STEPS

MSc in Sustainable Food Production Systems

WP1

Job Market Research Findings

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WP 1 Key info

Tasks

1.1 Assessment and analysis of stakeholders' needs

1.2 Research on STEPS relevant programmes

1.3 Review and analysis of best practices

1.4 Development of mechanisms for continuous stakeholders input

WP1 Progress
Task 1

Dev.1.1 Report - Assessment and analysis report on stakeholders' needs	UET and AUT	UC and UNHZ	UNSA and UNBI, assisted by MESCS USK	CULS, USAMVB, TEISTE and ReadLab will record Western Balkans problems and needs of education in MSc level, by reviewing EU and international organisations' archives and publications. They will also record forecasts regarding the needs of the labour market in the Western Balkans region and the objectives the educational strategies in relation to the development of food production systems	15-Jun-19	a)Organisations/stakeholders contacted in total 200 = surveys completed 200 / AL = 70; Kosovo = 60; BiH = 70 surveys / organisations
						b) in-depth interviews / semi-structured interviews with over 40 stakeholders in total or 15 interviews per country: AL, Kosovo, BiH
						c) roundtables and visits in total 30 / or 10 visits and roundtables per country

General context

The concepts of sustainability of food systems is currently discussed for several reasons in the consortium of the STEP project. In the case of Albania:

1. the need to be in compliance with the Acquis Communautaire regarding environmental, agriculture, rural development, social and economic aspects of food systems,

2. the new emerging trends of Albanian consumer perceptions related to organic food and other value added strategies linked with sustainability (Kokthi et al, 2015,2017) and food safety issues (Kokthi et al, 2016) Guri et al 2019) ,

3. the need for more innovation and entrepreneurship skills in food systems,,

, rises the need to have a broader analysis of the food systems and sustainability and increases the need for new education programme in this direction.

General context (cont)

- The existing curricula of the main high educations institutions in Albania that offer skills and interdisciplinary competences in these directions do not have a special focus on sustainability and in the complexity of current the food systems.

- The analysis of the current existing study programmes in Albania shows that lack the multidisciplinary approach in study programmes related to food sector.

General context (cont)

➢The overall objective of the project is to provide the background and support the design of the STEPS programme in order to meet labour market and society's need and expectations.

➢One of the specific objectives of the STEP project, is to explore partner countries' needs in terms of skilled engineers and managers, which will support every aspect of the transition towards sustainable food production systems;

Methodology
survey instruments
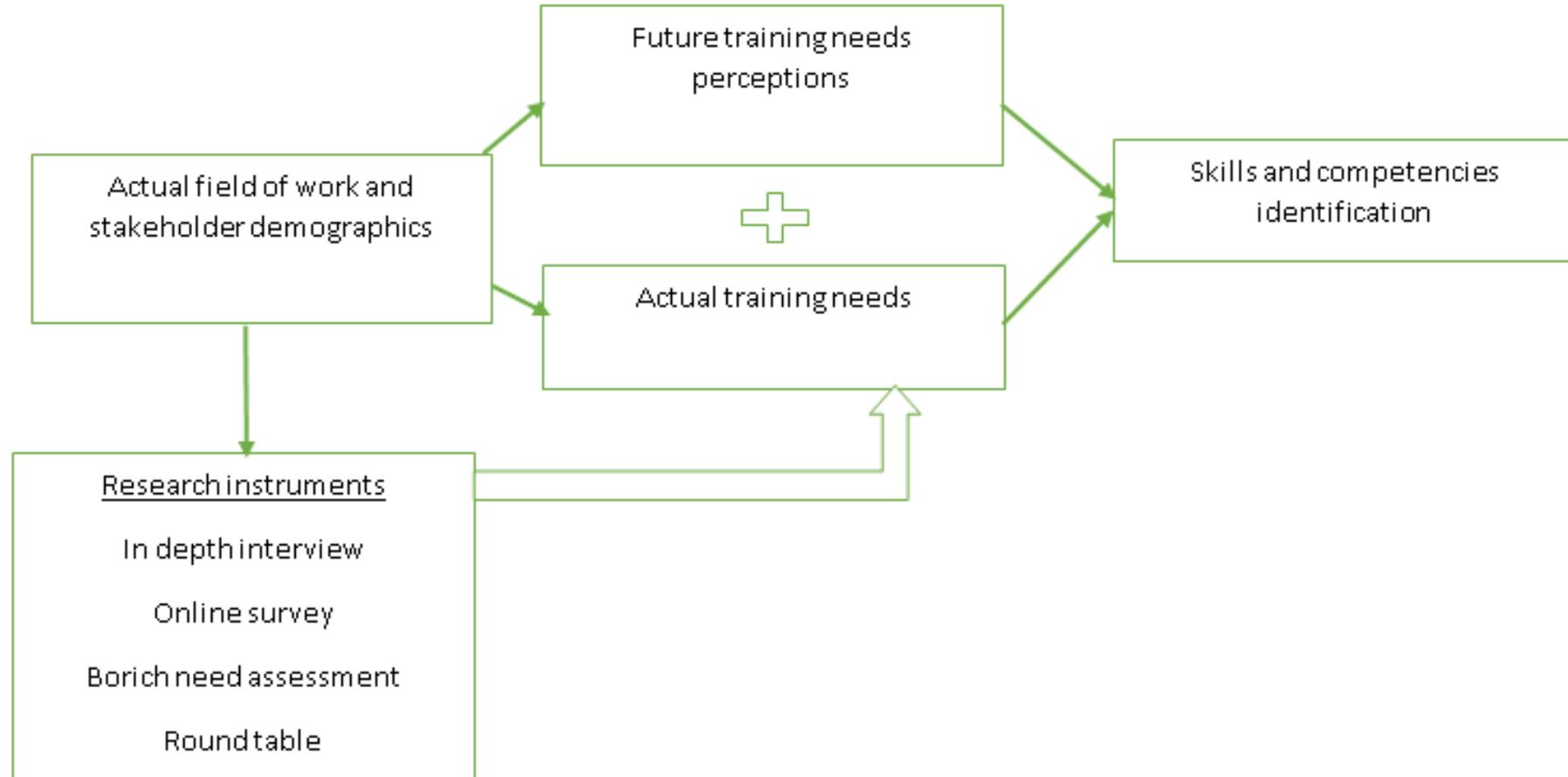
Methodology –sample selection

