

ANNEX 1

LIST OF HIGH PRIORITY GENERIC TERMS INCLUDED IN THE NOVEMBER 1996 OECD/IPCS SURVEY

<p>—A— acceptable daily intake acceptable risk adverse effect assessment assessment endpoint assessment factor</p> <p>—C— concentration-effect relationship</p> <p>—D— dose-effect relationship dose-related effect dose-response dose-response assessment dose-response curve dose-response relationship</p> <p>—E— ecological risk assessment effect assessment expert judgment exposure assessment exposure scenario</p>	<p>—F— fate</p> <p>—G— guidance value</p> <p>—H— hazard, hazard assessment hazard characterization hazard evaluation hazard identification</p> <p>—M— margin of exposure margin of safety measurement endpoint</p> <p>—R— reference dose risk risk analysis risk assessment risk characterization risk communication risk estimation risk evaluation risk identification risk management risk monitoring</p>	<p>—S— safety factor</p> <p>—T— tolerable daily intake tolerable intake toxicity toxicity assessment</p> <p>—U— uncertainty, uncertainty factor</p> <p>—V— validation</p>
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Note: Following the survey, the OECD/IPCS Terminology Planning Working Group agreed to add the following terms: “analysis”, “concentration”, “dose”, and “response” and delete the terms: “ecological”, “risk assessment”, “risk identification”, and “toxicity assessment”.

ANNEX 2

REFERENCES AND OTHER SOURCE DOCUMENTS OF DESCRIPTIONS OF HIGH PRIORITY TERMS

Codex 1995: Codex Alimentarius Commission (1995). Circular letter CL 1995/40-CAC.

Cohrssen 1989: Cohrssen J., Covello V. (1989). Risk analysis: A Guide to Principles and Methods for Analyzing Health and Environmental Risks. U.S. Department of Commerce, Springfield, VA.

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FAO 1995: Food and Agricultural Organization of the United Nations (1995). Report of the Eighth Session of the Codex Committee on Residues of Veterinary Drugs in Foods – Washington 7-10 June 1994. ALINORM 95/31. Rome.

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US-EPA 1992a: US Environmental Protection Agency (1992). Federal Register – Guidelines for exposure assessment; Notice.

US-EPA 1992b: US Environmental Protection Agency (1992). Framework for Ecological Risk Assessment. EPA/630/R-92/001, Washington DC.

US-EPA 1993: U.S. Environmental Protection Agency (1993). Terms of Environment – Glossary, Abbreviations and Acronyms. EPA 175-B-93-001. Washington DC.

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WHO 1978: World Health Organization (1978). Provisional guidelines for health program evaluation. HPC/DEP/78.1. Geneva.

WHO 1979: World Health Organization. (1979). Agreed terms on Health Effects Evaluation and Risk and Hazard Assessment of Environmental Agents. WHO unpublished document EHE/EHC/79.19. *WHO Environmental Health Criteria Programme*. Geneva.

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WHO 1989: World Health Organization. (1989). Control of Environmental Hazards – Assessment and management of Environmental Health Hazards. WHO/PEP/89.6, Recommendations of Working Group. Geneva.

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WHO/FAO 1995: World Health Organization. (1995). Application of Risk Analysis to Food Standard Issues. Series WHO/FNU/FOS/95. *Joint FAO/WHO Expert Consultation*, Geneva.

WHO/IPCS 1989: World Health Organization (1989). Glossary of terms on chemical safety for use in IPCS publications. WHO/ICS/89.27. Geneva.

WHOTER: World Health Organization. Submitted by the WHO Technical terminology Service, TER. Geneva.

ANNEX 3

ORIGINAL SURVEY RESULTS

Summary of Respondents

The following table summarizes the areas of expertise of the respondents, as well as the region of the world where they live. It should be noted that there are some respondents who did not complete the personal profile survey, and therefore can not be included in this table and the summary tables which are presented for each of the terms in the survey. The collection of the necessary information on these respondents will be attempted in the near future. For the purposes of this report their selections have been included in the summaries, and recorded in the “None Reported” category.

Summary of Respondents by Expertise and Country

Expertise	All	None	Asia	Africa	Europe	N. Amer.	L. Amer. Carib.	Aus/N Z
Biochemistry								
Biology								
Chemistry	1				1			
Drugs/Pharmaceuticals	3	1			2			
Ecological science (general)								
Ecological science (aquatic)	2		1		1			
Ecological science (terrestrial)								
Environmental science	10			1	6	1		2
Epidemiology	3				2	1		
Food Safety								
Laboratory research								
Mathematical sciences								
Occupational health	4	2			1	1		
Office research								
Pesticides	7				4		1	2
Risk assessment (general)	3		2		1			
Risk assessment (environmental)	25				17	7	1	
Risk assessment (human health)	71		6		40	17	2	6
Risk assessment methodology	1					1		
Risk Management								
Toxicology	8		1	2	4	1		
Other (see comment)	27	2	2	1	15	2	4	1
None listed	21	3	1		5	8	1	
TOTALS	186	8	13	4	99	39	9	11

Acceptable Daily Intake

Def.	All Respondents	Percentage	Chemistry	Pharmaceuticals	Ecological - Aquatic	Env. Science	Epidemiology	Occ. Health	Pesticides	Risk Ass. - General	Risk Ass. - Env.	Risk Ass. - Hum. Health	Risk Ass. - Meth.	Toxicology	Other	None Reported
0	12	6.1									2	3		1	2	4
1	44	22.4		1		4	1	1			3	15	1	1	9	8
2	12	6.1			1	1			1	1	1	5			1	1
3	39	19.9			1	2	2		2	1	6	13		1	3	8
4	19	9.7						1	2	1	2	3		1	5	4
5	1	0.5										1				
6	3	1.5										1		1		1
7	12	6.1						1	1		1	5		1	2	1
8	54	27.6	1	2		3		1	1		8	21		2	3	12

Definition

0. None of the below.
1. Estimate of the amount of a substance in food or drinking water, expressed on a body mass basis (usually mg/kgbw), which can be ingested over a lifetime by humans without appreciable health risk. (Leeuwen 1996)
2. Estimate of the amount of a pesticide in food and drinking water which can be ingested daily over a lifetime by humans without appreciable health risk. It is usually expressed in milligrams per kilogram of body weight. (Holland 1996)
3. An estimate of the daily exposure dose that is likely to be without deleterious effect even if continued exposure occurs over a lifetime. (US-EPA 1992a)
4. Estimate of the largest amount of a substance (e.g., a chemical) to which a person can be exposed on a daily basis that is not anticipated to result in adverse effects. Usually expressed in milligrams per kilogram per day (mg/kg/day). (Cohrssen 1989)
5. The maximum amount of a chemical whose total daily intake during lifetime. (sic) (UNEP 1994)
6. The amount of a food additive, expressed on a body weight basis, that can be taken daily in the diet, even over a lifetime, without risk. (WHO 1979)
7. The acceptable daily intake of a chemical is the daily intake which, during an entire lifetime, appears to be without appreciable risk to the health of the consumer on the basis of all the known facts at the time when a toxicological assessment is carried out. It is expressed in milligrams of the chemical per kilogram of body weight. (Vettorazzi 1980)
8. The daily intake of a chemical which, during a lifetime, appears to be without appreciable risk, on the basis of all the facts known at the time. It is expressed in milligrams per kilogram of body weight per day (mg/kg/day). (WHO 1996)

Acceptable Risk

Def.	All Respondents	Percentage	Chemistry	Pharmaceuticals	Ecological - Aquatic	Env. Science	Epidemiology	Occ. Health	Pesticides	Risk Ass. - General	Risk Ass. - Env.	Risk Ass. - Hum. Health	Risk Ass. - Meth.	Toxicology	Other	None Reported
0	93	58.1				4	1	3	1		9	40		2	9	24
1	67	41.9	1	1	1	5	2	1	4	1	8	16		5	13	9

Definition

0. None of the below.
1. A risk, perhaps in the region of 1 in a million of a seriously adverse occurrence, where the conduct of life is not affected provided that we are in fact satisfied that reasonable precautions are in place. (Guen 1995)

Adverse Effect

Def.	All Respondents	Percentage	Chemistry	Pharmaceuticals	Ecological - Aquatic	Env. Science	Epidemiology	Occ. Health	Pesticides	Risk Ass. - General	Risk Ass. - Env.	Risk Ass. - Hum. Health	Risk Ass. - Meth.	Toxicology	Other	None Reported
0	21	10.3				1					1	10		1	1	7
1	58	28.4		1	1	3	1	1	1		11	17	1	1	7	13
2	42	20.6	1	1		2	1	1	3	1	4	15		4	2	7
3	6	2.9								1	1	2			1	
4	77	37.7		1		4	1	1	3	1	9	27		2	14	14

Definition

0. None of the below.
1. Change in morphology, physiology, growth, development or life span of an organism which results in impairment of its functional capacity or impairment of its capacity to compensate for additional stress or increased susceptibility to the harmful effects of other environmental influences. (Leeuwen 1996)
2. Change in morphology, physiology, growth development or life span of an organism which results in impairment of functional capacity or which increases susceptibility to the harmful effects of other environmental influences. (WHO 1978) (Holland 1996)
3. Change in morphology, physiology, growth, development or life span of an organism which results. (USES 1994)

Definition (continued)

4. Change in morphology, physiology, growth, development or life span of an organism which results in impairment of functional capacity or impairment of capacity to compensate for additional stress or increase in susceptibility to the harmful effects of other environmental influences. (WHO 1994a) (WHO 1996)

Assessment

Def.	All Respondents	Percentage	Chemistry	Pharmaceuticals	Ecological - Aquatic	Env. Science	Epidemiology	Occ. Health	Pesticides	Risk Ass. - General	Risk Ass. - Env.	Risk Ass. - Hum. Health	Risk Ass. - Meth.	Toxicology	Other	None Reported
0	66	36.3		2		5	1	1	1		6	26	1	2	5	16
1	113	62.1	1	1	2	5	1	3	6	3	15	32		4	19	21
2	3	1.6									1	1			1	

Definition

0. None of the below.
1. The combination of analysis with policy-related activities such as identification of issues and comparison of risks and benefits (as in risk assessment and impact assessment). (Leeuwen 1996)
2. In the asbestos-in-schools program, the evaluation of the physical condition and potential for damage of all friable asbestos containing materials and thermal insulation systems. (US-EPA 1993)

Assessment Endpoint

Def.	All Respondents	Percentage	Chemistry	Pharmaceuticals	Ecological - Aquatic	Env. Science	Epidemiology	Occ. Health	Pesticides	Risk Ass. - General	Risk Ass. - Env.	Risk Ass. - Hum. Health	Risk Ass. - Meth.	Toxicology	Other	None Reported
0	63	40.4		2		3	1	2	2		5	27	1	2	4	14
1	93	59.6	1			5	1	1	4	2	14	26		4	15	20

Definition

0. None of the below.
1. An explicit expression of the environmental value that is to be protected. (US-EPA 1992a)

Assessment Factor

Def.	All Respondents	Percentage	Chemistry	Pharmaceuticals	Ecological - Aquatic	Env. Science	Epidemiology	Occ. Health	Pesticides	Risk Ass. - General	Risk Ass. - Env.	Risk Ass. - Hum. Health	Risk Ass. - Meth.	Toxicology	Other	None Reported
0	47	29.6		1		2		1			5	17	1	1	5	14
1	112	70.4	1	1	1	7	1	1	5	2	18	33		4	18	20

Definition

- 0. None of the below.
- 1. Numerical adjustment that can be used as tools to extrapolate from experimentally-determined effects endpoints to estimate an environmental concern level, i.e. that concentration of a substance at and above which ecosystems could be adversely affected. (OECD 1995)

Note: They can be used to extrapolate from acute to chronic effects, from laboratory to field conditions, from a few species to many, etc. (It should be noted that concern levels are not "safe" levels. They merely indicate that further assessment or information may be required.) (OECD 1995)

