

RISK COMMUNICATION COMPONENT IN RISK ANALYSIS : METHODOLOGY AND IMPLEMENTATION

Bridges V.¹, Salman M.²

La communication relative au risque est un aspect très important de l'analyse de risque et qui est encore souvent négligé. Ceci est particulièrement vrai dans les situations politiques ou celles impliquant le grand public. Afin de réussir la communication relative au risque, et que les décisions et politiques de lutte soient acceptées, l'une d'entre elles doit être efficace dans la communication.

Pour être efficace, divers critères doivent être pris en compte, le premier étant de communiquer avec les bonnes personnes. La perception du risque par le grand public n'est pas basée sur la science et il est d'une première importance que les écarts d'information entre les professionnels techniques et ceux qui sont touchés par ces divergences soient surmontés. La compréhension des principes et des concepts associés à la perception du risque par le grand public est aussi essentielle qu'une communication efficace. Le facteur le plus important de la perception du risque par le grand public est probablement le degré perçu de contrôle ou de maniement que l'individu a du danger. La sévérité des conséquences d'un résultat défavorable affecte également la perception du risque, telles que le nombre d'incertitudes associées. La complexité de la communication relative au risque relève du fait que les perceptions de la société sont en mouvement constant, résultant de changements constants dans l'attitude envers les risques à travers le temps.

L'art de la communication relative au risque est un challenge en cours, mais s'il est fait correctement, cela augmentera la réception et l'acceptation de la décision concernant le risque.

Risk analysis is typically divided into three components: risk assessment, risk management, and risk communication. The risk communication component consists of the effective communication of the results of risk assessment and risk management. Once a decision has been made during risk management, it must be communicated to those concerned with the issue. Risk communication is a critical, yet often overlooked, aspect of risk analysis. Even if the best possible decision is made and is based on a well done, scientifically sound risk assessment, if it is ineffectively communicated to those it impacts, the decision will be negatively received. In addition to the final decision, the process used to arrive at that decision should be communicated. This includes how the risk assessment result was derived and all factors that were utilized in the risk management phase of the assessment. If people understand why a particular decision was made, they are much more willing to accept it, even if they disagree with it. Emphasis on communication can be especially beneficial in professions that deal with uncertainties, such as animal health professions, where a good decision does not always guarantee a good outcome.¹

Those directly impacted by a risk decision must be communicated with regarding that decision. However, this population is just the most obvious one. Other groups that should also be communicated with are those who are indirectly affected by the decision and those who are interested in the issue, even though they are not directly or indirectly affected by it. These last two groups are frequently overlooked, yet can end up significantly impacting the success of the issue at hand.

Risk communication must take place in terms which are understandable and comprehensible to those needing to be informed. In order to be successful in risk communication, the decisions and policies stemming from risk analysis must be accepted. This requires the understanding of principles and concepts involved in risk perception by the general public. While scenario trees, probability density functions, and uncertainty analyses are all examples of techniques used in assessing risk, they are meaningless to most of the public. Often the public does not have the knowledge needed to relate to the level of risk based on technical information. The result is that the perception of risk by the general public is based on factors such as intuition, past experiences, or what they hear on the news, rather than on science. This is where the art of risk communication plays a major role. There is not a general method established to deal with the gap between the technically derived level of risk and the level of risk perceived by the public. Yet removing this gap is of prime importance if decisions and policy are to be accepted.

Probably the single most important factor in risk perception is the perceived degree of control or manageability the individual has over the hazard. People appear to be willing to take greater risks when they are the ones making the decision and think they have control over the situation. When the individual perceives they do not have control, they tend to become more risk adverse. It has been said that the level of acceptable risk drops as much as 1000 times when perceived control is removed from the individual.³

¹ United States Department of Agriculture, Animal and Plant Health Inspection Service, Veterinary Services, Centers for Epidemiology and Animal Health, 555 S. Howes, Ft Collins, CO 80521, USA

² Colorado State University CVMBS, Ft Collins, CO 80523, USA

Another factor in risk perception is the likely severity of consequence if an adverse outcome were to occur. Those hazards with outcomes that cause more severe consequence or affect greater numbers of people are typically given more weight by the general public. For example, a disaster that claims many lives but happens rarely is seen as worse than an event that kills a few people each day, even though many more people may be killed over time by the day to day hazard.

The amount of uncertainty associated with probability estimates for adverse outcomes also affects acceptance and perception of risk.³ The less certainty given to an outcome results in less credence given to the risk. This is especially true with future hypothetical situations.

Complicating risk communication is the fact that society and its perception towards events and activities is in constant movement, resulting in constant changes in risk perception and attitude towards risk. As more information about a risk becomes available over time, the perception of that risk can also increase.³ Changes in social values result in changes of the level of risk society is willing to accept.² As a new hazard becomes integrated into day to day life, its associated risks also become part of everyday life and become increasingly accepted. Advertising the benefits of an activity seems to increase its public acceptance and results in the acceptance of a greater level of risk associated with the activity.³

CONCLUSION

The key to risk communication is that it must be **effective**. In order to accomplish effective risk communication, several criteria must be remembered.

- Communicate how the result was derived in addition to the result.
- Communicate to those directly impacted, those indirectly impacted, and those interested in the issue even if not impacted.
- Communicate in terms which are understandable and comprehensible by those to whom you are communicating.
- Understand the factors involved in risk perception by the general public.
- Understand society's current perception of risk, keeping abreast of changes.

The art of risk communication is an ongoing challenge, but if done well, it will enhance the reception and acceptance of the risk decision.

BIBLIOGRAPHY

1. Johnston J., 1980. Decision Making and Veterinary Epidemiology. Proceedings of the Second International Symposium on Veterinary Epidemiology and Economics, 523-530.
2. Rowe W., 1977. An anatomy of risk. John Wiley and Sons, New York.
3. Starr C., Rudman R., Whipple C., 1976. Philosophical basis for risk analysis. Annual Review of Energy, vol 1, 652-662.