

SAFEFOODNET: AN ONGOING PROJECT ON CHEMICAL FOOD SAFETY: NETWORK FOR ENLARGING EUROPE

MARIANNA ELIA*, ANGELO MORETTO AND SARA VISENTIN

*Department of Environmental Medicine and Public Health
University of Padua
2 Via Giustiniani, 35128 Padova, Italy*

*To whom correspondence should be addressed: marianna.elia@tin.it

Abstract. Since the credibility of the information on food safety is very important, the methods how to disseminate verified data on chemical food contaminants to whom it may concern is the SAFEFOODNET project's principal objective. The Safefoodnet research project connects independent research institutions, universities, government agencies and ministries from across the EU. The objective is to harmonize and integrate the infrastructure and activities of the NMS and ACC in the field of chemical food safety with those of Old Member States and to provide the recently established European Food Safety Authority with an expert network in the field of chemical food safety. The structure of the general work plan has been broken down into 5 work packages (WP) to respond in a practical way to the SAFEFOODNET proposed objectives.

Keywords: contaminant; diet; food; safety; network; analytical

1. Introduction

To the surprise of many people living in modern, technologically advanced societies, food has come to be a problem. Many experts would argue against this notion, but public opinion surveys and other sociological researches clearly demonstrate that people are increasingly confused when trying to organise their food consumption behaviour, because they no longer trust the labels on food products. And what makes the problem worse is that even experts often fail to consent on the notion of safe food. In short, people in contemporary societies often face difficulties in finding

reliable and transparent answers about food safety. It is therefore a quite urgent research task to find out what information on safe food is available, how and at what level the information is collected, how reliable the information is, who is responsible for gathering and storing the information and, last but not least, who should provide this information to the public and how.

It is increasingly obvious that large section of the public no longer perceive the existing system of guaranteeing safe food as consistent. The system's credibility is dropping despite the claims by experts that much of the suspicion is not rationally based. The question on how to restore the credibility of the food safety process is therefore of key significance to all the actors, from "farm to fork", and since food production is essential to the quality of life, it is a central issue for societies in general.

The SAFEFoodNET research project connects independent research institutions, universities, government agencies, and ministries from across the EU. The objective is to provide tools to help harmonise and integrate the infrastructures and activities of the New Member Countries and Associated Candidate Countries in the field of chemical food safety with those of Old Member States and to provide the recently established European Food Safety Authority with a network of experts in the field of chemical food safety.

The first step to achieve this objective is to have a picture of the systems of the chemical food safety in the participating countries: Bulgaria, Cyprus, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Rumania, Slovakia, Slovenia and Turkey. On the basis of this information, recommendations how to improve chemical food safety management in the participating countries will be prepared. This will be achieved by the activities planned in two project working groups: one aimed at gathering knowledge on sources of dietary data in individual countries and another focussing on strategies/approaches and capabilities of monitoring food chemical contamination. Such information will be organized in "country profiles" where strengths, weaknesses and training needs will be described and discussed, and further steps forward identified. In addition, a network of scientists, researchers, and institutions able to address the several different aspects related the chemical contaminants in food will be available to all stakeholders.

Since the credibility of the information on food safety is very important, the methods how to disseminate verified data on chemical food contaminants to whom it may concern is the project's principal objective. The communication strategy should consider the existing formal institutional framework of chemical food safety systems, but also many

other socio-cultural characteristics of the food production in individual countries.

One of the main objectives is to establish a transparent information system, which will enable everybody who is concerned about chemical food safety to obtain reliable information and data on the regulation and control of the food in their daily diet. This means that expert knowledge and expertise should reach the general public, i.e. all interested consumers. To these ends, besides the project web-site (www.safefoodnet.net), several local, regional and European workshops will be convened. These will be organized in 2006 in different European locations with the participation of local authorities and relevant stakeholders in order to discuss the results of the project, investigate areas of cooperation, and propose steps forward a better assessment and management of food safety.

2. Participants in the Project and General Overview

SAFEFOODNET consortium has 20 partners from 17 countries, which include 4 MS (Italy, Denmark, Germany and Belgium), 10 NMS (Hungary, Czech Republic, Slovakia, Poland, Latvia, Lithuania, Estonia, Slovenia, Malta, Cyprus), and 3 ACC (Bulgaria, Romania, Turkey).

Objectives of the project are to gather information that will help to harmonize and integrate Associated Candidate Countries (ACC) and New Member States (NMS) infrastructures and activities in the field of chemical food safety with those of Member States (MS) and to provide the European Food Safety Authority (EFSA) with a network of scientists, researchers, institutions able to address the different aspects of the chemical contaminants in food. In addition, through participation in this project, scientists and research groups will have the opportunity to join mainstream research activities, such as the ones developed in “Food Chemical Safety in Europe” (FOSIE), the NoE “Chemicals as contaminants in the food chain: an NoE for research, risk assessment and education.” (CASCADE), the project “Harmonized Environmental Indicators for Pesticide Risk” (HAIR), or to promote new projects in the field of food safety.