Concentration Effect Relationship

Def.	All Respondents	Percentage	Chemistry	Pharmaceuticals	Ecological - Aquatic	Env. Science	Epidemiology	Occ. Health	Pesticides	Risk Ass. - General	Risk Ass. - Env.	Risk Ass. - Hum. Health	Risk Ass. - Meth.	Toxicology	Other	None Reported
0	24	12.1		1		1					5	8		1	1	7
1	93	46.7		1	2	7	1	1	5		8	28	1	2	16	21
2	13	6.5								1	5	4			1	2
3	31	15.6	1	1		1	1	1		1	5	11		2	3	4
4	9	4.5							1		1	4		1	1	1
5	10	5.0				1		1				4		1		3
6	19	9.5						1		1	2	10			2	3

Definition

- 0. None of the below.
- 1. Association between exposure concentration and the magnitude of the resultant continuously graded change, either in an individual or in a population. (Duffus 1993)

Definition (continued)

2. Association between the dose and the magnitude of a continuously graded effect in an individual or a population. Source After IUPAC Glossary. (Last 1995)
3. The relationship between dose and severity of effect. (WHO 1993)
4. Graded relationship between the dose of the pesticide to which the organism is exposed and the magnitude of a defined biological effect, either in an individual organism or in a population. (Duffus 1993) (Holland 1996)
5. Association between dose and the magnitude of a continuously graded effect, either in an individual or in a population or in experimental animals. (Duffus 1993)
6. The relationship between the administered or absorbed dose and the magnitude of the biological change in an animal or human subject. (WHO 1979)

Dose-Effect Relationship

Def.	All Respondents	Percentage	Chemistry	Pharmaceuticals	Ecological - Aquatic	Env. Science	Epidemiology	Occ. Health	Pesticides	Risk Ass. - General	Risk Ass. - Env.	Risk Ass. - Hum. Health	Risk Ass. - Meth.	Toxicology	Other	None Reported
0	16	8.2									1	7		1	1	6
1	57	29.1		1	2	5			3		7	19		2	9	9
2	40	20.4	1	2		2	1	1		2	4	12	1	2	5	7
3	15	7.7						1	1		4	5		1	2	1
4	34	17.3				3	1	1	2		2	11		2	3	9
5	30	15.3						1		1	4	14			3	7
6	4	2.0							1						1	2

Definitions

0. None of the below.
1. Association between the dose and the magnitude of a continuously graded effect in an individual or a population. (WHO 1979) (Last 1995)
2. The relationship between dose and severity of effect. (WHO, 1993)
3. Graded relationship between the dose of the pesticide to which the organism is exposed and the magnitude of a defined biological effect, either in an individual organism or in a population. (Duffus 1993) (Holland 1996)
4. Association between dose and the magnitude of a continuously graded effect, either in an individual or in a population or in experimental animals. (Duffus 1993)
5. The relationship between the administered or absorbed dose and the magnitude of the biological change in an animal or human subject. (WHO 1979)
6. Association between exposure concentration and the magnitude of the resultant continuously graded change, either in an individual or in a population. (Duffus 1993)

Dose-Related Effect

Def.	All Respondents	Percentage	Chemistry	Pharmaceuticals	Ecological - Aquatic	Env. Science	Epidemiology	Occ. Health	Pesticides	Risk Ass. - General	Risk Ass. - Env.	Risk Ass. - Hum. Health	Risk Ass. - Meth.	Toxicology	Other	None Reported
0	19	10.6				1		1			3	6			4	4
1	161	89.4	1	2	2	9	3	2	7	3	19	58	1	6	19	29

Definitions

0. None of the below.
1. Situation in which the magnitude of a biological change is related to the dose. (Duffus 1993)

Dose-Response

Def.	All Respondents	Percentage	Chemistry	Pharmaceuticals	Ecological - Aquatic	Env. Science	Epidemiology	Occ. Health	Pesticides	Risk Ass. - General	Risk Ass. - Env.	Risk Ass. - Hum. Health	Risk Ass. - Meth.	Toxicology	Other	None Reported
0	35	17.9		1		2					2	16			4	10
1	91	46.7		2	2	4	1	1	5	1	11	30		4	10	20
2	15	7.7				3			1	1	4	2		2	1	1
3	54	27.7				1	1	3	1	1	5	20	1	2	8	11

Definition

0. None of the below.
1. A quantitative relationship between the dose of a substance (e.g., a chemical) and an effect caused by the substance. (Cohrssen 1989)
2. How a biological organism's response to a toxic substance quantitatively shifts as its overall exposure to the substance changes (e.g., a small dose of carbon monoxide may cause drowsiness; a large dose can be fatal.) (US-EPA 1993)
3. The relationship between the dose of a chemical and the extent of the toxic effect produced by the chemical in a biological system. (WHO 1996)

Dose-Response Assessment

Def.	All Respondents	Percentage	Chemistry	Pharmaceuticals	Ecological - Aquatic	Env. Science	Epidemiology	Occ. Health	Pesticides	Risk Ass. - General	Risk Ass. - Env.	Risk Ass. - Hum. Health	Risk Ass. - Meth.	Toxicology	Other	None Reported
0	11	5.7										2	1			8
1	43	22.2		1	1	1		1	3		5	20		1	4	6
2	21	10.8			1	3	1				1	8			3	4
3	12	6.2	1			2			1		1	2		1	2	2
4	12	6.2		1		2	1				2	1		1	3	1
5	31	16.0							1	1	1	13		3	4	8
6	39	20.1		1		1		2	1	2	5	14		1	7	5
7	2	1.0										1				1
8	2	1.0									1					1
9	2	1.0									1			1		
10	19	9.8				1	1	1	1		6	5				4

Definition

- None of the below.
- The estimation of the relationship between dose or concentration and the incidence and/or severity of an effect. (OECD 1995)
- The process of characterizing the relationship between the dose of an agent administered or received and the incidence of an adverse health effect in exposed populations. (Leeuwen 1996)
- The estimation of the relationship between dose or concentration and the incidence and severity of an effect in a particular group of test organisms and, through extrapolation, in a whole population or ecosystem. (USES 1994)
- A component of risk assessment that describes the quantitative relationship between the amount of exposure to a substance and the extent of injury or disease. (Cohrssen 1989)
- The determination of the relationship between the magnitude of exposure and the magnitude and/or frequency of adverse effects. (WHO/FAO 1995)
- The determination of the relationship between the magnitude of administered, applied, or internal dose and a specific biological response. Response can be expressed as measured or observed incidence, percent response in groups of subjects (or populations), or the probability of occurrence of a response in a population. (US-EPA 1992a)
- The identification and quantification of the potential adverse effects of a substance and therefore includes hazard identification and dose-response assessment. (OECD 1995)
- The component of an environmental risk analysis concerned with quantifying the manner in which the frequency and intensity of effects increase with increasing exposure to a contaminant or other source of stress (Leeuwen 1996)
- Characterization of the toxicological properties and effects of a substance (e.g., a chemical) including all aspects of its absorption, metabolism, excretion, and mechanism of action, with special emphasis on establishment of dose-response characteristics. (Cohrssen 1989)

Definition (continued)

10. The estimation of the relationship between dose, or level of exposure to a substance, and the incidence and severity of an effect (EC 1993)

Dose-Response Curve

Def.	All Respondents	Percentage	Chemistry	Pharmaceuticals	Ecological - Aquatic	Env. Science	Epidemiology	Occ. Health	Pesticides	Risk Ass. - General	Risk Ass. - Env.	Risk Ass. - Hum. Health	Risk Ass. - Meth.	Toxicology	Other	None Reported
0	16	8.2					1			1	6				2	6
1	9	4.6				1					2	3			1	2
2	30	15.4				2			2			17		1	4	4
3	140	71.8	1	3	2	7	2	4	5	3	20	41	1	7	17	27

Definition

0. None of the below.
1. Similar to concentration-response curve except that the exposure dose (i.e., the quantity) of the chemical administered (e.g., by injection) to the organisms is known. (Rand 1995)
2. Graph of the relation between dose and the proportion of individuals in a population responding with an all-or-none effect. (Duffus 1993)
3. A graphical presentation of the relationship between degree of exposure to a substance (dose) and observed biological effect or response. (Cohrssen 1989)

Dose-Response Relationship

Def.	All Respondents	Percentage	Chemistry	Pharmaceuticals	Ecological - Aquatic	Env. Science	Epidemiology	Occ. Health	Pesticides	Risk Ass. - General	Risk Ass. - Env.	Risk Ass. - Hum. Health	Risk Ass. - Meth.	Toxicology	Other	None Reported
0	20	10.3		1			2				1	6		1	1	8
1	19	9.8				2					2	4			3	8
2	35	18.0			1	3		1	2		5	14		2	3	4
3	33	17.0	1	1		1				2	6	10	1	2	5	4
4	41	21.1			1	3		3	2		3	14		2	6	7
5	46	23.7		1					3	1	5	21		1	6	8

Definition

0. None of the below.
1. A relationship that occurs when changes in the level of a possible cause are associated with changes in the prevalence or incidence of the effect. (WHO 1993)
2. Association between dose and the incidence of a defined biological effect in an exposed population. (Duffus 1993) (Holland 1996)
3. A relationship between the amount of an agent (either administered, absorbed, or believed to be effective) and changes in certain aspects of the biological system (usually toxic effects), apparently in response to that agent. (US-EPA 1992a)
4. Association between dose and the incidence of a defined biological effect in an exposed population. (Duffus 1993)
5. The relationship between administered dose or exposure and the biological change in organisms. It may be expressed as the severity of an effect in one organism (or part of an organism) or as the proportion of a population exposed to a chemical that shows a specific reaction. (WHO 1979).
Synonym(s) dose-response relationship, exposure-response relationship

Ecological Risk Assessment

Def.	All Respondents	Percentage	Chemistry	Pharmaceuticals	Ecological - Aquatic	Env. Science	Epidemiology	Occ. Health	Pesticides	Risk Ass. - General	Risk Ass. - Env.	Risk Ass. - Hum. Health	Risk Ass. - Meth.	Toxicology	Other	None Reported
0	12	6.4						1	1	1	3	1			1	4
1	83	44.4	1	0	1	3			2	2	13	25	1	3	16	16
2	92	49.2		1	3	5	3	2	4		8	33		5	8	20

Definition

0. None of the below.
1. The application of a formal framework, analytical process, or model to estimate the effects of human actions(s) on a natural resource and to interpret the significance of those effects in light of the uncertainties identified in each component of the assessment process. Such analysis includes initial hazard identification, exposure and dose-response assessments, and risk characterization. (US-EPA 1993)
2. The process that evaluates the likelihood that adverse ecological effects may occur or are occurring as a result of exposure to one or more stressors. (US-EPA 1992a)

Effect Assessment

Def.	All Respondents	Percentage	Chemistry	Pharmaceuticals	Ecological - Aquatic	Env. Science	Epidemiology	Occ. Health	Pesticides	Risk Ass. - General	Risk Ass. - Env.	Risk Ass. - Hum. Health	Risk Ass. - Meth.	Toxicology	Other	None Reported
0	21	11.1				1	1					8	1	1	3	6
1	44	23.2	1	2	1	1	1		1		6	16			8	7
2	14	7.4				1					4	4		1	2	2
3	36	18.9		1	1	1	1	3		1	2	12		2	1	11
4	6	3.2							1			4				1
5	20	10.5				3		1	1		6	5		1	1	2
6	5	2.6							1			1		1		2
7	18	9.5				2			1		1	6			3	5
8	11	5.8							1	2	2	4		1		1
9	15	7.9				1			1			5			4	4

