



The upgrade of the dietary exposure assessment model “ImproRisk” – the role of EFSA and other stakeholders

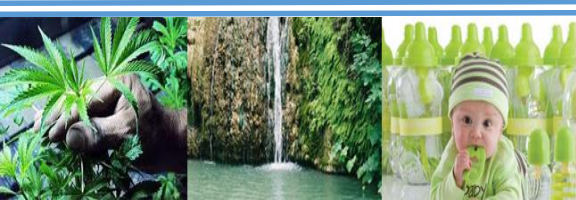
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State General Laboratory (SGL)

Ministry of Health, Cyprus



48th Focal Point Meeting
18-19 May 2022, Parma





Introduction



- ❖ SGL carries out risk assessment for estimating the chronic dietary exposure of the population to chemicals
- ❖ SGL has developed its own risk assessment model called "ImproRisk" since 2014
- ❖ In 2022, ImproRisk has been upgraded into an online model that accommodates FoodEx2, in order to meet EFSA's requirements and risk assessors' needs at national / European level.



2014

- Excel
- Chronic exposure to chemicals in food.
- FoodEx1



2019

- Online model (Shiny web application)
- Open access
- FoodEx1



2022

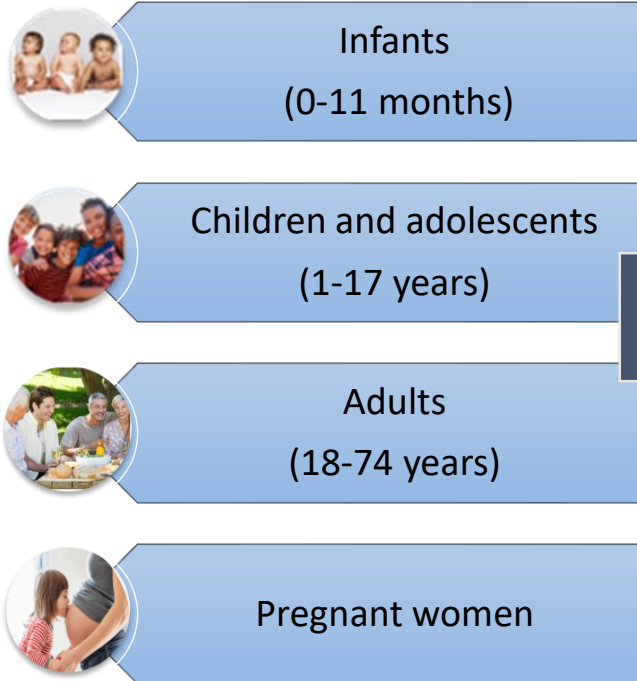
- Shiny web application
- FoodEx2
- Processing facets (F28)



Chronic exposure assessment of the Cypriot population to chemicals



Food Consumption data (EU Menu)



