

Addressing the current and Future skill needs for sustainability, digitalization and the bio-Economy in agriculture: European skills agenda and Strategy

Deliverable 1.4 “Focus group guidelines”	
Document description	Guidelines for FIELDS Focus Groups organization, conduction and reporting.
Work package title	WP1 Skill needs identification
Task title	Task 1.3 Country and EU Focus Groups
Status*	F
Partner responsible	ISEKI-Food Association
Author(s)	Line Friis Lindner, Luis Mayor
Date	23/07/20

**F: final; D: draft; RD: revised draft*



Table of Contents

1	TASK DESCRIPTION	3
2	SUMMARY	4
3	FIELDS FOCUS GROUPS	5
4	FOCUS GROUP PREPARATION	6
4.1	SELECT THE MODERATORS	6
4.2	SELECT THE PARTICIPANTS AND SEND A NON-FORMAL INVITATION.....	6
4.3	TECHNICAL SPECIFICATIONS FOR ONLINE FOCUS GROUPS	7
4.4	DURATION.....	8
4.5	LANGUAGE	8
4.6	FORMAL INVITATION	8
5	FOCUS GROUP CONDUCTION.....	9
5.1	ONLINE SETUP.....	9
5.2	INTRODUCTION	9
5.3	GROUP DISCUSSION	9
5.4	TERMINATION OF THE FOCUS GROUP.	10
5.5	AFTER THE FOCUS GROUP.....	10
6	FOCUS GROUP REPORTING	10
	ANNEX I. INVITATION TO FOCUS GROUP.....	12
	ANNEX II. INFORMATION SHEET.....	13
	ANNEX III. INFORMED CONSENT.....	14
	ANNEX IV. QUESTION GUIDE FOR THE FOCUS GROUP.....	15
	ANNEX V. FOCUS GROUP REPORTING TEMPLATE.....	19
	ANNEX VI. EXAMPLE OF EXCEL SPREADSHIT FOR DATA CATEGORISATION.....	20
	ANNEX VII. SKILL LIST.....	21
	ANNEX VIII. CHECK LIST FOR ORGANISING FOCUS GROUPS.....	29

1 Task description

As described in the work plan.

ISEKI will draft a first version of focus groups conduction guideline in M5. To ensure that all skills needs are covered, partners will revise and complete the guidelines with their own field specific information as follow:

1. **Agriculture & sustainability:** UNITO, CONFAGRI, ICOS, AP, UHOH, GAIA, CONFAGRI PT, SCOOP, GZS, UCLM, AC3A, FENACORE, Plant ETP, PA, FJBLT
2. **Food Industry and bio-economy:** WUR, ISEKI, ICOS, AP, UHOH, CERTH, ACTIA, SCOOP, GZS, LVA, FIAB, SEVT, ANIA, FJ-BLT,
3. **Certification, quality assessment and European harmonisation:** AERES, INFOR, LLL-P, EFB, EFVET,
4. **Digitalisation, Digital Technologies, Big data:** UNITO, WUR, UHOH, CERTH, SCOOP, AC3A, FJ-BLT, EFB
5. **Forestry:** AP, CEPI
6. **Water management:** UCLM, FENACORE,
7. **Soft skills:** UNITO, CONFAGRI, INFOR, EFB,

The guidelines will be circulated to partners (ICOS, AP, UHOH, CERTH, ACTIA, SCOOP, AC3A, FDE, LLL-P (involvement of their pool of experts)) under the responsibility of ISEKI who will provide the finalised guideline in M6 in English.

The focus groups will aim at collecting qualitative data about skills in the agriculture, forestry and bio-economy sector. They will be conducted by inviting at least five different profiles involved in each focus group: education providers, advisors, farmers, foresters, agri-food companies, forest industries and cooperatives. The aim of the focus groups is to gather information and data about:

- Identified needs in agriculture and forestry. Needs will be classified into 4 main categories: sustainability, digitalisation, bio-economy and soft skills
- Industry needs (extrapolate skills needed in agriculture and forestry based also on industry needs)
- Existing training in response to identified needs, and missing training for the identified needs
- Identified target groups for the training and curricula definition
- Best methods to deliver trainings to each target groups

The involvement of the forestry, food industry, and paper industry and water management specialists is an added value to the project, allowing to directly address the whole value chain needs and responding to the CAP objective for agri-food. It also addresses the concern of the “Strategic approach to EU agricultural research & innovation” to include the food and non-food supply chain in the discussion and develops new business model for farmers tackling the lock-in effect the sector often faces. Focus groups will bridge the industry (food, wood, fibre and bio-economy) with the farmers, foresters and education providers and provide an overview of the skills needs, skills gaps and training needs in the sector. The whole value chain of the sectors (with a distinction between food, fodder and animals) will be represented ensuring an exhaustive vision of needs.

Once the guidelines ready (available in English only, and partner will apply it nationally directly), the following partners will organise national focus groups:

1. CONFAGRI with the help of UNITO in Italy

2. ICOS in Ireland.
3. FIAB with the help of UCLM, FENACORE and SCOOP in Spain
4. AERES with the help of WUR in Nederland
5. ISEKI with the help of AP and LVA, JF-BLT.
6. UHOH in Germany, with the help of the Farmers Federation, BLL and BVL
7. EFB with the help of GAIA, SEVT and CERTH.
8. ACTIA will organise a brainstorming session in France with ACTIA experts' network. ANIA will organise a focus group in France, with the help of AC3A
9. GZS-ZKZP in Slovenia
10. CEPI will organize a focus group on forestry issues, and will participate to the one organised in Brussels.
11. One focus group will also be organised in Brussels with a more policy-oriented focus with the involvement of EU umbrellas organisations: LLL-P, EfVET, ISEKI, FDE, COPA – COGECA RES WP and EIP-AGRI focus groups members.

