INVITATION LETTER

Training Courses on principles and methods of food safety risk assessment

THIS TRAINING IS IMPLEMENTED BY THE TRAINSAFERFOOD CONSORTIUM.

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Introduction

Dear National Contact Point, As part of the Better Training for Safer Food initiative, the Consumers, Health and Food Executive Agency is organizing and implementing a 24 month training programme of activities on principles and methods of food safety risk assessment mainly to be held for officials from EU Member States (MS), and Candidate Countries (CC) under the 'Better Training for Safer Food' Initiative.

The overall objective of the course is to train experts with a scientific background and an interest in food and/or feed safety risk assessment in order to expand their theoretical knowledge and practical skills on principles and methods of risk assessment.

The EFSA Advisory Forum has, on several occasions, recommended that EFSA should develop a training program that can increase the understanding of procedures of risk assessment and contribute to an increased harmonization of risk assessments.

The training courses will primarily train staff of competent authorities involved in food safety activities at national level in MS and keep them up-to-date with all relevant aspects of EU legislation in order to facilitate a more uniform and harmonized practice for risk assessment.

The overall objective of the 8 courses is to train professionals with a scientific background and an interest in food-safety risk assessment in the principles, concepts and methods of risk analysis and to provide them with theoretical knowledge and practical experience in developing microbiological risk assessment models. The practical experience will be gained through the use of real-life case studies (e.g. from published EFSA opinions or national studies) that the participants will work on throughout the course and in parallel with new topics being added to their theoretical knowledge base.

The complexity level of the courses will be adapted to the participants' experience in risk assessment, which will be accessed beforehand.

1. Selection criteria

The trainees have the required **technical** and **linguistic knowledge level**.
It should be clear from their background and professional skills that the participation in the training activity will be a key element for the improvement of their daily work.
Participants shall represent staff of competent authorities of the Member States involved in official control activities and in general experts **involved in food safety risk assessment.**
It should be clear from their background and professional skills that the participation in the training activity will be a key element for the improvement of their daily work.
The participants will be requested to commit themselves to **disseminate the knowledge received** via different dissemination methods i.e. informing colleagues about the information received at the training, distributing (photocopying or sending via electronic way) the training materials among their colleagues, preparing informative articles in the professional national or, if possible, in international journals, preparing presentations based on the training materials for the obligatory national Competent authorities' professional trainings or other disseminating methods which could be appropriate to share the information received via the BTSF trainings.

2. Training sites

7 courses will be held in Lisbon (Portugal), 5 courses will be held in Berlin (Germany) and 4 courses will be held in Tallinn (Estonia).

2.1 Tallinn

In Tallinn we have selected ***Clarion Hotel Euroopa*** for the accommodation, meals and training venue. Clarion Hotel Europa is situated in immediate proximity of the Port of Tallinn, 1km from the old town. It is a top class business hotel that is characterized by its international ambiance. It is closely associated with art, music, design and culinary art.

The hotel offers multifunctional meeting rooms of different sizes, suitable for conferences and seminars. The conference center is equipped with modern video, sound and presentation technology and also free Wi-Fi.

Participants will be assisted by GIZ event managers but also by the highly trained and experienced staff during the entire event.


2.2 Lisbon

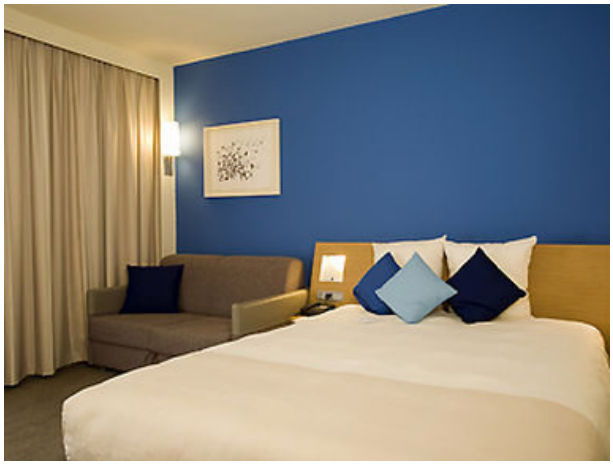
In Lisbon we have selected ***Novotel Lisbon*** for the for the accommodation, meals and training venue.

The hotel is located in the city of Lisbon, just 10 minutes' walk from Lisbon's historical city center.

Totally renovated, it is ideal for business meetings, offering 10 spacious meeting rooms. The Novotel Lisbon hotel also has a swimming pool, fitness center, restaurant, bar and garage.

All rooms are modern, spacious and equipped with: shower, WC, hairdryer, telephone, cable TV, mini bar, Wi-Fi connection.

The conference room selected is a first-class, fully air-conditioned event room, featuring modern conference technology, including projector, laptop (connected to Internet), flipchart, whiteboard, laser pointer and free WLAN for the participants.



2.3 Berlin

In Berlin we have selected the **NH Alexanderplatz.**

It is located in the city center and participants have easy access to all of the sights and attractions of Berlin. Alexanderplatz hosts Berlin's famous television tower and the shopping of Alexa. And nearby, the beautiful urban oasis Volkspark Friedrichshain with green paths tempts joggers and sightseers.

The conference facilities at the NH Berlin Alexanderplatz provide a sophisticated space for this type of event. For refreshments, lunches and dinners, there is a very nice and airy restaurant with its elegant summer terrace. Rooms are modern and fully equipped.

The NH Berlin Alexanderplatz hotel has also a nice wellness area including a sauna and steam bath.

2.4 Rome

In Rome we have selected the **IBIS** in E.U.R. district for the accommodation and dinners.

The Hotel Opening was on July 2010, with the project of the prestigious international architecture GPAIA study of Toronto. The E.U.R. district is a very nice and historical district of Rome that offers a very interesting structure with its play of lines, colors and shapes. Several museums and attractions are also present.

The interiors are modern and stylish, made with steel and wood.
It is an ideal hotel for business travelers and attendees of trade expositions and congresses

All rooms extremely colorful and equipped with**:** shower, WC, hairdryer, telephone, cable TV, mini bar, Wifi.

Hotel OP has an on-site restaurant serving national specialities and international dishes.

3. Timing

Session Reference	Dates	Location	Dateline for applications
Risk Assessment			
Session 1 **Chemical - Risk Assessment**	10-14 Nov 2014	Lisbon	30 Sept 2014
Session 2 **Pest Risk Assessment**	12-16 Jan 2015	Lisbon	03 Oct 2014
Session 3 **Nutrition Risk Assessment**	02-06 Feb 2015	Lisbon	03 Oct 2014
Session 4 **GMO Risk Assessment**	23-27 Feb 2015	Lisbon	15 Oct 2014
Session 5 **MC - Risk Assessment**	02-06 Mar 2015	Berlin	15 Oct 2014
Session 6 **Environmental Risk Assessment**	16-20 Mar 2015	Rome	15 Oct 2014

Session 7 **Animal Health Risk Assessment**	20-24 Apr 2015	Berlin	15 Nov 2014

Session 8 **MC - Risk Assessment**	04-08 May 2015	Tallinn	15 Nov 2014
Session 9 **Animal Welfare Risk Assessment**	18-22 May 2015	Tallinn	16 Jan 2015
Session 10 **Pest Risk Assessment**	15-19 Jun 2015	Tallinn	16 Jan 2015
Session 11 **Chemical - Risk Assessment**	29 Jun – 03 Jul	Berlin	30 Jan 2015
Session 12 **Nutrition Risk Assessment**	14 – 18 Sep 2015	Berlin	07 March 2015
Session 13 **GMO Risk Assessment**	05-09 Oct 2015	Tallinn	07 March 2015
Session 14 **Animal Walfare Risk Assessment**	11-15 Jan 2016	Lisbon	04 May 2015

Session 15 **Animal Health Risk Assessment**	08-12 Feb 2016	Lisbon	04 May 2015
Session 16 **Environmental Risk Assessment**	22-26 Feb 2016	Tallinn	04 May 2015

4. Invitation of your Country

The Chafea wishes to invite participants from your country to attend sessions as indicated in the table received in the **Annex – quota**.

However, **do not hesitate to send us additional applications**, which would be placed on a reserve list for each session. Should there be any availability, we would inform the National Contact Point at least three weeks before the training session.

As much as possible, do not hesitate to send us registration forms before the indicated deadline.

The earlier participants are registered, the easier it is then to carry out the organisation of the session

5. Learning objectives and agendas

Training Course 1: Microbiological risk assessment

The training course will cover the three components of risk analysis – risk assessment, risk management and risk communication – but will give particular focus to risk assessment under the context of microbial food safety. The aim is to introduce the participants to the concept of quantitative microbiological risk assessment as applied in national and international food safety. Participants will learn how to perform a structured risk assessment in alignment with the food safety question they have to address.

Efforts will be put on stressing the benefits and strengths of quantitative modelling, taking into account the uncertainty in our knowledge and the variability in the key parameters applied in a risk assessment mode (e.g. prevalence and number of pathogens present in the food in question).

Based on this, the participants should be able to perform robust interpretations of risk estimates from risk assessment models.

At the end of the course, participants will:

- Be familiar with the concepts of risk analysis i.e. risk assessment, risk management and risk communication;
- Be familiar with the legal framework and the role of international regulatory agencies in food-safety risk assessment;

- Understand and be able to describe the four steps of food-safety risk assessment i.e. hazard identification, hazard characterization, exposure assessment and risk characterization;
- Know the key differences between risk assessment approaches and risk terminology used in the various areas of food-safety risk assessment (e.g. chemical vs. microbial risk assessment)

- Be able to identify food safety problems and frame appropriate risk questions;
- Be able to construct exposure pathways;
- Be able to identify and interpret the data typically required in microbiological risk assessment;
- Be able to describe the types of models used in risk assessment (e.g. farm-to-consumption and process models), their utility, data requirements and differences between models;
- Be able to develop qualitative and (simple) quantitative risk assessment models (deterministic and stochastic) and construct different scenario analyses;
- Be able to apply relevant features in the most common software used in quantitative microbial risk assessments (primarily @RISK);
- Be able to interpret risk estimates and run different scenario analyses, taking into account variability and uncertainty;
- Be able to assess the model fit and perform sensitivity analyses;
- Have a basic understanding of the importance of appropriate communication of risk assessment results and risk management decisions.

Training course 2: Chemical risk assessment in food

The training course will cover the three components of risk analysis – risk assessment, risk management and risk communication – but will give particular focus to risk assessment in the context of chemical food safety. The aim is to introduce the participants to the concept of chemical risk assessment as applied in national and international food safety.

Participants will learn how to perform a structured risk assessment in accordance with the food safety question they have to address in the case study. Efforts will focus on the four steps of chemical risk assessment (hazard identification, hazard characterization, exposure assessment and risk characterization in chemical risk assessment).

The participants will be introduced to the assessment of the uncertainty and variability in data used in risk assessment. Based on this, the participants should be able to perform interpretations of risk assessment outputs.

<u>At the end of the course, participants will be able to:</u>

- explain the concepts of risk analysis i.e. risk assessment, risk management and risk communication;
- identify and summarise the legal framework and the role of international regulatory agencies in food-safety risk assessment;
- apply the elements 1) hazard identification, 2) hazard characterization, 3) exposure assessment and 4) risk characterization in chemical risk assessment and in relation to the case work;
- explain advantages and disadvantages of different toxicological test systems;
- describe the concept of ADME (absorption, distribution, metabolism and excretion);
- identify food safety problems and frame appropriate risk questions;
- identify and interpret the toxicological data, occurrence data and consumption data;
- apply the appropriate uncertainty factors required in chemical risk assessment;
- discuss and perform chemical risk assessment issues;

Training course 3: Pest risk assessment

The training course will cover the three components of risk analysis – risk assessment, risk management and risk communication – but will give particular focus to pest risk assessment. The aim is to introduce the participants to the concept of risk assessment as applied in national and in EFSA and other international food safety organizations.

Participants will learn how a structured risk assessment is performed. The focus in this particular course will be on risk assessment of organisms posing a risk to plant health. These include both plant pests which threaten crop production and species which threaten biodiversity. Efforts will be put on stressing the benefits and strengths of different models, taking into account the uncertainty in our knowledge and the variability in the key parameters applied in a risk assessment mode. Based on this, the participants should be able to better understand and interpret risk estimates from different risk assessment models.

