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D3.1 ASSESSMENT OF TRAINING NEEDS

WP3. PROFESSIONAL DEVELOPMENT OF SCIENTIFIC STAFF



Deliverable 3.1. Assessment of training needs

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1 Executive Summary

The results from the assessments and analyses of stakeholder's needs (WP1), and outcomes out of course design of the MSc Study program "Sustainable Food Production systems" (WP2) were used as prerequisites for preparation and implementation of activities related to professional development of scientific staff.

Training needs of Scientific staff for all partners HEIs of Western Balkan countries (Albania, Bosnia and Herzegovina and Kosovo) have been assessed based on their needs in terms of scientific background improvements and also teaching competences, related in particular with ICT-based methodologies, student-centred approaches and modern teaching/learning environments.

According to the needs identified by partners seminar and lectures topics will be offered as trainings, according to the intention and the capacity to deliver specific courses. The report will be used by partners in order to prepare slides, joint activities and related material for seminars and presentation for relevant lectures. Seminar/Lectures, in particular, will be open to academics and faculty staff working for HEIs and will improve capacities of scientific staff in topics such as: advanced technologies related to food production and processing, quality and safety, as well as aspects related to sustainable management of food systems which includes food supply chain management, environmental management and economics.

2 Introduction

2.1 Background

STEPS Project has a very important component that is called “Professional development of scientific staff”, which is described in WP3. Implementation activities foreseen in this work package include measures for further professional development of scientific staff in HEI-s which are part of the Project.

Improvement of the capacities of scientific staff of the partner countries will be achieved through close cooperation between partner countries HEI-s and EU HEI-s in transferring/exchanging knowledge. Seminars and lectures from specific scientific topics related to Sustainability food systems will be delivered during the implementation of the MSc. Program.

2.2 Aim and report structure

The aim of this report is to present results out of the assessment of training needs of STEPS Project partners as well as to present the concept and practical measures to be undertaken by the STEPS project in addressing all such needs. The report will be used by partners in order to prepare slides, joint activities and related material for seminars and presentation for relevant lectures.

First part of this report is built upon results obtained in WP1 and WP2 respectively in “Assessment of training needs”; “MSc structure” and “selection of staff”. The second part of the report presents achievements by current project life cycle in terms of professional development of scientific staff delivery of seminars and lectures.

3 Assessment of training needs on HEIs partners

3.1 Background

Results from the assessments and analyses of stakeholder’s needs (WP1), as well as outcomes of course design of the MSc. Study program “Sustainable Food Production systems” (WP2) are needed to prepare and implement activities related to professional development of scientific staff. The objective of the assessment of training needs on HEIs was to identify needs of Western Balkan countries (Albania, Bosnia and Herzegovina and Kosovo) for skilled professionals, who will lead implementation of sustainable food systems in practice. D1.1. and D2.1. reports provided information for needs of different stakeholders in , Kosovo, Bosnia & Herzegovina in terms of high educated and skilled professionals, who will support and be engaged for introduction and upgrade of sustainable food production systems in the country.

3.2 Training needs in Albania

The idea for introduction of a new MSc programm in “Sustainable food production systems” was well received by STEPS Project stakeholders in Albania. The most important topics/subjects, mentioned by participants to be incorporated into the MSc program was as following:

Food process engineering, including "smart" and "environmentally friendly" design of food processing premises and technological lines;

Value-Adding strategies (waste management, food package issues (plastic, heavy packages in relation to CO2 emission));

Food policy, food law, and food regulation;

Economic issues such as management, marketing, planning, analysis, project planning and proposals writing

(Figure1 presents all training needs in Albania for STEPS MSc. Programme)