Definition

0. None of the below.
1. The identification and quantification of the potential adverse effects of a substance and therefore includes hazard identification and dose-response assessment. (OECD 1995)
2. The component of an environmental risk analysis concerned with quantifying the manner in which the frequency and intensity of effects increase with increasing exposure to a contaminant or other source of stress (Leeuwen 1996)
3. The estimation of the relationship between dose or concentration and the incidence and/or severity of an effect. (OECD 1995)
4. The process of characterizing the relationship between the dose of an agent administered or received and the incidence of an adverse health effect in exposed populations. (Leeuwen 1996)
5. The estimation of the relationship between dose or concentration and the incidence and severity of an effect in a particular group of test organisms and, through extrapolation, in a whole population or ecosystem. (USES 1994)
6. A component of risk assessment that describes the quantitative relationship between the amount of exposure to a substance and the extent of injury or disease. (Cohrssen 1989)
7. The determination of the relationship between the magnitude of exposure and the magnitude and/or frequency of adverse effects. (WHO/FAO 1995)
8. The determination of the relationship between the magnitude of administered, applied, or internal dose and a specific biological response. Response can be expressed as measured or observed incidence, percent response in groups of subjects (or populations), or the probability of occurrence of a response in a population. (US-EPA 1992b)
9. Characterization of the toxicological properties and effects of a substance (e.g. a chemical) including all aspects of its absorption, metabolism, excretion, and mechanism of action, with special emphasis on establishment of dose-response characteristics. (Cohrssen 1989)

Expert Judgment

Def.	All Respondents	Percentage	Chemistry	Pharmaceuticals	Ecological - Aquatic	Env. Science	Epidemiology	Occ. Health	Pesticides	Risk Ass. - General	Risk Ass. - Env.	Risk Ass. - Hum. Health	Risk Ass. - Meth.	Toxicology	Other	None Reported
0	53	30.6				5	1	1	1		3	14	1	2	8	17
1	120	69.4	1	1	2	5	1	2	5	3	18	43		5	14	20

Definition

- 0. None of the below.
- 1. Opinions of persons well informed in an area that are incorporated into probability estimates. (Cohrssen 1989)

Exposure Assessment

Def.	All Respondents	Percentage	Chemistry	Pharmaceuticals	Ecological - Aquatic	Env. Science	Epidemiology	Occ. Health	Pesticides	Risk Ass. - General	Risk Ass. - Env.	Risk Ass. - Hum. Health	Risk Ass. - Meth.	Toxicology	Other	None Reported
0	14	7.1									3	2	1	1	1	6
1	13	6.6	1	2	1		1	1				4			2	1
2	12	6.1						1			2	3		1	2	3
3	30	15.3			1	1		1	1	1	6	8		1	4	6
4	20	10.2				2			1		2	8		1	2	4
5	1	0.5										1				
6	16	8.2				2			2		2	5		1	1	3
7	17	8.7				1	1				3	4			4	4
8	13	6.6				1		1	1			6				4
9	5	2.6				1						2			1	1
10	1	0.5										1				
11	4	2.0										1		1	2	
12		0.0														
13	2	1.0										2				
14	21	10.7				1				2	2	10			2	4
15	12	6.1							1		4	4			1	2
16	15	7.7		1		1					1	7		2	1	2

Definition

0. None of the below.
1. The quantification of exposure (dose) in a specific population based on measurements of emissions, environmental levels, biological monitoring, etc. (WHOTER)
2. Process of estimating concentration or intensity, duration and frequency of exposure to an agent that can affect health. (Last 1995)
3. The determination of the emissions, pathways and rates of movement of a substance in the environment, and its transformation or degradation, in order to estimate the concentrations/doses to which ecological systems and populations are or may be exposed. (OECD 1995)
4. The component of an environmental or human health risk analysis that estimates the emissions, pathways and rates of movement of a chemical in the environment, and its transformation or degradation, in order to estimate the concentrations/doses to which ecological systems and populations are or may be exposed. (Leeuwen 1996)
5. Process of measuring or estimating concentration, duration and frequency of exposures to pesticide present in environment or, if estimating hypothetical exposures, that might arise from the release of the pesticide into the environment. (Duffus 1993) (Holland 1996)
6. Process of measuring or estimating concentration (or intensity), duration and frequency of exposures to an agent present in the environment or, if estimating hypothetical exposures, that might arise from the release of a substance, or radionuclide, into the environment. (Duffus 1993)
7. The determination of the emissions, pathways and rates of movement of a substance and its transformation or degradation in order to estimate the concentrations/doses to which human populations or ecological systems and populations are or may be exposed. (USES 1994)
8. The determination or estimation (qualitative or quantitative) of the magnitude, frequency, duration, route, and extent (number of people) of exposure to a substance. (Cohrssen 1989)
9. The qualitative and/or quantitative evaluation of the degree of intake likely to occur. (WHO/FAO 1995)
10. The quantification of exposure in a specific population based on measurements of emissions, environmental levels, biological monitoring, etc. (WHO 1989)
11. The qualitative and/or quantitative evaluation of the likely intake of biochemical, chemical, and physical agents via food as well as exposures from relevant sources if relevant. (Codex 1995)
12. A scientific evaluation of the intake of a hazardous agent through food, taking into account exposure from other sources if relevant. It includes a quantitative and/or qualitative estimation of exposure and attendant uncertainties. (WHOTER)
13. The quantification of the amount of exposure to a hazard for an individual or group. (WHO 1979)
14. The determination or estimation (qualitative or quantitative) of the magnitude, frequency, duration, and route of exposure. (US-EPA 1992b)
15. The determination of the emissions, pathways and rates of movement of a substance and its transformation or degradation in order to estimate the concentrations/doses to which human populations or environment compartments are or may be exposed. (EC 1993)
16. The estimation (qualitative or quantitative) of the magnitude, frequency, duration, route and extent (for example, number of organisms) or exposure to a chemical substance or contaminants. (WHO 1996)

Exposure Scenario

Def.	All Respondents	Percentage	Chemistry	Pharmaceuticals	Ecological - Aquatic	Env. Science	Epidemiology	Occ. Health	Pesticides	Risk Ass. - General	Risk Ass. - Env.	Risk Ass. - Hum. Health	Risk Ass. - Meth.	Toxicology	Other	None Reported
0	9	4.9										1			1	7
1	108	58.4			2	7	1	3	4		12	42		5	13	19
2	68	36.8	1	3		3	1	1	2	3	12	19	1	2	8	12

Definition

0. None of the below.
1. A set of conditions or assumptions about sources, exposure pathways, concentrations of toxic chemicals, and populations (numbers, characteristics, and habits) that aid the investigator in evaluating and quantifying 3 exposure in a given situation. (Cohrssen 1989)
2. A set of assumptions concerning how an exposure may take place, including assumptions about the exposure setting, stressor characteristics, and activities that may lead to exposure. (US-EPA 1992a)

Fate

Def.	All Respondents	Percentage	Chemistry	Pharmaceuticals	Ecological - Aquatic	Env. Science	Epidemiology	Occ. Health	Pesticides	Risk Ass. - General	Risk Ass. - Env.	Risk Ass. - Hum. Health	Risk Ass. - Meth.	Toxicology	Other	None Reported
0	11	5.8				2	1				1	2			3	2
1	100	52.6	1	3		3	2	1	4	3	15	33	1	3	13	18
2	58	30.5			2	3		1	1		7	20		2	6	16
3	21	11.1				1			1		2	10		3	2	2

Definition

0. None of the below.
1. The pattern of distribution of a substance in the environment, or in organisms, and its changes with time (in concentration, chemical form, etc). (OECD 1995)
2. Disposition of a material in various environmental compartments (e.g. soil or sediment, water, air, biota) as a result of transport, partitioning, transformation, and degradation. (Leeuwen 1996)
3. Disposition of a material in various environmental compartments (e.g. soil or sediment, water, air, biota) as a result of transport, transformation, and degradation. (Holland 1996)

Guidance Value

Def.	All Respondents	Percentage	Chemistry	Pharmaceuticals	Ecological - Aquatic	Env. Science	Epidemiology	Occ. Health	Pesticides	Risk Ass. - General	Risk Ass. - Env.	Risk Ass. - Hum. Health	Risk Ass. - Meth.	Toxicology	Other	None Reported
0	21	12.7									2	9		1	2	7
1	27	16.4	1		1	4	1				1	13			4	2
2	117	70.9		2	1	5	1	2	6	3	15	40		5	14	23

Definition

- None of the below.
- Value, such as concentrations in air or water, which are derived after appropriate allocation of the TI among the different possible media of exposure. (WHO 1994a)

Note: Combined exposures from all media at the guidance values over a lifetime would be expected to be without appreciable health risk. The aim of the guidance value is to provide quantitative information from risk assessment for risk managers to enable them to make decisions concerning the protection of human health. (WHO 1994a)

- Value, such as concentrations in air or water, which are derived after appropriate allocation of the tolerable intake among the different possible media of exposure. (WHO 1996)

Note: Combined exposures from all media at the guidance values over a lifetime would be expected to be without appreciable health risk. The aim of the guidance value is to provide quantitative information from risk assessment for risk managers to enable them to make decisions concerning the protection of human health. (WHO 1996)

Harm

Def.	All Respondents	Percentage	Chemistry	Pharmaceuticals	Ecological - Aquatic	Env. Science	Epidemiology	Occ. Health	Pesticides	Risk Ass. - General	Risk Ass. - Env.	Risk Ass. - Hum. Health	Risk Ass. - Meth.	Toxicology	Other	None Reported
0	10	5.1				1			1	1	3				1	3
1	4	2.0								1	1	2				
2		0.0														
3	149	76.0		3	2	8	2	2	6	1	21	52	1	6	20	25
4	18	9.2						2			1	6			2	7
5	15	7.7	1							1	1	5		1	2	4

Definition

0. None of the below.
1. A loss to a species or individual as a result of damage. (Leeuwen 1996)
2. A function of the concentration to which an organism is exposed and the time of exposure. (Leeuwen 1996)
3. Damage or adverse effect to a population, species, individual organism, organ, tissue or cell. (Duffus 1993)
4. Physical injury and/or damage to health or property. (ISO 1990)
5. Refers to injury which requires repair or cure, or which may be irreparable. (Guen 1995)

Hazard

Def.	All Respondents	Percentage	Chemistry	Pharmaceuticals	Ecological - Aquatic	Env. Science	Epidemiology	Occ. Health	Pesticides	Risk Ass. - General	Risk Ass. - Env.	Risk Ass. - Hum. Health	Risk Ass. - Meth.	Toxicology	Other	None Reported
0	17	8.4				1					2	6	1		1	6
1	4	2.0									1	1				2
2	7	3.4			1						1	1			2	2
3	8	3.9							1		2	2			2	1
4	31	15.3		1		1			2	1	4	12		3	2	5
5	65	32.0		1		3	1	1	1	1	9	23		4	5	16
6	17	8.4			1	2		1			2	7			1	3
7	3	1.5										2		1		
8	1	0.5													1	
9		0.0														
10	6	3.0							1	1	1	2			1	
11	6	3.0				1			1			3			1	
12		0.0														
13	20	9.9		1		1	1	1			1	5			6	4
14	3	1.5									1				1	1
15	5	2.5									1	4				
16		0.0														
17	2	1.0	1												1	
18	8	3.9				1			1			3			1	2

Definition

0. None of the below.
1. Likelihood of an adverse natural phenomenon. (WHO 1992)
2. Likelihood that exposure to a chemical will cause an injury or adverse effect under the conditions of its production, use, or disposal. (Holland 1996)

Definition (continued)

3. Set of inherent properties of a pesticide which gives potential for adverse effects to man or the environment under conditions of its production, use or disposal, and depending on the degree of exposure. (Duffus 1993) (Holland 1996)
4. Set of inherent properties of a substance, mixture of substances or a process involving substances that, under production, usage or disposal conditions, make it capable of causing adverse effects to organisms or the environment, depending on the degree of exposure; in other words, it is a source of danger. (Duffus 1993)
5. An inherent property of a substance, agent, source of energy or situation having the potential of causing undesirable consequences. (OECD 1992)
6. The potential of a substance to cause adverse effects at a particular degree of exposure. (USES 1994)
7. A source of risk that does not necessarily imply potential for occurrence. (Cohrssen 1989)
8. A physical situation with a potential for human injury, damage to property, damage to the environment or some combination of these. (Jones 1992)
9. The likelihood that a pesticide will cause an adverse effect (injury) under the conditions in which it is used. (FAO 1990)
10. The likelihood that a chemical will cause adverse health effects under the conditions under which it is produced or used. (WHO 1979)
11. A biological, chemical, or physical agent in or property of food that may have an adverse health effect. (WHO/FAO 1995)
12. Chemical or physical agent or property that may cause a food to be unsafe for human consumption, or a defeat generally considered objectionable. (FAO 1995)
13. A potential source of harm. (ISO 1990)
14. The disposition of a thing, a condition or a situation to produce injury. (Guen 1995)
15. A source of danger; a qualitative term expressing the potential that an environmental agent can harm health. (WHO/IPCS 1989)
16. The likelihood that a chemical will cause adverse health effects (injury) under the conditions under which it is produced or used.
17. A source of danger. (WHO 1988)
18. The capacity to produce a particular type of adverse health or environmental effect. e.g. one hazard associated with benzene is leukemia (WHO 1996)