Snowball sampling is where research
participants recruit other participants for a test
or study.

Snowball sampling is a <u>non probability sampling method.</u>

Snowball sampling procedure is applied for governmental and
public stakeholders dealing food sector .
According to this sampling technique, the first subject recruited to
the sample group, provides multiple referrals.

According to Atkinson & Flint, (2001) some of the advantages of
this sampling technique are:
- the ability to recruit hidden populations,
- collect primary data in a cost-effective manner,
- plus the survey can be completed in short period of time.

Sampling

Industry

Local

- Producers

- Agroindustry

- Export food Entreprise

Civil Society

Local

- NGO-s

- Association

- Consumers

Academia

- Researchers

- Professors

- Research centers

Public authority

National

- The Ministry of Agriculture and Rural Development
- National food authority
- The institution for food and vet security

Local

- Municipalities service dealing with food systems
- Veterinary services

Methodology
Survey instruments

- **In depth interview**

- In depth interview is undertaken with several stakeholders dealing with food policy, academia, business sector, national and local administration dealing with food systems. etcetera

- In depth interview is structured in three main parts:

- in the first part is assessed the dynamic of food productions systems, the perceived changes in the last years, its comparison with the Eu and regional level and the general context of its development taking in consideration social and environmental issues.

- The second part deal with the perspectives and the market needs, more precisely the questions directed are focused on the actual qualifications, challenges that the work force is facing and the needed skills to better perform the activities while achieving the objectives, and the level of collaboration with the academia and policy sector.

- In the last part are collected the perceptions of the stakeholders related with the future of the sector, how this sector will be developed in the future, what is the role of EU integration, universities and other research bodies in this process.

Methodology
survey instruments

- **On line survey**

- The online questionnaire is structured as it follows, in the first part are collected demographic data of the respondents such as: the education, size of the organisation, position , years of experience, geographical area, actual sector of employment and the issues they deal with, and also their perceptions related to their training needs and challenges in food system (**questions from 1-9**).

- In the second part, perceptions on sustainability are collected, these questions are introduced in the online questionnaire in order to understand the perceptions on sustainability from the stakeholder perspective. Even though, these questions are not directly linked with the process of skills identifications it will help to project the skills for the future Msc program and to understand if stakeholders are aware of the sustainability and if the concept of the later is considered in their business (organisation) objectives (questions 9-12).

- In third part the questions 13, 14, 15 deal with the actual needs and future needs. Thirteen skills have included, and the respondents have chosen the required level of proficiency, this question will directly address the future and existing needs in the food system.

Data findings

- ***In depth interview data analysis***
- ***17 in depth interviews***
- The respondents represented a variety of actors in food systems such as:
    - Food safety sector at the Ministry of Agriculture and Rural Development,
    - Extension service employee at the MARD,
    - Institute of Food Safety and Veterinary services,
    - Technical supervisor of slaughterhouses,
    - National food authority,
    - Veterinary service,
    - Consumer protection agency,
    - GIZ and several businesses .
    - Academia

- **Demographics**

- They held different work positions, such as technical directors, supervisors, producers, managers etc.

- The experience within the food sectors of the respondents range from 4 years to 25,

- 41% of the respondents are women.

- Few of them have an experience on food systems abroad

Data findings

- **In depth interview-***What is the dynamic of the food sector in Albania ?*

- The dynamics of the food sector is positive as a result of several issues.

➤ First, Albania's urban population growth from the 90-s to today, the rural population decreased from 60 to 40 percent (in fact the rural population is even lower if we count emigration), thus creating the need for processed agro-food products.

➤ Second, the opening of Albania with the rest of the world after the fall of the communism, is accompanied with the alignment of its food consumption model with EU, which is based heavily on agro-processing economy.

➤ Third, since the 1990s, Albanian agriculture will increase its level of production, thereby increasing the need for the agri-food industry to participate in the process of calorie stabilization through processing.

Data findings

- **In depth interview** -*What changes have you noticed during the time you have worked in the industry?*

- The agri-food sector suffers from several major problems.

