Network on Food Consumption Data
Minutes of the 12th meeting

Held on 21-22 May 2019, Parma
(Agreed on 13 June 2019)

Participants

- **Network Representatives of Member States (including EFTA and pre-accession Countries):**

Country	Name
Austria	Petra RUST
Belgium	Karin DE RIDDER
Bulgaria	Vesselka DULEVA
Cyprus	Stelios YIANNOPOULOS
Croatia	Darja SOKOLIC
Czech Republic	Marcela DOFKOVA
Denmark	Ellen TROLLE
Estonia	Keiu NELIS
Finland	Liisa VALSTA
France	Carine DUBUISSON
Germany	Carolin KREMS
Hungary	Loretta LARNSAK
Ireland	Breige MCNULTY
Latvia	Inese SIKSNA
Lithuania	Albertas BARZDA
Luxembourg	Torsten BOHN
Netherlands	Marga C. OCKE
Poland	Katarzyna STOS
Portugal	Paulo CARMONA
Romania	Monica Mariana NEAGU
Slovakia	Katarina KROMEROVA
Slovenia	Natasa DELFAR
Spain	Carolina Munoz (via skype)
Sweden	Eva WARENSJO LEMMING
United Kingdom	Mark BUSH
Norway	Inger Therese LILLEGAARD
Switzerland	Christine ZUBERBUEHLER
Albania	Ira ALLKOSHAJ
Bosnia and Herzegovina	Katica ARAR
Serbia	Mirjana GURINOVIC
Turkey	Fatma Nevra OZCAN

Kosovo*	Ibrahim TERSHNJAKU

- **Hearing Experts**

Janet CADE (School of Food Science and Nutrition, University of Leads), Kurt GEDRICH (The Technical University of Munich) (DAY 2 of the meeting)

- **EFSA:**

Evidence Management (DATA) Unit: Sofia Ioannidou (Chair), Davide Arcella, Marina Nikolić (Minutes), Bruno Dujardin (point 5.1), Petra Gergelova (point 9), Zsuzsanna Horvath (point 5.3), Alban Shahaj.
NUTRI Unit: Celine Dumas (point 5.4)

1. Welcome and apologies for absence

The Chair welcomed the participants.

Apologies were received from (Georgios Marakis) Greece, Holmfridur Thorgeirsdottir (Iceland), Aida Turrini (Italy), Ingrid Busuttil (Malta), Zorica Đorđević (Montenegro), Suzana Popovska (North Macedonia).

2. Adoption of agenda

The agenda was adopted without changes.

3. Agreement of the minutes of the 11th meeting of the Network on Food Consumption Data held on 30-31 March 2017, Parma

The minutes of the 11th meeting were agreed by written procedure on 12 May 2017 and published on the EFSA website 31 May 2017".

Before commencing the meeting, the network participants briefly introduced themselves.

Topics for discussion

4. Update from Member States (MS)s on current or recently finished dietary surveys

4.1 Results from the NL national food consumption survey 2012-2016

Marga Ocke presented the Dutch national food consumption survey. She briefly described the study population, data collection process, response rate and summary of the results, including under and over reporting rates. Related to the reported under reporting, Carolin Krems suggested that this could be decreased by capturing the information about special conditions such as illness that could explain a low food intake on the day of reporting.

4.2 Outcomes of the Slovenian dietary survey on the general population

Natasa Delfar presented the workflows of the recently finalized national food consumption surveys on children and adult population in Slovenia. She presented the sampling frame, study design, administration of the interviews and the training process for the interviewers. She also described the OPEN (Platform for Clinical Nutrition) – web based dietary application, mentioning

* This designation is without prejudice to positions on status and is in line with UNSCR 1244/1999 and the ICJ Opinion on the Kosovo declaration of independence

the possibility of implementing the FoodEx2 catalogue in the national language. She reported on response rates by age group emphasizing that they were relatively high (55-69%) due to their numerous supporting activities. She mentioned the challenges faced and how these could be dealt with in order not to jeopardise the on-time finalization of the survey. Sofia Ioannidou encouraged other MS network members, running surveys under the EU Menu project, to submit their pilot data and get the experience for the final data transfer. She also advised MSs to proceed with the data submission at least three months before the end of the project in order to ensure sufficient time for corrections and re-submissions.

