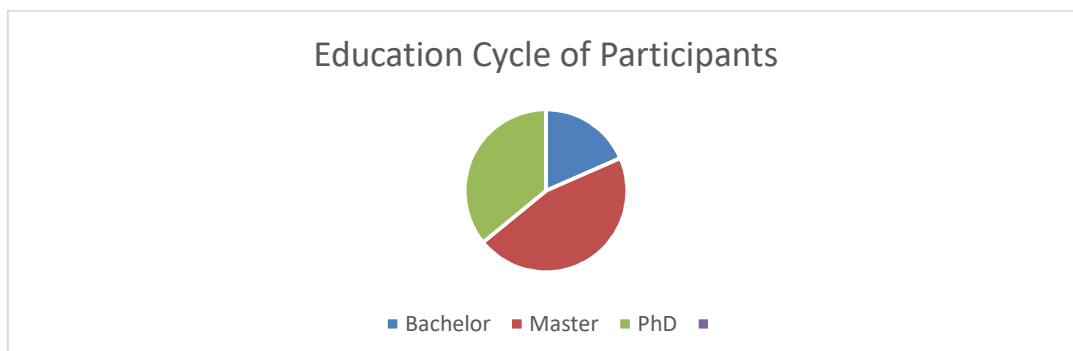
### *Georgia*

- Ilia State University
- University of Georgia
- Tbilisi State University
- Batumi Shota Rustaveli State University
- GIPA - Georgian Institute of Public Affairs
- Tbilisi State Medical University
- National Center for Disease Control and Public Health of Georgia
- Beritashvili Centre of Experimental Biomedicine
- Caucasus University, School of Business
- Free University of Tbilisi
- Agricultural University of Georgia
- Georgian Technical University
- East European University

### *Other Countries*

- Mediterranean University of Albania, Albania
- Assiut University, Egypt
- Vytautas Magnus University, Lithuania
- Tajik Agrarian University named after Sh.Shohtemur, Tajikstan
- Institut Polytechnique UniLaSalle, France
- University of Molise Department of Bioscience and Territory, Italy

In terms of education cycle, out of 113 registered participants, 19 participants were Bachelor students, 47 participants were Master students or had a Master's degree, 37 participants were PhD students and/or held a PhD degree.



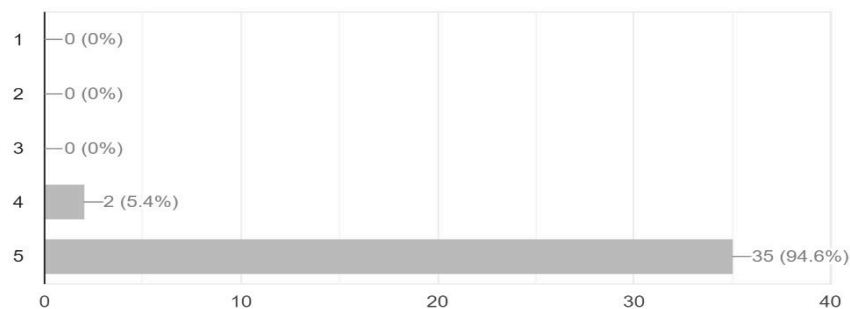
The participants having successfully passed the final test were sent a summer school evaluation survey consisting of 11 evaluation questions. Overall, 37 participants took part and completed the summer school evaluation survey. The aim of the survey was to find

out the general satisfaction of the summer school participants, which was measured through different components presented in details below. The respondents assessed all the given components with a scale of 1 to 5 where 1 is the lowest score, whereas 5 is the highest one.

All the covered points were assessed positively, most of them were as assessed as excellent. At the same time, it is important to note that the lowest assessment was given to three points.