FoodEx2
coding

SQL Risk Assessment model



FoodEx2
coding

Chemical Occurrence data

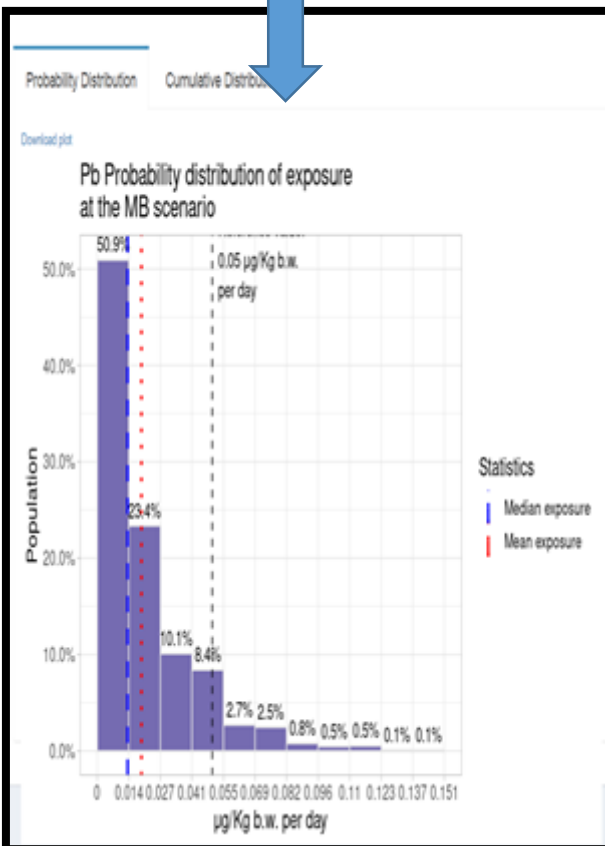




ImproRisk at a glance: Outputs



Probability distribution plots



Cross tabulation of exposure by demographics

Exposure statistics (µg/Kg b.w. per day) by Population class at the MB scenario

Select demographic

Population class

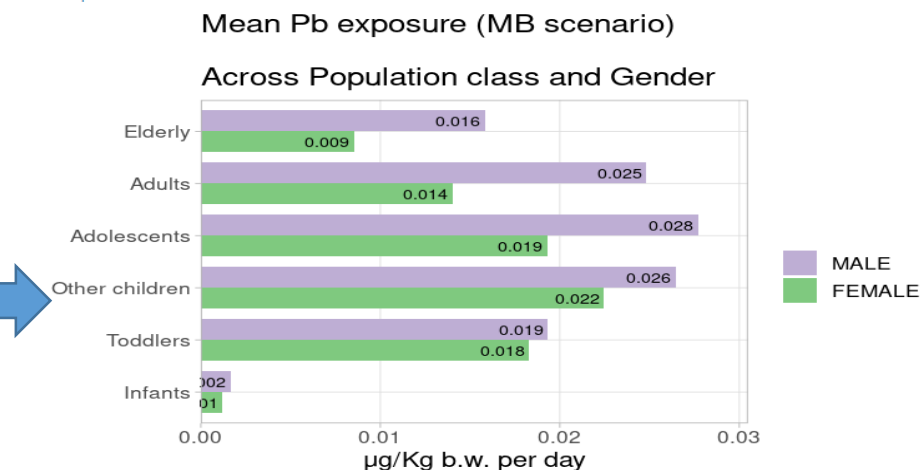
Population class	Min	Max	Mean	SD	P25	Median	P75	P95	pctOver
Adolescents	0.000	0.103	0.024	0.024	0.003	0.018	0.035	0.079	13.1%
Adults	0.000	0.113	0.019	0.021	0.001	0.015	0.028	0.060	8.7%
Elderly	0.000	0.151	0.012	0.018	0.000	0.003	0.020	0.046	3.4%
Infants	0.000	0.095	0.001	0.009	0.000	0.000	0.000	0.001	0.8%
Other children	0.000	0.145	0.025	0.028	0.003	0.016	0.034	0.081	18.5%
Toddlers	0.000	0.146	0.019	0.027	0.000	0.007	0.029	0.075	12.7%

* pctOver: Percentage of population above the reference value

Download as .xlsx

Cross tabulation of exposure by demographics

Download plot

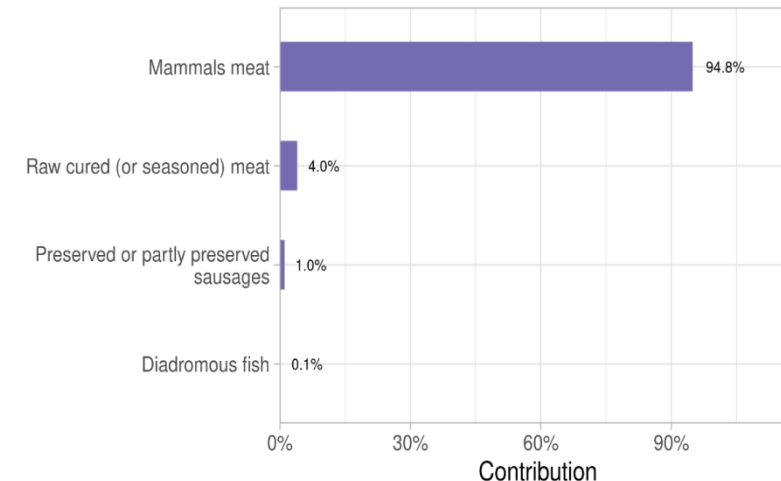


Exposure statistics by demographic

% Contribution at any level of the FoodEx2 exposure hierarchy

Contribution to the Pb Total Exposure (MB)

