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# **EFSA's Work Planning and Strategy cycles**

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Trusted science for safe food



# EFSA's Work Planning and Strategy cycles



- 1. Setting Work Programme priorities

# 1 | Setting WP priorities - Rationale

Building together the future of RA in Europe

I

Create efficiencies via synergies and by avoiding overlaps

II

Avoid divergent opinions or discrepancies

III

Avoid duplications & fragmentation of request/activities with the AF

IV

# 1 | Setting WP priorities – Survey Overview



## ✓ **Purpose:**

- ✓ To identify joint priorities to be highlighted in EFSA Programming Document 2020-2023
- ✓ To feed the more detailed development of the EFSA/AF workplan

## ✓ Survey was open from **20 May till 14 June 2019**

## ✓ **22 MS** participated

## ✓ **47 specific areas of work** grouped in **10 domains** of work

## ✓ **9 criteria** used for the classification of the priorities that were fine-tuned with a small pilot group of focal point members

## ✓ **Results from the survey:**

- ✓ Confirm the ongoing EFSA / AF WP priorities;
- ✓ Allow the identification of 19 top priorities amongst the 47 specific areas of work;
- ✓ Provide direction to further enhance activities in specific areas.

# Setting WP priorities – Survey Results – Top 19 priorities (1/2)



## Developing and implementing biological RA:

- Anti-microbial resistance (AMR) – Environment **(1)**
- Whole Genome Sequencing (WGS) and/or Next Generation Sequencing **(6)**

## Developing and implementing chemical RA:

- Chemical mixtures: developing harmonised methods for the RA of combined exposure to multiple chemicals **(2)**
- Data collection on endocrine activity for oestrogen, androgen, thyroid and steroidogenesis (EATS) **(3)**
- Carcinogenesis studies guidance **(8)**
- Exposure assessment - Pesticides in food for infants and young children **(10)**

## Preparedness:

- Microplastics **(4)**
- Emerging risks **(5)**
- Food waste and cyclical economy **(9)**

## Risk Assessment

- Pesticides **(7)**
- Biological Hazards **(12)**

**Overall rank based on scoring (see Annex)**

## Setting WP priorities – Survey Results – Top 19 priorities (2/2)



### **Data standardisation and quality:**

- Data quality: common language and harmonization of processes and formats (e.g. for metadata, IT systems) **(11)**

### **Capacity building:**

- Innovative approaches to increase capacity: Machine learning techniques (MLT) for literature and systematic reviews **(15)**

### **Cooperation:**

- EU Research Agenda **(16)**

### **Developing a pan-EU holistic and integrated approach in environmental RA:**

- ERA: GIS use of spatial data (landscape, farms, pastures, enterprises, animals' densities...) **(21)**

### **Developing and implementing harmonised methodologies & tools:**

- Animal welfare **(21)**
- Cross-cutting guidance implementation (weight of evidence, benchmark dose, uncertainties) **(21)**
- Endocrine disruptors guidance **(21)**

### **Risk Communication and Engagement:**

- Evidence-Based Approach to Risk Communications **(28)**

**Overall rank based on scoring (see Annex)**

# Setting WP priorities – Survey Results – Which areas ranked low?

## **Preparedness:**

- Application of residue definition to plant extracts/botanical active substances **(38)**

## **Developing a pan-EU holistic and integrated approach in environmental RA:**

- ERA: guidance on non-target terrestrial organisms **(39)**

## **Preparedness:**

Arthropod vectors **(40)**

## **Developing and implementing biological RA:**

- Synthetic biology **(41)**

## **Risk Communication and Engagement:**

- Consumer insights surveys **(42)**

## **Preparedness:**

- Plant pests (e.g. xylella) **(42)**

## **Risk Communication and Engagement:**

- Stakeholder engagement **(44)**

## **Developing and implementing harmonised methodologies & tools:**

Residue definition – QSAR guidance **(44)**

## **Developing and implementing chemical RA:**

- Evaluation of phototoxicity and photomutagenicity **(46)**

## **Risk Communication and Engagement:**

- Reputation Management **(47)**

**Overall rank based on scoring (see Annex)**

# 1 | Setting WP priorities – Survey results

## Q3) Ranking of priorities overall in EU – follow up actions



### Example 1

SO	AF Priorities - Specific areas of work	Score	Ranking
SO4	Developing and implementing biological RA: Anti-microbial resistance (AMR) - Environment	136	1