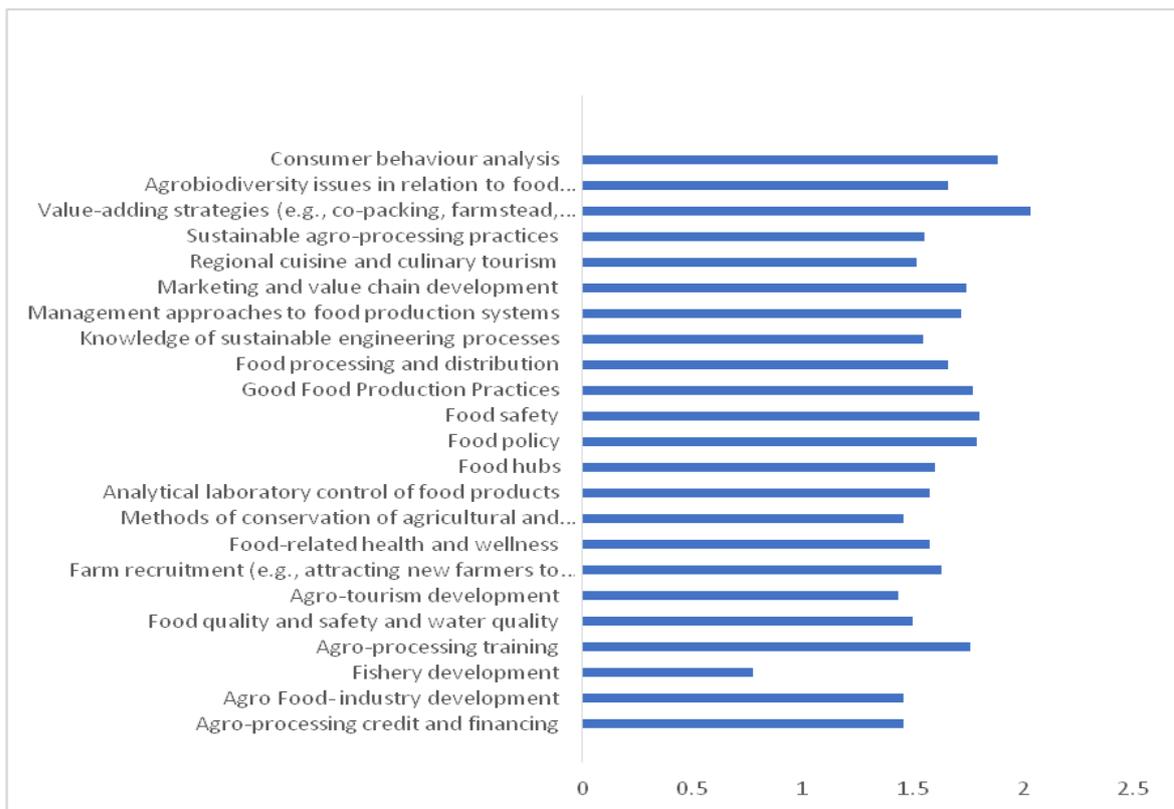


Fig.1 – Training needs in Albania (Source: AUT, UET,2019)

According to the training need identified by scientific staff of AUT were proposed to be trained for the topics of courses, as following:

Fundamentals of food production systems;

Agricultural and food industry waste management;

Traceability systems of food products and Innovative product development

Environmental Chemistry towards Food Processing

According to the training need identified by scientific staff of EUT were proposed to be trained for the topics of courses, as following:

Food ethics;

Economics of sustainability,

Sustainable food value chain management,

3.3 Training needs in Bosnia and Herzegovina

The analyses of stakeholder's needs (WP1), as well as outcomes of course design of the MSc. Study program WP2) in Bosnia and Herzegovina, have identified the following most important subjects/modules to be incorporated in to the course program.

Economic issues such as credit and financing, management, marketing, planning, analysis, project planning and proposals writing;

Soil and water management in agriculture;

Value-adding strategies (waste management, food package issues (plastic, heavy packages in relation to CO2 emission)).

