DEVELOPMENT OF THE FEIM WEB TOOL

Giulio Di Piazza, EFSA

EUROPEAN FOOD SAFETY AUTHORITY

AS IS

Currently EFSA is providing:

Single process calculators for dietary exposure

- Shared publicly (through Zenodo) with applicants.
- Simply made in excel and cannot combine multiple processes.
- Examples: FEIM-baking, FEIM-brewing

Multiple processes ad-hoc calculations

- Upon request
- Approximately 50 every year.
- There is no possibility to open self ad-hoc calculations on multiple processes to external users using a simple excel file. In fact, the calculation would require to read the raw data of the comprehensive food consumption database.

DIETARY EXPOSURE TO THE FE-TOS VIA TWO FOOD PROCESSES

Baking + Brewing (estimated by EFSA)

Age class	Nr surveys mean	Minimum mean (mg TOS/kg bw per day)	Maximum mean (mg TOS/kg bw per day)	Nr surveys P95	Minimum P95 (mg TOS/kg bw per day)	Maximum P95 (mg TOS/kg bw per day)
Infants	12	0,007	0,100	10	0,038	0,416
Toddlers	16	0,074	0,215	14	0,185	0,367
Other children	19	0,085	0,206	19	0,165	0,382
Adolescents	20	0,047	0,131	19	0,103	0,267
Adults	22	0,040	0,109	22	0,088	0,252
Elderly and very elderly	21	0,038	0,073	21	0,076	0,134

Baking – 35 mg TOS/kg flour (estimated by FEIM-baking)

Age class	Nr surveys mean	Minimum mean (mg TOS/kg bw per day)	Maximum mean (mg TOS/kg bw per day)	Nr surveys P95	Minimum P95 (mg TOS/kg bw per day)	Maximum P95 (mg TOS/kg bw per day)
Infants	12	0,007	0,097	10	0,038	0,416
Toddlers	16	0,074	0,209	14	0,186	0,356
Other children	19	0,084	0,202	19	0,165	0,380
Adolescents	20	0,046	0,124	19	0,103	0,262
Adults	22	0,034	0,076	22	0,076	0,148
Elderly and very elderly	21	0,034	0,071	21	0,068	0,125

Brewing – 28.3 mg TOS/kg cereals (estimated by FEIM-brewing)

Age class	Nr surveys mean	Minimum mean (mg TOS/kg bw per day)	Maximum mean (mg TOS/kg bw per day)	Nr surveys P95	Minimum P95 (mg TOS/kg bw per day)	Maximum P95 (mg TOS/kg bw per day)
Infants	12	0,000	0,002	10	0,000	0,000
Toddlers	16	0,000	0,005	14	0,000	0,034
Other children	19	0,000	0,004	19	0,000	0,032
Adolescents	20	0,000	0,005	19	0,000	0,026
Adults	22	0,002	0,029	22	0,016	0,130
Elderly and very elderly	21	0,001	0,014	21	0,004	0,059

NEEDS

- EFSA needs to offer a tool to facilitate dietary exposure calculations on enzymes intake to applicants to prepare their dossiers. Both on single and multiple processes. In particular, applicants need to respect the "Scientific Guidance for the submission of dossiers on Food Enzymes".

- In the guidance is also stated "Additional calculators are in the process of being developed. It is envisaged to create an overall assessment tool once all process-based models have been developed."