Health / environmental impact	Societal impact	European dimension	International dimension	Horizontal relevance	Collaborative approach to avoid duplication / divergence	Data Gaps	Methodological gaps	Research needs	Total score
22	12	14	21	16	15	13	9	14	136



- The very high scores on the relevance at international and horizontal level suggest the need for a **holistic approach/work with other EU Agencies and International bodies**
- The very high score on health/environmental impact suggests an urgency in addressing **AMR transfer from the environment to human health**
- A need for **further collaboration and research** on the topic is also indicated, despite the many ongoing initiatives already running under the EJP on One Health



# 1 | Setting WP priorities – Survey results

## Q3) Ranking of priorities overall in EU – follow up actions



### Example 2

SO	AF Priorities - Specific areas of work	Score	Ranking
SO4	<b>Developing and implementing chemical RA:</b> Chemical mixtures: developing harmonised methods for the RA of combined exposure to multiple chemicals	128	2



Health / environmental impact	Societal impact	European dimension	International dimension	Horizontal relevance	Collaborative approach to avoid duplication /divergence	Data Gaps	Methodological gaps	Research needs	Total score
13	8	18	17	15	14	14	14	15	128



- High score on European and International dimension and as well relatively high in terms of the other relevance criteria and gaps criteria. The topic is **on the Agenda of the AF meeting, for a broad discussion with input being provided by EFSA, ECHA and MSs.**
- **Need for further collaboration/research to fill data/ methodologies gaps in order to avoid duplication of efforts and to promote synergic work**
- To note that the scoring of the health/environment and societal impact was low relatively compared to the total score

# 1 | Setting WP priorities – Survey results

## Q3) Ranking of priorities overall in EU – follow up actions



### Example 3

SO	AF Priorities - Specific areas of work	Score	Ranking
SO1	Risk Assessment: Pesticides	104	7



Health / environmental impact	Societal impact	European dimension	International dimension	Horizontal relevance	Collaborative approach to avoid duplication / divergence	Data Gaps	Methodological gaps	Research needs	Total score
17	18	16	17	11	10	3	8	4	104



- Scores high on impact (health, environmental, societal) and high on European and International dimension. This indicates the need for continued **interactions with European / International stakeholders (e.g. ECHA / IARC)**.
- The area is currently of high relevance to EFSA as a result of the new Transparency Regulation. Therefore these concerns are already **partially being addressed in the context of current collaborations with ECHA and dialogue with IARC**.

# 1 | Setting priorities – Survey results

## Additional areas of relevance proposed in the survey

(1/2)

Domain	MS	Specific area of work	
Risk assessment	Germany	<b>Organic contaminants</b> (e.g., perfluorinated compounds, AH-receptor agonists (in addition to dl-PCBs and dioxins/furans)) important issues for the dietary risk assessment. Research needs: Optimisation of <b>systematic documentation of the risk assessment process</b>	(13) NEW
	Netherlands	<b>Animal welfare and food safety</b>	(21)
Risk Communication & Engagement	Spain	<b>Media engagement and training</b>	NEW
	Netherlands	<b>Risk governance and co-design</b>	NEW
Data standardisation and quality	Netherlands	<b>link between data and modelling</b>	NEW
	Italy	<b>Dietary surveys :</b> <b>a.</b> Looking at the food system level developing indicators and metadata structure to be matched with economic, societal, environmental aspects <b>b.</b> Build the informatic framework for the application of FAIR data principles by linking to the activity performed at European Open Science Cloud (European Open Science Cloud (EOSC)   Open Science - Research and Innovation - European Commission) and the Research Data Alliance ( <a href="https://www.rd-alliance.org/rda-europe">https://www.rd-alliance.org/rda-europe</a> )	(18)
		<b>Data quality:</b> Increase interoperability by defining common language and harmonization of processes and formats.	(11)
Capacity building	Germany	The long term goal of a <b>harmonised European postgraduate education on risk assessment for food safety</b> should be oriented interdisciplinary including human medicine and it should lead to an officially recognised degree.	NEW
	Italy	<b>Capacity building Scientific RA Training &amp; Teaching activities:</b> training initiatives on communication activities throughout the whole risk analysis process is a priority	NEW
Cooperation	Italy	<b>Partnering projects :</b> main working areas : inter-sectorial cooperation in in the framework of the One Health Approach; emerging risks; environmental RA; climatic changes; cyclical economy.	(21)

