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## UNIT 8 RISK COMMUNICATION

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### 8.0 OBJECTIVES

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After studying this unit, we shall be able to:

- define risk communication;
- illustrate goals of risk communication;
- state key communication stages during food safety risk analysis;
- describe roles and responsibilities for risk communication;
- enlist elements of effective risk communication;
- enlist principles of risk communication; and
- describe practical aspects of risk communication.

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### 8.1 INTRODUCTION

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Effective communication of information and opinion on risks associated with real or perceived hazards in food is an essential and integral component of the risk analysis process. Risk communication may originate from official sources

at international, national or local levels. It may also be from other sources such as industry, trade, consumers and other interested parties. In this context, interested parties may include government agencies, industry representatives, the media, scientists, professional societies, consumer organizations and other public interest groups and concerned individuals. In some cases, risk communication may be carried out in conjunction with public health and food safety education programmes.

Risk communication is an inseparable element of the risk management framework. Risk communication helps to provide timely, relevant and accurate information to, and to obtain information from, members of the risk management and risk assessment teams and external stakeholders, in order to improve knowledge about the nature and effects of a specific food safety risk.

Successful risk communication is a prerequisite for effective risk management and risk assessment. It contributes to transparency of the risk analysis process and promotes broader understanding and acceptance of risk management decisions. Numerous reports in the international literature have described how to communicate about risks. Communicating effectively with different audiences requires considerable knowledge, skill and thoughtful planning, whether one is a scientist (a risk assessor), a government food safety official (a risk manager), a communication specialist, or a spokesperson for one of the many interested parties involved in food safety risk analysis.

This Unit examines the role of risk communication in risk analysis, and describes practical approaches for ensuring that sufficient, appropriate communication takes place at necessary points in application of the risk management framework. It illustrates some effective methods for fostering essential communication within the risk analysis team and for engaging stakeholders in dialogue about food-related risks and the selection of preferred risk management options.

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## **8.2 UNDERSTANDING RISK COMMUNICATION**

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Risk communication is “an interactive exchange of information and opinions throughout the risk analysis process concerning risk, risk-related factors and risk perceptions among risk assessors, risk managers, consumers, industry, the academic community and other interested parties, including the explanation of risk assessment findings and the basis of risk management decisions.”

Risk communication is a powerful element of risk analysis. In a food safety emergency situation, effective communication between scientific experts and risk managers, as well as between these groups, other interested parties and the general public, is absolutely critical for helping people understand the risks and make informed choices. When the food safety issue is less urgent, strong, interactive communication among the participants in a risk analysis almost always improves the quality of the ultimate risk management decisions, particularly by eliciting scientific data, opinions and perspectives from a cross-section of affected stakeholders. Multi-stakeholder communication throughout the process also promotes better understanding of risks and greater consensus on risk management approaches.

Risk communication requires specialized skills and training. It also requires extensive planning, strategic thinking and dedication of resources to carry out effective risk communication. Since risk communication is the newest of the

three components of risk analysis to have been conceptualized as a distinct discipline, it often is the least familiar element for risk analysis practitioners. Nevertheless, the great value that communication adds to any risk analysis justifies expanded efforts to ensure that it is an effective part of the process.

Risk communication is fundamentally a two-way process. It involves sharing information, whether between risk managers and risk assessors, or between members of the risk analysis team and external stakeholders. Risk managers sometimes see risk communication as an “outgoing” process, providing the public with clear and timely information about a food safety risk and measures to manage it; and indeed, that is one of its critical functions. But “incoming” communication is equally important. Through risk communication, decision makers can obtain vital information, data and opinions, and solicit feedback from affected stakeholders. Such inputs can make important contributions to the basis for decisions, and by obtaining them risk managers greatly increase the likelihood that risk assessments and risk management decisions effectively and adequately address stakeholder concerns.

Everyone involved in a risk analysis is a “risk communicator” at some point in the process. Risk assessors, risk managers and “external” participants all need risk communication skills and awareness.

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### **8.3 THE GOALS OF RISK COMMUNICATION**

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The fundamental goal of risk communication is to provide meaningful, relevant and accurate information, in clear and understandable terms targeted to a specific audience. It may also lead to more widely understood and accepted risk management decisions. Effective risk communication should have goals that build and maintain trust and confidence. It should facilitate a higher degree of consensus and support by all interested parties for the risk management option(s) being proposed. The goals of risk communication are to:

- Promote awareness and understanding of the specific issues under consideration during the risk analysis process, by all participants;
- Promote consistency and transparency in arriving at and implementing risk management decisions;
- Provide a sound basis for understanding the risk management decisions proposed or implemented;
- Improve the overall effectiveness and efficiency of the risk analysis process;
- Contribute to the development and delivery of effective information and education programmes, when they are selected as risk management options;
- Foster public trust and confidence in the safety of the food supply;
- Strengthen the working relationships and mutual respect among all participants;
- Promote the appropriate involvement of all interested parties in the risk communication process; and

- Exchange information on the knowledge, attitudes, values, practices and perceptions of interested parties concerning risks associated with food and related topics.

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**Check Your Progress Exercise 1**



**Note:** a) Use the space below for your answers.  
 b) Check your answers with those given at the end of the unit.

1) Explain what is ‘risk communication’.

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2) List various goals of risk communication?

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**8.4 KEY COMMUNICATION STAGES DURING FOOD SAFETY RISK ANALYSIS**

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While good communication is essential throughout application of the RMF in addressing a food safety issue, effective communication is particularly critical at several key points in the process (See Fig. 6.1 in Unit 6). Risk managers therefore need to establish procedures to ensure that communication of the required nature(s) occurs at the required times, and that the appropriate participants are involved in each case.