TO BE

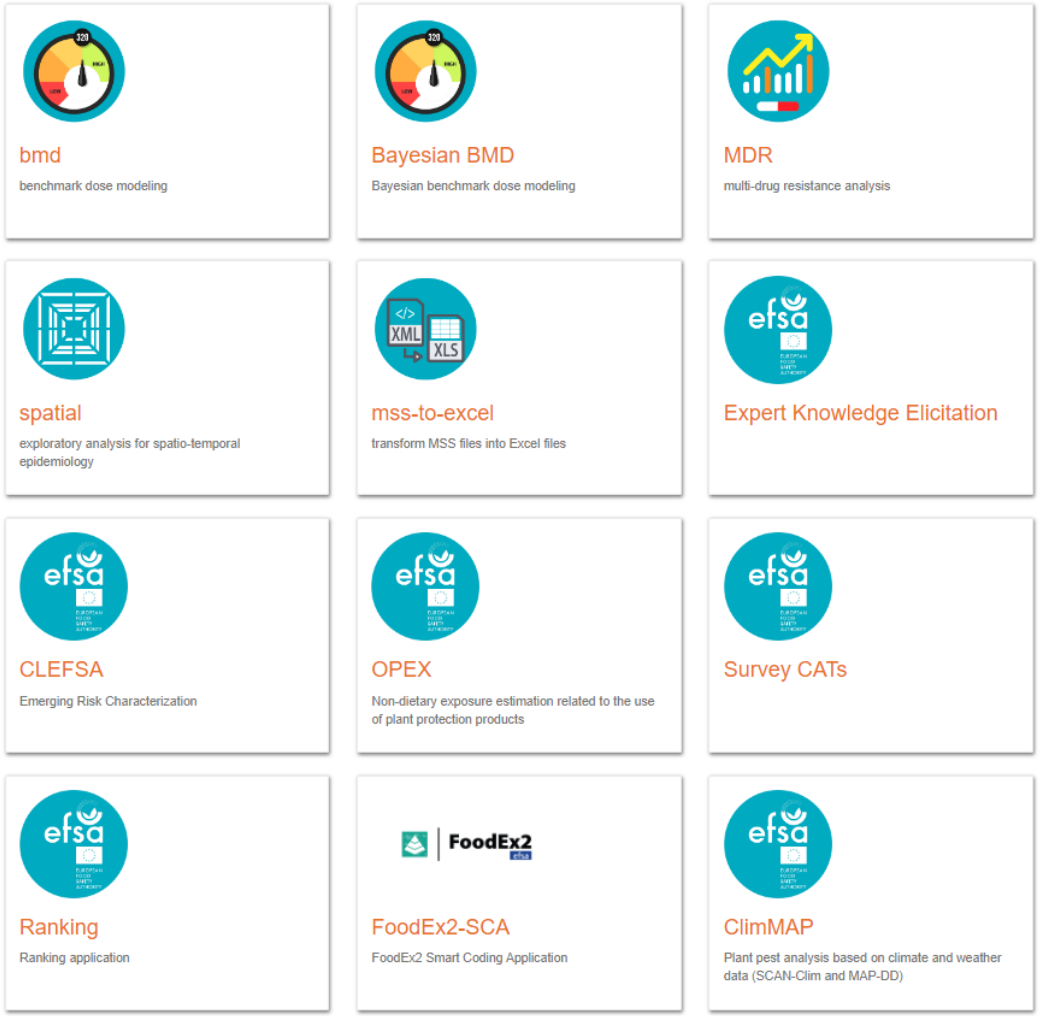
- Creation of a **user-friendly web-tool** to be used by EFSA, industries, applicants, risk assessors (Member States and worldwide).
- Users will be able to **run the tool autonomously**. Both for single or multiple processes risk assessments for enzyme intake.
- The design of the results will be improved.

TO BE - WHERE

The technology foreseen to be used for the development are already set up:

R4EU platform for the web tool application.

Link: EFSA statistical models



Some of the tools already in R4EU

TO BE – HIGH LEVEL REQUIREMENTS

The tool will allow users to:

- Insert **Recommended use level** for one or multiple **Food manufacturing processes** available in the list provided by the tool.
- ***Modify** autonomously the food list to be selected for each processes.

