

Annex

Posters of each national panel conducted during the WP3 PREPARE Project

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Introduction

In the framework of the FP7 project PREPARE, **stakeholder panels** have been organised to discuss the management of **contaminated goods** in the aftermath of a nuclear accident.

The Belgian panel included organisations with roles or responsibilities in nuclear / radiological emergency management, representing stakeholders affected or having an interest in decisions. The establishment of the panel relied on previous experience from the European projects FARMING and EURANOS. Activities carried out were: i) **policy Delphi** and ii) **two panel meetings**.

Objectives

Exchanging ideas and views concerning the **development of strategies, guidance and tools** for the management of the contaminated products, taking into account the views of a wide range of stakeholders, and using lessons learned from the Fukushima accident.

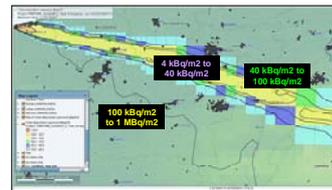
Methodology



On-line Delphi survey:
example of question and corresponding cloud tag



Visualisation of roles and challenges faced by participating organisations in different emergency management phases



Scenario used in the panel on other goods

On-line policy Delphi

- Structured communication technique
- Open questions, qualitative analysis
- Gather different opinions and provide opportunity to react and assess differing viewpoints (2 or more rounds)

Round 1: 15 items: five general questions (e.g. most problematic aspects in previous contaminations), five questions on contaminated food (e.g. flexible vs. adaptable MPL) and five questions on other goods (e.g. stakeholder involvement in measurement of rad. in goods).

Round 2: 3 items (e.g. communication)

Scenario-based panel discussions

First meeting: contaminated food

Topics: i) the experience and conclusions of the FARMING project; ii) the roles and responsibilities of the different organisations; iii) an NPP accident scenario.

Second meeting: other goods

Topics: i) Fukushima experience; ii) new BSS; iii) NPP accident scenario; iv) scenario of malevolent use of rad. in consumer goods.

All discussions were recorded, transcribed and analysed with the ATLAS software for qualitative analysis.

Participants

- Federal Agency for Nuclear Control
- Federal Agency for the Safety of the Food Chain
- Farmer unions: Boerenbond, ABS, FWA
- Belgian Confederation for Dairy Industry
- The Env., Nature and Energy Dept., Flemish Gov.
- Food Industry Federation
- Belgian National Agency for Radioactive Waste
- Belgoprocess, waste management company
- Harbour of Antwerp
- Public Health
- BelV, regulatory control authority
- CONTROLATOM, certified inspection body of class
- NITTO-Europe, private company
- IRE/ IRE-Bit- National Institute for Radioelements.
- SCK•CEN, Belgian Nuclear Research Centre

Conclusions

- Need for **standardisation and harmonisation** (technical and legal). Can this be achieved in **practice**?
- **MPLs** need further clarification; **consumers' acceptance** and **scale / characteristics** of the contamination play a key role when deciding in favour of a **graded or a conservative approach**;
- Reflection framework needed to establish the **processes for the management of contaminated non-food goods**; preliminary dose assessments; operational levels; legislation and guidance;
- Communication is a key point: "**helpdesk**" serving as contact point for stakeholders; comm. material and templates prepared in advance; clarification of **responsibilities for post-accidental communication**. How to communicate that a product is "safe"?
- Emergency planning should pay more attention to **long-term phase** (measurement capabilities and strategies, responsibility and flow of communication with/between stakeholders and the public, waste management strategies) and **socio-economic aspects** (including compensations schemes) and establish **protocols** between the federal level and the regions;
- Need for better **knowledge management and transfer** among/ to stakeholders;
- Emergency exercises should analyse more in depth the **post-crisis situation** (e.g. measurement and sampling, countermeasures, communication, socio-economic aspects), and have **larger involvement** of potentially affected stakeholders.

Finland: critical industry

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Background

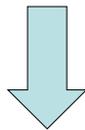
Several interdisciplinary groups including stakeholders are working on food, feed and drinking water safety. Also, specific workshops on this topic have been organized in recent years.