4.3 Progress in EU Menu dietary surveys in Serbia and implementation of DIET ASSESS & PLAN (DAP) tool in Balkan region

Mirjana Gurinović presented the ongoing Serbian national food consumption surveys on children, adults and ad hoc groups (vegetarians and pregnant women). She described the implementation of the EU Menu methodology, the pilot study and the test data submission as well as the ongoing field work. She also introduced the Diet Assess and Plan platform software and described its implementation in four Balkan countries (Montenegro, North Macedonia, Bosnia Herzegovina and Serbia). The use of the same software will bring a higher level of data harmonization in the region, which is essential for increasing the quality of the data. Carolin Krems commented that recruitment of vegetarians might be challenging. Serbia will try to recruit them through vegetarian/yoga federations or vegetarian restaurants in the country.

4.4 Results of the Swedish food consumption survey in adolescents

Eva Warensjö Lemming presented the 5th national dietary survey in Sweden - Riksmaten Adolescents 2016-2017 as a follow up of the children survey in Sweden performed in 2003. She described the main characteristics of the Swedish school-based survey, survey sample, administration method, participation rate and analysis results. Blood and urine samples were also collected for the analysis of biomarkers, nutrients contaminants and other compounds. She also briefly described the RiksmatenFlex software tool used for self-reported data collection. She provided references for two published reports that summarize all results from the survey. This survey has not been carried out within the EU Menu framework, but Sweden will share the data with EFSA.

4.5 Metadata analysis of Cyprus EU MENU Data, in order to be used in the ImproRisk Model

Stelios Yiannopoulos reported on successfully completed food consumption surveys on children and adults in Cyprus and described how Cyprus has proceeded with the data exploitation. He presented the deterministic model for dietary exposure assessment to contaminants – ImproRisk. He emphasized that the model is based on the FoodEx1 classification system and described the ongoing process of transforming data collected under the EU Menu survey from FoodEx2 to FoodEx1 to enable their usage for the exposure assessment by ImproRisk model. Davide Arcella commented that exposure models and tools developed at national level are very useful, mainly for screening purposes. Their use can save resources by reducing the number

of refined exposure assessments based on more detailed analysis and carried out with more complex statistical software.

5. EFSA activities in the area of food consumption data and exposure/intake assessment

5.1 RPC model and FACE calculator

Bruno Dujardin presented the Raw Primary Commodities (RPC) model, the Feed Additives Consumer Exposure (FACE) tool and their usage in dietary exposure assessment. He presented the steps of disaggregation of composite dishes to the RPC derivatives and from the RPC derivatives to RPCs emphasizing that, in some food sector areas, the occurrence data mainly exist at the RPC level. Finally, he presented an online tool implementing the methodology related to the assessment of the safety of feed additives for the consumer, which entered into force in May 2018. He described differences between the previous model, which was based on a model diet for the EU population, and the FACE tool, which is an example of exposure assessment using individual consumption data.

5.2 Update on the FoodEx2 classification system

Sofia Ioannidou presented the FoodEx2 classification and description system, its food categories and list of facet descriptors. She showed few examples of coding and encouraged network members to watch the available webinars on FoodEx2 to get familiar with the coding system. Alban Shahaj presented the latest version of the FoodEx2 catalogue browser and its features as well as the Interpreting and Checking Tool (ICT). He encouraged network members who are preparing data for submission to check their codes using ICT since this will greatly facilitate the data transmission.

5.3 Exposure assessment to dioxins

Zsuzsanna Horvath presented how the food consumption data present in the Comprehensive database were used for the exposure assessment to dioxins. She described the data selection, data cleaning process and the occurrence data used for the analyses. She presented a summary of the results related to the dietary exposure to dioxins by age groups. The published opinion can be found here. It includes an evaluation of the toxicity of dioxins and DL-PCBs for animals and humans, considering all relevant adverse health effects, an estimation of the dietary exposure of the EU population and assessment of the chronic human health risks coming from the estimated dietary exposure and an estimation of the exposure of the different animal species and assessment of the animal health risks as the consequence of the exposure from animal feed.