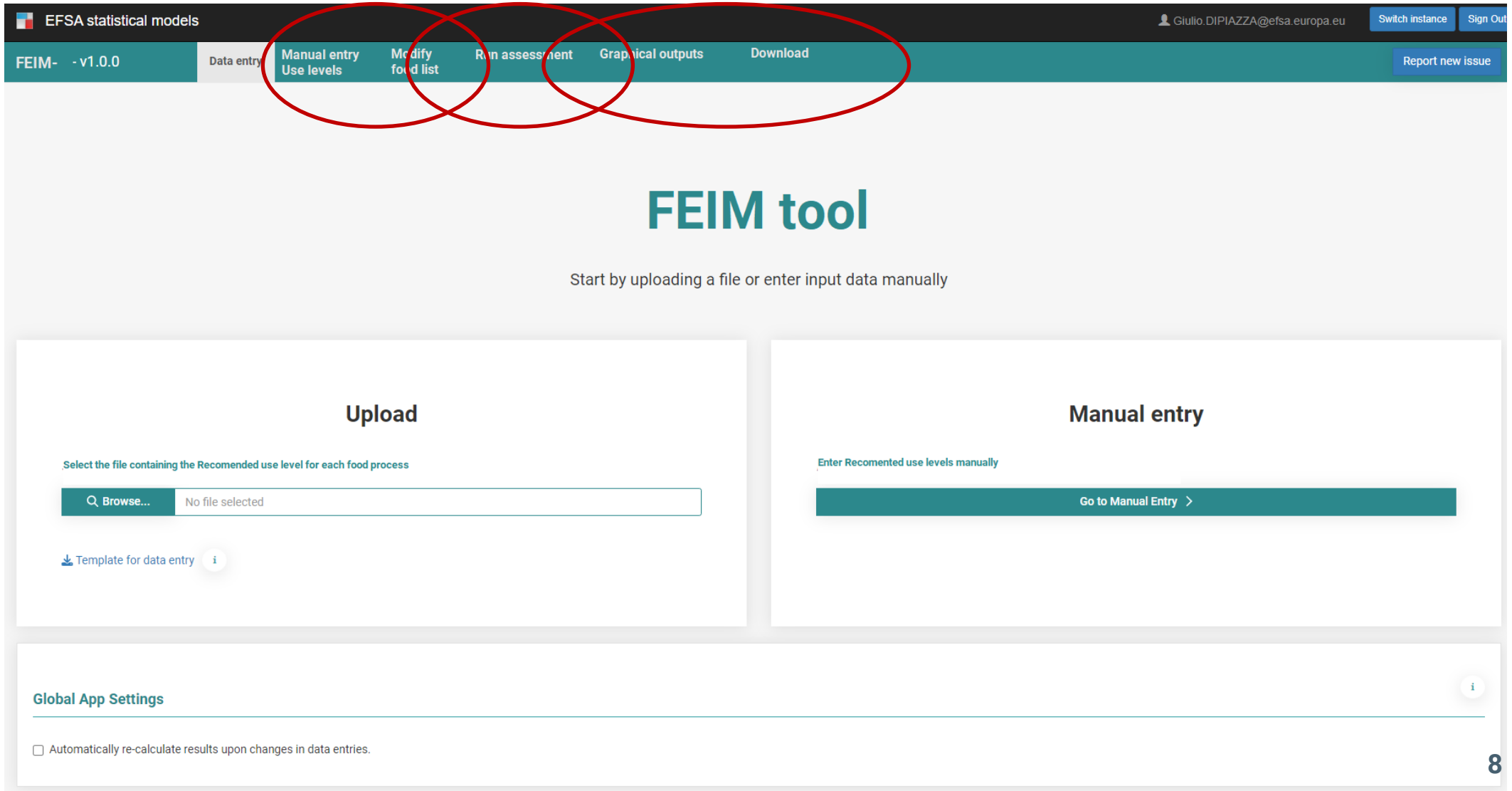
- **Run** the assessment. Numerical results will be provided at the same level of detail of the current ad-hoc assessments.

- Retrieve **graphical outputs** in the web-tool.
- **Download** the result in excel and other formats.

- *Access the tool with **webservices** (APIs).