STUK—Radiation and Nuclear Safety Authority has contacts with different sectors of industry during suspected cases of radiological contamination. No platform, however, existed where different sectors of industry may discuss radioactive contamination with experts and exchange ideas. Therefore, we decided to focus on critical industries and to organize the panels on the topic of *contamination of industrial products*.

First panel

Short introductions were given by experts after which the following topics were discussed:

- Radioactive substances in industrial import and export products
- Regulations regarding radiological emergency
- STUK's strategy on measurements in radiological emergency
- Product quality and measurements of radioactivity in scrap metal plants
- Control of contaminated products at the customs



Waste Framework Directive requires efficient recycling. Monitoring of contaminated materials is essential.

In emergency situation, decision on maximum permissible levels must be made promptly, licensing must be fast and straight-forward.

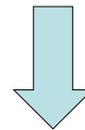
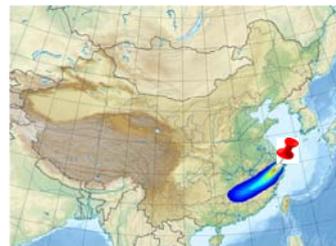
Public communication is very important and should be coordinated by STUK.

Invited Stakeholders

Industry Pools	Other relevant stakeholders
Chemical Industry pool	Finnish Commerce Federation
Forest Industry pool	Customs
Plastic and Rubber Industry pool	NESA—National Emergency Supply Agency
Construction pool	Finnish Freight Forwarding and Logistics
Electronics Industry pool	
Information Technology pool	

Second panel

In this panel, we chose an accident scenario in a NPP outside Europe where many companies have subcontractors/factories. What would be the effects on industries?



Communication is an intersecting theme in all aspects of emergency management. The group agreed to cooperate for improving the present state.

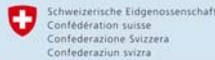
Radiological emergencies should be included in companies' crisis management plans (protection of workers and production, communication)

Emergency plans in overseas facilities should be found out. In-house plans should take these into consideration.

A well-thought monitoring strategy optimizes the use of monitoring capacity. In order to prepare strategies, maximum levels and types of certification systems must be known beforehand.

FRANCE / SWITZERLAND PANELS

Stakeholders' point of view on the management of the contaminated food



+ PROCESS & METHODOLOGY

- Reflection on contaminated foodstuff management
- Constitution of two stakeholders' panels:
 - Consumers (Union of Consumers, People's Aid NGOs, Environmental and Health NGOs...)
 - Producers / Retailers (local producers, Nestlé...)
- Integration of feedback experience of countries concerned by this issue, after Chernobyl and Fukushima accidents
- Constitution of a 'Mirror Panel' involving institutional organisations concerned by contaminated food management and control

+ RESULTS

3 main messages were expressed by the different stakeholders:

- Everything must be done to avoid any accident -> citizens are victims
- Totally new situation for all actors -> loss of references and values; nobody will be fully ready; unrealistic to try to predict everything; be ready to react quickly
- The concept of Maximum Permitted Levels (MPLs) is useful but questionable -> needs of adaptability and accountability based on monitoring and improvement process (solidarity & ethics)

- 20-22 January 2016 **Dissemination Workshop of the PREPARE Project - Bratislava**
- 12-13 November 2015 **Final PREPARE WP3 Workshop - Paris**
- 9 February 2015 Presentation of the results to the 'Mirror' Group & the National Post Accident Committee
- 1 December 2014 Joined meeting of the two French-Swiss Panels
- 3 November 2014 2nd Meeting of the 'Mirror' Group
- 5 June 2014 2nd Meeting of the 'Producers/retailers' Panel
- 25 April 2014 2nd Meeting of the 'Consumers' Panel
- 25 March 2014 1st Meeting of the 'Mirror' Group
- 13 February 2014 1st Meeting of the 'Producers/retailers' Panel
- 4 February 2014 1st Meeting of the 'Consumers' Panel
- February 2013 Kick-off Meeting of the PREPARE Project



