

# OFFICIAL FEEDBACK FORM

<b>DIALOGUE DATE</b>	Thursday, 20 May 2021 09:00 GMT +02:00
<b>DIALOGUE TITLE</b>	The European Green Deal: opportunities to anticipate and address emerging risks
<b>CONVENED BY</b>	Mr. Ladislav Miko, Head of European Commission's Representation in Slovakia
<b>DIALOGUE EVENT PAGE</b>	<a href="https://summitdialogues.org/dialogue/18790/">https://summitdialogues.org/dialogue/18790/</a>
<b>DIALOGUE TYPE</b>	Member State
<b>GEOGRAPHICAL FOCUS</b>	European Union

The outcomes from a Food Systems Summit Dialogue will be of use in developing the pathway to sustainable food systems within the locality in which they take place. They will be a valuable contribution to the national pathways and also of interest to the different workstreams preparing for the Summit: the Action Tracks, Scientific Groups and Champions as well as for other Dialogues.

# 1. PARTICIPATION

## TOTAL NUMBER OF PARTICIPANTS

39

## PARTICIPATION BY AGE RANGE

0-18

19-30

31-50

51-65

66-80

80+

## PARTICIPATION BY GENDER

Male

Female

0 Prefer not to say or Other

## NUMBER OF PARTICIPANTS IN EACH SECTOR

3 Agriculture/crops  
Fish and aquaculture

2 Livestock  
Agro-forestry  
Environment and ecology  
Trade and commerce

1 Education  
1 Communication  
2 Food processing  
1 Food retail, markets  
4 Food industry  
Financial Services

Health care  
Nutrition  
25 National or local government  
Utilities  
Industrial  
Other

## NUMBER OF PARTICIPANTS FROM EACH STAKEHOLDER GROUP

Small/medium enterprise/artisan  
Large national business  
Multi-national corporation  
Small-scale farmer  
Medium-scale farmer  
Large-scale farmer  
Local Non-Governmental Organization  
14 International Non-Governmental Organization  
Indigenous People  
Science and academia

Workers and trade union  
Member of Parliament  
Local authority  
25 Government and national institution  
Regional economic community  
United Nations  
International financial institution  
Private Foundation / Partnership / Alliance  
Consumer group  
Other

## 2. PRINCIPLES OF ENGAGEMENT

### HOW DID YOU ORGANIZE THE DIALOGUE SO THAT THE PRINCIPLES WERE INCORPORATED, REINFORCED AND ENHANCED?

The Dialogue was organised taking full benefit of the existing rules of procedures and rules of engagement of the EFSA Emerging Risk Exchange Network (EREN Network) and the Stakeholder Discussion Group on Emerging Risk (StaDG-ER). These rules are available on the EFSA website: - for the EFSA Emerging Risk Exchange Network (EREN Network), see <https://www.efsa.europa.eu/sites/default/files/assets/emrisknetworksen.pdf> - for the Stakeholder Discussion Group on Emerging Risk (StaDG-ER), see <https://www.efsa.europa.eu/sites/default/files/news/180119/180119-StaDG-ER-framework.pdf> The event was organised by the European Food Safety Authority (EFSA) well in advance of the time frame indicated in the Farm to Fork (F2F) Strategy for specific actions and targets. EFSA's approach to incorporate the meeting outcomes within the EFSA emerging risks identification system may help to anticipate solutions to potentially related emerging risks, well in advance to the strategy full implementation. EFSA and its Emerging Risks networks identified four different areas of discussions of high interest for EFSA. Through open discussions among the different groups of interest represented at the meeting, stakeholders' processes and approaches were analysed within the government and communities perspectives while overcoming the complexity of the many food systems, The members of the Emerging Risks Expert Network (EREN), the Stakeholders Discussion Group on Emerging Risks (StaDG-ER) as well as the collaborators from the European Commission were able to identified potential synergies and join efforts to achieve the Green deal common goals while aiming at ensuring that food safety is not compromised in Europe.

