

CHAPTER 2

RISK COMMUNICATION PROBLEMS

Communication about flood risk usually involves providing information concerning: a) the existence and nature of the flood threat; b) the seriousness of the risk; and c) steps that can be taken to control the flooding or mitigate its effects. Regardless of the scale of the project being considered, the purpose of the communication effort usually is to persuade people to take some recommended action. Effective communication is impeded by problems on both the source and receiver side of the information exchange.

RECEIVER PROBLEMS

Successful communication of information about flood risk requires overcoming a number of problems springing from human nature and from the views and experiences of the audience. These problems relate to people's perception of risk in general and the way in which risk-related information is viewed and evaluated.

Lack of Interest in Risk Information

People have enough problems in the day-to-day course of living. Information on a new risk represents an additional burden. Moreover, whatever action is needed to respond to the risk is likely to either cost something or require changing some present habit or practice. The natural tendency is toward rejecting the new information, rationalizing why it is not applicable, finding fault with the information or its source, or otherwise creating a way to avoid dealing with the risk. This is especially easy in the case of flooding that is often viewed as something which may or may not happen sometime in the future.

Incorrect Estimation of Risk

Scientifically designed studies have asked people to estimate the relative risk of various kinds of threats. The results indicate clearly that people tend to over-estimate

the risk of rare events and underestimate the risk of more common events like floods.

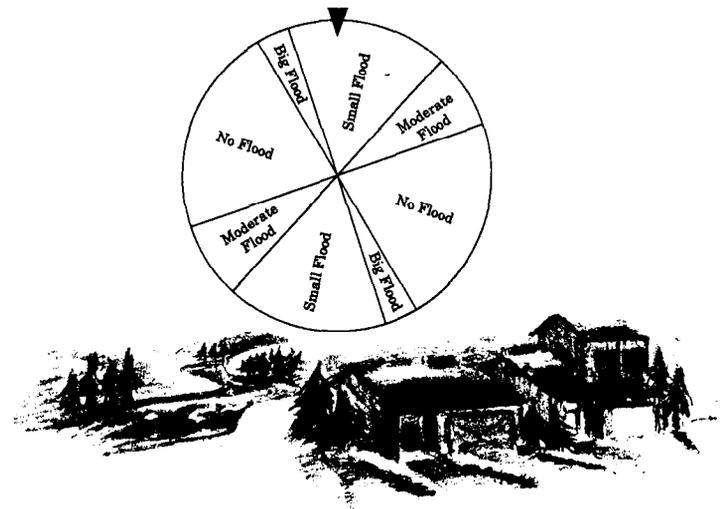
“...people tend to...underestimate the risk of more common events like floods.”

This characteristic error in estimating risk is attributed to the fact that unusual deaths and injuries receive far more attention in the media than the more common ones. Spectacular

incidents of damage or dramatic situations are also more likely to be remembered and recalled.

Misunderstanding of Probability

Most people also share the “gambler’s fallacy,” believing that because some event has occurred, it is less likely to occur again soon. For example, people tend to believe after a large flood has occurred that the chance for another such flood happening in the foreseeable future is reduced when, in fact, the chances have not changed.



Lack of Experience

Most people lack significant experience with relatively rare events, such as major floods. It's difficult for a person who has seen only small floods to conceive of a great flood occurring. Closely related to this is the tendency for people to misinterpret some single experience. Someone who once experienced minor flooding on the periphery of what was described as a large flood, or even saw minor flooding in a watershed adjacent to one having what was described as a large flood may develop a wrong idea of the seriousness and destructive power of such a flood and underestimate it.

Desire for Certainty

Dealing with information on potential flooding would be troubling enough for people if the nature of the risk was easy to understand and the extent of the risk was obvious. The problem is usually compounded by uncertainty concerning whether the risk affects the individual's location, the probabilistic nature of flooding, and the incomplete protection usually recommended. Uncertainty provides a convenient rationalization for disregarding the problem.

Reluctance to Make Trade-offs

Actions reducing a hazard sometimes have their own risks. For example, building a levee to prevent

moderate levels of flooding may create some risk of a more catastrophic type of flooding if the levee fails or is overtopped. People generally have difficulty making trade-offs among

these kinds of risks, especially if the risks cannot be compared in

explicit terms. A

similar type of problem arises if people are asked to choose between two mutually exclusive alternatives.

The usual response is a wish to have the advantages of both alternatives.

“Actions reducing a hazard sometimes have their own risks”

Potential for Success

People and communities are more willing to take action in response to information on flood risk if it is believed that the recommended action will be effective. Action is less likely when the recommended measure only has some probability of reducing the risk or will only partially eliminate the risk. Related to this, individuals and small communities often feel powerless against the risk of flooding. In order to influence them, information on flood loss reduction projects must make it clear that what is required can be accomplished, preferably by showing that it has been successfully accomplished by others in their circumstances.

SOURCE PROBLEMS

There are also problems on the source side that impede the exchange of information about flood risks. These problems can frequently be solved.

Limited Understanding of Receiver Goals

Those providing information on flood risk and attempting to persuade people or communities to move forward on some project usually have a relatively narrow viewpoint. The Corps of Engineers interest is in reducing flood losses or meeting some other water-related goal. But individuals and communities normally have a wide range of interests, fears, values, priorities, and preferences that are important to their decision making and which are largely unknown to the Corps of Engineers personnel working on a project.

Individuals and communities behave in the way that best satisfies the concerns that are most important to them. For example, a decision to live in an area subject to flooding may be based on many factors such as natural amenities, travel to employment, home price, nearness to friends and family, etc. Only a portion of these factors relate to the potential for flood losses and, even if the adverse consequences of floodplain residence are appreciated, they may not be enough to tip the overall equation in favor of moving. In order to have any
8 significant chance of success, informational

programs need to determine and consider as many as possible of the viewpoints and interests of the intended recipients.

Limited Authority and Resources

Even if all of the important concerns of an individual or community were known, the Corps of Engineers often lacks the authority and resources to address them in anything more

than a cursory manner. As a result, project proposals often generate questions

“...project proposals often generate questions that cannot be answered easily...”

that cannot be answered easily and which tend to stymie decision making. Minimizing these kinds of problems requires anticipating the impacts of the recommended action and ensuring all of the appropriate parties are involved in the planning.

Disagreements Among Experts

People generally believe that specialists in some field have knowledge superior to their own and tend to accept their conclusions and opinions. But people also expect experts using the same information to come to more or less the same conclusions and recommendations.

Disagreements among experts or agencies about the existence of a threat, its severity or the appropriate

reaction is confusing. From the perspective of the lay person, they are being asked to make a decision that can't be decided by the experts. Minimizing these kinds of problems requires ensuring that the experts are working with the same basic information and using the same assumptions.

Use of Difficult Language

Most fields make use of specialized terminology that is precise and expressive for those in the field but difficult for others to understand. The typical reaction is to ignore flood risk information presented in an overly technical or bureaucratic way.