Food policy, food law, and food regulation;

Food process engineering, including "smart" and "environmentally friendly" design of food processing premises and technological lines

(Figure 2 presents all training needs in Bosnia and Hercegovina for STEPS MSc. Programme)

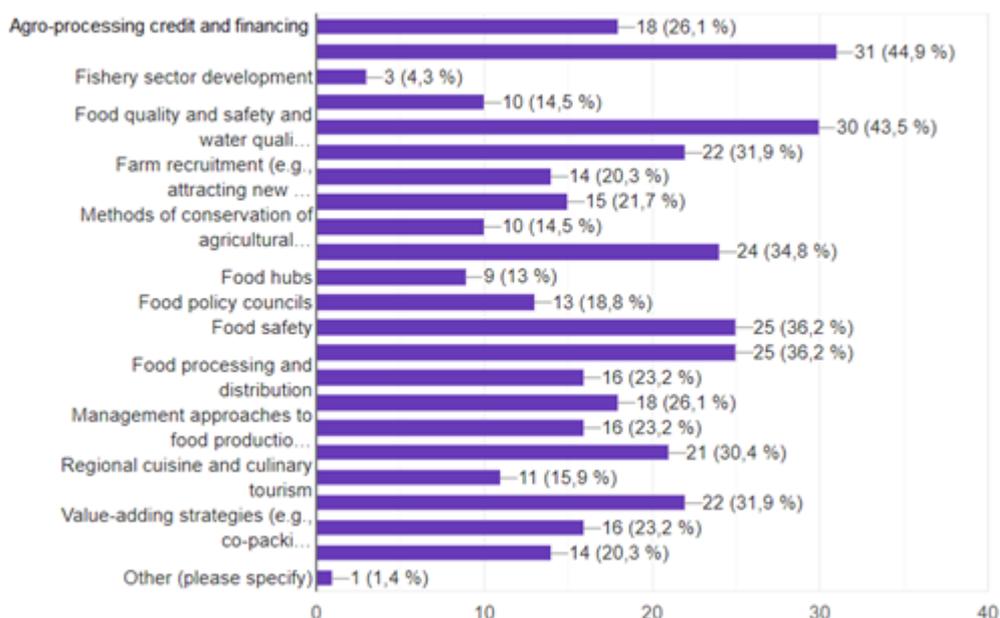


Fig.2 – Training needs in Bosnia & Herzegovina (Source: UNBI, UNSA,2019)

In terms of scientific backgrounds and teaching competences UNSA has proposed also the specific training needs in following subjects or modules:

Food ethics;

Economics of sustainability,

Sustainable food value chain management,

Sustainable water management in the food industry,

Processing by-products of the food industry, Sustainable energy using in the food industry;

Data analysis and decision making

In terms of scientific backgrounds and teaching competences UNBI has proposed also the specific training needs in following subjects or modules:

Supply chain,

Sustainable food production systems ,

Advanced food science and technology,

Sustainable management,

Management of food production systems,

Food Ethics, Low input agriculture,

Consumer science,

Rural development and Business economics and international trade in the agri-food sector.

UNBI has proposed also needs for training of their staff in terms of practical work on:

Kjeldahl Distillation Solutions for Food and Feed;

Automatic distillation unit (determination of nitrogen protein / nitrogen in raw materials, meat, cereals, poultry, oil seeds, food for domestic,

Analytical Instrument

Automated Titrators (Acid/Base; Redox; Precipitation, detect peroxides, salts);

color measurement instrument - portable colorimeters for measuring reflected color and color difference in a wide range (for color inspections of food, quality control).

The STEP-s partner universities from Bosnia and Herzegovina did not propose any other specific training needs. We assume that partner universities from Bosnia and Herzegovina may need trainings in the subjects mentioned above.

3.4 Training needs in Kosovo

The analyses of stakeholder’s needs (WP1), as well as outcomes of course design of the MSc. Study program WP2) in Kosovo, have identified the following most relevant subjects/modules to be incorporated in to the course program.

Economic issues such as: entrepreneurship and innovation, management, marketing, planning, analysis, project planning and proposals writing;

Nutrition science;

Value-adding strategies (new processing techniques, food package issues, sustainable development in food production);

Food policy, food law, and food regulation;

Food process engineering, including "smart" and "environmentally friendly" design of food processing premises and technological lines.