Initially, ACC and NMS profiles will be developed with respect to: the definition of analytical capabilities in terms of both infrastructure and knowledge; the identification of the possibilities of dietary assessment for the establishment of a “standard diet” (according for instance to the indications of GEMS/FOOD of WHO) and consumption patterns.

On the basis of country profiles, strengths, weaknesses and training needs will be identified. Consequently, workshops will be organized with local authorities and relevant stakeholders to discuss results of the project, and investigate areas of cooperation.

TABLE 1. List of participants of the project.

Partic. Role	Partic. No.	Participant name	Participant short name	Country
CO	1	International Centre for Pesticides and Health Risk Prevention	ICPS	Italy
CR	2	Dept. of Environmental Medicine and Public Health University of Padova	UNIPD	Italy
CR	3	Istituto Mario Negri	IRFMN	Italy
CR	4	Danish Institute for Food and Veterinary Research	DFVF	Denmark
CR	5	Institute and Outpatient Clinic of Occupational, Social and Environmental Medicine	UNE NRNB	Germany
CR	6	National Centre of Hygiene, Medical Ecology and Nutrition	NCHMEN	Bulgaria
CR	7	Godollo Agribusiness Centre	GAC PUC	Hungary
CR	8	Institute of Agricultural and Food Information Slezska	IAFI	Czech Republic
CR	9	Iuliu Moldovan Institute of Public Health, Cluj-Napoca	IPHCN	Romania
CR	10	Food Research Institute Bratislava	FRI	Slovakia
CR	11	National Food and Nutrition Institute	IZZ	Poland
CR	12	Lavtia University of Agriculture	LUA	Latvia
CR	13	Ministry of Agriculture and Rural Affairs, Ankara Province Control Laboratory Directorate	APCL	Turkey
CR	14	Estonian Environmental research Centre	EERC	Estonia
CR	15	Research and Consultancy Institute Ltd	RCI	Cyprus
CR	16	Agricultural Research Institute	ARI	Cyprus
CR	17	Kaunas University of Technology	KTU	Lithuania
CR	18	University of Ljubljana, Faculty of Social Science	FSS	Slovenia
CR	19	Food Safety Commission	MOH	Malta
CR	20	International Life Science Institute	ILSI Europe	Belgium

*CO = Coordinator

CR = Contractor

A web site will be developed with the information on contaminants in food in the different countries, methods to analyze them, regulations. The network, the project reports and the website will serve EFSA and other interested parties implementing chemical food safety strategies (e.g.: WHO,

especially in the GEMS/FOOD program, and, possibly, the International Program on Chemical Safety (IPCS) initiatives related to chemical food safety).

At the end of the project, ACC and NMS will be aware of their capabilities and needs, will have their own network of parties involved (or to be involved, if or when needed) with chemical food safety issues/problems. In addition, within the project, National Co-ordinators will be identified for a proper and efficient co-operation with EFSA, with the aim of a better integration and harmonisation of activities relating to chemical food safety in the new enlarged 25-member European Union. This network of National Co-ordinators and experts will be available on a website and will be instrumental in helping interested parties in joining mainstream research Networks of Excellence and other research projects.

3. Work Planning

SAFEFOODNET will last two years. This time-window is necessary to assemble thorough country profiles and to strengthen project's network and dissemination activities. In fact, beside the establishment of the NMS and ACC network of experts, SAFEFOODNET aims at developing a set of long-term activities, to be continued after the end of the project and hopefully expanded to other countries. On the other hand, a longer duration would probably undermine the prompt alignment of the project's results to EFSA and Community needs.

Based on the above-mentioned considerations, it is evident that the final goal of the project will be the harmonization of the approach to food safety among the enlarging European Union. A second significant result will be the creation of a European food Safety network, which will continue its activities after the end of the two-year period of the project. The network will work in close relation with the European Food safety Authority (EFSA) and will disseminate information through the website which will be created and implemented in the frame of SAFEFOODNET activities.

The project can be divided into two phases: in the first phase, selected information will be collected to define the state of the art in NMS and ACC either on availability and reliability of existing sources on food consumption patterns or on strategies for monitoring food contaminants, laboratory infrastructure, analytical procedures and available data.

Data collected will be evaluated and elaborated; in this phase, SAFEFOODNET will highlight strengths and needs in NMS and ACC in order to reach common standard with EU countries and plan future activities.

