

# Innovative Postgraduate Education in The Field of Environment Protection: Methods and Tools



## MENVI PRO PROJECT GENERAL OVERVIEW

Dr. Lilit Sahakyan  
CENS and ISEC

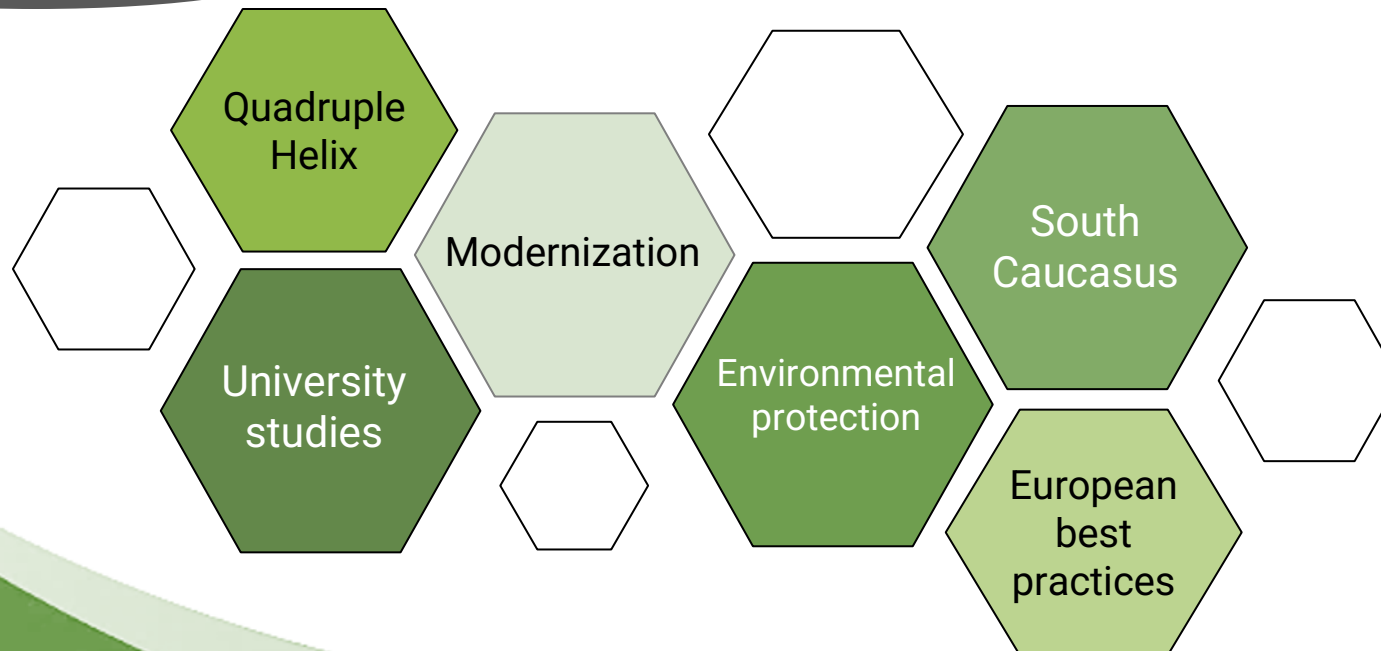
5 October 2022



# MENVIPRO: Modernization of Environment Protection Studies Programmes for Armenia and Georgia

## Aim of the project

to facilitate the modernization of the University studies in the field of Environment Protection in the Region of South Caucasus by transferring European best practices and applying principles of Quadruple Helix.