Umbrella organisations (ISEKI, FDE, LLL-P, PlantETP, EfVET, CEPI, EFFAT and Copa Cogeca WP RES) will help each country to gather the five different profiles when they don't cover the whole scope of stakeholders by reaching and directly engaging their networks. EIP-AGRI focus groups will be contacted and used where appropriate to facilitate the organisation. UHOH will lead the contact and involvement of EIP-AGRI focus group.

All focus groups will be conducted between M6 and M9 and recorded using high-quality microphone for analysis through IBM Watson Speech to text. The cloud service allows counting the occurrence of keywords. The software will be brought and the analysis will be performed by ISEKI.

Deliverables:

- *D1.4: Focus group guideline (M6) (ISEKI)*
- *D1.5: Focus group analysis (M9) (ISEKI)*

2 Summary

This document aims at providing guidance in the preparation, conduction and reporting of the Focus Groups indicated in section 1. The guidelines start with an introductory section (section 3), explaining the theory behind Focus Groups and the specific aims of the FIELDS Focus Groups. Furthermore, this section shows an updated table of the organisation of the FIELDS Focus Groups, since some changes in relation to the initial work plan were added (PA joined ICOS in the Irish Focus Group, CONFAGRI-PT joined the Spanish Focus Group, Plant EP joined Policy Focus Group). Section 4 provides recommendations for the preparation of the Focus Groups in terms of selection of moderators, participants' invitation and technical requirements. Instructions for conducting Focus Groups are given in section 5. Section 6 provides the methodology for transcribing, processing and reporting the information collected during the Focus Groups. Furthermore, partners have received additional and more detailed guidelines on how to transcribe the video-recordings, translate, and process the data quantitatively and qualitatively for the purpose of easing the overall data analysis which will be conducted in the months 8 and 9. The guidelines are complemented with no less important annexes:

invitation templates, templates for handling confidentiality issues, guidance questions for the Focus Groups, reporting and processing templates, skill lists and organisation check list.

Initially expected to be face-to-face Focus Groups, it was necessary to redo the guidelines to adapt the Focus Groups to online format, due to the critical Covid-19 situation in Europe during Task 1.3 (February-September 2020). This resulted in an effort increase for the preparation of the guidelines.

3 Fields focus groups

A focus group is a guided form of group discussion that collects qualitative data from the focused conversation of a “homogeneous” group. At the same time, however, a certain variation among participants is necessary to enable conflicting opinions to emerge among them. Working with focus groups is particularly useful in the early stages of developing studies and projects when ideas are developed, concepts created and requirements of the project are to be requested.

Focus groups are structured around a set of carefully predetermined questions, but the discussion should be free-flowing. Ideally, participant comments will stimulate and influence the thinking and sharing of others. Some people even find themselves changing their thoughts and opinions during the group discussion. As the method is based on the principles of communication, openness, trust and reflexivity, the size of the group should not be too large.

In the FIELDS project, the aim of conducting focus groups is to identify skill needs and future trends in agriculture, forestry and related sectors, by collecting information and qualitative data about:

- Identified needs in agriculture and forestry. Needs will be classified into 5 main categories: sustainability, digitalisation, bio-economy, soft skills and business-entrepreneurship
- Industry needs (extrapolate skills needed in agriculture and forestry-based also on industry needs).
- Existing training in response to identified needs, and missing training for the identified needs.
- Identified target groups for training and curricula definition.
- Best methods to deliver training to each target group.

Table 1 shows a list of the FIELDS Focus Groups:

Table 1. FIELDS Focus Groups

FG nº	Country	Main organiser	Collaborators
1	Italy	CONFAGRI	UNITO
2	Ireland	ICOS	PA
3	Spain	FIAB	UCLM, FENACORE, SCOOP, CONFAGRI-PT
4	Nederland	AERES	WUR
5	Austria	ISEKI	AP, JF-BLT, LVA
6	Germany	UHOH	
7	Greece	EFB	GAIA, SEVT, CERTH
8	France	ANIA	AC3A, ACTIA

9	Slovenia	GZS-ZKZP	
10	All*	CEPI	
11	All**	FDE	LLL-P, EfVET, ISEKI, PLANT-ETP, CEPI, COPA COGECA, EIP-AGRI

* Focus Group on Forestry issues, **Focus Group on Policy issues

4 Focus group preparation

4.1 Select the moderators

Ideally, the focus group is moderated by a team consisting of a facilitator and a rapporteur. The facilitator, as the word indicates, facilitates the discussion and asks the questions, and the rapporteur assists the facilitator, renders technical assistance and performs reporting activities. It is important to choose experienced facilitators, who bring along the following skills:

- Communication skills to set up an open and fruitful dialogue and facilitate discussions
- Experience with facilitating groups and leading discussions
- Good knowledge about the labour market in agriculture, forestry and related sectors (including bio-economy), sustainability and digitalisation

The rapporteur should be a native speaker and have good knowledge about the labour market in agriculture, forestry and related sectors, sustainability and digitalisation, thereby he/she really can follow the discussions and be quick with taking minutes about the main outputs. For the online conduction, it is important that the tasks are split beforehand, so that the facilitator can concentrate on the content-related part of the focus group discussion, i.e. small-talking in the beginning, asking questions, follow-up (according to the questions listed) and that the rapporteur is responsible for the technical moderation (i.e. chatting with participants if they have technical problems, assigning roles, etc.).

4.2 Select the participants and send a non-formal invitation

A functional focus group consists normally of 5-10 persons. If there are too many participants, a focus group is not effective.