<u>At the end of the course, participants will:</u>

- Be familiar with the general concepts of risk analysis i.e. risk assessment, risk management and risk communication;
- Understand and be able to describe the four steps of food-safety risk assessment i.e. hazard identification, hazard characterisation, exposure assessment and risk characterisation;
- Know the key differences between risk assessment approaches and risk terminology used in the various areas of food-safety risk assessment (e.g. chemical vs. microbial risk assessment);
- Have confidence in order that they are able to conduct pest risk analyses themselves.
- Have an understanding of the pest risk analysis (PRA) process; its international context and the roles of various international bodies such as the
- EFSA, IPPC, the WTO (re: WTO-SPS Agreement) and the European Commission.
- Understand what is required in each of the various detailed stages of a PRA, for example, what is needed for initiation, pest introduction, assessing impact, data requirement, risk management options etc.
- Learn how PRAs are used in practice and what the consequences of PRA can be.

- Have the opportunity to draft and develop a PRA during practical activity sessions set out in the timetable.
- Have increased knowledge about assessment of introduction and spread of organisms harmful to plants and to plant products

- Be able to identify plant health problems and frame appropriate risk questions;
- Be able to identify and interpret the data typically required in pest risk assessment;
- Be able to interpret risk estimates and run different scenario analyses, taking into account variability, sensitivity and uncertainty;

Training course 4: Risk assessment in nutrition

The objective of the first session is to introduce participants to the risk analysis concept and risk assessment frameworks. The goals and components of each step will be presented, and concepts will be illustrated with real life examples and risk questions. The role of international regulatory agencies and international risk assessment guidelines will be presented and discussed.

In the hazard identification session, the participants will be introduced to the process of hazard and risk identification, and the role of risk managers in this process will be covered. Examples of food safety problems and applied risk assessments, as well as their results and potential health impact, will be presented.

The course will end with group presentations of the case studies and developed risk assessments including discussions on risk management options and relevant risk communication issues.

The theoretical component of the course will cover the following technical topics:

- The risk assessment model in nutrition
- Risk identification and risk characterization
- Risk assessment of essential and non-essential nutrients
- Risk assessment of macro- and micronutrients
- Dietary intake estimations and assessments
- Food datasheets and household budget surveys
- Translation of dietary exposure data into nutrient intakes
- Tools for risk assessment and characterization
- Systematic literature search in risk assessment
- Risk-benefit assessment
- Tools for modeling different exposures into health effects
- Risk assessment of novel food
- Food safety risk analysis in the field of nutrition in practice
- Nutrition risk management and risk communication

At the end of the course, participants will:

- Be familiar with the concepts of risk analysis i.e. risk assessment, risk management and risk communication;
- Be familiar with the legal framework and the role of international regulatory agencies in food-safety risk assessment;
- Understand and be able to describe the four steps of nutrition risk assessment i.e. hazard identification, hazard characterisation, exposure assessment and risk characterisation;
- Know the key differences between risk assessment approaches and risk terminology used in the various areas of food-safety risk assessment (e.g. nutritional vs. microbial risk assessment);
- Be familiar with the specificities and challenges of nutrient assessment
- Have a basic understanding of the concepts, terminologies and methods used in nutrition risk assessment, their utility, data requirements, similarities, and differences;
- Be able to identify hazards and hazard characterisation, including intake-response assessment (NOEL, LOAEL, ULs, benchmark intake, uncertainty factors, identification of vulnerable subgroups;
- Have a basic understanding of the specificities and challenges of nutrient risk assessment in relation to essential and non-essential nutrients, macronutrients, micronutrients, and of novel foods
- Have a basic understanding of advantages and limits of different dietary survey methods
- Be able to identify and interpret the dietary exposure data typically available in dietary intake assessment;
- Be able to understand tools for modelling different management options like diet modelling, linear programming, Monte Carlo simulation;
- Have a basic understanding of the specificities and challenges of nutrition risk-benefit analyses;
- Be able to understand tools for risk-benefit analysis
- Have a basic understanding of the importance of appropriate communication of risk assessment results and risk management decisions.

Training course 5: Risk assessment in Genetically Modified Organisms and other biotechnologies

The course in GMO risk assessment is aiming to present an up to date, objective overview over broad and complex issues of risk assessment of genetically modified organisms used as food and feed. The course will bring up to date overview over general concept of risk analysis and risk perception.

In order to introduce the participants to the differences between the definitions of risk and hazard several adequate examples will be used covering broad spectrum of scientific issues related to the theme of the course. With the definitions and tools used in the process of risk assessment in place the general introduction to the GMO and other biotechnologies will follow up. This part of the course will also be focusing on the up to date status of the European Regulation/ Guidelines and its requirements

Learning objectives:

- To make the participants understand an essential role of well and critically performed molecular risk assessment of GMOs, which is the first step in total GMO analysis.
- To assess the level of documentation necessary for the evaluation of the insertion and expression of the new gene products in the genetically modified organism.
- To introduce them to the new emerging molecular technologies and to describe their usefulness and their perspectives in future risk assessments of the GMOs

At the end of the course, participants will be familiar with:

- Molecular characterization of the GM product, taking into the account the characteristics of the donor and recipient organism.
- The compositional, nutritional and agronomic characteristics of the GM product
- The potential toxicity and allergenicity of the GM product.
- The potential environmental impact following deliberate release of the GMO.
- The complexity level of the workshop will be adapted to the participants‟ experience in GMO risk assessment which will be accessed beforehand.

There are however certain issues which need to be explained in depth and which are closely related to above main points. Therefore the course will also cover:

- An introduction to the basic principles of animal studies with the emphasis of the international animal test guidance.
- The use of appropriate statistical principles and methods for the comparative analysis of food and feed and for the environmental risk assessment (ERA) of GMOs as well as a crucial subject:
- Distinguishing between statistical significance and biological relevance in GMO risk assessment.
- Dietary exposure assessment
- Comprehensive understanding of the main models, algorithms and typical data requirements for dietary exposure assessment to GMOs are presented. In order to give the participants

Training course 6: Risk assessment applied to animal welfare

The training course includes an introduction to the general concept of risk analysis including hazard identification, hazard characterization, exposure assessment, risk assessment and risk communication.

The aim of the first session is to introduce participants to the risk analysis concept and risk assessment frameworks. The goals and components of each step will be presented, and concepts will be illustrated with real life examples and risk questions. The role of international regulatory agencies and international risk assessment guidelines will be presented and discussed.

In the hazard identification session, the participants will be introduced to the process of hazard and risk identification, and the role of risk managers in this process will be covered. Examples of animal welfare problems and applied risk assessments, as well as their results and potential impact, will be presented.

The theoretical component of the course will cover the following technical topics:

- The risk assessment model in animal welfare
- Risk assessment of different stages of the animal's life (on farm, on transport, at slaughter)
- Risk assessment of different production systems
- Pros and cons of iceberg indicators in relation to overall welfare assessment
- Tools for risk assessment and characterization
- Systematic literature search in risk assessment
- Risk-benefit assessment
- Risk assessment of different species
- Animal welfare risk management and risk communication

At the end of the course, participants will:

- Be familiar with the concepts of risk analysis i.e. risk assessment, risk management and risk communication;
- Be familiar with the legal framework and the role of international regulatory agencies in animal welfare;
- Understand and be able to describe the four steps of animal welfare risk assessment i.e. hazard identification, hazard characterisation, exposure assessment and risk characterisation;
- Be familiar with the specificities and challenges of animal welfare assessment
- Have a basic understanding of the concepts, terminologies and methods used in animal welfare risk assessment, their utility, data requirements, similarities, and differences;
- Be able to identify hazards and hazard characterisation, on farm, on transport and at slaughter, including identification of vulnerable subgroups, as well as species specific challenges;
- Have a basic understanding of the specificities and challenges of animal welfare risk assessment in relation to different production systems
- Have a basic understanding of advantages and limits of different animal welfare survey methods
- Be able to understand tools for modelling different management options like linear programming, Monte Carlo simulation;
- Have a basic understanding of the specificities and challenges of animal welfare risk-benefit analyses;
- Be able to understand tools for risk-benefit analysis
- Have a basic understanding of the importance of appropriate communication of risk assessment results and risk management decisions.

Training course 7: Risk assessment for animal health

The aim of the first session is to introduce participants to the risk analysis concept and risk assessment frameworks. The goals and components of each step will be presented, and concepts will be illustrated with real life examples and risk questions. The role of international regulatory agencies and international risk assessment guidelines will be presented and discussed.

In the hazard identification session, the participants will be introduced to the process of hazard and risk identification, and the role of risk managers in this process will be covered. Examples of animal health problems and applied risk assessments, as well as their results and potential health impact, will be presented.

The course will end with group presentations of the case studies and developed risk assessments including discussions on risk management options and relevant risk communication issues.

The theoretical component of the course will cover the following topics:

- Introduction to risk assessment in the field of animal health
- Introduction to import risk assessment
- Data requirements for import risk assessment;
- The different steps in import risk assessment (IRA)
- Identification of appropriate risk management options

<u>At the end of the course, participants will:</u>

- Be familiar with the concepts of risk analysis i.e. risk assessment, risk management and risk communication;
- Be familiar with the legal framework and the role of international regulatory agencies in animal health risk assessment;
- Understand and be able to describe the four steps of animal health risk assessment i.e. hazard identification, hazard characterisation, exposure assessment and risk characterisation;

- Be familiar with the applications of risk assessment in animal health and trade
- Have a basic understanding of the concepts, terminologies and methods used in animal health risk assessment, their utility, data requirements, similarities, and differences;

- Be able to construct an event tree pathway related to a risk problem
- Become familiar with probability theory and basic knowledge on probability distributions
- Be able to perform a qualitative and quantitative deterministic risk assessment for specific animal health problems and trans-boundary animal diseases.
- Understand the difference between variability and uncertainty and how to deal with these.
- Know where and how to obtain data to implement a risk assessment
- Be able to understand tools for risk-benefit analysis
- Have a basic understanding of the importance of appropriate communication of risk assessment results and risk management decisions.

Training course 8: Environmental Risk Assessment

The training course will cover the three components of risk analysis – risk assessment, risk management and risk communication – but will give particular focus to environmental risk assessment.

The aim is to introduce the participants to the concept of environmental risk assessment as applied in national and international food safety.

Participants will learn how to perform a structured environmental risk assessment in accordance with the food safety question they have to address in the case study.

Efforts will focus on the four steps of risk assessment (hazard identification, hazard characterization, exposure assessment and risk characterization in chemical risk assessment). The participants will be introduced to the assessment of the uncertainty and variability in data used in risk assessment. Based on this, the participants should be able to perform interpretations of risk assessment outputs

By the end of the course, participants will:

- Be familiar with the concepts of risk analysis i.e. risk assessment, risk management and risk communication;
- Be familiar with the legal framework, legal registers and the concept of legal assessment in ERA;
- Be familiar with the specificities and challenges of environmental risk assessment
- Understand the key steps and requirements of life stage assessment
- Have a basic understanding of the concepts, terminologies and methods used in environmental risk assessment, their utility, data requirements, similarities, and differences;
- Have a sound understanding of environmental exposure assessment
- Have a basic understanding of advantages and limits of different environmental risk assessment methods
- Be able to understand tools for risk-benefit analysis
- Have a basic understanding of the importance of appropriate communication of environmental risk assessment results and risk management decisions

TRAINING COURSE ON

RISK ASSESSMENT

IN

MICROBIOLOGY

DRAFT AGENDA 2014 - 2016

Monday

Time		Activity	Tutor
13:30	14:00	**Arrival of participants**	
		Introduction to microbial risk assessment	
14:00	14:30	**Welcome and introduction**	**Maarten Nauta / Håkan Vigre**
		Opening and welcome address: Overview of the training course activities: general and learning objectives, program and expectations for the course.	
14:30	14:45	**<u>Lecture 1</u>:** **Introduction: What is risk?**	**Maarten Nauta / Håkan Vigre**
		Introduction to the concepts of risk and risk perception in the context of food safety.	
		Objectives of the session: Understand the concepts of risk and hazard; discuss the importance of risk perception	
14:45	15:00	**<u>Lecture 2</u>:** **Introduction: What is risk analysis?**	**Sara Pires / Tine Hald**
		Introduction to food safety risk analysis, including presentation of the three pillars of risk analysis: risk assessment, risk management and risk communication. Also short introduction to methods for safety risk assessments (QPS) and how they are related to food risk assessment.	
		Objectives of the session: Acquire knowledge on the three pillars of risk analysis, recognizing the role of each and the importance of separating tasks among risk assessors and risk managers.	
15:00	15:45	**<u>Lecture 3</u> What is risk assessment?**	**Maarten Nauta / Håkan Vigre**
		Overview of the four steps of risk assessment: hazard identification, hazard characterization, exposure assessment and risk characterization. Presentation of the main differences between e.g. microbial and chemical risk assessment. Introduce examples of microbial risk assessment.	
		Objectives of the session: Understand the differences and similarities of concepts and risk terminology in the various areas of food safety. Understand the	

		content, objectives, data requirements and methods of each step of the risk assessment process in microbial risk assessment.	
15:45	*16:00*	*Coffee break*	
16:00	16:45	**<u>Lecture 4:</u>** **Risk assessment history and international regulatory work**	**Moez Sanaa / Laurent Guillier**
		Overview of microbial risk assessment history and regulatory work of international agencies like EFSA, OIE, COM, FAO, and WHO. Introduction to risk assessment guidelines.	
		Objectives of the session: Understand the role and procedures of international agencies in the context of microbial risk assessment. Understand the principles of risk assessment in comparison with the precautionary approach.	
		Objectives of the session: Understand the role and procedures of international agencies in the context of microbial risk assessment. Understand the principles of risk assessment in comparison with the precautionary approach.	
16:45	17:15	**<u>Lecture 5:</u>** **Hazard identification**	**Sara Pires / Tine Hald**
		Identifying food safety problems (risk identification and risk ranking (based on e.g. burden of disease, food attribution and occurrence in food)). Presentation of examples within the context of microbial risk assessment.	
		Objectives of the session: Understand the process of identifying a food safety problem, including potential sources of information and different approaches for food safety issues.	
17:15	18:00	**<u>Group exercise 1</u>:** **The concept of risk analysis and risk assessment**	**<u>all</u>**
		Introduction to short sections of text, for instance a summary from a risk analysis, where the participants should identify the hazard, the risk, the risk manager, the risk assessor, data used, subject matter experts, the risk communicator, etc.	
		Objectives of the session: Consolidate concepts learned in theoretical lectures. Introduction to the case study each group will follow for the rest of the week.	
19:30	-	*Dinner at Hotel Restaurant*	

