# **Research Needs for Safe Food**

Stef Bronzwaer Research Coordinator Chief Scientist Office, EFSA

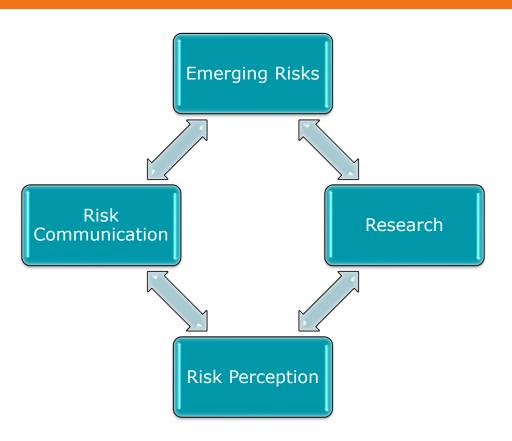
Parma Summer School 2018

Emerging Risks for Food Safety and Public Perception, 15-17 May 2018





# **RESEARCH – EMERGING RISKS**





# RISK ASSESSMENT RESEARCH ASSEMBLY (RARA)



- Make case for public funding of research in food safety
- Inform research agenda setting
- Provide platform for networking, facilitating new partnerships





# RARA KEY OUTCOMES 1/2

- Cooperation: EFSA and AF declared their shared commitment to supporting ERA
  - E.g. formation of research consortia through FPs
- Cohesion: need for alignment of research programming
  - e.g. Joint Programme Initiative
  - additionally, other modalities
- Impact: Future programming, particularly at EU level, need to demonstrate impact
- Networking: EFSA and partners already work together through many active EU-wide platforms





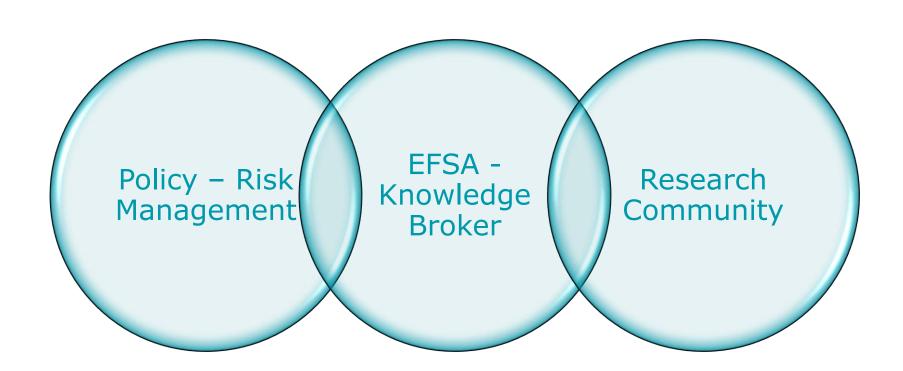
# **RARA KEY OUTCOMES 2/2**

- Research: EU agencies add value in the research knowledge cycle, through identification of research needs, advocacy, assessment of proposals and engagement with on-going projects (EU-ANSA paper)
- Public funding: Food safety is a public good that needs public investment
- **Exploitation**: better access to findings of on-going, and outcomes of concluded, food safety research projects
- Sharing: repeat RARA.
   Next EFSA conference 2018 –
   Science, Food, Society





# RISK ASSESSMENT RESEARCH ASSEMBLY (RARA)





## **RARA – RECURRENT RESEARCH NEEDS RAISED**

- Risk-benefit (cost-benefit)
- Mixtures/combined exposure
- Botanicals
- Food security, waste reduction
- Novel foods
- Food fortification
- Crowd-science & artificial intelligence



# **RARA - FOLLOW-UP**

### Risk Assessment Research Assembly (RARA)

Utrecht, 7 February 2018

EFSA organised the first Risk Assessment Research Assembly (RARA), with a view to stimulating new partnerships in food safety research to safeguard public health, and highlighting the importance of public funding.

Bringing together EU and national research funders, policy/decision makers and leading food safety researchers, RARA served as a platform to:

- · exchange research ideas, which may form part of future calls, and
- · identify partners and possible ways of funding.