+ CONCLUSION AND PERSPECTIVES

PREPARE WP3 = opportunity to:

- Open dialogue between authorities, experts, industries, producers, retailers, consumers and NGOs
- Engage reflection beyond emergency action plans -> focussed on transition and long term phases
- Develop further cooperation with Japanese partners and with the NERIS Platform



Discussion of national stakeholders on management of contaminated goods

Vasiliki Tafili, Vasiliki Kamenopoulou, Costas Hourdakos, Constantinos Potiriadis
Greek Atomic Energy Commission (EEAE)

Introduction background

The Fukushima nuclear accident (2011), for a non-affected country such as Greece, acted as an exercise to test the authority's own capabilities in emergency response. The management of contaminated goods, including cooperation and coordination among stakeholders, proved to be crucial in the post-accident period. In Greece, a non-nuclear country, the management of post-accident situations is based mainly on the provisions included in EC regulations and guides. The Greek Atomic Energy Commission (EEAE), as the national radiation safety regulatory authority, organized and coordinated the national panel of stakeholders involved in the monitoring of contaminated goods, under the scope of its participation in the PREPARE project (WP3).

Methodology - timetable



Stakeholders



- **Authorities/organisations** in charge of the control and management of goods at the national level in case of contamination
- **Laboratories** involved in emergency management plans
- **Scientific and professional associations**
- **Other bodies/unions** related to specific country-related activities

Main results

Education, training and information

- need for further and continuous training of stakeholders personnel,
- education and information activities within the organizations on radiation and radiation protection matters,
- further cooperation with EEAE in terms of training, information and coordination.

Infrastructure

- identification of equipment upgrading needs,
- need for familiarization of industry with existing sample analysis procedures.

Coordination

- concerns related to the coordination among involved organizations,
- european – wide decisions are expected and will be followed in case of nuclear emergency,
- there are general emergency plans in place in each industry, including risk assessment; the same plans are expected to be used in case of radiological contamination,
- different response capabilities from company to company.



Ireland's Stakeholder Panel for PREPARE WP3

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Background

- Ireland has no nuclear facilities
- Following a nuclear accident abroad the most significant route of potential exposure to the Irish population would be the consumption of contaminated food
- Most of the ingestion dose could be averted through the introduction of protective actions

Irish Panel's Objective

To investigate the issues involved in placing Irish produced foodstuffs (meat, dairy and crops) in the marketplace (at home and abroad) following contamination from a nuclear accident abroad



Panel Members

Government Departments	<ul style="list-style-type: none"> • Department of Agriculture, Food & the Marine • Department of the Environment, Community & Local Government
State Agencies	<ul style="list-style-type: none"> • Radiological Protection Institute of Ireland (now EPA Office of Radiological Protection) • Food Safety Authority of Ireland
Farming Sector	<ul style="list-style-type: none"> • Irish Farmers Association
Dairy Sector	<ul style="list-style-type: none"> • Irish Dairy Industries Association • Irish Dairy Board
Meat Sector	<ul style="list-style-type: none"> • Meat Industry Ireland
Crops Sector	<ul style="list-style-type: none"> • Teagasc • Irish Grain and Feed Association
Seafood Sector	<ul style="list-style-type: none"> • Sea Fisheries Protection Agency
Retail Sector	<ul style="list-style-type: none"> • Tesco • Musgrave Group
Consumer Sector	<ul style="list-style-type: none"> • Consumer Association of Ireland

Meetings

- 2 meetings - May & October 2014 in the National Emergency Co-ordination Centre in Dublin
- Approximately 20 participants at each meeting
- Meetings combined presentations with open discussions
- First meeting – issues surrounding contamination of food, protective actions that could be implemented to reduce radioactivity in food, and the impact on trade if food was contaminated following a nuclear accident
- Second meeting - feasibility of various agricultural protective actions



