SGL National activities on networking, engagement and research

Georgios Stavroulakis

Christopher Papachrysostomou

EFSA Focal Point

State General Laboratory (SGL)

Ministry of Health, Cyprus

44th Focal Point Meeting
18-19 November 2020

Content of the presentation

- **Feedback on the national FP event "Annual Meeting of the Article 36 Organisations in Cyprus focused on "RESEARCH"**

- **Upgrade of the ImproRisk model**

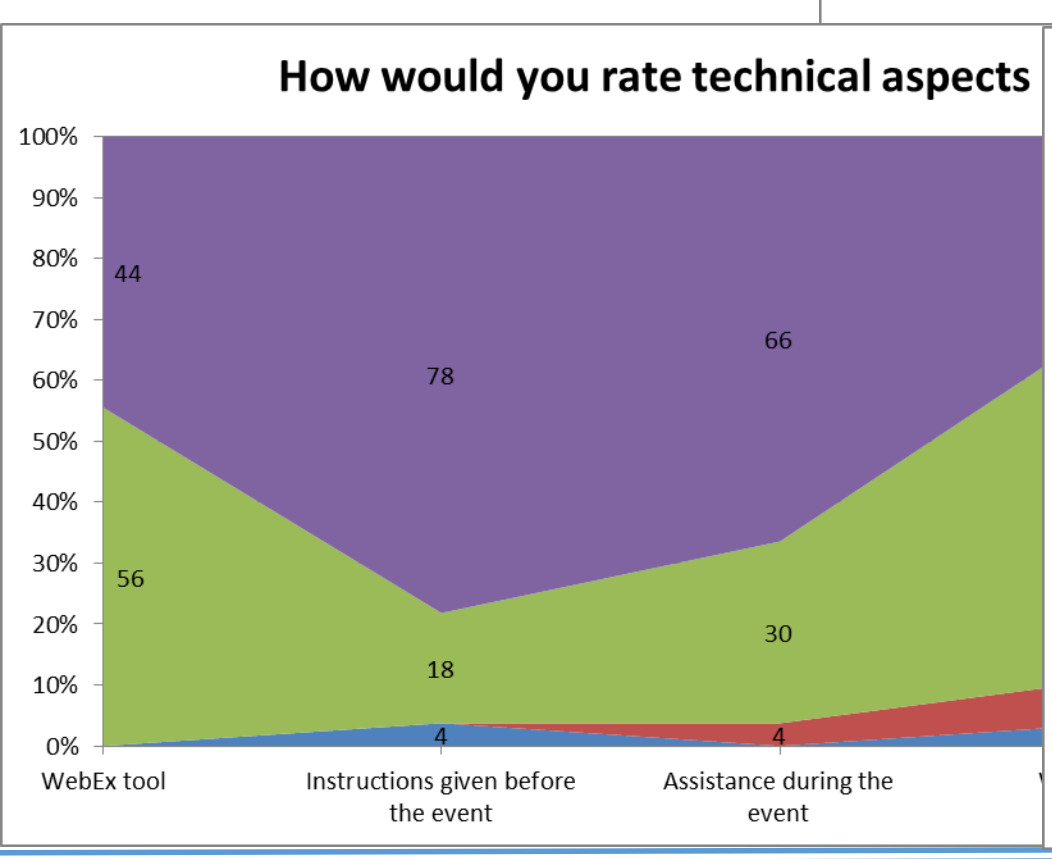
Annual Meeting of the Article 36 Organisations in Cyprus focused on "RESEARCH"

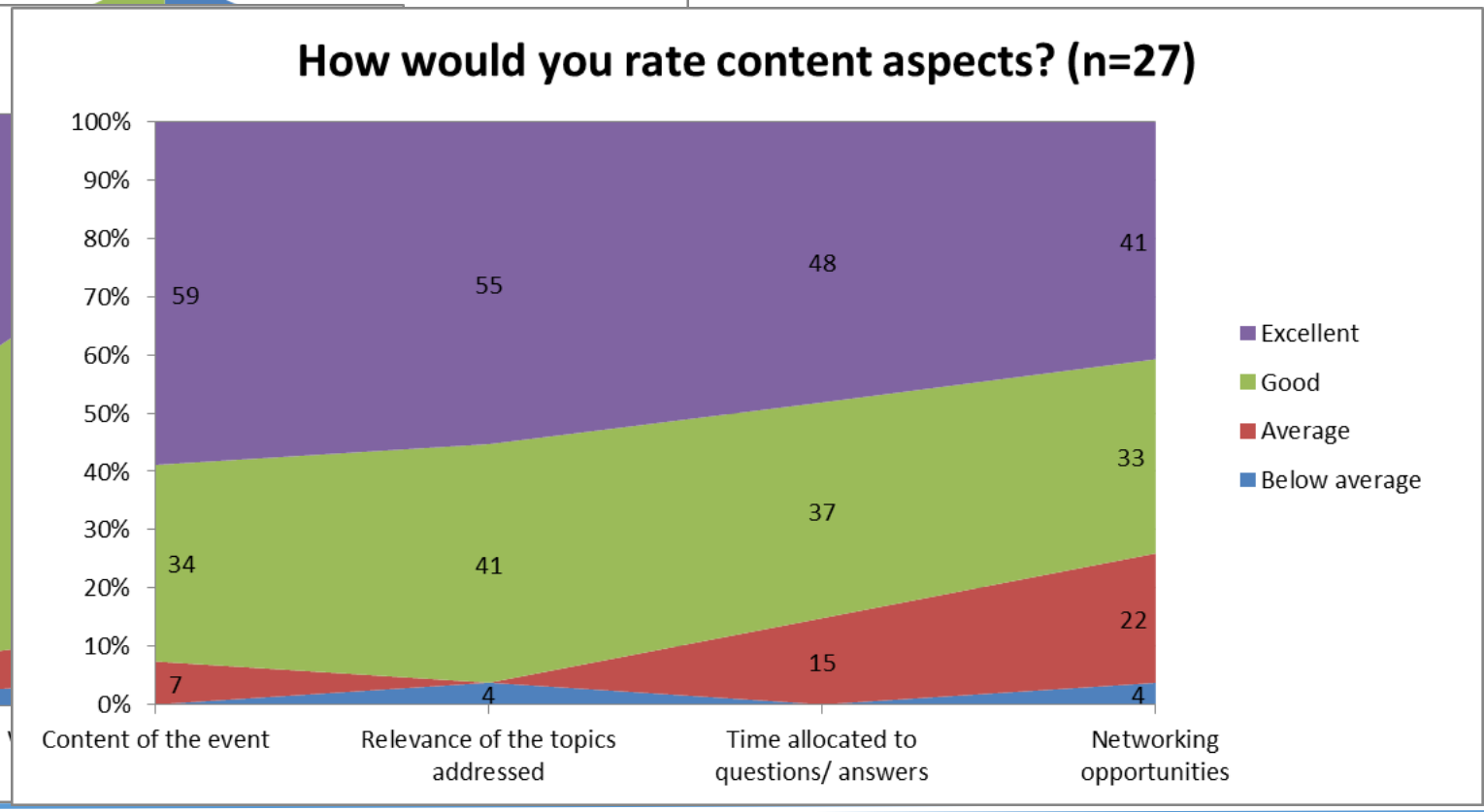
- **Virtual meeting, 21/09/2020**
- **Participants**
  - ✓ **EFSA Focal Point of Cyprus**
  - ✓ **Members of the Risk Assessment Unit and Research Promotion Unit of SGL**
  - ✓ **Representatives from Article 36 Organisations of Cyprus**
  - ✓ **Representative from Research and Innovation Foundation**
  - ✓ **EFSA**
- **Purpose of the meeting**
  - ✓ **Bringing together the wider scientific community and funders/ policy makers in order to exchange ideas on research needs at national and EU level**
  - ✓ **Identifying the main funding tools at national and European level, in order to avoid duplication of work and to promote research consortia**
- **Executing Focal Point tasks 2.6, 2.7!**

