

Report of the Workshop on integration of data on household food availability and individual dietary intakes

Copenhagen, Denmark, 28–29 April 2009



Abstract

The World Health Organization Regional Office for Europe and the Directorate-General for Health and Consumers of the European Commission have established a joint three-year project to monitor progress in improving nutrition and physical activity and preventing obesity in the European Union. As part of this project, a workshop on the integration of data on household food availability and individual dietary intakes was convened in Copenhagen, Denmark on 28–29 April 2009. The main aims were: to discuss the implications of the application of different dietary data collecting protocols and existing data sources on the development of a harmonized European database; and to review a list of indicators to compare food consumption and nutrient intake patterns among all population groups across Europe.

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List of abbreviations

The following abbreviations are used in this report:

24HDR	24-hour dietary recall
BMI	body mass index
DAFNE	Data Food Networking (database)
DG SANCO	Directorate-General for Health and Consumers (EC)
E	energy
EAR	estimated average requirement
EC	European Commission
EFCOSUM	European Food Consumption Survey Method
EFCOVAL	European Food Consumption Validation
EFSA	European Food Safety Agency
EHIS	European Health Interview Survey
ENHR	European Nutrition and Health Report
EPIC	European Prospective Investigation into Cancer and Nutrition
EPIC-SOFT	European Computer Program for 24-hour Dietary Protocols
EU	European Union
EUHSID	European Union Health Surveys Information Database
EuroFIR	European Food Information Resource Network
EUROSTAT	European Commission Statistical Office
EURRECA	European micronutrient Recommendations Aligned Network of Excellence
EXPOCHI	Exposure Assessment Studies for Children
FAO	Food and Agricultural Organization of the United Nations
FFQ	food frequency questionnaire
HBSC	Health Behaviour in School-aged Children
HECTOR	Healthy Eating Out
HELENA	Healthy Lifestyle in Europe by Nutrition in Adolescence
HES	Health Examination Survey
HIS	Health Interview Survey
IDAMES	Innovative Dietary Assessment Methods in Epidemiological Studies and Public Health
IFS	Infant Feeding Survey
INFOODS	International Network of Food Data Systems
MONICA	Multinational monitoring of trends and determinants in cardiovascular disease
NDNS	National Diet and Nutrition Survey
RIVM	Dutch National Institute for Public Health and the Environment
WHO	World Health Organization
WP	work package

Acknowledgements

This report is a deliverable of work package (WP) 1 of the three-year collaborative project between the World Health Organization (WHO) and the Directorate-General for Health and Consumers (DG SANCO) of the European Commission (EC), which began in January 2008 (2007WHO02) under the title *“Monitoring progress on improving nutrition and physical activity and preventing obesity in the European Union (EU)”*. WHO expresses gratitude to the EC for supporting this workshop. Sincere appreciation is expressed to the participants who took time to participate in this workshop and whose valuable contributions will assist the WHO Regional Office for Europe in the process of developing a European database on nutrition, obesity and physical activity. Grateful thanks are extended to Lars Møller for the layout and typesetting of this report, Frank Theakston for the text editing and to WHO staff who have contributed to the development of this report: Caroline Bollars and Lideke Middelbeek for writing the report, Sally Charnley for the administrative support and Trudy Wijnhoven for the overall coordination.

Scope and purpose

A database of national and regional surveys on overweight and obesity is currently in place in the WHO Regional Office for Europe (1). The database will be updated and expanded with the help of other databases and sources on micronutrient status, per capita food supply, household food availability, individual food consumption and nutrient intake, and physical activity levels. Data will be obtained as much as possible for three age groups – children, adolescents and adults.

This workshop was organized as part of the project’s WP 1 on the surveillance of nutritional status, dietary habits and physical activity patterns. Its aims were to:

- discuss the implications of the application of different dietary data collection protocols and existing data sources on the development of a harmonized European database;
- recommend a list of indicators to be included in the database to compare food consumption and dietary intake patterns among all population groups across Europe;
- review a methodology for the calculation of dietary adequacy in nationally representative populations; and
- establish links between different existing international or European data sets.

Participants and programme

The workshop was attended by 11 experts from national administrations or leading European dietary database and surveillance projects and 4 WHO staff members (see Annex 1 for the list of participants).

The programme began with a general presentation about the joint WHO/EC monitoring project, followed by a presentation on currently available dietary surveillance data in the EU. It also included various presentations on currently existing European-wide dietary databases and running projects. Short presentations were made on experience from five countries on food consumption and nutrient intake surveillance and the methods used. During two working group sessions the participants discussed dietary data collection protocols, harmonization of existing European food consumption databases and the list of dietary intake indicators recommended for inclusion in the database. An overview of the full programme is given in Annex 2.

Trudy Wijnhoven, focal point for the project at the WHO Regional Office for Europe, chaired the meeting.

Welcome and introduction

The workshop was opened by Trudy Wijnhoven and there then followed an introductory speech by Francesco Branca, Director of the Department of Nutrition for Health and Development at WHO headquarters.

Francesco Branca gave a picture of the challenges that are still globally unmet and the need to continue prioritizing work on nutrition policy development and surveillance. Within the scope of this work, it is essential to make links with food insecurity, demographic changes and trends in globalization and urbanization. The WHO European Action Plan for Food and Nutrition Policy 2007–2012 (2) serves as a supportive framework for WHO to monitor the strategic priorities that are set within the different actions. The establishment of national and international surveillance systems is crucial in monitoring policies and responding to policy needs.

Furthermore, he stressed the importance of the contribution that the workshop was making to the integration of currently available data, and the relevance of the database that the Regional Office was developing to monitoring the commitments and policy actions mentioned in the European Charter on Counteracting Obesity (3), the WHO European Action Plan (2) and the EC White Paper on a Strategy for Europe on nutrition, overweight and obesity related health issues (4). He stressed that the European Region can be seen as a leader in the implementation and monitoring of food and nutrition policy.

Joint WHO/EC project on monitoring progress on improving nutrition and physical activity and preventing obesity in the European Union, 2008–2010

At the WHO European Ministerial Conference on Counteracting Obesity, in November 2006 (5), Member States approved the European Charter on Counteracting Obesity (3), which lists goals, guiding principles and a framework for action. In May 2007, the EC adopted its White Paper on a Strategy for Europe on nutrition, overweight and obesity related health

issues (4). In September 2007, the WHO Regional Committee for Europe endorsed the WHO European Action Plan for Food and Nutrition Policy 2007–2012 (2), which calls on Member States to develop and implement food and nutrition policies and translates the principles and framework provided by the Charter into specific action packages and monitoring mechanisms.

To monitor the impact of these leading policy documents and the progress made on improving nutrition and physical activity and preventing obesity in the EU, a three-year joint WHO/EC (DG SANCO) project covering the period 2008–2010 was established, entitled *“Monitoring progress on improving nutrition and physical activity and preventing obesity in the EU”*. The project’s main aims are to develop a database on nutrition, physical activity and obesity prevention, including surveillance data, country policy documents, policy implementation tools and good practices, and to evaluate the status of country policy development and the implementation of key commitments contained in the above-mentioned three documents. It is led by the Regional Office and the results and contents of the database will be officially endorsed by the Member States.