### HOW DID YOUR DIALOGUE REFLECT SPECIFIC ASPECTS OF THE PRINCIPLES?

Under the coordination of EFSA, members of the represented Stakeholder groups, Member States and EC collaborators volunteered to actively contribute to the event. From a collaborative and active preparative work on the topics to be covered, the outcomes of the meeting successfully reflect multi stakeholder inclusivity and other Principles of engagement such as respect for diverging opinions, engagement to complement the work of others while building trust among big players within the various European Food System. The composition of the two Networks participating in this event is available in the EFSA website: - EFSA Emerging Risk Exchange Network (EREN Network) <https://www.efsa.europa.eu/sites/default/files/assets/emrisknetworkerenlist.pdf> - Stakeholder Discussion Group on Emerging Risk (StaDG-ER) <https://www.efsa.europa.eu/sites/default/files/engage/stakeholders/stakeholders-ER-minutes-selection-renewal.pdf>

### DO YOU HAVE ADVICE FOR OTHER DIALOGUE CONVENORS ABOUT APPRECIATING THE PRINCIPLES OF ENGAGEMENT?

Organising a UN Food Systems Summits Dialogue from the perspective of analysing challenges and opportunities on already established policies and strategies affecting various food systems in a wide area, such as the European Union, requires a good mix of the participants profiles (EU institutions, Member States Competent Authorities, Industry, NGOs, consumers associations), to allow ample time for discussion and exchange of views, and a good Chair to ensure that the exchange of opinions is done in a constructive and respectful manner.

# 3. METHOD

The outcomes of a Dialogue are influenced by the method that is used.

**DID YOU USE THE SAME METHOD AS RECOMMENDED BY THE CONVENORS REFERENCE MANUAL?**

Yes

No

The initial proposal to organise a discussion to identify challenges and opportunities arising from the implementation of the F2F strategy with a view of anticipating to food safety risks, was discussed at one of the meetings of the Stakeholders Discussion Groups on Emerging risk (StaDG-ER) back in December 2019. The preparatory work for this initial proposal aimed at making the discussions fluent and inclusive to all stakeholders by touching into four specific topics that were identified as of common interest for EFSA and the StaDG-ER members. These were; (i) the reduction of antimicrobial use in farmed animals; (ii) the transition towards a healthy diets; (iii) the reduction of waste in circular economy; and (iv) the reduction in the dependency on chemical pesticides and increased organic farming. The topic selected for this event was first discussed at a dedicated agenda item at the 24th StaDG-ER meeting in December 2020. From the highly interest raised and the fruitful outcomes, the group recommended to extend the discussion to the Emerging Risk Exchange (EREN) Network. Thereafter, and consequent to consultations with European Commission on the preparation on a joint StaDG-ER/EREN meeting, the topic and layout of the event was found to meet with several parameters making it fit under the method recommended by the Convenors Reference Manual for the UN Food Systems Summits Dialogue. For the preparation of the dialogue, a selected members of the SatDG-ER and EREN networks, with proven expertise in the four topics to be presented, were invited to collaborate with EFSA on the development of the presentations disclosed at the meeting. Comments and remarks from respective services from the European Commission were also collected and considered before the meeting. This methodology allowed capturing interests and views from the different parties in anticipation to the open discussions at the meeting. The initial presentations on each topics were followed by an open discussion where members of stakeholders groups, representatives from Member States and EC openly exposed their views to the challenges and opportunities previously identified, while proposing additional potential risks and possible solutions.

# 4. DIALOGUE FOCUS & OUTCOMES

## MAJOR FOCUS

This event was organised by the European Food Safety Authority (EFSA) and involved its Emerging Risks networks: the Emerging Risks Exchange Network (EREN) and the Stakeholders Discussion Group on Emerging Risks (StaDG-ER). The aim of the event was twofold: discuss on the potential opportunities and challenges derived from the transition to sustainable food systems and anticipate solutions on potentially related emerging risks.

The Farm to Fork (F2F) Strategy (see [https://ec.europa.eu/food/farm2fork\\_en](https://ec.europa.eu/food/farm2fork_en)), at the heart of the European Green Deal, aims to make food systems fair, healthy and environmentally-friendly. The overall goals of the strategy are to reduce the environmental and climate footprint of the food system, to lead a global transition towards competitive sustainability from farm to fork, to tap into new opportunities for businesses, people and the environment, and to create a robust and resilient food system. The strategy includes 27 specific actions to achieve its objectives and four aspirational quantitative targets for Europe in 2030:

1. Reduce by 50% the overall use and risk of chemical pesticides and reduce use by 50% of more hazardous pesticides
2. Reduce nutrient losses by at least 50% while ensuring no deterioration in soil fertility; this will reduce use of fertilisers by at least 20 %
3. Reduce sales of antimicrobials for farmed animals and in aquaculture by 50%
4. Achieve at least 25% of the EU's agricultural land under organic farming and a significant increase in organic aquaculture

Based on former reflections between EFSA and its Emerging Risks networks, the event built on four different areas that are not specified in the quantitative targets, but are still covered by the strategy:

- Reduction of antimicrobial use in farmed animals,
- The transition towards a healthy diet,
- Reduction of waste in circular economy, and
- reduction in the dependency on chemical pesticides, excess fertilisation and increased organic farming.

