EuroFIR

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Developments in Food Composition Information Systems supporting ethnic and traditional food in Europe



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Shaping and implementing the Balkan Food Platform

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Capacity development in Food Composition Database (FCDB) is a long-term, continuous process that focuses on national priorities, development policies plans and processes. EuroFIR NEXUS (www.eurofir.org), together with Institute for Medical Research, University of Belgrade (IMR, RS, www.srbnutrition.info) and the Network for Capacity Development in Nutrition for Central and Eastern Europe (NCDNCEE-CAPNUTRA, www.agrowebcee.net/ncdn), initiated the Balkan food platform in 2011 with aim of developing the first regional FCDB for West Balkan Countries (WBC) that requires involvement of compilers from different countries.

Web-based Food Composition Data Management (FCDM) software for FCDB creation (national/ regional) was developed by the IMR research team according to EuroFIR NoE recommendations. Capacity development activities comprised NCDNCEE workshops, trainings and compilation of the foods and recipes information from Balkan countries. The regional FCDB is based on the Serbian FCDB with contribution from other countries, i.e. Croatia, Slovenia and Macedonia, and is open to new members' contributions.

The regional FCDB consist of 2 045 simple foods and 116 traditional recipes. These are characterised with cc.15 nutrients per food item, LanguaL food codes, FoodEx2 codes etc. Memorandum of Understanding (MoU) has been signed between EuroFIR NEXUS, IMR and CAPNUTRA, and the Federation of Bosnia & Herzegovina, Cyprus, Croatia, Republic of Macedonia, Republic of Moldova, Montenegro, Russia and Ukraine. Identification of the training needs in FCDB management is of great importance for further CD activities in the region.

Regional FCDB, harmonized with EuroFIR standards, containing data relevant to this population, is an important food and nutritional tool for researchers, policy makers and food industry. The Balkan Food Platform is basis for future communication, data exchange and integration of new food data in Europe.

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Development of the first online Serbian Food Composition Database harmonised with EuroFIR standards

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The European Food Information Resource Network (EuroFIR) aims to develop food composition data platform in Europe including CEE countries. The Institute for Medical Research (IMR, RS) was an active partner in EuroFIR NoE (2005-2010), EuroFIR NEXUS (www.eurofir.org, 2011-2013) and the EFSA project (2012), 'Updated food composition database for nutrient intake'. The objective was to create the first online Serbian Food Composition Databases (FCDB) harmonized with EuroFIR standards.

IMR developed and used web-based Food Composition Data Management (FCDM) software, harmonized with EuroFIR standards, to create the Serbian FCDB (www.serbianfood.info).

The first version of the online Serbian FCDB was compiled and launched in 2007, becoming part of the Food Composition Data Interchange Platform. All foods in this database (1 143) were indexed using the LanguaL Thesauri with FCDM software (2008). During 2012, within the EFSA project, FoodEx2 was combined with FCDM software and foods from Serbian FCDB mapped with the recommended EFSA codes. To date, Serbian FCDB has 1 046 foods (characterised with up to 68 nutrients) and 116 composite dishes typical for the Serbian population and collected through national dietary intake surveys (2006-2012).

Development of the Serbian FCDB, and FCDM software as a tool, was essential for future nutritional research in Serbia. Its application in projects, research and practice will facilitate improvement of nutrition and food quality in Serbia to ensure better health of the population.

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Traditional food consumption and nutrition risk factors among different social groups in Serbia

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Objectives: To analyse whether traditional foods consumption is associated with nutrition risk factors for development of non-communicable diseases, particularly cardiovascular disease (CVD) among different social groups in Serbia.

420 adult participants (age 25-65 years) in Serbia were examined with 2 x 24hour dietary recall. These data were used to extract the most consumed traditional dishes and simple foods, which were connected with DIET-ASSESS via the Food Composition Data Management (FCDM) nutritional tool, to calculate nutritional value. Identification of groups at risk of CVD was achieved with regard to diet quality and, particularly, intake of dietary fat as a risk factor for CVD.

Participants were from low- and middle-income groups (170 and 250). It was indicated that both groups consume traditional food at the same frequency; 9% of daily energy intake is from traditional dishes. Low-income participants consumed more meat containing traditional foods. Middle-classes had more dairy, cereals and fruits in their meals. In general, low-income groups' intake included somewhat less total and saturated fat than middle-income group (38,6 vs. 39,41%TE), whereas the intake both groups were above recommended levels (25-35% of TE) by EHN. Intake of MUFA and PUFA was within recommended goals- (10-15%TE) and (5-10%TE) in both income groups.

Since consumption of traditional food is still predominant in Serbian nutrition, it is evident the quality of a diet based on traditional food is influenced by the way food is prepared (more/ less salt, fat etc.), recipes, where it is consumed (at home or out-of-home), frequency, availability of simple foods for preparation, time and other social factors.

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Nutritional research tools harmonized with EuroFIR recommendations used in food composition information systems

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Due to identified shortfalls in standardised methodology and tools in dietary surveys, and information about traditional foods in Central and Eastern Europe (CEE) countries and the Balkan Region, development of harmonized nutritional tools are of great importance for food composition information systems, including traditional foods and overall nutrition research of the region.

Development of the comprehensive programme DIET-ASSESS that which has Open Data Base Connection (ODBC), allows incorporation of any external food composition databases from EuroFIR Database Platform (27 databases harmonized with EuroFIR technical annex) and use of e-Search function. Other elements of the programme are nutritional recommendation dataset such as: NutriRecQuest web-tool (micronutrient recommendations), WHO/ other recommendations and nutrition population goals. Input such as nutritional questionnaires (24HDR, FFQ, standards food record) or nutrition planning (recipes, meals, menus) are variable functions, which use data from FCDB and micronutrient recommendations to compute output results.

DIET-ASSESS is connected with Serbian FCDB and EuroFIR NEXUS Regional FCDB (with traditional recipes) - Balkan Platform, which both use the web-based Food Comp Data Management (FCDM) application. On the other hand, it retains NutriRecQuest- web tool to enable nutritional assessment of planned menu/ diet or dietary intake based on 24HRD. Outputs are reports (on personal, population, national level) on nutritive values of energy, macro- and micronutrients, food consumption etc. It allows graphic review and export to Excel format for further statistical analysis in SSP, SPSS, SPSS, etc.

DIET-ASSESS and other incorporated nutritional tools were used in national and international projects and they have an essential role in future nutritional research in the region for capacity development.

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