Food items at FoodEx2 Level 3 with greater than 0.1% contribution





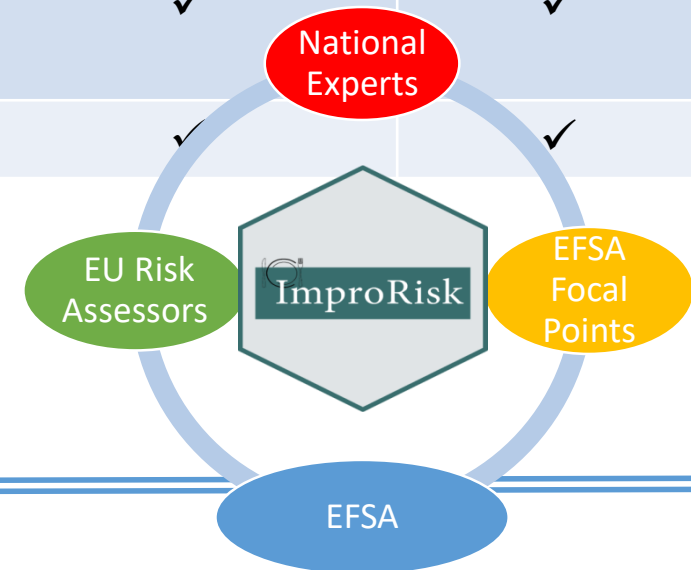
Methods and tools to engage with stakeholders



Tools	National Experts	EU Risk Assessors/ EFSA Focal Points	EFSA
Exchange of emails	✓	✓	✓
Info sessions	✓	✗	✗
Oral presentations at EFSA meetings/ Conferences	✗	✓	✓
Trainings/Workshops	✓	✓	✓

❖ Allocation of sufficient national budget for subcontracting (2014-2022), to ensure ImproRisk will reach its desired format

❖ Rendering ImproRisk an open access model.





Results



- ❖ By making ImproRisk an open model a total number of 45 risk assessors from 17 Member States, 4 observer countries, United Kingdom, USA and South Korea expressed their interest and were provided with access to the model (excel version)
- ❖ Collaboration with EFSA through the signing of a Grant Agreement on the further development of ImproRisk (2016)
- ❖ Organization of Trainings/Workshops at EU level, e.g. TAIEX Workshop in Montenegro (2018), etc.
- ❖ Development of an **open-access harmonized dietary risk assessment model as a web application**, which accommodates **FoodEx2**.





SGL future plans regarding ImproRisk



❑ Final version of ImproRisk is now available online!

❑ Due to an increased demand by various parties to access the ImproRisk application, we are planning to migrate the server and database to a more robust server provider

- ✓ Enhance the speed and capacity to store users' data (up to 300 users)

❑ Process to be completed by end of May





Follow-up Training Workshop



- ☐ Cyprus, is willing to share the model with other MS and observer countries in order to enhance capacity building in Risk Assessment
- ☐ **Follow-up Workshop** on “hands-on” training on **ImproRisk as an online model** to risk assessors from MS and pre-accession countries
 - Mode: Physical (should conditions allow due to Covid-19)
 - Provisional date: September 2022
- ☐ EFSA’s contribution to be specified...





Thank you very much for your attention!!

Questions??

Acknowledgments

- ❖ Mr. Lefkios Paikousis, Director of Improvast (Cyprus) and SGL's external collaborator, for his significant contribution in the development of the ImproRisk model

Training Workshop on the IMPRORISK Model, 17-18 May 2018, Larnaca, Cyprus