Agenda (Draft)	
09:00-09:10	**Welcome speech,** *Dr. Stelios Yiannopoulos, Director of SGL, EFSA Advisory Forum Member* *Mr. Christopher Papachrysostomou, EFSA Focal Point*
09:10-09:20	**Presentation of SGL research activities/interests in relation to food safety and risk assessment,** *Dr. Georgios Stavroulakis, EFSA Focal Point Alternate*
09:20-10:20	**Presentations of Article 36 Organisations research activities/interests with relevance to food/food safety,** *Representatives of Environmental Health Services, Department of Agriculture, Veterinary Services, Agricultural Research Institute, University of Cyprus and Cyprus University of Technology*
10:20-10:35	**EU Risk Assessment Agenda (EURAA)** *Mr. Drago Marojevic, Engagement & Cooperation Unit (ENCO), EFSA*
10:35-10:45	**Coffee break**
10:45-11:00	**EFSA funding and cooperation opportunities,** *Dr. Stef Bronzwaer, Research Coordinator, EFSA*
11:00-11:20	**National funding opportunities related to food safety,** *Ms Marilena Paraskeva, Head of Research and Innovations Project Unit, Research and Innovation Foundation*
11:20-11:45	**Horizons for Food Safety Research,** *Dr. Stef Bronzwaer, Research Coordinator, EFSA*
11:45-12:00	**AOB/ Discussion**