Tuesday

Time		Activity	Tutor
		Exposure assessment	
8:45	*9:00*	*Registration*	
9:00	9:30	**<u>Lecture 6:</u>** **Framework and example of a risk assessment**	**Moez Sanaa / Laurent Guillier**
		Content of the session: Introduction to a typical framework of a risk assessment. Identification and formulation of risk questions. Highlight the importance of a common understanding of the risk question(s) by the risk assessors and risk managers.	
		Objectives of the session: Understand the process of risk assessment as a response to or interaction with risk management. Understand the importance of the definition and framing of the risk question.	
9:30	10:00	**<u>Lecture 7:</u>** **Exposure pathways**	**Maarten Nauta / Håkan Vigre**
		Overview of steps and variables to consider in the food pathway. Effect of each step in the pathogen load. Relation between variables. Discussion of data requirements.	
		Objectives of the session: Learn how to identify the steps and variables of a transmission pathway. Understand the connection between variables and the effect of each in the levels of the pathogen in the food item, e.g. growth or inactivation. Learn how to identify data requirements.	
10:00	10:45	**<u>Lecture 8:</u>** **Qualitative and quantitative models for risk assessment**	**Moez Sanaa / Laurent Guillier**
		Overview of qualitative models for risk assessment. Discussion of the concepts of low, moderate and high risk.	
		Objectives of the session: Understand the utility, data requirements and methods of qualitative risk assessments. Discuss the meaning of different outputs, and how results can be used. Discuss limitations of the qualitative approach.	
10:45	*11:00*	*Coffee break*	
11:00	12:15	**<u>Group exercise 2:</u>** **Case-studies**	**<u>all</u>**

		Work on the case-study provided on the first day. The group should identify and frame the risk question(s) and design a risk pathway following the farm to fork concept, and identify data needs.	
		Objectives of the session: Consolidate concepts learned in theoretical lectures, particularly in the identification of a risk question and definition and relation between variables. Develop case study initiated in the first day.	
12:15	12:30	**<u>Discussion,</u>**	**Maarten Nauta / Håkan Vigre**
12:30	*14:00*	*Lunch*	
		Models for risk assessment	
14:00	14:45	**<u>Lecture 9:</u>** **Quantitative models for risk assessment**	**Leonardo de Knegt /Sofia Duarte**
		Introduction to quantitative models for risk assessment. Comparison between semi-quantitative and quantitative models. Introduction to deterministic models. Presentation and comparison of deterministic and stochastic models.	
		Objectives of the session: Understand the utility, data needs and methods of quantitative models.	
14:45	15:30	**<u>Teaching example</u>:**	**Maarten Nauta / Håkan Vigre**
		Introduction of a teaching example that will be used throughout the course to illustrate the different numerical methods in microbiological risk assessment. Using the case-study, participants will develop a simple deterministic model, implementing it in an Excel spreadsheet. The spreadsheet with the teaching example will be handed out, and works at a template for further work during the group exercises. The participants should add in extra steps in the model in alignment with group exercise 2.	
		Objectives of the session: Consolidate concepts learned in theoretical lectures. Application of units and values to defined variables; establishment of the connection between variables; interpretation of the output.	
15:30	*15:45*	*Coffee break*	
15:45	17:15	**<u>Group exercise 3 Case studies.</u>**	all

17:15	18:00	**<u>Lecture 10:</u>** **Risk, probability and uncertainty**	**Maarten Nauta / Håkan Vigre**
		A basic introduction of probability theory and probability distributions and conditional probability. Subjective and empirical (relative frequency) assessment of probabilities. Comparison of discrete and continuous distribution and how they are used. Implement probability distributions for uncertainty in the teaching example.	
		Objectives of the session: Understand the concept of probability and rules for calculations based on probability. Be familiar with how probability distributions can be implemented in a mathematical model	

Wednesday

Time		**Activity**	**Tutor**
		Data and Stochastic models for risk assessment	
8:45	*9:00*	*Registration*	
9:00	9:30	**<u>Lecture 11:</u>** **Data requirements and data collection**	**Maarten Nauta / Håkan Vigre**
		Presentation of the typical data requirements for a microbial risk assessment. Overview of sources and methods for data collection, including presentation of international databases (e.g. Food Consumption Database and EU Zoonosis Report database) and online resources.	
		Objectives of the session: Provide the participants with tools to identify data needs and collect data in national and international resources. Understand generality *vs*. context dependency of data sources.	
9.30	10.00	**<u>Group exercise 3: finalize deterministic case study, discussion</u>**	**all**
10:30	*10:45*	*Coffee break*	
10.45	11:30	**<u>Lecture 12:</u>** **Introduction to risk assessment software**	**Leonardo de Knegt /Sofia Duarte**
		Demonstration of risk assessment tools, including spreadsheets and the software @RISK.	
		Objectives of the session:	

		The participant will be familiar with the software that can be used in quantitative risk assessment models before the theoretical lectures on the methodologies and the practical exercises. @RISK will be provided to all participants to be used during the period of the course. Participants will be given a printed tutorial for additional support.	
11.30	12:00	**<u>Lecture 13:</u>** **How to model the probability of contamination of a food item taking uncertainty into account**	**Maarten Nauta / Håkan Vigre**
		Content of the session: Methods for modelling the probability of contamination of a food item, and how sampling procedures/data sources influence on the uncertainty	
		Objectives of the session: Understand the relationship between prevalence of infection (animal level) and prevalence of contamination (food item level) and between qualitative (presence/absence) and quantitative occurrence of contamination. Learn modelling methods for taking uncertainty into account in a model.	
12:00	12:30	**<u>Group exercise 4</u>:** **Case-studies**	**all**
		A plenary exercise: Work on the teaching example using stochastic modeling; implementing a stochastic model in EXCEL/@RISK.	
		Objectives of the session: Consolidate concepts learned in theoretical lectures.	
12:30	*14:00*	*Lunch*	
14:00	14:30	**<u>Lecture 14:</u>** **How to model concentration of pathogens in food taking the variability into account?**	**Leonardo de Knegt /Sofia Duarte**
		Content of the session: Methods for modelling the changes in concentrations of pathogens in food, including predictive model for growth and inactivation.	
		Objectives of the session: Understand the difference between contaminated/not contaminated and given it is contaminated, what is the concentration. Learn modelling methods for taking variability into account in a model.	
14:30	15:30	**<u>Group exercise 5</u>:**	**all**
		Work on the case studies using stochastic modeling; implementing a stochastic model in EXCEL/@RISK developed in exercise 3.	

		Objectives of the session: Consolidate concepts learned in theoretical lectures. Development of a risk assessment model using probability distributions. Understand the difference between variability and uncertainty. Learn how to interpret results in the light of these concepts.	
15:30	*16:00*	*Coffee break*	
16:00	17:30	**Extra lecture (15) where we summarize and clarify topics that has been identified during the first part of the course. Will be prepared on place**	**all**
17.30	18.00	**<u>Discussion</u>**	**Maarten Nauta / Håkan Vigre**
19:30	-	*Dinner at Hotel Restaurant*	

Thursday

Time		Activity	Tutor
		Hazard characterization / Dose-response modeling	
8:45	*9:00*	*Registration*	
9:00	9:15	**<u>Lecture 16:</u>** **Dose response for infectious organisms - introduction**	**Norval Strachan**
		Content of the session: Lecture: Introduction into concepts of infection/acute illness; basic issues in microbial dose response; categories of models.	
		Objectives of the session: Obtain basic understanding of how to translate exposure into health effects; limitations and opportunities.	
9:15	10:00	**<u>Lecture 17:</u>** **Dose response for infectious organisms – sources of information**	**Norval Strachan**
		Content of the session: Experimental studies and natural experiments; biases in dose response; sources of heterogeneity.	
		Objectives of the session: Guidance on where to find the data for dose response studies; make decisions on what is appropriate for a specific risk study.	
10:00	10:30	**<u>Lecture 18:</u>** **Dose response for infectious organisms – dose response models**	**Norval Strachan**
		Content of the session: Modelling dose-response relationship. Statistical inference in dose-response modelling and applicability of results to new condition.	
		Objectives of the session: Practical exercises in DR assessment; hands-on experience in obtaining/applying dose response information.	
10:30	*10:45*	*Coffee break*	
10:45	12:00	**<u>Lecture 19:</u>** **Risk characterisation**	**Leonardo de Knegt /Sofia Duarte**
		Content of the session:	

		Estimating the risk by integrating the output from exposure assessment (taking into account uncertainty and variability) with the dose-response. This will be illustrated using the lecture example	
		Objectives of the session: Learn methods for estimating the risk.	
12:00	12:30	**<u>Lecture 20</u>:** **Assessing uncertainty, scenario analyses**	**Maarten Nauta / Håkan Vigre**
		<u>Content of the session:</u> Introduction of the uncertainty assessment at the level of the scenario, model and model parameters. Possible concepts for documentation of uncertainty with regard to the intended purpose of the model as a decision support for the risk manager.	
		<u>Objectives of the session:</u> Understand that models are limited due to uncertainties and – if well-communicated – can still be valuable support for decision makers. Obtain basic understanding that uncertainties occur at various levels in a risk assessment and that a systematic documentation is required to ensure transparency.	
12:30	*14:00*	*Lunch*	
		Doing risk assessment	
14:00	15:00	**<u>Group exercise 6</u>:** **Case-studies**	**all**
		Applying dose-response in stochastic model and risk characterisation.	
		Objectives of the session: Consolidate concepts learned in theoretical lectures. Apply a dose-response model in the stochastic model developed on the previous day. Interpret results in the light of the concept.	
15:00	15:30	**<u>Group exercise 7:</u>**	**all**
		Preparing a risk assessment report	
		Objectives of the session: The groups should prepare a 10 min presentation of the risk assessment performed that could be presented Friday Each group should hand in a risk assessment report to the course coordinator. The template for that report is attached.	
15:30	*15:45*	*Coffee break*	
15:45	17:30	**Group exercise 7, continued**	**all**

17:30	18:00	**<u>Discussion</u>**	**Maarten Nauta / Håkan Vigre**
19:30	-	*Dinner at Hotel Restaurant*	

Friday

Time		Activity	Tutor
		Food safety risk analysis in practice	
8:45	*9:00*	*Registration*	
9:00	9:45	**<u>Lecture 21:</u>** **Risk management and communication**	**Leonardo de Knegt /Sofia Duarte**
		Content of the session: Examples on how risk assessments' results are used in risk management, and how risk management options are identified and selected. Discussion of other (non-scientific) factors important to consider as risk managers and how risk assessments' results and risk management decisions are communicated to the public and concerned food producers.	
		Objectives of the session: Discuss the use of risk assessment results in risk management for deciding on different control options and mitigation strategies. Provide the participants with a basic understanding of the importance of appropriate communication of risk assessment results and risk management decisions.	
9:45	10:30	**<u>Group exercise 8:</u> Presentation of case-studies**	**all**
		This will take place in two parallel sessions – 3 groups in each session. One of the groups will be picked to be the risk assessment group. One group will represent the managers and one group will represent an independent group of scientific reviewers. Initially, the risk assessment group will present their assessment to the scientific reviewers. The scientific reviewers outline the strengths and weaknesses of the risk assessment performed. Secondly, the risk assessment group presents the results from their risk assessment for the risk managers, and afterwards the reviewers hand over the notes to the managers. On the basis of the obtained information the managers take a decision	
		Objectives of the session: The groups will be able to present the output of their work during the trainer and demonstrate acquired concepts. The feedback from trainers and participants is expected to provide additional input. All participants will have the opportunity to be presented to the other group's case-studies.	