## MENVIPRO PARTNERS





# WHY CENS AND ME ?

CENS Director

Head of ISEC  
department

lecturer of ISEC  
department

MENVIPRO  
Local Coordinator from CENS



**Dr. Lilit Sahakyan**

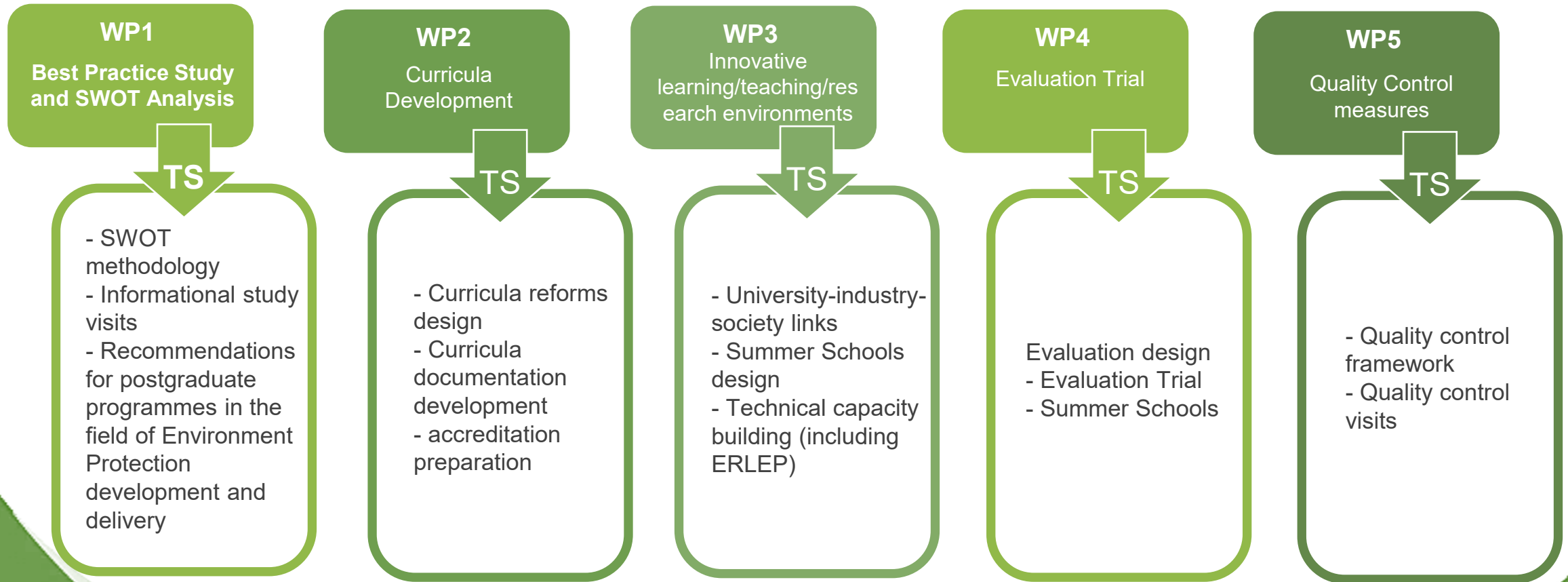


**CENS Founder  
Prof. Armen Saghatelyan**

Center for the Ecological-Noosphere Studies of National Academy of Sciences of Armenia (CENS) was founded in 1993. It is a research and education center, engaged in fundamental and applied studies in ecology, environment, agriculture and food safety.



## WP & TASKS



# RESULTS



## Best Practice Study and SWOT Analysis Armenia and Georgia



MENVIPRO

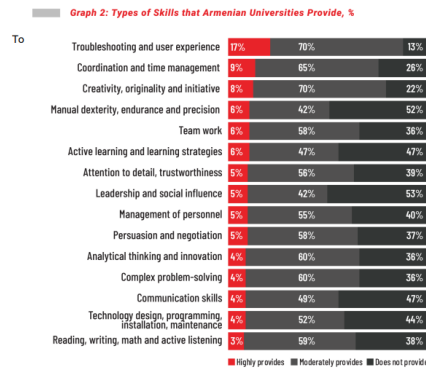
Modernization of Environment Protection Studies  
Programmes for Armenia and Georgia  
(598232-EPP-1-2018-1-IT-EPPKA2-CBHE-JP)