**8.4.1 Preliminary Risk Management Activities**

- a) **Identifying a food safety issue:** During this initial step in preliminary risk management activities, open communication among all parties with information to contribute can be invaluable for accurately defining the issue. As explained in Unit 6, information about a particular food safety issue may be brought to risk managers’ attention by a wide range of potential sources. Risk managers then need to pursue information from other sources that might have knowledge of the specific issue, such as the industry that produces or processes the foods involved, academic experts and other affected parties as circumstances may dictate. As the definition of the issue evolves, an open process with frequent back-and-forth communication among all the participants helps to promote both an accurate definition and common perception of the issue that needs to be addressed.
- b) **Developing a risk profile:** At this step, the critical communication is primarily between risk managers, who are directing the process, and risk

assessors or other scientists who are developing the risk profile. The quality of the result is likely to be enhanced if the same open and broadly representative communications network described in the previous step is maintained, and used to obtain input and feedback as the profile is developed. During this activity, the experts developing the risk profile need to establish their own communication networks with the external scientific community and industry to build up a sufficient body of scientific information.

- c) **Establishing risk management goals:** When risk managers establish risk management goals (and decide whether or not a risk assessment is feasible or necessary), communication with risk assessors and external stakeholders is essential; the risk management goals should not be established by risk managers in isolation. The government policy aspects included in the goals will vary on a case-by-case basis. The risk managers should ascertain that the risk management questions asked can be reasonably addressed by a risk assessment, and this assurance can come only from risk assessors. Once risk management goals for resolving a particular food safety issue have been established, they should be communicated to all interested parties.
- d) **Developing a risk assessment policy:** As described in risk management (Unit 6), a risk assessment policy provides essential guidelines for subjective and often value-laden scientific choices and judgments that risk assessors must make in the course of a risk assessment. The central communication process at this step involves risk assessors and risk managers. Often, face-to-face meetings are the most effective mechanism, and a considerable amount of time and effort may be required to complete the process. Usually, a number of complex issues must be considered and resolved.

Input from external interested parties with knowledge on these policy choices should be taken at this step. For example, the stakeholders may be invited to comment on a draft or invited to participate in a public meeting where the risk assessment policy is being considered. Risk assessment policies also should be documented and accessible for review by parties who may not have taken part in developing them.

- e) **Commissioning a risk assessment:** When risk managers ask the risk assessors to carry out a formal risk assessment, the quality of communication at the outset often contributes significantly to the quality of the resulting risk assessment product. Here too, the communication that matters most is that between risk assessors and risk managers. The subjects to be covered include, most centrally, the questions that the assessment should try to answer, the guidance provided by the risk assessment policy, and the form of the outputs.

Other practical aspects at this stage are clear and unambiguous communication of the purpose and scope of the risk assessment, and the time and resources available (including availability of scientific resources to fill data gaps that emerge). As in the step above, face-to-face meetings between the two groups is generally the most effective communication mechanism, and the discussions should be continued until clarity is achieved by all participants.

There is no single approach for ensuring effective communication between risk managers and risk assessors. At the national level, mechanisms may

depend on agency structure, legislative mandates and historical practices. Because of the need to protect the risk assessment process from the influence of “political” considerations, the role of external stakeholders in discussions between risk assessors and risk managers is generally limited; however, it is possible to obtain useful inputs in a structured manner (see next section).

- f) **Conduct of a risk assessment:** Traditionally, risk assessment has been a comparatively “closed” phase of risk analysis, in which risk assessors do their work largely out of the public eye. Ongoing communication with risk managers is essential here, of course, and questions the risk assessment seeks to answer may be refined or revised as information is developed. As explained in Unit 6, interested parties who have essential data, such as manufacturers of chemicals and food industries whose activities contribute to exposure may also be invited to share scientific information with the risk assessment team. However, in recent years, the general trend towards greater openness and transparency in risk analysis has had an impact on risk communication, encouraging more participation by external stakeholders in processes surrounding successive discussions of a risk assessment. Some national governments and international agencies have recently taken steps to open up the risk assessment process to earlier and wider participation by interested parties (given below).

#### **External stakeholder participation in processes related to the conduct of food safety risk assessments at international (FAO/WHO) and national levels**

- The Internet has created opportunities for wider participation in the work of the FAO/WHO joint expert bodies. JECFA and JMPR each have websites (on the FAO and WHO websites), on which calls for experts, rosters of experts and requests for data are posted. Any interested experts may submit an application to be included on a roster. Interested parties may submit scientific data for consideration by the expert committees in response to specific calls for data.
  - Increasingly, e.g. when risk assessment methodologies are updated, public input is sought via posting of draft documents on the dedicated websites.
  - When the United States conducted its risk assessment for *Listeria monocytogenes* in ready-to-eat foods, it solicited extensive inputs from industry, consumer groups and others with an interest in and knowledge of the problem. The government held public meetings with stakeholders to discuss questions to be addressed, to ask for data and to hear suggestions about analytical approaches. A draft of the risk assessment was published and comments were solicited from the public. Extensive additional scientific data and other inputs were received, especially from industry, and the process led to several improvements between the first draft and the final risk assessment.
- g) **When the risk assessment is completed:** Once the risk assessment has been done and the report is delivered to risk managers, another period of intense communication generally occurs (see Unit 6). Risk managers need to make sure they understand the results of the risk assessment, the implications for risk management, and the associated uncertainties. The results also need to be shared with interested parties and the public, and their comments and reactions may be obtained. Since the results of a risk

assessment often are complex and technical in nature, the success of communication at this stage may rest to a large extent on a history of effective communication by and among the relevant participants at appropriate earlier points in the risk analysis process.

