Risk-based approaches to food safety

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Hellenic Food Authority

We aim to ensure that:

- Food produced or sold in Greece is safe to eat
- Consumers have the information they need to make informed choices about what they eat
- Regulation and enforcement is risk-based and focused on improving public health
Foodborne diseases in the WHO European Region

Every year

23 million people fall ill
5000 people die

Diarrhoeal diseases are responsible for most foodborne illnesses

Norovirus infection = almost 15 million cases
Campylobacter = nearly 5 million cases

FOODBORNE DISEASES ARE PREVENTABLE. EVERYONE HAS A ROLE TO PLAY.

For more information: www.who.int/foodsafety

#SafeFood

General principles of food safety

- (i) a comprehensive and integrated approach to food safety throughout the whole food chain (from farm to table),
- (ii) the precautionary principle,
- (iii) the responsibilities of food business operators,
- (iv) the establishment of traceability at all stages of production, processing and distribution,
- (iv) the transparency through public consultation and information and
- (v) the requirement of food law and any subsequent measures to be based on risk analysis, except where it is not appropriate to the circumstances or nature of the measure.
Hazard based approach ≠ Risk based approach
Risk - based approach

- What can go wrong?
- How probable is it to happen?
- If it happens, which are the consequences on health?
Risk Analysis

Risk assessment (RA) is a scientifically based process. It can be used to:

• review of the European legislation on food safety
• evaluate the more effective control measures and address a possible food crisis
• establish food safety priorities

Risk management (RM) is a process distinct from RA but considering RA results and other factors. It can:

• weigh policy alternatives in consultation with interested parties
• select appropriate prevention and control measures

Risk communication (RC) is the interactive exchange of information during both RA and RM

“The World on your Plate”

Herb Butter: Salted butter - Ireland
Garlic puree - China, USA, Spain
Garlic salt - China, USA, Spain
Lemon - USA
Parsley - France, UK
Pepper - Indonesia
Water - Ireland

Chicken Breast: Chicken - Ireland, Belgium
- UK, France etc.

Batter: Flour - Belgium, France
Water - Ireland

Bread Crumb: Bread crumb - Ireland, UK
Rape-seed oil - EU, Australia, Eastern Europe

Chicken Kiev

Courtesy A. Reilly, FSAI, Ireland
Risk - based approach for the national authorities - examples

- Where the risk is highest.
- Prioritize the food safety interventions
- Which risk mitigation measure is the most effective
- Need to plan our official control plans based on public health risk ranking.
Risk analysis

Risk assessment

Risk management

Risk communication
<table>
<thead>
<tr>
<th>European Level</th>
<th>National Level (Ministries, SC, Agencies)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Risk assessment</td>
<td>• Various structures of risk assessment in MS.</td>
</tr>
<tr>
<td>Risk communication</td>
<td>• Institutionally separation (e.g. Austria, Denmark, Finland, France)</td>
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<tr>
<td>Scientific outputs</td>
<td>• Not institutionally separation (e.g. Belgium, Cyprus, Greece, Ireland, Spain etc)</td>
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<tr>
<td>Risk management</td>
<td>• But procedures in order to ensure the basic principles of RA:</td>
</tr>
<tr>
<td>Risk communication</td>
<td>Transparency, independency and objectivity</td>
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</table>
Risk assessment (RA) is a scientifically based process. It can be used to:
- review the safety of the new products under development
- evaluate the more effective control measures
- address a possible food crisis
- establish food safety priorities and

Risk management (RM) is a process distinct from RA but considering RA results and other factors. It can:
- weigh policy alternatives in consultation with interested parties
- select appropriate prevention and control measures

Risk communication (RC) is the interactive exchange of information during both RA and RM
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