The seven project work packages are:

1. surveillance of nutritional status, dietary habits and physical activity patterns;
2. national policies and actions;
3. good practice in regional and local initiatives;
4. establishment of the database and management;
5. support to national surveillance and policy intelligence;
6. coordination, management and reporting; and
7. dissemination of results.

Monitoring dietary intake patterns within and across countries is important for the development of targeted action and the evaluation of strategies and policies. The harmonization of nutrient intake and food consumption methodologies will facilitate intercountry comparison and benchmarking.

Overview of currently available dietary surveillance data in the European Region

The WHO European Action Plan for Food and Nutrition Policy 2007–2012 (2) aims to reduce the prevalence of diet-related noncommunicable diseases; reverse the trend towards obesity in children and adolescents; reduce the prevalence of micronutrient deficiencies;

and reduce the incidence of foodborne diseases. Action area 6 outlines the need to establish national and international surveillance systems on nutritional status in different age and socioeconomic groups. Systems should be simple and sustainable and tailored to the needs of countries while based on common protocols. Ideally, analytical tools and databases should be established at the international level to facilitate international comparison.

A short overview was provided of European, international and national projects, databases and surveys that will be relevant to the project. The following were presented in greater detail.

European projects

- *EFCOSUM – European Food Consumption Survey Method (1999–2001)*. The project aimed to standardize national survey results from 23 European countries. The survey results included the mean (habitual) and population distribution of the intake of foods, energy, macronutrients and micronutrients, as well as levels of high intake of contaminants and additives, in individuals across the various countries (<http://www.public-health.tu-dresden.de/dotnetnuke3/Portals/5/Projects/EFCOSUM/final%20report%20efcosum.pdf>, accessed 25 January 2010).
- *EFCOVAL – European Food Consumption Validation (2006–2009)*. The project aims to develop and validate a trans-European food consumption method that can be used for estimating the intake of foods, nutrients and potentially hazardous chemicals within the European population (<http://www.efcoval.eu/>, accessed 25 January 2010).
- *EHNR II – European Nutrition and Health Report 2009*. The project's general aim is to provide a comprehensive and up-to-date report on the nutrition and health situation in Europe that focuses on diet, physical activity, tobacco use and alcohol consumption (<http://www.univie.ac.at/enhr/>, accessed 25 January 2010).
- *EPIC – European Prospective Investigation into Cancer and Nutrition*. EPIC was designed to investigate the relationships between diet, nutritional status, lifestyle and environmental factors and the incidence of cancer and other chronic diseases. EPIC is a large study of diet and health, having recruited 520 000 people in ten European countries: Denmark, France, Germany, Greece, Italy, the Netherlands, Norway, Spain, Sweden and the United Kingdom (<http://epic.iarc.fr/index.php>, accessed 25 January 2010).
- *EURRECA – European Micronutrient Recommendations Aligned (2007–2011)*. This network of excellence aims to develop a “tool kit” to support the work of expert panels and policy-makers developing micronutrient recommendations (<http://www.eurreca.org>, accessed 25 January 2010).
- *HECTOR – Healthy Eating Out (2006–2009)*. This collaborative partnership between the scientific community, consumer associations and catering-related enterprises aims to collect food consumption data on individuals eating outside the home, to analyse

European catering practices, to assess the types and quantities of food provided (food supply) and to understand the characteristics and determinants of out-of-home dietary patterns (food demand) (<http://www.nut.uoa.gr/hector/>, accessed 25 January 2010).

- *HELENA – Healthy Lifestyle in Europe by Nutrition in Adolescence (2005–2008)*. The study provided harmonized and comparable data about attitudes to nutrition, the main determinants of food choice and preference and food consumption among male and female European adolescents, taking advantage of computer-based dietary assessment tools (<http://www.helenastudy.com/>, accessed 25 January 2010).
- *IDAMES– Innovative Dietary Assessment Methods in Epidemiological Studies and Public Health (2007–2009)*. The aim is to generate standard operating procedures for innovative methods assessing diet in epidemiological studies that allow quantitative and detailed characterization of individuals regarding their dietary intake, including alcohol (<http://nugo.dife.de/twiki41/bin/view/IDAMES/>, accessed 25 January 2010).

International projects

- *WHO MONICA – Multinational MONItoring of trends and determinants in Cardiovascular disease (1970s–1990s)*. This international project aimed to monitor trends in cardiovascular diseases and to relate these to changes in risk factors in the population over a ten-year period. There were a total of 32 MONICA collaborating centres in 21 countries (<http://www.ktl.fi/monica/>, accessed 25 January 2010).
- *HBSC – Health Behaviour in School-aged Children (as of 1982)*. The survey investigates health behaviour, including eating behaviour, food consumption and physical activity, in 11-, 13- and 15-year-olds (<http://www.hbsc.org/>, accessed 25 January 2010).

European databases

- *DAFNE – Data Food Networking* is a joint effort of European countries to compare the food habits of their populations and to monitor trends over time in food availability through the creation of a regularly updated food databank (<http://www.nut.uoa.gr/English/index.asp?page=202>, accessed 25 January 2010).
- *The concise European Food Consumption Database of the European Food Safety Agency (EFSA)* gathers data on average daily consumption of foods per person in EU Member States (<http://www.efsa.europa.eu/en/datex/datexfooddb.htm>, accessed 25 January 2010).
- *EHIS – European Health Interview Survey* aims to measure, on a harmonized basis and with a high degree of comparability among EU Member States, the health status, lifestyle (health determinants) and health care service use of EU citizens; it will include fruit and vegetable consumption (http://ec.europa.eu/health/ph_information/dissemination/reporting/ehss_01_en.htm, accessed 25 January 2010).

- *EUHSID – European Union Health Surveys Information Database* aims to improve information and knowledge for the development of public health and for updating the Health Interview Survey (HIS) and Health Examination Survey (HES) databases with new health surveys carried out in the EU (<http://www.euhsid.org/>, accessed 25 January 2010).
- *Data collected by the EC Statistical Office (EUROSTAT)* are provided by the national agencies for statistics of the 27 EU Member States (<http://epp.eurostat.ec.europa.eu/portal/page/portal/eurostat/home/>, accessed 25 January 2010).
- *The Household Budget Survey* provides data on food expenditure and food quantities (<http://europa.eu/rapid/pressReleasesAction.do?reference=STAT/08/88&type=HTML&age=d=0&language=EN&guiLanguage=en>, accessed 25 January 2010).

International databases

- *The Food Balance Sheets of the Food and Agricultural Organization of the United Nations (FAO)* present a comprehensive picture of the pattern of a country's food supply during a specified reference period (<http://faostat.fao.org/>, accessed 25 January 2010).
- *The WHO Global Databank on Infant and Young Child Feeding* stores data on prevalence and duration of breastfeeding and complementary feeding for infants and young children (<http://www.who.int/nutrition/databases/infantfeeding/en/index.html>, accessed 25 January 2010).