- The high transaction costs,

- the asymmetry of information,

- lack of traceability which rises the difficulty to guarantee the quality of the product.

- Another important issue dealing with the food sector in Albania is linked with the perceptions of Albanian consumer on the safety and quality of the products. Consumers perceive Albanian agri-food products as generally unsafe with unknown raw materials origin, suspicious and with excessive levels of colorants and additives etc (Guri et al 2019).

Data findings

- In depth interview -*What changes have you noticed during the time you have worked in the industry?*

➢The food sector has taken important steps to improve the quality and diversification of the products.

➢Several Albanian brands compete with the imported products and some foreign brands have disappeared from the market.

➢The increased competition force the agro-processors to increase the effort in product quality and food safety improvements.

➢The increasing awareness from the consumer side regarding the quality and the safety of the products is another important issue that push the industry to act in accordance with that.

Data findings

- In depth interview-*How would you describe the food production system in Albania so far?*

➢The development of agri-food systems can be defined as a two type speed system, from one side, large industrial food processing unit which have intensified their efforts and compete in a larger markets and small unit of production and processing that struggle in the process of quality standardisation.

➢In general the perception of the majority of the respondent is that the food production system in Albania has been in a constant process of improvement. In the last 10 years many entities have invested and are producing accordingly to the European standards.

➢Nevertheless, the system is facing inefficiencies because of the poor quality of the raw material in the country compared to countries in the region. In addition, in Albania are lacking professionals with training and skills in quality assurance and control.

Data findings

- In depth interview-*How do you see the future of the sector?*
  - ➢ The food sector will increase in the future for many reasons.
  - ➢ First because of the domestic growing demand and secondly because of the tourism development.
  - ➢ Albania is continuously investing in tourism development, the growing number of tourists will also indirectly increase the demand for semi-finished or processed products. This demand is specific at certain times of the year with specific quality characteristics, which at the present, the Albanian agri-food sector responds a little from the quantitative investments. Also from a qualitative point of view, in terms of food safety, further improvements are needed.
  - ➢ Domestic demand will increase steadily, because of consumption increase as a result of revenue growth, this is not only an Albanian trend but it is also observed in the western countries where the level of income growth is verified. As a consequence, the increase in revenues is accompanied by an increase in demand for processed products.

Data findings

- **In depth interview -***What challenges do you face in regard to work force?*
- *The respondents highlighted the following issues*
    1. Ageing farm population and lack of interest and motivation of youth to consider farming as a main occupation;
    2. Insufficient knowledge, information and skills on modern farm management, national and EU standards; weak compliance with standards;
    3. Limited vocational training capacity and insufficient range and quality of specialised advisory services;
    4. Missing skills in food safety management systems, equipment, laboratories, and as well as knowledge and skills of the labour force in management, entrepreneurial and marketing issues ;
    5. Lack of producers' knowledge of quality requirements and specifications of raw vegetables for food industry /Production does not comply with global GAP/ no body accredited to certify farms at reasonable costs;
    6. Poor technological expertise in informal and small wineries;
    7. Lack of knowledge of brands and trademarks and their protection;

Data findings

- **In depth interview-*What is the role of EU Integration?***

- The integration in the European Union plays an important role as the opening of the negotiations is linked also with an important chapter that deals with the food sector and agriculture. This process will definitely have an impact in terms of safety and quality standards which are expected to improve due to the EU accession.

- The accession in EU requires the provision of quality system of control, traceability, legislation approximation etcetera. The integration process can open the floor to niche markets for certain products that are lacking in the European market, especially products coming from quality production systems.

- The pre adhesion support schemes to agriculture and food sector, if the agro-food sector will have the possibility to absorb it, will have an important impact in the improvement of the sector especially in meeting the standard of food safety and quality.

- EU integration plays also an important role in rising the awareness of institutions, business operators and consumers on food quality and safety standards. The Eu integration process will also increase the level of awareness on food sustainability issues.

- EU integration, has also an important role in the capacity building process, as previously mentioned, the lack of competences and knowledges in all the sectors dealing with food systems, will require a more qualified and responsible labour force. As a consequence this will also have an impact on the quality of the products.

Data findings

- ***Online survey data analysis***

➤About 80 subjects dealing with the food sector in Albania has completed the questionnaire during June-August,2019

➤The education level of the respondent:
  - 7% of the respondent held upper secondary education diploma,
  - 13% a bachelor or equivalent diploma,
  - 69% of the respondents held as master degree diploma and
  - 11% have a PhD on food systems.

