



# SWOT ANALYSIS OF MENVIPRO PROJECT IMPLEMENTATION AND MANAGEMENT IN ARMENIA



**NAS RA**  
INTERNATIONAL SCIENTIFIC  
EDUCATIONAL CENTER

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## GENERAL POLITICAL AND SOCIO-ECONOMIC CLIMATE

- The statistical analysis of the admission figures for 2017-2019 academic year in all HEIs in Armenia shows that Environmental Sciences are among the professions with the lowest demand and lowest admission figures with evident dominance of humanities and social sciences.

## Strengths

- Availability of the allowances, scholarships, tuition fee waivers, discounts of tuition fee
- Availability of governmentally funded places for students in the natural sciences

## Weaknesses

- Disinterest of students to continue and pursue their education in the second and third levels of education as soon as they find a job in the labour force.
- Non-availability of highly-paid jobs in the labour market in the environmental sciences (except for international organizations).
- Humanitarization of the education (dominant number of students are in the humanities and social sciences).
- Lack of advertising and promotion of the Environmental education among wider ranges of societies for awareness-raising purposes.
- Most places at the universities are based on tuition fees.

## REGULATORY FRAMEWORKS

- The draft law “On Higher Education” has undergone an amendment leading to a new edition of the law on “Higher Education and Science” in the form of a single legislative document.
- Strategic Perspective Development Program of the Armenian Government from 2014 to 2025
- Governmental program for 2018-2022
- Strategy on Development of Environmental Education and Upbringing adopted in 2018

## Weaknesses

- The current Governmental program lays down a very vague notion about the need to boost or promote environmental education in all the circles of education through informative TV programs and non formal education.
- The main law governing education and science is still in the stage of development so it is still unclear what this draft law envisages for the development of promotion of environmental education in Armenia.
- There are no specific governmental funding schemes available to modernize environmental education in Armenia

## **Demand for specialists in EP with postgraduate degrees**

- One of the major employers for ISEC NAS RA is the research organizations themselves where the professional departments of ISEC NAS RA are located. One of the ISEC's missions is to provide young specialists to the Academy of National Academy of Sciences of Armenia and ensure the integration of education and science.
- Starting from 2010 up to 2019, 9 master graduates have been working at the research departments of the Center for Ecological-Noosphere Studies of NAS RA and 4 Master students have continued their education as PhD students. A total of 65 ISEC graduates are employed at different research organizations at NA RA

## **Analysis of the Research Results on the Evaluation of the Educational Programme Competence 'Environmental Protection and Nature Management' by Employers**

The Quality Assurance Department ISEC has conducted a survey on the satisfaction of the programme competence "Environmental Protection and Nature Management" educational program for employers. The goal of this survey was to provide the ISEC faculty with the opportunity to consider employers' opinions while reviewing an educational program.

- Apart from the evaluation questions, there were also other optional questions. The questionnaire involved some open-ended questions where the employers were expected to answer in the open text format based on their knowledge, feeling, and understanding. Such kinds of questions referred to the basic skills and knowledge, which according to the employer, an employee was supposed to have.





- As a result of the data analysis it was found out that employers have emphasized the analytical capacity of their employees, their willingness to constantly learn and gain new knowledge, the capacity to plan and conduct research on environmental protection, since the average value for the mentioned features was the highest 4.91 out of the possible 5 scores.



Which subject courses were of most importance for the employees and their companies.