#### Outcome

The first RARA attracted 200 scientists, risk assessors and policy makers from 40 countries. To learn more about the event, you can check out the event report, the programme and a leaflet highlighting the key outcomes.

- Event report
- Event programme
- Key outcomes

Note: If you wish to print the leaflet, make sure to select the setting 'flip on short edge'.

#### Event documents

RARA was organised as a dynamic and interactive event. Participants' input and contributions have been captured in the following documents.

- e-Inventory of research ideas shared among participants before the event
- Posters & slides presentations supporting research pitches made during the event
- <u>EFSA-supported networking via joint projects (2015-2017)</u> poster presented at RARA
- Food for thought booklet of abstracts from keynote speakers and panellists
- Satisfaction survey summary statistics from participants' feedback

https://www.efsa.europa.eu/en/events/event/180207

## Flyer with key outcomes





## **IDENTIFYING RESEARCH NEEDS**

- EFSA provides **scientific advice** on request of EU risk managers on food safety for policy making
- When reviewing the available scientific evidence, knowledge gaps are identified
- Every 3 years at end of the mandate of our scientific panels and scientific committee, we gather priority research topics
- National food safety agencies (Advisory Forum) are consulted on food safety priorities
- EFSA staff



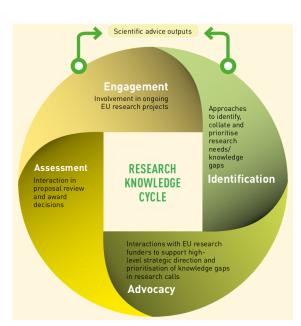
## **RESEARCH NEEDS - IDENTIFIED**

- ♦ EU Risk Assessment Agenda: includes 28 priorities
- ♦ 2017 report on EFSA's priority research topics:
  - microplastics and nanoparticles in food
  - honey bee health
  - food borne viruses
  - risk assessment methodologies
  - European-cloud-based integrated data collection



## **RESEARCH NEEDS - EXPERTISE**

- Link between R&I and education/training (e.g. Marie-Curie): need to build next generation of risk assessors
- EU research programmes to capture regulatory needs for policy making
- To identify cross-boundary priorities among regulatory agencies (EU-ANSA paper)





## **RESEARCH NEEDS - METHODS**

## **METHODOLOGIES FOR REGULATORY PURPOSES**

New and emerging technologies to be swiftly considered in scientific assessments

- Toxicology, omics, bioinformatics, microbiome
- Nano-technologies
- New Breeding Techniques



## **RESEARCH NEEDS - DATA**

- Research data from funded projects to be available for the risk assessment process, so to better inform policies
- **Data accessibility** (e.g. satellite data) quicker and faster, to operate real-time monitoring and signal alerts
- Data interoperability
- Data curation to ensure data quality
- Increase in computational power
- Technologies to use the data: artificial intelligence techniques such as machine learning, crowd-science etc.

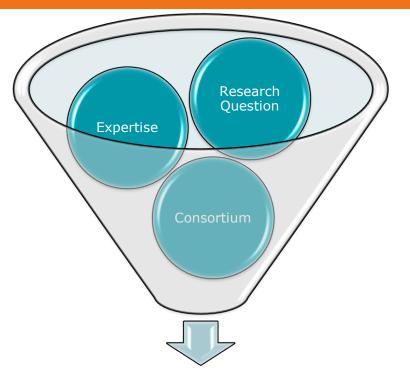


## RESEARCH NEEDS – LONGER TERM

- New developments in food production, animal testing, increasing complexity of RA (e.g. mixtures)
- Role of microbiome, proteome, metabolome and exposome in Risk Assessment
- Holistic approaches
- Societal dimension for acceptability
- Methodologies to address future challenges
- Be prepared for the unknown: Food Safety impact from Food Fraud. Food Defence
- Health risks vs health benefits



