



## **BTSF – RISK ASSESSMENT IN THE FOOD CHAIN**

### **Course 2 - Microbiological risk assessment**

#### **Fact-sheet**

The harmonisation of risk assessment methodologies has been identified as a priority area of the Strategy for Cooperation and Networking between the EU Member States and EFSA, since harmonisation would help in the development of high-quality scientific opinions that are recognised as truly authoritative. 2008 EFSA Working Group Report on "Fostering harmonised risk assessment approaches in Member States" pointed out how countries organised risk assessment differently at the time. Many of the procedures in the countries appeared to be in line, or at least not in conflict, with procedural aspects within EFSA, however highlighting discrepancies in procedural aspects of risk assessment, mostly regarding declarations of interest, public register of risk assessment requests, procedures concerning the selection of experts, the interaction with stakeholders and between risk assessors and risk managers during the risk assessment process.

The present training programme will address issues listed above through the adoption of a practical approach, aimed to increase knowledge of Competent Authorities and scientists from public institutions and national authorities involved in food chain risk assessment in order to increase the level of expertise and harmonisation.

#### **OBJECTIVES**

The main goal of the training programme is to disseminate best practices for the implementation of principles and methods of food chain risk assessment, improving knowledge of this complex area of work and ensuring consistent and high implementation standards across the European Union.

Specific objectives are:

- Promoting reduction of discrepancies in procedural aspects of risk assessment;
- Contributing to the harmonisation of risk assessment approaches;
- Contributing to increasing transparency and building trust amongst Member States' authorities in each other's risk assessments;
- Disseminating best practices for risk management and communication;
- Promoting exchange of experience in order to increase the level of expertise and harmonisation of approaches.

#### **TOPICS**

The following topics will be covered during the training sessions, both from a theoretical and practical standpoint.

1. Introduction to microbiological risk assessment

2. Hazard Identification

- Statement of problem and scope of risk assessment;
- Food intoxication versus food infection;
- Pathogen-product pathway;
- Data and information on microbial agent, food and process, consumer practice;
- Concept of Qualified Presumption of Safety (QPS);
- Bacteria, molds, algae, mycotoxins.

3. Hazard Characterization

- The disease triangle (pathogen virulence-host susceptibility-food matrix);
- Sources of dose-response data (human volunteer feeding studies, epidemiological data, animal studies, in vitro studies);

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- Modelling dose-response relationship (types of models, selection of dose-response model);
- Statistical inference in dose-response modelling and applicability of results to new (even unknown) conditions, different from the reference data set.

**4. Exposure Assessment**

- Describing and modelling the production-to-consumption chain;
- Describe the basic processes, such as microbial processes (such as growth and inactivation of microorganisms) and food handling processes (such as cross-contamination), statistical inference and applicability of results to new (even unknown) conditions, different from the reference data set;
- Qualitative and qualitative (deterministic vs. stochastic) models, simple vs. structured models, limitations due to data;
- Uncertainty and variability in exposure assessment;
- Sources of data and models, their generality vs. context dependency.

**5. Risk Characterization**

- Qualitative, semi-quantitative, quantitative outputs;
- Distinguishing variability and uncertainty;
- Sensitivity analysis and "what if" scenarios;
- Model criticism: model fit, model comparison and model assumptions;
- Applicability and generality of results, limitations.

6. Risk management aspects specifically related to microbiological risk assessment and other related issues

7. Short introduction to Risk Communication.

Besides, group works, exercises and case studies will be included. A test of knowledge will be carried out by all participants at the beginning and at the end of each workshop.

**FACTS AND FIGURES**

During the second phase, 2 five-day training sessions will be organised and implemented, and approximately 20 people will attend each training session.

**TRAINING LOCATIONS AND CALENDAR**

Training sessions will be implemented according to the following calendar.

Year	Training sessions	Locations	Proposed dates
2023	TS 1	Warsaw, Poland	09-13 October 2023
2024	TS 2	Rome, Italy	17-21 June 2024

**PARTICIPANT SELECTION CRITERIA**

The training will be addressed to official from Competent Authorities and scientists from public institutions and national authorities involved in food chain risk assessment (with a focus on microbiological risk assessment). They must have worked in functional areas of food chain risk assessment with a minimum of 3 years of professional experience or have had experience of setting up and implementation of food chain risk assessment in a Competent Authority (covering areas of food/ feed safety, animal health or animal welfare).

**PROJECT MANAGEMENT AND TUTORS' TEAM**

The project will be implemented by the company OPERA srl in consortium with NSF Euro Consultants SA. The project's staff includes Mr. Claudio Bompard (CEO of OPERA) as Project Manager, Mr. Jørgen Schlundt as training coordinator, Mr. Luigi Pisanello and Ms. Guendalina Mamma as Event Managers and a pool of 4 highly qualified tutors from 4 MS: Ms. Andrea Gross-Bošković, Ms. Anja Buschulte, Ms. Géraldine Boué, Mr. Patrick Butaye.

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