Examples of European national surveys among adults

- *Austria*: Austrian study on nutritional status
- *Belgium*: Belgian national food consumption survey; Health interview survey
- *Bulgaria*: National survey on dietary intake and nutritional status of the Bulgarian population
- *Czech Republic*: Individual food consumption – the national study
- *Denmark*: Danish dietary habits survey
- *Estonia*: Health behaviour among the Estonian adult population
- *Finland*: Health behaviour and health among the Finnish adult population; National FINDIET 2002 study
- *France*: Health and nutrition barometer; Individual and national survey on food consumption; National survey on nutrition and health
- *Germany*: German nutrition survey
- *Hungary*: Hungarian national dietary survey

- *Ireland*: North/south Ireland food consumption survey
- *Latvia*: Health behaviour among the Latvian adult population
- *Lithuania*: Health behaviour among the Lithuanian adult population
- *Malta*: First national health interview survey
- *Netherlands*: National food consumption survey
- *Norway*: Norwegian dietary survey
- *Poland*: Household food consumption and anthropometric survey in Poland
- *Slovenia*: Nutritional habits of Slovenian adults in health protection aspect
- *Sweden*: Dietary habits and nutrient intakes in Sweden
- *United Kingdom*: National diet and nutrition survey

Selected databases and projects on nutrient intake and food consumption

DAFNE: household budget surveys

On a global level, data for nutrition monitoring and surveillance are commonly derived from food balance sheets and household budget surveys. The members of the households participating in the nationally representative household budget surveys are asked to record, mainly in open questionnaires, information on all foods and beverages available during a reference period, including purchases, contributions from own production and items offered to members as gifts. To ensure complete recording, trained interviewers visit households during the survey period. Food consumption in restaurants, canteens and similar establishments is recorded only in terms of related expenses. Data are collected regularly and within one year in order to capture seasonal variations in food intake. Information on the demographic and socioeconomic characteristics of the household members is also collected, allowing exploratory analyses on the effect of socioeconomic determinants on dietary indicators.

Since 1987, the DAFNE team has been coordinating a series of workshops and research projects aiming at the development of a databank of comparable food and sociodemographic information, using data collected through the household budget surveys. With the support of the EC, the DAFNE project has developed the methodology for harmonizing household budget survey data collected at various points in time in 24 European countries: Austria, Belgium, Croatia, Cyprus, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Luxembourg, Malta, Montenegro, Norway, Poland, Portugal, Serbia, Slovakia, Slovenia, Spain, Sweden and the United Kingdom. Currently, data from Albania, Armenia, Estonia and Lithuania, together with recent data from Hungary, Poland and Portugal, are being analysed and will be integrated into the database.

After cleaning the data indicators, the process of harmonization begins, the aim being data that are more easily comparable. This process includes managing and processing the raw data, documenting the variables used in the analysis, and harmonizing the food and sociodemographic information (namely the household's locality and composition as well as the education and occupation of the head of the household). The harmonization procedure includes the establishment of operational classification criteria, iterative cross-coding and several working group meetings to address specific problems, and is described in the DAFNE classification schemes for food and sociodemographic data.

Over the years, the DAFNE databank has been recognized as a resource for conducting a wide range of nutritional analyses at food and nutrient level. Moreover, data on the mean daily per person availability of foods and beverages can be directly retrieved through the Internet-based DafneSoft application tool.

EFSA: European food consumption database

Within the risk assessment role of EFSA, data on food consumption are an important part of the exposure assessment analysis that is one of EFSA's core responsibilities. According to EC Regulation No 178/2002 of 28 January 2002, EFSA should involve itself particularly in collecting data relating to food consumption, so as to assess the exposure risks of individuals. EFSA works closely with all organizations operating in the field of data collection, including those from EU applicant countries, third countries and international bodies.

EFSA uses three different types of information source to assess food consumption data: (a) food supply data (GEMS/Food); (b) data from household surveys (EUROSTAT); and (c) data from dietary surveys among individuals. Food consumption data from dietary surveys are available in most European countries but data obtained at national level can often not be compared directly because of differences in methodology and food categorization.

In April 2005, the EFSA Scientific Colloquium recommended EFSA to set up a common database on food consumption, with the aim of improving the consistency and reliability of exposure assessments. Such a database would contribute to the improvement of data comparability and harmonization. As a result, EFSA has set up an expert group on food consumption data comprising representatives from 32 European countries. The group provides a platform for sharing thoughts on the harmonization of methodologies for collecting and collating food consumption data.

The current European food consumption database contains consumption data for 15 main food categories (with 29 subcategories) for the adult population (16–64 years of age). Individual food consumption data for the main food categories and subcategories are currently available for 19 European countries. However, there are still gaps in the existence and collection of food consumption data. For this reason, EFSA has created short- and long-

term objectives for improving data collection. The short-term objectives focus on compiling existing food consumption data at the most disaggregated level possible for population groups other than adults, e.g. small children and the elderly. The long-term objectives would be to promote the collection of harmonized food consumption data collection by Member States within a pan-European dietary survey.

There are currently two EFSA projects.

- The EXPOCHI (Exposure Assessment Studies for Children) project has the chief aim of carrying out an independent exposure assessment study in children (in particular children aged 1–3 years) for food colours, selenium, chromium and lead. The project would also provide individual food consumption data for children for different Member States).
- The Comprehensive European Food Consumption Database project is a collaborative agreement for the generation and processing of food consumption data. Currently, 20 EU Member States are involved as partners in this project.

To set up a comprehensive European food consumption database, an organization has been nominated in each country by the Permanent Representative of the EU. The food consumption data to be provided by the nominated organization must be a nationally representative sample of the adult population (defined as those between 16 and 64 years of age) and collected at individual level by means of a short-term dietary assessment method, such as 24-hour dietary recall (24HDR) or dietary record. EFSA aims to collect the most recent data for the country (dietary surveys carried out before 1996 are not acceptable).

ENHR II: European Nutrition and Health Report 2009

The general aim of ENHR II is to provide a comprehensive and up-to-date report on the nutrition and health situation in Europe, focusing on diet, physical activity, tobacco use and alcohol consumption. For this purpose, information was collected in 25 EU countries divided into 4 regions (north: Denmark, Estonia, Finland, Latvia, Lithuania, Norway and Sweden; south: Cyprus, Greece, Italy, Portugal and Spain; west: Belgium, France, Ireland, Luxembourg, the Netherlands and the United Kingdom; and central and eastern Europe: Austria, the Czech Republic, Germany, Hungary, Poland, Romania and Slovenia). The project collects nutrition and health data using the outcomes of existing national nutrition and health surveys and through the input from the different project partners and related European projects.