Issues Identified

Public Response	Communications	Measurements	Trade	Agricultural Protective Actions
<ul style="list-style-type: none"> • Need to understand public perception of risks • Should be prepared for irrational responses e.g. panic buying • Consumers cannot be treated as a single entity e.g. children's diets • Emergency response structures must be flexible enough to handle any type of emergency • More education for the public on radioactivity needed 	<ul style="list-style-type: none"> • Clear communication paths needed to avoid confusion • Timely and accurate information can help to maintain trust and confidence • Notify industry/stakeholders directly and quickly • Develop prepared messages • Consider who will deliver the communication • Use non-technical language • Online distribution of information important 	<ul style="list-style-type: none"> • Sample measurements to reassure and certification • Ireland has been ISO 17025 accredited laboratory for measuring radioactivity in food and environmental samples • Concern regarding Laboratory capacity in time of emergency • Investigate use of other laboratories for screening • Contamination with radioactivity will last a long time 	<ul style="list-style-type: none"> • Retailers will not buy what they cannot sell • Customer confidence is key • 90% of Irish beef and dairy products exported - how to influence external markets? • Ireland too small to regionalise • Ireland's message needs to be aligned with that from other EU countries • EU response will be critical • Cost of food will increase 	<ul style="list-style-type: none"> • Dilution not acceptable • Disposal of contaminated food could cause problems • Cost of protective actions - who will pay? • Availability of clean fodder • Capacity to house animals • Logistics for live animal monitoring • Food labelling to effect protective actions used • Communications with farmers

Conclusions

- Even an accident at the nearest nuclear power plant in the UK will not cause significant radiation exposure to people in Ireland or result in immediate health effects if appropriate agricultural and food protective actions are implemented
- Agriculture and food exports are very important to the Irish economy and must be protected following a nuclear accident abroad
- One of the most important issues in the event of a nuclear emergency is good communications - all stakeholders in the Irish food industry must be involved in the communications plan
- Ireland's National Emergency Plan for Nuclear Accidents is being reviewed - outcomes from PREPARE WP3 will be addressed in it

Stakeholder interactions in nuclear emergency response for the Dutch food supply chain

Esther van Asselt, Puck Brandhoff and Chris Twenhöfel



Background

In the Netherlands, EPAn (Unit Planning and Advice – Nuclear) assesses the radiological situation and advises the national and regional levels on protective actions. This advice is based on radiological and human health expertise provided by the Crisis Expert Team (CET) radiation. At the start of the project, CET lacked insight in the measures taken by food producers in case of a nuclear accident and communication with these stakeholders was limited. Furthermore, experience on recovery measures was primarily focused on the first stage after an incident.

Objective

- To create awareness of the emergency management problems related to the contamination of food and feed after large scale accidents.
- To establish cooperation between industry and government and learn from each other's action plans.
- To learn about countermeasure options available for the food industry and the applicability of predefined Maximum Protection Limits (MPLs)

Methodology

In-depth interviews were organised with governmental institutes (n=5), organisations in the food supply chain (n=5) and NGOs (n=3) as a preparation for two panel meetings. The aim of these meetings was to get acquainted and learn about the decision making process regarding nuclear emergency response. The two meetings focused on a case study with a fictive incident in the NPP Borssele (Figures 1 and 2).

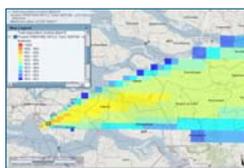


Figure 1. Model calculations performed with RODOS. Results show the contaminated area around Bergen op Zoom for the Iodine group (Bq/m²) after a fictive incident in Borssele.

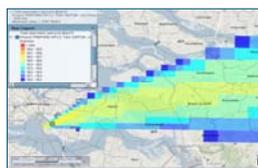


Figure 2. Model calculations performed with RODOS. Results show the contaminated area around Bergen op Zoom for the Caesium group (Bq/m²) after a fictive incident in Borssele.

Acknowledgements

The financial contribution from the Dutch Ministry of Economic Affairs and the EU FP7 project PREPARE is highly appreciated.