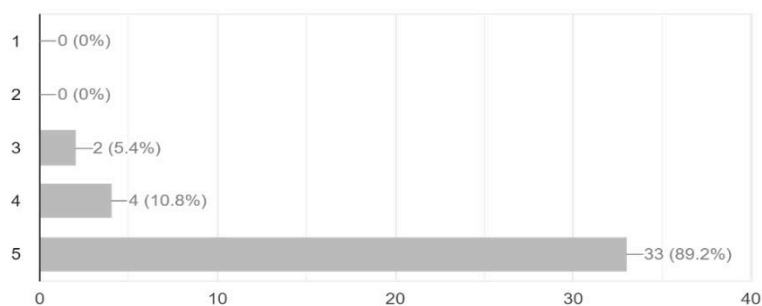
Thus, the dominant majority of the respondents, 94.6%, assessed the key topics covered in the summer school related to Environmental Protection Studies as excellent. For the details, see below:

Key topics of Environmental Protection Studies are covered. From 1 to 5  
0 / 37 correct responses



As the bar chart below shows, the respondents again assessed positively the theoretical and practical significance of the topicu included in the agenda of the summer school. Compared with the first point, in this particular case, 10.8% of the respondents scored this question at 4, where 89% of the respondents gave Score 5 to it.

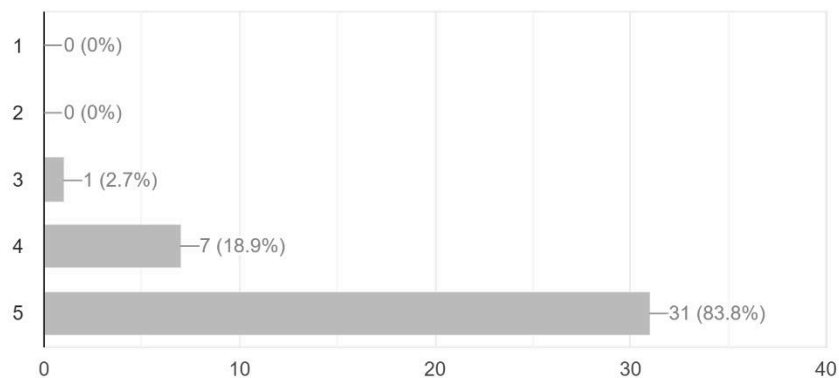
The topics selected are of theoretical and practical significance. From 1 to 5  
0 / 37 correct responses



This question compared to the first two points were assessed a bit lower, 83%. At the same time, more respondents gave Score 4, 7 out of 37 respondents. Anyway, it should be noted that even this figure is a positive one.

The materials are explained/presented in a simple, understandable and professional manner. From 1 to 5

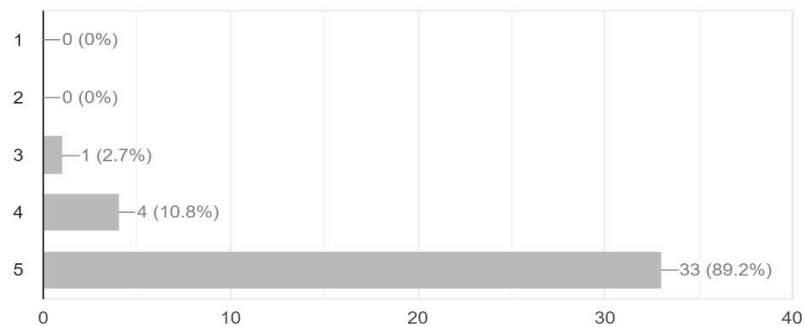
0 / 37 correct responses



What about the next bar graph, the feedback to the participants of the summer school was properly ensured in respondents' opinions.

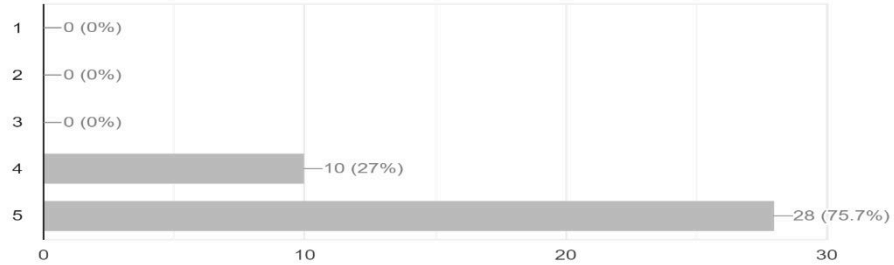
The feedback with the attendees is ensured. From 1 to 5