**Hazard
Assessment**

Def.	All Respondents	Percentage	Chemistry	Pharmaceuticals	Ecological - Aquatic	Env. Science	Epidemiology	Occ. Health	Pesticides	Risk Ass. - General	Risk Ass. - Env.	Risk Ass. - Hum. Health	Risk Ass. - Meth.	Toxicology	Other	None Reported
0	32	16.6					1				4	13	1	1	1	11
1	36	18.7			2	3			1	1	6	10		1	4	8
2	5	2.6									2	1		1	1	
3	19	9.8		1		1			2		1	8		2		4
4	23	11.9				1		1	1		4	8			3	5
5	20	10.4						1		1	2	7		1	4	4
6	5	2.6									1	1			3	
7	1	0.5						1								
8	6	3.1	1			1					1	2				1
9	10	5.2				1					2	4			2	1
10	3	1.6									1	1				1
11	3	1.6				1					1				1	
12	17	8.8		1		1		1			1	6		2	1	4
13	2	1.0								1					1	
14	7	3.6					1					4			2	
15	4	2.1							1			1			1	1

Definition

0. None of the below.
1. The estimation of the incidence and severity of the adverse effects likely to occur in an environmental compartment due to actual or predicted exposure to a substance, i.e. integration of the effects and exposure assessments. (OECD 1995)
2. Comparison of the intrinsic ability to cause harm (see hazard) and expected environmental concentration, often a comparison of PEC and PNEC. (Leeuwen 1996)
3. Determination of factors controlling the likely effects of a hazard such as mechanism of toxicity, dose-effect relationships and worst case exposure levels. This is the prelude to risk assessment (US-EPA 1992a) (Holland 1996)
4. Determination of factors controlling the likely effects of a hazard such as the dose-effect and dose-response relationships, variations in target susceptibility, and mechanism of toxicity. (Duffus 1993)
5. The process designed to estimate the incidence and severity of the adverse effects likely to occur in a human population or environmental compartment due to actual or predicted exposure (USES 1994)
6. The estimation of the incidence and severity of the adverse effects likely to occur in a human population or environmental compartments due to actual or predicted exposure to a substance. This may include risk estimation, i.e. quantification of that likelihood. It also serves as a summary and description of the results of a risk analysis for a risk manager or the public and other interested parties. (Leeuwen 1996)

Definition (continued)

7. Outcome of hazard identification and risk estimation applied to a specific use of a substance or occurrence of an environmental health hazard: the assessment requires quantitative data on the exposure of organisms or people at risk in the specific situation. The end product is a quantitative statement about the proportion of organisms or people affected in a target population. (Duffus 1993)
8. The description of the nature and often the magnitude of human or non human risk, including attendant uncertainty. (US-EPA 1992b)
9. The process designed to estimate the incidence and severity of the adverse effects likely to occur in a human population or environmental compartment due to actual or predicted exposure. (USES 1994)
10. The final phase of the risk-assessment process that involves integration of the data and analysis involved in hazard identification, source/release assessment, exposure assessment, and dose-response assessment to estimate the nature and likelihood of adverse effects. (Cohrssen 1989)
11. A phase of ecological risk assessment that integrates the results of the exposure and ecological effects analyses to evaluate the likelihood of adverse ecological effects associated with exposure to a stressor. The ecological significance of the adverse effects is discussed, including consideration of the types and magnitudes of the effects, their spatial and temporal patterns, and the likelihood of recovery. (US-EPA 1992)
12. Integration of hazard identification, hazard characterisation and exposure assessment into an estimation of the adverse effects likely to occur in a given population, including attendant uncertainties. (WHO/FAO 1995)
13. Integration of the above steps into an estimation of the adverse effects likely to occur in a given population, including attendant uncertainty. (FAO 1995)
14. The description of the different potential health effects of the hazard and quantification of dose-effect and dose-response relationships in a general scientific sense. (WHO 1989)
15. A summary, integration, and evaluation of the major scientific evidence, reasoning and conclusions of a risk assessment. It is a concise description of the estimates of potential risk and the strengths and weaknesses of those estimates. (US-EPA 1993)

Hazard Characterization

Def.	All Respondents	Percentage	Chemistry	Pharmaceuticals	Ecological - Aquatic	Env. Science	Epidemiology	Occ. Health	Pesticides	Risk Ass. - General	Risk Ass. - Env.	Risk Ass. - Hum. Health	Risk Ass. - Meth.	Toxicology	Other	None Reported
0	48	27.9		1		2	2	1			7	20	1	1	3	10
1	36	20.9				3			3	2	3	11		1	4	9
2	88	51.2	1	1	2	5		3	4	1	9	30		4	15	13

Definition

0. None of the below.

Definition (continued)

1. The qualitative and/or quantitative evaluation of the nature of the adverse effects associated with biological, chemical, and physical agents which may be present in food. For chemical agents, a dose-response assessment should be performed. For biological or physical agents, a dose-response assessment should be performed if the data is obtainable. (WHO/FAO 1995)
2. The quantitative and/or qualitative evaluation of the nature of the adverse effects, and may include a dose-response assessments. (FAO 1995)

Hazard Evaluation

Def.	All Respondents	Percentage	Chemistry	Pharmaceuticals	Ecological - Aquatic	Env. Science	Epidemiology	Occ. Health	Pesticides	Risk Ass. - General	Risk Ass. - Env.	Risk Ass. - Hum. Health	Risk Ass. - Meth.	Toxicology	Other	None Reported
0	56	33.5		1		1	2	1	1		9	25	1	1	6	8
1	56	33.5	1		1	5		2	2		7	19		1	5	13
2	55	32.9		2		4		1	2	3	6	15		4	10	8

Definition

0. None of the below.
1. Identification and assessment of the potential adverse effects that could result from manufacture, use, and disposal of a material in a specified quantity and manner. (Rand 1995)
2. Establishment of a qualitative or quantitative relationship between hazard and benefit, involving the complex process of determining the significance of the identified hazard and balancing this against identifiable benefit: this may subsequently be developed into a risk evaluation. (Duffus 1993)

**Hazard
Identification**

Def.	All Respondents	Percentage	Chemistry	Pharmaceuticals	Ecological - Aquatic	Env. Science	Epidemiology	Occ. Health	Pesticides	Risk Ass. - General	Risk Ass. - Env.	Risk Ass. - Hum. Health	Risk Ass. - Meth.	Toxicology	Other	None Reported
0	17	8.9				1					1	3	1		3	8
1	3	1.6				1		1								1
2	73	38.2	1	2	1	3		2	4	2	10	26		1	6	15
3	15	7.9			1						4	3		1	3	3
4	15	7.9		1		1	1				5	5		1	1	
5	5	2.6										2			3	
6	15	7.9					1		2			10			1	1
7		0.0														
8	9	4.7				2						1		1	4	1
9	5	2.6					1					3				1
10	2	1.0									1	1				
11	1	0.5						1								
12	10	5.2				1					1	3		1		4
13	10	5.2								1	1	5		1	1	1
14	11	5.8							1		1	5		1		3

Definition

0. None of the below.
1. The first stage in risk assessment to establish qualitatively whether a carcinogenic hazard exists. (ECETOC 1982)
2. The identification of the adverse effects which a substance has an inherent capacity to cause. (OECD 1995)
3. Determination of substances of concern, their adverse effects, target populations, and conditions of exposure, taking into account toxicity data and knowledge of effects on human health, other organisms and their environment. (Duffus 1993)
4. The identification of the adverse effects which a substance has an inherent capacity to cause. (USES 1994)
5. A component of risk assessment that involves gathering and evaluating data on the types of injury or disease (for example, cancer) that may be produced by a substance and on the conditions of exposure under which injury or disease is produced. (Cohrssen 1989)
6. The identification of known or potential health effects associated with a particular agent. (WHO/FAO 1995)
7. The qualitative indication that a hazard(s) could be present in a particular food. (FAO 1995)
8. Identification of the adverse effects which a substance has an inherent capacity to cause, or in certain cases, the assessment of a particular effect. It also includes the identification of target populations and conditions of exposure. (WHOTER)

Definition (continued)

9. The identification of the environmental agent of concern, its adverse effects, target populations and conditions of exposure. (WHO 1989)
10. The identification of known or potential adverse health effects in humans produced by biological, chemical, and physical agents which may be present in a particular food or group of foods. (Codex 1995)
11. The confirmation of the existence of a hazard in food, based on its known or potential health effects in humans, on its known or potential levels of the agent in food and on any other relevant information available. (WHOTER)
12. The identification of the substance of concern, its adverse effects, target populations, and conditions of exposure. (WHO 1988)
13. A description of the potential health effects attributable to a specific chemical or physical agent. For carcinogens assessments, the hazard identification phase of the risk assessment is also used to determine whether a particular agent of chemical is, or is not, causally linked to cancer in humans. (US-EPA 1992b)
14. The identification of the adverse effects which a substance has the inherent capacity to cause. (EC 1993)

Margin of Exposure

Def.	All Respondents	Percentage	Chemistry	Pharmaceuticals	Ecological - Aquatic	Env. Science	Epidemiology	Occ. Health	Pesticides	Risk Ass. - General	Risk Ass. - Env.	Risk Ass. - Hum. Health	Risk Ass. - Meth.	Toxicology	Other	None Reported
0	21	12.4					1				1	8	1	1	1	8
1	45	26.6	1		1	2		1	3	2	3	16		2	7	7
2	63	37.3		2		2		1	2	1	8	22		3	9	13
3	21	12.4		1		2		1			2	12		1		2
4	7	4.1				1					1	2			2	1
5	3	1.8										1			2	
6	9	5.3						1				2			2	4

Definition

0. None of the below.
1. The ratio of the no-observed-adverse-effect level (NOAEL) to the estimated exposure dose (EED) (US-EPA 1992a)
2. Ratio of the no-observed-adverse-effect level (NOAEL) to the theoretical or estimated exposure dose (EED) or concentration (EEC). (Duffus 1993)
3. The ratio of the no-observed-adverse-effect level (NOAEL) to the estimated exposure intake or dose. (Leeuwen 1996)
4. Ratio of the highest estimated or actual level of exposure to a pesticide and the toxic threshold level (usually the NOEC or NOEL). (US-EPA 1992a) (Holland 1996)

5. The ratio of the estimated daily intake of man to the NOAEL(mammal,noncarcinogens) or NEL(man,genotoxic carcinogens). (USES 1994)
6. The maximum amount of exposure producing no measurable effect in animals (or studied humans) divided by the actual amount of human exposure in a population. (Cohrssen 1989)

Margin of Safety

Def.	All Respondents	Percentage	Chemistry	Pharmaceuticals	Ecological - Aquatic	Env. Science	Epidemiology	Occ. Health	Pesticides	Risk Ass. - General	Risk Ass. - Env.	Risk Ass. - Hum. Health	Risk Ass. - Meth.	Toxicology	Other	None Reported
0	26	17.3		1							4	8	1		3	9
1	34	22.7			1					1	2	16		1	3	10
2	10	6.7				1				1	4	3				1
3	6	4.0				1		1				2			1	1
4	10	6.7				1		2				2		1	3	1
5	22	14.7				2			1		2	7		2	4	4
6	42	28.0				1			2	1	5	17		3	5	8