10:30	*10:45*	*Coffee break*	
10:45	12:00	**Group exercise 8 cont. Discussion of case-studies.** On the basis of case studies, the strength and weaknesses of the concept of risk analysis is discussed in each session.	**all**
12:00	12:30	Closing session. Course evaluation	**Maarten Nauta / Håkan Vigre**
12:30	*14:00*	*Lunch*	

TRAINING COURSE ON

RISK ASSESSMENT

IN

CHEMISTRY

DRAFT AGENDA 2014-2016

Monday

Time		Activity	Tutor
From	*To*		
13:30	14:00	**Arrival of participants**	
14:00	15:45	**Title of the Session: Welcome and introduction to the course**	**Anoop Sharma, Max Hansen and Annette Petersen**
		Introduction to EFSA	
		Content of the session: The tutors and instructors introduce themselves and the tutors give an introduction to the course.	
		Objectives of the session: Introduction of tutors, participants and the schedule of the course.	
15:45	16:00	Break	
16:00	17:00	**Title of the Session: Introduction to chemical Risk Analysis**	
		Content of the session: An overview of the general principles in chemical risk assessment and an introduction to risk management and risk communication.	
		Objectives of the session: To be able to describe the general principles in chemical risk analysis.	
17:00	18:00	**Introduction to case studies**	
		Content of the session: The participants will be introduced to case studies and project work will start.	
		Objectives of the session: To start up project work of a specific case.	
19:30		*Dinner at Hotel Restaurant*	**All tutors and participants**

Tuesday

9:00	10:15	**Title of the Session: Hazard Identification** (including break)	**Max Hansen and Anoop Sharma**
		Content of the session: Presentation of toxicokinetics, including absorption, distribution, metabolism and excretion.	
		Objectives of the session: To be able to explain the main points in the absorption, distribution, metabolism and excretion processes and why it is important in risk assessment.	
10:15	11:15	**Title of the Session: Toxicodynamics**	

		Content of the session: To present threshold approach/non threshold approach, test strategies including acute, sub chronic and chronic toxicity and main sources of toxicological data.	
		Objectives of the session: To be able to explain the difference between threshold and non threshold approach and some test strategies.	
11:15	12:30	**Title of the Session: Case study** (including break)	**Max Hansen and Anoop Sharma and Annette Petersen**
		Content of the session: The participants will work on the project with focus on hazard identification issues.	
		Objectives of the session: To describe hazard identification issues in the assigned case.	
12:30	13:30	Lunch	
13:30	14:45	**Title of the Session: Toxic effects on the central nervous system** (including break)	**Dimitra Nikolo-poulou**
		Content of the session: Neurotoxicity (acute, delayed and developmental). Ppresentation of examples related to hazard identification and risk assessment in food.	
		Objectives of the session: To provide an overview of the identification of the possible toxicological effects on the central nervous system in relation to chemical risk assessment in food.	
14:45	16:00	**Title of the Session:** Collection of chemical consumption data (including break)	**Annette Petersen**
		Content of the session: Presentation of consumption data, methodologies, EFSA, WHO and National databases, Extrapolation from crop to crop and from country to country. Plenar discussions.	
		Objectives of the session: Explain weaknesses and strengths of different methodologies for collection of chemical consumption data	
16:00	17:30	**Title of the Session:** Case study (including break)	**Max Hansen and Anoop Sharma and Annette Petersen**
		Content of the session: The participants will work on the project with focus on hazard identification issues.	
		Objectives of the session: To describe hazard identification issues in the assigned case.	
18:00	18:30	**Summary and discussion**	**All tutors and participants**

Wednesday

9:00	11:30	**Title of the Session: Hazard Characterisation** (including break)	**Max Hansen**

		Content of the session: Critical effect, dose response relationship, including ADI/TDI, ARfD, NOAEL; benchmark dose, MOE. The participants will work on the project with focus on quantifying health based threshold (dose response relationship) on the critical effect.	
		Objectives of the session: To be able to explain the difference methods of quantifying dose response relationship on the critical effect. To describe hazard characterisation issues in the assigned case.	
11:30	12:30	**Title of the Session: Collection of occurrence data including** (including break)	**Annette Petersen**
		Content of the session: Sampling strategies (monitoring, control etc), quality of data, left-censored data, uncertainty, extrapolation and databases.	
		Objectives of the session: To explain how occurrence data are collected. To explain uncertainties of occurrence data.	
12:30	13:30	Lunch	
13:30	14.30	**Title of the Session:** Exposure estimations including break	**Annette Petersen**
		Content of the session: Point estimates, acute and chronic exposure, cumulative exposure (including hazard index), uncertainties, probabilistic modelling	
		Objectives of the session: To be able to explain some of the main issues of exposure, data and uncertainties	
14.30	16:15	**Title of the Session: Genotoxicity and carcinogenicity** (including break)	**Anoop Sharma**
		Content of the session: Presentation of genotoxicity in relation to cancer and the role of genotoxicity in risk assessment.	
		Objectives of the session: Explain different types of DNA damage. Explain the difference between genotoxic and non genotoxic carcinogens and the implications of these two types of carcinogens in risk assessment.	
16:15	17:30	**Title of the Session:** Case study (including break)	**Max Hansen and Anoop Sharma and Annette Petersen**
		Content of the session: The participants will work on the project with focus on hazard identification issues.	
		Objectives of the session: To describe hazard identification issues in the assigned case.	
17:30	18:00	**Summary and discussion**	**All tutors and participants**
19:30		*Dinner at Hotel Restaurant*	

Thursday

9:00	10:30	**Title of the Session: Exposure estimations** (including break)	**Annette Petersen**
		Content of the session: Point estimates, acute and chronic exposure, cumulative exposure (including hazard index), uncertainties, probabilistic modelling	
		Objectives of the session: To be able to explain some of the main issues of exposure, data and uncertainties	
10.30	12:30	**Title of the Session: Case study** (including break)	**Max Hansen and Anoop Sharma and Annette Petersen**
		Content of the session: The participants will work on the project with focus on exposure assessment issues.	
		Objectives of the session: To describe and exposure assessment issues in the assigned case.	
12:30	13:30	Lunch	
13:30	14:45	**Title of the Session: The TTC concept** (including break)	**Elke Rauscher-Gabernig**
		Content of the session: Presentation of a non-testing method and examples	
		Objectives of the session: To know general principles of this approach and where to use it	
15:00	15:30	**Title of the Session:** Risk Characterisation, risk management and risk communication	**Max Hansen**
		Content of the session: Examples of risk characterisation, risk management and risk communication	
		Objectives of the session: To understand how a risk assessment can be used in risk management and risk communication	
15:30	17:00	**Title of the Session: Case study** (including break)	**Max Hansen and Anoop Sharma**
		Content of the session: The participants will work on the project with focus on exposure assessment and hazard characterisation issues.	
		Objectives of the session: To describe hazard characterisation and exposure assessment issues in the assigned case.	
17:00	17:30	**Summary and discussion**	**All tutors and participants**
19:30		*Dinner at Hotel Restaurant*	

Friday

9:00	11:30	**Title of the Session: Finalising and presentation of the final case work as poster presentation** (including break)	**Max Hansen and Anoop Sharma**
		Content of the session: The groups will present their case work. Tutor and student evaluation of the full course.	
		Objectives of the session: To describe the final case work.	
11:30	12:30	**Closing session: Course evaluation.**	**Max Hansen and Anoop Sharma**
12:30	13:30	Lunch	

TRAINING COURSE ON

RISK ASSESSMENT

IN

PEST

DRAFT AGENDA 2014-2016

Monday

Time		Activity	Tutor
13.30	14.00	**Arrival of participants**	**Alan MacLeod**
		Introduction to Pest Risk Assessment	
14.00	14.30	**Welcome and introduction**	**Alan MacLeod**
		Opening and welcome address. Overview of the training course activities: general and learning objectives, programme and expectations for the course.	
14.30	15.15	**Lecture**: **Introduction: What is risk and what is risk analysis?**	**Romano Zilli**
		Introduction to the concepts of risk and risk perception in the context of food safety. Introduction to food safety risk analysis, including presentation of the three pillars of risk analysis: risk assessment, risk management and risk communication.	
		Objectives of the session: Understand the concepts of risk and hazard; discuss the importance of risk perception; acquire knowledge on the three pillars of risk analysis, recognizing the role of each and the importance of separating tasks among risk assessors and risk managers.	
15.15	16.00	**Lecture: What is risk assessment?**	**Arne Büchert**
		Overview of the four basic steps of risk assessment: hazard identification, hazard characterization, exposure assessment and risk characterization. Presentation of the main differences between e.g. pest and chemical risk assessment. Introduce examples of different types of risk assessment.	
		Objectives of the session: Understand the differences and similarities of concepts and risk terminology in the various areas of food safety. Understand the content, objectives, data requirements and methods of each step of the risk assessment process.	
16.00	16.15	Coffee break	
16:15	17:00	**Lecture: Risk assessment history and international regulatory work**	**Alan MacLeod**
		Overview of pest risk assessment history and regulatory work of international agencies like IPPC, WTO, EPPO and EFSA. Introduction to risk assessment guidelines.	
		Objectives of the session: To understand the role and procedures of international agencies in the context of risk assessment.	

17.00	18.00	**Group exercise: Key elements and actors**	**Romano Zilli and Arne Büchert**
		Introduction to short sections of text. Participants should identify the hazard, the hazard characterisation, the risk manager, the risk assessor and the risk communicator.	
		Objectives of the session: Consolidate concepts learned in theoretical lectures. Introduction to the case study each group will follow for the rest of the week.	

Tuesday

Time		Activity	Tutor
09:00	10:00	**Title of the Session:** Introduction to Pest Risk Assessment	**Alan MacLeod**
		Content of the session: PP-presentation of the legal framework of Pest Risk Assessment and of the different steps in the assessment including discussions of risk assessment at national and international level. Differences between Pest risk assessment and other types of risk assessments will be illustrated. The presentation provides a summary overview of PRA, setting the scene and future developments.	
		Objectives of the session: The purpose is to provide the overall context in which PRA is conducted. The presentation will describe the international agreements that relate to PRA such as the IPPC and the WTO-SPS Agreement. The aim is to provide participants with an understanding of the international context of PRA and where their country fits in that context. The principles of the IPPC that are most directly supported by PRA are emphasized. The presentation provides a brief overview of the entire PRA process, while a more detailed presentation and discussion of the each component of PRA will be dealt with in lectures and group exercises during the rest of the course.	
10:00	10:30	**Title of the Session:** Data requirements for pest risk assessment	**Robert Steffek**
		Content of the session: Presentation of data requirements for different scenarios of pest risk assessment.	
		Objectives of the session: To make participants familiar with data requirements for pest risk assessment.	
10:30	10:45	Coffee break	
10:45	11:15	**Lecture: Uncertainties in pest risk assessment**	**Alan MacLeod**
		Content of the session: Introduction to uncertainties in pest risk assessment with a focus on the identification of different types and sources of uncertainties and the ways to reduce uncertainty.	
		Objectives of the session: To discuss uncertainties related to pest risk assessment and to emphasize the importance of taking into account all relevant uncertainties when performing the assessments and giving advices for mitigation of the potential risk	
11:15	12:30	**Title of the Session:** Terminology	**Alan MacLeod & Robert Steffek**
		Content of the session:	

		Break out activity / participation exercise / game	
		Objectives of the session: The terminology game is a good "ice breaker" and gets participants moving around the room, communicating with each other, asking questions and becoming involved in their own learning. It sets the tone of the learning atmosphere for the next few days.	
12:30	13:30	Lunch	
13:30	15:30	**Title of the Session:** Beginning a pest risk assessment	**Robert Steffek**
		Content of the session: PP-presentation: • Initiation • Categorization	
		Objectives of the session: To explain the steps involved in the initiation and categorization stages of PRA. Outline of the reasons for doing PRAs (3Ps i.e. pest / pathway / policy), the screening process to determine whether the organism is a pest. Subsequent definition of the PRA area for those species that are determined to be a pest.	
15:30	15:45	Coffee break	
15:45	17:30	**Title of the Session:** Beginning a PRA (continued)	**Robert Steffek & Alan MacLeod**
		Content of the session: Breakout activity / group exercises	
		Objectives of the session: The purpose of the activity is to provide participants with an opportunity to apply what they have learned about during the previous session "beginning a PRA".	
17:30	18:00	**Review of activities during the day** Questions / answers on material covered during the day. Explain feedback / evaluation forms.	**Alan MacLeod**