# 1 | Setting priorities – Survey results

## Additional areas of relevance proposed in the survey

(2/2)



Domain	MS	Specific area of work	
Developing & implementing biological RA	Germany	<b>Whole Genome Sequencing:</b> standardization of mathematical modelling to avoid variability on data interpretation	(6)
Developing & implementing chemical RA	Germany	- <b>EATS:</b> The endocrine system is much broader than only estrogens, androgens.... To broaden the perspective for the prevention of disease. - Big <b>data gap on test guidelines for major diseases</b> of the people (e.g. cardiovascular, stroke, different cancer identities) - The <b>susceptible patient group and ageing</b> has to be brought into focus.	(3)
	Netherlands	1. stomach and intestines should have more attention, 2 allergies, 3 epigenetics-prenatal exposure and food additives and consumption patterns	<b>NEW</b>
	Italy	<b>joint efforts for collection and standardisation of all available historical data</b> important on computational alternative methods development), development of AOPs (adverse outcome pathways), IATA (integrated approaches to testing and assessment, defined approach), guidance explaining how to use the methods alternative to animal testing, how to evaluate the uncertainties of each test or computational models, collaboration with existing OECD groups e.g. EAGMST, IATA case study, OSAR toolbox management group.	(27)
Developing a pan-EU holistic and integrated approach in environmental RA	Cyprus	Minor use of <b>Plant Protection Products, in small traditional cultivations, lack of alternatives when new emerging pest and diseases</b> as well in cases of withdrawn Active Substances from the market.	<b>NEW</b>
	Netherlands	risk assessment of <b>food production chains - from (pre)farm to fork</b>	<b>NEW</b>
	Austria	<b>ERA on consumer products and substances</b> used in food, pharmaceuticals and production of this substances, which can be released <b>wastewater (sewage) into the environment.</b>	<b>NEW</b>
	Italy	<b>Spatial analysis of water quality</b>	<b>NEW</b>
Developing and implementing harmonised methodologies & tools	Germany	We need to address more translational approaches to increase the relevance of the <b>biological relevance to humans.</b> The impact of the 3Rs has to be highlighted.	<b>NEW</b>
	Italy	<b>Further researches are needed in the area of:</b> integrated approaches (IATA), which include QSAR, AOP (mechanistic understanding), read across could be used for residues (and each single metabolite) risk assessment. <b>Development of guidances</b> explaining how the uncertainties of such integrated approach could be estimated. Further evaluation of all existing QSAR models for different toxicological endpoints is needed. Development of defined approaches to testing and assessment consisting of a fixed data interpretation procedure (where is possible) probably should be a long term goal <b>Animal welfare :</b> The animal welfare area may also have an important impact <b>on the agricultural economy:</b> concerns about the current farming systems and the world trade rules, impacting on the European agricultural economy and policy.	(44) (21)

# 1 | Setting WP priorities – Survey Follow up



- ✓ **The top 19 priorities:**

- ✓ Will be highlighted as joint priorities in EFSA Programming Document 2020-2023
- ✓ Will be further developed into a more detailed EFSA/AF workplan

- ✓ **The remaining areas in the list (28):**

- ✓ **To decide today**, if a specific area of work should be added to the top 19 priorities
- ✓ Work will continue as part of EFSA/MS work programmes and discussed where considered relevant by the AF

- ✓ **The additional proposals from the survey:**

- ✓ Those addressing one of the existing top 19 priorities, will be used to specify further the follow up actions
- ✓ For the remaining ones, **to consider today**:
  - ✓ Including as one of the top 19 priorities, e.g. capacity building activities
  - ✓ Including in next year's consultation cycle