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In the first meeting (n=13), problems encountered after an incident were discussed as well as responsibilities of the various stakeholders. The second meeting (n=12) focused on intervention measures for three products (pork, dairy and carrots) within one municipality. The effects for I-131 and Cs-134/137 were studied. Two groups of participants were asked to evaluate the feasibility and social aspects of five packages of intervention measures. Subsequently, they had to weigh the importance of human health, costs, feasibility and social aspects (acceptability and reassurance of the population). An MCDA approach was followed using Web-HIPRE (<http://hipre.aalto.fi>)

Results

The first panel meeting showed that a good cooperation is needed between government and industry in order to quickly exchange information and to streamline communication towards clients and consumers. The MCDA-analysis in the second meeting showed that the two groups of participants made different choices (figure 3).

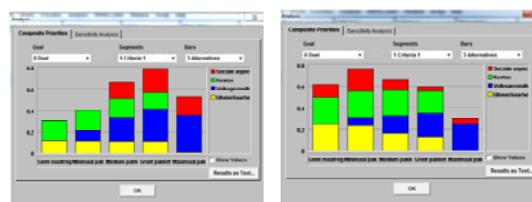


Figure 3. Outcome of the MCDA analysis in two groups of participants. Five packages of intervention measures ranging from no measures to maximum measures were weighed for human health aspects, cost aspects, feasibility and social aspects.

Lowest scores were obtained for package 1: no measures and package 5: maximum measures. The first package scores badly on human health and social aspects, whereas the last package scores badly on costs and feasibility. According to the participants, measures that result in levels above the MPLs are only acceptable in case of food shortages. Stakeholders stressed that good communication is essential for acceptance and reassurance of the population.

Conclusions

- PREPARE initiated cooperation between industry and government.
- MCDA helps to gain insight into the various aspects involved in the decision making process.
- Communication aspects and export interests need to be included in decision making.
- A good communication between stakeholders and with the public is extremely important.
- Input from both government and industry is needed in order to adapt current nuclear emergency response protocols.

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Stakeholder seminars in Norway

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Aim:
Participatory process with a large number of stakeholders as input to a more resilient emergency preparedness planning and response at the regional level

Background
Norwegian nuclear and radiological emergency preparedness was developed post-Chernobyl and is constantly evolving to meet the needs of today. The Norwegian Nuclear Preparedness Organisation consists of the Crisis Committee for Nuclear Preparedness, the Crisis Committee's Advisors, and the County Governors. The County Governors are the Crisis Committee's representatives on the regional level (cf. Royal Decree of 23 August 2013). They have the responsibility to coordinate preparedness and recovery at the regional level in cooperation with the municipality administrations and local offices of various authorities. The standard preparedness seminars are focusing mostly on the national plans/actions/actors. We acknowledge that local and regional actors will have an important part to play in implementing mitigating actions in case of radioactive fallout. We wanted to measure how a series of dialogue seminars increase the learning, networking, involvement and problem solving compared to a standard competence building seminar.

Scenario used:

- Explosion in the HAL tanks at the Sellafield reprocessing plant
- 1% of the estimated inventory reaches the atmosphere and is transported to Norway (Figure 1a)
- Substantial deposition estimated for Norway, in particular the south-west coast (Figure 1b), comparable to post-Chernobyl levels (Figure 1c)

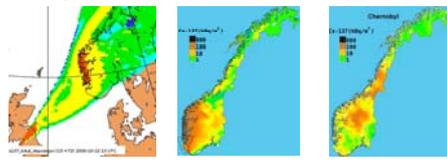


Figure 1: Modelled deposition (kBq/m² of Cs-137) in Norway from a hypothetical accident at the Sellafield reprocessing plant. The scenario is based on a 1% release of Cs-137 from the 21 HAL tanks and real weather conditions on 19 October 2008. a) the release being transported to Norway; b) deposition across Norway; the county of Rogaland framed on the bottom left; c) deposition across Norway after the Chernobyl accident.

Methodology:
The seminars were arranged as a cooperation between the County Governor of Rogaland, NRPA/PREPARE and CERAD. Participants received an e-mail with invitation (Figure 2) and a document with details about the aims of the seminar and the scenario to be discussed.