The second phase of the project will be mainly addressed at dissemination and training. To this aim, a website will be created either to exchange information and documentation among partners, or to support dissemination activities. SAFEFOODNET activities will culminate in the last six months of the project, when the project's results will be disseminated, through the organization of seminars, to national authorities and relevant stakeholders, either at the local or at the international level.

To reach relatively homogeneous groups of countries, SAFEFOODNET seminars will be addressed to four well-defined areas, that is Baltic Countries, Central European Countries, Southern European Countries and islands (Malta and Cyprus).

The structure of the general work plan has been broken down into **5 work packages (WP)** to respond in a practical way to the SAFEFOODNET proposed objectives:

WP1: Management

WP2: Diet

WP3: Chemical residues

WP4: Web-site

WP5: Dissemination and exploitation

The network includes 4 MS, 10 NMS and 3 ACC. Activities carried out in 17 countries need a timely and firm coordination. Therefore, the management of SAFEFOODNET is assigned to a specific work package (**WP1**). WP1 addresses the co-ordination of administrative and scientific areas of the project. It will assure a well-timed delivery of internal and official documents. WP1 has the task to create and maintain the administrative and technical archive of accounts, contractual record, and progress reports, intermediate and final deliverables. Moreover, the management will include: organisation of project meetings; communication with European Commission, circulation of documents to partners.

WP2 and **WP3** concern the collection of information on available data on diets and analytical methods for detection of food chemical contaminants.

Experts in WP2 and in WP3 prepared standardized forms (questionnaires) for the collection of relevant information at national level on available diets and residues from local and international monitoring programs. Such questionnaires are to be completed on-line by the coordinator or by the institution addressed by the co-ordinator before the end of the first reporting period. Instructions on how to complete the questionnaire are on the web-site (see below) and have been communicated to the Commission Project Officer.

Data – collection will be organized by the area coordinators and results discussed within experts of WP2 and WP3. The latter will provide a

homogeneous description of available data together with the judgment about the necessity of a dedicated database and/or the possibility to append available data to existing databases, if not included yet.

Results concerning national diets may influence adequate sampling strategies in planning national monitoring program. The Scientific Manager and members of the Scientific Management team will assure adequate integration between WP2 and WP3 at every stage of the project.

WP2 and WP3 will also describe current Community and National *acquis* and/or current European and International scientific activities in the area. Actually, information on chemical residues in food involves several aspects, such as pre-analytical and analytical procedures, laboratory accreditation, etc.

Based on this information country profiles will be developed and will include suggestions for NMS and ACC alignment to Community *acquis* (body of common rights and obligations which bind all the Member States together within the European Union) and country-specific needs in food chemical safety.

A specific work package (**WP4**) has been assigned to the creation of the web-site because the web-site is a key system to work and communicate with partners and a valid instrument for a broad and timely passive dissemination of activities. Therefore, WP4 expertise will be required to address technicalities related to scientific issues, including judgement about data structure and database organisation. Moreover, experts in WP4 advised on the best way for circulating and using forms for data collection. WP4 maintains the electronic NMS and ACC network, and support dissemination outside the project. The web-site offers a restricted area for project's participants for internal communication and circulation of documents.

WP5 participants will focus on dissemination and exploitation activities of the project. For the sake of practicality, the activities in this work package will be mainly conducted on a regional basis: four areas have been identified (Table 2), having each a co-ordinator, who manages its national co-ordinators. WP5 will focus more on issues related to dissemination and exploitation strategies within and outside the consortium, rather than to scientific topics as such. WP5 will investigate the possibility to join existing mainstream activities especially in NMS and ACC and Europe with a view to implementing dissemination and exploitation activities. Since the start of the project, WP5 will work in close co-operation with area and national co-ordinators to discuss local activities. Dissemination of results will include: publications, participation in international conferences; organisation of workshops.

WP4 and **WP5** will consolidate the capability of this network to join the international community of scientists with particular regard to the

mainstream ongoing European projects. NMS and ACC profiles, dissemination of the project's results and the established NMS and ACC network will serve EFSA and the European Commission to plan strategies for improving dietary risk analysis and management in the enlarging Europe. Moreover, the project's outcomes will help relevant national authorities to plan, follow-up and revise national monitoring programmes in the field of food chemical safety.

TABLE 2. Regional and final workshops.

	Month N° from the start of the project	N° Days	Country hosting the event	n. Participants
Workshop in Baltic countries	18	2	Latvia	18 (*)
Workshop in Central Countries	19	2	Slovak Republic	20 (*)
Workshop in Southern countries	20	2	Bulgaria	17 (*)
Workshop in Islands	21	2	Malta	12 (*)
Final Workshop	24	1	Brussels	27

(*) Plus local participants.