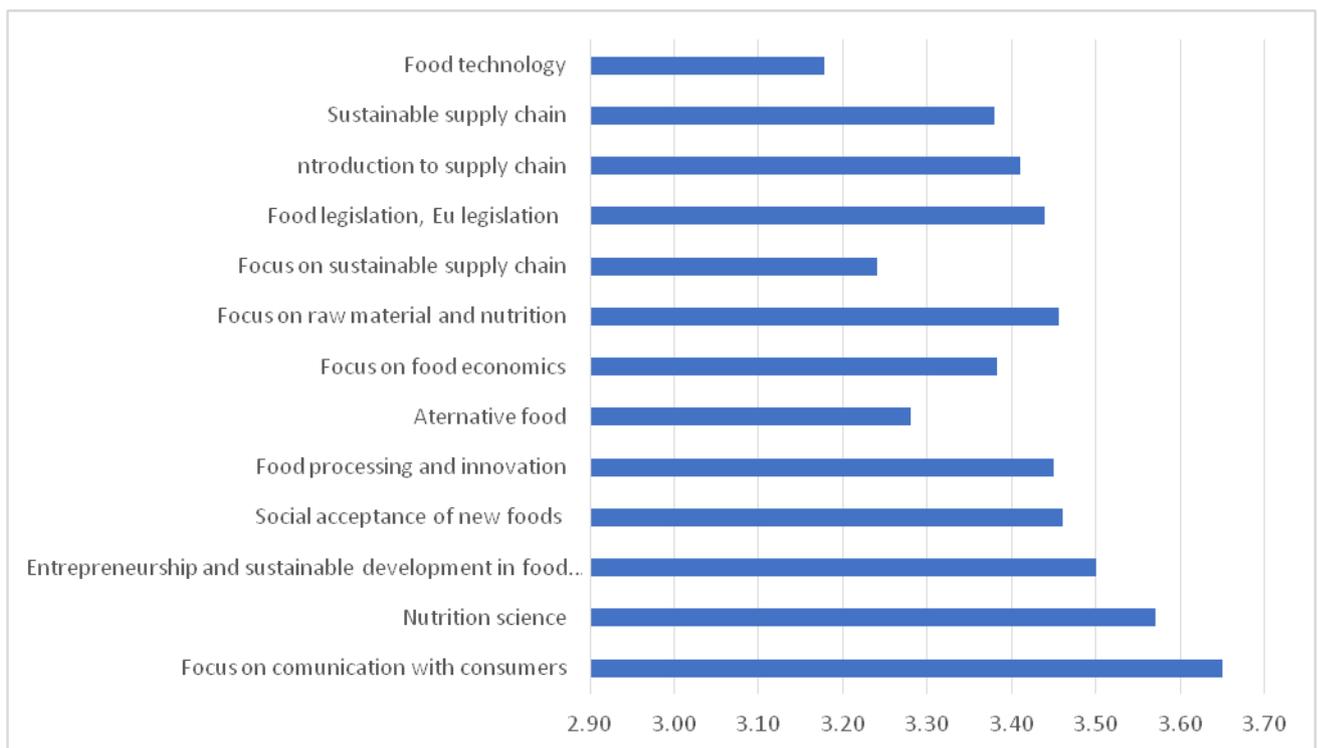


Fig.3 – Training needs in Kosovo (Source: UC, UHZ, 2019)

In addition to needs identified during assessment in Kosovo, UHZ proposes specific training needs in following subjects or modules such as:

Introduction to sustainability

Entrepreneurship in the food industry

Food legislation

Introduction to supply chain

Consumer science and sustainable consumption

Nutrition

In addition, UC proposes specific training needs in following subjects or modules such as:

Governance, policy and legislation in the agri-food sector

Food Ethics

Total Quality Management in the Agri-Food Sector

4Conclusions

The assessment in partners countries showed that there is a need to do lectures and seminars in topics which are relevant for sustainable food production systems. It is expected that presentation of lectures and seminars will improve capacities of scientific staff in topics such as: advanced technologies related to food production and processing as well as aspects related to sustainable management of food systems which includes food supply chain management, environmental management and economics. Apart from knowledge exchange in topics mentioned above, the scientific staff will also gain experience in modern teaching and learning methodologies.

5REFERENCES

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- WP2 of STEPS project proposal, D2.2 report - Selection of faculty staff and organization in working group report.