Each focus group should include at least five different profiles (this is compulsory):

- education providers
- advisors
- farmers
- foresters
- agri-food companies
- forest industries
- cooperatives

If possible, invite at least two participants from the agriculture sector (Farmers, Cooperatives), two from the Industry sector (Food Companies) and two education providers (University, Vocational training, other....) to allow discussion not only between but also within sectors.

Further participants out of broader stakeholder circles can be invited, from whom valuable contributions are expected: politicians (including chamber representatives), NGOs (including consumers), market actors (conventional actors in wholesale, logistics and retailing or alternative food networks) and others. While diversity vivifies the discussion and enables a broader range of views, be careful in selecting further participants to avoid fragmenting the discussion too much. In the end, it is your decision which stakeholder groups to include.

Focus groups on forestry issues (organised by CEPI in Brussels) and the policy-oriented focus group also organized in Brussels (by FDE, LLPL-P, EfVET, ISEKI, COPA COGECA, EIP-AGRI, CEPI, Plant-ETP) might need different composition of participants when compared with the others.

As described in the DoW: "umbrella organisations (ISEKI, FDE, LLL-P, Plant-ETP, EfVET, CEPI, EFFAT and Copa Cogeca WP RES) will help each country to gather the five different profiles when they don't cover the whole scope of stakeholders by reaching and directly engaging their networks. EIP-AGRI focus groups will be contacted and used where appropriate to facilitate the organisation. UHOH will lead the contact and involvement of EIP-AGRI focus group." Should you need the assistance of umbrella organisations please contact ISEKI previously.

Before sending the formal invitation, we recommend that you approach the participants you would like to invite. This will allow you to fix the date of the focus group in a more flexible way, taking into account the availability of your participants. Explain to your contacts that the focus group will take place online, not everyone is used to take part in meetings online.

A personal approach, in person or on the phone, is the most effective way for the initial contact. We all get lots of email solicitations and have become accustomed to deleting them without qualms. A personal message is harder to ignore. In case you need to use emails, you will find an e-mail template at the end of this document (Annex I), which you can modify to suit your needs.

Consider motivating factors for participating and explain "What's in it for me?". For example, improving business through an extended network; impact on research and policies; national and international contacts.

4.3 Technical specifications for online focus groups

For some participants, it may be a new experience to participate in an online focus group. Therefore, it is important to prepare your participants well beforehand, already in the first invitation.

Inform your participants of the online web-conferencing tool you will be using and of any installations necessary. Ask your participants, if available to them, to test their webcam beforehand and to turn on their webcams during the focus group discussion. It is always beneficial to see each other. Also ask your participants

to use headsets or good microphones and to test these beforehand. And finally, ask your participants beforehand to remain in a room with little background noise. It is essential that the sound quality is good on the one hand to facilitate a smooth discussion but also to enable a good data processing afterwards.

4.4 Duration

An average focus group lasts around two hours, eventually include a short 5-min break in the middle. Inform your participants about the duration when inviting them and make sure that they have reserved enough time.

4.5 Language

The focus groups are conducted in the regional language as this supports the flow of dialogue. Make sure that you have an appropriate translation of the guiding questions.

4.6 Formal invitation

Once the date, programme and participant list are arranged, send formal invitations (e-mail, post mail) including detailed information about the focus group and ask participants for confirmation. Ask participants return the signed informed consent (see Annex II and III).

Approximately one week before the focus group takes place, send the 5 skills lists (Annex VII) to all your participants by email and ask your participants to:

1. Rank in order of importance (where 1 is most important and 5 least important) on each of the 5 skills lists, the 5 most important skills for the sector you represent (e.g. farmer, forester, food industry etc.) in your current job. If your job profile does not fit within any of the bio-economy skills lists, you may leave this category out. For the remaining 4 skills lists, you are obliged to rank the 5 most important skills. Please return your 5 lists with your rankings per email to your contact person before the focus groups takes place.
2. Take a look at your ranking on each of the skills lists and select among all 25 skills (or 20 if your profile does not match the bio-economy skills), the 10 most important skills and rank them in order of importance (where 1 is most important and 10 least important). Please also return your 10 most important skills by email to your contact person before the focus groups takes place.

Send e-mail reminders or make phone calls two days before the event as a kind reminder of the Focus group and the documents they must send.

5 Focus group conduction

5.1 Online setup

Before participants arrive, ensure that both facilitator and rapporteur log in at least 15 min beforehand to ensure that all interactive features work well (sharing screen, microphones, recording set-up etc.). Ask also participants to arrive at least 5 minutes before start to ensure any technical difficulties are settled and you can start on time.

Ensure that you are recording the whole session. The use of a transcription software is optional.

5.2 Introduction

You may use the ppt template to share during your focus group (not compulsory) – you can change the order and the information on the slides as you deem necessary.

In a few ppt-slides, the facilitator introduces him- or herself, the rapporteur and the organisation(s), including a short overview of the project and the agenda. Also give an outline of the purpose of the focus group and how the information will be used. Introduce each participant by using the information you collected beforehand.

Next, set the ground rules for the discussion, by explaining how the web-conferencing tool works including the main functions for participants (camera, chat function, microphone, etc.). Ask participants to keep their cameras on during the whole discussion but to mute their microphones when not speaking (this does not apply to the facilitator). Explain that participants may raise their hand before speaking (usually only for larger groups), and emphasize that the goal is not that participants come to agreement on the topics, but rather that all participants should be able to express their different opinions. Stress that everything that happens during the focus group is confidential, that the recording is for research purpose use only and no one will ever be identified by name.

The facilitator or the rapporteur may share each question on separate ppt-slides, and during the discussion track the main outcomes of the statements and discussions on the screen visible to all participants.

