Risk Communication Toolkit for Environmental Issues and Concerns

1 Introduction

Risk communication is the process of informing people about potential hazards to their health, property, or community. It is a science-based approach for effective communication in situations of high stress, high concern, or controversy (USEPA 2019c). Risk communication is often seen as an effort that only happens after a crisis or emergency; however, it should provide a mechanism for community stakeholders to participate in the process of decision-making about potential risks or actual threats to their person, property, or community. Risk communication provides people the best available scientific, public health, and environmental information concerning potential threats, empowering them to make sound choices. This information is best delivered in easily understood language from trusted and credible sources. Having a risk communication plan in place prior to an emergency will improve effective and successful risk communication, reducing repercussions of any incident. Additional information is available in the Toolkit.

The Toolkit is applicable to current, immediate, and emerging environmental issues and concerns. Risk communication can be particularly challenging when dealing with contaminants of emerging concern where science is rapidly evolving. Communicators must grapple with competing interpretations of uncertain science and risk management strategies, while earning community trust and promoting meaningful engagement. The discipline of community engagement is interwoven with risk communication and associated planning.

A common misconception among environmental professionals is that risk communication occurs only after a crisis or emergency. In fact, it requires consistent communication through multiple avenues well before public concern develops. It is often in the form of a dialogue between the risk managers and the affected community.

The information in this fact sheet is more fully described in the *ITRC Risk Communication Toolkit (Toolkit)* (https://rct-1.itrcweb.org).

The purpose of this fact sheet is to:

- provide summarized information about risk communication
- describe the Risk Communication Planning Process
- reference a list of communication and engagement tools included in the Toolkit

Interested Party:

Responsible parties, state regulators, and owners and operators of contaminated site who have a vested interest or are impacted in some way by a situation or issue.

Stakeholder:

A person, group, or organization that is affected, potentially affected, or has any interest in a project or a project's outcome, either directly or indirectly (Presidential/Congressional Commission 1997).

2 Key Aspects of Risk Communication

Five key aspects necessary for developing and implementing an effective risk communication plan are shown in Figure 1 and described below (Hance, Chess, and Sandman 1991).

Understand How Communities See Risk

People evaluate and understand risk differently, depending on the inherent characteristics of the risk itself. Communications can help people frame the risk and address issues that are of greatest concern to communities. The more you understand the view or perceptions of the affected people and communities, the better you will be able to address their needs.

Stakeholders who perceive a risk as unacceptable or less acceptable are more likely to express emotional outrage when confronted with news about a hazard in their community. Practitioners need to acknowledge, honor, and address this emotion to facilitate constructive and meaningful dialogue.

Figure 1. Five Key Aspects of Risk Communication

Build Trust and Credibility

Trust is a major factor in effective stakeholder engagement and risk communication. Continuing engagement and transparency from the start sets the stage for successful trust building. Distrust can easily form due to, but not limited to, lack of information, inability to reach decision makers, inconsistency among several site risk management strategies, and inconsistent or contradictory media. In addition, practitioners should keep in mind that trust is influenced by history and previous interactions with regulatory agencies and potential responsible parties. Engagement and partnership with a community representative group or liaison, local health practitioners, and academic institutions can assist with building trust among the public and community stakeholders (NJDEP 2014; Council of Australian Governments 2018; ATSDR 2011).

Release Information Effectively

If people are at risk, don't wait to release information. If the lead organizations are exploring a potential risk, explain this to the public. Release information before sharing it with the media. Impacted individuals and families want to hear directly from decision makers about environmental concerns and hazards in their community prior to learning about it through media channels. Practitioners should make an effort to inform the community and other impacted stakeholders directly and periodically to facilitate trust building. Taking these actions helps maintain control of the message and interpretation of the data. If you don't trust the data, discuss procedures and what's being done.

Interact with Communities

Involving stakeholders early in decision-making can support better decisions. If stakeholder groups are present, determine how they may play a role in stakeholder engagement. Recognize that people's values and feelings are a legitimate aspect of an issue and listen and acknowledge such feelings.

Ensure that risk communicators are adept at interacting with stakeholders in a public forum, and that the communication team has staff with a sound technical basis and credibility in the subject matter. If possible, agency and responsible party representatives should be consistent throughout the life of the project.

Explain Risks and Management Strategies

Explaining risk information about any concern affecting communities is often challenging and complicated, particularly for environmental hazards, emerging contaminants, and immediate public health risks. Explaining scientific concepts, such as potentially complex chemistry, data and knowledge gaps, and current knowledge of health effects is fundamental to building trust. Stakeholders want to know if an exposure will cause or has caused a health impact(s). Thus, risk communication must inform on the basics of the risk assessment process so that stakeholders understand that health effects can be caused by multiple environmental and anthropogenic factors. Education on risk assessment basics can also inform stakeholders on how unacceptable risk can be reduced by risk mitigation activities.

The Toolkit includes information about risk communication challenges for emerging issues and concerns as well as information to help decision makers to learn and understanding the risk perceptions of stakeholders.