Definition

0. None of the below.
1. The ratio of the no-observed-adverse-effect level (NOAEL) to the estimated exposure intake or dose. (Leeuwen 1996)
2. Ratio of the highest estimated or actual level of exposure to a pesticide and the toxic threshold level (usually the NOEC or NOEL). (US-EPA 1992a) (Holland 1996)
3. The ratio of the estimated daily intake of man to the NOAEL (mammal, noncarcinogens) or NEL(man, genotoxic carcinogens). (USES 1994)
4. The maximum amount of exposure producing no measurable effect in animals (or studied humans) divided by the actual amount of human exposure in a population. (Cohrssen 1989)
5. The ratio of the no-observed-adverse-effect level (NOAEL) to the estimated exposure dose (EED) (US-EPA 1992a)
6. Ratio of the no-observed-adverse-effect level (NOAEL) to the theoretical or estimated exposure dose (EED) or concentration (EEC). (Duffus 1993)

Measurement Endpoint

Def.	All Respondents	Percentage	Chemistry	Pharmaceuticals	Ecological - Aquatic	Env. Science	Epidemiology	Occ. Health	Pesticides	Risk Ass. - General	Risk Ass. - Env.	Risk Ass. - Hum. Health	Risk Ass. - Meth.	Toxicology	Other	None Reported
0	29	22.7				2				1	1	16			2	7
1	99	77.3		2	2	7	1	2	3	2	20	23		4	15	18

Definition

- 0. None of the below.
- 1. A measurable ecological characteristic that is related to the valued characteristic chosen as the assessment endpoint. (US-EPA 1992a)

Reference Dose

Def.	All Respondents	Percentage	Chemistry	Pharmaceuticals	Ecological - Aquatic	Env. Science	Epidemiology	Occ. Health	Pesticides	Risk Ass. - General	Risk Ass. - Env.	Risk Ass. - Hum. Health	Risk Ass. - Meth.	Toxicology	Other	None Reported
0	23	13.8		1		1	1		1		1	9	1	1	2	5
1	16	9.6				1			1	1	1	4		1	3	4
2	6	3.6							1			1			1	3
3	59	35.3	1	1		4		1	2	1	4	23		2	8	12
4	12	7.2				1		1			1	3			1	5
5	4	2.4									2	1		1		
6		0.0														
7	5	3.0				1		1				2			1	
8	42	25.1						1		1	5	21		2	5	7

Definition

- 0. None of the below.
- 1. Estimate of the amount of a substance in food or drinking water, expressed on a body mass basis (usually mg/kgbw), which can be ingested over a lifetime by humans without appreciable health risk. (Leeuwen 1996)
- 2. Estimate of the amount of a pesticide in food and drinking water which can be ingested daily over a lifetime by humans without appreciable health risk. It is usually expressed in milligrams per kilogram of body weight. (Holland 1996)
- 3. An estimate of the daily exposure dose that is likely to be without deleterious effect even if continued exposure occurs over a lifetime. (US-EPA 1992a)
- 4. Estimate of the largest amount of a substance (e.g. a chemical) to which a person can be exposed on a daily basis that is not anticipated to result in adverse effects. Usually expressed in milligrams per kilogram per day (mg/kg/day). (Cohrssen 1989)
- 5. The maximum amount of a chemical whose total daily intake during lifetime. (IRPTC 1994)
- 6. The amount of a food additive, expressed on a body weight basis, that can be taken daily in the diet, even over a lifetime, without risk. (WHO 1979)
- 7. The acceptable daily intake of a chemical is the daily intake which, during an entire lifetime, appears to be without appreciable risk to the health of the consumer on the basis of all the known facts at the time when a toxicological assessment is carried out. It is expressed in milligrams of the chemical per kilogram of body weight. (Vettorazzi 1980)
- 8. An estimate (with uncertainty factors spanning perhaps an order of magnitude) of the daily exposure (mg/kg/day) to the general human population (including sensitive sub-groups) that is likely to be without an appreciable risk of deleterious effects during a lifetime of exposure. It is

derived from the NOAEL or the LOAEL by application of uncertainty factor that reflect various types of data used to estimate RfD and an additional modifying factor, which is based on professional judgement of the entire database of the chemical (IRIS 1992) (WHO 1996)

Risk

Def.	All Respondents	Percentage	Chemistry	Pharmaceuticals	Ecological - Aquatic	Env. Science	Epidemiology	Occ. Health	Pesticides	Risk Ass. - General	Risk Ass. - Env.	Risk Ass. - Hum. Health	Risk Ass. - Meth.	Toxicology	Other	None Reported
0	20	9.8									1	3		2	6	8
1	19	9.3		2		2	1				3	4		1	1	5
2	12	5.9		1		1		1			1	4	1			3
3	23	11.3			1		1	1			6	6			3	5
4	13	6.4				2			1		2	6			1	1
5	11	5.4				1			2		1	6			1	
6	9	4.4				1				1		6				1
7	8	3.9				2			1		1	1			1	2
8	4	2.0										2		2		
9	14	6.9						1			1	6				6
10	8	3.9			1						1	4		1		1
11	14	6.9								2	2	4		1	2	3
12	3	1.5	1									1				1
13	2	1.0										1			1	
14		0.0														
15	2	1.0										1				1
16	3	1.5										3				
17		0.0														
18	5	2.5						1			2	1			1	
19	5	2.5				1					1	1			2	
20		0.0														
21	4	2.0					1					2			1	
22	25	12.3							3		3	6		1	6	6

Definition

0. None of the below.
1. Statistical concept defined as the expected frequency of undesirable effects arising from exposure to a given hazard.
2. The possibility that a harmful event (death, injury, loss, etc) arising from exposure to a physical or chemical agent may occur under specific conditions. (Last 1995)

Definition (continued)

3. The probability of an adverse effect on man or the environment resulting from a given exposure to a chemical or mixture. It is the likelihood of a harmful effect or effects occurring due to exposure to a risk factor (usually some chemical, physical or biological agent). (Leeuwen 1996)
4. A statistical concept defined as the expected frequency or probability of undesirable effects resulting from a specified exposure to known or potential environmental concentrations of a material. (Holland 1996)
5. Probability of any defined hazard occurring from exposure to a pesticide under specific conditions. Risk is a function of the likelihood of exposure and the likelihood to harm biological or other systems. (Holland 1996)
6. The probability of injury, disease, or death under specific circumstances. In quantitative terms, risk is expressed in values ranging from zero (representing the certainty that harm will not occur) to one (representing the certainty that harm will occur). (US-EPA 1992a)
7. Possibility that a harmful event (death, injury or loss) arising from exposure to a chemical or physical agent may occur under specific conditions. (Duffus 1993)
8. Expected frequency of occurrence of a harmful event (death, injury or loss) arising from exposure to a chemical or physical agent under specific conditions. (WHOTER)
9. The combination of a consequence and the probability of its occurrence. (OECD 1992)
10. The probability of a substance to cause adverse effects. (USES 1994)
11. A measure of the probability that damage to life, health, property, and/or the environment will occur as a result of a given hazard. (US-EPA 1993)
12. In risk assessment, the probability that something will cause injury, combined with the potential severity of that injury. (Cohrssen 1989)
13. The likelihood of a specified undesired event occurring within a specified period or in specified circumstances. (Jones 1992)
14. The expected frequency of undesirable effects of exposure to the pesticide. (FAO 1990)
15. The likelihood of suffering a harmful effect or effects resulting from exposure to a risk factor (usually some chemical, physical, or biological agent). (WHO 1979)
16. A function of the probability of an adverse effect and the magnitude of that effect, consequential to a hazard(s) in food. (WHO/FAO 1995)
17. A function of the probability of an adverse event and the magnitude of that event, consequential to a hazard(s) in food. (FAO 1995)
18. The probable rate of occurrence of a hazard causing harm and the degree of severity of the harm. (ISO 1990)
19. The chance of something adverse happening. (WHO 1995)
20. A quantitative probability that a health effect will occur after a specified "amount" of a hazard has exposed an individual. (WHO 1989)
21. The probability of deleterious health or environmental effects. (US-EPA 1992b)
22. The probability that an adverse outcome will occur in a person, a group, or an ecological system that is exposed to a particular dose or concentration of a hazardous agent, i.e. it depends on both the level of toxicity of hazardous agent and the level of exposure. It is expressed in values ranging from zero (certainty that an effect will not occur) to one (certainty that an effect will occur). (WHO 1996)

Risk Analysis

Def.	All Respondents	Percentage	Chemistry	Pharmaceuticals	Ecological - Aquatic	Env. Science	Epidemiology	Occ. Health	Pesticides	Risk Ass. - General	Risk Ass. - Env.	Risk Ass. - Hum. Health	Risk Ass. - Meth.	Toxicology	Other	None Reported
0	36	21.1				1	1	1			4	11		3	4	11
1	24	14.0				2		1	2		3	9		1	3	3
2	106	62.0		3		4	1	2	3	2	11	37	1	3	18	21
3	5	2.9				1					1	2		1		

Definition

0. None of the below.
1. An imprecise term which infers the quantified calculation of probabilities and risks without taking any judgements about their relevance. (Jones 1992)
2. A process consisting of three components: risk assessment, risk management and risk communication. (WHO/FAO 1995)
3. A process consisting of three components: risk assessment, risk management and risk communication. (FAO 1995)

**Risk
Assessment**

Def.	All Respondents	Percentage	Chemistry	Pharmaceuticals	Ecological - Aquatic	Env. Science	Epidemiology	Occ. Health	Pesticides	Risk Ass. - General	Risk Ass. - Env.	Risk Ass. - Hum. Health	Risk Ass. - Meth.	Toxicology	Other	None Reported
0	15	7.7									2	7		1	1	4
1	74	38.1	1	2	2	1	2	1	4	2	9	22		4	7	17
2	22	11.3				1	1	1			3	5	1		4	6
3	4	2.1							1		1	1				1
4	13	6.7				1		1		1	2	5			2	1
5	5	2.6				1						1		1	1	1
6	7	3.6		1		1						3				2
7	8	4.1				1					2	3		1		1
8	12	6.2				2					2	5			1	2
9	3	1.5										1			2	
10		0.0														
11	12	6.2				1			1			6			3	1
12	10	5.2						1			2	3			2	2
13	7	3.6							1		1	3				2
14	2	1.0										1			1	
15	0	0.0														

Definition

0. None of the below.
1. The determination of the relationship between the predicted exposure and adverse effects in four major steps: hazard identification, dose-response assessment, exposure assessment and risk characterisation. (OECD 1995)
2. A process which entails some or all of the following elements: hazard identification, effects assessment, exposure assessment and risk characterization. It is the identification and quantification of the risk resulting from a specific use or occurrence of a chemical compound including the determination of dose-response relationships and the identification of target populations. When little or no quantitative data is available on dose-response relationships for different types of populations, including sensitive groups, such considerations may have to be expressed in more qualitative terms. (Leeuwen 1996)
3. Process of defining the risk associated with a specified use pattern for a pesticide, usually expressed as a numerical probability or as a margin of safety. (Holland 1996)
4. The determination of the kind and degree of hazard posed by an agent, the extent to which a particular group of people have been or may be exposed to the agent, and the present or potential health risk that exists due to the agent. (US-EPA 1992a)
5. Identification and quantification of the risk resulting from a specific use or occurrence of a chemical or physical agent, taking into account possible harmful effects on individual people or society of using the chemical or physical agent in the amount and manner proposed and all the possible routes of exposure. Quantification ideally requires the establishment of dose-effect and dose-response relationships in likely target individuals and populations. (Duffus 1993)

Definition (continued)