The report will contribute to identifying major nutrition and health problems in the EU regions and to formulating new and evaluating existing national food and nutrition policies. The method implies collecting and critically reviewing available data on the most common indicators used for assessing the nutrition and health situation in the 25 European countries. The report will provide information on dietary habits, diet-related health indicators and established food and nutrition policies in European countries, and aims to

generate recommendations for different stakeholders. Preliminary results show gaps in the comparability and reliability of collected data, leading to the recommendation that standardized data collection methods should be used.

EFCOVAL: European Food Consumption Validation project

At present, many EU Member States collect data at national level using different methodologies, while some of them do not have food consumption surveys in place. This limits the intercountry comparison of dietary intake data and the development and evaluation of European food policies.

In the EFCOVAL project, 14 partners from 11 countries work on the development and validation of a trans-European food consumption survey instrument for the intake of foods and nutrients. The Dutch National Institute for Public Health and the Environment (RIVM) coordinates the project. EFCOVAL follows up on the work of a former EU project that recommended a detailed recording of all food intake of a person over a 24-hour period using the EPIC-SOFT program (European Computer Program for 24-hour Dietary Protocols) as the best way of obtaining reliable and comparable data from European countries.

One of the activities within EFCOVAL is upgrading the EPIC-SOFT program, both functionally and technologically. The validity of the software will be tested by gathering dietary data among adults in five European countries and comparing the results within and between those countries with biological markers of dietary intake. In addition, the EPIC-SOFT tool will be tested for its feasibility for use in children.

The EFCOVAL project will develop country-specific versions of EPIC-SOFT and promote the implementation of the software in food consumption surveys in other European countries.

FAO: food composition and consumption

FAO runs the secretariat of the International Network of Food Data Systems (INFOODS; http://www.fao.org/infoods/index_en.stm, accessed 25 January 2010). This global network consists of 18 regional and subregional data centres providing data on food composition. INFOODS provides leadership and an administrative framework for the development of standards and guidelines for collecting, compiling and reporting food component data. It is also the generator of special international databases and serves as a general and specific resource for persons and organizations interested in food composition data on a worldwide basis. In the European Region, INFOODS is linked to the European Food Information Resource Network (EuroFIR; <http://www.eurofir.net/index.asp?id=1>, accessed 25 January 2010), which provides comprehensive pan-European food information and serves as an essential underpinning component of all food and health surveys and diet research in Europe. EuroFIR is a partnership among 47 universities, research institutes and small and medium-sized enterprises in 25 European countries.

The Twenty-sixth FAO Regional Conference for Europe, held in Innsbruck in June 2008, acknowledged the importance of networks such as INFOODS and EuroFIR for the documentation of local foods and provision of data on nutrient composition. The Conference emphasized that the goal of increasing global food production, including biofuels, should be balanced against the need to protect biodiversity, ecosystems and traditional foods and agricultural practices.

An instrument used by FAO to assess dietary adequacy is the individual dietary diversity questionnaire, which measures 16 food groups and can be used as a proxy for nutrient adequacy. FAO uses supply utilization accounts to report on food supply (production, imports and stock changes) and utilization (exports, seed, feed, waste, industrial use, food and other use). Both elements (supply and utilization) are kept physically together to allow the matching of food availability with food use. FAO also works with food balance sheets, which show the quantities and types of food available in any country and give the content of the food supply expressed in terms of nutrient value. The data from the food balance sheets serve as an information source for the dietary energy supply, which is an indicator for hunger or undernourishment relating to energy.

IDAMES: Innovative Dietary Assessment Methods in Epidemiological Studies and Public Health

The need for new dietary assessment methods to better measure diet in large-scale epidemiological studies is well recognized. Validation and comparative risk studies indicate that the standard instrument for such studies, the food frequency questionnaire (FFQ), might not provide the dietary data needed to adequately assess the relationship between diet and health.

The IDAMES project therefore aims to evaluate innovative approaches in their ability to provide quantitative and more precise estimates for diet in epidemiological studies. Such approaches include the use of an advanced methodology, identification of new applications of existing instruments and the promotion of statistical strategies to generate best estimates of individual intake. The project also aims to deliver standard operating procedures to help other researchers to adopt and apply new methodologies.

The methodology of IDAMES consisted primarily of literature reviews and a pilot study, the outcome of which revealed that 24HDR is an appropriate instrument for obtaining detailed and quantified dietary data. 24HDR can be done either through personal interviewing or through a self-administered Internet-based tool. As with surveys, at least two 24HDR per person are needed to allow the calculation of non-linear calibration functions. Advanced statistical methods are now available for estimating individual intake and population distribution functions using two sources of dietary information, namely 24HDR and a food propensity questionnaire. However, there is no consensus yet on how many 24HDR are needed to characterize an individual's intake. The feasibility of applying three 24HDR by

telephone in combination with an Internet-based food propensity questionnaire should be further explored.

IDAMES aims at fostering modern technologies to be applied in dietary intake assessment. With this in mind, the project conducts pilot studies to test the feasibility of new methodologies and new applications of existing instruments.

Selected country experiences on national dietary intake and food consumption surveys

Denmark

Denmark has been conducting national dietary surveys since 1985. In the period 2000–2006, over 7000 people aged between 4 and 75 years participated in a dietary survey, for which they entered their dietary intake in pre-coded food diaries for 7 consecutive days. In the same period, physical activity levels were mapped using a modified version of the International Physical Activity Questionnaire. In addition, the participants were interviewed about their social background, their attitudes and knowledge about healthy lifestyle, their weight and height and their use of dietary supplements, and were asked to give selected supplementary information on their dietary habits.

Data from the dietary surveys show that dietary habits in Denmark are changing. After several years with an increasing intake of added sugar, average intake seems to have levelled off. Nevertheless, some 60% of children still consume too much refined sugar, which, according to the Nordic Nutrition Recommendations 2004 should not exceed 10% of total energy intake (≤ 10 E%). There has been a decrease in fat intake since the first national survey in 1985, yet 8 out of 10 children and adults still consume more fat (especially saturated fat) than recommended (max. 30 E%). The average intake of vitamins and minerals is fairly adequate (except for vitamin D and for iron in women of childbearing age). The average intake of dietary fibre and whole grain is lower than recommended. The intake of fruit and vegetables has increased since 1995 but has levelled off in recent years; 67% of the children and 84% of adolescents and adults still consume less than the recommended levels.

Data from the national dietary surveys are used in several ways, for example in the development and evaluation of nutrition policies and public health initiatives such as fat campaigns (1990–1996) and the campaign “6 a day – eat more fruit and vegetables” launched in 1998. Evaluation of the adequacy of nutrient intake has formed the scientific background for the mandatory iodine fortification programme introduced in 2000 and is currently used in the ongoing efficiency monitoring. Dietary intake data are also used as background information for nutrient profiling schemes and serve as a basis for recommendations on meals served in schools and institutions. Recently, the collected anthropometric data were used to document an increase in the prevalence of overweight among children and

adolescents from 1995 to 2002, as well as social inequality in the prevalence of overweight and obesity among adults.

Five reports and several scientific articles have been published based on the continuous nationwide dietary survey carried out in Denmark from 2000 to 2006.