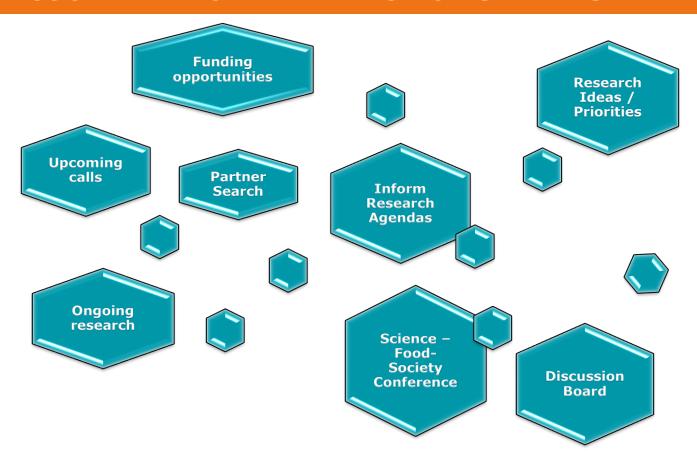
# **INGREDIENTS FOR RESEARCH PROJECTS**



Funding opportunity



## **RESEARCH COORDINATION - MAIN ACTION STRANDS**





# **SOME UPCOMING CALLS H2020**

Topic	Identifier	Opening (planned)	Deadline
Alternative proteins for food and feed	LC-SFS-17-2019	(16/10/18)	23/01/19
Improving animal welfare	SFS-08-2018-2019	(16/10/18)	23/01/19
New and emerging risks to plant health (2-stage)	SFS-05-2018-2019- 2020	31/10/17 (16/10/18)	13/02/18 23/01/19
Anti-microbials and animal production (2-stage)	SFS-11-2018-2019	31/10/17 (16/10/18)	13/02/18 23/01/19
Integrated health approaches and alternatives to pesticide use (2-stage)	SFS-04-2019-2020	(16/10/18)	23/01/19
Prototyping new innovative services	INFRAEOSC-02-2019	(16/10/18)	29/01/19
Support to the EOSC Governance	INFRAEOSC-05-2018- 2019	(10/01/18) (26/07/18)	19/04/18 21/11/18
Enhancing the EOSC portal and connecting thematic clouds	INFRAEOSC-06-2019- 2020	14/11/18	20/03/19
Real-time nano-characterisation technologies	DT-NMBP-08-2019	(16/10/18)	22/01/19
Safe by design, from science to regulation: metrics and main sectors	NMBP-15-2019	(16/10/18)	22/01/19
The Human Exposome Project: a toolbox for assessing and addressing the impact of environment on health	SC1-BHC-28-2019	(26/07/18)	16/04/19



## **FUNDING OPPORTUNITIES**



## **R&I Participant Portal – Tab Funding Opportunities**

https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/master\_calls.html

- Open and forthcoming calls under EU programmes (including H2020)
- Topic Search
- Partner Search
- RSS feed
- Calendar



## **ON-GOING RESEARCH**



### **CORDIS**

### Community Research and Development Information Service

European Commission > CORDIS > Projects and Results > Home

## $\uparrow$

### NEWS & EVENTS PROJECTS & RESULTS RESEARCH\*EU MAGAZINES

# **CORDIS – Tab Projects & Results**

https://cordis.europa.eu/projects/home\_en.html

- Report summary
- Advanced Search
- Export function

https://cordis.europa.eu/search/result\_en?q=(%27fo\_od%27%20AND%20%27safety%27)%20AND%20(pr\_ogramme/code%3D%27H2020%27)%20AND%20/pr\_oject/startDate%3D2017-04-06-2018-04-06%20AND%20contenttype%3D%27project%27

### Browse by:

#### ▼ Subject

Aerospace Technology (3426)

Agricultural biotechnology (1001)

Agriculture (7113)

Automation (8)

Biofuels (214)

Biotechnology (11832)

Business aspects (879)

Clean coal technologies (17) Climate change and Carbon

cycle research (379)
Construction Technology

Construction Technology (743)

Coordination and Cooperation (16050)

Earth Sciences (3021)

Economic Aspects (20598)

Education and Training

(19349) Electronics and

Microelectronics (7016)

Employment issues (7859) Energy Saving (5318)

Energy Saving (5318)

Energy Storage and Energy Transport (745)

Environmental Protection (24563)

Food (4073)

### The primary information source for EU-funded projects since 1990

The **Projects & Results Service** is your one stop for information on EU-funded research projects and project results.