Wednesday

Time		Activity	Tutor
9:00	9:15	Questions / follow up from Tuesday	**Alan MacLeod**
9:15	10:30	**Title of the Session:** Assessing probability of introduction (entry)	**Robert Steffek**
		Content of the session: • PP-presentation (lecture): Assessing pest entry • Group Exercise: Initiation, Categorization and Entry	
		Objectives of the session: As a consequence of this presentation and group exercise, participants should know the IPPC definition of a pathway; know the important features of a pathway and be able to describe different types of pathways; recognise how the description of a pathway can influence the information required for a PRA; know what type of information is required and where to find such data and know what factors associated with pathways need to be considered during a PRA.	
10:30	10:45	Coffee break	
10:45	12:30	**Title of the Session:** Assessing probability of introduction (entry) continued	**Robert Steffek & Alan MacLeod**
		Content of the session: Group exercise continues	
		Objectives of the session: See above	
12:30	13:30	Lunch	
13:30	15:30	**Title of the Session:** Assessing probability of introduction (establishment)	**Alan MacLeod**
		Content of the session: PP-presentation (lecture) and group breakout activity • Establishment (presentation) • Assessing pest establishment (breakout activity)	
		Objectives of the session: The objectives of the lecture and group activities are to provide participants with an understanding of the second step in a pest risk assessment – probability of introduction (establishment). Participants will become familiar with the factors that influence establishment, and will be provided with an introductory look at climate matching models including Climex.	
15:30	15:45	Coffee break	

15:45	17:30	**Title of the Session:** *Assessing probability of spread*	**Gabor Lövei**
		Content of the session: PP-presentation (lecture) and group breakout activity • Spread (presentation) • Assessing pest spread potential (breakout activity)	
		Objectives of the session: The objectives of this lesson are to provide participants with an understanding of the assessment of spread (likelihood and extent). At the end of this lecture participants should be familiar with factors influencing the spread of a pest and how to assess spread.	
17:30	18:00	**Review of the presentations and activities during the day**. Feedback / questions / answers on topics and material covered.	**Alan MacLeod**
		Social Evening	

Thursday

Time		Activity	Tutor
09:00	09:15	Questions / follow up from Wednesday	**Alan MacLeod**
09:15	10:45	**Title of the Session:** Assessing consequences of pest introduction and spread (impacts)	**Gabor Lövei**
		Content of the session: PP-presentation (Lecture): Assessing pest impacts Group Exercise: Assessing impacts	
		Objectives of the session: As a consequence of the presentation and group activity participants should realise that many factors can be taken into account to judge the potential impact that results from a new pest introduction. Impacts on crops and environmental impacts should be recognised and hence participants should know the difference between direct and indirect damage, and understand the factors that need to be considered when assessing potential impact.	
10:45	11:00	Coffee break	
11:00	12:30	**Title of the Session:** Overall assessment of risk	**Alan MacLeod**
		Content of the session: PP-presentation (Lecture): Overall assessment of risk Group Exercise: Combining elements of risk	
		Objectives of the session: The participants should realize by this stage that there are a variety of approaches to assess risk and that the IPPC does not prescribe a specific methodology or specify an approach to take when concluding a risk assessment, but there are several options, for example participants will see examples from NPPOs, EFSA guidance and EPPO. The participants will learn about some of the advantages and disadvantages of each approach.	
12:30	13:30	Lunch	
13:30	17:30	**Title of the Session:** Risk reduction options / risk management	**Robert Steffek**
		Content of the session: PP-presentation (Lecture): Risk management.	

		Introduction to Risk Management and discussion on mitigation measures. Group Exercise: Discussion and group work to compile lists of potential management measures (alone or in combination) (Coffee break when convenient)	
		Objectives of the session: Participants should learn that risk can be managed at various stages along a pathway and that a range of mitigations measures may be available. Participants should recognise the various factors that contribute to determine the most appropriate treatment or combination of treatments to reduce the level of risk of the pest to an acceptable level.	
17:30	18:00	Review of the presentations and activities during the day. Feedback / questions / answers on topics and material covered.	**Alan MacLeod**

Friday

Time		Activity	Tutor
09:00	09:05	**Questions / follow up from Thursday**	**Alan MacLeod**
09:05	09:45	**Lecture: Risk communication - EFSA recommendations**	**(Guest lecture from EFSA)**
		Content of the session: PP-presentation**:** "When Food Is Cooking Up a Storm – Proven Recipes for Risk Communications"	
		Objectives of the session: To introduce the EFSA guidelines/recommendations for Risk Communication that is aiming to provide a common framework applicable for developing communications approaches on risk across public health authorities in different countries.	
9:45	10:30	**Title of the Session: Risk communication**	**Alan MacLeod, Robert Steffek, Gabor Lövei**
		Content of the session: PP-presentation: Communication of Pest Risk Assessments Group Exercise: Group presentations and peer review of each groups work. Groups of participants will prepare and make presentations of their PRA findings to each other for feedback and comments. The participants will role play interested stakeholders such as importers, domestic producers, NPPOs and the general public.	
		Objectives of the session: Participants should find that by opening up PRAs for consultation and review decision making can be better informed and that assumptions and uncertainties within PRAs need to be explained.	
10:30	10:45	Coffee break	
10:45	12:00	**Title of the Session:** Applying PRA knowledge	
		Content of the session: Breakout activity - Individuals or groups use pest datasheets and scenarios provided to conduct brief assessments to reinforce learning.	
		Objectives of the session: • To reinforce what has been learned during the PRA course. • An opportunity to explain any aspects that remain unclear to individual participants.	
12:00	12:30	Closing session: **Course evaluation.**	**Alan MacLeod**
		Content of the session:	

		Participants will be asked their immediate opinion and judgment about the course.	
		Objectives of the session: To have a measure for the value of the course and to get advice from the participants on possibilities for further improvements of similar courses in the future.	
12:30	14:00	**Lunch**	

TRAINING COURSE ON

RISK ASSESSMENT

IN

NUTRITION

DRAFT AGENDA 2014-2016

Funded by
the Better Training for Safer Food
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Monday

Time		Activity	Tutor
13:00	14:00	**Arrival of participants; registration**	
14:00	14:30	**Lecture 1:** **Welcome and introduction**	**Inge Tetens**
		Content of the session: Opening and welcome address. Overview of the training course activities: general and learning objectives, program and expectations for the course. Presentation of participants.	
14:30	15:15	**Lecture 2**: **What is risk and what is risk analysis?**	**Hans Verhagen**
		Content of the session: Introduction to the concepts of risk and risk assessment in the context of nutrition. Introduction to nutrition risk analysis, including presentation of the three pillars of risk analysis: risk assessment, risk management and risk communication.	
		Objectives of the session: Understand the concepts of risk and hazard; discuss the importance of risk perception; acquire knowledge on the three pillars of risk analysis, recognizing the role of each and the importance of separating tasks among risk assessors and risk managers.	
15:15	16:00	**Lecture 3**: **What is risk assessment?**	**Hans Verhagen**
		Content of the session: Overview of the four basic steps of risk assessment: hazard identification, hazard characterization, exposure assessment and risk characterization. Presentation of the differences between e.g. nutritional and health risk assessment. Introduce examples of different types of risk assessment, including quantitative risk assessment vs. qualitative risk assessment.	
		Objectives of the session: Understand the differences and similarities of concepts and risk terminology in the various areas of food safety. Understand the content, objectives, data requirements and methods of each step of the risk assessment process and understand the differences between quantitative and qualitative risk assessment.	
16:00	16:15	*Coffee break*	

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15:45	16:30	**Lecture 4:** Risk management and risk communication	**Inge Tetens**
		Content of the session: Examples on how results from nutrition risk assessments are used in risk management, and how risk management options are identified and selected. Examples on how the results of nutrition risk assessments are communicated, and how communication strategies and different options are identified and selected.	
		Objectives of the session: Discuss the use of risk assessment results in risk management and the use of nutrition risk communication and the decisions on different control options and mitigation strategies. Understand the importance of appropriate communication of nutrition risk assessment results.	
16:30	18:00	**Group exercise 1:** **Case-study: Identification of risk assessment steps**	**Inge Tetens / Hans Verhagen**
		Content of the session: Introduction to short sections of text, for instance a summary from a nutrition assessment analysis, where the participants should identify the hazard, the risk, the risk manager, the risk assessor and the risk communicator. Groups will be formed by the tutors. Each group will have one preselected case study.	
		Objectives of the session: Consolidate the concepts learned in the theoretical lectures.	

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Tuesday

Time		Activity	Tutor
		The risk assessment model in nutrition	
8:45	9:00	*Registration*	
9:00	9:45	**Lecture 5:** **Concepts, terminologies and methods of DRV**	**Inge Tetens**
		Content of the session: Introduction to the concepts, terminologies and methods used in the risk assessment of nutrition. Defining Dietary Reference Values (DRV's), nutrient based goals and objectives, and food based dietary guidelines (FBDG).	
		Objectives of the session: Understand the concepts, terminologies and methods used in the risk assessment of nutrition: DRV's, nutrient based goals and objectives and FBDG.	
9:45	10:30	**Lecture 6:** **Risk–benefit assessment of nutrients**	**Hans Verhagen**
		Content of the session: Introduction to the concepts, terminologies and methods used in risk–benefit assessment in the context of nutrients. Specificities and challenges in the risk-benefit assessment of nutrients will be discussed .	
		Objectives of the session: Understand the methodological challenges in risk-benefit analyses of nutrients.	
10:30	10:50	*Coffee break*	
10:50	12:30	**Group exercise 2:** **Case-study: Risk-benefit assessment of nutrients**	**Hans Verhagen / Inge Tetens**
		Content of the session: Introduction to short sections of text from selected examples of risk-benefit assessment. Groups will have one pre-selected case study each and the results of the group exercise will be presented in plenum.	
		Objectives of the session: Identify risk assessment steps and methodological issues in selected examples of risk-benefit assessments.	
12:30	14:00	*Lunch*	

14:00	14:45	**Lecture 7:** **Risk assessment of micronutrients**	**Inge Tetens**
		Content of the session: Introduction to the concepts, terminologies and methods used in the risk identification and risk characterization in the area of micronutrients, including intake-response assessment (NOAEL, LOAEL, benchmark intake, uncertainty factors, upper intake level (UL), identification of vulnerable subgroups).	
		Objectives of the session: Understand the concepts, terminologies and methods used in the risk identification and risk characterization in the area of micronutrients.	
14:45	15:30	**Lecture 8:** **Risk assessment of non-essential nutrients**	**Gitte Ravn-Haren**
		Content of the session: Specificities and challenges in the risk assessment of non-essential nutrients and discussion on selected topics.	
		Objectives of the session: Understand similarities and differences between risk assessment of essential and non-essential nutrients.	
15:30	15:45	*Coffee break*	
15:45	18:00	**Group exercise 3:** **Case study: Nutrition risk assessment models in relation to strategies for safe addition of vitamins and minerals to foods**	**Gitte Ravn-Haren / Inge Tetens**
		Content of the session: Introduction to the group exercise and time to read assigned scientific papers **.** The groups will compare and discuss methodologies of selected papers and the results will be presented in plenum.	
		Objectives of the session: Obtain an understanding of the different risk assessment models in relation to addition of vitamins and minerals to foods and the effect of model choice on the result.	