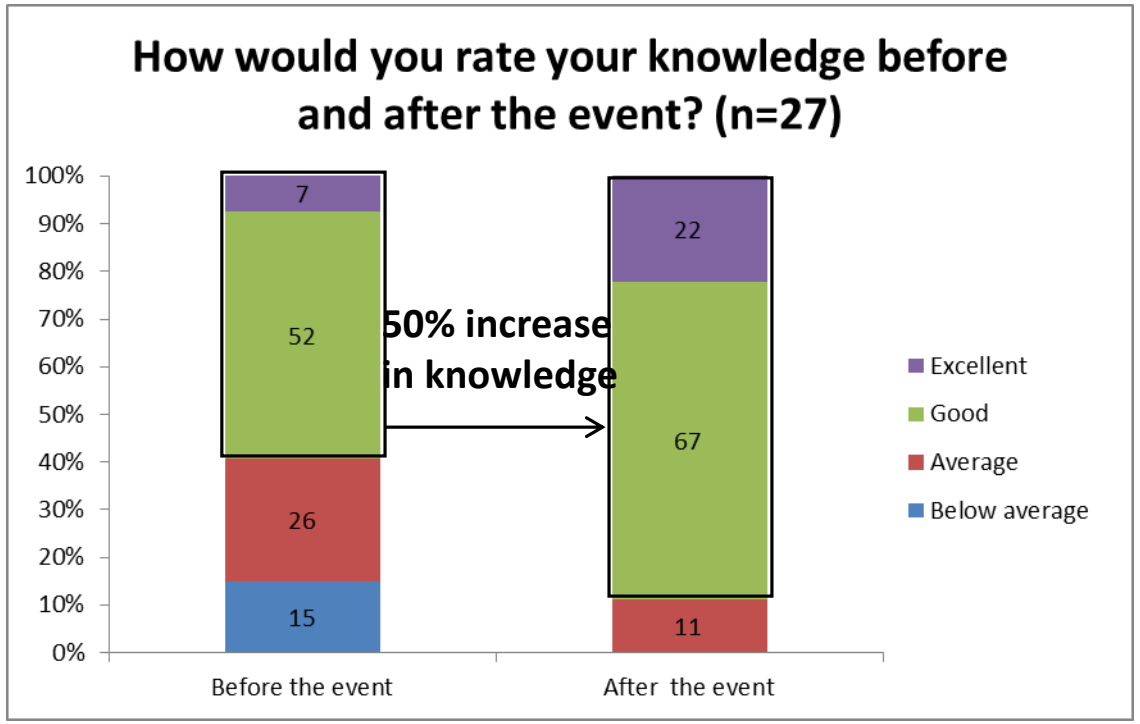
Evaluation of the meeting

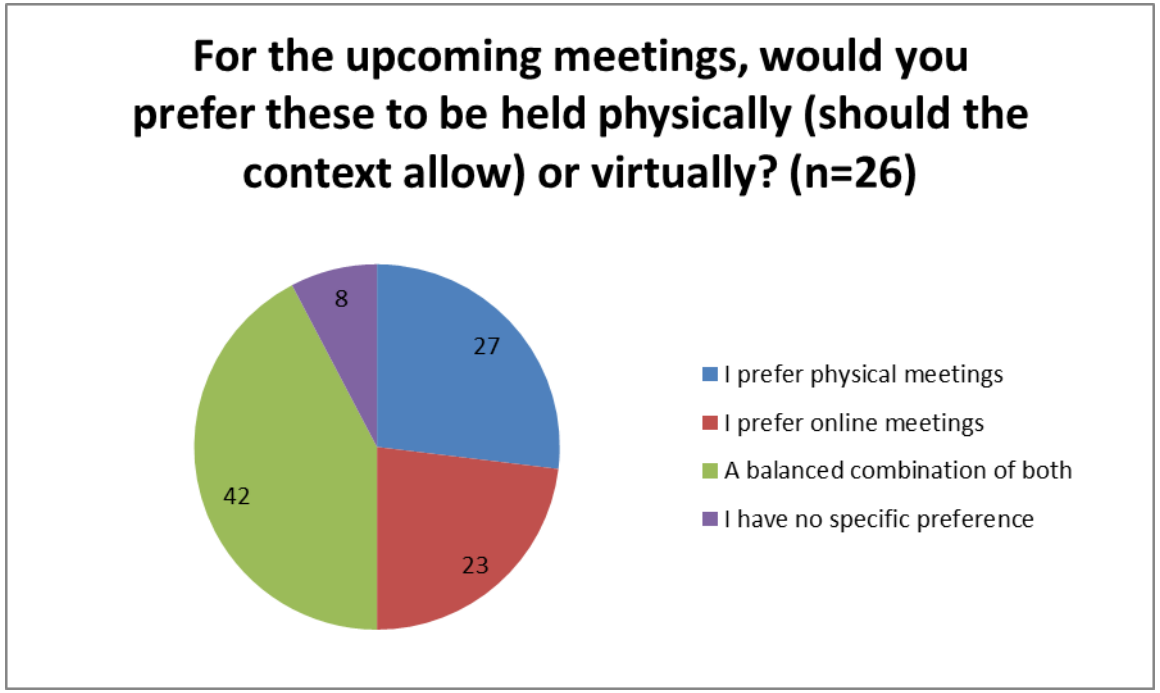
Overall, how would you rate your event experience? (n=27)





Evaluation of the meeting (2)