Because of its central importance as a basis for risk management decisions, the output of a risk assessment is usually published as a written report. In the interests of transparency, such reports need to be complete, and explicit about assumptions, data quality, uncertainties and other important attributes of the assessment. In the interests of effective communication, they need to be written in clear, straightforward language, readily accessible to a non-specialist. Assigning a communication expert to the risk assessment team, from the outset if possible, is often helpful for meeting this latter objective.

- h) Ranking risks and setting priorities:** When this step is necessary (see Unit 6), risk managers should ensure a broadly participatory process that encourages dialogue with relevant stakeholder groups. Priority judgments are inherently value-laden, and ranking risks in priority for risk assessments and risk management attention is fundamentally a political and social process, in which those stakeholder groups affected by the decisions should participate.

Some examples of national processes that involved such multiparty consultation with external stakeholders (given below). Food safety officials in various contexts have established new communication forums that bring industry, consumer representatives and government officials together to discuss problems, priorities and strategies in collegial, non adversarial settings. Such contacts can build bridges and common understandings of issues, such as the value of risk analysis or emerging problems; they are less useful for resolving current specific disputes, although they do improve understanding of each other's general perspectives.

### **Examples of national and regional experiences with multiparty processes for communication about broad food safety issues**

- ***Food Safety and Standards Authority of India (FSSAI):*** The Indian Parliament, in 2006, passed the 'Food Safety and Standards Act 2006'. The Act provides for establishing Food Safety and Standards Authority of India (FSSAI). The FSSAI is being established and it will have an advisory board of stakeholders, which will include members from the food industry, agriculture, consumers, and relevant research bodies and food laboratories besides other ex-officio members. It will also include appropriate experts from various stakeholder sectors on its Scientific Panels. This will strengthen the risk communication process.
- ***New Zealand Consumers Forum:*** In 2003, the New Zealand Food Safety Authority (NZFSA) initiated an on-going biannual forum with representatives of more than two dozen consumer, environmental health and other civil-society groups with an interest in food safety, and invites them to discuss how NZFSA makes decisions, and how civic organizations could productively be involved in that process. Stakeholders also identify their own food safety priorities on an annual basis, and a portion of NZFSA operational research funds is dedicated to investigating the scientific basis of those concerns.

- **Lebanese National Food Safety Committee:** In 2005, Lebanon's Minister of Agriculture set up an independent national committee for food safety. The committee is advisory and includes representation from a cross-section of interested stakeholders, including food producers, processors, retailers, and consumer organizations. The committee began its work by focusing on issues related to pesticides and animal health as each relates to food safety.
- **UK stakeholder forum on BSE:** The Food Standards Agency (FSA) in the UK set up a forum for consultation with stakeholders, to communicate about risks of BSE and measures for managing the risks. The forum was chaired by the chair of the FSA Board and included participants representing all segments of the food production chain, from cattle and feed producers to consumer organizations. For details about the forum and its activities see:  
<http://www.food.gov.uk/news/newsarchive/2002/jul/otmstakeholdersjuly>.
- **Uruguayan Food Safety Agency:** In Uruguay, Parliament is considering a new food safety law that would establish a national food safety agency. The proposed agency will have an advisory board of stakeholders, which will include industry, consumers and other designated participants. Also under discussion is the possibility of including experts from various stakeholder sectors on the Scientific Board of the new agency.
- **Latin America: COPAIA** (Pan American Commission on Food Safety): In 2001, Latin American governments and the Pan American Health Organization established COPAIA, a commission on food safety in the region with 20 appointed members, 10 from government and five each from industry and consumer organizations. The group serves in an advisory role to the regional council of agricultural and health ministers and has made a variety of consensus policy recommendations, focused mainly on the use of risk analysis and on strategies for involving interested sectors of the public in national food safety decision making.
- **United States National Academy of Sciences Food Forum:** In the early 1990s, United States federal food safety agencies and the National Academy of Sciences (NAS) set up this forum which brings together experts on food safety and nutrition from government, industry, consumer organizations, academia and professional societies. The group meets several times a year to study issues; it also has organized large public science-and-policy meetings on numerous topics it identified as important and likely to benefit from in-depth discussion. The Food Forum does not make policy recommendations to the government but provides a mechanism to identify priorities and emerging issues, and suggests possibly effective problem-solving strategies.

#### 8.4.2 Identifying and Selecting Risk Management Options

Decisions on issues such as risk distribution and equity, economics, cost-effectiveness and arriving at an ALOP are often the essence of risk management. Effective risk communication during this stage of the risk management framework is therefore fundamental to the success of the risk analysis. The government food safety risk managers, based on their experience managing other food related risks, may have a clear idea of potential risk management options, and perhaps some preliminary preferences for managing a new food safety issue. Consultation at this stage may provide them with some alternative views, for instance where there is a range of possible risk

management options for controlling a hazard at different points in the food production chain. The extent of this consultation will depend on the individual food safety issue.

When risk management options are being evaluated, the risk analysis process sometimes becomes a clearly political one, with different interests within a society each seeking to persuade the government to choose the risk management options they prefer. This can be a useful phase; if managed effectively, it can illuminate the competing values and compromises that must be weighed in choosing risk management options, and support transparent decision making. WTO members are required to implement the SPS Agreement based on transparency as a means to achieve a greater degree of clarity, predictability and information about trade rules and regulations (see below).

