



University of Belgrade  
Institute for Medical Research  
Centre of Research Excellence in  
Nutrition and Metabolism  
[www.srbnutrition.info](http://www.srbnutrition.info)

## SUCCESSFUL REGIONAL HARMONISATION IN FOOD AND NUTRITION DATA COLLECTION AND ANALYSIS FOR EVIDENCE BASED NUTRITION POLICY IN SERBIA AND WESTERN BALKANS

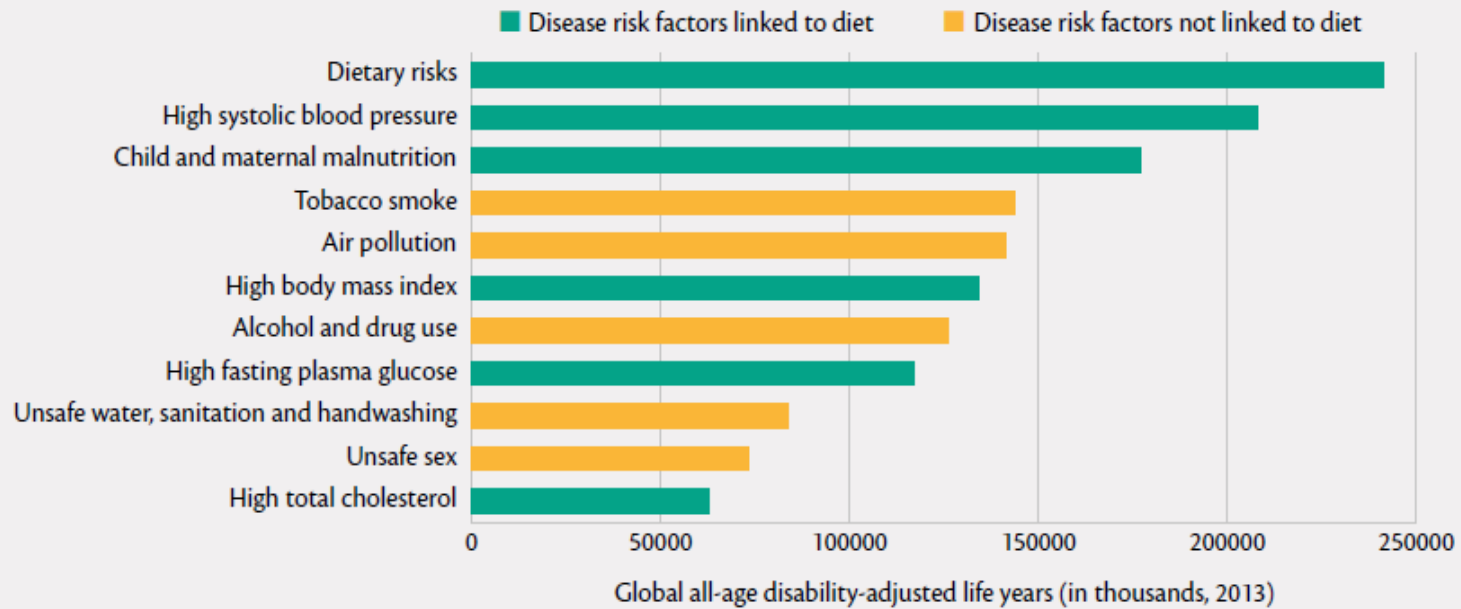
Mirjana Gurinović, Agnes Kadvan, Milica Zeković, Jelena Milešević,  
Marina Nikolić, Eleonora Dupouy, Paul Finglas, Maria Glibetić

Centre of Excellence in Nutrition and Metabolism, University of  
Belgrade, Republic of Serbia

**EuroFIR Food Symposium 2018:**  
**Food Composition and Intake supporting research, policies and innovation in Europe**  
**Wednesday 11th April 2018 , Brussels, Belgium**

## Top Risk factor for Global Burden of Diseases\*

**FIGURE 1: Six of the top 11 risk factors driving the global burden of disease are related to diet**



Source: Global Burden of Disease Study 2013 Collaborators (2015), Figure 5

Note: The graph shows global disability-adjusted life years (DALYs) attributed to level 2 risk factors in 2013 for both sexes combined.

\*Source: Global Panel on Agriculture and Food Systems for Nutrition. 2016. Food systems and diets: Facing the challenges of the 21st century. London, UK.

SECOND INTERNATIONAL CONFERENCE ON NUTRITION

 Food and Agriculture Organization of the United Nations  
 World Health Organization  
 Viale delle Terme di Caracalla, 00153 Rome, Italy - Tel: (+39) 06 57051 - Fax: (+39) 06 5705 4593 - E-mail: ICN2@fao.org - www.fao.org/icn2

Second International Conference on Nutrition
Rome, 19-21 November 2014
Conference Outcome Document: Rome Declaration on Nutrition

The recommendation # 58 **ICN 2 Framework for Action (FfA)** urge countries to improve and harmonize the monitoring and evaluation of nutrition data.

Collection of the dietary intake data are essential for evidence-based policy making in the areas of leveraging the potential of nutrition-sensitive agriculture and food systems for healthy diets and in close link with **Decade of Action in Nutrition**.