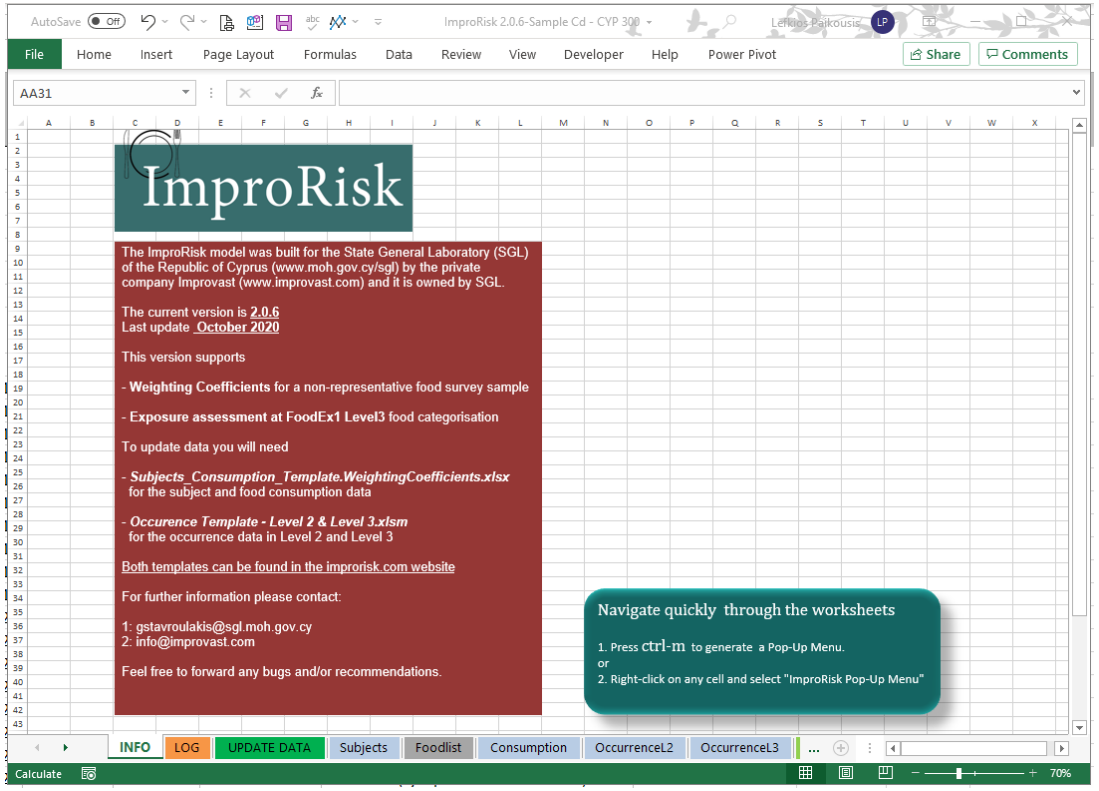


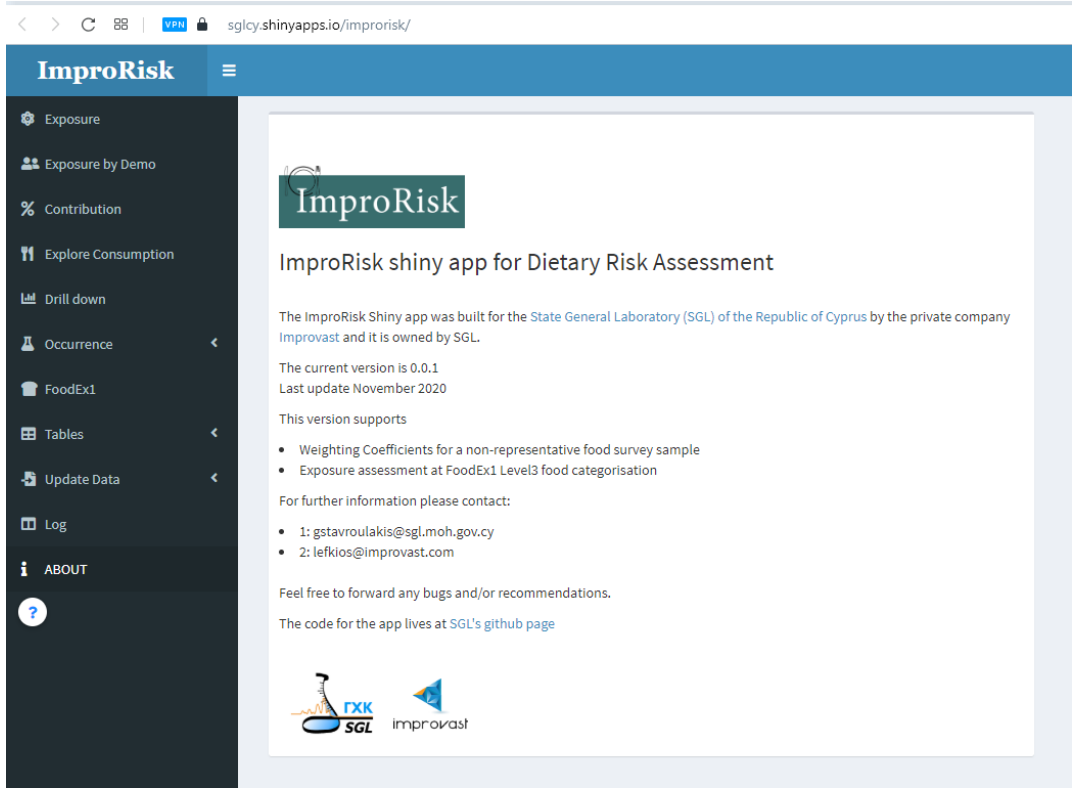


Upgrade of the ImproRisk model

Excel application

Web application





ImproRisk as a Shiny Application

- **Shiny** is an *R package* that makes it easy to build **interactive web apps** straight from R

- ***R*** is a programming language and free software environment for statistical computing and graphics

https://shiny.rstudio.com

WHY as a Shiny Application

- **Online**
- ***Fast***
- ***Interactive***
- ***Flexible***
- ***Reporting and Graphics capabilities***

Capabilities

- Exposure at Level 3 (FoodEx 1)
- By demographic group
- Explore consumption data
- Weighted exposure by population weights
- Customise table and graph reports
- Upload consumption and occurrence data
- FoodEx2 categorisation (under development)

Exposure estimates (population weighted)

ImproRisk

- Exposure
- Exposure by Demographic
- Contribution
- Explore Consumption
- Drill down
- Occurrence
- FoodEx1
- Tables
- Update Data
- Log
- ABOUT

Exposure estimates

Substance Info

Chemical Substance	Lead (Pb)
Substance Category	Contaminant
Reference value (µg/Kg b.w.)	0.63