6. The value judgment of the significance of the risk, identified by a risk analysis taking into account any relevant criteria. (OECD 1992)
7. Determination of the relation between the predicted exposure and adverse effects in four major steps: hazard identification, dose-response assessment, exposure assessment and risk characterisation. (USES 1994)
8. Qualitative and quantitative evaluation of the risk posed to human health and/or the environment by the actual or potential presence and/or use of specific pollutants. (US-EPA 1993)
9. The quantitative evaluation of the likelihood of undesired events and the likelihood of harm or damage being caused together with the value judgements made concerning the significance of the results. (Jones 1992)
10. The assessment of the risk encountered by populations or groups of human individuals exposed to the agent under consideration. (WHO 1979)
11. The scientific evaluation of known or potential adverse health effects resulting from human exposure to foodborne hazards. The process consists of the following steps: (i) hazard identification, (ii) hazard characterisation, (iii) exposure assessment, and (iv) risk characterisation. The definition includes quantitative risk assessment, which emphasises reliance on numerical expressions of risk, and also qualitative expressions of risk, as well as an indication of the attendant uncertainties. (WHO/FAO 1995)
12. A scientific process of identifying hazards, and estimating risk in quantitative or qualitative terms. This involves four analytical steps: hazard identification, hazard characterization, exposure characterization and risk characterization. (FAO 1995)
13. A risk assessment depends on an identification of hazards and dangers, and consists of an estimation of the risks arising from them with a view to their control, avoidance, or to a comparison of risks. Included in a risk assessment is the intention to accept risks while defining and limiting one's exposure to them, or to avoid risks which are too high. (WHO 1995)
14. Hazard identification + risk characterization + exposure assessment + risk estimation. (WHO 1989)
15. A global term for the whole activity from hazard identification to risk monitoring. (WHO 1989)

**Risk
Characterization**

Def.	All Respondents	Percentage	Chemistry	Pharmaceuticals	Ecological - Aquatic	Env. Science	Epidemiology	Occ. Health	Pesticides	Risk Ass. - General	Risk Ass. - Env.	Risk Ass. - Hum. Health	Risk Ass. - Meth.	Toxicology	Other	None Reported
0	15	7.9		1							2	6		1		5
1	24	12.6			1	1	1				4	9	1	1	3	3
2	9	4.7							1		1	2			2	3
3	25	13.1				3		2			1	8			3	8
4	17	8.9				1				1	1	8		1	2	3
5	10	5.2							1		1	6				2
6	5	2.6						1		1	1	1				1
7	24	12.6		1		1			2		1	11		1	3	4
8	1	0.5													1	
9	2	1.0										2				
10	24	12.6				2	1	1			5	4		2	5	4
11	11	5.8	1								1	5		1		3
12	1	0.5									1					
13	3	1.6		1	1				1							
14	2	1.0													1	1
15	3	1.6										1			1	1
16	15	7.9							2	1	4	4			2	2

Definition

0. None of the below.
1. The estimation of the incidence and severity of the adverse effects likely to occur in a human population or environmental compartments due to actual or predicted exposure to a substance. This may include risk estimation, i.e. quantification of that likelihood. It also serves as a summary and description of the results of a risk analysis for a risk manager or the public and other interested parties. (Leeuwen 1996)
2. Outcome of hazard identification and risk estimation applied to a specific use of a substance or occurrence of an environmental health hazard: the assessment requires quantitative data on the exposure of organisms or people at risk in the specific situation. The end product is a quantitative statement about the proportion of organisms or people affected in a target population. (Duffus 1993)
3. The description of the nature and often the magnitude of human or non human risk, including attendant uncertainty. (US-EPA 1992b)
4. The process designed to estimate the incidence and severity of the adverse effects likely to occur in a human population or environmental compartment due to actual or predicted exposure. (USES 1994)

5. The final phase of the risk-assessment process that involves integration of the data and analysis involved in hazard identification, source/release assessment, exposure assessment, and dose-response assessment to estimate the nature and likelihood of adverse effects. (Cohrssen 1989)
6. A phase of ecological risk assessment that integrates the results of the exposure and ecological effects analyses to evaluate the likelihood of adverse ecological effects associated with exposure to a stressor. The ecological significance of the adverse effects is discussed, including consideration of the types and magnitudes of the effects, their spatial and temporal patterns, and the likelihood of recovery. (US-EPA 1992a)
7. Integration of hazard identification, hazard characterisation and exposure assessment into an estimation of the adverse effects likely to occur in a given population, including attendant uncertainties. (WHO/FAO 1995)
8. Integration of the above steps into an estimation of the adverse effects likely to occur in a given population, including attendant uncertainty. (FAO 1995)
9. The description of the different potential health effects of the hazard and quantification of dose-effect and dose-response relationships in a general scientific sense. (WHO 1989)
10. A summary, integration, and evaluation of the major scientific evidence, reasoning and conclusions of a risk assessment. It is a concise description of the estimates of potential risk and the strengths and weaknesses of those estimates. (US-EPA 1993)
11. The estimation of the incidence and severity of the adverse effects likely to occur in an environmental compartment due to actual or predicted exposure to a substance, i.e. integration of the effects and exposure assessments. (OECD 1995)
12. Comparison of the intrinsic ability to cause harm (see hazard) and expected environmental concentration, often a comparison of PEC and PNEC. (Leeuwen 1996)
13. Determination of factors controlling the likely effects of a hazard such as mechanism of toxicity, dose-effect relationships and worst case exposure levels. This is the prelude to risk assessment (US-EPA 1992a) (Holland 1996)
14. Determination of factors controlling the likely effects of a hazard such as the dose-effect and dose-response relationships, variations in target susceptibility, and mechanism of toxicity. (Duffus 1993)
15. The process designed to estimate the incidence and severity of the adverse effects likely to occur in a human population or environmental compartment due to actual or predicted exposure (USES 1994)
16. The estimation of the incidence and severity of the adverse effects likely to occur in a human population or environmental compartment due to actual or predicted exposure to a substance, and may include risk estimation, i.e. the quantification of that likelihood. (EC 1993)

Risk Communication

Def.	All Respondents	Percentage	Chemistry	Pharmaceuticals	Ecological - Aquatic	Env. Science	Epidemiology	Occ. Health	Pesticides	Risk Ass. - General	Risk Ass. - Env.	Risk Ass. - Hum. Health	Risk Ass. - Meth.	Toxicology	Other	None Reported
0	8	4.0									1				2	5
1	47	23.6		1		3	1	2	1		5	14		1	7	12
2	69	34.7			1	5	1	1		3	9	26	1	2	7	13
3	62	31.2	1	2	1	2	1		3		7	24		4	8	9
4	13	6.5						1	3		2	4		1	1	1

Definition

0. None of the below.
1. Interpretation and communication of risk assessments in terms that are comprehensible to the general public or to others without specialist knowledge. (Duffus 1993)
2. The exchange of information about health or environmental risks among risk assessors and managers, the general public, news media, interest groups, etc. (US-EPA 1993)
3. An interactive process of exchange of information and opinion on risk among risk assessors, risk managers, and other interested parties. (WHO/FAO 1995)
4. An interactive process of exchange of information and opinion on risk among risk assessors, risk managers, and stakeholders. (FAO 1995)

Risk Estimation

Def.	All Respondents	Percentage	Chemistry	Pharmaceuticals	Ecological - Aquatic	Env. Science	Epidemiology	Occ. Health	Pesticides	Risk Ass. - General	Risk Ass. - Env.	Risk Ass. - Hum. Health	Risk Ass. - Meth.	Toxicology	Other	None Reported
0	27	14.6				1		1	1		3	10		1	1	9
1	65	35.1	1	1	2	2	1		4	2	13	20		2	6	11
2	32	17.3				2		1			1	11		3	8	6
3	23	12.4		1		2	1	1			4	5			5	4
4	10	5.4							1		1	3			2	3
5	18	9.7				1			1	1		8	1		3	3
6	10	5.4						1				5		1		3

Definition

0. None of the below.
1. The quantification of the likelihood (i.e. probability) that adverse effects will occur in an environmental compartment due to actual or predicted exposure to a substance. (OECD 1995)
2. Assessment, with or without mathematical modelling, of the probability and nature of effects of exposure to a substance based on quantification of dose-effect and dose-response relationships for that substance and the population(s) and environmental components likely to be exposed and on assessment of the levels of potential exposure of people, organisms and environment at risk. (Duffus 1993)
3. The quantitative estimation of probabilities of clearly described effects by including uncertainty analysis; the risk assessment is complete when the risk characterization includes "risk estimation". (USES 1994)
4. Estimated risks where a degree of precision can be claimed. (HSE 1995)
5. The process of combining the risk characterization, dose-response relationships and exposure estimated to quantify the risk in a specific population. The end product is a qualitative and quantitative statement about the type of health effects expected and the proportion and number of affected people in a target population, including estimates of the uncertainties involved. The size of the population exposed needs to be known. (WHO 1989)
6. The quantification of dose-effect and dose-response relationships for a given environmental agent, showing the probability and nature of the health effects of exposure to the agent. (WHO 1988)

Risk Evaluation

Def.	All Respondents	Percentage	Chemistry	Pharmaceuticals	Ecological - Aquatic	Env. Science	Epidemiology	Occ. Health	Pesticides	Risk Ass. - General	Risk Ass. - Env.	Risk Ass. - Hum. Health	Risk Ass. - Meth.	Toxicology	Other	None Reported
0	45	25.7		1			1		1		6	16	1		6	13
1	80	45.7		1	1	4		2	4	1	9	26		5	12	15
2	50	28.6	1			3		1	1	2	3	23		2	6	8

Definition

0. None of the below.
1. Establishment of a qualitative or quantitative relationship between risks and benefits, involving the complex process of determining the significance of the identified hazards and estimated risks to those organisms or people concerned with or affected by them. (Duffus 1993)
2. Comparing calculated risks or public health impact of the exposure to the environmental agent with risks caused by other agents or societal factors and with the benefits associated with the agent, as a basis for a decision about "acceptable risk". (WHO 1989)

Risk Identification

Def.	All Respondents	Percentage	Chemistry	Pharmaceuticals	Ecological - Aquatic	Env. Science	Epidemiology	Occ. Health	Pesticides	Risk Ass. - General	Risk Ass. - Env.	Risk Ass. - Hum. Health	Risk Ass. - Meth.	Toxicology	Other	None Reported
0	51	35.4		1		1	1	1	1	1	5	26	1	1	2	10
1	93	64.6				7	1	3	4	2	8	25		5	17	21

Definition

0. None of the below.
1. Recognition of a potential hazard and definition of the factors required to assess the probability of exposure of organisms or people to that hazard and of harm resulting from such exposure. (Duffus 1993)

Risk Management

Def.	All Respondents	Percentage	Chemistry	Pharmaceuticals	Ecological - Aquatic	Env. Science	Epidemiology	Occ. Health	Pesticides	Risk Ass. - General	Risk Ass. - Env.	Risk Ass. - Hum. Health	Risk Ass. - Meth.	Toxicology	Other	None Reported
0	12	6.0										1		2	3	6
1	9	4.5				1			1			4			1	2
2	5	2.5		1		1						1		2		
3	7	3.5						1		1		3				2
4	12	6.0				1		1				3			2	5
5	57	28.6		1	1	2	2				9	22		3	4	13
6	7	3.5				1			1		1	3				1
7	16	8.0				1		1		2	3	7			1	1
8	15	7.5				1						4			7	3
9	1	0.5										1				
10	16	8.0			1				1		3	8			2	1
11	7	3.5									1	2		1	1	2
12		0.0														
13	20	10.1	1	1		2			3		3	7			1	2
14	2	1.0										1	1			
15	9	4.5							1		3	1			2	2
16	4	2.0						1			1	2				