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Second International Conference on Nutrition
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Conference Outcome Document: Framework for Action

UNITED NATIONS DECADE OF  
**ACTION ON NUTRITION**  
2016-2025

**WHO European Food and Nutrition Action Plan 2015–2020 –Objective 4-**

- *Support surveillance, monitoring, evaluation and research*

SMART Commitments by countries:



Key messages from the **FAO/WHO Regional Symposium on Sustainable Food Systems for Healthy Diets in Europe and Central Asia**, Budapest, Hungary, 4-5 December 2017 <http://www.fao.org/europe/events/detail-events/en/c/1034293/>

- **Governments should take action** to ensure that adequate capacities of national statistical services are developed for the monitoring of SDG indicators and to strengthen **data collection and analysis for evidence-based policy**, including food consumption and nutrition data, surveillance of child growth and nutritional status of the population, food composition data of commonly available local foods, data on food contaminants.



**Accurate dietary intake assessment at individual and population level, dietary surveys and nutrition surveillance systems requires harmonized methodology and validated nutritional tools.**



**Research infrastructure (RI) and Capacity Development (CD) are prerequisite for harmonized public health nutrition (PHN) research and nutrition epidemiology (NE).**



**In CEE/Balkan countries absence of RI and CD in PHN&NE were identified, particularly Food Composition Data Bases (FCDB), data base management, dietary assessment tools and lack of standardized dietary intake data.**



**Institute for Medical Research (IMR), Serbia & CAPNUTRA through several EU projects (EuroFIR & EuroFIR–Nexus, EURRECA, CHANCE, EFSA projects) and FAOREU worked on development of food and health RI and CD in Europe and CEE/Balkan countries.**



**Specific focus was on the development of harmonized food composition database (FCDB) and dietary assessment tools and their multilateral linkages, following European standards and recommendations.**

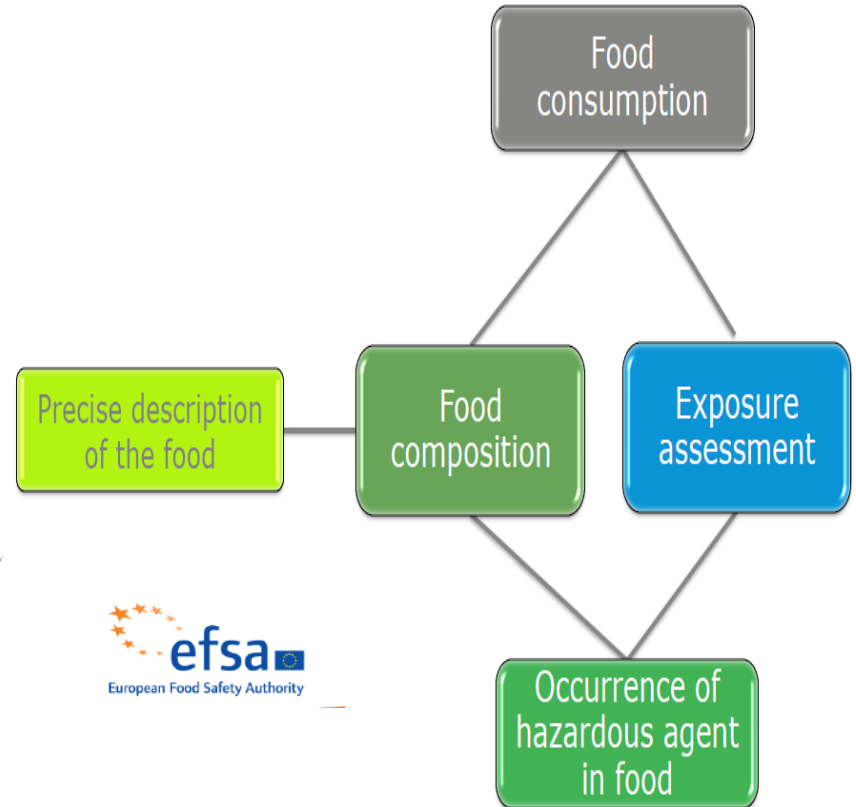
Gurinović, M., Nutrition Epidemiology and Public Health Nutrition. Reference Module in Food Sciences. Elsevier, 2016.  
Gurinović, M., et al, Improving nutrition surveillance and public health research in Central and Eastern Europe/Balkan Countries using the Balkan Food Platform and dietary tools. Food Chemistry, 2016

## Dietary exposure assessment elements

Harmonized and standardized food consumption data collection from national dietary surveys at individual level are an essential element for the exposure assessment to the different nutritional and food safety hazards, which is an integral part of the risk assessment process carried out at EFSA (Regulation (EC) N° 178/2002) using EFSA Comprehensive European Food Consumption Database.



Food composition databases are required to support food and nutrient intake, and exposure assessment.