Type of Reference value	Benchmark Dose Level (BMDL)
Frequency	DAILY

Exposure Statistics (µg/Kg b.w.)

Sample size: 300
Population size: 706,667

	LB	MB	UB
Min	0.109	0.122	0.135
Max	1.919	1.96	2
Mean	0.508	0.532	0.556
SD	0.215	0.221	0.228
P25	0.372	0.387	0.407
Median	0.478	0.503	0.524
P75	0.6	0.63	0.661
P95	0.861	0.911	0.957
pctOver	21.1%	25.6%	28.3%

pctOver: % of population over the reference value

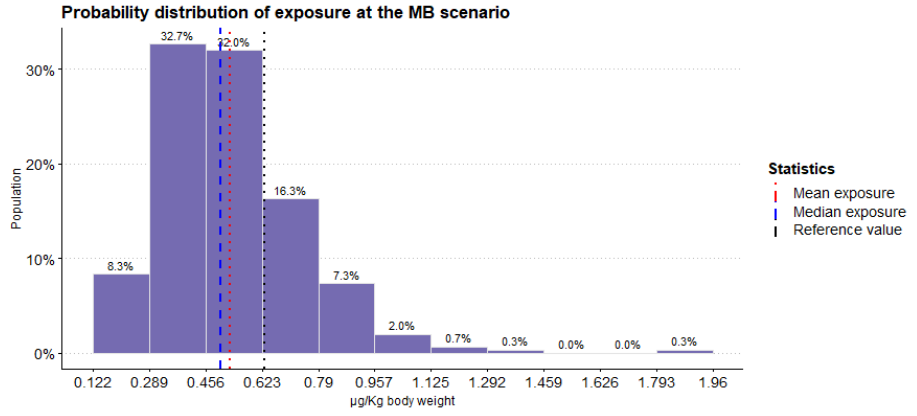
Download .xlsx

Customise tables & graphs +

Distribution of exposure

Scenario: LB | MB | UB

PDF | CDF



Download plot

Exposure estimates by Demographic group

ImproRisk

- Exposure
- Exposure by Demographic
- Contribution
- Explore Consumption
- Drill down
- Occurrence
- FoodEx1
- Tables
- Update Data
- Log
- ABOUT

Explore exposure, grouped by demographic information

Select demographic

Population class

Scenario

LB | MB | UB

Exposure statistics by Population_Class at the MB scenario

pop_class	Min	Max	Mean	SD	P25	Median	P75	P95	pctOver
Adolescents	0.24	1.96	0.67	0.32	0.47	0.57	0.74	1.39	35.8%
Adults	0.12	1.20	0.51	0.19	0.38	0.49	0.62	0.88	23.48%
Elderly	0.16	0.94	0.49	0.17	0.37	0.46	0.65	0.78	27.11%