Data findings
Sample demographics

- The work experience of the respondents varies from 2 to 30 years.
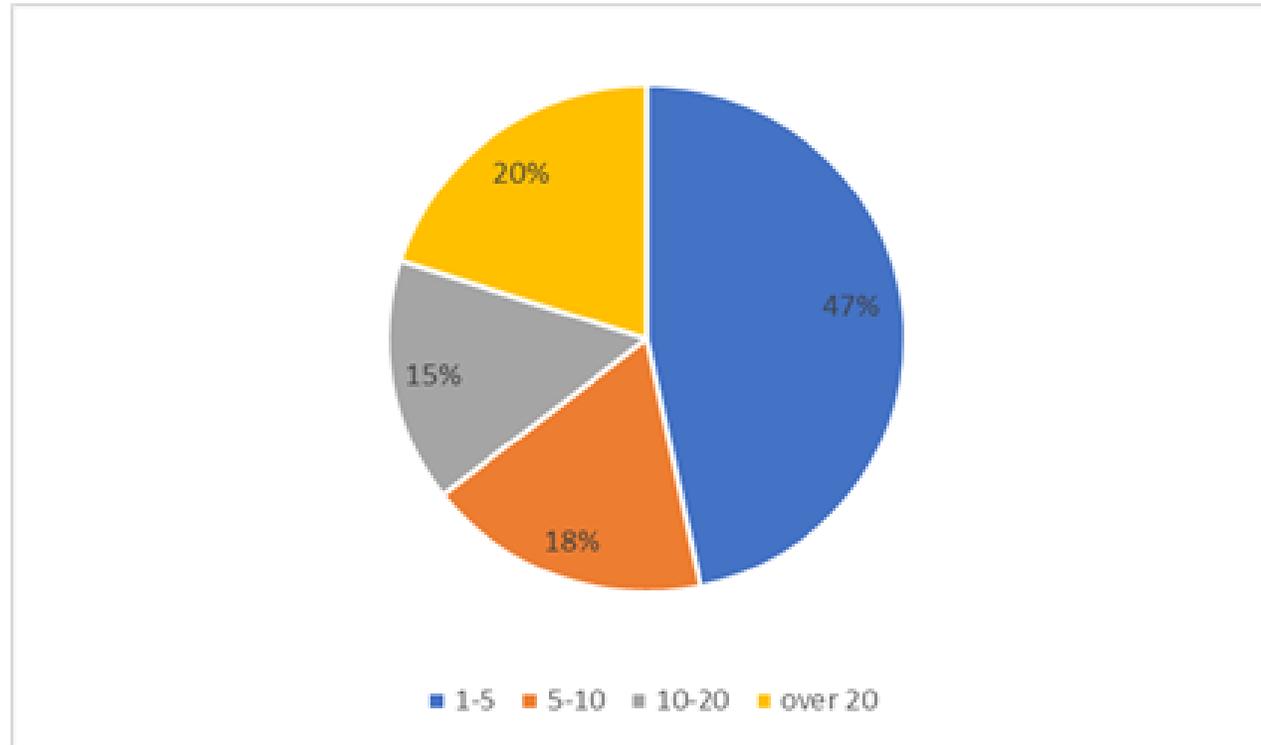
Data findings sample demographics

- **The size of interviewed companies**

- According to the Albanian Institute of Statistics, the classification of enterprises according to number of employees is as it follows:

- from 1to 9 are considered as micro,

- small from 10 to 49 employees,

- Medium 50 to 249

- Big more than 250
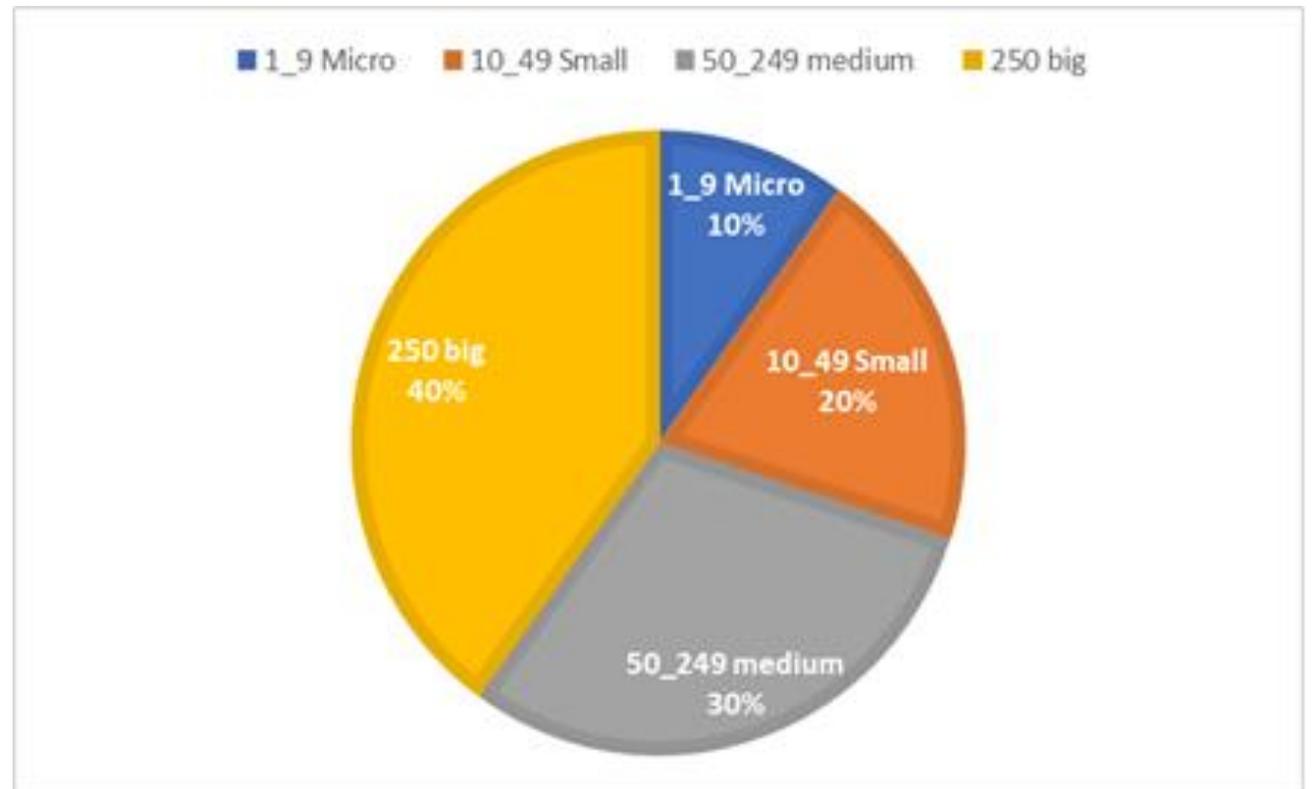
Data findings
Sample demographics