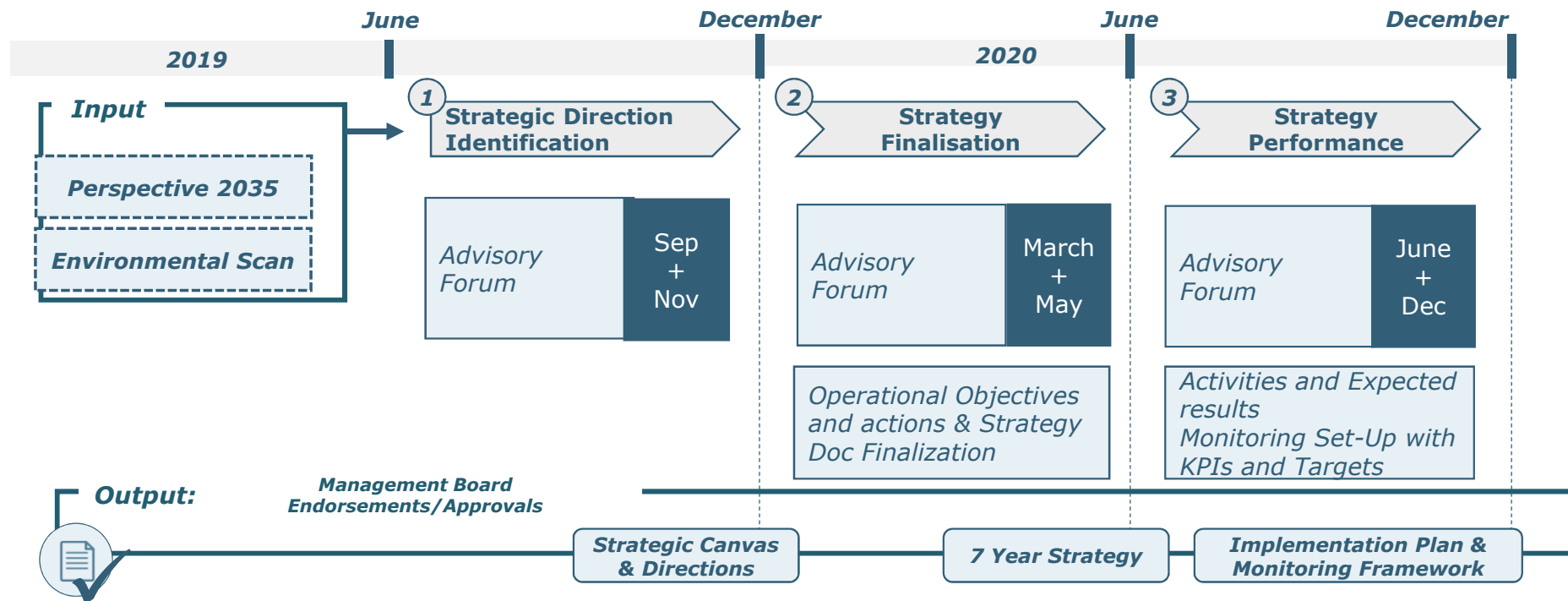
- ✓ **All the priorities and new proposals to be considered in the 2021-2027 Strategy**

# EFSA's Work Planning and Strategy cycles



- 2. Update on EFSA Strategy 2021-2027

# Strategy Definition | Process



## AF meeting 18 September 2019

- Presentation of current reflections on Strategic Directions
- Propose approach for AF input
  - EU Survey (three elements)
    1. Score elements as High-Medium-Low
    2. Indicate possible additional elements for inclusion (free-text box)
    3. Reply to a set of open questions (free-text box)



# Towards Strategic Directions (draft)



## Society & Communication

Addressing societal needs and expectations to **strengthen citizen trust** on regulatory science for decision making, by;

- **Increased transparency**
- **Strengthened engagement**
- **Coordinated/integrated risk communication**
- **Targeted communication**

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## Food Systems & Risk Assessment

Being **prepared for and providing fit for purpose scientific advice** to EFSA's customers, in line with evolving;

- **Contribution to Sustainable Development goals with Extended/Integrated Assessments (e.g. AMR-environment)**
- **Integrate new risk assessment tools and methods (e.g. chemical mixtures)**
- **Being ready for assessing new food and feed sources and production technologies**
- **Implement Quality Requirements in Risk assessment (Quality of science, GLP, verification studies)**
- **Improve capacity for Identification of emerging risks Foresight and Horizon scanning capacity**

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## Knowledge, People, Data & Funding

**Building and maximizing the use of available resources and knowledge**, through;

- **Coordinated/integrated strategies, work-programmes, resources**
- **Coordinated research agenda EU and internationally**
- **Expertise/capacity building and sharing for a sustainable RA model (EU and Internationally)**
- **Data interoperability**
- **Big data and computational analytics**
- **Knowledge products and services (e.g. automated self service RA reports)**

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178 Certain SDs are directly related to the Transparency Regulation

# AF Consultation – Survey Timeline 2019



- Week of 23<sup>rd</sup> September: survey validation by AF volunteers
- 1-18 October: AF members reply to survey
- 18 October to mid-November: Integration of the results in the draft Strategy Direction
- AF meeting 27 November: presentation of survey results and discussion
- 17 December: Presentation of the DRAFT Strategy Direction to the Management Board

# EFSA's Work Planning and Strategy cycles



Thank you!