Analysing challenges and opportunities from the F2F strategy implementation from an emerging risks perspective may lead to a number of solutions to support the Action Tracks in the scope of expected UN Global Compact Leaders Summit: 2021. To this end, although promoting a reduction on the use of chemical pesticides or the sale of antimicrobial substances could be perceived as compromising food security, the solutions arising from the event aim at ensuring fair and wider access to safe and nutritious food for all. Furthermore, the analysis on the transition towards a healthy diet and increasing organic farming could bring actions prompting the shift to sustainable consumption and more nature-positive production patterns. Finally, the implementation of safe circular economy methods to support the reduction of food waste focuses on closing the biological and technical cycles, contributing as such to reduce the vulnerabilities, shocks and stresses on currently used resource and energy sources and preserve the environment

Disclaimer: the content of this report is a reflection of the discussion held with EFSA network groups on emerging risks identification. The views recollect within do not represent a position neither from EFSA nor from the European Commission.

### ACTION TRACKS

- |                                     |  |
|-------------------------------------|--|
| <input checked="" type="checkbox"/> | Action Track 1: Ensure access to safe and nutritious food for all      |
| <input checked="" type="checkbox"/> | Action Track 2: Shift to sustainable consumption patterns              |
| <input checked="" type="checkbox"/> | Action Track 3: Boost nature-positive production                       |
| <input type="checkbox"/>            | Action Track 4: Advance equitable livelihoods                          |
| <input type="checkbox"/>            | Action Track 5: Build resilience to vulnerabilities, shocks and stress |

### KEYWORDS

- |                          |                           |                                     |                         |
|--------------------------|---------------------------|-------------------------------------|-------------------------|
| <input type="checkbox"/> | Finance                   | <input checked="" type="checkbox"/> | Policy                  |
| <input type="checkbox"/> | Innovation                | <input checked="" type="checkbox"/> | Data & Evidence         |
| <input type="checkbox"/> | Human rights              | <input type="checkbox"/>            | Governance              |
| <input type="checkbox"/> | Women & Youth Empowerment | <input checked="" type="checkbox"/> | Trade-offs              |
| <input type="checkbox"/> |                           | <input checked="" type="checkbox"/> | Environment and Climate |

## MAIN FINDINGS

### Reduction of antimicrobial use in farmed animals

Potential welfare issues in organic schemes where a decrease in the use of antimicrobials could compromise animal welfare, have been indicated and referred during previous discussions within EFSA stakeholders' fora. Still, available scientific evidence provides divergent views, potentially associated with the multiple factors related to specific farming systems. Aiming to maintain the effectiveness of antimicrobials, monitoring impact and One Health monitoring measures are recommended. Setting targets at national level should recognise herds' population dynamics, and prescribed antimicrobials used only when strictly needed.

Alternatives to antimicrobials should involve cost-effective, feasible replacements and a positive impact on animal health. Examples include: enhanced farm biosecurity, vaccines, organic acids, probiotics, passive immunisation, bacteriophages, teat sealants and better-quality feed. Regulatory clarity when categorising alternatives would make their development clearer and more attractive.

While there is diverging evidence, any drastic changes over a short period could negatively impact on animal health and welfare. Campaigning for achieving reduction goals in antimicrobial sales, may drive consumer or production trends towards new products such as artificial meat, which could be perceived as not needing antimicrobials, but still needs further evidence and research.

### Towards a healthy and plant-based diet

With one out of five deaths in 2017 in the EU attributable to unhealthy diets, the farm to fork strategy aims at moving towards a healthy and plant-based diet to reduce the level of obesity and diet-related non-communicable diseases. A "plant-based diet" is not meant for consumers to become vegetarian or vegans, but to stimulate practices to diversify sourcing of proteins while reducing animal protein intake, consumption of heavily processed foods, and giving preference to seasonal and regional food products. The Mediterranean Diet is an example of a healthy diet with little to moderate amounts of animal-sourced foods. However, to reach a broader population, the solution should attempt to accommodate different cultures and customs.