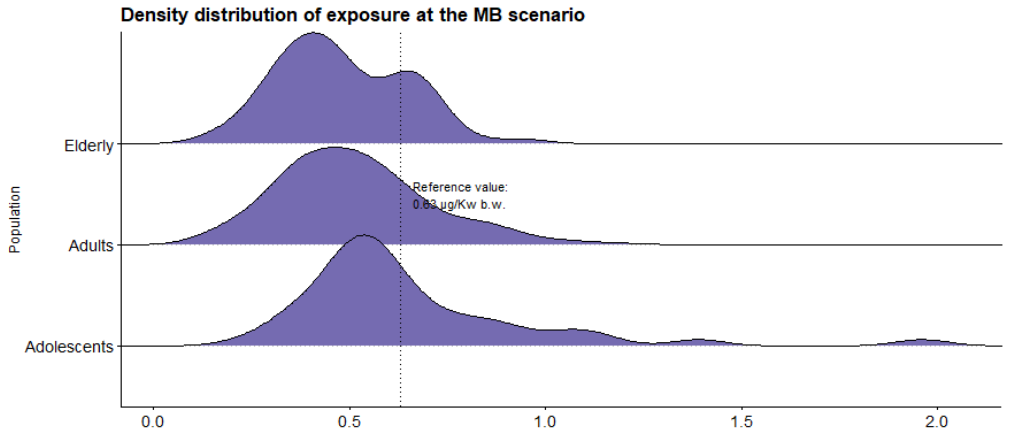
Download .xlsx

Substance Info

Chemical Substance	Lead (Pb)
Substance Category	Contaminant
Reference value (µg/Kg b.w.)	0.63
Type of Reference value	Benchmark Dose Level (BMDL)
Frequency	DAILY

Distribution of exposure

PDF | CDF



Download plot

Customise tables & graphs

Exposure digits

2

pctOver Digits

2

Bandwidth (PDF)

0.023 0.07 0.203

0.023 0.04 0.06 0.08 0.1 0.11 0.13 0.15 0.17 0.18 0.203

Food Contribution to the Total Exposure

ImproRisk

- Exposure
- Exposure by Demographic
- Contribution
- Explore Consumption
- Drill down
- Occurrence
- FoodEx1
- Tables
- Update Data
- Log
- ABOUT

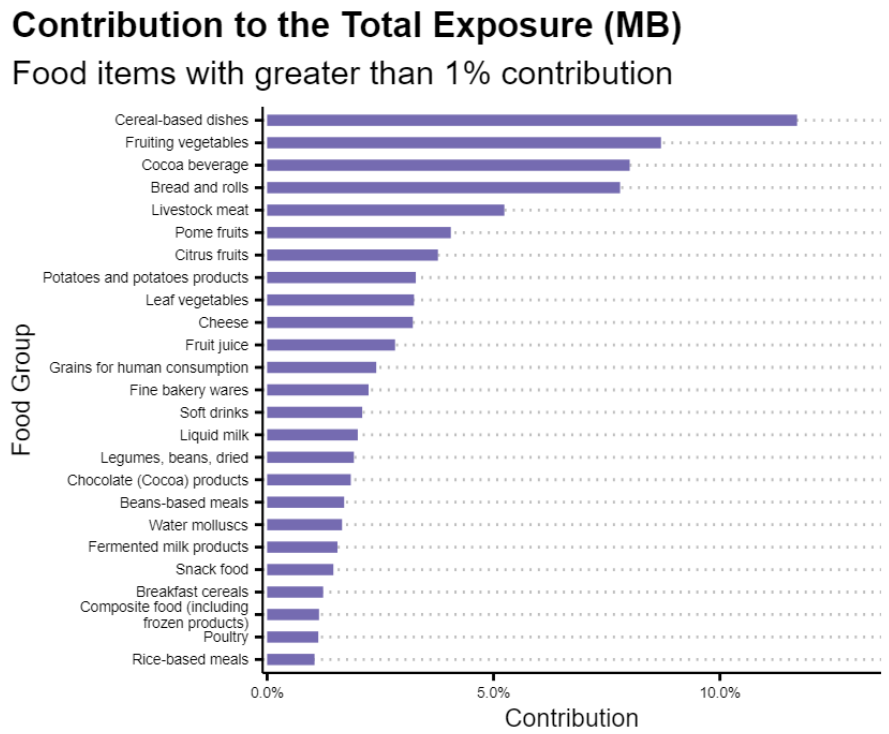
Explore the contribution of food items to the total exposure

Select

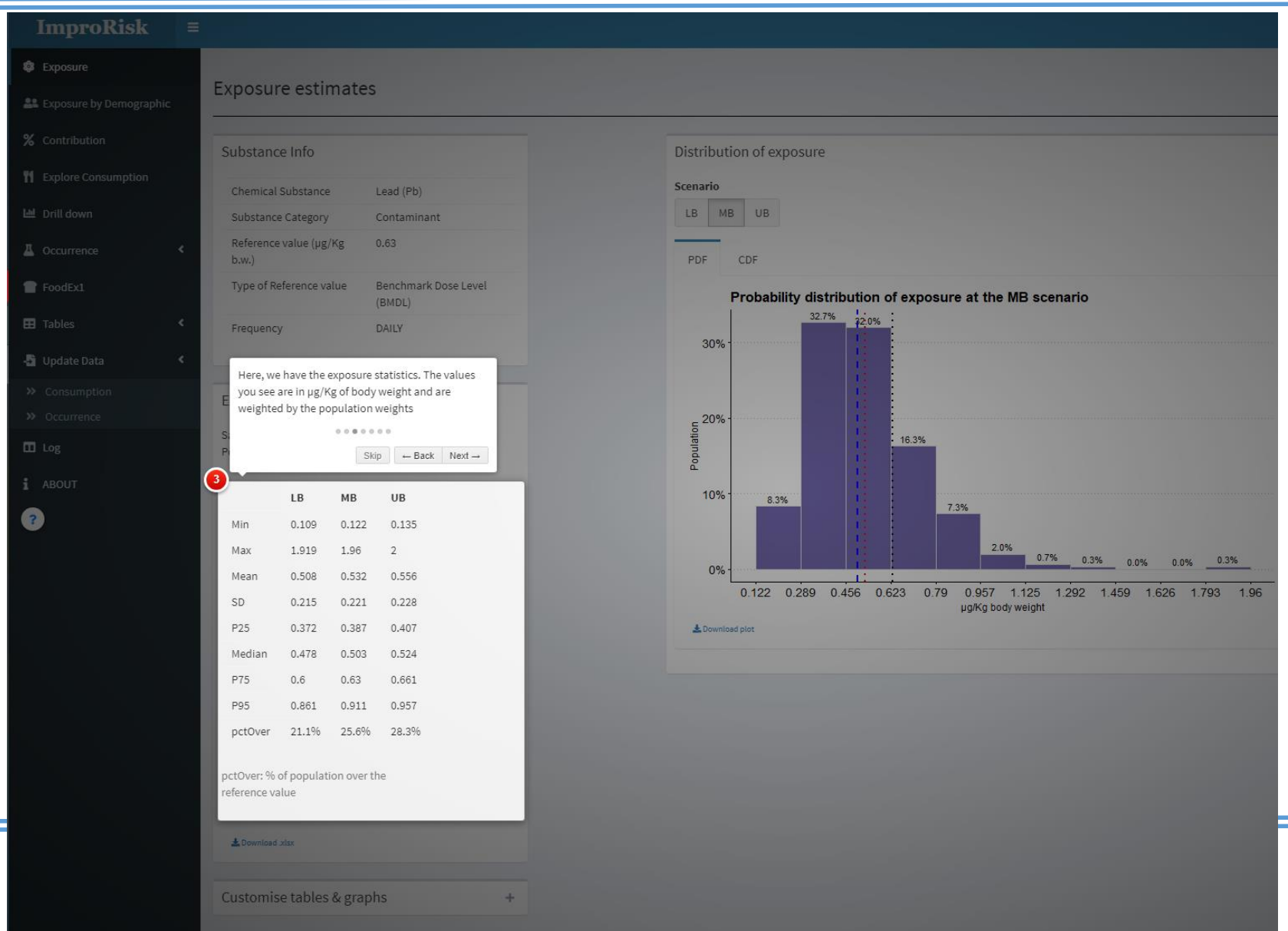
FoodEx1 Level: Level 2 (Level 1, Level 2, Level 3)