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Wednesday

Time		Activity	Tutor
		Dietary intake assessments	
8:45	9:00	*istration*	
9:00	9:45	**Lecture 9:** **Dietary intake methods**	**Anja Biltoft-Jensen**
		Content of the session: Advantages and limitations of different methods for dietary assessments: i.e. 24-hr recall, food diaries, food frequency questionnaires, food datasheets and household budget surveys.	
		Objectives of the session: Understand advantages and limitations of different methods for dietary assessments.	
9:45	10:30	**Group exercise 4:** **Case study: Dietary survey methods related to the level of details requested for risk assessment**	**Anja Biltoft-Jensen / Ellen Trolle**
		Content of the session: The groups will choose a suitable dietary assessment approach for different case studies and the results discussed in plenum.	
		Objectives of the session: To obtain a basic understanding of the different considerations to make in choosing a dietary assessment approach.	
10:30	10:50	*Coffee break*	
10:50	11:45	Group exercise 4 (continued)	
11:45	12:30	**Lecture 10:** **Tools and databases for the translation of foods into nutrients**	**Anja Biltoft-Jensen**
		Content of the session: Tools and databases needed for translation of dietary intake data into food and nutrient intakes.	
		Objectives of the session: To give insight into the methods, tools and databases needed to generate output from dietary surveys	
12:30	14:00	*Lunch*	
14:00	14:45	**Lecture 11:** **The EFSA harmonization approach of a food consumption**	**Ellen Trolle**

		Content of the session: EFSA Comprehensive European Food Consumption Database in Exposure Assessment and the harmonization approach.	
		Objectives of the session: Understand the rationale for the harmonization of the dietary data in EU and the methods proposed.	
14:45	15:30	**Group exercise 5:** **Case study: Implications of methodological differences in the national dietary surveys included in the EFSA Comprehensive European Food Consumption Database**	**Ellen Trolle / Anja Biltoft-Jensen**
		Content of the session: Methodological differences and similarities in the national dietary surveys included in the EFSA Comprehensive European Food Consumption Database in Exposure Assessment will be discussed in groups using the morning lecture as background information.	
		Objectives of the session: To obtain a basic understanding on the limitations and usefulness of the dietary data available in the EFSA Comprehensive European Food Consumption Database in Exposure Assessment.	
15:30	15:45	*Coffee break*	
15:45	17:30	**Group exercise 5 (continued)**	
18:00		*Dinner at Hotel Restaurant*	

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Thursday

Time		Activity	Tutor
		Tools for risk assessment and characterization	
8:45	9:00	*Registration*	
9:00	9:45	**Lecture 12:** **Systematic literature search in risk assessment**	**Inge Tetens**
		Content of the session: Introduction to concepts and methods of systematic literature search in risk assessment in the area of nutrition.	
		Objectives of the session: Obtain basic understanding of how to conduct a systematic literature search in risk assessment in the area of nutrition, and understand its strength and weaknesses.	
9:40	10:30	**Lecture 13:** **Setting of DRVs of infants and young children**	**Hildegard Przyrembel**
		Content of the session: Methods of setting DRVs of infants and young children.	
		Objectives of the session: Obtain basic understanding of the different steps in setting DRVs for infants and young children	
10.30	10.50	*Coffee break*	
10.50	12.30	**Group exercise 6:** **Case study: Risk assessment of infant and follow-on formulae**	**Hildegard Przyrembel / Inge Tetens**
		Content of the session: Case studies on risk assessment of infant and young children follow-on formulae.	
		Objectives of the session: To obtain an understanding of some of the important issues in the risk assessment of follow-on formulaes in realtion to infants and young children.	
12.30	14:00	*Lunch*	
14:00	14:45	**Lecture 14:** **Risk assessment of novel foods**	**Marina Heinonen**

		Content of the session: Risk assessment of novel foods, including assessment of risk of change in diet composition due to introduction of novel food into existing diet.	
		Objectives of the session: Understand the risk assessment in the nutritional part of the risk assessment of novel foods.	
14:30	15:30	**Group exercise 7:** **Case-study:** Risk assessment of novel foods	**Marina Heinonen / Inge Tetens**
		Content of the session: Introduction to the nutritional issues in risk assessment of novel foods in the EU using selected EFSA opinions on novel foods. Group discussions on the selections of nutrition risk assessment tools.	
		Objectives of the session: To obtain a basic understanding on the challenges/difficulties in assessing the nutritional safety of different novel foods.	
15:30	15:45	*Coffee break*	
15:45	18:00	**Group exercise, cont'd**	**Marina Heinonen / Inge Tetens**

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Friday

Time		Activity	Tutor
		Nutrition risk assessment in practice	
8:45	9:00	*Registration*	
9:00	9:45	**Lecture 15:** **History of nutrition risk assessment**	**Inge Tetens**
		Content of the session: Nutrition risk assessment history and its role in regulatory work of international agencies.	
		Objectives of the session: Be aware of the historical development and understand the role og nutrition risk assessment in international agencies.	
9:45	10:30	**Group exercise 7:** **Presentation of case-studies 1**	**Marina Heinonen / Inge Tetens**
		Content of the session: Each group will present their case-study on novel food risk assessment. The presentation will be followed by a discussion, with feedback from trainers and other participants.	
		Objectives of the session: The groups will be able to present the output of their work during the training and demonstrate acquired concepts. The feedback from trainers and participants is expected to provide additional input.	
10.30	11.00	*Coffee break + check out of rooms*	
11.00	11.30	**Presentation of case-studies, cont'd** Questions – evaluation - discussion	**Inge Tetens**
11.30	12.30	**Closing session:** Course session and evaluation	**Inge Tetens**
12.30	14.00	*Lunch*	

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TRAINING COURSE ON

RISK ASSESSMENT

IN GENETICALLY MODIFIED ORGANISMS AND OTHER BIOTECHNOLOGIES

DRAFT AGENDA 2014-2016

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Monday

Time		Activity	Tutor
13.30	14.00	**Arrival of participants**	
		Introduction to risk assessment	
14.00	14.30	**Welcome and introduction**	**Ilona K. Sørensen**
		Opening and welcome address. Overview of the training course activities: general and learning objectives, programme and expectations for the course.	
14.30	15.00	**Introduction: What is risk and what is risk analysis?**	**Max Hansen**
		Introduction to the concepts of risk and risk perception in the context of food safety. Introduction to food safety risk analysis, including presentation of the three pillars of risk analysis: risk assessment, risk management and risk communication.	
		Objectives of the session: Understand the concepts of risk and hazard; discuss the importance of risk perception; acquire knowledge on the three pillars of risk analysis, recognizing the role of each and the importance of separating tasks among risk assessors and risk managers.	
15.00	16.00	**Lecture**: **What is risk assessment?**	**Morten Poulsen**
		Overview of the four basic steps of risk assessment: hazard identification, hazard characterization, exposure assessment and risk characterization. Presentation of the main differences between e.g. GMO and chemical risk assessment. Introduce examples of different types of risk assessment.	
		Objectives of the session: Understand the differences and similarities of concepts and risk terminology in the various areas of food safety. Understand the content, objectives, data requirements and methods of each step of the risk assessment process.	
16.00	16.15	Coffee break	
16.15	16.45	**Lecture: Overview and analysis of risk assessment procedures**	**Max Hansen**
		Review of single steps of a specific risk assessment	
		Objectives of the session: To understand and gain the knowledge of the role and procedures of different risk assessment procedures.	
16.45	18.00	**Group exercise: Case-studies**	**Max Hansen**

		Introduction to short texts such as summaries from a risk analysis, where the participants should identify the hazard, the risk, the risk manager, the risk assessor and the risk communicator. Finally, groups will be formed and a list of case-studies will be presented by the tutors. Each group will select a case study that it will work on for the remainder of the course.	
		Objectives of the session: Consolidate concepts learned in theoretical lectures. Introduction to the case study each group will follow for the rest of the week.	
19.30	-	Welcome dinner at the restaurant	

Tuesday

Time		**Activity**	**Tutor**
8.45	*9.00*	*Registration*	
9.00	10.00	**Title of the Session: GMO and other biotechnologies**	**Jan W. Pedersen**
		Content of the session: General introduction to the area of GMO and other biotechnologies. Brush-up on regulatory status and requirements.	
		Objectives of the session: To get an informed legal frame for regulation and assessment of the genetically modified organism in EU.	
10.00	10.15	Coffee break	
10.15	11.00	**Title of the Session: Identification of newly inserted genes and gene products; gene expression / suppression.**	**Ilona K. Sørensen**
		Content of the session: An overview of the different inserted genes and gene products that has been produced**.**	
		Objectives of the session: To assess the level of documentation necessary for the evaluation of the insertion and expression of the new gene products in the genetically modified organism.	
11.00	12.30	**Title of the Session: Toxicity and allergenicity assessment**	**Morten Poulsen**
		Content of the session: Overview of the different steps in the toxicity and allergenicity assessment.	
		Objectives of the session:	

		To understand how different toxicity and allergenicity investigations can be used in the risk assessment.	
12.30	13.30	Lunch	
13.30	14.15	**Title of the session:** Group exercise (Case I)	**Tutors of the day**
		Content of the session: Toxicity assessment in practice	
		Objectives of the session: To illustrate toxicity assessment in an example from real life.	
14.15	14.30	Coffee break	
14.30	15:30	**Title of the session: Feeding studies (with laboratory and target animals) for the safety and nutritional assessment of food/feed derived from GM plants.**	**Morten Poulsen**
		Content of the session: Design and performance of feeding studies and how to interpret the observed findings in the studies.	
		Objectives of the session: Give participants an understanding of the strengths and limitations of animal studies.	
15.30	15.45	**Introduction to group exercise (case II)**	**Morten Poulsen**
15.45	16.00	Coffee break	
16.00	17.30	**Title of the session: Group exercise (Case II)**	**Tutors of the day**
		Content of the session: A study report of a 90-day study with a GM-maize.	
		Objectives of the session: The participants should give a critical review of the study report with focus on study design, performance and analysis. Presentation in plenum.	

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Wednesday

Time		Activity	Tutor
8.45	*9.00*	*Registration*	
9.00	*10.45*	**Title of the Session: Appropriate statistical principles and methods for the comparative analysis of food/feed. The rationale and methodology of the environmental risk assessment (ERA) of GMOs. Uncertainty analysis (quantifiable statistical uncertainty, etc.).**	***Joe Perry***
		Content of the session: • The statistical design and analysis of the compositional trials. • Lectures and group discussions	
		Objectives of the session: To increase the understanding of how important the data quality is for the risk assessment. Description of uncertainties that can/will influence risk assessments.	
10.45	11.00	Coffee break	
11.00	12.30	***Title of the Session: Intended vs. Unintended effects***	***Jan W. Pedersen***
		Content of the session: - Introducing the concept of substantial equivalence, which is the key tool for revealing unintended effects - Introducing the OECD consensus document with suggestions for key substances to be analysed for comparison - Other parameters such as agronomic and phenotype parameters useful for comparisons.	
		Objectives of the session: How to assess the results from comparisons between the genetically modified organism and the non-transgenic counterpart.	
12.30	13.30	Lunch	
13:30	15:15	**Title of the Session: Exposure assessment in the context of the evaluation of food and feed derived from GM plants.**	**Cian O'Mahony**
		Content of the session: PP-presentation Lecture Outbreak activities	
		Objectives of the session: Procedures for exposure assessments will be presented as background for group activities. Participants will be split up into	

		different groups that will work on different case studies taken from EFSA opinions.	
15:15	15:30	Coffee break	
15:30	17:00	**Title of the Session:** **Exposure assessment in the context of the evaluation of food and feed derived from GM plants (continued).**	**Cian O'Mahony**
		Content of the session: Continuation of Outbreak activities	
		Objectives of the session: Participants will continue their work on the case studies and are allowed to discuss problems about the exposure assessment with the other groups.	
17:00	17:30	Plenary presentation and discussion of the assessments performed by the groups.	**Tutors of the day**
17:30	18:00	Review of the presentations and activities during the day Feedback/questions/answers on topics and material covered.	**Tutors of the day**

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Thursday

Time		Activity	Tutor
8.45	*9.00*	*Registration*	
		Title of the Session: Intended vs. Unintended effects - cont.	
09:00	10:30	**Title of the Session:** Scope and interplay between molecular characterization, compositional and agronomic characterizations in the identification of unintended effects of GM plants and products.	**Thomas Frenzel**
		Content of the session: PP-presentation and outbreaks activity	
10:30	10:45	Coffee break	
10:45	12:30	**Title of the Session: The rationale and methodology of the environmental risk assessment (ERA) of GMOs**	**Jeremy Sweet**
		Content of the session: PP presentations on: • Scopes of application, including or not cultivation in EU; • Environmental Protection Goals, Problem Formulation and Assessment Endpoints in the ERA	
		Objectives of the session: To give participants a broader and better understanding of various aspects of environmental risk assessments of GMOs.	
12:30	13:30	Lunch	
13:30	15:00	**Title of the Session: Environmental Risk Assessment (ERA) of GM Plants**	**Jeremy Sweet**
		Content of the session: PP presentations on: • Assessing target and non-target intended and unintended effects of GM Plants and their cultivation; Gene flow, fitness and invasiveness of GM plants.	
		Objectives of the session: To give participants a broader and better understanding of various aspects of environmental risk assessments of GM Plants.	
		Coffee break	
15:00	16.45	**Title of the Session: Post-market Environmental Monitoring** **Content of the session:**	

		PP-presentation and lectures to describe the two approaches of post-market environmental monitoring: • Case-specific monitoring (of identified risks) • General surveillance (of unidentified risks).	
		Objectives of the session: To present participants the tools and strategies for monitoring and surveillance of environmental impacts from GM Plants. .	**Jeremy Sweet**
		• At the end of the session participants will be split up into smaller groups. They will be presented different GM plant-cases/problems that illustrate the 2 approaches. The groups will be asked for their proposals to solve the problems	
16:45	17:30	**Plenary presentation and discussion of the work performed by the groups.**	**Tutors of the day**
17:30	18:00	**Review of the presentations and activities during the day. Feedback / questions / answers on topics and material covered.**	**Tutors of the day**

Friday

Time		**Activity**	**Tutor**
8.45	*9.00*	*Registration*	
9.00	10:30	**Title of the Session:** Environmental **Risk Management.**	**Jeremy Sweet**
		Content of the session: Lectures and group discussions	
		Objectives of the session: To give participants an overview of different tools that can be used by risk managers to handle potential GM plant risks.	
10:30	10:45	Coffee break	
10:45	12:00	**Title of the Session: Environmental Monitoring and Risk Management**	**Jeremy Sweet**
		Content of the session: Group discussions – the group will work on the cases that were introduced in the previous sessions.	
		Objectives of the session: The aim of the group work is to give participants a better understanding of different management options to handle risks from GMO plants or plant products.	