4. Potential Impact of SAFEFOODNET Activities on Food Safety Issues in EU

The primary goal of SAFEFOODNET is to promote ACC and NMS capabilities of addressing all aspects relating to chemical food safety, and facilitate the interaction of interested local parties with mainstream research activities, with EFSA and other international and supranational bodies or activities.

4.1. STRATEGIC IMPACT

The impact of this project will be at both National and European level. At the National level, National co-ordinators and networks of scientists/experts in chemical food safety will be identified (WP2 and WP3). Individual countries will be characterised in terms of existing resources, infrastructures, organisational features, data sources, points of strength and weakness, with a view of contributing to improved understanding of gaps

and needs, and to highlight actions needed to harmonise processes in ACC and NMS with those of Member States. At the European level, the results of SAFEFOODNET will mainly contribute to a better integration of ACC and NMS institutions involved with food safety with ongoing activities and bodies of the European Union, and to the development of durable links to join mainstream European research in related scientific fields. This project will ultimately lead to societal benefits in terms of consumers' health.

Project components' chart

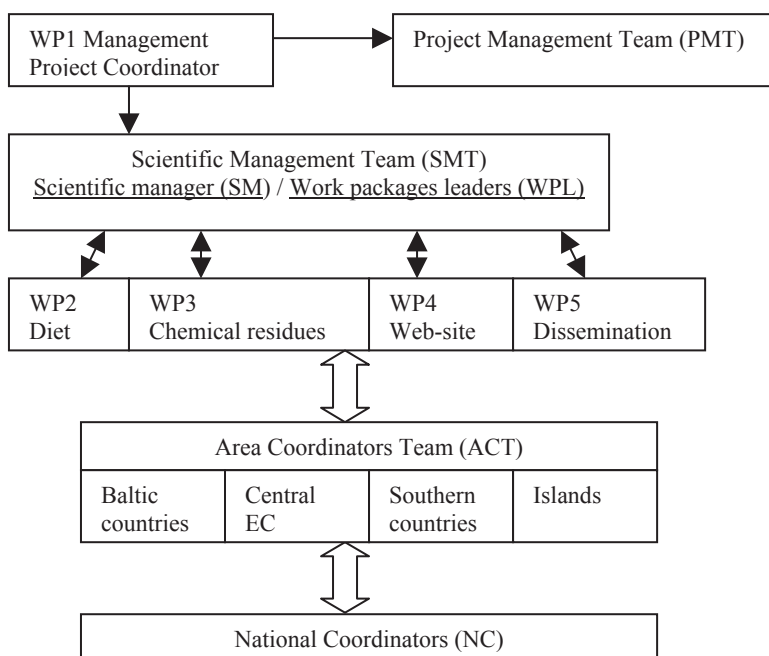


FIGURE 1. Graphical presentation of work packages.

4.2. INTEGRATION TOWARDS THE ENLARGING EU

As the European Union enlarges, it is essential that the ACC and NMS have implemented food safety control systems equivalent to those in place within the Community. This represents a significant challenge to those countries, in terms of:

- adopting the necessary legislation and guidance, and harmonising it with the current EU *acquis*,
- establishing relevant institutions to implement and enforce this legislation,

- upgrading their chemical food safety information and monitoring systems,
- developing a network of scientists, researchers, institutions that will be able to address the several aspects of food chemical contamination and to build the necessary connections with EFSA.

SAFEFOODNET will contribute to address this challenge, mainly by facilitating networking (at both country, regional, and European level) of regulatory bodies, institutions and experts involved with chemical food safety. By the end of the project, the establishment of these networks will ensure durable connections, beyond participation in the support action. SAFEFOODNET will represent a step toward a full integration and cooperation with Member States, a fostered coordination of ACC and NMS policies by devising and implementing country networks, joint measures and systems for exchanging information and experience at European level.

4.3. PREPAREDNESS TO FOOD SAFETY EMERGENCIES

Another relevant point is the ability to react to chemical food safety emergencies (e.g.: outbreaks of chemical food contamination). EFSA has to play a key role in supporting a rapid and effective EU response. In order to do this, EFSA should be able to collect, analyze and distribute relevant information to Member States and to the Commission for an improved planning and handling of crisis situations at the European level. It is clearly evident that such a task can only be accomplished if a proper system is set up in all Member States to collect, analyze and communicate relevant information, as well as to act in response to the indication provided by EFSA. These indications might include rapid responses as well as follow-ups, monitoring and epidemiological surveillance on a local or more general basis. Only if all involved bodies are prepared to the task, will networking be effective. One of the outcomes of SAFEFOODNET will be the identification of problems and needs of ACC and NMS in this respect. Identification of needs is the first step towards the development of a strategy to address specific problems in individual countries.