# Annex – Ranking priorities

# 1 | Setting WP priorities – Survey results

## Q1) Which are the priorities overall in EU (ranking)?

### Preparedness (data & methods)

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4

- Animal disease outbreaks
- Application of residue definition to plant extracts/botanical active substances
- Arthropod vectors
- Emerging risks
- 5**  Food waste and cyclical economy
- Food-borne parasites
- Hazards and risks from aquaculture products and processes
- 4**  **Microplastics**
- New food preparation processes as a result of increased migration of human populations
- Plant pests (e.g. xylella)
- Risk prioritisation

**9**

### Developing and implementing Chemical RA

S  
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4

- 8**  Carcinogenesis studies guidance
- Computational toxicology, QSAR and read-across
- Data collection on endocrine activity for oestrogen, androgen, thyroid and steroidogenesis (EATS)
- 3**  Exposure assessment - Pesticides in food for infants and young children. G&P
- Evaluation of phototoxicity and photomutagenicity
- 2**  **Chemical mixtures: developing harmonised methods for the RA of combined exposure to multiple chemicals**

### Risk assessment

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- Biological Hazards
- Contaminants - Heavy metals
- Food packaging
- Nutrition, enzymes, food additives

### **7** Pesticides

### Developing and implementing biological RA

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4

- 1**  **Anti-microbial resistance (AMR) - Environment**
- 6**  Whole Genome Sequencing (WGS) and/or Next Generation Sequencing
- Biological Predictive modelling
- Synthetic biology

### Developing and implementing harmonised methodologies & tools

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4

- Animal welfare**
- Cross-cutting guidance implementation (weight of evidence, benchmark dose, uncertainties)**
- Endocrine disruptors guidance**
- Human variability in Risk Assessment

### Risk Communication & Engagement

S  
O  
1

- Evidence-Based Approach to Risk Communications**
- Consumer insights surveys
- Reputation Management
- Risk perception
- Stakeholder engagement

### Capacity Building

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3

- Scientific RA Training & Teaching activities e.g. EFSA training courses open to external experts, BTSF RA training courses, EU-FORA Fellowship Programme, Parma Summer School
- Integrating regulatory needs in research for H2020 / Horizon Europe, from food safety priorities identification to project set-up, implementation and results exploitation
- Innovative approaches to increase capacity: Machine learning techniques (MLT) for literature and systematic reviews**

### Cooperation

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3

- Partnering projects
- EU Research Agenda**
- EU Risk Assessment Agenda

### Developing a Pan-EU holistic and integrated approach in environmental RA

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4

- ERA: guidance on non-target terrestrial organisms
- Environmental RA and protection goals
- ERA: GIS use of spatial data (landscape, farms, pastures, enterprises, animals densities...)**

### Data

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2

- Dietary surveys
- Data quality: promote a common language and an harmonization of processes and formats (e.g. formats for metadata, IT systems)**

## 2 | Setting priorities - Results

**Q2 b) Based on the criteria selected by each country, which is the score for ranking in the specific areas of work overall in EU?**

SO	AF Priorities - Specific areas of work	Score	Ranking
S04	<b>Developing and implementing biological RA:</b> Anti-microbial resistance (AMR) - Environment	136	1
S04	<b>Developing and implementing chemical RA:</b> Chemical mixtures: developing harmonised methods for the RA of combined exposure to multiple chemicals	128	2
S04	<b>Developing and implementing chemical RA:</b> Data collection on endocrine activity for oestrogen, androgen, thyroid and steroidogenesis (EATS)	110	3
S04	<b>Preparedness:</b> Microplastics	107	4
S04	<b>Preparedness:</b> Emerging risks	106	5
S04	<b>Developing and implementing biological RA:</b> Whole Genome Sequencing (WGS) and/or Next Generation Sequencing	105	6
S01	<b>Risk Assessment:</b> Pesticides	104	7
S04	<b>Developing and implementing chemical RA:</b> Carcinogenesis studies guidance	102	8
S04	<b>Preparedness:</b> Food waste and cyclical economy	99	9
S04	<b>Developing and implementing chemical RA:</b> Exposure assessment - Pesticides in food for infants and young children	98	10