5.3 Group discussion

The group discussion is the centre-piece of a focus group. It is supported by the guiding questions (see Annex IV), which serve as a frame for the discussion. Allocate time to each section/question to ensure that you do not run out of time, although some flexibility might be necessary to raise additional questions, to deepen

certain issues or to give short explanations on terms or concepts. Take an attitude of active listening but never lose control over the discussion.

If necessary, pose an ice breaker question, such as “what is your typical working day like”, just to get people talking. It is good moderator practice to paraphrase and summarise long, complex or ambiguous comments. It demonstrates active listening and clarifies the comment for everyone in the group.

Be attentive to participants who may be silent or very talkative. Both require gentle attention from the moderator. Be sure that no one remains silent for too long; the more time that goes by without a given person speaking the harder it will be for them to speak. If there is a ‘silent’ participant, try initiating a circle of responses/comments so that the silent one speaks without being singled out. An overly talkative participant may require that the moderator interrupt. This can be done kindly with a ‘thank you Mr X, we’ll come back to you but now let’s hear from the others’. Do not be afraid to stop an aggressive speaker, the focus group success requires this.

5.4 Termination of the focus group.

Towards the end, summarise the discussed issues by pointing out common attitudes and differences in opinion as well. Offer the participants the opportunity to add aspects not mentioned before. Give an idea of how the outcomes will be treated. At the end of the session, thank the participants for attending.

5.5 After the focus group

Read your own notes immediately after the meeting to be sure that you noted all important information. Fill in the Reporting Template as described in point 4 below.

Write a thank you e-mail to the participants.

6 Focus group reporting

The main purpose of conducting 12 focus groups in 10 different countries where 5 similar profiles are present (namely (1) farmers, (2) advisors, (3) agri-food companies, forest industries and cooperatives, (4) foresters and (5) education providers) is to collect qualitative data about skills in the agriculture, forestry and related sectors.

For that reason, a well-prepared and well-structured data collection, data processing and data analysis is very important. Thus, each Focus Group organiser is responsible for providing data that is consistently collected and analysed to be able to track information across the profiles and the countries.

To that end, each Focus Group organiser should:

1. Transcribe the video-recorded file of the focus group in the language in which the focus group was conducted.

The basic idea of a transcription is to write everything down, as detailed as possible, so that the person conducting research has complete information about the ‘what’ was said and by whom. Because focus groups, in comparison to interviews, involve a larger number of participants, focus group transcription is more challenging and can be a time-consuming process. Therefore, a few basic guidelines for transcribing are presented here:

- Each and every word of the participants should be recorded on the transcript.
- The facilitator and speakers should be clearly differentiated in focus group transcription. Assign a number to each participant and facilitator and indicate in the beginning of the transcript an identification key that links the participant’s name with an anonymized number, such as “IP1”. For example:
 - IP1: I don’t know, but for me digital skills are synonymous with big data, computing.
- Write your transcript as soon as possible after your Focus Group took place, as you can better recall the voices of the persons shortly after.
- Save your transcription and keep it for at least one year after the conduction of the focus group.

2. Prepare a Focus Group Report in English

The Focus Group Report consists of two parts:

- **Basic information about the focus group**
 - Please fill in the reporting template in English in Annex V
- **Categorisation of the data collected during the focus group**
 - a. After having transcribed the video-file, read the transcript carefully to get a deeper understanding of the content.
 - b. Open an Excel spreadsheet (as example see Annex VI) and allocate a sheet to each question by labelling them according to the numbering in the Focus Group Guidelines (i.e. Q1.1, Q1.2, etc.)
 - c. Label three columns on each sheet: (1) one column for coding; (2) one column for the participant ID#; and (3) and one column for responses.
 - d. Enter each separate comment, response or idea on a separate line with participant ID attached.
 - e. When you have entered all comments, look for common categories or themes which promise to give answers to the questions posed across the entries for each question and type these in the column for coding.

It is recommended to prepare the transcript and the Focus Group Report shortly (latest 1 week) after the conduction of the focus group.

The Focus Group Report in English must be sent to the task leader, ISEKI-Food Association, the latest 31 July 2020.

Annex I. Invitation to Focus Group - e-mail template

What are the most important skill needs of Agri-food and Forestry employees? What will be their skill needs in the future?

Dear (XXXX),

I would like to invite you to take part in an online **focus group** (small discussion group) about identifying the current and future skill needs of Agri-food and Forestry employees. The whole event should last approximately 2 hours, and the **date will be decided later considering your availability**.

The focus group will provide an opportunity for you **to meet** different **stakeholders** (education providers, advisors, farmers, Agri-food companies, cooperatives...) **very relevant** in your country. In particular, we would like to collect information about:

- Skill needs in Agriculture, Forestry and Food Industry.
- Existing and missing training in response to identified needs.
- Target groups for training and best methods to deliver training.

More background information (date, detailed programme, venue or online link) will be sent before the focus group.

Your views will help us to further develop training curricula in the context of the ERASMUS+ SSA project "FIELDS" which will eventually be used in training institutions in different European countries. You may, in the future, have some benefits from participating in this study as its aim is to ultimately help workers in the Agri-food and Forestry sectors to be better trained for current and future market and social demands.

The focus group will be online and we will send detailed instructions for participating.

If you would like to take part in the focus group, please let us know by contacting (insert name and contact number) or e-mailing (insert e-mail address). It will be held between May-July 2020. Please propose some dates on which you are available.