Scenario: LB | MB | UB

Customise tables and graphs



Build in guided help



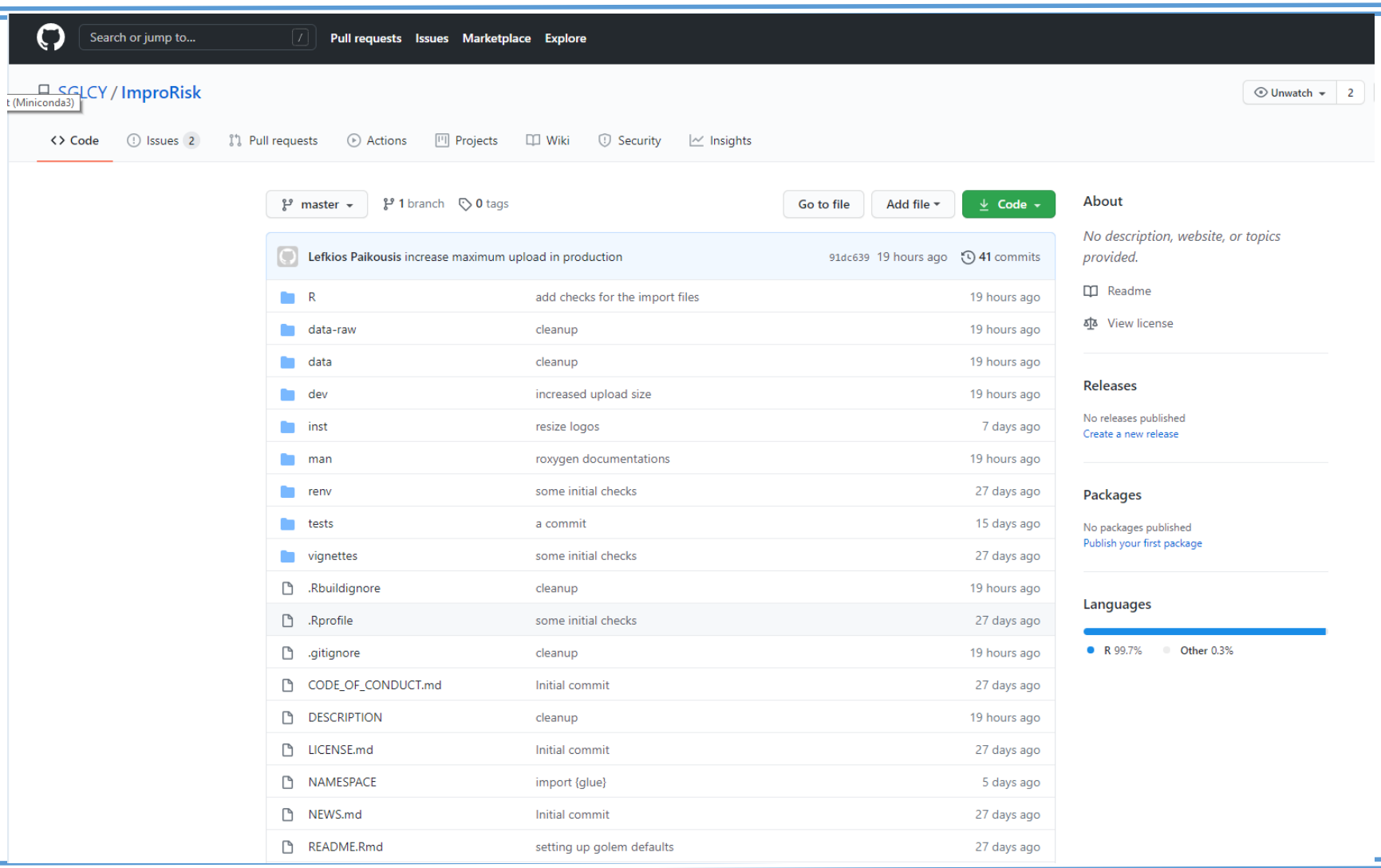
Food consumption dataset format

	A	B	C	D	E	F	G	H	I	J	K	L
1	SERIAL	SUBJECTID	DAY	AMOUNTFOOD	FOODNAME	FOODEX_L4_CODE	GENDER	AREA	POP_CLASS	AGE	WEIGHT	WCOEFF
2	1	1001	1	10	Preserved meat	A.01.000795	FEMALE	Nicosia	Adolescents	12	81	2094
3	2	1001	1	15	Sugars	A.01.001268	FEMALE	Nicosia	Adolescents	12	81	2094
4	3	1001	1	25	Instant coffee, powder	A.01.000429	FEMALE	Nicosia	Adolescents	12	81	2094
5	4	1001	1	55	Cheese, Edam	A.01.001117	FEMALE	Nicosia	Adolescents	12	81	2094
6	5	1001	1	75	Cucumbers (Cucumis sativus)	A.01.000343	FEMALE	Nicosia	Adolescents	12	81	2094
7	6	1001	1	95	Condiment	A.01.001649	FEMALE	Nicosia	Adolescents	12	81	2094
8	7	1001	2	140	Tea (Infusion)	A.01.001515	FEMALE	Nicosia	Adolescents	12	81	2094
9	8	1001	2	190	Lettuce, excluding Iceberg-type lettuce (Lactuca sativa)	A.01.000361	FEMALE	Nicosia	Adolescents	12	81	2094
10	9	1001	2	190	Octopus (Octopus vulgaris)	A.01.000929	FEMALE	Nicosia	Adolescents	12	81	2094
11	10	1001	2	190	Sugars	A.01.001268	FEMALE	Nicosia	Adolescents	12	81	2094
12	11	1001	2	190	Olive oil	A.01.001375	FEMALE	Nicosia	Adolescents	12	81	2094
13	12	1001	2	215	Squid (Loligo vulgaris)	A.01.000928	FEMALE	Nicosia	Adolescents	12	81	2094
14	13	1001	2	235	Cow milk	A.01.000950	FEMALE	Nicosia	Adolescents	12	81	2094
15	14	1001	3	320	Cuttlefish (Sepia officinalis)	A.01.000930	FEMALE	Nicosia	Adolescents	12	81	2094
16	15	1001	3	10	Cow milk	A.01.000950	FEMALE	Nicosia	Adolescents	12	81	2094
17	16	1001	3	10	Olive oil	A.01.001375	FEMALE	Nicosia	Adolescents	12	81	2094
18	17	1001	3	10	Juice, Orange	A.01.001397	FEMALE	Nicosia	Adolescents	12	81	2094
19	18	1001	3	15	Preserved meat	A.01.000795	FEMALE	Nicosia	Adolescents	12	81	2094
20	19	1001	3	15	Olive oil	A.01.001375	FEMALE	Nicosia	Adolescents	12	81	2094
21	20	1001	3	20	Hot chocolate	A.01.001532	FEMALE	Nicosia	Adolescents	12	81	2094
22	21	1002	1	20	Cheese, Edam	A.01.001117	FEMALE	Nicosia	Adolescents	15	43	2094
23	22	1002	1	25	Cucumbers (Cucumis sativus)	A.01.000343	FEMALE	Nicosia	Adolescents	15	43	2094
24	23	1002	1	25	Leaf vegetables	A.01.000359	FEMALE	Nicosia	Adolescents	15	43	2094
25	24	1002	1	30	Wheat bread, brown	A.01.000103	FEMALE	Nicosia	Adolescents	15	43	2094
26	25	1002	1	30	Oranges (Citrus sinensis)	A.01.000547	FEMALE	Nicosia	Adolescents	15	43	2094
27	26	1002	1	40	Cheese, Edam	A.01.001117	FEMALE	Nicosia	Adolescents	15	43	2094
28	27	1002	1	55	Tomatoes (Lycopersicum esculentum)	A.01.000338	FEMALE	Nicosia	Adolescents	15	43	2094
29	28	1002	1	55	Tuna (Thunnus)	A.01.000891	FEMALE	Nicosia	Adolescents	15	43	2094