5.4 Opinion on vitamin D

Celine Dumas presented the work done for the update, regarding infants, of EFSA's scientific opinion of 2012 on the tolerable upper intake level (UL) of vitamin D. She introduced the definition and the context of the mandate EFSA has received related to this topic and presented the applied methodology. Food consumption data available in the Comprehensive database on infants (from six countries) were combined with food composition data from 20 EU MS present in the EFSA Nutrient Composition database. She presented a summary of the results for two group of infants

(younger than 4 months and 4-12 months). The EFSA opinion can be found here. She finally introduced the new tool developed at EFSA related to the dietary reference values – DRV finder.

6. Welcome and apologies for absence

No further apologies were received during the second day of the meeting. Aida Turrini, the network representative from Italy followed the second day o the network via skype.

7. New methodologies and tools for national dietary surveys

7.1 Challenges faced by Belgium during the EU Menu survey

Karin De Ridder presented the challenges the Belgium EU Menu team faced during the project. She described how hard it was to employ and keep the core, educated team throughout the project. She stressed the high drop out of interviewers and low response rate of the participants, particularly in Brussels which resulted in delayed sampling process. The lack of team members also resulted in low number of valid physical activity measurements (with the accelerometer). Karin also reported on the high percentage of underreporting of energy intake and the long and demanding data management process needed to get a high-quality data set. She emphasized the problem of translation of reports and results due to the multilingual environment in Belgium. Finally, she reported on problems they faced due to the post-survey changes in demands related to the reporting of supplements and updated FoodEx2 catalogue. The chair acknowledged these challenges recognising that running a dietary survey is not an easy task. She invited project teams in other countries to learn from these experiences and plan in advance how they can face such problems. Belgium is planning their new dietary survey; its methodology will still be the one recommended in the EU Menu guidance and a food frequency questionnaire will be administered in a subsample of the population to increase the representativity of certain areas.

7.2 The United Kingdom (UK) National Diet and Nutrition Survey: Changes in food consumption data collection methods

Mark Bush presented the latest decisions of the Food Standard Agency (FSA) on the methodology used to carry out their national dietary surveys. He mainly focused on their transition from the paper and pencil food diary to 24-hour recall automatized data collection. The reasons that drove UK towards this transition was the need to have methods more compatible with modern lifestyles and comparable with new and future technologies, to make it easier for subjects to participate and to keep the costs low. He emphasised the importance of innovation and the need for keeping methodology and tools updated, despite the fact that this could partially undermine data consistency and trend analysis. He presented the selection procedure followed for the identification of an automated dietary assessment tool driven by being reliable, technically functional and adaptable to the UK survey. He also stressed as important step in the tool selection/development the definition of the purpose of data collection. The tool fulfilling the set requirements was the web based Intake24 and it is planned to be used in fieldwork by the end 2019.

7.3 Development of a food diary app

Marga Ocke presented the new methodology, based on a food diary application, currently under development for future Dutch national food consumption surveys. The current process was considered too slow and it was decided to make use of new advancements in data science and technology. In particular, the high rate of smartphone users drove them towards the use of an electronic food diary. Marga gave an overview of the app flow chart, screen shots of the various windows and its back-end development and emphasized the advantages of using branded food databases. She however, described also the challenges as, for example, the fact that mixed/composite dishes are not yet covered by the VCP-app. She indicated that in 2020 food consumption data will be collected with the app and compared with the 2020-2021 data collection using the GloboDiet software. Based on the comparison, future use of the app in the Dutch national food consumption surveys will be evaluated.

7.4 A mobile app for collecting food consumption data

Darja Sokolić presented their newly developed NutriCr web application and the digitalized process of the ongoing food consumption survey in Croatia. She described how the web application manages the whole process of the interview and how the app is connected with different databases used in the survey. This app will be used for the collection of food consumption data under the current EU Menu project in Croatia.

8. New methodologies and tools for the collection of food consumption data

8.1 Dietary intake assessment using technology: gaps and requirements

Janet Cade presented a systematic review on methods using the latest technology for dietary assessments, such as online tools, apps, cameras, wearable sensors etc. The review evaluated 43 tools in total. Janet gave an overview of the main challenges for which new technologies have been used, e.g. data entry, the food identification and description, the food composition databases and nutrient outputs, the lack of customisation and validation. She also discussed the maturity of these new technologies for large population surveys. She finally presented a new validated web application tool for dietary assessment called MyFood24 which was developed by researchers at the University of Leeds. This app is already translated in German and Danish using the respective Food Composition Databases.