## CAPACITY DEVELOPMENT IN FOOD CONSUMPTION RESEARCH INFRASTRUCTURE IN SERBIA AND BALKAN REGION



Updated and adapted FCDM web application with EFSA codes (FoodEx2)

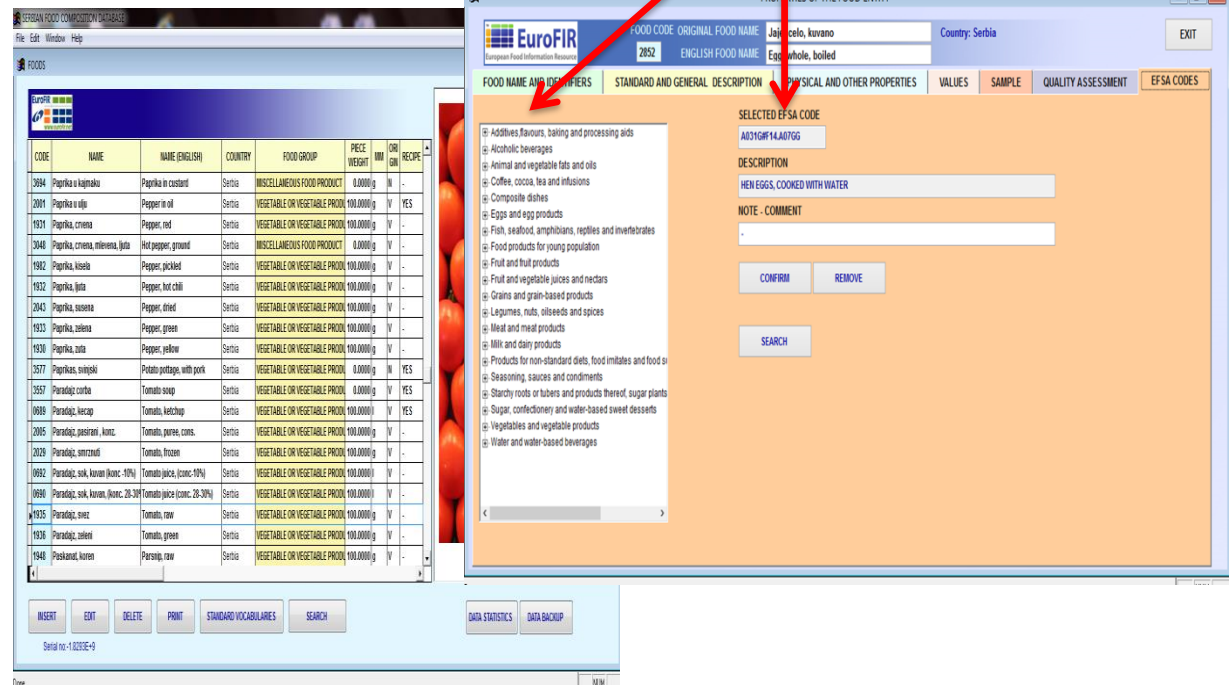
### -1<sup>st</sup> Online Serbian FCDB

- Developed during EuroFIR project 2006-2010 implementing EU CEN standards
- Food Composition Data Management (FCDM) web application developed according to EuroFIR Technical Annex for FCDB creation, LanguaL coding, EFSA FoodEX2, Recipes, Multilingual
- Serbian FCDB 1046 foods and 130 traditional/common Serbian composite dishes

### -Serbian FCDB in EFSA project

- In 2012-IMR became a partner in EFSA project:  
"Updated food composition database for nutrient intake"

### -Balkan Food platform developed during EuroFIR-Nexus project 2011-2013



The screenshot shows the 'SERBIAN FOOD COMPOSITION DATABASE' web application. On the left, there is a table listing various food items with columns for CODE, NAME, NAME-ENGLISH, COUNTRY, FOOD GROUP, PECE (VEGET, MILK, OIL), and ORN (VEG, ANI, REC). The table lists items like 'Paprika u kajmaku', 'Paprika u ulju', 'Paprika crvena', etc. On the right, a detailed view of a food item is shown. The 'FOOD NAME AND IDENTIFIERS' tab is active, displaying the 'FOOD CODE' (2852), 'ORIGINAL FOOD NAME' (Jaj celulo, kuvano), and 'ENGLISH FOOD NAME' (Egg whole, boiled). The 'SELECTED EFSA CODE' is 'A0316H14A07GG'. Below this, there is a list of EFSA codes with checkboxes, such as 'Additives: Flavors, baling and processing aids', 'Alcoholic beverages', etc. A 'SEARCH' button is visible at the bottom of the detailed view.

Glibetić, M., et al., Management of food composition database harmonized with EuroFIR criteria using a web application. *Journal of Food Composition and Analysis*, 2010.

Gurinović, M., et al, Establishment and advances in the online Serbian food and recipe data base harmonized with EuroFIR™ standards. *Food Chemistry*, 2016

Gurinović, M., et al, Improving nutrition surveillance and public health research in Central and Eastern Europe/Balkan Countries using the Balkan Food Platform and dietary tools. *Food Chemistry*, 2016

## DIET ASSESS & PLAN (DAP)

Capacity Development in Nutrition Research in Balkans in last decade initiated creation of contemporary, harmonized Research Infrastructure (RI) compliant to European standards  
One of the fundamentals of this RI is an innovative tool, Diet Assess & Plan:

A platform for standardized and harmonized **food consumption collection, comprehensive dietary intake assessment and nutrition planning**



**DAP platform** consists of the following:

**DAP web software, Food Composition Data Base Management (FCDM) web application, Serbian FCDB, Balkan food platform with Regional FCDB & link to EuroFIR 30 FCDBs and nutrient recommendation datasets**