Netherlands

Food consumption surveys have been conducted in the Netherlands since 1987. After three national surveys at five-year intervals, a new dietary survey system has been developed as a response to policy need. The Ministry of Health, Welfare and Sport has given RIVM the responsibility for dietary monitoring. The main aim is to provide data on intake distributions of food groups, energy, nutrients and potentially hazardous substances in the Dutch population and important target groups. The data are used for formulating and evaluating health and food safety policy, for public information purposes and for scientific research.

The methodology consists of three modules. The first aims at a continuous collection of data among the general population aged 7–69 years. The core survey began in 2007 following a pilot study among 750 young adults aged 19–30 years in 2003. Food consumption is assessed using two non-consecutive 24HDRs in combination with a self-administered questionnaire. Habitual intake, necessary for judging nutritional adequacy, is estimated by statistical modelling from intake data on two days. While data collection is an ongoing process, survey reports are published at three-year intervals (the first being expected in 2011).

The second module aims to collect data among specific target groups such as young children, ethnic groups, pregnant and lactating women and elderly people. As part of this module, 1279 children aged 2–6 years were studied in 2005/2006 using standardized food records. A survey among elderly people is currently in preparation.

The third module is about nutritional status. The studies in this module are specifically targeted at nutrients for which intake cannot be assessed well in food consumption surveys (sodium and iodine excretion in 2006) and aim to follow up on signals of possible inadequate intake (among children in 2008).

The above-mentioned pilot study among young adults showed that none of them consumed the recommended 200 grams of vegetables daily and less than 10% consumed the recommended 200 grams of fruit per day. The same study found that 53% of women and 58% of men had a diet containing less than 35% energy as fat, and that only 11% of men and 6% of women had a diet with less than 10% energy from saturated fatty acids. Almost 60% of men and 28% of women had a diet that contained less than 1% energy from trans fatty acids.

A survey of young children conducted in 2005/2006 revealed that their diet was adequate in terms of the proportions of total fat, carbohydrates and protein. However, the fatty acid composition of the diet was unsatisfactory because fish consumption (rich in fish fatty acids) is low and saturated fatty acid intake, especially in 4- to 6-year-old children, is high. Only a small proportion of children met the recommended intake of vegetables, although for fruit the situation was slightly more favourable (one in four). Further, one in seven children was found to be overweight or obese, indicating a positive energy balance in the period prior to the study. Intakes of most vitamins and minerals were shown to be adequate, with the exception of vitamin D and folate.

In 2006, a study of salt intake in adults (based on a urinary excretion study in 333 men and women aged 19–70 years in and around the town of Doetinchem) reported that salt intake was above the recommended 6 grams per day, with an average of 8.8 grams per day. The highest mean intake, 10.1 grams per day, was observed in men aged 19–49 years, but mean intake was also considerably higher than recommended among older men and among women.

Food consumption data are essential to underpin a policy that will provide adequate healthy nutrition and food safety. In line with other countries, several aspects of the Dutch diet, such as high energy intake in relation to low energy expenditure, unhealthy fatty acid composition, low consumption of vegetables, fruit, fibre-rich cereals and fish, high intake of salt, and inadequate folate and vitamin D intake (especially among young children, elderly and some ethnic groups), call for targeted policy action.

Poland

In Poland, dietary intake data are retrieved from national food balance sheets and the results of household budget surveys and individual dietary surveys. Data from national food balance sheets provide information on the quantities of the principal food groups available for consumption per capita per year. Data sets have been used to monitor developments in the national dietary pattern and also to identify any impact of trends in dietary patterns on the health situation and to estimate the relationships between selected variables.

Household budget surveys were initiated in Poland before the Second World War by the Central Statistical Office. Through the years, the methodology applied has been improved and coverage extended. In 1993, the monthly rotation method was introduced, so that in each month of the year a different group of households participates in the surveys. This method has been adhered to ever since.

Household budget surveys serve to provide information on household income, expenditure and food quantities. Different variables, such as socioeconomic group, household size, place of residence, income, and educational level of the head of the household, are taken into account in presenting the results of the surveys.

There are numerous surveys on individual dietary intake in Poland but only the following four are nationally representative:

- *The household food consumption and anthropometric survey.* The main observation from this survey is that energy intake levels are relatively high, especially in older boys and young men.
- *The multi-centre nationwide health survey of the population (WOBASZ) as part of the POLKARD programme.* This survey was carried out in 2003–2005 using two different assessment methods (24HDR and FFQ) and included adults aged 20–74 years.
- *The dietary habits and nutritional status of children and adolescents at puberty survey.* This survey has been carried out twice (in 1996–1997 and 2000) and used 24HDR to assess dietary intake. Most of the participants took part in both surveys.
- *The survey on nutrition of four-year-old children.* The latest survey was carried out in 2005 using seven-day records to assess dietary intake.

The dietary data have been used in developing policy actions, such as in the preparation of the National Programme for Prevention of Overweight, Obesity and Noncommunicable Diseases through Diet and Improved Physical Activity, the preparation of new Polish dietary reference Intakes and in other nutrition-based initiatives such as dietary guidelines and risk assessment tools.

Portugal

The National Platform against Obesity aims at curbing the obesity epidemic and reversing the current trend, with a special focus on children. Research, intersectorality, municipal partnerships and the involvement of local government are important pillars of the platform.

The national health survey, food balance sheets and household budget surveys are the instruments used to collect data on dietary intake. Body mass index (BMI) data for adults and children are collected through participation in the WHO European Childhood Obesity Surveillance Initiative and the GALP Energy Platform Against Obesity (6). The latter also looks at numbers of meals, the intake of (un)healthy foods, perceived barriers to a healthy diet and awareness.

Portugal is working on a school nutrition project that will also generate data on nutrient intake among schoolchildren.

The EC School Fruit Scheme is considered a good opportunity to increase the consumption of fruit and vegetables within the family setting.

As a result of a recommendation by Parliament, a national food survey will be conducted. No national dietary intake data have become available since 1989.

United Kingdom

The United Kingdom undertakes a range of surveys to assess diet and nutrient intakes by the population, in order to assess and evaluate nutrition policies. National nutrition policy focuses on reducing the intake of salt, fat, saturated fat and added sugar and increasing the consumption of fruit, vegetables and dietary fibre. Quantitative data on food consumption are collected and macronutrient and micronutrient intakes are calculated based on updated analyses of nutrient composition of foods, and levels of various vitamins and minerals are measured in blood samples. Dietary patterns and nutrient consumption are compared with national diet and nutrient recommendations and inform further research, policy development and targeted interventions. Breastfeeding and weaning practices are monitored through the Infant Feeding Survey (IFS). Details of surveys are given below.

