

GLOSSARY

Consensus

A situation involving a number of representatives of different groups or interests, in which agreement is being sought among them on one or more issues of common concern and no group or interest opposes the decision reached.

Cost—benefit analysis

See *risk–benefit analysis*.

Dose

The amount of a substance delivered to the body or target organ as a result of exposure.

Dose–response relationship

The quantitative relationship between the dose of a toxic substance received by an individual (animal or person), and the resulting consequence. An exposure–response relationship concerns the exposure of the individual rather than the dose received.

Epidemiology

The study of the distribution and determinants of disease frequency in humans. It may involve the observation of unusual clusters of a rare disease; descriptive statistics on morbidity and mortality patterns; ecological studies correlating disease incidence or prevalence rates with geographical or spatial risk factors; and analytical studies of the relationship between disease incidence or prevalence and exposure to particular toxic substances.

Exposure

Contact between a substance and an individual or a population. Exposure may occur via different pathways, including oral, dermal and inhalation.

Exposure–Response Relationship

See *dose–response relationship*.

Hazard

A condition having the potential to cause undesirable consequences (harm).

Hazard identification

The recognition that a hazard exists and the definition of its characteristics.

Health consequence

The adverse impact on health that can result from exposure to a substance.

High-risk groups

Part of a population that has a greater than average chance of adverse effects from a particular cause. This may result from higher sensitivity or predisposition (such as because of age or genetic constitution); or its potential for high exposure (such as through behaviour or place of residence).

Mediation

The process by which stakeholders, together with the assistance of a neutral person or persons, systematically isolate disputed issues to develop options, consider alternatives and reach a consensual settlement that will accommodate their needs. It emphasizes the participants' own responsibility for making decisions that affect their lives.

Monitoring and surveillance

Regular sampling of various media in the environment (air, water and soil) or of health indicators (infection and disease incidence) to carry out specific programmes – for example, the verification of compliance by industry with permitted levels of air emissions of various chemicals; detection of patterns of disease; checking the adequacy of environmental controls for the protection of wildlife species; and providing routine baseline information about environmental or health conditions to governments or planning authorities.

Negotiation

An approach to dispute resolution involving designated representatives of stakeholder groups and a neutral chair or convenor that seeks mutual gain through the constructive settlement of disputes. Representatives of government agencies may be parties to these agreements, and if so they are committed to implementing the terms of the agreements through their regulatory powers.

Probability

The likelihood that an effect will occur, expressed as a fraction or decimal per unit time or unit opportunity.

Psychometric scaling

Tests used to measure psychological characteristics, including intelligence and, more recently, lifestyle preferences and related attitudes and behaviours; as applied to risk perception, it measures the effects of such qualitative dimensions as familiarity, dread, catastrophic events and risk to children.

Public hearing

A process in which matters of public concern are dealt with at meetings open to the public and at which members of the public are invited both as an audience and as active participants in the proceedings.

Public right to know

A situation in which officials representing both public- and private-sector organizations or administrations are required, by legislation or other form of obligation, to disclose certain information of interest to the general public and in which this requirement ultimately is enforceable by members of the public as a matter of law.

Risk

A measure of the probability and severity of an adverse effect (to health, property or the environment).

Risk analysis

The process of using available information to quantify the risk from one or more hazards.

Risk assessment

The joint process of risk estimation and risk evaluation.

Risk–benefit or cost–benefit analysis

Comparison of the probable negative consequences of a certain level of risk with the social, economic, public health, or other advantages to individuals and the community that are thought to accrue from accepting that risk. Benefits may be expressed either in quantitative terms (monetary or health) or in qualitative terms (the quality of life). Risks may also be expressed in monetary terms, in which case the comparison is referred to as a cost–benefit analysis. The comparison is intended to support decision-making as to whether the benefits are worth the risks (or costs) involved.

Risk communication

The exchange or provision of information to inform, persuade or warn others about risk to health. Risk communication is the transmission of information between interested parties about the levels of health risks, about the significance or meaning of health risks or about decisions, action or policies aimed at managing or controlling health risk. Interested parties include government agencies, politicians, corporations and industry groups, unions, the mass media, scientists, professional organizations, public interest groups and individual citizens.

Risk control

Using the process of decision-making for managing risk, including implementation, enforcement and measurement of effectiveness, using such tools as risk assessment with the aim of reducing or eliminating risk (sometimes referred to as risk management – see *risk management process*).

Risk estimation

Expanding risk analysis to determine the extent, severity and distribution of adverse effects.

Risk evaluation

The stage in the risk management process in which values and judgement enter, introducing consideration of the relative importance of competing risks and the associated consequences of actions dictated by decision-making, including risk acceptance and opinion analysis.

Risk management process

The complete process of hazard identification, risk estimation, risk evaluation and risk control (sometimes referred to as risk management – see *risk control*).

Risk perception

Awareness that an adverse effect is occurring under the influence of external factors.

Risk system

Defines the boundaries of the risk analysis, implying that the system is identifiable, made up of interacting parts or subsystems that are also identifiable and that the boundary of the system can be described or identified. This is straightforward for most technological hazards. For nontechnological hazards it may be necessary to restrict the application to an incomplete system, ignoring the parts that are described but not taken into account in the analysis.

Stakeholders

All the individuals and groups who are entitled, by virtue of their residence in a particular location, expertise, record of involvement in an issue or other factor, to participate in processes or decisions whose outcome may affect the health or wellbeing of themselves or the communities that they represent.

Toxicology

The study of the adverse effects of toxic substances, including the derivation of dose–response relationships, using data from animals, humans and cell cultures and the application of these results to the prevention of harm to humans.

Uncertainty

A reflection of the reliability of a numerical estimate. Uncertainty in a risk estimate may arise from several sources: the inherent variability in the system; inaccuracies in measurement; or unreliability in the measurement, for example, because of insufficient data.

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