Glibetić, M., et al., Management of food composition database harmonized with EuroFIR criteria using a web application. Journal of Food Composition and Analysis 2010.  
Gurinović, M., et al, Establishment and advances in the online Serbian food and recipe data base harmonized with EuroFIR™ standards. Food Chemistry, 2016  
Gurinovic M., et al, Development, features and application of DIET ASSESS & PLAN (DAP) software in supporting public health nutrition research in Central Eastern European Countries (CEEC), Food Chemistry , 2016



## DIET ASSESS & PLAN (DAP) platform



- DAP has been created according to **EuroFIR guidelines** (Becker et al., 2008) in Microsoft VisualFoxPro and relies on two types of database: MySQL database for FCDB and local Microsoft VisualFoxPro database engine
- DAP, as a web tool for dietary intake assessment, is based on electronic versions of **standard food consumption questionnaires** - 24-h dietary recalls (24HDR), Food Frequency Questionnaire (FFQ), Food Records (FR) and Food Propensity Questionnaire (FPQ),
- Using entered data and external datasets: food composition database(s) and nutrient recommendation datasets DAP enables comprehensive calculation and extensive assessment of dietary intake on individual and/or population levels
- DAP enables planning daily menu and/or long-term diet, design of foods/formulation, food labelling, and assessing nutrient intake adequacy according to selected nutrient recommendations
- Furthermore, It supports food procurement and diet planning in the public sector settings

Becker, W., Moller, A., Ireland, J., Roe, M., Unwin, I., & Pakkala, H. (2008). *Proposal for structure and detail of a EuroFIR Standard on food composition data II. Technical Annex*. Copenhagen.

Gurinovic M., et al, *Development, features and application of DIET ASSESS & PLAN (DAP) software in supporting public health nutrition research in Central Eastern European Countries (CEEC)*, *Food Chemistry*, 2016



## DIET ASSESS & PLAN (DAP) platform



DAP's unique structure enables application of national Food Composition Data Bases (FCDBs) from the European food composition exchange platform (30 national FCDBs) developed by EuroFIR (Finglas, 2014), and communication with other food tools/databases such as FoodEXplorer (EuroFIR AISBL, 2013), FoodBasket (EuroFIR, 2011) etc. using standardized coding systems i.e. LanguaL™ (Moller & Ireland, 2014) and FoodEx2 (EFSA, 2014)



Integration of these coding systems in DAP structure enables food matching process on the level of foods and recipes, and subsequently on dietary questionnaires

Finglas, P.M., et al, Assessing and improving the quality of food composition databases for nutrition and health applications in Europe: The contribution of EuroFIR. *Advances in Nutrition*, 2014  
EuroFIR AISBL. (2013). Welcome to FoodEXplorer. *EuroFIR AISBL*. Brussels: EuroFIR AISBL. Retrieved from <http://www.eurofir.org/foodexplorer/aboutfoodexplorer.html>  
EuroFIR. (2011). FoodBasket (simple recipe calculator) [homepage on the Internet]. Retrieved from <http://www.eurofir.org/foodbasket>  
Moller, A., & Ireland, J. (2014). LanguaL. Roskilde: Danish Food Informatics (DFI). Retrieved from <http://www.langual.org/Default.asp>  
EFSA. (2014). Food Classification, FoodEx2 browsing tool. Retrieved from <http://www.efsa.europa.eu/en/datex/datexfoodclass>

# DIET ASSESS & PLAN (DAP) PLATFORM



**EuroFIR**  
European Food Information Resource  
**Food platform - 30 FCDBs**

**EuroFIR™ Food Composition Exchange Platform** 30 national databases - 26 European, Canada, USA, JP and NZ  
>40.000 foods indexed by Langual™,



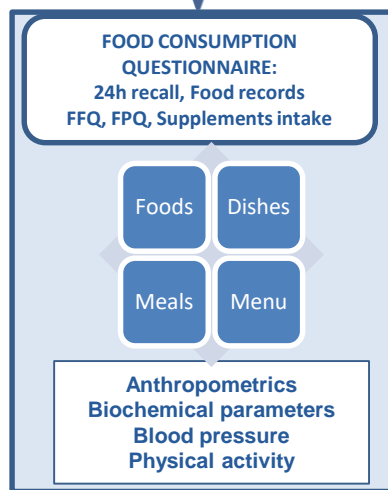
**Balkan Food Platform**  
Regional FCDB

**Food Composition Data Management (FCDM) web application**



**SERBIAN FCDB**

**DRVs**  
WHO, EFSA, DACH, NNR



## OUTPUTS

Reports on individual and/or population level in consumed and/or planned dishes, meals, menus

**DIETARY PATTERNS-**  
Food consumption / food groups / EuroFIR - EFSA classification / % contribution EV

**NUTRIENT INTAKE ASSESSMENT -** Energy, macro - (%EV) and micronutrient intake & contribution of food groups sources to total intake

**NUTRITIONAL STATUS AND ADEQUACY ASSESSMENT**

Minimum Dietary Diversity- Women (MDD-W)

Diet modelling/planning: menus, public procurements

Food design & reformulation

Physical activity level

Nutrition declaration

Nutrients intake through supplements

**Currently running in:** EFSA project-Support to National Dietary Surveys in Compliance with the EU Menu methodology (sixth support): **“The adults’ survey”**, including subjects from 10 to 74 years old, 2017-2021 (Serbia, Bosnia and Herzegovina and Montenegro) and **“The children’s survey”**, including subjects from three months up to 9 years old, 2017-2021 (Serbia and ‘Former Yugoslav Republic of Macedonia’ (FYROM)).