Occurrence at Level 3 – Dataset format

Chemical Substance	Cadmium (Cd)																
Substance Category	Contaminant																
Reference value (µg/Kg b.w.)	2.5																
Type of Reference value	Tolerable Intake			mg/kg													
Type	WEEKLY				min			mean			median			P95			
Level 1	Level 2	Level 3	No of Samples	LB	MB	UB	LB	MB	UB	LB	MB	UB	LB	MB	UB	LB	MB	UB
Grains and grain-based products	Grains as crops	Corn grain	1	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Grains and grain-based products	Grains as crops	Rice	4	0.005	0.005	0.005	0.009	0.009	0.009	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Grains and grain-based products	Grains for human consumption	Wheat grain	2	0.011	0.011	0.011	0.016	0.016	0.016	0.016	0.016	0.016	0.021	0.021	0.021	0.021	0.021
Grains and grain-based products	Breakfast cereals	Breakfast cereals	13	0.006	0.006	0.006	0.027	0.027	0.027	0.024	0.024	0.024	0.048	0.048	0.048	0.048	0.048
Vegetables and vegetable product	Vegetables and vegetable product	Vegetables and vegetable product	2	0.006	0.006	0.006	0.008	0.008	0.008	0.008	0.008	0.008	0.01	0.01	0.01	0.01	0.01
Vegetables and vegetable product	Fruiting vegetables	Tomatoes (Lycopersicum esculent	3	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Vegetables and vegetable product	Fruiting vegetables	Aubergines (egg plants) (Solanum	2	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Vegetables and vegetable product	Fruiting vegetables	Okra, lady's fingers (Hibiscus escul	2	0.01	0.01	0.01	0.025	0.025	0.025	0.025	0.025	0.025	0.038	0.038	0.038	0.038	0.038
Vegetables and vegetable product	Leaf vegetables	Leaf vegetables	2	0.004	0.004	0.004	0.007	0.007	0.007	0.007	0.007	0.007	0.01	0.01	0.01	0.01	0.01
Vegetables and vegetable product	Leaf vegetables	Lettuce, excluding Iceberg-type le	4	0.01	0.01	0.01	0.012	0.012	0.012	0.011	0.011	0.011	0.015	0.015	0.015	0.015	0.015
Vegetables and vegetable product	Fungi, cultivated	Cultivated mushroom (syn. Button	1	0.045	0.045	0.045	0.045	0.045	0.045	0.045	0.045	0.045	0.045	0.045	0.045	0.045	0.045
Legumes, nuts and oilseeds	Legumes, beans, green, with pods	Legumes, beans, green, with pods	2	0.004	0.004	0.004	0.006	0.006	0.006	0.006	0.006	0.006	0.007	0.007	0.007	0.007	0.007
Fruit and fruit products	Fruit and fruit products	Fruit and fruit products	2	0	0.002	0.003	0	0.002	0.003	0	0.002	0.003	0	0.002	0.003	0	0.002	0.003
Fruit and fruit products	Citrus fruits	Oranges (Citrus sinensis)	1	0	0.002	0.003	0	0.002	0.003	0	0.002	0.003	0	0.002	0.003	0	0.002	0.003
Fruit and fruit products	Citrus fruits	Lemons (Citrus limon)	1	0	0.002	0.003	0	0.002	0.003	0	0.002	0.003	0	0.002	0.003	0	0.002	0.003
Fruit and fruit products	Pome fruits	Apple (Malus domesticus)	2	0	0.002	0.003	0	0.002	0.003	0	0.002	0.003	0	0.002	0.003	0	0.002	0.003
Fruit and fruit products	Stone fruits	Stone fruits	3	0	0.002	0.003	0	0.002	0.003	0	0.002	0.003	0	0.002	0.003	0	0.002	0.003
Fruit and fruit products	Stone fruits	Sweet cherry (Prunus avium)	3	0	0.002	0.003	0	0.002	0.003	0	0.002	0.003	0	0.002	0.003	0	0.002	0.003
Fruit and fruit products	Stone fruits	Peaches (Prunus persica)	4	0	0.002	0.003	0	0.002	0.003	0	0.002	0.003	0	0.002	0.003	0	0.002	0.003
Fruit and fruit products	Berries and small fruits	Table grapes (Vitis euvitis)	1	0	0.002	0.003	0	0.002	0.003	0	0.002	0.003	0	0.002	0.003	0	0.002	0.003
Fruit and fruit products	Berries and small fruits	Strawberries (Fragaria × ananassa)	1	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Fruit and fruit products	Miscellaneous fruits	Figs (Ficus carica)	2	0	0.002	0.003	0	0.002	0.003	0	0.002	0.003	0	0.002	0.003	0	0.002	0.003
Fruit and fruit products	Miscellaneous fruits	Bananas (Musa × paradisica)	1	0	0.002	0.003	0	0.002	0.003	0	0.002	0.003	0	0.002	0.003	0	0.002	0.003
Meat and meat products (including	Livestock meat	Beef meat (Bos spp.)	29	0	0.002	0.003	0.004	0.005	0.007	0	0.002	0.003	0.004	0.004	0.004	0.004	0.004	0.004
Meat and meat products (including	Livestock meat	Pork / piglet meat (Sus scrofa)	44	0	0.002	0.003	0.001	0.002	0.003	0	0.002	0.003	0.004	0.004	0.004	0.004	0.004	0.004
Meat and meat products (including	Livestock meat	Mutton / lamb meat (Ovis aries)	35	0	0.002	0.003	0	0.002	0.003	0	0.002	0.003	0.001	0.002	0.003	0.001	0.002	0.003
Meat and meat products (including	Livestock meat	Goat / kid meat (Capra hircus)	3	0	0.002	0.003	0.002	0.003	0.003	0.003	0.003	0.003	0.004	0.004	0.004	0.004	0.004	0.004
Meat and meat products (including	Livestock meat	Rabbit meat (Lepus cuniculus)	9	0	0.002	0.003	0.002	0.003	0.004	0	0.002	0.003	0.009	0.01	0.01	0.009	0.01	0.01
Meat and meat products (including	Poultry	Chicken meat (Gallus domesticus)	24	0	0.002	0.003	0.001	0.002	0.003	0	0.002	0.003	0.005	0.005	0.005	0.005	0.005	0.005
Meat and meat products (including	Game birds	Quail meat (Coturnix coturnix)	2	0	0.002	0.003	0.002	0.003	0.003	0.002	0.003	0.003	0.004	0.004	0.004	0.004	0.004	0.004
Meat and meat products (including	Edible offal, farmed animals	Edible offal, farmed animals	9	0.012	0.012	0.012	0.02	0.02	0.02	0.019	0.019	0.019	0.029	0.029	0.029	0.029	0.029	0.029

Open Source


Search or jump to...
Pull requests
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Explore
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Unwatch 2
Code
Issues 2
Pull requests
Actions
Projects
Wiki
Security
Insights
master
1 branch
0 tags
Go to file
Add file
Code
Lefkios Paikousis increase maximum upload in production
91dc639 19 hours ago
41 commits
R add checks for the import files 19 hours ago
data-raw cleanup 19 hours ago
data cleanup 19 hours ago
dev increased upload size 19 hours ago
inst resize logos 7 days ago
man roxygen documentations 19 hours ago
renv some initial checks 27 days ago
tests a commit 15 days ago
vignettes some initial checks 27 days ago
.Rbuildignore cleanup 19 hours ago
.Rprofile some initial checks 27 days ago
.gitignore cleanup 19 hours ago
CODE_OF_CONDUCT.md Initial commit 27 days ago
DESCRIPTION cleanup 19 hours ago
LICENSE.md Initial commit 27 days ago
NAMESPACE import {glue} 5 days ago
NEWS.md Initial commit 27 days ago
README.Rmd setting up golem defaults 27 days ago
About
No description, website, or topics provided.
Readme
View license
Releases
No releases published
Create a new release
Packages
No packages published
Publish your first package
Languages
R 99.7%
Other 0.3%

Future steps

- **Online version of the ImproRisk model**
  - Currently under development
  - Members of the Risk Assessment Unit of SGL will provide comments to the Developer of the model, in order to further refine its structure and content and remove any bugs from the system
  - Estimated period for completing the above task ~ 5-6 months
  - ImproRisk Model according to FoodEx1 to be ready and online accessible by
  - March-April 2021! …STAY TUNED!

- **Training workshop on the use of ImproRisk (excel version of the model) with the participation of Greece and Montenegro (December 2020).**
  - Performing FP task 2.6 by contributing to capacity building.

THANK YOU FOR YOUR ATTENTION!

For further information on the ImproRisk model please contact:

- **Georgios Stavroulakis**
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