### SWOT ANALYSIS

#### ENVIRONMENTAL EDUCATION IN ARMENIA

Yerevan 2019



STRENGTHS		WEAKNESSES																																																													
<ul style="list-style-type: none"><li>Academic programs are in line with the mission of the Center.</li><li>Academic programs are developed according to the requirements of the state educational standards.</li><li>Experience and opportunity to apply modern teaching and learning methods.</li><li>At the end of the academic year, taking into account the graduates' satisfaction surveys of the academic programs, assessment results of the academic programs by the employers, suggestions from the relevant departments, as well as the report by the chairmen of the State Certification Committee, appropriate changes are made in the syllabi of the academic programs.</li><li>The approval of the new courses has a probation period.</li><li>Research activities in the relevant academic organizations are taken into account while choosing a Master thesis topic.</li></ul>		<ul style="list-style-type: none"><li>Lack of the experience of the annual monitoring of academic programs.</li><li>Lack of the mechanisms for assessing and revising the results of the full cycle of the academic programs, as a result insufficient justification from the perspective of the demands of the labour market.</li><li>Lack of sufficient experience were raised in definition of the learning outcomes and assessment.</li><li>Students and external stakeholders' lack of interest in the quality assessment and reviewal procedures of the academic program and its components were raised</li><li>Lack of experience exchange among master students, PhD students, lecturers and administrative staff from the leading educational institutions</li><li>Lack of trainings and evaluation concepts for lecturers and service staff for applying student-centered policy principle.</li></ul>																																																													
Armenian Universities Provide, %		students' research stock for the																																																													
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		<ul style="list-style-type: none"><li>Limited opportunities to invite leading experts from foreign organizations.</li><li>Unstable and non-regulated labour market and unpredictable developments.</li><li>External stakeholders' (mainly employers) insufficient interest and participation in the implementation and continuous improvement of the academic programs.</li><li>Monopoly in the majority of academic programs.</li><li>Changing requirements of the labour market demand</li><li>Due to the changes in the existing labor market demand, external stakeholders' weak reaction and indifference.</li></ul>																																																													

STRENGTHS	WEAKNESSES																		
<ul style="list-style-type: none"><li>• The EU-Georgia Association Agreement is supporting approximation to relevant EU policies and practices, meaning also promoting the modernisation of the education and training systems and the quality in higher education in a manner which is consistent with the EU Modernisation Agenda for Higher Education and the Bologna process (Article 359).<sup>3</sup></li><li>• All study programs and higher education institutions are reviewed against quality standards in an authorization process authorization. From 2017 onwards, the processes and criteria have become stricter which is envisaged to lead to higher quality of teaching practice and a reduction in the number of weaker study programs.</li></ul>	<ul style="list-style-type: none"><li>• In some cases, the content and quality of higher education need to be in better accordance to modern labor market requirements. Business representatives often complain about the relevance and quality of education received by graduates. As a result, unemployment and inactivity has remained relatively high on the Georgian labor market.</li><li>• The higher education institutions have incentive to maximize the total number of students, and do not closely consider their low average performance in national admission tests because of the current funding system: mostly students are the only</li></ul>																		
	<table><tr><th colspan="2">HEIs</th></tr><tr><td></td><td>University</td></tr><tr><td></td><td>Teaching University</td></tr><tr><td></td><td>College</td></tr><tr><td></td><td>Total</td></tr><tr><td></td><td></td></tr><tr><th colspan="2">Bachelor</th></tr><tr><td>sum</td><td>156493</td></tr><tr><td>% of total</td><td>73.59%</td></tr></table>	HEIs			University		Teaching University		College		Total			Bachelor		sum	156493	% of total	73.59%
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OPPORTUNITIES																			
<ul style="list-style-type: none"><li>• Based on the objectives, current higher education policy reforms should be aimed at (i) improving quality, learning outcomes and skills formation for the Georgian labor market; (ii) strengthening the innovative capacity and entrepreneurship in the labor force; and (iii) enhancing tertiary education opportunities for underrepresented students.</li><li>• The master students who have successfully passed the unified master's exams have a chance to get funding from state budget. For this purpose 2.2 mln</li></ul>	<ul style="list-style-type: none"><li>• accountability system (with the exception of annual self-evaluation for authorization and accreditation). Therefore, universities do not feel accountable to the public (university society). In a number of spheres this situation contains risks although it grants universities high levels of autonomy.</li><li>• Accreditation procedures are quite strict. It may cause delay of launching the new courses.</li></ul>																		

HEIs	Public	Private	Total
University	12	18	30
Teaching University	6	13	19
College	1	4	5
Total	19	35	54

	Bachelor	Medical education	Master	PhD	Total
sum	156493	19777	27891	8482	212643
% of total	73.59%	9.30%	13.12%	3.99%	100%

MENVIPRO

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### SWOT ANALYSIS

#### ENVIRONMENTAL EDUCATION IN GEORGIA

Tbilisi 2019

# RESULTS

## Curricula Development

### CENS & ISEC



- 8 modernized curricula  
4 new developed
- Comparative analyses was done with 5 EU universities including not partners of MENVIPRO
- -National accreditation preparation and passing with new syllabus
- All 12 Curricula were renewed according the modernized ones
- 4 New curriculum was designed and prepared according national quality requirements

### GSU



- 4 new developed curricula
- Comparative analyses was done with 1 EU universities including not partners of MENVIPRO
- -National accreditation preparation and passing with new syllabus
- All 4 Curricula were renewed according the modernized ones
- 4 New curriculum was designed and prepared according national quality requirements