# DIET ASSESS & PLAN (DAP)



**Challenges identified in the CEEC/B region and lack of standardized dietary intake data needs further attention in order to improve health outcomes**

**Considering identified gaps in nutritional tools, lack of surveys and comparable dietary intake data implementation of DAP as user-friendly system could harmonize nutritional surveys in Balkan countries.**

**DAP is already validated and applied in the region and represents important RI for nutrition epidemiology, public health nutrition research, nutrition education and CD in the Balkans region**



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## DIET ASSESS & PLAN (DAP) platform



- The DAP software has been recently evaluated in **EFSA Ring Trial**, which took place within the project that aimed to identify and evaluate available data collection protocols and tools for capturing food consumption information for risk assessment purposes in Europe



- DAP's concept and structure make it a reliable infrastructure to perform harmonized **nutritional epidemiology studies on population level**
- Furthermore, DAP has option for **personalized nutritional counselling with possibility for longitudinal monitoring and various prediction studies**

# DIET ASSESS & PLAN (DAP) publications

Food Chemistry xxx (2015) xxx-xxxx

Contents lists available at ScienceDirect

Food Chemistry

journal homepage: [www.elsevier.com/locate/foodchem](http://www.elsevier.com/locate/foodchem)

Improving nutrition surveillance and public health research in Central and Eastern Europe/Balkan Countries using the Balkan Food Platform and dietary tools

Guřinović Mirjana<sup>a,b,\*</sup>, Milešević Jelena<sup>a,b</sup>, Novaković Romana<sup>a,b</sup>, Kadvan Agnes<sup>a,b</sup>, Djekić-Ivanković Marija<sup>a,b</sup>, Šatalić Zvonimir<sup>b,c</sup>, Korošec Moja<sup>b,d</sup>, Spiroski Igor<sup>b,e</sup>, Ranić Marija<sup>a,b</sup>, Dupouy Eleonora<sup>f</sup>, Oshaug Arne<sup>bg</sup>, Finglas Paul<sup>h,i</sup>, Glibetić Maria<sup>a,b</sup>

Food Chemistry xxx (2015) xxx-xxxx

Contents lists available at ScienceDirect

Food Chemistry

journal homepage: [www.elsevier.com/locate/foodchem](http://www.elsevier.com/locate/foodchem)

Analytical Methods

Establishment and advances in the online Serbian food and recipe data base harmonized with EuroFIR™ standards

Guřinović Mirjana<sup>a,b,\*</sup>, Milešević Jelena<sup>a,b</sup>, Kadvan Agnes<sup>a,b</sup>, Djekić-Ivanković Marija<sup>a,b</sup>, Debeljak-Martačić Jasmina<sup>a,b</sup>, Takić Marija<sup>a,b</sup>, Nikolić Marina<sup>a,b</sup>, Ranković Slavica<sup>a,b</sup>, Finglas Paul<sup>c,d</sup>, Glibetić Maria<sup>a,b</sup>

Journal of Food Composition and Analysis 24 (2011) 741-743

Contents lists available at ScienceDirect

Journal of Food Composition and Analysis

journal homepage: [www.elsevier.com/locate/jfca](http://www.elsevier.com/locate/jfca)

Short communication

Management of food composition database harmonized with EuroFIR using a web application

Marija Glibetić\*, Agnes Kadvan, Jasna Tepsic, Jasmina Debeljak Martacic, Marija Djekić-Ivankovic, Mirjana Guřinovic

Food Chemistry

journal homepage: [www.elsevier.com/locate/foodchem](http://www.elsevier.com/locate/foodchem)

Development, features and application of DIET ASSESS & PLAN (DAP) software in supporting public health nutrition research in Central Eastern European Countries (CEEC)

Mirjana Guřinović<sup>a,b,\*</sup>, Jelena Milešević<sup>a,b</sup>, Agnes Kadvan<sup>b</sup>, Marina Nikolić<sup>a,b</sup>, Milica Zeković<sup>a</sup>, Marija Djekić-Ivanković<sup>b</sup>, Eleonora Dupouy<sup>c</sup>, Paul Finglas<sup>d</sup>, Maria Glibetić<sup>a,b</sup>

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<sup>b</sup>Capacity Development Network in Nutrition in Central and Eastern Europe, CAPNUTRA, Serbia  
<sup>c</sup>FAO Regional Office for Europe and Central Asia (REU), Budapest, Hungary  
<sup>d</sup>EuroFIR AISBL, Brussels, Belgium

MARIA GLIBETIĆ

Food Chemistry 185 (2015) 437-440

Contents lists available at ScienceDirect

Food Chemistry

journal homepage: [www.elsevier.com/locate/foodchem](http://www.elsevier.com/locate/foodchem)

Analysis of fat content in Serbian margarines: Urgent need for labeling and consumer information

Arsić<sup>a</sup>, Snježana Petrović<sup>a</sup>, Sandra Milanović<sup>b</sup>, Mirjana Guřinović<sup>a</sup>



Article

**Validity of the Food Frequency Questionnaire Assessing the Folate Intake in Women of Reproductive Age Living in a Country without Food Fortification: Application of the Method of Triads**