The environment may also benefit from such a change in the diet, with an expected positive impact on water eutrophication, and a cut of related greenhouse gas emissions. It could also lead to a less intensive meat production system in Europe with positive effects on animal health and welfare.

Nevertheless, based on some studies, fostering healthy diets in Europe could be 60% more expensive than the cheapest alternative that can provide all 20 essential nutrients that people need to survive.

### Reduction of food waste in Circular Economy

An estimated 20% of the total food produced is wasted in the EU and 129 million tons per year globally. Waste of food is in essence a loss in environmental resources, and generates excess emissions related to farming, processing, and transport. Moreover, food waste is a missed opportunity to feed those in need and is a financial loss for farmers, retailers and consumers. EU initiatives in place are already mitigating the issue of food waste. In 2015, the EU has expressed its commitment to cut food waste by 50% by 2030, in line with Sustainable Development Goals. Tackling food waste is part of the revised EU Waste Legislation and the F2F strategy. Food waste prevention is embedded in the concept of circular economy, which focuses on closing the biological and technical cycles, so that the need for virgin resources and energy use are minimised. The Reduce-Reuse-Recycle approach applies for food waste, where 'reduce' implies an improved planning and food production technology, as well as behavioural changes (meal planning, food donation). 'Reuse' refers to the use of former foodstuffs used as feed, while 'recycle' mainly focuses on energy or manure production from food waste.

### Reduce dependency on pesticides, excess fertilisation and increase organic farming

The F2F strategy contains a broad range of measures supporting the transition to sustainable farming practices. However, drastic changes for European agriculture may lead to unintended effects and negative consequences, e.g. lack of alternatives to chemical pesticides.

To ensure that the F2F strategy does not lead to an increased dependency on food imports or an increase of the price for food, coordinated efforts at national and EU level are required together with the application of Integrated Pest Management (IPM) strategy. Many of the more harmful pesticides (candidates for substitution) should be removed from the market in the coming 10 years. Alternatives to chemical pesticides supported by research, training of farmers and the implementation of innovative technologies are all key to make the F2F strategy a success. Due to the different structure of European agriculture and the fact that some countries are already more advanced in reaching the targets, different solutions may need to be tailored to the individual Member States' needs.

The Commission is currently in the process of reviewing the Sustainable Use of Pesticides Directive to strengthen the legal framework where stakeholders were invited to be engaged.

## ACTION TRACKS

- ✓ Action Track 1: Ensure access to safe and nutritious food for all
- ✓ Action Track 2: Shift to sustainable consumption patterns
- ✓ Action Track 3: Boost nature-positive production
- Action Track 4: Advance equitable livelihoods
- Action Track 5: Build resilience to vulnerabilities, shocks and stress

## KEYWORDS

- Finance
- Innovation
- Human rights
- Women & Youth Empowerment
- ✓ Policy
- ✓ Data & Evidence
- Governance
- ✓ Trade-offs
- ✓ Environment and Climate

## OUTCOMES FOR EACH DISCUSSION TOPIC - 1/4

### Reduction of antimicrobial use in farmed animals

The coordinated monitoring and responsible use of antimicrobials is an important priority, and the reduction of usage should not jeopardise animal health and welfare. The EU aspirational target set by the F2F strategy should be considered at MS level for variation between farming systems, disease status, characteristics of population groups in different species and other local, regional or Member State-related specificities. Monitoring various indicators for health and welfare (e.g. lesions at meat inspection) could show trends and could inform on the impact of reducing antimicrobial use.

A Danish case study in pigs, compare these lesions before and after introduction of a Yellow card scheme. It is important to investigate the link between the necessary antimicrobial treatment thresholds requested by organic schemes and the potential risk of compromising animal welfare. The benefits of reduction of antimicrobial usage should outweigh potential disadvantages or unintended negative effects. This could result in low control of infectious disease or increases in lesions at meat inspection, detrimental economic effects being also related to the needs in different farm systems and species in different countries.

In Belgium, although no specific studies and scientific data are available, information from pig producers shows that reduced use on antimicrobial has not impact on farm mortality. However, some producers reported economic losses due to carcass quality.