### **Transparency provisions in the WTO SPS Agreement**

Governments are required to notify other countries of any new or changed sanitary requirements which affect trade, and to set up offices (called “Enquiry Points”) to respond to requests for more information on new or existing measures. They also must open to scrutiny how they apply their food safety regulations. A special Committee has been established within the WTO as a forum for the exchange of information among member governments on all aspects related to the implementation of the SPS Agreement.

### **8.4.3 Implementation**

To ensure that a chosen risk management option is implemented effectively, government risk managers often need to work closely, in an ongoing process, with those upon whom the burden of implementation falls. When implementation is carried out primarily by industry, government generally works with the industry to develop an agreed plan for putting food safety controls into effect, then monitors progress and compliance through the inspection, verification and audit process. When risk management options include consumer information, consumer contact programmes are often required, for example to enlist health care providers in disseminating the information. Surveys, focus groups and other mechanisms also can be pursued to measure how effectively consumers are receiving and following the government’s advice. The emphasis at this stage is on “outgoing” communication and the government needs to explain to those involved what is expected of them. Mechanisms should also be built into the process to collect feedback and information about successes or failures of implementation efforts.

### **8.4.4 Monitoring and Review**

At this stage, risk managers need to arrange for the collection of relevant data needed to evaluate whether the implemented control measures are having the intended effects. While risk managers take the lead in developing formal criteria and systems for monitoring, other inputs may enhance this determination. Parties other than those designated as responsible for monitoring and review activities may be consulted or may bring information to the attention of the authorities at this stage as well. Risk managers sometimes use a formal risk communication process to decide whether new initiatives are needed to further control risks. Communication with public health authorities

that are not integrated in food safety authorities is especially important during this step.

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**Check Your Progress Exercise 2**



**Note:** a) Use the space below for your answers.  
b) Check your answers with those given at the end of the unit.

1) What are the means available for ensuring participation of external stake holders?

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2) State the provision of risk communication reflected in SPS Agreement?

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3) Enumerate various stages of risk analysis during which risk communication is important.

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**8.5 ROLES AND RESPONSIBILITIES FOR RISK COMMUNICATION**

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**8.5.1 International Organizations**

• **The "Codex system"**

The Codex Alimentarius Commission is an inter-governmental organization with established procedures for input from member governments and other interested parties such as consumer and industry representatives as well as other international standards organizations. The organizational structure and processes of the CAC and its subsidiary bodies, provide many opportunities for effective risk communication, both within the Codex system (i.e., among the various Committees) and external to Codex. The Codex and its Committees are risk managers and the FAO/WHO expert advisory groups are risk assessors. The FAO/WHO expert advisory groups include the Joint FAO/WHO Expert Committee on Food Additives (JECFA) and the Joint FAO/WHO Meeting on Pesticide Residues (JMPR) and the Joint FAO/WHO Expert Meetings on Microbiological Risk Assessment (JEMRA). Other international expert bodies

such as the International Commission for Microbiological Specifications for Foods (ICMSF) also may provide scientific support. Co-ordination of Codex risk management activities is carried out by the FAO/WHO Codex Secretariat. The Secretariat is also responsible for some risk communication activities such as the publication of a variety of documents, including standards, reports and other texts from the Codex committees. Reports of Codex meetings provide a record of the deliberations and the outcome of food safety discussions leading to the elaboration of Codex standards. The Internet World-Wide Web is used to rapidly disseminate these reports and other Codex information.

- **The Food and Agriculture Organization (FAO) and the World Health Organization (WHO) of the United Nations**

FAO and WHO provide advice to member governments and other interested parties from internationally recognized experts through consultations on specific issues. The agencies have a responsibility to develop and promote the principles and procedures of risk analysis and to communicate these to member governments to assist them in the development of effective strategies and information programmes at the national level. Where FAO and WHO jointly undertake to conduct risk assessment activities (e.g., JECFA, JMPR, JEMRA and other FAO/WHO expert consultations), they communicate the results and recommendations to their member governments, as well as other interested parties, through published reports and the Internet World-Wide Web.

- **World Trade Organization (WTO)**

The WTO Agreement on the Application of Sanitary and Phyto-sanitary Measures (SPS Agreement) encourages harmonization and places a strong emphasis on the risk communication principles of transparency and consistency in the development and application of food safety measures. Harmonization includes the establishment, recognition, and application of common sanitary measures by different member countries, and this is clearly dependent on effective risk communication. The WTO SPS Committee manages the implementation of the SPS Agreement for WTO member countries and, through the notification procedure required by the SPS Agreement, it communicates risk management decisions among those member countries.

## **8.5.2 Governments**

Governments have a fundamental responsibility for risk communication when managing public health risks, regardless of the management methods used. With the responsibility for managing risks comes the responsibility to communicate information about risks to all interested parties to an acceptable level of understanding. Decision-makers within governments have the obligation to ensure effective communication with interested parties when performing scientific and technical analyses and to appropriately involve the public and other interested parties in the risk analysis process. Risk managers also have the obligation to understand and respond to the underlying bases of public concerns about health risks.

Governments that are members of the Codex have a responsibility to play an active role in the Codex process. They should ensure that all interested parties within their countries (industry, consumers, national organizations, etc.) have an opportunity to contribute to national positions on the proposed Codex standards.