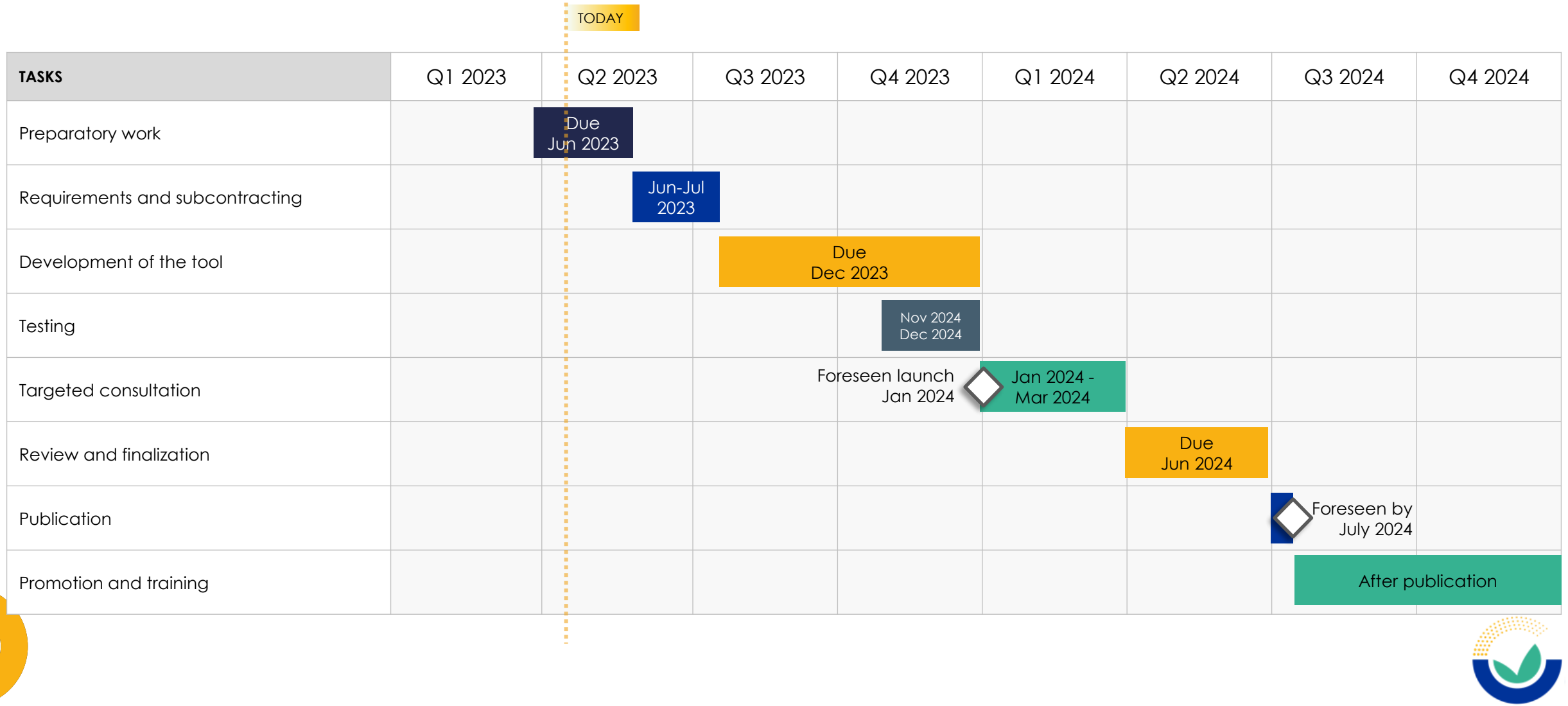
*not confirmed

TO BE – PROTOTYPE FRONTPAGE



*The Tool will probably not have this shape, this front page was copied and modified from another tool in R4EU (PRIMo4), just for the purpose of giving an idea of the possible outcome.

WORK PLAN


TODAY
TASKS
Q1 2023
Q2 2023
Q3 2023
Q4 2023
Q1 2024
Q2 2024
Q3 2024
Q4 2024
Preparatory work
Due Jun 2023
Requirements and subcontracting
Jun-Jul 2023
Development of the tool
Due Dec 2023
Testing
Nov 2024 Dec 2024
Targeted consultation
Foreseen launch Jan 2024
Jan 2024 - Mar 2024
Review and finalization
Due Jun 2024
Publication
Foreseen by July 2024
Promotion and training
After publication

SUGGESTIONS AND FEEDBACK

Feedbacks and suggestions on what you would like to see in the tool are important and much appreciated.

Thanks!

STAY CONNECTED

SUBSCRIBE TO
efsa.europa.eu/en/news/newsletters
efsa.europa.eu/en/rss
Careers.efsa.europa.eu – job alerts

LISTEN TO OUR PODCAST
Science on the Menu –Spotify, Apple Podcast and YouTube

FOLLOW US ON TWITTER
@efsa_eu @methods_efsa
@plants_efsa @animals_efsa

FOLLOW US ON LINKEDIN
Linkedin.com/company/efsa

FOLLOW US ON INSTAGRAM
@one_healthenv_eu

CONTACT US
efsa.europe.eu/en/contact/askefsa

efsa
EUROPEAN FOOD SAFETY AUTHORITY