Yours faithfully

XXXXXXXXXX

Annex II. Information sheet

Organising
institution

logo

(optional)

[NAME OF THE ORGANISING INSTITUTION]

PARTICIPANT INFORMATION SHEET

This focus group (small discussion group) is part of a research project on current and future skill needs of workers in the Agri-food and Forestry sectors. The research project (FIELDS, ERASMUS+ SSA project) is being carried out by a consortium of 30 partners from 12 European countries. The focus group is organised by [Department/Faculty/School, Name of the Organising institution]. Event organisers are [Title and name of the Facilitator] and [Title and name of the Rapporteur]. [Title and name of the Facilitator] is [position and affiliation] and you may reach [him/her] by email at [e-mail address]. [Title and name of the Rapporteur] is [position and affiliation] and you may reach [him/her] by email at [e-mail address].

Any and all information you may give will be treated in the strictest confidence. The researchers will take notes during the discussion but everything you say during the focus group will be fully anonymised. The outcomes of this research may be published externally in a journal, on a website or via a conference presentation. Your personal details will be kept strictly confidential and your name will be removed in any work published as a result of this research. However, we do want to be able to refer to the positions and some aspects of the identities (e.g., country) of those who are involved.

To participate in this research project, you must attend the 2-hour online focus group beginning at [hour] on [date]. You must complete and sign the attached consent stating that you understand that you are taking part in a research study and that the focus group will be video recorded. Those are the only requirements.

There are no risks associated with participating in this research project. You may, in the future, have some benefits from participating in this study as its aim is to ultimately help workers in the Agri-food and Forestry sectors to be better trained for the current and future market and social demands.

The video recording of the conversation group is confidential and will be used only by [Title and name of the Facilitator] and [Title and name of the Rapporteur] in preparing the summary report of the focus group. However, we cannot guarantee this confidentiality beyond the limitations of the law. We do not intend to use the video recording for any further studies and will not keep the recording any longer than 1 year.

Your participation in this research project is completely voluntary and you may withdraw at any time.

If there is any aspect of the project or your participation that you would like to discuss further, or feel you may need support with, please do not hesitate to get in touch with one of the organisers of the focus group

Annex III. Informed consent

Organising
institution

logo

(optional)

[NAME OF THE ORGANISING INSTITUTION]

INFORMED CONSENT FORM

I will attend an online focus group that is part of a research project on current and future skill needs of workers in the Agri-food and Forestry sectors. The research project (FIELDS, ERASMUS+ SSA) is being carried out by a consortium of 30 partners from 12 European countries. The focus group is organised by [Department/Faculty/School, Name of the Organising institution]. Event organisers are [Title and name of the Facilitator] and [Title and name of the Rapporteur].

I understand that I will not be asked to give any personal information at this conversation group. However, due to the small size of the group, I understand that it may not be possible to keep my participation completely confidential or to remain fully anonymous. I may withdraw from the conversation group at any time.

I am aware that the conversation group will be video recorded and that data collected during this conversation group will be analysed and shared with partners in the FIELDS project, and that this data may be published as part of a scientific report. I understand that the data will be confidential within legal limitations and that the video recording will be destroyed after 1 year.

Please complete the following (Circle Yes or No for each question)

I have read the participant information sheet Yes/No

I understand the information provided Yes/No

I have had an opportunity to ask questions and discuss this study Yes/No

I have received satisfactory answers to all my questions Yes/No

I am aware that the focus group discussion will be video-recorded Yes/No

I have read and understood the information in this form. My questions and concerns have been answered by the researchers, and I have a copy of this consent form. Therefore, I consent to take part in this research project

Participants Signature: _____

Name in Block Capitals: _____

Date: _____

Annex IV. Question guide for the Focus Group

These questions are the guide for Focus Groups 1-10 (see table 1 at the beginning of this document). Focus Group 11 on Forestry issues can either use these questions or adapt them as considered by the organisers. Focus Group 12 on Policy Issues will need other questions which will be prepared by the organisers.

In italics comments for the facilitators.

Please note that ALL the participants have to answer ALL the questions, unless the question is labelled as "Group Question". As facilitators it is your responsibility to fulfil this condition.

If the focus group seems to be reluctant, consider starting with this initial theme, to get the discussion going. Otherwise, begin with theme 2.

You may use the PPT template.

Optional! Theme 1: Getting started, background information and defining the participants' networks (5-15 minutes)

Briefly present yourself, the rapporteur and the project objectives. The participants are presented by the facilitator.

Q1.1. Considering the whole food/forestry sector in which you are involved, who would you describe as being your most important collaboration partners in your daily work?

Facilitator's notes to theme 1:

Theme 2: Skills (1 hour)

DoW:

- Identify needs in agriculture and forestry. Needs will be classified into 5 main categories: sustainability, digitalisation, bio-economy, soft skills and business-entrepreneurship skills.
- Industry needs (extrapolate skills needed in agriculture and forestry based also on industry needs).

Q2.1: You received by email 5 skills lists on (1) sustainability skills, (2) digital skills, (3) bio-economy skills, (4) soft skills and (5) business and entrepreneurship skills and you were asked firstly to rank in order of importance on each skills list the 5 most important skills in the sector you represent. Secondly, you were asked to select among the 25 skills the 10 most important skills that you think are important in the sector you represent. Please present your 3 most important skills!

The facilitator kindly asks each participant to present their three most important skills by reading them out loud, explaining their choices. An excel file with all the top ten rankings of the participants will be shown in the screen, which must be prepared in advance based on the participants answers. At the same time, the facilitator writes down in his own notes the presented findings of each participant to be able to ask more specific questions to initiate a discussion. This may facilitate the discussion and lead to further questions about frequency of skills, predominance of skills or categories of skills.

Examples of questions to facilitate the discussion:

Why soft skills are so important for farmers?

Why sustainable skills hardly appear in the top ten ranking for industry workers?