### 8.5.3 Industry

Industry is responsible for ensuring the quality and safety of the food it produces. It also has a corporate responsibility to communicate information regarding risks to affected consumers. Industry participation in all aspects of risk analysis is essential for effective decision making and can serve as a major source of information for risk assessment and risk management. The routine information flow between industry and government usually involves communications necessary to set standards or for approvals for new technologies, ingredients, or labels.

### 8.5.4 Consumers and Consumer Organizations

Broad and open participation in risk analysis at the national level is viewed by the public as an essential element of what constitutes appropriate public health protection. Early participation in the risk analysis process by the public or consumer organizations can help to ensure that consumer concerns are addressed and will generally result in a better public understanding of the risk assessment process and how risk-based decisions are made. It can further provide support for the risk management decisions that result from the assessment. Consumers and consumer organizations have a responsibility to present their concerns and opinions on health risks to risk managers. International consumer organizations that are Codex observers have direct input into Codex discussions on these matters. International and national consumer organizations play an important role in disseminating information on health risks directly to consumers. Consumer organizations also often work with governments and industry to ensure that risk messages addressed to consumers are appropriately formulated and delivered.

### 8.5.5 Academia and Research Institutions

Members of the academic and research community may play an important role in risk analysis by contributing scientific expertise on health and food safety matters and assisting in the identification of hazards. They may be asked by the media or other interested parties to comment on government decisions. They often have a high level of credibility with the public and the media, and may serve as independent sources of information. Researchers involved in studies of consumer perception or communication methods and the assessment of communication effectiveness, may also be helpful to risk managers seeking expert advice on risk communication approaches and strategies.

### 8.5.6 Media

The media clearly play a critical role in risk communication. Much of the information that the public receives on food-related health risks comes to them through the media. The many varieties of mass media have roles which vary depending on the issue, the context and the type of media involved. The media may merely transmit a message, or they may create or interpret a message. They are not limited to official sources of information and their messages often reflect the concerns of the public and other sectors of society. This can and does facilitate risk communication since risk managers may become aware of concerns of which they were not previously aware.

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## 8.6 ELEMENTS OF EFFECTIVE RISK COMMUNICATION

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Depending on what is to be communicated and to whom, risk communication messages may contain information on the following:

### A) The nature of the risk

- The characteristics and importance of the hazard of concern.
- The magnitude and severity of the risk.
- The urgency of the situation.
- Whether the risk is becoming greater or smaller (trends).
- The probability of exposure to the hazard.
- The distribution of exposure (how widely is the exposure distributed?).
- The amount of exposure that constitutes a significant risk.
- The nature and size of the population at risk.
- Who is at the greatest risk.

**B) The risk benefit analysis:** It means weighing the risk and benefits associated with the use of a chemical / practice that is beneficial as well as hazardous to some extent, e.g. use of pesticides in agriculture prevents crop from pests but also leaves residues in foods which could be a health hazard. Other similar examples could be use of veterinary drugs, food additives etc.

- The actual or expected benefits associated with each risk.
- Who benefits and in what ways.
- Where the balance point is between risks and benefits.
- The magnitude and importance of the benefits.
- The total benefit to all affected populations combined.

### C) Uncertainties in risk assessment

- The methods used to assess the risk.
- The importance of each of the uncertainties.
- The weaknesses of, or inaccuracies in the available data.
- The assumptions on which estimates are based.
- The sensitivity of the estimates to changes in assumptions.
- The effect of changes in the estimates on risk management decisions.

### D) Risk management options

- The action(s) taken to control or manage the risk.
- The action individuals may take to reduce personal risk.
- The justification for choosing a specific risk management option.
- The effectiveness of a specific option.
- The benefits of a specific option.
- The cost of managing the risk, and who pays for it.
- The risks that remain after a risk management option is implemented.

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## 8.7 PRINCIPLES OF RISK COMMUNICATION

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### 8.7.1 Know the Audience

In formulating risk communication messages, the audience should be analyzed to understand their expectations and requirements. Beyond knowing in general who the audience is, it is necessary to actually get to know them as groups and ideally as individuals to understand their concerns and feelings and to maintain an open channel of communication with them. Listening to all interested parties is an important part of risk communication.

### 8.7.2 Involve the Scientific Experts

Scientific experts, in their capacity as risk assessors, must be able to explain the concepts and processes of risk assessment. They need to be able to explain the results of their assessment and the scientific data, assumptions and subjective judgments upon which it is based, so that risk managers and other interested parties clearly understand the risk. They further must be able to clearly communicate what they know and what they do not know, and to explain the uncertainties related to the risk assessment process. In turn, the risk managers must be able to explain how the risk management decisions are arrived at as well.

### 8.7.3 Establish Expertise in Communication

Successful risk communication requires expertise in conveying understandable and usable information to all interested parties. Risk managers and technical experts may not have the time or the skill to perform complex risk communication tasks, such as responding to the needs of the various audiences (public, industry, media, etc.) and preparing effective messages. People with expertise in risk communication should therefore be involved as early as possible. This expertise will likely have to be developed by training and experience.

### 8.7.4 Be a Credible Source of Information

Information from credible sources is more likely to influence the public perception of a risk than is information from sources that lack this attribute. The credibility accorded to a source by a target audience may vary according to the nature of the hazard, culture, social and economic status, and other factors. If consistent messages are received from multiple sources then the credibility of the message is reinforced. Factors determining source credibility include recognized competence or expertise, trustworthiness, fairness, and lack of bias. For example, the terms that consumers have associated with high credibility include *factual*, *knowledgeable*, *expert*, *public welfare*, *responsible*, *truthful*, and good "track record". In studies, consumers have indicated that distrust and low credibility resulted from exaggeration, distortion and perceived vested interest.