On the other hand, preliminary analysis in an Italian welfare study has not identified a relationship between animal welfare and antimicrobial use or the reduction of its use. In some farms, a higher level of welfare improves the health of the animals and contributes to a reduction of antimicrobial use; for others, this reduction can have a negative impact on animal welfare. It is difficult to foresee the extent of this impact as well as setting general rules without accounting for the specific situations.

Various strategies, and their combination, support prevention of diseases and improve livestock health. However, those do not substitute the potential need for antimicrobial therapy when health is compromised. The selection of intervention should start with considerations of cost-effective and feasible alternatives to antimicrobials. More regulatory certainty on the current and new options for nutritional management and manipulation of the microbiome (e.g. use of pre-/pro-biotics, bacteriophages) could stimulate innovation in this area. However, some of the alternatives can raise additional safety problems such as research signals on some probiotics potentially carrying resistance genes .

EFSA's work on antimicrobial resistance together with ECDC and EMA to assess links between the use of antimicrobials and development of resistance, found multiple positive correlations between antimicrobial consumption in humans and animals depending on the antimicrobial in use. A number of areas for interventions were assessed leading to recommendations accounting for local situations and integrating several of the options together within national strategies. A One Health approach is important when monitoring antimicrobial resistance in human and animals, but also the comprehensive assessment of alternatives that may have wider significant economic, environmental or social impacts. There is wider recognition of the multifaceted responsibilities for prudent use and voluntary commitments in various sectors, and more stringent prescriptions and application rules.

The participants also highlighted the importance to avoid rapid regulatory changes that could lead to drastic changes over a short period, because of potential negative impact on animal health and welfare. Shifting to new systems will cost some 'learning money', and is associated with new costs that need to be balanced with benefits. Therefore, the progress towards the aspirational target related to antimicrobial sales, could also benefit from studies on the potential impact on animal health and welfare aspects.

### ACTION TRACKS

	Action Track 1: Ensure access to safe and nutritious food for all
✓	Action Track 2: Shift to sustainable consumption patterns
	Action Track 3: Boost nature-positive production
	Action Track 4: Advance equitable livelihoods
	Action Track 5: Build resilience to vulnerabilities, shocks and stress

### KEYWORDS

	Finance	✓	Policy
✓	Innovation	✓	Data & Evidence
	Human rights		Governance
	Women & Youth Empowerment	✓	Trade-offs
		✓	Environment and Climate

## OUTCOMES FOR EACH DISCUSSION TOPIC - 2/4

### Towards a healthy & plant-based diet

Although there is no doubt about the beneficial effects of a healthy diet for consumers, the increase of plant sources (fruits, vegetables, legumes, pulses) in the diet could lead to several challenges. Plants are complex mixtures and may contain undesirable substances, whether naturally occurring (e.g. antinutrients), or contaminants resulting from culture conditions (e.g. sulphates), climate change (e.g. mycotoxins), or properties of the plant itself (e.g. bioaccumulation of heavy metals or minerals/micronutrients). Plants used as/for food have often not been assessed for safety and may expose consumers to undesirable substances. It should also be noted that plant proteins differ from meat proteins in terms of quality (amino acid scoring profile / digestibility). Existing techniques to concentrate proteins, such as alkali-concentration may lead to an increase of lysinoalanine, a metal chelator associated with nephrotoxicity.

The importance of the challenges raised during the discussions would need to be relativised, since the transition to healthy diets does not lead to the introduction of a completely new diet in the European Union but rather to achieve better the already existing dietary recommendations, e.g. increasing the amount of pulses and seeds consumed, reducing the consumption of red meat and ultra-processed foods. Moreover, most of the challenges are addressed by existing regulations in place in the EU (e.g. maximum limits of antinutrients or contaminants). The transition towards a healthy and plant-based diet should therefore be seen as an evolution rather than a revolution. Educating the consumers about the healthy diet will be key, as eating more raw products and vegetables, requires new processing / cooking habits to tackle the potential food safety aspects associated with these products. As a general recommendation, the food consumption changes resulting from the introduction of a healthy diet in Europe will require a reassessment of the exposure levels to undesirable substances like the ones previously mentioned.