Read more...

**Horizon 2020** <u>project information</u> and now also <u>report summaries</u> are available on CORDIS. All H2020 projects can be <u>downloaded from the EU Open Data Portal</u>.

Search projects and results				
	Free text	•	a	

#### Latest Results in Brief



### Telematics technology steering us towards smarter EU roads

2018-03-27

If we are to have truly smart cities our transport systems will have to be more cost-effective, safer and sustainable. Perhaps most of all they will need to be more integrated, as the EU-funded project MFDS demonstrates.



#### A new approach to quantum technology

2018-03-27

Cold molecular ions may soon prove useful to quantum technology, thanks to research and training undertaken under the COMIO project.

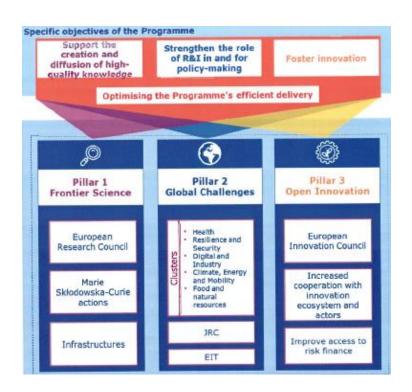


## **HORIZON EUROPE**

- Commission proposes almost 100 billion Euro (97,6 B Euro) for next 7-yr programme (27% increase from H2020)
- Unprecedented that € 10 billion (one tenth of total budget) should go to food, agriculture, rural development and bio-economy
- **Evolution not revolution**: name changes from H2020 to Horizon Europe
- Ample reference to Sustainable Development Goals (SDGs) and importance of international cooperation
- Reduce number of funding instruments. Important instrument will be
   European Partnership Initiatives



## **HORIZON EUROPE**



- Introduction of high-level and ambitious 'missions' to be able to speak better to citizens showing impact
- Food safety included under 'Food and natural resources' as separate 'cluster' under Pillar 2 (Global Challenges)
- One of specific objectives of Programme is to: 'strengthen the role of R&I in, and for, policy making, incl. policy implementation'
- Reinforce Open Science: open access (publications and data) by default, and European Open Science Cloud (EOSC) for next generation of data services for storing, processing and sharing big science data



# **FOCAL POINT NETWORK**

Home About People Focal Point members and observers

## http://www.efsa.europa.eu/en/people/fpmembers

How we work

Values

Governance

Partners

People

Management Board members

Executive Director

Operational management

Advisory Forum members and observers

Focal Point members and observers

Documents

### Focal Point members and observers

#### What are Focal Points?

Country	Organisation	Contact	FP website/E-mail
Austria	Austrian Agency for Health and Food Safety (AGES)	Johann Steinwider	Austrian FP  austrianfocalpoint@ages.at
Belgium	Federal Public Service (FPS)Health Food Chain Safety and Environment	Laurence Ballieux	Belgian FP  efsafocalpoint@health.belgium.be
Bulgaria	Risk Assessment Center on Food Chain – Ministry of Agriculture and Food	Donka Popova	Bulgarian FP  EFSAfocalpoint@mzh.government.bg
Croatia	Croatian Food Agency (HAH)	Sanja Miloš	efsa.focalpoint@hah.hr
Cyprus	Ministry of Health -  The State General Laboratory	Maro Christodoulidou	Cypriot FP  efsafocalpoint@sgl.moh.gov.cy



## **STAY CONNECTED!**



## **Subscribe to**

www.efsa.europa.eu/en/news/newsletters www.efsa.europa.eu/en/rss



## **Engage with careers**

www.efsa.europa.eu/en/engage/careers



## **Follow us on Twitter**

- @efsa\_eu
- @plants\_efsa
- @methods\_efsa