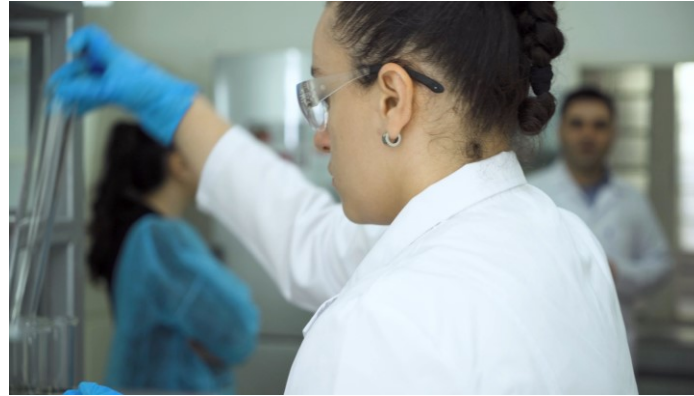
### Georgia & Ila University



- 3 new developed/modernized curricula
- National accreditation preparation and passing with new syllabus
- All 3 Curricula were renewed according the modernized ones
- 3 New curriculum was designed and prepared according national quality requirements

# RESULTS

## Innovative learning/teaching/research environments



**Room for online classes  
and meetings**

**ERLEP-Education and Research  
Laboratory for Environment  
Protection in the bases of CENS**

- ✓ Practices of CENS/ISEC and ANAU students since 2020
- ✓ Cognitive v of more than 80 pupil from 10 Yerevan Schools
- ✓ 2 scientific articles on ERLEP Laboratory
- ✓ 2 visits for ERLEP infrastructure quality control
- ✓ Dr. Andrey Garence
- ✓ Dr. Angela Fatorettu
- ✓ ERLEP Laboratory Involvement in all 12 Course Curricula
- ✓ 2 Project based education realisation using ERLEP infrastructure



# RESULTS

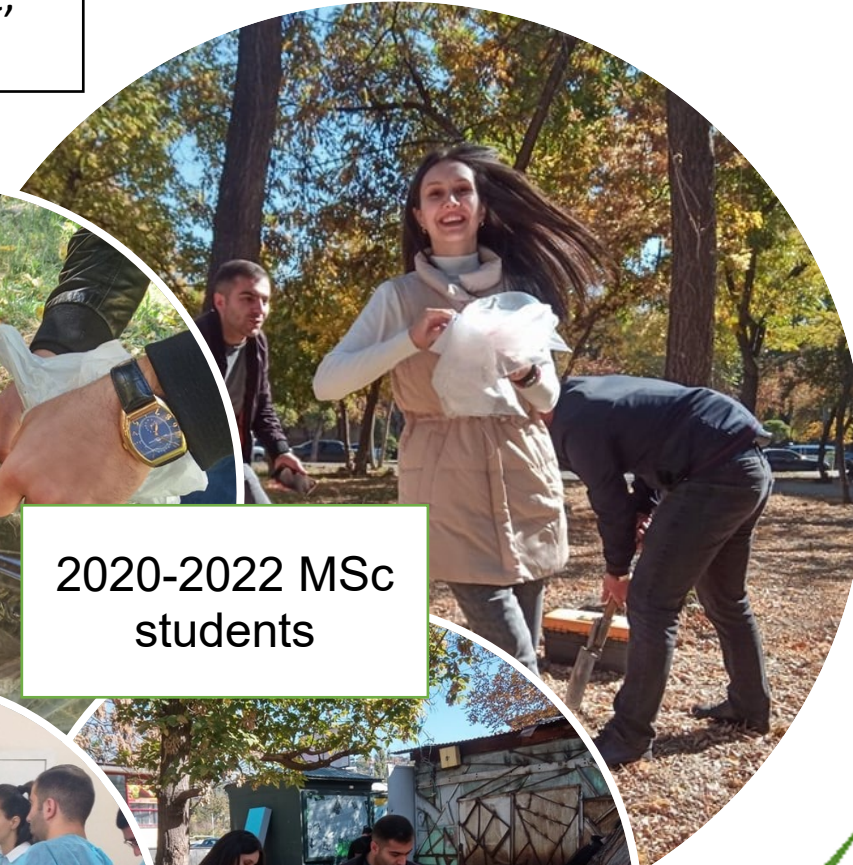
Project based education development,  
testing and implementation



2021-2023 MSc  
students



2020-2022 MSc  
students





# RESULTS

## Quadruple Helix

### 2 Signed agreements with Labor Market



CENS



Yerevan municipality



Hydrometeorology and  
monitoring center SNCO



Cadastre Committee of RA



RVSPCLS" SNCO SSFS  
MA RA



### 5 Manufacturing practices of 2019-2022 MSc students





# RESULTS

## VISITS and working meetings



### 4 Overall visits

Martin Luther University Halle-Wittenberg  
Universidade de Lisboa  
2x Università degli Studi della Tuscia (curr. & Lab.)