Agricultural considerations were also discussed, with the question whether the European agriculture would be able to address the need for more fruits, vegetables and legumes. The lack of agricultural lands can be compensated through innovation, with the development of new ways of producing plants (e.g. vertical farming), but history has shown that any type of intensification of farming generates unwanted and unexpected issues that will have to be carefully monitored. A second consequence linked to the reduction of meat consumption is that less manure will be available to fertilise soils, and therefore more chemical fertilisers may be needed. This needs to be balanced however with the potential reduced use of agricultural land for plants for feed, and the reduction of nutrient losses in agriculture. The impact on agriculture in terms of economic sustainability was also discussed.

The last part of the discussion addressed the issue of the acceptance of the seasonality aspect of this new diet by EU consumers. If consumers continue demanding fresh produce out of season, the introduction of a healthy diet could lead to an increase of imports with the associated emerging risks: introducing new plant pests in Europe, products not complying with EU legal limits, e.g. for pesticide residues, entering the food chain. However, it was noted that regulatory and import monitoring activities already exist in the EU covering those potential risks. Other aspects such as increase of CO2 levels associated to potentially longer transport should be considered. Finally, it was noted that the increased demand for fruits and vegetables will not imply a dramatic increase of imports or a revolution of the EU agriculture if measures are implemented to tackle food waste (see summary of the related session).

### ACTION TRACKS

✓	Action Track 1: Ensure access to safe and nutritious food for all
✓	Action Track 2: Shift to sustainable consumption patterns
	Action Track 3: Boost nature-positive production
	Action Track 4: Advance equitable livelihoods
	Action Track 5: Build resilience to vulnerabilities, shocks and stress

### KEYWORDS

	Finance	✓	Policy
	Innovation	✓	Data & Evidence
	Human rights		Governance
	Women & Youth Empowerment	✓	Trade-offs
		✓	Environment and Climate

## OUTCOMES FOR EACH DISCUSSION TOPIC - 3/4

### Reduction of food waste in Circular Economy

New technologies could allow for more efficient use of available resources, and consumer behaviour change has an enormous potential for reducing the waste at the final level of the food chain, which now accounts for ca. 46% of total food waste. The possibility to reduce food waste at the early stages of the food chain is in the contrary limited because of the stable/ increasing demand for food.

Several initiatives in Europe aim to tackle food waste. The SAFE campaign "One Man's Waste is Another Man's Treasure" aims to reduce the social and economic impact of food waste by collecting food waste from local shops and its redistribution to local communities in need. However, many challenges have to be overcome when implementing European initiatives aiming at reducing food waste such as reducing availability on feed materials if potato peels are transformed into biofuel, introducing chemical and biochemical risks to food and feed when breeding insects on former foodstuff or the high presence of unknown organic substances as well as heavy metals in biobased plastic food contact materials compared to virgin-made equivalents FCMs. It was noted that EU regulatory risk assessment frameworks should already be well placed to assess potential changes related to circularity in food and feed systems.

Food waste reduction can bring environmental, social and economic benefits for EU citizens. Food donation/redistribution initiatives, better forecasting of requirements to reduce surplus, removal of buy one get one free promotion and clearer information for the consumers on food labelling (best before/use by/ecolabelling) aim at raising awareness on staff and consumers as well as improving consumer behaviour towards the benefits of food waste reduction.

Food waste reduction will also motivate innovation into the food chain to further develop: (i) novel food contact materials to prolong shelf life, (ii) processes for keeping food losses in the food chain: repurposing food, buying imperfect produce, (iii) new feed sources, (iv) nutrient recovery methods: biofertilizer from composting or anaerobic digestate, (v) methodologies to recover energy from food waste: biogas from anaerobic digestion, rendering, or (vi) techniques for the reduction of emissions in all steps of the food chain.

However, all these circular economy solutions and ideas must continue to be monitored closely in order to ensure that food safety is not compromised. Emerging risks related to circular economy include reintroducing pathogens or contaminants into the food chain and allergenicity of novel foods. In the animal health remit, it is, however, important to mention that these risks are mitigated by EU-wide ban on using food waste as animal feed. Feed ban in the EU is very stringent and prevents the reintroduction of pathogens to the food chain. In addition, new EU policies to reduce dependency on chemical pesticides and excess fertilisation, as well as to increase organic farming, can also help to mitigate these potential risks. Issues discussed included: under redistributed food, potential food safety risks (bacterial contamination); under former foodstuffs as animal feed: presence of packaging remnants (plastic, paper, aluminium foil); under food contact materials to prolong shelf life: immunogenicity and allergenicity of bio-based food contact materials, migration of nanomaterials into foodstuff and potential risks to human health – toxicity; under nutrient recovery from food waste: contamination of food and environment by pathogenic bacteria and bacteria carrying antibiotic resistance genes (ARGs), potential allergenicity of the insects, food additives; under using food waste for animal feed (not allowed under EU legislation): parasites, bacteria, and viruses; allergens.