Effective communications acknowledge current issues and problems, are open in their content and approach, and are timely. Timeliness of the message is most important since many controversies become focused on the question, "why didn't you tell us sooner", rather than on the risk itself. Omissions, distortions and self-serving statements will damage credibility in the longer term.

### **8.7.5 Share Responsibility**

All the parties involved in the risk communication process (e.g. government, industry, media) have joint responsibilities for the outcome of that communication even though their individual roles may differ. Since science must be the basis for decision making, all parties involved in the communication process should know the basic principles and data supporting the risk assessment and the policies underlying the resulting risk management decisions.

The regulatory agencies of governments at the national, regional and local levels, have a fundamental responsibility for risk communication. The public expects the government to play a leading role in managing public health risks. This is true when the risk management decision involves regulatory or voluntary controls, and is even true when the government decision is to take no action. In the latter event, communication is still essential to provide reasons why taking no action is the best option. In order to understand the public concerns and to ensure that risk management decisions respond to those concerns in appropriate ways, the government needs to determine what the public knows about the risks and what the public thinks of the various options being considered to manage those risks.

The media plays an essential role in the communication process and therefore shares in these responsibilities. Communication on immediate risks involving human health, particularly when there is a potential for serious health consequences, such as food-borne illnesses, cannot be treated the same as less immediate food safety concerns.

Industry has a responsibility for risk communication, especially when the risk is as a result of their products or processes.

### **8.7.6 Difference between Science and Value Judgment**

It is essential to separate "facts" from "values" in considering risk management options. At a practical level, it is useful to report the facts that are known at the time as well as what uncertainties are involved in the risk management decisions being proposed or implemented. The risk communicator bears the responsibility to explain what is known as fact and where the limits of this knowledge begins and ends. Value judgments are involved in the concept of acceptable levels of risk. Consequently, risk communicators should be able to justify the level of acceptable risk to the public. Many people take the term 'safe food' to mean food with zero risk, but zero risk is often unattainable. In practice, 'safe food' usually means food that is 'safe enough.'

Making this clear is an important function of risk communication.

### **8.7.7 Assure Transparency**

For the public to accept the risk analysis process and its outcomes, the process must be transparent. While respecting legitimate concerns to preserve confidentiality (e.g. proprietary information or data), transparency in risk analysis consists of having the process open and available for scrutiny by interested parties. Effective two-way communication between risk managers, the public and interested parties is both an essential part of risk management and a key to achieving transparency.

### 8.7.8 Put the Risk in Perspective

One way to put a risk in perspective is to examine it in the context of the benefits associated with the technology or process that poses the risk. Another approach that may be helpful is to compare the risk at issue with other similar, more familiar risks. However, this latter approach can create problems if it appears the risk comparisons have been intentionally chosen to make the risk at issue seem more acceptable to the public. In general, risk comparisons should not be used unless:

- both (or all) risk estimates are equally sound;
- both (or all) risk estimates are relevant to the specific audience;
- the degree of uncertainty in all risk estimates is similar;
- the concerns of the audience are acknowledged and addressed; and
- the substances, products or activities themselves are directly comparable, including the concept of voluntary and involuntary exposure.

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#### Check Your Progress Exercise 3



**Note:** a) Use the space below for your answers.  
b) Check your answers with those given at the end of the unit.

1) List various principles of risk communication?

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2) What are the different elements of effective risk communication?

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3) Describe the role of international organisations, industry, government, consumer, consumer organizations and media in the risk communication process?

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## 8.8 SOME PRACTICAL ASPECTS OF RISK COMMUNICATION

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While the advantages of effective risk communication are obvious, communication does not occur automatically and it has not always been easy to achieve. Communication elements of a risk analysis need to be well organized and planned, just as risk assessment and risk management elements are. When resources permit, governments may include specialists in conducting or managing communication aspects of food safety risk analysis among their staff.

Whether managing risk communication falls to a specialist or to someone with more general responsibilities, a number of practical questions are inevitably encountered. This section examines some of those questions and suggests some workable approaches for answering them in the national context.

### 8.8.1 Goals of Communication

When planning for communication, an essential first step is to determine what the goal is. Those planning communication programmes need to establish: i) what the subject of the communication is (for example, risk assessment policy, understanding outputs of a risk assessment, identifying risk management options); ii) who needs to participate, both *generically* (i.e. risk assessors, affected industry) and *specifically* (i.e. which individuals); and iii) when during the risk analysis process each kind of communication should take place. The answer to this last question can be “often”; that is, some communication processes do not occur once, but may be reiterated, or ongoing, during large portions of or throughout application of the entire RMF.

It is also important to avoid choosing inappropriate risk communication goals (given below). Communication efforts undertaken without sufficient care as to what they are intended to accomplish often turn out to be counter productive.

**Some inappropriate communication goals to avoid: What risk communication is *not* good for:**

- ***Risk communication is not public education:*** Public education on food safety requires risk communication skills, but the two endeavours are separate and distinct activities. “Education” implies a “teacher/student” relationship, in which the expert authorities have knowledge to pass on to the (largely uninformed) public. The public may in fact already have a great deal of information; effective communication is a two-way exchange of information, not a one-way transfer. In a risk analysis context, gathering information is often as important as conveying it.
- ***Risk communication is not public relations:*** Much of the literature on communicating with consumers about risks and control measures conveys the strong message that risk communication is a useful tool for making the public see the issues the way the experts or risk managers see them. But in fact, ordinary citizens often have an equally rational but fundamentally different perspective on risks. The essence of good communication is for each group to understand and appreciate the other’s perspective, not for the group with greater communication resources to convince the others that their perspective is the correct one.