For the general population, nutritional surveillance to monitor food and nutrient intake is carried out by the National Diet and Nutrition Survey (NDNS). It collects data on foods consumed over a week, biochemical measures of nutritional status, and measures of fatness and physical activity from each individual in the survey. It permits the analysis of associations between food and nutrient intake, biochemical and anthropometric measures and further exploration of the relationships between these variables (for example, between energy intake and BMI). The results of the survey are used to develop nutrition policy and to contribute to the evidence base for government advice on healthy eating. The new NDNS is a rolling programme over seven years, surveying all age groups simultaneously (including at least 1000 individuals annually). The move to the new rolling programme will help spot emerging trends and measure the effectiveness of interventions. Continuous field work will also allow more flexibility to respond quickly to new policy needs.

The Health Survey for England is a series of annual surveys that began in 1991. All surveys have covered the adult population (16 years of age and over) living in private households in England. Children have also been included every year since 1995. Core elements included every year are general health, smoking, alcohol consumption, fruit and vegetable consumption, height, weight, blood pressure measurements and blood and saliva samples. Each year, the survey focuses on different demographic groups, looking at special topics such as cardiovascular disease, physical activity, accidents, lung function and certain blood analyses. The most recently published survey (2007) focused on knowledge of and attitudes to key aspects of lifestyle behaviour – alcohol use, eating and physical activity.

The latest survey to retrieve information on the general population is the Family Food Survey, focusing on food and drink purchases by households in the United Kingdom. The report presents trends in average levels of food purchases and demographic characteristics converted into average energy and nutrient intakes. Data are collected for a sample of households using self-reported diaries of all purchases, including food eaten outside the

home over a two-week period. Energy and nutrient intakes are calculated using standard profiles for each of some 500 types of food.

Some surveys are also conducted in certain subgroups of the population, such as the Low Income Diet and Nutrition Survey. This is a national sample of the most materially deprived households and provides strong, nationally representative baseline data on eating habits, nourishment and nutrition-related health.

The IFS, conducted every five years, collects information on infant feeding practices. The survey provides national estimates of the incidence and prevalence of breastfeeding as well as capturing data on other aspects of infant feeding, such as the use of breast-milk substitutes, weaning practices and the introduction of complementary foods.

The Diet and Nutrition Survey of Infants and Young Children aims to gather detailed information about the diet of a representative sample of infants and young children. The survey serves to bridge the gap in data between the age groups covered by the IFS and the NDNS.

Methodology for estimating dietary adequacy in europe

To evaluate the adequacy of nutrient intake at the population level, information is needed on the nutrient intake distribution in the population linked to the reference nutrient intake recommendations.

The methodology for calculating the prevalence of inadequacy in the population depends on the recommendations for the nutrient under study. When an estimated average requirement (EAR) is available, the probabilistic approach or the EAR cut point method will be applied. When the recommendation for the nutrient under study relies on an average intake, the only option is a qualitative decision on the adequacy of intake. The appropriate interpretation of the nutrient recommendations will be crucial in choosing the procedure to evaluate the adequacy of nutrient intake. Thus, transparency in the process of deriving the recommendations and access to this information for the country under study will allow correct application of the methodology. This is currently an area of concern for certain European countries.

Within the EURRECA network of excellence, a scoring system has been developed to rate food consumption surveys. Some of the items included in the score are key factors in the evaluation of nutrient intake adequacy: the representativeness of the sample and the sample size, the methods used to collect food data and whether they have been validated; estimation of misreporting; and assessment of diet supplements and fortified foods.

Data collection procedures and data handling can affect the calculation of the prevalence of nutrient inadequacy in the population, causing an overestimate or underestimate of the true prevalence.

Dietary data variables and indicators to be included in the WHO European database on nutrition, obesity and physical activity

The following five main areas will be included in the WHO European database on nutrition, obesity and physical activity, which is currently under development:

1. *surveillance data*: nutritional status, dietary habits and physical activity;
2. *policies*: nutrition, obesity and promotion of physical activity;
3. *actions to implement the policies*: government programmes and initiatives, public–private partnerships and legislation in the different areas of action;
4. *good practice*: programmes, initiatives and preventive interventions in different settings improving diet, promoting physical activity and/or preventing obesity; and
5. *status of implementation of key commitments*: contained in the European Charter on Counteracting Obesity (3), the EC White Paper on a Strategy for Europe on nutrition, overweight and obesity related health issues (4) and the WHO European Action Plan for Food and Nutrition Policy 2007–2012 (2).

Data on nutrient intake of macronutrients and micronutrients, per capita food supply, household food availability and food consumption (household vs individual) can be used to evaluate dietary habits in populations. Regarding data entry, different variables ranging from identification items (e.g. country, representativeness) and general survey information (e.g. survey year, age range, sample size) to specific variables on per capita food supply, household food availability and individual food consumption and nutrient intake will be included in the database.

For data output, a set of outcome indicators has been defined for measuring changes and trends over time. Outcome indicators further facilitate the understanding of where a country is and how far it is from its goals.

Working groups

The programme included two working group sessions (see Annexes 3, 4 and 5):

- working group 1: dietary data collection protocols and harmonization of a European food consumption database; and
- working group 2: dietary data, indicators and dietary adequacy.

Working group 1

The objectives of working group 1 were to:

- discuss the implications of different dietary data collection protocols and existing data sources on the development of a harmonized European database;
- recommend criteria for the inclusion of nationally representative surveys on food supply, food availability, food consumption and nutrient intake into a common European database; and
- recommend the next steps in the establishment of links between the different existing international or European data sets.

The following points emerged from the discussion.

- Few data are currently available for certain population groups such as infants and pregnant and lactating women.
- The value of regional data and smaller surveys was emphasized. It was suggested that, in order to have a complete overview of nutrient intake data in a country, WHO should consider including such surveys and other sources if nationally representative sources are not available.
- An amendment to the glossary was proposed. Since food balance sheets do not give information about household food availability it was suggested that the word household be deleted in the context of the workshop.
- It was suggested that, when presenting data on food supply and food availability, the strengths and limitations of the respective data sets should be taken into account and reported.
- A description of the kinds of food item that are included in each food group would provide the database user with valuable information. As different ways of categorizing food groups currently exist, it would be useful to work towards a common way of defining food groups.
- It was recommended that household budget surveys and food balance sheets should be used for reporting on their population's dietary habits in those Member States that do not have any individual data on food consumption and nutrient intake.
- The different dietary methods currently applied by Member States serve different purposes. The repeated 24HDR was suggested as the preferred data collection method for dietary intake data. Food frequency methods could provide additional data.

- To establish links between the WHO European database and different European and other international databases, it was recommended that WHO establish a set of quality assurance criteria for the data available and the methods used.
- To ensure more comparable data in the future, the working group advised WHO to develop a set of recommendations that promote a standardized way of collecting data. It was also pointed out that some Member States might need advice on how best to utilize the data that they have.

Working group 2

The objectives of working group 2 were to:

- discuss a list of indicators recommended for inclusion in the database to compare food consumption and dietary intake patterns among all population groups across Europe; and
- review a methodology for calculating dietary adequacy in nationally representative populations.