Milica Zeković<sup>1,\*</sup>, Marija Djekić-Ivanković<sup>1</sup>, Marina Nikolić<sup>1</sup>, Mirjana Guřinović<sup>1</sup>, Dusanka Krajinović<sup>2</sup> and Marija Glibetić<sup>1</sup>

<sup>1</sup> Centre of Research Excellence in Nutrition and Metabolism, Institute for Medical Research (IMR), University of Belgrade, Tadeusa Koscuska 1, 11158 Belgrade, Serbia; djekic.ivankovic@gmail.com (M.D.-I.); marina.nikolic12@yahoo.com (M.N.); mirjana.gurinovic@gmail.com (M.G.); mglibetic@gmail.com (M.G.)  
<sup>2</sup> Department of Social Pharmacy and Pharmaceutical Legislation, Faculty of Pharmacy, University of Belgrade, Vojvode Stepe 450, 11000 Belgrade, Serbia; dusica.krajinovic@pharmacy.bg.ac.rs  
 \* Correspondence: zekovicmilica@gmail.com; Tel: +381-113031997

Validity of an FFQ assessing the vitamin D intake of young Serbian women living in a region without food fortification: the method of triads model

Marija Djekić-Ivanković<sup>1,2</sup>, Hope A Weiler<sup>2</sup>, Marina Nikolić<sup>1</sup>, Agnes Kadvan<sup>1</sup>, Mirjana Guřinović<sup>1</sup>, Ljuba M Mandić<sup>3</sup> and Maria Glibetić<sup>1,\*</sup>

<sup>1</sup>Centre of Research Excellence in Nutrition and Metabolism, Institute for Medical Research, University of Belgrade, Tadeusa Koscuska 1, 11000 Belgrade, Serbia; <sup>2</sup>School of Dietetics and Human Nutrition, McGill University, Macdonald Campus, Ste. Anne-de-Bellevue, Québec, Canada; <sup>3</sup>Faculty of Chemistry, University of Belgrade, Belgrade, Serbia



## DIET ASSESS & PLAN IN NUTRITIONAL RESEARCH AND CAPACITY DEVELOPMENT IN CEE/BALKAN

- **Capacity Development Network in Nutrition in Central and Eastern Europe-CAPNUTRA**
- **FoOmega:** „Intake, status and biological action of folate and PUFA: Improvement of Nutrition in Serbia“ (No. III 41030 ), National project of Ministry of Science Republic of Serbia (2011-2018)
- **Bilateral project with Slovenia: TRADIFA** ”Fatty acids profile and trans fatty acids content in traditional food in food composition databases for healthier dietary choices of population” 2014-2015
- **BACCHUS- FP7:** “ Beneficial effects of dietary bioactive peptides and polyphenols on cardiovascular health in humans (BACCHUS) ” 2012-2016
- **CHANCE- FP7:** ”Low Cost technologies and traditional ingredients for the production of Affordable, Nutritionally correct, Convenient foods enhancing health in population groups at risk of poverty” 2011-2014
- **EFSA projects:** Support to National Dietary Surveys in Compliance with the EU Menu methodology "The children's survey", including subjects from three months up to 9 years old, 2017-2021  
 Support to National Dietary Surveys in Compliance with the EU Menu methodology- "The adults' survey", including subjects from 10 to 74 years old. 2017-2021  
 ”Dietary monitoring tools for risk assessment ”, 2014  
 “Updated food composition database for nutrient intake” 2012
- **Bilateral project with Croatia:** “Folate status in populations at risk: young adult women of reproductive age and elderly” 2011-2013
- **YUSAD national study:** (National study of precursors of atherosclerosis in schoolchildren and adult members) , NUTQ - Version1 of DIETASSESS program

## Support to National Dietary Surveys in Compliance with the EU Menu methodology (sixth support)

- **A platform for successful regional cooperation**



Harmonized methodology developed in compliance with EU Menu guidance

Unique platform for food consumption data collection

Regional capacity development i.e. transfer of knowledge and technical expertise

Continual and synchronized update of Regional FCDB

• Standard terminology – FoodEX2



# Support to National Dietary Surveys in Compliance with the EU Menu methodology



National dietary surveys at an individual level are already carried out in many European countries and provide valuable information for use in national policy decisions and are important in monitoring dietary habits, in nutrition surveillance and in conducting dietary exposure assessments



However, data obtained at a national level cannot be merged for pan-European exposure assessments due to the variety of methodologies applied across different countries



The availability of harmonised and detailed food consumption data at European level has been widely recognised as essential in order to improve the consistency and reliability of exposure assessments carried out by EFSA Panels on the European level



Therefore, EFSA has created guidance on methodological principles to follow and protocols to be used for individual dietary surveys within a pan-European context, in order to obtain a more harmonised food consumption database



# Support to National Dietary Surveys in Compliance with the EU Menu methodology



## 2009

- EFSA published guidance on **“General principles for the collection of national food consumption data in the view of a pan-European dietary survey”**
- Pan-European food consumption survey **“What’s on the Menu in Europe? (EU Menu)”** was launched

Two feasibility pilot projects were delivered producing protocols for more harmonized food consumption data (**PANCAKE and PILOT-PANEU projects**), as well as two methodological pilot projects (**“Food Consumption Data Collection Methodology for the EU Menu Survey” (EMP-PANEU) and Dietary Tools projects**) to define and test corresponding high-quality computer-assisted data collection methods and processes