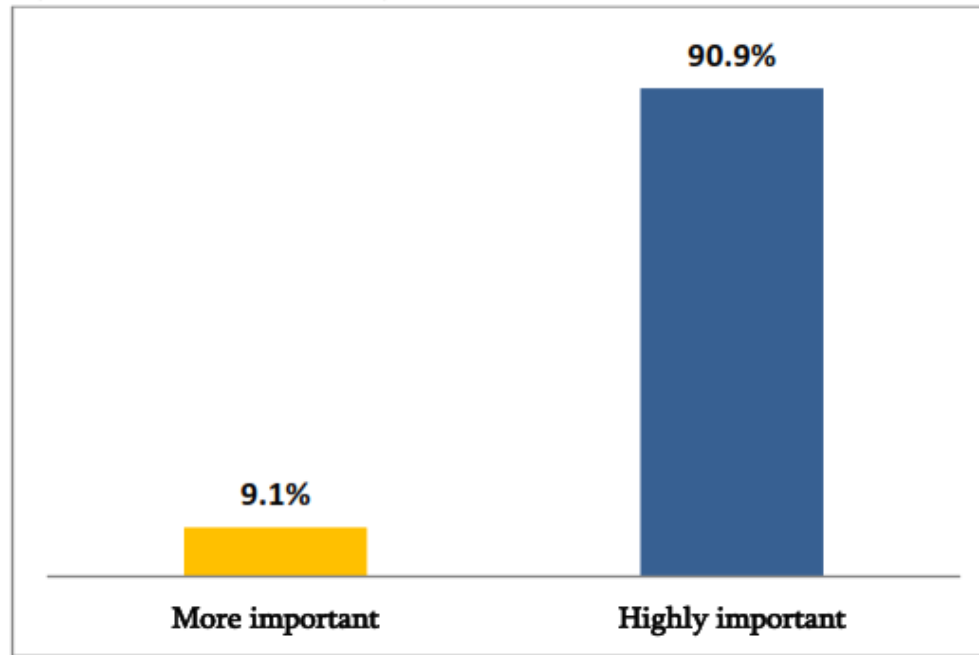
Most employers responded in the following manner:

**Table1. Frequency of selection of subject courses**  
**Subject Courses Listed per Frequency**

GIS  
Soil Quality Monitoring  
Environmental Geochemistry  
Environmental Statistics  
Urban Ecology  
Spatial Data Infrastructure and Data Management  
Landscape Planning  
Complex Geomapping  
Applied Remote Sensing  
Environmental Toxicology

Unlike other points, **research planning and implementation in the EP** are considered to be highly important with 90.9% of the employees and only 9.1% consider it to be more important:

**Figure 15. Research planning and implementation in the EP (%)**



Interesting data was extracted from the questions relating the knowledge, skills and abilities of the employees, where each employee had an option to submit three answers. The results are as follows:

Most important 3 pieces of knowledge (most frequent responses are highlighted in red):

- Field-specific professionalism – ability to write, to provide information in a precise and literate manner,
- Knowledge of field-specific legislation,
- Knowledge of languages – at least English and Russian
- Plant geography and geobotany
- Ecological physiology
- Toxinology
- Statistics
- Biology
- Professional knowledge
- Ecology
- Law

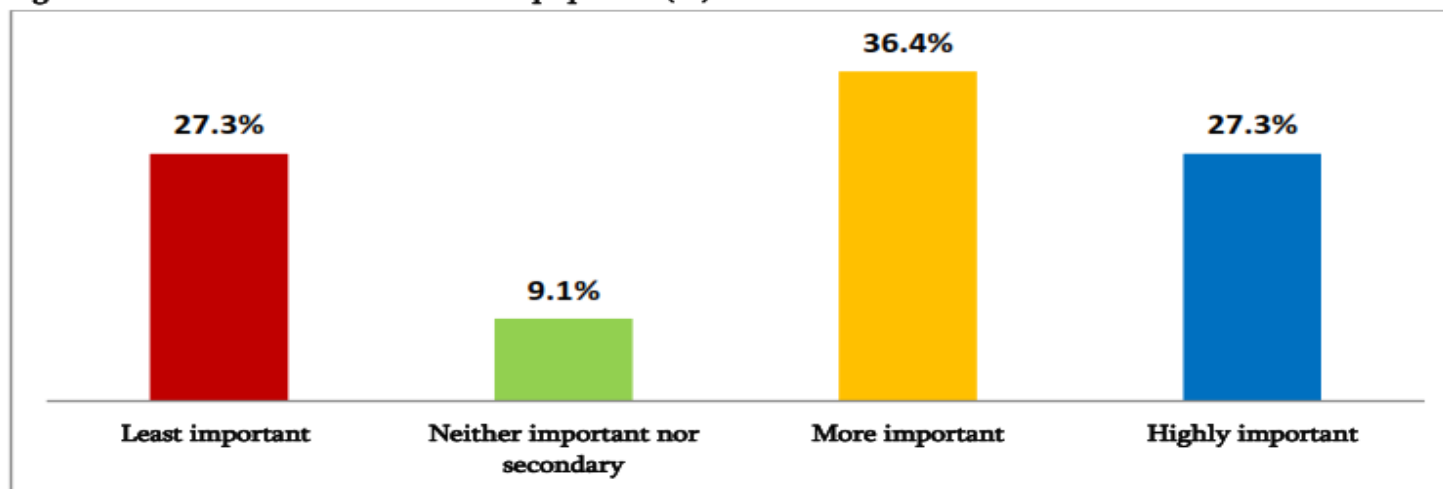
What about **3 most important abilities**, the employers mentioned the following options:

- Ability to digest and provide information quickly,
- Ability and willingness to work in a team
- Creative approach,
- Being willing and kind - this is what I can say based on my own experience
- Promptness
- Diligence
- Creativity
- Professional knowledge
- Language knowledge
- Ethics
- Field trips
- Ability to analyze the task
- Ability to identify problems on time,
- Ability to divide complex problems into logical components and to solve them step by step.

What about **3 most important skills**, the employers mentioned the following options:

- **Computer skills**
- Skills in writing in different genres
- Filming and editing skills
- Application of cutting-edge IT,
- Relevant qualifications,
- Application of knowledge in the specific field,
- English
- Mapping skills
- Creative thinking
- Communication skills
- Skills on conducting examinations on the spot and drafting reports,
- Ability to give realistic solutions to the problems based on the facts,
- Ability to prioritize working processes,
- Decision-making after evaluation of all probable solutions.

**Figure 14. Abilities to work with lab equipment (%)**



At the same, it is important to note that the surveyed employees valued the skills to work with the following lab equipment:

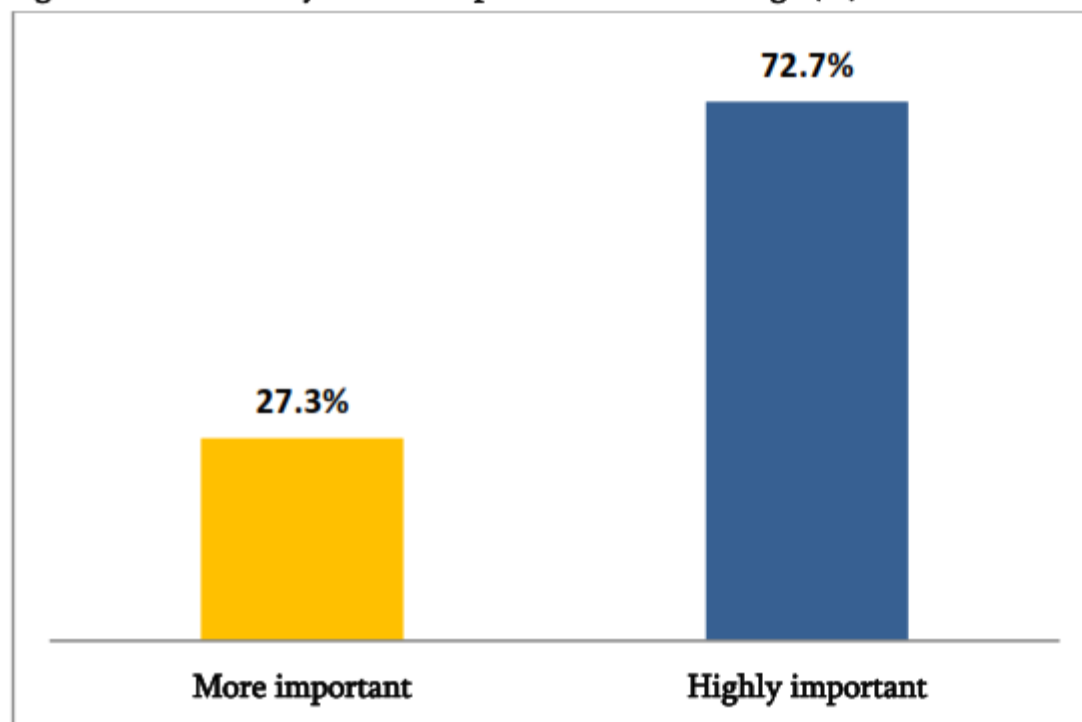
- pH-meter Hanna Checker
- GPSMAP64s Germiné
- HI 99121 Soil pH checker
- Scanning Electron Microscope
- Analytical scales

