



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



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ABSTRACT

The objective of this paper is to share experience and provide updated information on Capacity Development in the Central and Eastern Europe/Balkan Countries (CEE/BC) region relevant to public health nutrition, particularly in creation of food composition databases (FCDBs), applying dietary intake assessment and monitoring tools, and harmonizing methodology for nutrition surveillance. Balkan Food Platform was established by a Memorandum of Understanding among EuroFIR AISBL, Institute for Medical Research, Belgrade, Capacity Development Network in Nutrition in CEE – CAPNUTRA and institutions from nine countries in the region. Inventory on FCDB status identified lack of harmonized and standardized research tools. To strengthen harmonization in CEE/BC in line with European research trends, the Network members collaborated in development of a Regional FCDB, using web-based food composition data base management software following EuroFIR standards. Comprehensive nutrition assessment and planning tool – DIET ASSESS & PLAN could enable synchronization of nutrition surveillance across countries.

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1. Introduction

Europe is facing major challenges in reducing the burden of diet-related non-communicable diseases (NCDs) by promoting healthy nutrition and lifestyles. The World Health Organization (WHO) has defined specific actions summarized in the newly adopted Action plan for the implementation of the European strategy for the prevention and control of NCDs 2012–2016 (World Health Organization, 2012). In line with this, a prerequisite to identify trends in dietary patterns, conduct research on diet-disease

relationships, and set up effective nutritional policies, is to have a solid evidence and scientific data on food and nutrient intakes and nutritional status of the populations.

Previously, WHO's 'European Action Plan for Food and Nutrition Policy 2007–2012' defined a specific actions for effective monitoring, evaluation and research: "Establish national and international surveillance systems on nutritional status, food availability and consumption, and physical activity patterns; evaluate the impact of programmes and policies; improve public and private research" (World Health Organization, 2007). Nutrition surveillance system entails continuous screening of trends and patterns among nutritional status key indicators in the population, which enable identification of existing and emerging needs, considering socioeconomic aspect, as well as planning, implementing, analyzing the effects of policies and programs on nutrition related issues, and predicting future

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trends, targeting and developing appropriate nutrition interventions and public health and/or nutrition policies (Edestein, 2011).

Nowadays, many European countries have established programs for monitoring dietary patterns, which provide necessary information on trends in food and nutrient intakes and dietary patterns among various (sub)populations of interest. Unfortunately, currently there is paucity of such programs and data in Central and Eastern European Countries/Balkan Countries (CEE/BC) region (Mensink et al., 2012; Novaković et al., 2012; Novaković et al., 2013). Moreover, when data are available, the extent to which they can be compared to other countries is limited due to the diversity in study methodologies, which hampers informed decision making in public health on national and international level (Elmadfa et al., 2009; Mensink et al., 2012). In other word, the CEE/BC region has specific situation related to the RI and nutrition surveillance systems which precondition is Capacity Development (CD).

CD in food and nutrition, includes not only formal training, but also human resource development, organizational, institutional and legal framework development, that all aim at enhancement of knowledge and skills together with enforcement of RI (Lopes & Theisohn, 2003). CD is a long-lasting process, a strategy that needs to be central to public health nutrition (PHN) management (Baillie, Bjarnholt, Gruber, & Hughes, 2009). To initiate and support CD activities in PHN in the CEE/BC, identify main challenges and needs in food and nutrition related issues in the region, and create frameworks and planning guidelines for CD activities, the United Nations University System Standing Committee on Nutrition (UNU/SCN) supported establishment of the *Network for Capacity Development in Nutrition in Central and Eastern Europe (NCDNCEE)* (Pavlovic, Pepping et al., 2009), and further its descendant “Capacity Development Network in Nutrition in Central and Eastern Europe” (CAPNUTRA) (NCDCEE-CAPNUTRA).