• Respondents actual working issue:

Pie chart showing:
- Working in value chains — 60%
- Conservation and environmental sustainability — 4%
- Incrasing food quality and safety — 7%
- Leadership and dissemination, in food systems — 29%
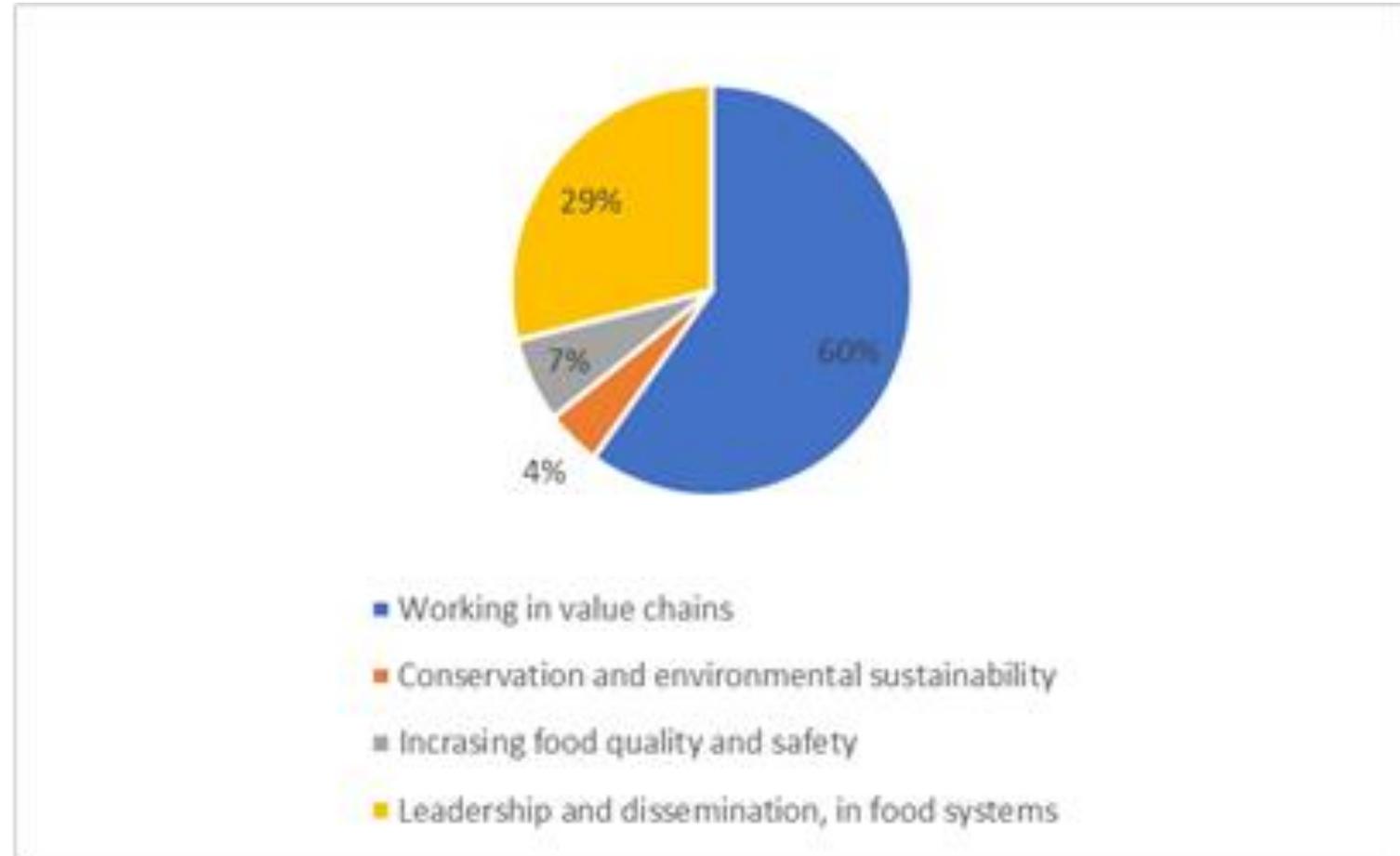
Data findings
Sample demographics