Figure 2 – Invitations to the seminar

The seminars were planned in a way which allowed to compare the effect of a standard competence-building seminar, where participants were given lectures on various subjects and a more interactive seminar with group discussions within and across sectors (Table 1). Two questionnaires were designed to measure whether a series of dialogue seminars increases the learning, networking, involvement and problem solving compared to a standard competence-building seminar.

Table 1 - Overview of the three seminar days

Date 2015	Seminar day	Venue	Focus	Number of participants
26 January	1	Hjelmeland	Competence building (lectures)	62
27 January	2	Hjelmeland	Discussions within and across sectors	48
10 March	3	Stavanger	Partly lectures, partly discussions across sectors	41

Acknowledgements:
The seminars were arranged with the partial support of EC FP7 Grant agreement no: 323287, the Research Council of Norway (RCN) through its Centres of Excellence funding scheme, project number 223268/F50, and RCN project numbers 221391/E40 and 226130/E40.

Participants:
Regional actors (County Governor Administration officers, aquaculture industry, fisheries, police force, fire department, County Medical officer, Home Guard, Food Safety regional office, drinking water producer, Friends of the Earth Rogaland, Red Cross Rogaland, Civil Protection Rogaland, Farmers Union Rogaland, TINE dairy producer, Norwegian Sheep and Goat Association, Health Corporation Stavanger, Health Corporation Fonna); **national actors** (NRPA, Food Safety Authority, Directorate for Civil Protection, Directorate for fisheries, Seafood Council, Consumer Council, Farmers Union); **local actors** (farmer, fisherman, Agricultural chief officer, Mayor); **Municipality representatives** (Eigersund, Hjelmeland, Randaberg, Sandnes, Sola, Stavanger, Vindafjord and Tysvær municipalities) and **experts** (CERAD, Marine Research Institute, National Institute of Nutrition and Seafood Research, University of Oslo).



Results:
Main issues raised in the discussions on day 2:

- Need for cooperation and coordination of efforts
- Roles and responsibilities of actors should be clarified
- More seminars and exercises are required
- Importance of correct and relevant information, coordination of information and availability of information channels
- Measurement capacity and certifying quality of the products
- Possible health effects for Norwegian population because they consume local food
- Preparation on documentation should be done in peacetime
- Issues of drinking water should be addressed

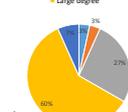
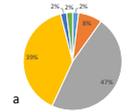
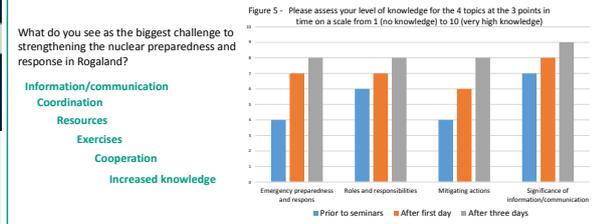
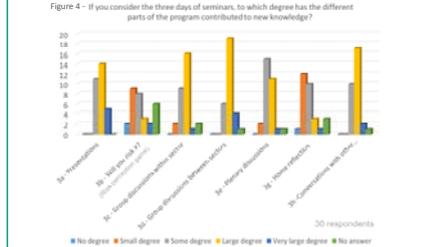


Figure 3 – Percentage of answers to question 4To which degree have you gained better understanding of the challenges faced by your own sector? a) after day 1 (n=51), b) after day 3 (n=30)



Conclusions:

- Roles and responsibilities on regional and local level are not clearly understood and shared by the actors. There is an unrealistic expectation at the regional/local level that the Crisis Committee will instruct them in a very detailed way on what to do in case of a nuclear/radiological accident
- A wide variety of stakeholders is beneficial for increased understanding of the challenge as a whole and for better networking
- Group discussion sessions and informal conversation between participants are significant elements in stakeholder involvement, besides presentations
- A series of meetings with ample time for discussions increase the understanding of the roles and responsibilities, the networking and the new knowledge for most participants
- Most participants found the seminars useful for their work/organisation
- The seminars contributed to increased wish/willingness to work more on R/N emergency preparedness (for most actors)