The experts reviewed the list of proposed indicators/variables and made suggestions as to the formulation of the indicator and population groups related to, for example, fruit and vegetable supply and availability, fruit and vegetable consumption, and the intake of energy, fat, free sugars, dietary sodium chloride and micronutrients such as selenium, cobalamin, copper and manganese.

Specifically for the indicators list, the participants suggested:

- separating the indicator on the consumption of 400 grams of fruit and vegetables, as some data surveys report on their consumption separately and not necessarily in grams but, for instance, in portion sizes;
- including the intake of trans fatty acids, given the political context, despite concerns about the difficulty of their monitoring and measurement;
- including production and supply data for salt in addition to salt intake;
- indicating a baseline and reference period for indicators on trends in nutrient intake;
- linking energy intake to energy expenditure and therefore include physical activity levels;

- basing the definition of (in)adequate dietary intake on the WHO/FAO recommendations (7);
- formulating an indicator on dietary fibre; and
- adding the elderly as a subpopulation.

Specifically for the variables list, the participants suggested:

- separating the concept of household food availability from that of food supply, as the food groups involved in the two concepts are different;
- using the EFSA classification of food groups for the variables related to food consumption;
- including the basal metabolic rate to reflect the study populations' intake, monounsaturated and polyunsaturated fatty acids being specified as alpha-linolenic, docosahexaenoic and eicosapentaenoic acids as far data can be provided; and
- using individual data only for the assessment of dietary adequacy.

Conclusions and recommendations

- Information about the methodology of the surveys should be included in the database.
- The dietary methodology conducted in Poland could be used as an example of good practice for making a subsample, allowing comparability of household information and information on individual dietary intakes. It is possible to design an individual survey nested within a household survey at national level. Bias can occur, however, and it is therefore important to provide the source (data deriving from a household survey). Statistical rigour needs to be ensured when developing a nested sample, as different parameters need to be selected on the same subject and problems with correlation may occur.
- It was advisable to take ethics and data protection policies into consideration.
- Food balance sheets can be useful for calculating energy and micronutrients and can provide very rough trends, but should not be taken as an alternative for the information collected through individual dietary surveys.
- It was strongly recommended that the database should include all available data on nutrient intake, food consumption and food availability for a country. Any existing

sources (international, national and regional), although they have their own strengths and limitations, should not be disregarded at this point.

- Attention should be paid to certain groups such as lower socioeconomic groups, the elderly, pregnant and breastfeeding women and young people, as there is often a dearth of data on these groups in the EU.
- Surveys/sources that use methods of data collection other than repeated 24HDR, dietary records and FFQ should not be excluded from the database.
- WHO should provide guidance on how to further develop national data collection to permit standardization and harmonization and make data more comparable in the future.

References

1. *Nutrition Policy Database [online database]*. Copenhagen, WHO Regional Office for Europe, 2009 (<http://data.euro.who.int/nutrition/>, accessed 25 January 2010).
2. *WHO European Action Plan for Food and Nutrition Policy 2007–2012*. Copenhagen, WHO Regional Office for Europe, 2008 (<http://www.euro.who.int/Document/E91153.pdf>, accessed 25 January 2010).
3. *European Charter on Counteracting Obesity*. Copenhagen, WHO Regional Office for Europe, 2006 (<http://www.euro.who.int/Document/E89567.pdf>, accessed 25 January 2010).
4. *White Paper on a Strategy for Europe on nutrition, overweight and obesity related health issues*. Brussels, European Commission, 2007 (http://ec.europa.eu/health/ph_determinants/life_style/nutrition/documents/nutrition_wp_en.pdf, accessed 25 January 2010).
5. *WHO European Ministerial Conference on Counteracting Obesity. Conference Report*. Copenhagen, WHO Regional Office for Europe, 2007 (<http://www.euro.who.int/document/E90143.pdf>, accessed 25 January 2010).
6. *2007: the start of a longer run. Annual report & accounts, Galp Energia '07*. Lisbon, Galp Energia, 2007 (<http://investor.relations.galpennergia.com/NR/rdonlyres/FC99E393-94FA-45DE-8048-501834505C0E/0/ARGE07.pdf>, accessed 25 January 2010).
7. *Vitamin and mineral requirements in human nutrition*. Geneva, World Health Organization and Rome, Food and Agricultural Organization of the United Nations, 2004 (<http://whqlibdoc.who.int/publications/2004/9241546123.pdf>, accessed 25 January 2010).

ANNEX 1. Participants

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ANNEX 2. Programme

Tuesday, 28 April 2009

- 13.00 – 14.00 **Registration**
- 14.00 – 14.15 **Welcome and introductions**
- 14.15 – 14.30 **Introduction to the WHO/EC monitoring project** (*Trudy Wijnhoven*)
- 14.30 – 15.00 **Overview of currently available dietary surveillance data in the European Region** (*Trudy Wijnhoven*)
- 15.00 – 15.30 **Coffee/tea break**
- 15.30 – 16.15 **European dietary databases**
- Energy and nutrient data in FAO food balance sheets (*Barbara Burlingame*)
 - DAFNE – household budget surveys (*Ada Naska*)
 - European food consumption database of the European Food Safety Agency (*Davide Arcella*)
- 16.15 – 17.00 **European dietary projects**
- European Nutrition and Health Report II (*Ibrahim Elmadfa*)
 - EFCOVAL (*Marga Ocké*)
 - IDAMES (*Heiner Boeing*)
- 17.00 – 19.00 **Parallel working group discussions – part 1**
- 20.00 **Dinner at Hellerup Parkhotel**

Wednesday, 29 April 2009

- 08.30 – 09.15 **Reporting back to the plenary**
- Rapporteurs of working groups
 - Plenary discussion
- 09.15 – 10.30 **Selected country experiences on national dietary intake and food consumption surveys**
- Denmark (*Sisse Fagt*)
 - Netherlands (*Marga Ocké*)
 - Poland (*Mirosław Jarosz*)
 - Portugal (*João Breda*)
 - United Kingdom (*Sheela Reddy*)
- 10.30 – 10.45 **Coffee/tea break**
- 10.45 – 11.15 **Methodology to estimate dietary adequacy in Europe**
(*Blanca Roman Viñas*)
- 11.15 – 11.45 **Dietary data variables and indicators to be included in the database** (*Trudy Wijnhoven*)
- 11.45 – 12.30 **Parallel working group discussions – part 2**
- 12.30 – 13.15 **Lunch**
- 13.15 – 14.15 **Parallel working group discussions – part 2, continued**
- 14.15 **Coffee/tea break**
- 14.15 – 15.00 **Reporting back to the plenary**
- Rapporteurs of working groups
 - Plenary discussion
- 15.00 – 15.30 **Conclusions and recommendations**
- 15.30 **Closure**

ANNEX 3. Briefing for working group 1a

Dietary data collection protocols and harmonization of a European food consumption database

Participants

Mr Davide Arcella, Professor Heiner Boeing, Dr Barbara Burlingame, Professor Ibrahim Elmadfa, Dr Ada Naska, Dr Marga Ocké and Ms Trudy Wijnhoven.