- Innov X-5000 – portable XRF analyzer
- Horriba U-53G – multiparameter water quality checker
- AquaCalc 5000 Pro – stream flow computer
- Aspirator ABA-1-120-02A – air dust sampler
- Gamma-spectrometry system supplied with a HPGe semiconductor detector and GENIE-2000 and LABSOCS software (Canberra)
- Radonometer RAD 7 (DurrIDGE)
- InSpector™1000 portable multi-channel analyzer (Canberra)
- E-600 portable radiation monitor (Eberline)
- HPLC
- Microwave digester
- Fixed wing UAV eBee SQ
- “AAAnalyst 800” Atomic Adsorption Spectrometer
- “AAS1N” Atomic Adsorption Spectrophotometer
- “ПФМ-БП” Flame Emission Photometer
- “СФ-46” Spectrophotometer
- “DR/2400” Portable Spectrophotometer
- “Trace DSQ” Gas Chromatograph/ Mass-Spectrometer



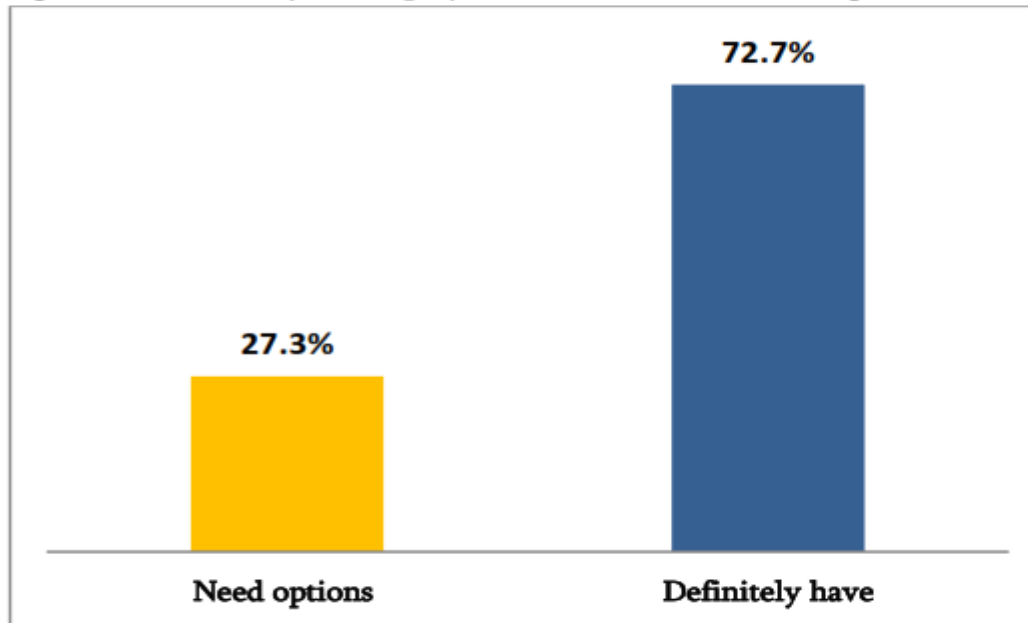
**Availability of narrow professional knowledge** is also important for the employees, as 72.7% of the surveyed employers think it is highly important, while 27.3% think it is more important:

**Figure 11. Availability of narrow professional knowledge (%)**



It's noteworthy that in all cases the surveyed employers noted that their employees **need short-term trainings**, where 72.7% selected definitely have, while 27.3% selected need options.

**Figure 16. Whether your employees need short-term trainings (%)**





The fields of trainings completed by the employers are of particular interest:

- Journalism
- Food Safety (veterinary medicine, phytosanitary)
- Management
- Geobotany
- Food risk assessment
- Environmental education and public awareness-raising
- Urban ecology
- Environmental geochemistry
- Environmental statistics
- Assessment of ecosystems
- Evaluation of damage caused to environment
- Environmental insurance
- Policy making and development

Another important datum is that the majority of the surveyed employers 90.9% mentioned that their company needs specialists in the environmental protection studies and only 9.1% mentioned they don't need such a specialist.



- **Main Universities providing environmental education**
- **YSU** - “Ecology and Management of Bioresources” Master’s degree program
- **ASPU** - “Environmental Chemistry (Environmental Protection and Nature Management)” Master’s degree program and
- “Environmental Sciences” Master’s degree program



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