Guided by Institute for Medical Research (IMR), Serbia, the NCDNCEE – CAPNUTRA joined several EU projects (EuroFIR & EuroFIR–Nexus, EURRECA, EFSA projects), resulting in significant improvements of dietary tools and databases, and contributing to an overall food and health RI in Europe and CEE/BC. Specific focus was on the development of a harmonized food composition database (FCDB), and multilateral linkage between dietary assessment tools, following European standards and recommendations (Bell, Pakkala, & Finglas, 2012; Cavelaars et al., 2010; Finglas, Weichselbaum, & Buttriss, 2010; Glibetic et al., 2010; Gurinović, Witthöft et al., 2010; Matthys et al., 2010; Roe et al., 2013; Berry, Astley, & Finglas, 2014).

Although significant progress has been made in CD activities in CEE/BC region, there are still lags in production and management of FCDBs and nutritional software tools among CEE/BC that require further development. The inventory of FCDB status in the region within EuroFIR (2006–2010) project identified absence of FCDB and FCDB management software (Pavlovic, Witthöft et al., 2009). The project identified training needs in FCDB management and these results were used to shape succeeding CD activities (Gurinović, Kadvan et al., 2010). Alongside, through EURRECA project, IMR & NCDNCEE-CAPNUTRA identified and collected gray literature sources on nutritional surveys from CEE following the EURRECA inclusion criteria (Novaković et al., 2012; NCDNCEE – CAPNUTRA). Gray literature has been identified as potential source of open access data and nutritional information from CEE/BC. Insightful review of this source, however, revealed lack of data on dietary intake for all population groups, particularly for infants, children and adolescents, pregnant and lactating women, immigrants and low income populations (Novaković et al., 2012). Furthermore, data on micronutrient intake among CEE/BC populations were scarce and interpretation of existing evidence required caution due to disharmonized study approaches and methodology.

This paper summarizes actions undertaken to respond to above mentioned public health initiatives for strengthening research capacities and nutrition surveillance systems in Europe, with special focus on CEE/BC. Its particular objective is to show main steps undertaken in Capacity Development and research infrastructure with the aim of achieving harmonized FCDBs and dietary assessment tools. Based on inventory of the latest FCDB status, training needs in FCDB management, availability of software tools, and nutritional surveys, conducted during EuroFIR Nexus project (2011–13) in CEE/BC, in collaboration with NCDNCEE-CAPNUTRA members, further CD activities and research in food and nutrition in the region will be tuned with ongoing European research trends.

2. Materials and methods

Screening and strengthening of CD process in FCDB in CEE/BC, development of regional FCDB and harmonization of the nutritional research tools preceded establishment of the Balkan Food Platform (BFP). In this process the following actions were undertaken:

- Involvement of national institutions, from CEE/BC, responsible for FCDB compilation in shaping BFP (Table 1).
- In order to identify strengths and weaknesses of the associated institutions in context of CD, screening was conducted using tailor-made questionnaires. Two questionnaires covered three main sections:
 - ✓ Inventory of the latest FCDB status in CEE/BC, tools used for FCDBs management and/or their shortages, as well as CD achievements in FCDB.
 - ✓ Inventory of FCDB training needs in CEE/BC – identification of training needs in the region, and priority ranking, particularly in the field of FCDB building, with regards to trends in food and nutrition research.
 - ✓ Inventory of (national) dietary surveys and dietary assessment tools and FCDBs used for these projects in CEE/BC.
- Plan and organization of CD meetings:
 - ✓ CD activities entailed annual meetings to facilitate networking among involved countries from the region, exchange of experience, presentation of progress, discussions on needs and problems related to FCDB and nutritional tools implementation.
- Development of the first online regional FCDB using web based Food Composition Data Management (FCDM) EuroFIR harmonized software (Glibetic et al., 2010) and training in its application:
 - ✓ Important part of CD meetings was to provide participants with hands-on workshop in upgraded FCDM software created by IMR. Trainings and education for the Network members from CEE/BC in FCDB establishment and management at “Food Comp” courses was provided with EuroFIR support.
- Development and signing of a Memorandum of Understanding (MoUs) with key food and nutrition stakeholders/institutions from CEE/BC and other key stakeholders.
- Design and presentation of Diet Assessment & Planning Tool – DIET ASSESS & PLAN, for dietary intake assessment and nutrition planning.

3. Results & discussion

This section summarizes main steps taken to develop capacity and infrastructure for harmonized FCDBs and dietary intake

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