0 / 37 correct responses



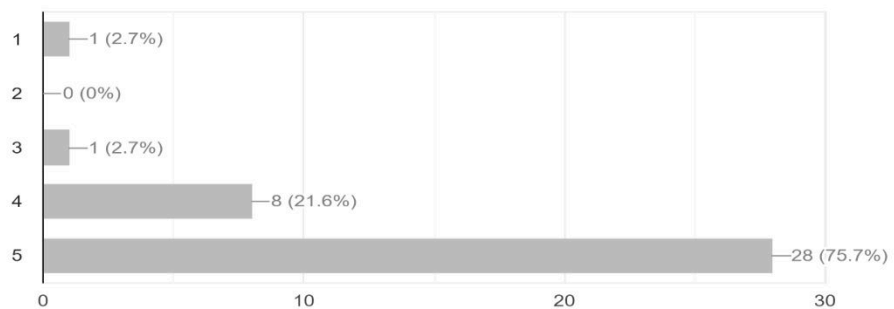
Regardless of having positive scores in case of this bar chart, this bar chart has the greatest number of 4 scores out of all 11 questions. It should be noted this may be due to the online formal of the summer school.

Attendees are prepared for research. From 1 to 5  
0 / 37 correct responses



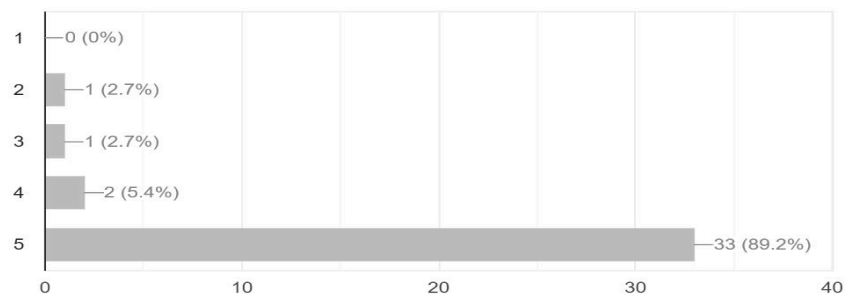
In the next bar chart, the number of the respondents having given the highest score is equal as it was in the last one, but here Scores 1 and 3 were also selected by one participant, respectively.

Webinar hours are used effectively and efficiently. From 1 to 5  
0 / 37 correct responses



As the bar chart shows, the scores are again positive, where the dominant number of respondents assessed it as excellent.

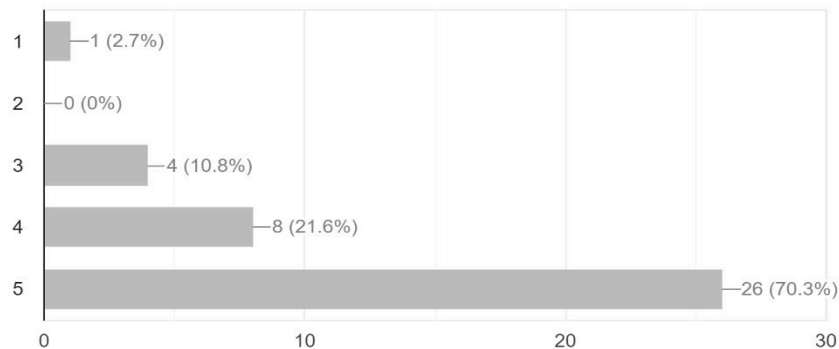
Lecturers are demanding, friendly and respectful. From 1 to 5  
0 / 37 correct responses



In this given case, the lowest number of respondents selected score 5 out of all bar charts. At the same time, the highest percentage of the respondents selected Score 3 as compared with the other questions. Therefore, we may assume that some respondents still consider online teaching and learning as ineffective.