- ***Telling people a food is safe will not necessarily reassure them:*** One common, difficult risk communication situation arises when government and industry food safety officials perceive that consumers are unduly frightened about a risk. In that situation, simply asserting that the available scientific information shows the risk is insignificant generally does not make people worry less. In fact, if consumers perceive that their concerns are being dismissed too lightly, they may trust those in authority less and worry more. The most effective response to perceived public fears is to engage in dialogue with consumers, to listen and respond to their concerns. Honest discussion of what scientific data about the risk show (including uncertainties) will help put risk in perspective.

## 8.8.2 Communication Strategies

A great many specific strategies for effective risk communication have been developed for use in various contexts, including food safety, and in different cultures. Some basic components of a risk communication strategy in the context of food safety risk analysis are summarized given below.

### **Strategies for effective communication with external stakeholders during a food safety risk analysis:**

- Collect, analyze and exchange background information about the food safety risk.
- Determine risk assessors', risk managers' and other stakeholders' perceptions of and knowledge of the food safety risk or risks involved, and their resulting attitudes and risk related behaviour.
- Learn from external stakeholders what their risk-related concerns are and what their expectations are for the risk analysis process.
- Identify and be sensitive to related issues that may be more important to some stakeholders than the identified risk itself.
- Identify the types of risk information stakeholders consider important and want to receive, and the types of information they possess and wish to convey.
- Identify types of information needed from external stakeholders, and determine who is likely to have information to contribute.
- Identify the most appropriate methods and media through which to disseminate information to, and obtain information from, different types of stakeholders.
- Explain the process used to assess risk, including how uncertainty is accounted for.
- Ensure openness, transparency and flexibility in all communication activities.
- Identify and use a range of tactics and methods to engage in an interactive dialogue involving risk analysis team members and stakeholders.
- Evaluate the quality of information received from stakeholders and assess its usefulness for the risk analysis.

### 8.8.3 Identifying “Stakeholders”

While risk managers may agree with the general goal of inviting affected stakeholders to participate at appropriate points in application of a risk management framework, it is not always a simple matter to know specifically who those parties are, or to get them engaged in a particular risk analysis process. Often, affected stakeholder groups are known to risk managers from the outset, or identify themselves and seek to participate early in the process. Sometimes, however, some affected stakeholders may be unaware of the need for or the opportunity to participate, and authorities may need to reach out to them. Most countries have laws and policies about how and when stakeholders can participate in public decision-making processes. Risk managers can work within such frameworks to optimize participation. Lists some sectors of society who may have a stake in a given food safety risk analysis given below.

#### **Examples of potential stakeholders in a particular food safety risk analysis**

- Farmers, ranchers, fishermen and other food producers.
- Food processors, manufacturers, distributors and their vendors.
- Food wholesalers and retailers.
- Consumers and consumer organisations.
- Other citizen advocacy groups (environmental, religious, etc.).
- Community groups (neighbourhood associations, co-operatives, etc.).
- Public health community and health care providers.
- Universities and research institutions.
- Government (local government, state and federal regulatory agencies, elected officials, importing countries etc.).
- Representatives of different geographic regions, cultural, economic or ethnic groups.
- Private sector associations.
- Businessman.
- Labour unions.
- Trade associations.
- Media.

When risk managers seek to identify appropriate stakeholders, the criteria is given below may be useful.

#### **Criteria for identifying potential stakeholders to participate in a given food safety risk analysis**

- Who might be affected by the risk management decision (including groups that already know or believe they are affected, as well as groups that may be affected but as yet do not know it)?
- Who has information and expertise that might be helpful?
- Who has been involved in similar risk situations before?
- Who has expressed interest in being involved in similar decisions before?
- Who should rightfully be involved, even if they have not asked to be?

Mechanisms have been established in many countries for engaging stakeholders in food safety decision making at the national level in a general, ongoing way. Participation by interested parties in such broader activities may increase their awareness of new food safety issues, and builds the government's familiarity with interested sectors of the society. For example, some countries have set up a national food safety advisory committee, a national Codex committee, a network of industry and civil-society contacts who wish to take part in Codex-related activities, and similar organizations. To the extent that such networks exist, they can be used to ensure appropriate risk communication with relevant stakeholder groups. Where such mechanisms have not yet been established, the benefits they offer in terms of supporting participation of affected interested parties in risk analysis is only one of many advantages national food authorities may gain by creating them.

Once stakeholders are identified, their role in a given risk analysis needs to be defined. While potentially valuable inputs from stakeholders in different sectors can occur at most stages of the generic risk management process, constraints may exist in specific cases. For example, in a situation that demands urgent action, time for consultation may be very limited. In some cases stakeholder participation may not have much genuine influence on the decision; if the decision is not really negotiable, stakeholders should be informed so that they do not feel that they are wasting their time.

#### 8.8.4 Methods and Media for Communication

Depending on the nature of the food safety issue, the number and nature of the stakeholder groups involved, and the social context, a great many alternatives may be appropriate for conveying and receiving information at various points in application of the risk management framework. Lists some of the more widely applicable options are given below. While there will probably always be a need for detailed written documents, scientific reports and official government analyses of food safety issues and decisions, effective communication often requires additional approaches. Some of the familiar mechanisms, such as meetings, briefings and workshops, can be tailored so as to attract participation by different stakeholders whose involvement is desired. For instance, a workshop on scientific and economic aspects of the food safety controls relevant to the issue under consideration would be likely to attract robust food industry participation, while a panel discussion on the latest advances in risk analysis methodologies should appeal to many academic experts, as well as to other stakeholders.