### ACTION TRACKS

	Action Track 1: Ensure access to safe and nutritious food for all
✓	Action Track 2: Shift to sustainable consumption patterns
	Action Track 3: Boost nature-positive production
	Action Track 4: Advance equitable livelihoods
	Action Track 5: Build resilience to vulnerabilities, shocks and stress

### KEYWORDS

	Finance	✓	Policy
✓	Innovation	✓	Data & Evidence
	Human rights		Governance
	Women & Youth Empowerment	✓	Trade-offs
		✓	Environment and Climate

## OUTCOMES FOR EACH DISCUSSION TOPIC - 4/4

Reduce dependency on pesticides, excess fertilisation and increase organic farming

The food system is a complex interlinked entity that reacts in predictable and unpredictable ways when one part is disturbed. The use of certain chemical pesticides in agriculture may contribute to soil, water and air pollution, biodiversity loss and can harm non-targeted species (plants and animals). In addition, the excess of nutrients (especially nitrogen and phosphorus) in the environment is another potential source of air, soil and water pollution and leads to climate impact. In contrary, the shift to organic farming may have a positive impact on biodiversity and may influence the creation of new employment, particularly for young people in some European countries advanced in organic farming.

Achieving the aspirational targets of the F2F Strategy, should allow an adequate time frame for their accomplishments. Successful experiences with the Integrated Pest Management (IPM) strategy have proven to be efficient to reduce pesticides use (e.g. planting fencing or using pest-resistant crop varieties) and should be considered when analysing the effectiveness of these targets. The challenges identified at the meeting relate to the whole food system in Europe. Examples include the limited number of approved pesticides on plant health, the risk of importing of exotic disease (e.g. broad bean beetle, fruit tree canker and Jimsonweed) and the need for safe alternative solutions. The shift from chemical to organic fertilisers could lead to broader risks including microbial contamination of water sources used for food production.

In addition, if these transitions take place too fast, the appropriate tools and technologies to adjust to the new reality may not be readily available. Moreover, we should take into consideration the social and economic impact in a global context.

In line with the F2F targets, the European Commission will present a proposal for a revision of the Sustainable Use of Pesticides Directive (SUD), to significantly reduce the use, the risk and dependency on pesticides and enhance integrated pest management in 2022. Additionally, the Horizon 2020 programme is already providing opportunities to foster innovation through research that can help in reaching the aspirational targets of the F2F strategy in this area.

The discussions stressed the need for a holistic food system approach encompassing the effects on food production, environment, and consumers habits. It was highlighted that Europe's food safety system is one of the best in the world to be kept and safeguarded.

### ACTION TRACKS

<input type="checkbox"/>	Action Track 1: Ensure access to safe and nutritious food for all
<input type="checkbox"/>	Action Track 2: Shift to sustainable consumption patterns
<input checked="" type="checkbox"/>	Action Track 3: Boost nature-positive production
<input type="checkbox"/>	Action Track 4: Advance equitable livelihoods
<input type="checkbox"/>	Action Track 5: Build resilience to vulnerabilities, shocks and stress

### KEYWORDS

<input type="checkbox"/>	Finance	<input checked="" type="checkbox"/>	Policy
<input checked="" type="checkbox"/>	Innovation	<input checked="" type="checkbox"/>	Data & Evidence
<input type="checkbox"/>	Human rights	<input type="checkbox"/>	Governance
<input type="checkbox"/>	Women & Youth Empowerment	<input checked="" type="checkbox"/>	Trade-offs
<input type="checkbox"/>		<input checked="" type="checkbox"/>	Environment and Climate

## AREAS OF DIVERGENCE

### Reduction of antimicrobial use in farmed animals

Some participants already reported a reduction of antimicrobial use over the last years, and a new 50% reduction target was seen as unrealistic. High antimicrobial usage offers a proxy for structural or managerial deficiencies impacting on animal welfare. Furthermore, non-prescribed antimicrobials may have sub-standard quality and the impact of falsified medicines may increase too.