8.2 Personalized Nutrition via mobile apps – A bright, yet scary future?

Kurt Gedrich talked about the concept of personalized nutrition giving practical examples of its application. He described the Food4Me tool features and results of its use as well as the mobile app Nutrilize, developed within the Enable project. He defined the future role of the artificial intelligence in the area of dietary assessment stressing the option of collecting data "on-the-fly" such as food prices, restaurant's menus etc. He concluded that personalized nutrition via mobile apps may facilitate healthier dietary choices, offer the

change to embrace environment of eating and wealth of research activities but may run into serious issues of protection of privacy.

8.3 The Global Dietary Database

Dimitra Karageorgou talked about the Global Dietary Database (GDD), an ongoing global initiative to leverage existing dietary data. She presented gaps, challenges and needs for the global monitoring of food consumption data. She also described the current data availability and the process of harmonization of existing dietary data stressing the importance of harmonized methods and templates for the collection/analysis of dietary data at international level. In this context they have established a partnership with FAO/WHO and EFSA in order to exchange methodologies and expertise, share resources and avoid duplication of efforts.

9. Brainstorming on the future of the EU Menu framework project

Davide Arcella chaired a brainstorming session dedicated to the future of the EU Menu framework project. He gave an overview of the use food consumption data in the EFSA outputs and described the steps taken since 2005 to accomplish this collection. Davide acknowledged the good work done so far within the EU Menu framework project, which is planned to be finalised by 2023, and kicked off a round table on the next steps EFSA and MSs should follow in the area of food consumption data, with different challenges and options being presented.

The network expressed as a consensus to keep the EU food consumption database updated. Consumer behaviours evolve in time and everybody agreed on the fact that it is fundamental to continue the collection of up-to-date harmonised and high-quality food consumption data.

Mark Bush (UK) pointed out that evidence-based policy for public health nutrition and exposure assessment as well as areas where we want to have evidence on, should define the level of quality of the information collected. The response rate is not a crucial issue to be improved since a high response rate does not guaranty a non-biased data. He finally stressed that an improvement is more needed in the area of the representativity of the population.

Inger Therese Lillegaard (NO) emphasised the importance of high-quality chemical occurrence data and stressed that more intensive collaboration between the MSs is needed. In fact, she suggested network meetings on a yearly basis instead of biennially as it is currently the case.

Marga Ocke (NL) suggested that MSs should invest more in developing methodologies for the matching of food data in a semi-automatic ways. For example, matching food consumption data with FoodEx2 classification, or matching branded food data with generic food composition data.

Ellen Trolle (DK) suggested to have an evaluation of the quality of the data collected under the EU Menu framework project in order to check their level of detail and accuracy and identify possible improvements for the next steps.

Lisa Valsta (FI) discouraged the organisation of a pan-European survey instead of national ones. Instead she proposed the following improvements: on collaboration between health area and food safety area, on the response

rate by the use of weighing factors and on lowering under and over reporting rates with additional questions related to the specific days (presence of illnesses, traveling day etc.). She also encouraged investment of resources in the area of validation of new tools to enable simplified procedure of data collection, harmonisation in the area of data mapping and food composition and occurrence data.

Janet Cade suggested more intensive collaboration with food manufacturers as a way of improvement both food composition and chemical occurrence databases.

Albertas Barzda (LI) stressed the importance of going towards new technologies and data collection via mobile apps and suggested the translation of tools in national languages.

All network members requested EFSA to bring to the attention of the upcoming EFSA Advisory Forum the following message:

'**The collection of accurate, harmonised and detailed food consumption data should still remain a primary long-term objective for EFSA, and a top priority for collaboration with the EU Member States**'.

10. Any Other Business

Albertas Barzda shortly presented the recently finalized food consumption survey among school age children in Lithuania, after the coffee break on the first day of the meeting. He presented the set of data collected within the survey and emphasized that the survey was designed according to the EU Menu methodology.

11. Conclusions

The Chair briefly summarised the main decisions and outcomes of the meeting.

12. Closure of the meeting

The chair thanked all participants for their valuable contribution and closed the meeting.