## 2014

- In order to facilitate the collection of more harmonized food consumption data from all EU Member States by the year 2020 updated **“Guidance on EU Menu methodology”** was published

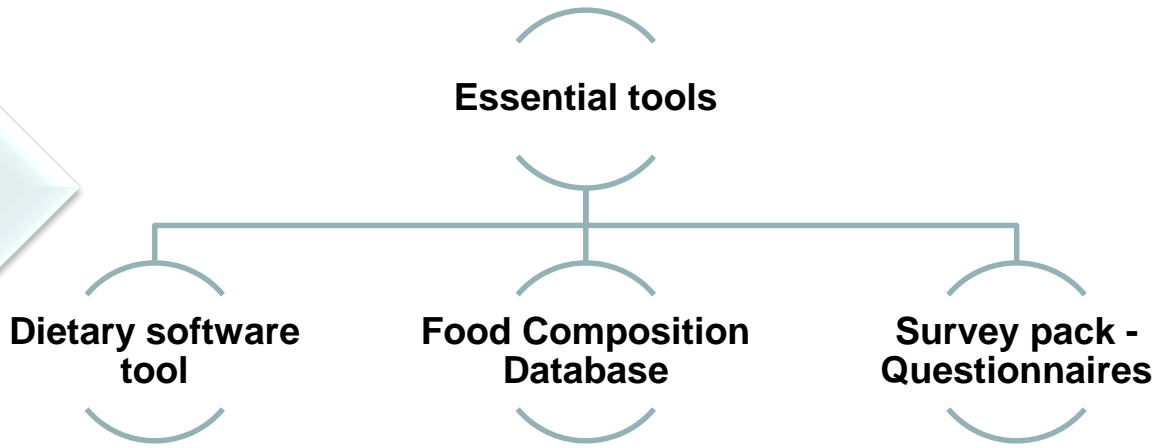
# Support to National Dietary Surveys in Compliance with the EU Menu methodology



## Main objective

- Provision of high-quality dietary intake data that can be used to perform exposure assessments of food-borne hazards and nutrient intake estimations in the remit of EFSA's scientific committee and scientific panels

- ### Preparatory stage
- Sampling strategy (stratification based on age, sex and geographical region)
  - Recruitment plan
  - Quality control plan
  - Data management plan
  - Training of the interviewers



## EFSA project - Support to National Dietary Surveys in Compliance with the EU Menu methodology (sixth support)-DAP implementation



**“The adults’ survey”, including subjects from 10 to 74 years old, 2017-2021  
(Serbia, Bosnia and Herzegovina and Montenegro)**



**“The children’s survey”, including subjects from three months up to 9 years old,  
2017-2021  
(Serbia and FYROM)**

## EFSA project - Support to National Dietary Surveys in Compliance with the EU Menu methodology (sixth support)-DAP implementation

**Informed consent form**

**General questionnaire**

**24h dietary recalls / Diet records**

- Two non-consecutive days for each person \*at least one week apart
- In the case of children aged 3 months to 9 years, the food diary method is used for data collection, accompanied by two face-to-face visits
- In the case of adolescents and adults aged 10 to 74 years, 24-hour recall is used for data collection – first interview is always performed face to face, while the second interview may be carried out via a telephone interview if a face-to-face encounter is not feasible
- To obtain best estimates on quantities consumed for different foods portion-size picture book is used

**Age appropriate Food propensity questionnaire (FPQ)**

- Short selected list of age-appropriate foods and dietary supplements
- Frequency data is planned to be used as a covariate to model the estimation of usual intake

**The International Physical Activity Questionnaire (IPAQ) – short version**

**Survey – pack elements**



## EFSA project - Support to National Dietary Surveys in Compliance with the EU Menu methodology (sixth support)-DAP implementation

### Food consumption data collection and processing

#### DIET ASSESS & PLAN (DAP)

advanced nutritional software-based tool for food consumption data collection, comprehensive dietary intake assessment and nutrition planning

DAP platform represents important research infrastructure for nutrition epidemiology and public health nutrition research and consists of:

DAP web application,

Food Composition Data Base Management (FCDM) web application,

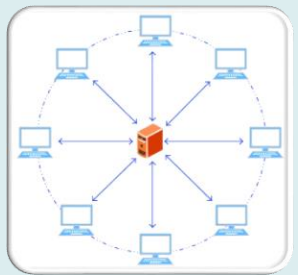
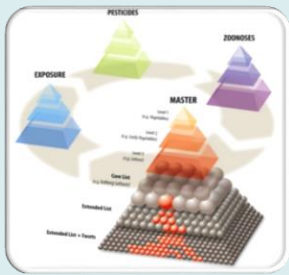
Serbian food composition data base (FCDB)

Balkan food platform with Regional FCDB

Nutrient recommendation datasets

# EFSA project - Support to National Dietary Surveys in Compliance with the EU Menu methodology (sixth support)-DAP implementation

## Food consumption data collection and processing



**Databases incorporated in the DAP software tool are:**

- facet descriptors,
- portion sizes,
- standard recipes
- yield factors

In order to retrieve food composition information on foods consumed and/or recipes entered, DAP communicates with Serbian/ Regional FCDB, with food items coded using European Food Safety Authority (EFSA) FoodEx2 coding system