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12.00	12.30	**Closing session. Course evaluation**	**Ilona K. Sørensen**
12.30	14.00	Lunch	

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TRAINING COURSE ON

RISK ASSESSMENT

IN ANIMAL WELFARE

DRAFT AGENDA 2014-2016

Monday

Time		Activity	Tutor
13:00	13:30	**Arrival of participants; registration**	
13:30	14:30	**Welcome and introduction**	**TC** **Björn Forkman**
		Content of the session: Opening and welcome address. Overview of the training course activities: general and learning objectives, program and expectations for the course. Presentation of participants.	
14:30	15:15	**Lecture**: **Introduction: What is risk and what is risk analysis?**	**Nils Toft**
		Content of the session: Introduction to the concepts of risk and risk assessment in the context of animal welfare. Introduction to animal welfare risk analysis, including presentation of the three pillars of risk analysis: risk assessment, risk management and risk communication.	
		Objectives of the session: Understand the concepts of risk and hazard; discuss the importance of risk perception; acquire knowledge on the three pillars of risk analysis, recognizing the role of each and the importance of separating tasks among risk assessors and risk managers.	
15:15	15:45	**Lecture**: **What is risk assessment?**	**Nils Toft**
		Content of the session: Overview of the four basic steps of risk assessment: hazard identification, hazard characterization, exposure assessment and risk characterization. Presentation of the main differences between e.g. animal welfare and health risk assessment. Introduce examples of different types of risk assessment, including quantitative risk assessment vs. qualitative risk assessment.	
		Objectives of the session: Understand the differences and similarities of concepts and risk terminology in the various areas of animal welfare. Understand the content, objectives, data requirements and methods of each step of the risk assessment process and understand the differences between quantitative and qualitative risk assessment.	
16:00	16:15	*Coffee break*	
15:45	16:15	**Lecture:** **Risk assessment history and international and national regulatory work**	**Nils Toft & Björn Forkman**

		Content of the session: Overview of animal welfare risk assessment history and regulatory work of international agencies like EFSA and OIE as well as selected national agencies. Introduction to risk assessment guidelines.	
		Objectives of the session: Understand the role and procedures of national and international agencies in the context of animal welfare risk assessment.	
16:15	18:00	**Group exercise:** **Case-study 1:** Identification of risk assessment steps – the case of animal welfare claims	**Nils Toft & Björn Forkman**
		Content of the session: Introduction to short sections of text, for instance a summary from a animal welfare assessment analysis, where the participants should identify the hazard, the risk, the risk manager, the risk assessor and the risk communicator. Groups will be formed by the tutors. Each group will have one preselected case study.	
		Objectives of the session: Consolidate the concepts learned in theoretical lectures.	

Tuesday

Time		Activity	Tutor
		The risk assessment model in animal welfare	
8:45	9:00	*Registration*	
9:00	9:45	**Lecture:** **Concepts, terminologies and methods**	**Sine Norlander & Björn Forkman**
		Content of the session: Introduction to the concepts, terminologies and methods used in the risk assessment of animal welfare. Defining aspects of animal welfare, introducing the Five freedoms, Welfare Quality's® 12 criteria	
		Objectives of the session: Understand the concepts, terminologies and methods used in the risk assessment of animal welfare	
9:45	10:30	**Lecture:** **Risk identification and risk characterization of the environment**	**Sine Norlander & Björn Forkman**
		Content of the session: Introduction to the concepts, terminologies and methods used in the risk identification and risk characterization in the area of animal welfare.	
		Objectives of the session: Understand the concepts, terminologies and methods used in the risk identification and risk characterization in the area of animal welfare	
10:30	10:50	*Coffee break*	
10:50	12:00	**Group exercise:** **Case study 2:** Case study on differences and similarities in animal welfare risk assessment models in relation to the differing animal welfare challenges	**Sine Norlander & Björn Forkman**
		Content of the session: Introduction to the group exercise and time to read assigned scientific papers	
		Objectives of the session: Obtain an understanding of the different risk assessment models in relation to different animal welfare challenges and the effect of model choice on the result	
12:30	14:00	*Lunch*	
14:00	15:30	**Group exercise: (cont'd)**	

		Plenary session: presentation of the group exercise and plenum discussion	**Sine Norlander & Björn Forkman**
15:30	15:45	*Coffee break*	
15:45	16:15	**Lecture:** **Risk assessment of animal welfare on farm**	**Antoni Dalmau**
		Content of the session: Specificities and challenges in the risk assessment of animal welfare on farm	
		Objectives of the session: Understand the specific challenges of animal welfare assessment on farm.	
16:15	16:45	**Lecture:** **Risk-benefit analysis of production systems**	**Antoni Dalmau**
		Content of the session: Specificities and challenges in the risk-benefit assessment of different production systems.	
		Objectives of the session: Understand the methodological challenges in risk-benefit analyses	
16:45	18:00	**Group exercise** **Case study 3: risk-benefit analysis**	**Antoni Dalmau & Björn Forkman**
	-	**Content of the session:** Case-study on different risk-benefit analyses on alternative production systems	
		Objectives of the session: To obtain an understanding of the use of risk-benefit models in relation to animal welfare	

Wednesday

Time		Activity	Tutor
		Animal welfare on transport and at slaughter	
8:45	9:00	*istration*	
9:00	9:45	**Lecture:** **Challenges of animal welfare assessment at transport**	**Antonio Velarde**
		Content of the session: Possibilities of assessing animal welfare on and in relation to transport, animal welfare challenges	
		Objectives of the session: Understand advantages and limitations of different methods for assessments.	
09:45	10:30	**Lecture:** **Challenges of animal welfare assessment at slaughter**	**Antonio Velarde**
		Content of the session: Possibilities of assessing animal welfare at slaughter, primary animal welfare challenges.	
		Objectives of the session: Understand advantages and limitations of different methods for assessments at slaughter.	
10:30	10:50	*Coffee break*	**Antonio Velarde & Björn Forkman**
10:50	12:00	**Group exercise:** **Case-study 4:** Assessing the interaction of risk assessment on farm, on transport and at slaughter	
		Content of the session: Discussion of how the different situations interact to affect the total welfare of the animal, and how this affects the risk assessment models.	
		Objectives of the session: To obtain a basic understanding of the different animal welfare challenges and how they affect the risk assessment	
12:30	14:00	*Lunch*	**Antonio Velarde**
14:00	15:30	**Lecture::** **Animal welfare in a European perspective**	
		Content of the session: Current strategies in animal welfare in Europe, challenges and possibilities	

		Objectives of the session: To obtain a basic understanding of the strategies and possibilities for animal welfare on a European basis	
15:30	15:45	**Coffee break**	**Antonio Velarde & Björn Forkman**
15:45	17:00	**Group exercise:** **Case study 5:** **Assessing animal welfare**	
		Content of the session: Individuals, in groups, will try to estimate a number of animal welfare relevant variables from film and photos	
		Objectives of the session: To obtain a basic understanding of difficulties in assessing a specific animal welfare relevant variables, and in particular how to weigh them against each other	
17:30	18:00	**Group exercise (cont'd)** Plenary session: presentation of the group exercise and plenum discussion	**Antonio Velarde & Björn Forkman**
		Dinner at Hotel Restaurant	

Thursday

Time		Activity	Tutor
		Tools for risk assessment and characterization	
8:45	9:00	*Registration*	
9:00	9:40	**Lecture:** **Systematic literature search in risk assessment**	**Koen Mintiens**
		Content of the session: Introduction to concepts and methods of systematic literature search in risk assessment in the area of animal welfare.	
		Objectives of the session: Obtain basic understanding of how to conduct a systematic literature search in risk assessment in the area of animal welfare, and understand its strength and weaknesses.	
9:40	10:30	**Lecture:** **Tools for modeling different management options in relation to animal welfare risk assessments**	**Koen Mintiens**
		Content of the session: Introduction into concepts of how to translate different animal welfare challenges into welfare risk assessments, including, linear programming, Monte-Carlo simulation.	
		Objectives of the session: Obtain basic understanding of the methods available to assess the risk of animal welfare challenges in different target populations and species.	
10.30	10.50	*Coffee break*	
10.50	12.30	**Group exercise:** **Case study 8:** Tools for modelling different challenges into animal welfare risk assessment	**Koen Mintiens**
		Content of the session: Case study on organic farming and animal welfare in organic farming	
		Objectives of the session: To obtain a basic understanding of some of the important issues in the application of the tools introduced.	
12.30	14:00	*Lunch*	
14:00	14:30	**Lecture:** **Available data bases related to animal welfare**	

		Content of the session: A selection of existing national databases within the EU and their animal welfare related content	**Koen Mintiens**
		Objectives of the session: Understanding of the types of data that is available, their strengths and weaknesses	
14:30	15:30	**Group exercise:** **Case-study 6:** **Use of one measure available in most databases as an iceberg indicator**	**Koen Mintiens & Björn Forkman**
		Content of the session: Introduction to the issues around using a single measure as an iceberg indicator. Group discussions on the selections of mortality risk assessment tools.	
		Objectives of the session: To obtain a basic understanding on the challenges/difficulties in assessing a single variable as an animal welfare measure	
15:30	15:45	*Coffee break*	
15:45	17:30	**Group exercise, cont'd**	
17:30	18:00	**Discussion in plenum** Presentation of the group exercise and plenum discussion	**Koen Mintiens & Björn Forkman**
		Dinner at Hotel Restaurant	

TRAINING COURSE ON

RISK ASSESSMENT

IN ANIMAL HEALTH

DRAFT AGENDA 2015-2016

Monday

Time		Activity	Tutor
13:00	13:30	**Arrival of participants; registration**	
13:30	14:30	**Welcome and introduction**	**Nils Toft**
		Content of the session: Opening and welcome address. Overview of the training course activities: general and learning objectives, program and expectations for the course. Presentation of participants.	
14:30	15:15	**Lecture**: **Introduction: What is risk and what is risk analysis?**	**Nils Toft**
		Content of the session: Introduction to the concepts of risk and risk assessment in the context of animal health. Introduction to animal health risk analysis, including presentation of the three pillars of risk analysis: risk assessment, risk management and risk communication.	
		Objectives of the session: Understand the concepts of risk and hazard; discuss the importance of risk perception; acquire knowledge on the three pillars of risk analysis, recognizing the role of each and the importance of separating tasks among risk assessors and risk managers.	
15:15	15:45	**Lecture**: **What is risk assessment?**	**Nils Toft**
		Content of the session: Overview of the four basic steps of risk assessment: hazard identification, hazard characterization, exposure assessment and risk characterization. Introduce examples of different types of risk assessment, including quantitative risk assessment vs. qualitative risk assessment.	
		Objectives of the session: Understand the differences and similarities of concepts and risk terminology in animal health. Understand the content, objectives, data requirements and methods of each step of the risk assessment process and understand the differences between quantitative and qualitative risk assessment.	
16:00	16:15	*Coffee break*	
15:45	16:15	**Lecture:** **Risk assessment history and international regulatory work**	**Preben Willeberg**

		Content of the session: EU and international regulatory framework including the OIE standards and the SPS agreement of the WTO. Introduction to risk assessment guidelines.	
		Objectives of the session: Understand the role and procedures of international agencies in the context of animal health risk assessment.	
16:15	18:00	**Group exercise:** **Case-study 1:** Identification of risk assessment steps – the case of animal health claims	**Nils Toft + Preben Willeberg**
		Content of the session: Introduction to short sections of text, for instance a summary from a import assessment analysis, where the participants should identify the hazard, the risk, the risk manager, the risk assessor and the risk communicator. Groups will be formed by the tutors. Each group will have one preselected case study.	
		Objectives of the session: Consolidate the concepts learned in theoretical lectures.	