Do you think the proposed online teaching is effective? From 1 to 5

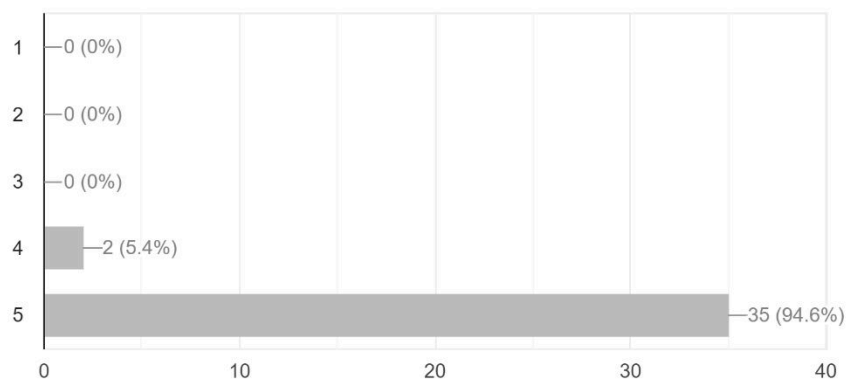
0 / 37 correct responses



The respondents' responses show that presentations were provided on the virtual platform after the lecture and it was available to the dominant majority of the respondents. At the same time, it should be noted that the respondents here selected only scores 4 (5.4%) and 5 (94.6%).

Attendees are provided with presentations. From 1 to 5

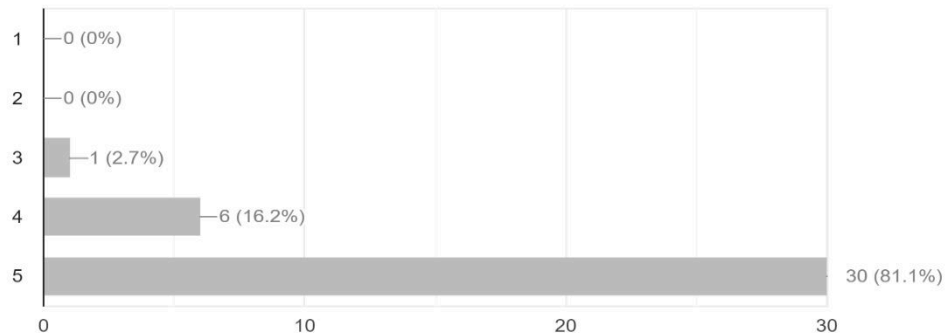
0 / 37 correct responses



The respondents' responses show that knowledge has been assessed impartially as the participants took two online tests consisting of multiple-choice questions based on the

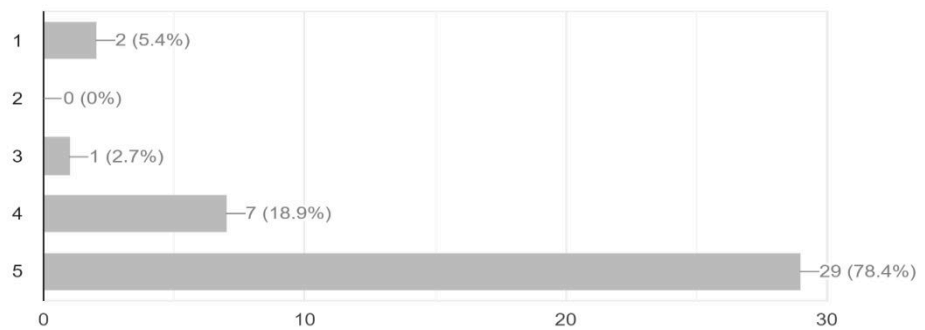
topics covered in the course of the summer school, as 81.1% of the respondents selected Score 5, whereas 16.2% of the respondents selected Score 4.

Knowledge is assessed impartially. From 1 to 5  
0 / 37 correct responses



Though the last question was mostly assessed positively, nevertheless, in the case of the last bar chart the greatest number of respondents selected Score 1 unlike other questions, 5.4%. Anyway, it should be noted this figure constitutes only 2 respondents out of 37.

Are you overall satisfied with how the Summer School took place? From 1 to 5  
0 / 37 correct responses



Overall, it should be noted that the respondents are, in general, are happy with the key topics of Environmental Protection Studies, theoretical and practical significance of selected topics, the way of presented materials, feedback provided to the attendees, obtaining skills for research, webinar hours, the way lecturers delivered their lectures, online teaching and learning, provision of presentations, impartiality of knowledge assessment, and overall satisfaction of the pace and progress of the summer school.