Definition

0. None of the below.
1. The managerial, decision-making and active hazard control process to deal with those environmental agents for which the risk evaluation has indicated that the risk is too high. (WHOTER)
2. This term covers (1) risk evaluation, (2) exposure control, and (3) risk monitoring. (WHOTER)
3. Interventions to control environmental factors, which adversely affect health and to prevent or limit environmental damage. (WHO 1994b)
4. The practical application and implementation of the risk assessment to meet specific goals and achieve safe use of a substance. (WHO/IPCS 1989)
5. A decision making process that entails the consideration of political, social, economic and engineering information together with risk-related information in order to develop, analyze and compare the regulatory options and select the appropriate regulatory response to a potential health or environmental hazard. (Leeuwen 1996)
6. Decision-making process and procedures used by regulators and others to limit potential risks from use of pesticides. This involves risk assessment, emission control, exposure control and evaluation of the success of the risk mitigation efforts. (Holland 1996)
7. A decision-making process that entails considerations of political, social, economic, and engineering information with risk-related information to develop, analyse, and compare regulatory options and to select the appropriate regulatory response to a potential chronic health hazard. (US-EPA 1992a)
8. Decision-making process involving considerations of political, social, economic, and engineering factors with relevant risk assessments relating to a potential hazard so as to develop, analyse, and compare regulatory options and to select the optimal regulatory response for safety from that hazard. Essentially risk management is the combination of three steps: risk evaluation; emission and exposure control; risk monitoring. (Duffus 1993)
9. Actions taken to achieve or improve the safety of an installation and its operation. (OECD 1992)
10. Decision-making process involving considerations of political, social, economic, and engineering factors with relevant risk assessments relating to a potential hazard so as to develop, analyse, and compare regulatory options and to select the optimal regulatory response for safety from that hazard. (USES 1994)
11. The process of evaluating and selecting alternative regulatory and non-regulatory responses to risk. (US-EPA 1993)
12. The actions one may take, given the quantification of the risks posed by the technological system under consideration. (WHO 1979)
13. The process of weighing policy alternatives to accept, minimise or reduce assessed risks and to select and implement appropriate options. (WHO/FAO 1995)
14. The process of weighing policy alternatives, selecting an appropriate regulatory option, and implementing that option. (FAO 1995)
15. The application of a set of measures relevant to a particular set of significant risks and intended to restrict and maintain risks within tolerable limits at proportionate cost. (WHO 1995)
16. Risk evaluation + exposure control + risk monitoring. The managerial, decision-making and active hazard control process to deal with those environmental agents for which the risk evaluation has indicated that the risk is too high. (WHO 1989)

Risk Monitoring

Def.	All Respondents	Percentage	Chemistry	Pharmaceuticals	Ecological - Aquatic	Env. Science	Epidemiology	Occ. Health	Pesticides	Risk Ass. - General	Risk Ass. - Env.	Risk Ass. - Hum. Health	Risk Ass. - Meth.	Toxicology	Other	None Reported
0	19	10.3									1	11		1	1	5
1	126	68.1	1	2	1	3	2	3	4	2	15	45		2	20	26
2	40	21.6		1	1	5	1	1	3	1	6	7	1	5	3	5

Definition

0. None of the below.
1. Process of following up the decisions and actions within risk management in order to check whether the aims of reduced exposure and risk are achieved. (Duffus 1993)
2. The process of measuring the reduction in risk after exposure control actions have been taken, in order to make decisions concerning a re-assessment of the risk and further control actions. (WHO 1989)

Safety

Def.	All Respondents	Percentage	Chemistry	Pharmaceuticals	Ecological - Aquatic	Env. Science	Epidemiology	Occ. Health	Pesticides	Risk Ass. - General	Risk Ass. - Env.	Risk Ass. - Hum. Health	Risk Ass. - Meth.	Toxicology	Other	None Reported
0	17	8.7				1			1			5		2	2	6
1	33	16.9			1	1	1		1		5	13	1	1	6	3
2	14	7.2				1					2	6			3	2
3	30	15.4		2		3				2	6	7		1	2	7
4	58	29.7	1		1	2		1	4		8	14		3	8	16
5	13	6.7				1				1		8			2	1
6	5	2.6						1				2				2
7	19	9.7		1				1	1		2	9		1	1	3
8	6	3.1						1				4			1	

Definition

0. None of the below.

Definition (continued)

1. The practical certainty that adverse effects or injury will not result from exposure to a material when used in the quantity and the manner proposed for its use. (Rand 1995)
2. Reciprocal of risk: practical certainty that injury will not result from a hazard under defined conditions: 1. Safety of a drug or other substance in the context of human health: the extent to which a substance may be used in the amount necessary for the intended purpose with a minimum risk of adverse health effects. 2. Safety (toxicological): The high probability that injury will not result from exposure to a substance under defined conditions of quantity and manner of use, ideally controlled to minimise exposure. (Duffus 1993)
3. A situation without unacceptable risks. For purposes of this text, "safety" embraces health, safety and environmental protection, including protection of property. (OECD 1992)
4. Reciprocal of risk: practical certainty that injury will not result from a hazard under defined conditions. (USES 1994)
5. Practical certainty that a substance will not cause injury under carefully defined circumstances of use. (Cohrssen 1989)
6. The extent to which a chemical substance may be used in the necessary amount for intended purposes with a minimum risk of adverse health effects. (WHO 1979)
7. Freedom from unacceptable risk of harm. (ISO 1990)
8. The extent to which a chemical substance may be used in the amounts necessary for intended purposes with a minimum risk of adverse health effects. (WHO 1979)

Safety Factor

Def.	All Respondents	Percentage	Chemistry	Pharmaceuticals	Ecological - Aquatic	Env. Science	Epidemiology	Occ. Health	Pesticides	Risk Ass. - General	Risk Ass. - Env.	Risk Ass. - Hum. Health	Risk Ass. - Meth.	Toxicology	Other	None Reported
0	31	16.4		1		1			1		3	12		1	5	7
1	21	11.1				2		1	1		1	7		2	2	5
2	47	24.9	1	1		2	1	2	3	1	7	11		1	4	13
3	51	27.0		1	1	2			1	1	11	17	1	2	5	9
4	39	20.6			1	2	1	1	1	1	1	19		2	6	4

Definition

0. None of the below.
1. A factor applied to reduce the no-observed-effect level (NOEL) to derive an acceptable daily intake. (Last 1995)
2. A number which accounts for the uncertainty or variability in an estimate of a no effect level by adding an extra margin of safety and therefore differs from assessment or application factors. (OECD 1995)
3. A factor applied to an observed or estimated toxic concentration or dose to arrive at a criterion or standard that is considered safe. Safety factor and uncertainty factor are often used synonymously. (Leeuwen 1996)

Definition (continued)

4. A factor applied to the no-observed-effect level to derive acceptable daily intake (ADI) (the no-observed-effect level is divided by the safety factor to calculate the ADI). The value of the safety factor depends on the nature of the toxic effect, the size and type of population to be protected, and the quality of the toxicological information available. (WHO 1987)

Threshold

Def.	All Respondents	Percentage	Chemistry	Pharmaceuticals	Ecological - Aquatic	Env. Science	Epidemiology	Occ. Health	Pesticides	Risk Ass. - General	Risk Ass. - Env.	Risk Ass. - Hum. Health	Risk Ass. - Meth.	Toxicology	Other	None Reported
0	11	5.6				1						2		1	3	4
1	68	34.7			2	2	1	1	1		9	31		1	6	14
2	7	3.6							1		2	3				1
3	49	25.0	1	1		1			2	2	5	18	1	3	7	8
4	26	13.3				3		1	1	1	2	5		3	4	6
5	35	17.9		2		2	2	2	2		5	10			5	5

Definition

0. None of the below.
1. Dose or exposure concentration below which an effect is not expected to occur. (Leeuwen 1996)
2. Concentration of a pesticide in an organism or environmental compartment below which an adverse effect is not expected. (Holland 1996)
3. The dose or exposure below which a significant adverse effect is not expected. (US-EPA 1992a)
4. Dose or exposure concentration below which an effect is not expected. (Duffus 1993)
5. The lowest dose of a substance (e.g. a chemical) at which a specified measurable effect is observed and below which it is not observed. (Cohrssen 1989)

Tolerable Daily Intake

Def.	All Respondents	Percentage	Chemistry	Pharmaceuticals	Ecological - Aquatic	Env. Science	Epidemiology	Occ. Health	Pesticides	Risk Ass. - General	Risk Ass. - Env.	Risk Ass. - Hum. Health	Risk Ass. - Meth.	Toxicology	Other	None Reported
0	39	22.7				1	1	1	2		5	13		1	4	11
1	12	7.0	1			4			1		1	5				
2	27	15.7				1			1	1	2	13		2	2	5
3	24	14.0		1				1		1	3	8		1	1	8
4	37	21.5				1				1	6	14		2	8	5
5	33	19.2		1	1	2		1	2			13			8	5

Definition

0. None of the below.
1. Regulatory value equivalent to the acceptable daily intake established by the European Commission Scientific Committee on food. (Leeuwen 1996)
2. Term preferred by the European Commission for acceptable daily intake of environmental contaminants. ADI is reserved for pesticides and food additives where extensive toxicological test data is available. (Holland 1996)
3. Regulatory value equivalent to the acceptable daily intake established by the European Commission Scientific Committee on Food. Unlike the ADI, the TDI is expressed in mg/person, assuming a body weight of 60 kg. TDI is normally used for food contaminants. (Duffus 1993)
4. Regulatory value equivalent to the acceptable daily intake and nominally used for food contaminants. (USES 1994)
5. An estimate of the amount of a substance in food or drinking-water, expressed on a body weight basis (mg/kg or ug/kg of body weight), that can be ingested daily over a lifetime without appreciable health risk. (WHOTER)

Tolerable Intake

Def.	All Respondents	Percentage	Chemistry	Pharmaceuticals	Ecological - Aquatic	Env. Science	Epidemiology	Occ. Health	Pesticides	Risk Ass. - General	Risk Ass. - Env.	Risk Ass. - Hum. Health	Risk Ass. - Meth.	Toxicology	Other	None Reported
0	32	22.4				1	1	1		1	4	12		2	3	7
1	111	77.6		1		6		1	4	2	12	42		3	19	21

Definition

0. None of the below.
1. An estimate of the intake of a substance which can occur over a lifetime without appreciable health risk. (WHO 1994a)

Toxicity

Def.	All Respondents	Percentage	Chemistry	Pharmaceuticals	Ecological - Aquatic	Env. Science	Epidemiology	Occ. Health	Pesticides	Risk Ass. - General	Risk Ass. - Env.	Risk Ass. - Hum. Health	Risk Ass. - Meth.	Toxicology	Other	None Reported
0	11	5.6							1			3		1	3	3
1	3	1.5						1	1						1	
2	68	34.3	1	2	1	3	1	3	1	1	8	27		2	5	13
3	21	10.6			1	1	1				5	6		1	1	5
4	31	15.7		1		3			1	1	5	7		1	4	8
5	15	7.6				1					3	5			4	2
6	18	9.1				1			1	1	2	6		1	2	4
7	1	0.5										1				
8	4	2.0									1	2				1
9	1	0.5														1
10	8	4.0							1			4		1	2	
11	6	3.0										4				2
12	1	0.5													1	
13	10	5.1					1		1			4	1	1	1	1

Definition

0. None of the below.
1. The general term applied to adverse biological effects in man resulting from pollutants. (Pfafflin 1976)
2. The inherent property of a chemical to cause an adverse biological effect. (ECETOC 1982)
3. The inherent potential or capacity of a substance to cause adverse effects on a living organism, seriously damaging structure or function or producing death. (Leeuwen 1996)
4. The inherent potential or capacity of an agent or material to cause adverse effects in a living organism when the organism is exposed to it. (Holland 1996)
5. Capacity to cause injury to a living organism defined with reference to the quantity of substance administered or absorbed, the way in which the substance is administered (inhalation, ingestion, topical application, injection) and distributed in time (single or repeated doses), the type and severity of injury, the time needed to produce the injury, the nature of the organism(s) affected and other relevant conditions. (Duffus 1993)

Definition (continued)

6. Adverse effects of a substance on a living organism defined with reference to the quantity of substance administered or absorbed, the way in which the substance is administered (inhalation, ingestion, topical application, injection) and distributed in time (single or repeated doses), the type and severity of injury, the time needed to produce the injury, the nature of the organism(s) affected, and other relevant conditions. (WHOTER)
7. Measure of incompatibility of a substance with life: this quantity may be expressed as the reciprocal of the absolute value of median lethal dose (1/LD50) or concentration (1/LC50). (WHOTER)
8. The quality or degree of being poisonous or harmful to plant, animal, or human life. (Cohrssen 1989)
9. The relative power of a toxic material to cause harm. (Jones 1992)
10. A physiological or biological property which determines the capacity of a chemical to do harm or produce injury to a living organism by other than mechanical means. (FAO 1990)
11. The capacity to cause injury to a living organism. (WHO 1979)
12. (Of a substance) The capacity to cause injury to a living organism. (WHO 1978)
13. The quality or degree of being poisonous or harmful to plant, animal or human life. (WHO 1996)