Whilst there are benefits of reduction measures achieved by organic farming such as less multidrug resistance, there are also potential disadvantages or unintended negative effects. Practical investigations on the impact of reduced use of antimicrobials in different pig production systems in Denmark revealed a shift in the type of lesions found at meat inspection. However, Italy and Belgium reported different effects.

There is no refined standard to measure antimicrobial usage considering the dose and the age group of the animals, making difficult to establish threshold for usage and compare between various groups.

In addition, some concerns were raised whether pre- or probiotics used in animal production would be attained to the same risks and qualified presumption of safety criteria applicable for those for human consumption. Future research and considerations are needed on safe probiotics for animal consumption.

### Towards a healthy & plant-based diet

One area for diverging views among the participants was whether the EU regulatory framework in place is adequate to deal with the transition to healthier and plant-based diet, and the challenges associated with its introduction. If the regulatory framework in place is adequate to address undesirable substances or groups of substances taken in isolation, it is less clear whether it addresses adequately the safety of plant-based foods as a whole. Current legislation foresees a centralised EU safety assessment of plant-based novel foods but for traditional plant-based foods, the responsibility for safety is left to food manufacturers and Member States Competent Authorities. The traditional non-conventional foods previously mentioned was given as an example.

A second area for diverging views is regarding the adequacy of existing health-based guidance values (HBGVs) for most contaminants and common undesirable substances (e.g. antinutrients) that could be found in vegetables. Some participants underlined that these HBGVs have been calculated on the basis of current EU consumption patterns, and questioned their validity following the introduction of a healthy diet. Suggestion was made to re-evaluate the exposure to these undesirable substances and the protection level of current HBGVs.

### Reduction of food waste in Circular Economy

The discussions focussed on finding the balance between preventing emerging risks for food safety and the social, environmental, and economic advantages of food waste prevention.

Several voluntary and regulatory initiatives in Europe aim to tackle the reduction of food waste. While EU requirements (e.g. certification, trainings and keeping the cold chain), could be perceived as a burden, whilst ensure food is kept safe up to the final consumer.

The feed ban is very stringent in Europe and prevents the reintroduction of pathogens into the food chain. Adequate controls should be ensured when food waste is being used as feed elsewhere and imported.

Proposals for reduction of food packaging must find solutions not compromising correct food labelling e.g. "best before" date and food safety. Currently there is no life cycle assessment (LCA) on food packaging. Safety of packaging is assessed when used in contact with food but the environmental fate and the safety assessment for its reintroduction into the food chain are still not well described.

Food sustainability aspects beyond safety should not jeopardise efforts and achievements carried out in Europe to achieve its current high level of consumer protection.

### Reduce dependency on pesticides, excess fertilisation and increase organic farming

The implementation of the Integrated Pest Management (IPM) strategy allows smooth transition to sustainable practices and farmers have until 2030 to reach the F2F aspirational targets. However, although the targets of the strategy have not been regulated, there are ongoing policy initiative such as the Common Agricultural Policy (CAP) or the revision of the sustainable Use Directive (SUD) that stimulates their achievement. The need to supply alternative products and the potential increase of food imports from third countries should be considered. Research initiatives will support innovation and development of new technologies helping to overcome the challenges we confront today. Nevertheless, time should be allowed for producers and consumers to accept these new solutions and for the potential risks to food safety to be assessed. Balancing the benefits of achieving these targets with potential emerging risks requires the participation of all the interested parties.

During the discussion it was highlighted that the EU has powerful instruments like the payment of subsidies to farmers through the Common Agricultural Policy, which need to be aligned with the goals of the F2F strategy.

## ACTION TRACKS

✓	Action Track 1: Ensure access to safe and nutritious food for all
✓	Action Track 2: Shift to sustainable consumption patterns
✓	Action Track 3: Boost nature-positive production
	Action Track 4: Advance equitable livelihoods
	Action Track 5: Build resilience to vulnerabilities, shocks and stress

## KEYWORDS

	Finance	✓	Policy
✓	Innovation	✓	Data & Evidence
	Human rights		Governance
	Women & Youth Empowerment	✓	Trade-offs
		✓	Environment and Climate