Databases will be updated after the pilot study and during the main survey regularly so that new foods, recipes and other information reported by the study subjects can be added

In order to assure high level of control and standardization and to facilitate updating, modifications to the country-specific files will be centralized and performed by experts in nutrition

# Conclusion



**DAP is a relevant element of RI for strengthening surveillance, monitoring, evaluation and research in the PHN field**

**It is a successful example of standardized and harmonized tool for dietary assessment surveys and present successful regional harmonisation in food and nutrition data collection and analysis for evidence based nutrition policy in Serbia and Western Balkans**

**Its features make it concurrent tool for large nutrition epidemiology studies not only in CEEC but in wider geographical context and present one of New Technologies for Dietary Intake Assessment**

## 6th Meeting of the UNU/SCN Network for Capacity Development in Nutrition in Central and Eastern Europe (NCDNCEE), Belgrade, 25th-26th May, 2011 (32 participants from 15 CEE countries)

The agenda of the meeting is available at website: <http://www.agrowebcee.net/ncdn/> and Photo gallery at website: <http://www.agrowebcee.net/ncdn/photo-gallery/photo-gallery-2011/>.

Video film is available at: You Tube: [http://www.youtube.com/watch?v=OGAaVs3po-c\\_](http://www.youtube.com/watch?v=OGAaVs3po-c_).





# Food Composition Data Base (FCDB) Development through NCDNCEE activities 2006-2011 and future activities: partnership with EuroFIR NoE & EuroFIR AISBL- Belgrade 26 May 2011



**Workshop: Regional Food Composition Data Base: Web based Food Comp Data Management (FCDM) software application in BalkanFood Platform development**



First Symposium of the Capacity Development in Nutrition and Food Research in Central and Eastern Europe (CAPNUTRA) 21-23 January 2013, Belgrade, Serbia

[www.capnutra.org](http://www.capnutra.org)



**Balkan Food Platform -  
Regional Food  
Composition Data  
Base development  
National food database  
compiler organisation  
from CEE/Balkan**

- **Memorandum of Understanding (MoU) was signed with 11 CEE and Balkan countries, forming Balkan food platform with Regional FCDB harmonized with EuroFIR using FCDM web tool for integration to EuroFIR Platform.**
- Cooperation in food composition in the Balkan Countries and with EuroFIR Food Data Platform
- **Croatia (2 institutions); Cyprus; FB&H ; Republic of Macedonia; Moldova ; Montenegro; Russia; Slovenia, Ukraine & EuroFIR AISBL, Serbia-IMR, CAPNUTRA**



**1stEU Menu progress meeting 04 05 2017,  
Parma, EFSA**

**CAPNUTRA symposium, Capacity development  
in dietary intake survey - harmonisation with EU  
Menu methodology regional training for DIET  
ASSESS & PLAN (DAP) application and  
implementation in West Balkan countries (WBC)  
11-12th september 2017 Belgrade, Serbia**



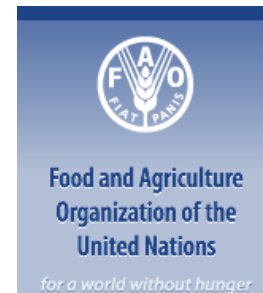


Centar Izuzetne Vrednosti  
u oblasti istraživanja ishrane i metabolizma  
Centre of Research Excellence  
in Nutrition and Metabolism

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- **EuroFIR NoE (FP6)**- European Food Information Resource Network ([www.eurofir.net](http://www.eurofir.net))
- **EURRECA (FP6)**- Harmonising nutrient recommendations across Europe with special focus on vulnerable groups and consumer understanding , ([www.eurreca.org](http://www.eurreca.org))
- **EuroFIR Nexus (FP7)**- EuroFIR Food Platform: Further integration, refinement and exploitation for its long-term self-sustainability ([www.eurofir.org](http://www.eurofir.org))
- **FAOREU**-FAO Regional Office for Europe and Central Asia, Budapest, Hungary
- **EFSA projects**-“Updated food composition database for nutrient intake”&Dietary monitoring tools for risk assessment”, Support to National Dietary Surveys in Compliance with the EU Menu methodology "The children's survey", including subjects from three months up to 9 years old, 2017-2021, Support to National Dietary Surveys in Compliance with the EU Menu methodology- "The adults' survey", including subjects from 10 to 74 years old. 2017-2021
- **CHANCE (FP7)**- Low Cost technologies and traditional ingredients for the production of Affordable, Nutritionally correct, Convenient foods enhancing hEalth in population groups at risk of poverty ([www.chancefood.eu](http://www.chancefood.eu) )
- **ODIN (FP7)**-Food-based solutions for Optimal vitamin D Nutrition and health through the life cycle ([www.odin-vitd.eu](http://www.odin-vitd.eu))
- **FOLOMEGA** -Biological mechanism, dietary intake and status of polyunsaturated fatty acids and folate: Nutrition improvement in Serbia, III41030 <http://srbnutrition.info/english/folomega/>
- **CAPNUTRA**-Capacity Development Network in Nutrition in Central and Eastern Europe- [www.capnutra.org](http://www.capnutra.org)



# **Thank you for your attention!**

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