### 11 Working meetings

4 Online meetings    2 Summer schools  
1 kick-off meeting    4 working meetings



### Teaching Staff visits

6 visits from ISEC and GSU



### Technical Staff visits

8 visits from CENS and GSU



### 2 Visits to Armenia

kick-off meeting & Final Conference



### 2 Visits to GEORGIA

Work meeting & Summer School



### 3 Visits to EU

Martin Luther University Halle-Wittenberg  
Universidade de Lisboa  
Università degli Studi della Tuscia

### Aim of visits

- ✓ Lab visits
- ✓ Teaching
- ✓ Technical
- ✓ Kickoff
- ✓ Studying
- ✓ Summer school participation
- ✓ Quality visits
- ✓ Management visits
- ✓ Online meetings

# RESULTS

"Environmental Science Education for Sustainable Human Health"

2 Summer schools

"Sustainable and Innovative Approaches to Environmental Security"

## ARMENIA



102 Participants  
25 Lecturers  
60 Students  
18 Topics



## GEORGIA



40 Participants  
14 Lecturers  
20 Students  
13 Topics



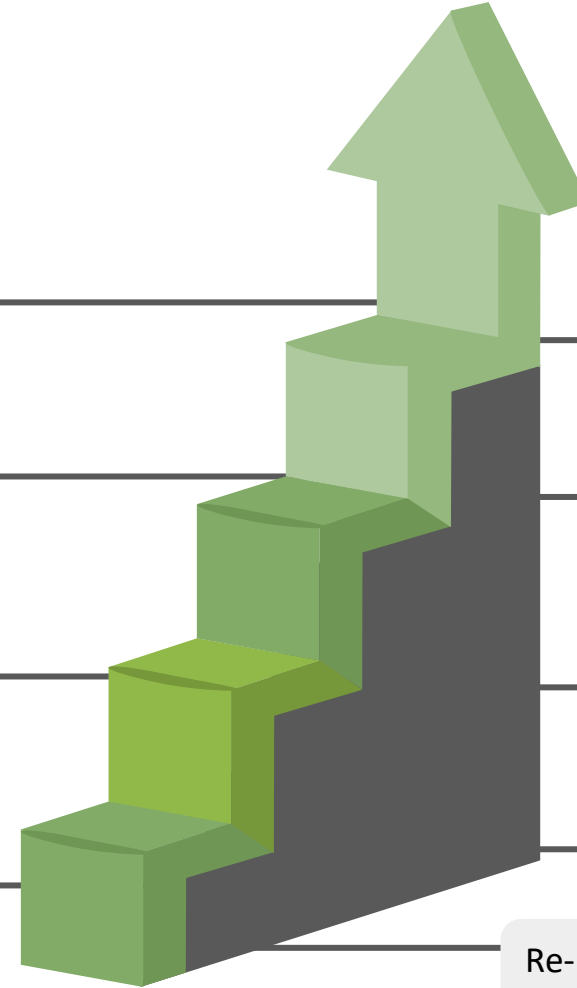


- ✓ Articles in Local & international media
- ✓ More then 2000 post views in social media
- ✓ 2 Dissemination video clips
- ✓ Dissemination materials: flyers, banners ...
- ✓ 2021,2022 Education & Carreer EXPO
- ✓ STARMUS Fest: Science camp, 100 000 participants

# RESULTS

Dissemination

## SUSTAINABILITY & FUTURE



Fixation of the discipline of environmental science in PhD level in Armenia

Keep tradition of summer and autumn young scientist school

Sharing the capacities with Armenian, Georgian universities and beyond

Dissemination of the studies and education via all scientific and social tools

Opening master courses in other universities using results of this project

Involving schools via visits, projects, science festivals etc.

New educational and scientific projects

Involving in global educational initiatives like GLOBE using built facilities

Re-use of all project material which are open for all



# THANK YOU !