Objectives

- To discuss the implications of different dietary data collection protocols and existing data sources on the development of a harmonized European database.
- To recommend criteria for the inclusion of nationally representative food availability, food consumption and dietary intake surveys into a common European database.
- To recommend the next steps in establishing links between the different existing international or European data sets.

Facilitator's role:

To lead the discussion and prepare the presentation jointly with the rapporteur.

Rapporteur's role:

To take notes on the discussion, prepare the presentation and report back at the plenary session.

Participants are invited to discuss the following:

1. Other than those presented this afternoon, what are the current international sources that would provide data on:
 - household food purchases (household budgetary surveys)
 - household food availability
 - household food consumption
 - individual dietary intake?
- 2A. In general, what are the current strengths and limitations, either from international or national sources, of the available data on:
 - household food purchases
 - household food availability
 - household food consumption
 - individual dietary intake?

2B. How should we deal with these limitations?

3A. The different dietary methods currently applied by individual Member States, such as single 24-hour recall, multiple 24-hour recall, observed weighed method and food frequency methods, serve different purposes. Which of these or any other methods can be considered as useful for the collection of data on:

- household food consumption
- individual dietary intake?

3B. When another methodology has been applied than identified above for the two types of data, should these surveys be excluded from the integrated WHO European database?

3C. Which criteria should be applied when considering the inclusion of nationally representative dietary surveys in the common database, for instance dietary survey method, sampling frame (adults: population-based; children/adolescents: population- and school-based), minimum sample size, response rate, food coverage, etc.?

4. WHO would like to establish external links between the WHO European database and other existing international databases. What are the steps you would recommend WHO to take in linking with databases such as those maintained by the DAFNE project, EC, EFSA and FAO?

ANNEX 4. Briefing for working group 1b

Dietary data collection protocols and harmonization of European food consumption database

Participants

Ms Caroline Bollars, Dr João Breda, Ms Sisse Fagt, Professor Miroslaw Jarosz, Ms Lideke Middelbeek, Dr Sheela Reddy and Ms Blanca Roman Viñas.

Objectives

- To discuss the implications of different dietary data collection protocols and existing data sources on the development of a harmonized European database.
- To recommend criteria for the inclusion of nationally representative food availability, food consumption and dietary intake surveys into a common European database.
- To recommend the next steps in establishing links between the different existing international or European data sets.

Facilitator's role:

To lead the discussion and prepare the presentation jointly with the rapporteur.

Rapporteur's role:

To take notes on the discussion, prepare the presentation and report back at the plenary session.

Participants are invited to discuss the following questions and give both general and country-specific comments for each of the following questions:

1. Other than those presented this afternoon, what are the current international sources that would provide data on:
 - household food purchases (household budgetary surveys)
 - household food availability
 - household food consumption
 - individual dietary intake?
- 2A. What were the reasons for your country collecting nationally representative data on (if applicable):
 - household food purchases
 - household food availability
 - household food consumption
 - individual dietary intake?

- 2B. What dietary collection methods are used?
- 2C. If you have not yet been collecting household food consumption or individual dietary data among children, adolescents, adults or the elderly, would your country consider doing this in the future? If yes, when and how would this be done and what would be the content of these surveys? If not, what would be the barriers to doing so?
- 2D. If your country has applied a dietary methodology different than, for instance, the one proposed by the EFCOSUM project,¹ would you see any possibility of changing the national approach to a common European one? What would be the barriers and limitations to doing this?
3. Which criteria should be applied when considering the inclusion of nationally representative dietary surveys in the common database, for instance dietary survey method, sampling frame (adults: population-based; children/adolescents: population- and school-based), minimum sample size, response rate, food coverage, etc.?
4. What would be your recommendations to WHO for harmonizing the collection and analysis of data on household food consumption and individual dietary intake that would enable benchmarking and intercountry comparison?

¹ Two non-consecutive 24-hour recalls and a food list to assess the proportion non-users for infrequently consumed food.

ANNEX 5. Briefing for working group 2

Dietary data and indicators – dietary adequacy

Objectives

- To discuss a list of indicators recommended for inclusion in the database to compare food consumption and dietary intake patterns among all population groups across Europe.
- To review a methodology for the calculation of dietary adequacy in nationally representative populations.

Facilitator's role:

To lead the discussion and prepare the presentation jointly with the rapporteur.

Rapporteur's role:

To take notes on the discussion, prepare the presentation and report back at the plenary session.

Participants are invited to discuss the following:

1. The aim of the European common database will be to include indicators that would allow benchmarking for certain nutrition goals and to assess trends over time. What outcome indicators would you recommend for monitoring the nutrition situation and preventing obesity in the European Region? Please go through the list of indicators and assess whether they are desirable. Are there any others to add?
- 2A. The current database architecture contains various database variables for each dietary component: "household food availability/supply", "food consumption" and "dietary intake". Would you recommend deleting or including any variables for the sections on "identification" and "general info on survey"?
- 2B. Which food group classification would you recommend WHO to use?
- 2C. Would you recommend that WHO obtain the country's raw data sets on individual dietary intake to analyse the information for the defined indicators? Or would reporting on the results by the Member States using the same definition for a variable/indicator be sufficient?
- 2D. With regard to the individual intake of energy and macronutrients, would you recommend that WHO include all the listed variables? If not, which ones are irrelevant?

- 2E. With regard to the individual intake of micronutrients, would you recommend that WHO include all the listed variables? If not, which ones are irrelevant?
- 3A. Can both household (as provided by household budget surveys and food balance sheets) and individual data be used for the assessment of dietary adequacy in terms of macronutrients and micronutrients?
- 3B. What would be the recommended method to be used for the estimating the adequacy level of the diet in the European Region?

Joint WHO/EC DG SANCO project: Monitoring progress on improving nutrition and physical activity and preventing obesity in the European Union (EU), 2008-2010

Report series

No. Title

- 1 Report of the 1st Meeting of National Information Focal Points, Brussels, Belgium, 23–24 September 2008
- 2 Report of the 2nd Meeting of National Information Focal Points, Copenhagen, Denmark, 23–24 June 2009
- 3 Report of the Meeting on community initiatives to improve nutrition and physical activity, Berlin, Germany, 21–22 February 2008
- 4 Report of the Workshop on integration of data on physical activity patterns, Zurich, Switzerland, 25–26 February 2009
- 5 Report of the Workshop on integration of data on household food availability and individual dietary intakes, Copenhagen, Denmark, 28–29 April 2009
- 6 Review of physical activity surveillance data sources in European Union Member States
- 7 Review of dietary intake surveillance data sources in European Union Member States
- 8 Review of obesity surveillance data sources in European Union Member States
- 9 Review of food and nutrition policy development and legislation in European Union Member States
- 10 Review of physical activity promotion policy development and legislation in European Union Member States
- 11 Overview of public-private partnerships aiming to prevent obesity in European Union Member States
- 12 Overview of implementation of statutory and self-regulatory codes in the area of marketing foods and beverages to children in European Union Member States

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