SO	AF Priorities - Specific areas of work	Score	Ranking
S02	<b>Data standardisation and quality:</b> Data quality: common language and harmonization of processes and formats (e.g. for metadata, IT systems)	97	11
S01	<b>Risk Assessment:</b> Biological Hazards	96	12
S01	<b>Risk Assessment:</b> Contaminants - Heavy metals	89	13
S01	<b>Risk Assessment:</b> Food packaging	89	13
S03	<b>Capacity building:</b> Innovative approaches to increase capacity: Machine learning techniques (MLT) for literature and systematic reviews	87	15
S03	<b>Capacity building:</b> Scientific RA Training & Teaching activities e.g. EFSA training courses open to external experts, BTSF RA training courses, EU-FORA Fellowship Programme, Parma Summer School	85	16
S03	<b>Cooperation:</b> EU Research Agenda	85	16
S02	<b>Data standardisation and quality:</b> Dietary surveys	84	18
S03	<b>Capacity building:</b> Integrating regulatory needs in research for H2020 / Horizon Europe, from food safety priorities identification to project set-up, implementation and results exploitation	82	19
S04	<b>Preparedness:</b> Animal disease outbreaks	82	19

## 2 | Setting priorities - Results

**Q2 ii) Based on the criteria selected by each country, which is the score for ranking are the specific areas of work overall in EU?**

SO	AF Priorities - Specific areas of work	Score	Ranking
S03	<b>Cooperation:</b> EU Risk Assessment Agenda	81	21
S03	<b>Cooperation:</b> Partnering projects	81	21
S04	<b>Developing a pan-EU holistic and integrated approach in environmental RA:</b> ERA: GIS use of spatial data (landscape, farms, pastures, enterprises, animals densities...)	81	21
S04	<b>Developing and implementing harmonised methodologies &amp; tools:</b> Animal welfare	81	21
S04	<b>Developing and implementing harmonised methodologies &amp; tools:</b> Cross-cutting guidance implementation (weight of evidence, benchmark dose, uncertainties)	81	21
S04	<b>Developing and implementing harmonised methodologies &amp; tools:</b> Endocrine disruptors guidance	81	21
S04	<b>Developing and implementing chemical RA:</b> Computational toxicology, QSAR and read-across	79	27
S01	<b>Risk Assessment:</b> Nutrition, enzymes, food additives	77	28
S01	<b>Risk Communication and Engagement:</b> Evidence-Based Approach to Risk Communications	77	28
S04	<b>Developing and implementing biological RA:</b> Biological Predictive modelling	76	30
S04	<b>Developing and implementing harmonised methodologies &amp; tools:</b> Human variability in Risk Assessment	71	31

SO	AF Priorities - Specific areas of work	Score	Ranking
S04	Preparedness: Food-borne parasites	71	31
S04	Preparedness: Risk prioritisation	71	31
S04	Developing a pan-EU holistic and integrated approach in environmental RA: Environmental RA and protection goals	70	34
S04	Preparedness: Hazards and risks from aquaculture products and processes	70	34
S01	Risk Communication and Engagement: Risk perception	66	36
S04	Preparedness: New food preparation processes as a result of increased migration of human populations	66	36
S04	Preparedness: Application of residue definition to plant extracts/botanical active substances	58	38
S04	Developing a pan-EU holistic and integrated approach in environmental RA: ERA: guidance on non-target terrestrial organisms	56	39
S04	Preparedness: Arthropod vectors	53	40
S04	Developing and implementing biological RA: Synthetic biology	52	41
S01	Risk Communication and Engagement: Consumer insights surveys	51	42
S04	Preparedness: Plant pests (e.g. xylella)	51	42
S01	Risk Communication and Engagement: Stakeholder engagement	50	44
S04	Developing and implementing harmonised methodologies & tools: Residue definition – QSAR guidance	50	44
S04	Developing and implementing chemical RA: Evaluation of phototoxicity and photomutagenicity	34	46
S01	Risk Communication and Engagement: Reputation Management	33	47