Management of Contaminated Goods after a Nuclear Accident: Overview of the Portuguese National Panels

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<p>1st National Panel “Management of contaminated foodstuff and feedstuff after a radiological or nuclear accident” IST/CTN, 11th of April 2014 Panel Methodology</p> <p>Thematic Session (1st Part):</p> <ul style="list-style-type: none"> • Concepts of ionizing radiation and radiological emergencies. <i>Luís Portugal, APA</i> • Strategies to deal with contaminated food and feedstuff. <i>Maria José Madruga, IST</i> • Risk perception and acceptance of contaminated food. <i>Mário Reis, IST</i> • Regulatory issues (guidelines and reference levels). <i>João Oliveira Martins, APA</i> • Management of communication and public information in an emergency situation. <i>Filipe Távora, APA</i> <p>Discussion session (2nd Part):</p> <ul style="list-style-type: none"> • Two working groups, each one with one moderator and two rapporteurs. • Final panel session for the presentation of the conclusions of each working groups. 	 35 participants	<p>2nd National Panel “Management of contaminated consumer goods after a radiological or nuclear accident” IST/CTN, 9th of April 2015 Panel Methodology</p> <p>Thematic Session (1st Part):</p> <ul style="list-style-type: none"> • Concepts of ionizing radiation and radiological protection during emergencies. <i>João Oliveira Martins, APA and Octávia Monteiro Gil, IST</i> • Contaminated consumer goods. <i>Isabel Paiva, IST</i> • Detection and management of contaminated consumer goods. <i>Luís Portugal, APA</i> • Communication challenges in radiological and nuclear emergencies. <i>Filipe Távora, APA</i> <p>Discussion session (2nd Part):</p> <ul style="list-style-type: none"> • One working group with two moderators and two rapporteurs. 	 36 participants
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<p>Stakeholders in 1st Panel</p> 	<p>Stakeholders in both Panels</p> 	<p>Stakeholders in 2nd Panel</p> 
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Health and Environment

- Increase awareness of the European regulations (Maximum Permitted Levels) of radioactive contamination for foodstuff and feedstuff.
- Concerns about the implementation of harmonized reference levels in EU.
- No receptivity of the public to consume contaminated products regardless compliance with legal radionuclide established reference levels.
- Misconceptions about the health effects related to the ingestion of contaminated foodstuff.
- Governmental entities are aware of the problems involved in the follow-up of a RN accident.
- Industrial stakeholders have doubts about the country's capacity to deal with the direct and indirect consequences of RN emergencies.

Economics and Policies

- Contamination in foodstuff/feedstuff and other consumer goods may have negative impacts on the regional and national economy.
- Concerns about the possible existence of unknown contaminated goods in circulation at national level.
- Logistics-related concerns if the containers need to be retained due to contamination.
- Bilateral cooperation between the EU and IAEA members in emergency situations.
- Private companies have no monitoring capabilities (economical/technical). However:
 - 1st Panel: industrial stakeholders recognize the importance of their social role during and after the emergency phases and showed availability in investing in monitoring equipment for the control of their products.
 - 2nd Panel: transport companies are willing to assume some self-monitoring costs if this brings some competitiveness advantages.

Management Practices

- Similar or overlapping competences between different entities .
- **1st Panel:**
 - Some authorities were not fully sure about the specific procedures related to management of contaminated foodstuff/feedstuff and asked for clearly defined emergency protocols.
 - Limitations to implement national and international recommendations - insufficient human and technical resources and financial support from the Government.
- **2nd Panel:**
 - Lack of clear rules or procedures on how to manage contaminated consumer goods.
 - Harmonization is not in place in the management practices.
 - Monitoring equipment is adequate to manage routine situations but it may not be sufficient and/or adequate during emergency situations.
 - The incoming goods arriving through the Lisbon Maritime Harbor are well controlled by the Customs due to the MEGAPORTS Initiative.