• Geographical area of operation
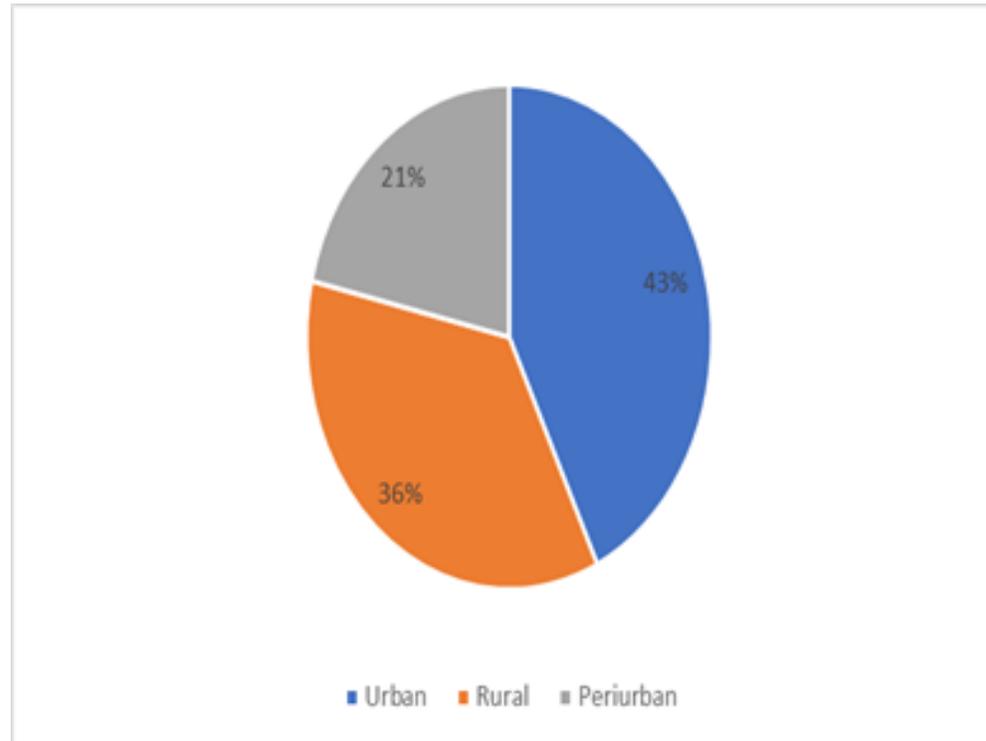
Data findings

- Questions on sustainability :

- What are the factors that the organisation considers as part of sustainability?

- What are the challenges your project, program, organization, or business faces at this time?

Data findings

- About 62% of the respondents considers that the main challenges that the organisation faces are: attaining financial viability,

- About 74% of the participants in this survey considers the pursuit of sustainability strategies is necessary to be competitive while the rest maybe will consider it in the future and will not consider.

Data findings

- *Online survey: What is the most important issue to consider in food systems*
- About 70% of the participant in the survey considers food safety and quality the most important issue,
- 10% food processing and distribution,
- 10% food production, while
- health, nutrition, and socio-political is considered as an important issue by 5% of the respondents.

Data findings
Need assessment

What are the activities that need further trainings on the food systems?

- ☐ Fundraising and grantsmanship
- ☐ Survey design and basic statistical analysis
- ☐ Economic impact analysis
- ☐ Food system mapping (geographic information systems (GIS)
- ☐ Conducting feasibility studies, on food waste and losses on major food value chains
- ☐ Development of improved tools and methodologies for food systems analysis
- ☐ Preparing business plans
- ☐ Computer-aided design (e.g., AutoCAD)
- ☐ Stakeholder engagement, conduct and follow-up meetings with policymakers and other stakeholders at the county level in the development of post-harvest reduction strategies
- ☐ Online presentation technology, Prepare and submit regular progress reports
- ☐ Optimizing the use of social media
- ☐ Curriculum development
- ☐ Community food assessments
- ☐ Other (please specify)

food quality and eu food quality scheme trainings(organic agriculture)