Why in general digital skills appear in the top ten in most of you?

...

Q2.2: Would you add any skill you find missing in the lists? Why is/are important?

The facilitator shows on the screen the excel file with the ranked skills table in question 2.1. Then question 2.3 is asked as a group question.

Q2.3: How do you think your current top ten list will change within the next 5-10 years? Will there be other skills in the list? Or will the ranking have changed?

Q2.4: You were asked to rank your 10 most important skills in the sector you represent, do you see differences within your sector depending on the job level of responsibility?

The facilitator will direct this question specifically to the representatives of the farmers, foresters and food industry stakeholder profiles only. Responsibility levels are: 1) low level, responsible of a task or group of tasks; 2) medium level, responsible of a group of persons; 3) high level, responsible of the farm/enterprise.

Facilitator's notes to theme 2:

Theme 3. Training (45 minutes)

DoW:

- Existing training in response to identified needs, and missing training for the identified needs.
- Identified target groups for the training and curricula definition.
- Best methods to deliver training to each target groups.

Q3.1: Based on your identified 10 most important skills in the sector you represent, which of these skills need more training? Why?

It is expected to have different training needs for farmers and industry employees. Again you may lead the discussion through questions as "explain your choices" or "do you find similarities/differences within and between sectors?"

Q3.2: Based on your experience, is the available training suitable to cover the previously identified training needs? Which is the missing training? (Group question)

Question 3.2 is rather difficult to be answered individually. The question will be first asked to education provider/s, and then start a discussion with the whole group. The same procedure for Questions 3.3 and 3.4.

Q3.3. Do you think skills need to be trained in different ways, depending on the people to be trained? (Group question)

Please consider a “normal situation” and not only the current measures due to COVID-19. Here the facilitator may redo the question: "do you find different training methodologies depending on age, position in the company, education background, living in rural/urban area, type of task (manual task, office task, computer task)... or any other characteristic that can create subgroups in your working sector.."? And give some example: a digital skill can be trained at home through online resources for a young person but maybe needs in-person training for a senior.

Q3.4. What type of training is available to support learning and knowledge transfer? Base your answers on the preferred methodologies that meet the overall sector needs. (Group question)

(Group question)

The question maybe first asked to education provider/s. He/she will probably speak about different training formats/methods (online training, face-to-face, CoP, mentoring, coaching, shadowing...), whereas the others listen. Then ask the question to farmers and industry employees. The facilitator can also give examples of different trainings formats/methods.

Q3.5. Is it important for you to receive a professional certification for your training? Why?

Here the facilitator first explains what certification of a professional is.

Facilitator's notes to theme 3:

Final Question: (0-15 min)

4.1 Is there anything we have not discussed that you find important to update farmers, foresters and food industry employees skills, facing the current and future market/social needs?

Annex V. Focus Group reporting template

Basic information

Date		
Location		
Language		
Focus group main responsible partner organisation and assisting organisations	Main responsible organisation	
	Assisting organisation	
Recruitment: explain how the participants were recruited (method (email, phone), through personal contacts, etc.		
List of participants with the identification key related with the stakeholder profile to which the person belongs (agriculture, education, forestry etc.).	ID1: farmer ID2: education provider ID3:...	
Executive summary (1-2 A4 pages) summarising your understanding of the group dynamics, what happened in the group, major findings, conclusions, and recommendations.		

Annex VI. Example of excel spreadsheet for data categorisation

	A	B	C	D	E	F	G	H
1	Coding	ID	Responses			Coding categories:		
2	A	1	ID 1:the most important skills in my work are related to the ability to communicate with others			A	Communication	
3	B, C, D	2	ID2: For me as a farmer it is important that I can manage my time, and we recently changed to organic farming and I would like to get some skills on the topics of sustainability			B	Time management	
4	A	3	ID3: For me communication is also important in my daily work			C	Organic farming	
5						D	Sustainability	
6						E		
7						F		
8						G		
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								

Annex VII. Skill list

Sustainability (Sheet 1)

Climate change skills

1. Mitigation and adaptation to climate change incl.
 - Climate change competences (weather extremes; interdependency of climate systems and biospheres);
 - Climate change mitigation (e.g. fostered CO₂ sequestration) and adaptation (e.g. species composition) via sustainable forest management)

Sustainable management of resources

2. Efficient use of resources and logistics
3. Improved agri-food system productivity incl.
 - Sustainable management of water, streams and energy in the food industry
4. Active management of natural resources
5. Integrated pest management incl.
 - Sustainable use of pesticides
6. Biodiversity incl.
 - Detection and support of biodiversity of plants and animals
7. Sustainable metrics and certification incl.
 - Public and private schemes for certification (e.g. Green labels)
 - Life Cycle Assessment, Life Cycle Analysis data, including PEF (Product Environmental Footprint)

Sustainable Business and Governance Models and Environmental Policy

8. Environmental Management Systems (EMS)
9. Corporate social responsibility associated with sustainability reporting/press releases
10. National, EU and international environmental policies, regulation, subsidy and support programmes

Circularity

11. By-products and co-products valorisation incl.
 - Treatment and reuse of reclaimed water
 - Inorganic waste management practices
 - Agricultural valorisation of organic fertilizers
 - Management of slurry in livestock farms
 - Biodegradable and compostable materials (incl. packaging)
 - Valorisation of forestry residues and industrial side new technologies in pulp and paper manufacturing
 - Use of by-products of timber harvesting (nutrients circulation vs nutrients removal)
 - Circular economy and recycling in the pulp and paper industry
 - Reuse, recycling and valorisation of raw materials, contact materials (packaging), by-products and waste in the food industry