Table 1. Risk characteristics that influence level of acceptance
Source: Adapted from USEPA 2007a

More Acceptable	Less Acceptable
Voluntary	Involuntary
Controlled by individual	Controlled by others
Clear benefits	Little or no clear benefit
Fairly distributed	Unfairly distributed
Natural	Human-made
Generated by a trusted source	Generated by an untrusted source
Familiar	Exotic
Affects adults	Affects children

Releasing Information Effectively
• Act - don't wait
• Share what you do and don't know
• Share with affected public first before a general release
• Talk procedures
• Preliminary data
• Release in context
(Hance, Chess, and Sandman 1991)

Interacting with Communities
• Involve the public
• Use appropriate forums
• Communicate with many different audiences
• Acknowledge and deal with values and feelings expressed
• Respond personally
• Choose the right speakers
(Hance, Chess, and Sandman 1991)

3 Risk Communication Plan Description

The communication plan process described in the Toolkit supports the key aspects of risk communication. The success of a risk communication plan depends on building a working relationship between stakeholders and those conducting and overseeing the project. Communication is best accomplished through a team approach. This plan template was adapted from the work of NJDEP (2014), which relied on the work of Caron Chess, Billie Jo Hance, and Peter Sandman, Environmental Communication Research Program, Cook College, Rutgers University, as published by the New Jersey Department of Environmental Protection. Figure 2. Illustrates the eight-step process of the risk communication plan.

Risk communication is a two-way, ongoing, and continuous dialogue. Having a communication plan supports an ongoing stakeholder engagement process, identifies communication methods and tools, and acts as a record keeping form to achieve meaningful and effective risk communication. Communication planning supports reassessment of communication methods and approaches to improve or help craft better, more effective messages. The steps involved in the risk communication plan process are summarized in Table 2. Appendix A of the Toolkit includes a risk communication plan template that users may find helpful to download and fill-in as they developed their own risk communication plan. Guidance on forming a communiation team is provided under Step 1.

Figure 2. Communication plan process diagram
Source: Modified from (NJDEP 2014)

Communication and Engagement Tools

The Toolkit includes communication and engagement methods and tools with some examples:

- Active Centralized Information Repositories (Section 4.6.1.2)
- Sample SMART Goals (Appendix B)
- Audience/Stakeholder Identification Guide (Appendix C)
- Key Message Mapping Guide (Appendix D)
- Guidance for Writing Press Releases (Appendix E)
- Guidance for Writing Analytical Results Letters (Appendix F)
- Social Factors Vision Board (Appendix G)
- Communications Methods Summary Table (Appendix H)
- Analytical Data Package Public Information Fact Sheet (Appendix I)
- Tracking Form for Media Correspondence (Appendix J)

Method Selection: What do you want to accomplish?
- Receive information from affected people
- Give information to affected people
- Establish dialogue with community
- Summarize or update on progress

Table 2. Steps of the Risk Communication Plan Process
Sources: Chess et al. 1989; Hance, Chess, and Sandman 1991; NJDEP 2014; NOAA 2020

Risk Communication Plan Process	
Step 1: Identify the Issue/Concern	
• What are the likely concerns? • Who is impacted? • What is known about the problem, the community, your organization's history with the community, site or issue?	• What does your organization need to learn? • What does your organization need to share? • What is the expected response from the public?

Risk Communication Plan Process

Step 2: Set Goals & Objectives	
• Define the communication and outreach task and how you will achieve it • Determine how you will measure it and when it will be accomplished	• Break down goals into specific objectives with measurable results-think –short term, mid-term and long-term intervals

Step 3: Identify Communities & Constraints	
• Who must be made aware of the issue(s) and is affected by the problem, by the solution, and by the media? • What are the constraints/barriers to communicate – e.g., remote locations, access to the internet, ability to attend engagement activities?	• Access publicly available data-driven tools to assist with audience/stakeholder assessment

Step 4: Assess Stakeholders/Communities	
• Review media sources used in community • Use community partners • Discuss expected audience concerns with management team	• If appropriate, make a few targeted and/or random contacts to determine audience knowledge, perception, and concern about issue

Step 5: Identify Messages	
• Accurate, timely information you want or need to share with audiences about the issue or case • Link to case specific goal • Address key points about the issue	• Create consistency in communications • Apply the Message Mapping Tool

Step 6: Select Communication & Engagement Methods	
• A communication method is the means by which you communicate with your audiences	• Select a method based on your goal, how your audience best finds or receives information, and the nature of the issue.

Step 7: Implement Strategies – Communication Task Planning	
• List tasks to develop materials • List activities used for communications • How long will tasks take to complete? • What data need to be shared and in what form?	• Who is responsible for each task? • Who is the appropriate spokesperson? • What constraints may emerge in completing tasks? • How will the effort be evaluated?

Step 8: Evaluate, Debrief and Follow up	
• Assess what went well and what did not • Learn how to improve effectiveness • Inform decisions about future programming	• How did ongoing evaluation inform or impact the goals and results? • What ongoing support and/or follow-up are needed with the community?

4 References, Acronyms and Glossary

The references cited in this fact sheet and further references can be found at https://rct-1.itrcweb.org/references. The acronyms used in this fact sheet and in the Toolkit can be found at https://rct-1.itrcweb.org/acronyms. The Toolkit also contains a glossary that can be found at https://rct-1.itrcweb.org/glossary.

ITRC
1250 H St. NW, Suite 850
Washington, DC 20005
itrcweb.org

ITRC Disclaimer

ERIS
ENVIRONMENTAL RESEARCH
INSTITUTE OF THE STATES

ECOS