Data findings
Need assessment

- *What are the activities that need further trainings on the food systems?*
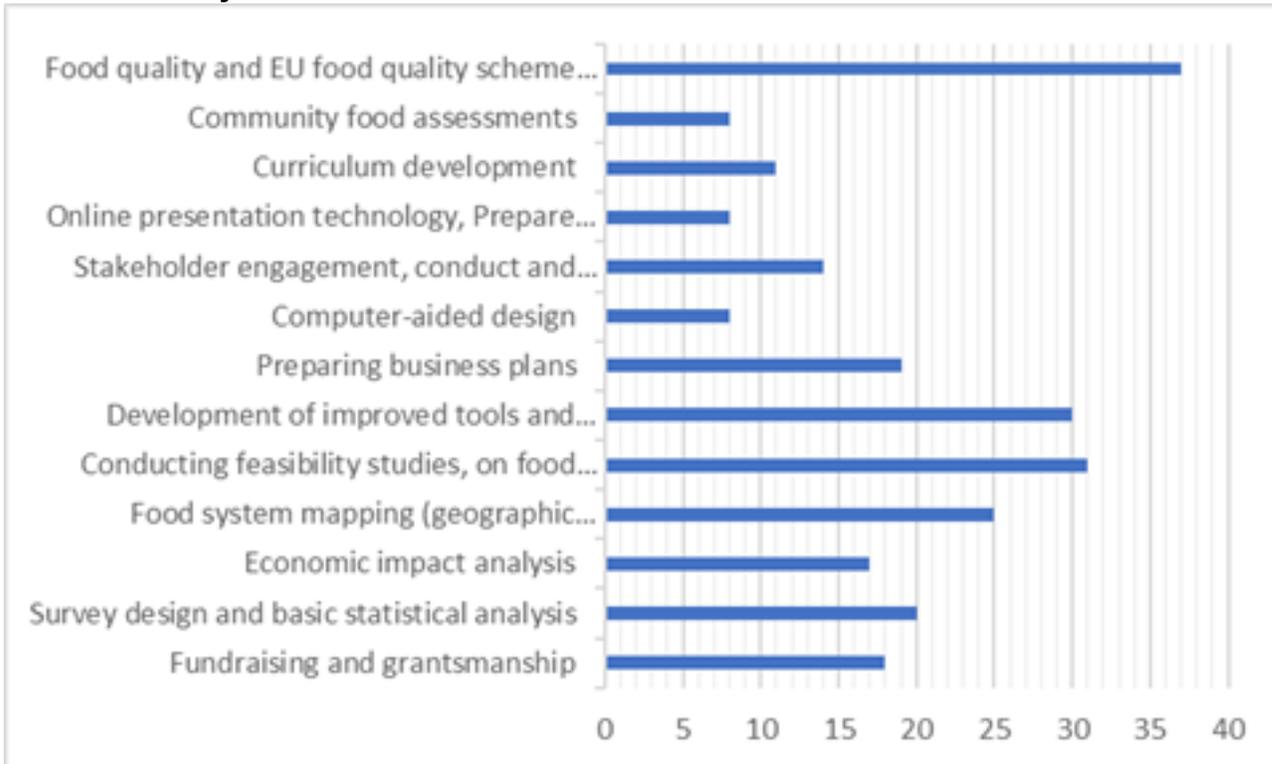
- Food quality and EU food quality scheme trainings (EU legislation alignment),
- Conducting feasibility studies, on food waste and losses on major food value chains,
- Development of improved tools and methodologies for food systems analysis,
- Food system mapping (geographic information systems (GIS),
- Survey design and basic statistical analysis

• *What are the skills*

Agrobiodiversity issues in relation to food... — 25
Value-adding strategies (e.g., co-packing,... — 11
Sustainable agro-processing practices — 16
Regional cuisine and culinary tourism — 6
Marketing and value chain development — 12
Management approaches to food production... — 6
Knowledge of sustainable engineering processes — 22
Food processing and distribution — 21
Good Food Production Practices (GFPP) — 19
Food safety — 16
Food policy councils — 7
Food hubs — 7
Analytical laboratory control of food products — 23
Methods of conservation of agricultural and... — 15
Food-related health and wellness — 18
Farm recruitment (e.g., attracting new farmers to... — 11
Agro-tourism development — 15
Food quality and safety and water quality — 40
Beginning of agro-processing training — 16
Fishery sector development — 4
Agro Food- industry development — 28
Agro-processing credit and financing — 17

0 5 10 15 20 25 30 35 40 45

Data findings
Need assessment

If you hire an additional employee, what topic and what is the
level of proficiency required, from very little proficiency to very
high proficiency.

| Topic					
Food technology	☐	☐	☐	☐	☐
Sustainable supply chain	☐	☐	☐	☐	☐
Food legislation, Eu legislation	☐	☐	☐	☐	☐
Introduction to supply chain	☐	☐	☐	☐	☐
Focus on raw material and nutrition	☐	☐	☐	☐	☐
Focus on food economics	☐	☐	☐	☐	☐
Focus on sustainable supply chain	☐	☐	☐	☐	☐
Focus on comunication with consumers	☐	☐	☐	☐	☐
Social acceptance of new foods	☐	☐	☐	☐	☐
Aternative food	☐	☐	☐	☐	☐
Food processing and innovation	☐	☐	☐	☐	☐
Nutrition science	☐	☐	☐	☐	☐
Entrepreneurship and sustainable development in food industries	☐	☐	☐	☐	☐