Energy

12. Generation, storage and use of renewable energies incl.
 - Next generation bio-refineries and bio-product mills and their outlets
 - Residual forest wood products to produce energy
 - Design, building and operation of renewable energy systems
13. Identification of renewable energy systems suitable for the farm / business enterprise
14. Identification of raw materials and waste for energy production in the farm/business enterprise
15. Identification of energy consumption and demand on the farm / business enterprise
16. National and EU Energy Market

Specific skills for sustainable agriculture

17. Good Agricultural Practices incl.
 - Global GAP and international standards of good practices in agriculture
18. Water management incl.
 - Water quality control and protection
 - Water saving cultivation
 - Tools and models for saving water and selecting the proper crop pattern at the farm level
 - Irrigation management and techniques
 - Advisor services for irrigation water management to improve training, information and knowledge transfer
 - Optimization of irrigation system design and management and the associated energy
19. Soil Nutrient and Health Management incl.
 - Soil protection and improvement
 - Maintenance of permanent vegetal soil cover and minimum tillage
 - Techniques for carbon sequestration in the soil

Specific skills for sustainable forestry

20. Impact of timber harvesting and other forest management practices in wildlife populations and habitats.
21. Protective role of forests and their management in mountainous areas
22. Multifunctional forests and ecosystem-services

Specific skills for sustainable food industry

23. Organic production requirements
24. Analysis of contaminants
25. Sustainable packaging

2: Digitalisation (sheet 2)

General digital skills

1. Everyday usage of digital technology to communicate (e.g. use of computer, tablet or mobile phone, word processing, sending emails, browsing the internet safely, making video calls, social media networks)
2. Data handling and analysis
3. Data protection
4. Cloud technology
5. Smart connected devices (e.g. general principles, categories, requirements, limitations, and vulnerabilities)

Digitalisation for business

6. E-commerce and e-marketing
7. Digital entrepreneurship
8. Digital information and services (e.g. product prices and standards, payment services, advisory services)

Digital tools to support production and production management

9. Digital supplier management systems
10. Digital product quality management systems
11. Warehouse management systems
12. Digital food traceability systems
13. Digital reversed logistics systems
14. Digital pest control systems
15. Decision support systems (DSS) incl.
 - o Control technology with decision support tools (DST)
 - o Use of web SIG platforms (or ICT platforms) including sensors network models and tools for DSS within a feedback process
16. Robot and drone technology

Specific skills for digital (smart) farming

17. Farm Management Information Systems (FMIS)
18. Precision animal health and productivity management systems (incl. feed intake management)
19. Field operations management systems (incl. soil, plant, seed and yield management systems)
20. Digital irrigation control systems
21. Digital soil nutrient control systems
22. Weather data management systems/software
23. Climate control systems (incl. indoor and roofed farming (greenhouses and roofed fields))
24. Robot and drone technology in agriculture

3. Bio-economy (Agriculture, sheet 3a)

Basic skills in production operations and production management

- 1 Planning and coordinating production
- 2 Performing farming operations
- 3 Equipment maintenance
- 4 Logistics and storage incl.
 - o Storage techniques and requirements of different raw materials
 - o Transportation of livestock (incl. droving), produce and supplies
 - o Warehouse management
- 5 Calculating, handling and managing risk
- 6 Health and safety management and operations incl.
 - o Drive and operate agricultural machines safely
- 7 Product traceability

Technologies, products and production approaches

- 8 Urban, peri urban and rural area agriculture
- 9 Conventional versus /and Organic farming incl.
 - o Organic farming
 - o Hybrid farming (combination of organic and conventional farming methods)
- 10 Controlled Environment Agriculture
- 11 Crop diversification and rotation
- 12 Plant new breeding techniques
- 13 Agricultural biodiversity
- 14 Genetically Modified Crops
- 15 New industrial crops and bioproducts for the bioeconomy incl.
 - o Bioproducts: Biofuels, Bioplastics, Biochemicals, Textiles, Cosmetic & Pharmaceuticals
 - o New industrial crops: cameline, hemp, castor, guayule, etc.
- 16 Biofertilizers, compost, bio digestates

Healthy farm

- 17 Animal care and animal welfare during transport and production
- 18 Livestock efficiency/ management/ biosecurity
- 19 Crop protection incl.
 - o Prevention of crop disorders
 - o Use of plant protection products
- 20 Integrated pest/disease management
- 21 Plant and animal breeding for resilience and robustness

3. Bio-economy (Forestry and related industries, sheet 3b)

Production operations, technologies and production approaches

1. Characteristics of forests, geographical differences and ownership patterns
2. Sustainable forest management practices and planning
3. Reforestation, afforestation and restoration of forest ecosystems
4. Forest equipment/machinery and maintenance
5. Health and safety management and operations
6. Calculating, handling and managing risk
7. Products of forestry incl.
 - Harvesting on the focus of high quality / high value logs (right shaping of logs)
 - Logs for construction
 - Timber for pulp and paper industry
 - Timber for energy supply (material use before energy use)
8. Process operations in the pulp, paper, timber and cork industry
9. Safety and health in the pulp, paper, timber and cork industry
10. Equipment/machinery and maintenance in the pulp, paper, timber and cork industry
11. Automation in the pulp, paper timber and cork industry
12. New technologies in pulp, paper, timber and cork manufacturing

Healthy forest

13. Prevention and management of natural disturbances (e.g. floods, drought and forest fires)
14. Seedling damages (caused by e.g. deer, moose and other mammals)
15. Forest disease control and prevention
16. Water quality in forests

3. Bio-economy (Food Industry, sheet 3c)

Skills for food quality and food safety

- 1 Quality management, quality assurance and quality control incl.
 - o Sensory evaluation and qualities
- 2 Food safety management, food hygiene and food safety control