Tuesday

Time		Activity	Tutor
		Qualitative import risk assessment (IRA)	
8:45	9:00	*Registration*	
9:00	9:45	**Lecture:** **Concepts, terminologies and methods**	**Marcus Doherr**
		Content of the session: Introduction to the concepts, terminologies and methods used in the qualitative (import) risk assessment	
		Objectives of the session: Understand the concepts, terminologies and methods used in the qualitative import risk assessment	
9:45	10:30	**Lecture:** **Problem formulation**	**Marcus Doherr**
		Content of the session: IRA initiated by the identification of a pathway or a commodity; IRA initiated by the identification of a disease or a pathogen; IRA initiated by the review or revision of a policy; Formulation of the risk question(s)	
		Objectives of the session: Understand the importance of the risk question in relation to the IRA	
10:30	10:50	*Coffee break*	
10:50	12:00	**Group exercise:** **Case study 2:** Case study on problem formulation in IRA	**Marcus doherr** **Nils Toft** **Preben Willeberg**
		Content of the session: Introduction to the group exercise and time to read assigned scientific papers	
		Objectives of the session: Obtain an understanding of the differences in risk assessment models due to differences in underlying problem formulation	
12:30	14:00	*Lunch*	
14:00	15:30	**Group exercise: (cont'd)**	

		Plenary session: presentation of the group exercise and plenum discussion	**Marcus doherr** **Nils Toft** **Preben Willeberg**
15:30	15:45	*Coffee break*	
15:45	16:15	**Lecture:** **Assessment of introduction and spread of a disease or disease agent**	**Marcus Doherr**
		Content of the session: Probability of entry; Probability of establishment; Probability of spread (host availability).	
		Objectives of the session: Understand how to assess introduction and spread.	
16:15	16:45	**Lecture:** **Assessment of consequences associated with introduction and spread**	**Preben Willeberg and Nils Toft**
		Content of the session: Impact on susceptible host population; Socio-economic and environmental consequences	
		Objectives of the session: Understand the methodological challenges in assessing consequences	
16:45	18:00	**Group exercise** **Case study 3: Qualitative Import Risk Assessment**	**Marcus Doherr and Preben Willeberg**
	-	**Content of the session:** Case-study on selected Qualitative IRA	
		Objectives of the session: To obtain an understanding of the use of Qualitative IRA	

Wednesday

Time		Activity	Tutor
		Data for Risk Assessment and Quantitative methods	
8:45	9:00	*istration*	
9:00	9:45	**Lecture:** **Data, statistics and probability theory**	**Koen Mintiens and Nils Toft**
		Content of the session: Introduce the typical data used for risk assessment and how to describe, analyze and model with data.	
		Objectives of the session: Obtain a feeling for the data and how to use it in IRA.	
9:45	10:30	**Plenary Exercise:** **Data, statistics and probability theory**	**Koen Mintiens and Nils Toft**
		Content of the session: Exercises in simple data management, statistics and probability theory. Introduction to course software.	
		Objectives of the session: To get an introduction to working with data.	
10:30	10:50	*Coffee break*	
10:50	12:30	**Group exercise:** **Case-study 4:** Variability and Uncertainty	**Koen Mintiens and Nils Toft**
		Content of the session: Through examples variability and uncertainty will be presented and discussed, to make the participant familiar with these concepts and their importance in quantitative risk assessment	
		Objectives of the session: To obtain a basic understanding on variability and uncertainty and how to deal with these	
12:30	14:00	*Lunch*	
14:00	14:45	**Lecture :** **An example of a Quantitative IRA**	**Koen Mintiens and Nils Toft**
		Content of the session: An example of a quantitative IRA will be presented	
		Objectives of the session: To understand the different steps in a quantitative risk assessment	

14:45	15:45	**Plenary Exercise:** **Working with Quantitative IRA**	**Koen Mintiens and Nils Toft**
		Content of the session: The example from the lecture will be demonstrated and used as a tutorial, while studying the effect of small changes.	
		Objectives of the session: To try working with a quantitative risk assessment model	
15:45	16:00	**Coffee break**	
16:00	17:30	**Group exercise:** **Case study 5:** Sensitivity analysis in quantitative risk assessment	**Koen Mintiens and Nils Toft**
		Content of the session: The groups will work with a model to do sensitivity analysis on selected parameters	
		Objectives of the session: To obtain a basic understanding of the use of quantitative models	
17:30	18:00	**Group exercise (cont'd)** Plenary session: presentation of the group exercise and plenum discussion	
		Dinner at Hotel Restaurant	

Thursday

Time		Activity	Tutor
		Quantitative Risk Assessment	
8:45	9:00	*Registration*	
9:00	9:40	**Lecture:** **Constructing a Quantitative import risk assessment**	**Koen Mintiens**
		Content of the session: Introduction into concepts and methods of event tree analysis and other tools for building a quantitative IRA.	
		Objectives of the session: Obtain basic understanding of how to construct a quantitative IRA	
9:40	10:30	**Lecture:** **Modeling issues in Quantitative IRA**	**Koen Mintiens**
		Content of the session: Introduction of the methodologies and modeling issues related to quantitative IRA.	
		Objectives of the session: Obtain basic understanding of the modeling methods, their limitations and potential for different problems	
10.30	10.50	*Coffee break*	
10.50	12.30	**Group exercise:** **Case study 6:** Constructing a quantitative IRA	**Koen Mintiens and Nils Toft (+Anette Boklund)**
		Content of the session: Case study on constructing a quantitative IRA	
		Objectives of the session: To obtain a basic understanding of the modeling approach.	
12.30	14:00	*Lunch*	
14:00	15:00	**Lecture:** **Risk assessment of spread of a pathogen – Simulation models**	
		Content of the session: Introduction to the simulation models for spread of exotic diseases	**Anette Boklund**
		Objectives of the session: Understand the concept of simulation models for spread of disease	

15:00	15:30	**Group exercise:** **Case-study 7:** Simulating Foot-and-Mouth disease in Denmark	**Anette Boklund and Nils Toft**
		Content of the session: The groups will work with a case study based on simulation of FMD in Denmark.	
		Objectives of the session: To obtain a basic understanding on the models used to study spread of exotic diseases as well as the potential for these tools to assess socio-economic consequences.	
15:30	15:45	*Coffee break*	
15:45	17:30	**Group exercise, cont'd**	
17:30	18:00	**Discussion in plenum** Presentation of the group exercise and plenum discussion	**Anette Boklund and Nils Toft**
		Dinner at Hotel Restaurant	

Friday

Time		Activity	Tutor
		Identification of appropriate risk management options	
8:45	9:00	*Registration*	
9:00	9:45	**Lecture:** **Risk Management**	**Preben Willeberg**
		Content of the session: Examples on how the results of animal health risk assessments are communicated, and how communication strategies and different options are identified and selected. Discussion of non-scientific factors important to consider in the communication of animal health risk communication to the public and to others concerned.	
		Objectives of the session: Discuss the use of animal health risk communication and the decisions on different control options and mitigation strategies. Provide the participants with a basic understanding of the importance of appropriate communication of animal health risk assessment results.	
9:45	10:30	**Presentation of case-studies 1**	**Preben Willeberg, Anette Boklund and Nils Toft**
		Content of the session: Each group will present their case-study. The presentation will be followed by a discussion, with feedback from trainers and other participants.	
		Objectives of the session: The groups will be able to present the output of their work during the training and demonstrate acquired concepts. The feedback from trainers and participants is expected to provide additional input.	
10.30	11.00	*Coffee break + check out of rooms*	
11.00	11.45	**Presentation of case-studies, cont'd** Questions – evaluation - discussion	**Preben Willeberg, Anette Boklund and Nils Toft**
11.45	12.30	**Closing session:** Course evaluation	**Nils Toft**
12.30	14.00	*Lunch*	

TRAINING COURSE ON

ENVIRONMENTAL RISK ASSESSMENT

- AGENDA -

DRAFT AGENDA 2015-2016

Monday		Introduction to the training and to environmental risk assessment	
14:00	14:15	**Welcome & Introduction:** Introduction to programme, tutors, and domestic arrangements.	
14:15	14:45	**Icebreaker (group exercise)** • Brief introduction of participants • Break up in small groups and discussion of participant's professional role and institution, current related issues and expectations from this workshop. • Presentation and discussion of results	**Aurélie Bois-Macherey and Heinz-Werne Engel**
14:45	15:45	**Session 1 : Environmental compartments** • Identifying different compartments • Identifying links between compartments (water, air, soil,…) • Sustainable concepts and needed equilibrium between each environmental compartments	**Aurélie Bois-Macherey and Heinz-Werne Engel**
15:45	16:00	*Coffee break*	
16:00	17:15	**Session 2 : Environmental protection goals** • Short history on environmental considerations since 1960 • Update on International and European conferences on environmental and health matters	**Aurélie Bois-Macherey and Heinz-Werne Engel**
17:15		Close of Day 1	
Tuesday		**Environment and legal issues**	
08:45	09:00	Registration	
09:00	10:30	**Session 3 : Overview of global legislation** • The international framework • Overarching EU legislation • International Standards	**Harri Moora et Heinz-werner Engel**
10:30	11:00	*Coffee break*	
11.00	13:00	**Session 4** : **Environmental legal assessment : goals and methodologies** • Legal registers and conformity assessment • Legal assessment as the first step of global environmental risk assessment	**Harri Moora et Heinz-werner Engel**
13:00	14:00	*Lunch*	
14:00	15:00	**Session 5: Environmental Aspects identification (group exercise)** • In groups : Based on 5 real case studies in different sectors : identifying environmental aspects and impacts	**Harri Moora et Heinz-werner Engel**
15:00	15:15	*Coffee break*	

15:15	17:00	**End if Session 5: Environmental Aspects identification (group exercise)** • Discussion and exchanges between groups	**Harri Moora et Heinz-werner Engel**
17:00		Close of Day 2	
Wednesday		**Life stage assessment**	
08:45	09:00	Registration	
09:00	10:30	**Session 6a : Life-stage assessment- Introduction, goal and purpose** • Different existing scopes and methodologies • Defining : The functional unit, the system boundaries, the methods, the impact categories chosen	**Anne-Françoise Woitchick and Agnes Baule**
10:30	11:00	*Coffee break*	
11:00	13:00	**Session 6b : Life-stage assessment : step 1 – Life stage inventory (including case study)** • Inventory of flows from and to nature for a product system (inputs of water, energy, and raw materials, and releases to air, land, and water) • Collect and use of datas : methods, difficulties, expectations • Possible interpretations	**Anne-Françoise Woitchick and Agnes Baule**
13:00	14:00	*Lunch*	
14:00	15:30	**Session 6c : Life-stage assessment : step 2 – Life stage impact assessment (including case study)** • selection of impact categories, category indicators, and characterization models; • classification of results • impact measurement : by categories and in total	**Anne-Françoise Woitchick and Agnes Baule**
15:30	16:00	*Coffee break*	
16:00	17:00	**Session 6d : Life-stage assessment : step 3 – Interpretation (including case study)** • Summurazing step 1 and 2 • Analysis datas and results to emphasis significant issues • Conclusions and recommendations on the functional units positive and negative environmental impacts	**Anne-Françoise Woitchick and Agnes Baule**
17:00		Close of Day 3	
Thursday		**Environmental exposire assessment**	
08:45	09:00	Registration	
9:00	10:00	**Session 7 : Non-target organisms and risk assessment evaluation** • Goals and purpose • Methods	**Agnes Baule**
10:00	10:30	**Session 8a : Environmental exposure assessment :** • Goals and purpose • Methods	**Agnes Baule**

10:30	*11:00*	*Coffee break*	
11:00	13:00	**Session 8b : Environmental exposure assessment :** • Receptor based approach • Exposure and route of exposure • Measurement of exposure (direct and indirect approachs) • Exposure factors • Acceptable Exposure for Occupational Environments	**Agnes Baule**
13:00	*14:00*	*Lunch*	
14:00		**Session 9 : Field visit** Half day field visit to outbreak sites and other relevant sites to have Practical visit and discussion on how to carry out an environmental risk assessment Participants will be split into small groups each lead by a tutor.	**Aurélie Bois, Harri Moora and Heinz-Werner Engel**
Friday		**Review of key points and learning outcomes**	
08:45	09:00	Registration	
09:00	10:00	**End of Session 9:** • Review of field visit and key observations plus questions and answers • Conclusions and identify best practices	**Aurélie Bois, Harri Moora and Heinz-Werner Engel**
10:30	*11:00*	*Coffee break*	
11:00	12:30	**Session 10 : Evaluation and conclusions** • Evaluation of the participants • Evaluation of the trainings and the tutors / coordinators • Questions and answers	**All tutors**
12:30		Close of the training