Data findings
Need assessment

If you hire an additional employee, what topic and what is the level of proficiency required, from very little proficiency to very high proficiency.
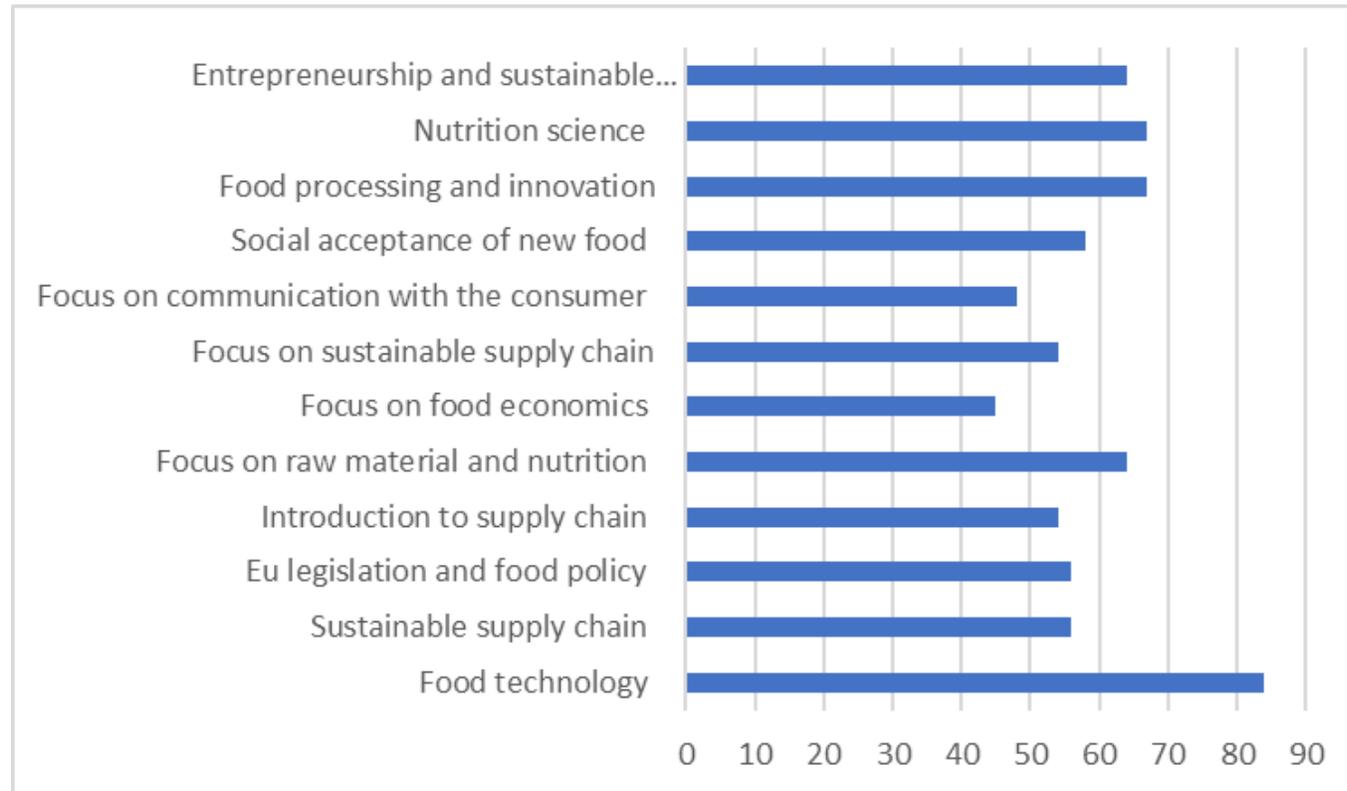
Data findings
need assessment

- Focus groups to be continued

Skills and competences	Current attainment of each competency					Mean	Rate the relevance/importance					Mean
	1	2	3	4	5		1	2	3	4	5	
Agro-processing credit and financing												
Agro Food- industry development												
Fishery sector development												
Beginning of agro-processing training												
Food quality and safety and water quality												
Agro-tourism development												
Farm recruitment (e.g., attracting new farmers to the community)												
Food-related health and wellness												
Methods of conservation of agricultural and livestock products												
Analytical laboratory control of food products												
Food hubs												
Food policy councils												
Food safety												
Good Food Production Practices (GFPP)												
Food processing and distribution												
Knowledge of sustainable engineering processes												
Management approaches to food production systems												
Marketing and value chain development												
Regional cuisine and culinary tourism												
Sustainable agro-processing practices												
Value-adding strategies (e.g., co-packing, farmstead, regional slaughterhouses)												
Agrobiodiversity issues in relation to food production systems												
Fundraising and grantsmanship												
Survey design and basic statistical analysis												
Economic impact analysis												
Food system mapping (geographic information systems (GIS)												
Conducting feasibility studies, on food waste and losses on major food value chains												
Development of improved tools and methodologies for food systems analysis												
Preparing business plans												
Computer-aided design												
Stakeholder engagement, conduct and follow-up												
Online presentation technology, Prepare and submit regular progress reports												
Curriculum development												
Community food assessments												
Food quality and EU food quality scheme trainings (EU legislation alignment)												
Food technology												
Sustainable supply chain												
Focus on communication with the consumer												

Relevant Masters and best practices

Dev.1.2 Report -Survey of STEPS relevant programmes	UET and AUT	UC and UNHZ	UNSA and UNBI, assisted by MESCS USK	CULS for the case of central and northern EU countries ▪ USAMVB for the case of eastern EU countries ▪ TEISTE for the case of southern EU countries ▪ ReadLab for the case of western EU countries In addition, ▪ CULS and USAMVB will review relevant MSc programmes in North and South America ▪ TEISTE and ReadLab will review relevant MSc programmes in Asia, Africa and Oceania	30-Jun-19	In total over 100 MSc programme analysed: 12 master programme analysed per each partner
Dev.1.3 Report -Best practices of MSc programmes	UET, AUT, UHZ and UC for the case of Western Balkans			CULS, USAMVB, TEISTE and ReadLab at European and at international level.	15-Sep-19	25 best practices reported: 3-4 best practices per partner

STEPS

Thank you!