Main Findings

Communication, Education and Training

- Public is sensitive to issues related with radioactive contamination and its perception depends on the way the subject is communicated.
- Contradictory information given by different institutions gives a wrong image about the competences of the management emergency and post-emergency crisis.
- Existence of institutions trusted by the consumers involved in the communication process in the management of an emergency or post-emergency situation.
- Technical/scientific personnel trained in communicating clear concepts using simple and transparent information based on straightforward language.
- Education and training on risk perception, emergency and post emergency situations is needed for technical/scientific officers, *media* and general public.

Final Workshop of the European Research Project PREPARE-WP3

UK Stakeholder Panel – Consumer goods

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STAKEHOLDER PANELS

The main objective was to discuss with UK stakeholders the key issues related to handling of goods contaminated with radioactivity following a nuclear accident, as part of the European Commission PREPARE project. Two stakeholder meetings were held; March and November 2014.

The primary objectives of the first workshop were to determine:

- The roles of different organisations in implementing regulations and dealing with the contaminated goods
- Whether specific regulation and guidance are required to deal with goods contaminated with radioactive material
- Any practical and operational issues that may need to be considered when implementing any regulations

Twenty people from 14 organisations attended. The panel's opinion was that in the event of an overseas radiological emergency, UK organisations could cope with the influx of contaminated consumer goods and that dealing with the routine cases of contaminated goods presented a bigger challenge. It was generally felt that some case studies should be used by Public Health England (PHE) to aid the development of flow charts detailing how these goods should be treated. Additionally the roles and responsibilities of the organisations involved could be clarified. The final point from the panel was that many of the challenges identified in developing a cohesive strategy managing contaminated consumer goods would benefit from cooperation at a European level.

The primary objectives of the second workshop were to determine:

- Further clarification on the roles and responsibilities of different organisations in implementing regulations and dealing with the contaminated goods
- Discuss flow chart (see figure) and case studies prepared by PHE to develop a procedure to deal with all likely situations. Identify what guidance is needed for the UK
- Agree on further work required and future of the stakeholders group

Seventeen people from 12 organisations attended. Greater clarification was gained about the role of various organisations at different stages in the process of managing contaminated goods. However, roles and responsibilities were still not clear-cut and there was no consensus about the protocol for dealing with abandoned goods. However, the stakeholders did make a number of suggestions. The panel felt that PHE should produce a guidance document that clearly sets out the roles and responsibilities of the different organisations involved and should be endorsed by all agencies. The guidance should set out how the regulations should be applied but the panel concluded that no additional legislation was required.

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- DHL
- Environment Agency
- Fed Ex
- Food Standards Agency
- Government Decontamination Service
- Health and Safety Executive
- Local Authority - Southampton
- Natural Resources Wales
- NUVIA
- Office for Nuclear Regulation – Radioactive Materials Transport
- Port Health – Felixstowe and London
- Scottish Environment Protection Agency
- Swiss Air
- Trading Standards
- UK Steel

CASE STUDIES

Two case studies were used to explore the issues

Case Study 1 - Contaminated steel plasterboard anchor bolts detected at a sea port

A container arriving at Felixstowe sea port triggered radiation detectors and was found to contain packages of steel plasterboard anchor bolts some of which were contaminated with ⁶⁰Co. The bolts were stored at Felixstowe for some months initially awaiting repatriation. Given factors such as the high cost of repacking the goods in line with transport regulations and possible doses to the ship's crew it was decided to separate the active bolts from the non-active ones and send them to the UK's Low Level Waste Repository.

Case Study 2 - Contaminated cooking utensils detected on exit from a nuclear power station

Several stainless steel cooking utensils contaminated with ⁶⁰Co were discovered as they triggered the radiation monitors on leaving a nuclear site. Their contamination was not related to activities on the site and Trading Standards traced the supplier of the utensils. A public health risk assessment was performed and the risk judged to be very low. It was therefore decided that the utensils still in circulation did not need to be

FLOW CHART