Skills for food production and manufacturing (industrial performance)

- 3 Cleaning and preparation
- 4 Production operations and management incl.
 - o milk processing
- 5 Health & safety management
- 6 Engineering maintenance
- 7 Preservation and packaging
- 8 Shop floor control and other control operations
- 9 Risk assessment and management
- 10 Continuous improvement

Logistics and supply chain skills

- 11 Supply to production and supplier management
- 12 Transportation (modalities and planning) & logistics management
- 13 Management of inventories
 - o Goods received
 - o Pick and pack
 - o Storage & storage systems (FIFO)
 - o Stock management
- 14 Traceability

Other skills

- 15 Food security
- 16 Ethics for food
- 17 Emerging technologies
- 18 Food Labelling/Certifications
- 19 Food defense
- 20 Food fraud

4. Soft skills (Sheet 4)

Fundamental soft skills

1. Communication
 - With others at work and in the daily life
 - Languages
 - Reporting and briefing
 - Public speaking
 - Press releases
2. Problem solving
3. Analytical, critical and creative thinking

Self-management skills

4. Demonstrating positive attitudes & behaviours
5. Being resilient, adaptable and proactive
6. Organisation, planning, visioning and strategic thinking
7. Equality skills (interculturalism, gender, empowerment, harassment)
8. Safety awareness
9. Reflecting on own performance

Teamworking and interpersonal skills

10. Team building (incl. conflict resolution, negotiation, flexibility)
11. Teamwork character (incl. responsibility, honesty, empathy)
12. Conflict management
13. Change management

Business soft skills

14. Providing leadership
15. Managing personnel (incl. delegating, motivating, assessing)
16. Networking
17. Innovative thinking

Education skills

18. Digital tools to support learning and distance learning
19. Learning at work
 - Learning by doing
 - Learning from others (mentoring, shadowing...)
 - Learning each other
20. Learning continuously (lifelong learning)
21. Training others (training skills, training tools, course design, assessment...)
22. STEM knowledge (Science, Technology, Engineering and Mathematics) to understand and cooperate through the whole food/bioproducts value chains

5. Business and entrepreneurship skills (Sheet 5)

Marketing

1. Monitoring market activity and conditions
2. Direct marketing in agriculture, food industry and forestry
3. Sales and marketing
4. Local marketing associations
5. Selling skills – Building buy-in to an idea, a decision, an action, a product, or a service
6. Customers service

Financial skills

7. Business planning/model and strategic management
 - Scenario/foresighting/forecasting
 - Recognize and realize business opportunities
 - Key Performance Indicators (KPIs) management
 - Knowledge management
 - Stakeholder management
8. Basics of financial issues incl.
 - Balance sheets analysis
9. Purchasing/renting (equipment, structures, seeds, fertilizers, herbicides, animal feed and other supplies)

Fair, collaborative and competitive value chains

10. Cooperatives (values, legal framework and management)
11. New value chains / new business models incl.
 - Values-based supply chains
 - Short food supply chains
12. Collaboration/cooperation across all sectors in the food chain

Skills for research, development and innovation

13. Social expectations/Consumers science & behaviour
14. Interdisciplinary knowledge to assess the whole value chain
15. Funding opportunities
16. Product development incl.
 - Laboratory and desk research
17. Project management
18. Knowledge transfer in the bioeconomy chains
19. Innovation management and its deployment on-site
20. Scale-up issues per sector (technical difficulties, costs and volume calculations)
21. Protection of intellectual property rights

Compliance with policy and legislation

22. Fiscal basis and regulations
23. Specific sector legislation incl.
 - Agricultural policy and legislation
 - Food policy and legislation
 - Forest and nature related policies (EU and national legislations and marked-based systems covering natural resources and their management)
24. Food Labelling/Certifications
25. Farm environmental management plan

Annex VIII. Checklist for organising Focus Groups

List of FIELDS partners/people involved in the organisation

Partner name/abbreviation	Person	Email
Partner #		
Partner #		

Activity description/division of responsibilities

	Activity description	Responsibility
1.	Prepare potential participant list (see table below); establish first contacts; fix date; translate formal invitation	
2.	Send formal invitation and fix list of participants	
3.	Fix choice of web conferencing tool and host	
4.	Agree on division of responsibilities/roles (facilitator and rapporteur) during focus group.	
5.	Translate skills lists (may be necessary for some focus groups and others not)	
6.	Send preparatory email to participants (approx. 1 week beforehand) with the skills lists and tasks (as described in the Guidelines point 2.6. Ask them also a brief CV (max. 5 lines) as introduction for the moderator. Ask participants to read the information sheet (Annex II) and read, fill in, sign and send the informed consent (Annex III)	
7.	Collect skill rankings beforehand: top 5 for each category and top 10 general ranking for the whole set of skills. Top 10 is made based on the previously selected 25 (5 per category). It is mandatory that Focus Group participants send the ranked skill lists before the Focus Group.	
8.	Carry out a test online meeting with moderator and rapporteur to test screen sharing, process, and audio quality.	
9.	Translate slides	
10.	Moderator and rapporteur should clearly agree on the technical workflow of the online focus group (who shares the screen, switches slides, takes notes on the screen)	
11.	Reporting (incl. transcription and processing of data according to Annex V in the Guidelines)	

List of participants

Stakeholder profiles (<i>choose min 5 profiles</i>)	Partner(s) responsible for inviting	Suggestion(s)/names of invitees (organisation)
Farmers		
Cooperatives		
Agri-food companies		
Education providers (University, Vocational training, other....)		
Advisors		
Foresters		
Forest industries		
...		