##### Some tactics for engaging stakeholders in a food safety risk analysis

###### Meeting techniques

- Public hearings
- Public meetings
- Briefings
- Question and answer sessions
- Town hall meetings
- Panel discussions
- Focus groups
- Workshops

###### Non-meeting techniques

- Interviews
- Hotlines and toll-free numbers
- Websites
- Advertising and flyers
- Television and radio
- Reports, brochures and newsletters
- Booths, exhibits and displays
- Contests and events



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### Check Your Progress Exercise 4

**Note:** a) Use the space below for your answers.  
b) Check your answers with those given at the end of the unit.

1) What are some inappropriate communication goals that should be avoided during risk communication?

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2) What are the potential stakeholders in food safety risk analysis?

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3) List various strategies for effective communication with external stakeholders?

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4) What is the criteria for identifying potential stakeholders in given food safety risk analysis?

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## 8.9 LET US SUM UP

Risk communication is a powerful but often underutilized element of risk analysis. This unit examines the role played by good risk communication in the application of the generic food safety RMF. Critical steps within the RMF at which effective communication is essential are identified, and the specific communication processes required at each stage are described. Practical aspects of communication, such as choosing appropriate goals for risk communication and how to identify and engage external stakeholders, are briefly reviewed. While ensuring good risk communication requires thoughtful planning and some commitment of resources, risk managers may find that establishing an infrastructure for communication and a climate in which communication is encouraged, expected and flows naturally, are among the most important steps they can take to achieve a successful outcome for a risk

management process. This Unit does not explain “how to talk about risk”, a separate topic beyond the scope of this guide, but readers are referred to the reference materials at the end of the unit for advice on that subject.

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## 8.10 KEY WORDS

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- COPAIA** : (Pan American Commission on Food Safety). In 2001, Latin American governments and the Pan American Health Organization established COPAIA, a commission on food safety in the region with 20 appointed members, 10 from government and five each from industry and consumer organizations.
- FSSAI** : Food Safety and Standards Authority of India. The FSSAI is being established and it will have an advisory board of stakeholders, which will include members from the food industry, agriculture, consumers, and relevant research bodies and food laboratories besides other ex-officio members.
- NZFSA** : The New Zealand Food Safety Authority. In 2003, NZFSA initiated an on-going biannual forum with representatives of more than two dozen consumer, environmental health and other civil-society groups with an interest in food safety, and invites them to discuss how NZFSA makes decisions, and how civic organizations could productively be involved in that process.

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## 8.11 ANSWERS TO CHECK YOUR PROGRESS EXERCISES

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Your answer should include following points:

### Check Your Progress Exercise 1

- 1) Risk communication is “an interactive exchange of information and opinions throughout the risk analysis process concerning risk, risk-related factors and risk perceptions among risk assessors, risk managers, consumers, industry, the academic community and other interested parties, including the explanation of risk assessment findings and the basis of risk management decisions.”
- 2)
  - Promote awareness and understanding of the specific issues under consideration during the risk analysis process, by all participants;
  - Promote consistency and transparency in arriving at and implementing risk management decisions;
  - Provide a sound basis for understanding the risk management decisions proposed or implemented;
  - Improve the overall effectiveness and efficiency of the risk analysis process;

- Contribute to the development and delivery of effective information and education programmes, when they are selected as risk management options;
- Foster public trust and confidence in the safety of the food supply;
- Strengthen the working relationships and mutual respect among all participants;
- Promote the appropriate involvement of all interested parties in the risk communication process; and
- Exchange information on the knowledge, attitudes, values, practices and perceptions.

### **Check Your Progress Exercise 2**

- 1) Details given on page no. 73.
- 2) Details given in Section 8.4.2.
- 3) Your answer should include the key stages discussed in sections 8.4.1 to 8.4.4 including the sub-stages listed under Section 8.4.1. You may also refer to Fig. 6.1 of Unit 6 for answering this question.

### **Check Your Progress Exercise 3**

- 1)
  - Know the audience
  - Involve the Scientific Experts
  - Establish Expertise in Communication
  - Be a Credible Source of Information
  - Share Responsibility
  - Differentiate between Science and Value Judgment
  - Assure Transparency
  - Put the Risk in Perspective
- 2) Your answer should include that depending on what is to be communicated and to whom; risk communication messages may contain information on the following:
  - The nature of the risk
  - The risk benefit analysis
  - Uncertainties in risk assessment
  - Risk management options
- 3) Relevant details with respect to international organizations, industry, government, consumer, consumer organizations and media as explained in Section 8.5.1

### **Check Your Progress Exercise 4**

- 1) Details given in Section 8.8.1
- 2) Details given in Section 8.8.3

3) Details given in Section 8.8.2

4) Details given in Section 8.8.3

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## 8.12 SUGGESTED READING

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**FAO/WHO.** 1999. *The Application of Risk Communication to Food Standards and Safety Matters*. Report of a Joint FAO/WHO Expert Consultation. Rome, Italy. 2–6 February.

**WTO.** 2002. Operating the SPS Enquiry Point. Chapter 4 in *How to Apply the Transparency Provisions of the SPS Agreement. A Handbook*. WTO Secretariat (available at: [http://www.wto.org/english/tratop\\_e/sps\\_e/spshand\\_e.pdf](http://www.wto.org/english/tratop_e/sps_e/spshand_e.pdf)).