Toxicity Assessment

Def.	All Respondents	Percentage	Chemistry	Pharmaceuticals	Ecological - Aquatic	Env. Science	Epidemiology	Occ. Health	Pesticides	Risk Ass. - General	Risk Ass. - Env.	Risk Ass. - Hum. Health	Risk Ass. - Meth.	Toxicology	Other	None Reported
0	21	11.1								2	8	1	1	3	6	
1	49	25.9		1		4	1		2	3	20			12	6	
2	20	10.6			1	1		1		4	4			1	8	
3	11	5.8						1	1	3	4			1	1	
4	10	5.3				1			1	1	2		1	2	2	
5	8	4.2		1						1	3		1		2	
6	24	12.7		1		1		1		1	4	6		3	2	5
7	13	6.9							1	2	1	7			1	1
8	29	15.3	1		1	1		1	1		3	14		2	2	3
9	4	2.1									1				1	2

Definition

0. None of the below.
1. Characterization of the toxicological properties and effects of a substance (e.g. a chemical) including all aspects of its absorption, metabolism, excretion, and mechanism of action, with special emphasis on establishment of dose-response characteristics. (Cohrssen 1989)
2. The estimation of the relationship between dose or concentration and the incidence and/or severity of an effect. (OECD 1995)

Definition (continued)

3. The process of characterizing the relationship between the dose of an agent administered or received and the incidence of an adverse health effect in exposed populations. (Leeuwen 1996)
4. The estimation of the relationship between dose or concentration and the incidence and severity of an effect in a particular group of test organisms and, through extrapolation, in a whole population or ecosystem. (USES 1994)
5. A component of risk assessment that describes the quantitative relationship between the amount of exposure to a substance and the extent of injury or disease. (cohrseen 1989)
6. The determination of the relationship between the magnitude of exposure and the magnitude and/or frequency of adverse effects. (WHO/FAO 1995)
7. The determination of the relationship between the magnitude of administered, applied, or internal dose and a specific biological response. Response can be expressed as measured or observed incidence, percent response in groups of subjects (or populations), or the probability of occurrence of a response in a population. (US-EPA 1992b)
8. The identification and quantification of the potential adverse effects of a substance and therefore includes hazard identification and dose-response assessment. (OECD 1995)
9. The component of an environmental risk analysis concerned with quantifying the manner in which the frequency and intensity of effects increase with increasing exposure to a contaminant or other source of stress (Leeuwen 1996)

Uncertainty

Def.	All Respondents	Percentage	Chemistry	Pharmaceuticals	Ecological - Aquatic	Env. Science	Epidemiology	Occ. Health	Pesticides	Risk Ass. - General	Risk Ass. - Env.	Risk Ass. - Hum. Health	Risk Ass. - Meth.	Toxicology	Other	None Reported
0	28	14.5				2			1		1	13	1	1	3	6
1	88	45.6		3	2	6	1	2	2		10	26		2	14	20
2	29	15.0						1	2	1	5	10		2	3	5
3	20	10.4							2	1	4	6			1	6
4	28	14.5				1	1	1	1	1	5	8		1	4	5

Definition

0. None of the below.
1. Imperfect knowledge concerning the present or future state of the system under consideration. A component of risk resulting from an imperfect understanding of the degree of hazard or of its spatial and temporal pattern of expression. (Leeuwen 1996)
2. Uncertainty with respect to parameter values and model formulations of processes. (USES, 1994)
3. A felt state of imperfect knowledge where one may seek to increase the chances of successful action by improving available information. (Guen 1995)
4. Felt deficiency in knowledge relevant to forthcoming decisions of critical importance. (Guen 1995)

Uncertainty Factor

Def.	All Respondents	Percentage	Chemistry	Pharmaceuticals	Ecological - Aquatic	Env. Science	Epidemiology	Occ. Health	Pesticides	Risk Ass. - General	Risk Ass. - Env.	Risk Ass. - Hum. Health	Risk Ass. - Meth.	Toxicology	Other	None Reported
0	23	12.4		1							3	9			3	7
1	75	40.5			2	4	1	3	3		14	20	1	2	6	19
2	16	8.6							1	1	2	6		1	3	2
3	23	12.4		1					2	2	3	7			3	5
4	8	4.3	1	1		2					1			1	2	
5	31	16.8							1			18		3	5	4
6	9	4.9				1	1				1	4				2

Definition

0. None of the below.
1. A factor applied to an exposure or effect concentration or dose to correct for identified sources of uncertainty. (Leeuwen 1996)
2. Factor in toxicological assessment for extrapolation of data from experimental animals to man (assuming that man may be more sensitive) or from selected individuals to the general population. (Holland 1996). For example an uncertainty factor is generally applied to the no-observed-effect level to derive an acceptable daily intake.
3. One of several, generally 10-fold factors, used in operationally deriving the Reference Dose (RfD) from experimental data. UFs are intended to account for (1) the variation in sensitivity among the members of the human population; (2) the uncertainty in extrapolating animal data to the case of humans; (3) the uncertainty in extrapolating from data obtained in a study that is of less-than-lifetime exposure; and (4) the uncertainty in using LOAEL data rather than NOAEL data. (US-EPA 1992a)
4. In assay methodology, confidence interval or fiducial limit used to assess the probable precision of an estimate. (Duffus 1993)
5. In toxicology, value used in extrapolation from experimental animals to man (assuming that man may be more sensitive) or from selected individuals to the general population: for example, a value applied to the no-observed effect level (NOEL) or no-observed-adverse-effect level (NOAEL) to derive an acceptable daily intake or reference dose (RfD) (the NOEL or NOAEL is divided by the value to calculate the acceptable daily intake or RfD). The value depends on the nature of the toxic effect, the size and type of population to be protected, and the quality of the toxicological information available. (WHOTER)
6. A product of several single factors by which the NOAEL or LOAEL of the critical effect is divided to derive a TI. (WHO 1994a)

Validation

Def.	All Respondents	Percentage	Chemistry	Pharmaceuticals	Ecological - Aquatic	Env. Science	Epidemiology	Occ. Health	Pesticides	Risk Ass. - General	Risk Ass. - Env.	Risk Ass. - Hum. Health	Risk Ass. - Meth.	Toxicology	Other	None Reported
0	35	17.7				1					1	15	1	1	3	13
1	144	72.7	1	3	2	7	2	4	2	3	22	43		7	19	29
2	19	9.6				1			4		2	8		1	2	1

Definition

0. None of the below.
1. The process of assessing whether the predictions or conclusions reached in a risk assessment are correct. (OECD 1995)
2. In pesticide analysis, the process for establishing that an analytical method or equipment will provide reliable and reproducible results. (Holland 1996)

ANNEX 4

DETAILS OF THE PROCESS OF WORK INVOLVED IN THE DEVELOPMENT OF HARMONISED DESCRIPTIONS OF GENERIC TERMS IN HAZARD AND RISK ASSESSMENT

The below is a reproduction of material which appeared in the draft report, for the purpose of providing more detailed information on the approach taken by the Terminology Planning Group. Readers will need to turn to the section on the report titled 'Approach to the work' for information on the process employed in finalising the draft report.

INTRODUCTION

1. The overall objective of this project is to harmonize generic terms used in chemical hazard/risk assessment. This will help to facilitate the mutual use and acceptance of the assessments of chemicals between countries, saving resources for both governments and industry. This project has been initiated as a direct response to requests from governments to harmonize the use of such terms and, therefore, increase the understanding and communication of risks associated with exposure to chemicals. Specifically, it addresses and responds to the need for "Harmonized Approaches for Performing and Reporting Health and Environmental Risk Assessments" (requested by the 1st Intergovernmental Forum on Chemical Safety in 1994). It will facilitate meeting the objectives set forth by the IFCS regarding Programme Area A of Chapter 19, Agenda 21. Further, the goals and objectives of this project are instrumental in addressing the needs and objectives outlined in the World Trade Organization (WTO) Agreement on the Application of Sanitary and Phytosanitary Measures and Agreement on Technical Barriers to Trade. It should be noted that this project is complementary to other activities being undertaken by the International Programme on Chemical Safety (IPCS) and Organisation for Economic Co-operation and Development (OECD) to harmonize technical terms used in chemical hazard/risk assessment.

2. The current focus is on the harmonization of terms used by risk assessors in the hazard/risk assessment of chemicals (including pesticides) to be used in the context of chemicals management (i.e. notification, registration, classification, etc.). Although work has been done previously on the development of internationally-agreed upon definitions for terms used in chemical hazard/risk assessment (e.g. by IPCS, OECD and others), inconsistencies in the definitions and use of many of these terms still exist. Such inconsistencies have been highlighted in a number of forums including the work of the IPCS project to harmonize risk assessment approaches and by the OECD Pilot Project to Compare Pesticide Data Reviews. Through such efforts, inconsistency in the usage of terminology was found in all test areas, but was particularly prevalent for certain aspects related to human health.

3. Inconsistencies in the use of terminology can become an impediment to the harmonization of risk assessment approaches by hindering the mutual understanding of the different approaches currently in use. The barriers created by these inconsistencies in terminology reduce the possibility for the sharing and use of assessments between countries.

METHODOLOGY

4. The principles of good practice in international terminology work has been a subject of study for many decades by many individual scientists and researchers as well as a wide range of national and international bodies. Although the principles have evolved and continue to be dynamically adapted to meet new requirements and take advantage of new technologies, they have reached a fair level of overall stability. The methodology of terminology data management adopted in the present project follows

international standards. Standardization of the content of definitions started from existing materials, on which expert opinions were sought using a modified Delphi technique.

SCOPE

5. The scope of this joint activity covers the general category of terms referred to as **generic**. **Generic terms** are defined as general terms used in the process of determining risks from exposure to chemicals, regardless of the subject-specific fields. Examples of such terms include hazard identification, risk characterization, and risk assessment.

Terms

6. The IPCS and OECD, in consultation with the other the Inter-Organization Programme for the Sound Management of Chemicals (IOMC), identified generic terms that were considered to be problematic from the standpoint of understanding and communication. It was agreed that in this initial stage, the list of terms considered be kept to a minimum. It was recognized that the set of terms must be considered as a total package so that no terms used in a definition were themselves left undefined. Thus, it was agreed that the list considered be limited to 50 terms.

Definition

7. The secretariats compiled a database with the definitions used for each of the terms in key sources. "Key" sources were identified as those that are widely cited or used (i.e., IUPAC) or those that have regulatory implications in countries or organizations (i.e., EU Technical Guidance Documents or national guidelines). From a total of 5000 terms and 15,000 definitions collected from the key sources, the 50 initial terms featured a total of over 350 definitions.

Survey

8. These terms and definitions were compiled into a survey. The survey was circulated widely among IPCS, OECD and IOMC contact points. It was also posted on the World Wide Web for response electronically. Responders were asked to

- a) identify or to provide their preferred definition for each term,
- b) identify terms considered as synonyms, and
- c) indicate whether any important key documents/sources were omitted.

9. Additional information on the individual responding was requested such as their area of expertise, years of experience with risk assessment, affiliation, etc. Responses were received from approximately 200 respondents from different countries, institutions and scientific disciplines.

Terminology Planning Working Group

10. A Terminology Planning Workgroup was established by the secretariats to provide advice and guidance in coming to agreement on the use and definition of the terms and toward developing a glossary of chemical hazard/risk assessment terms as used by hazard/risk assessors. The Workgroup is composed of individual experts in the areas of terminology and hazard/risk assessment. The list of Workgroup members is provided in the following table.

11. The Workgroup met in March, 1998 to review the preliminary survey results and to make recommendations on the use and further analysis of the data collected by developing an action plan to work toward harmonizing this first set of generic terms.

Members of the planning group

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Health Organization
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Critical Analysis of Results

12. The Terminology Planning Workgroup agreed upon a mechanism for reaching consensus on the definitions. Using "concept-driven" approach, a detailed semantic analysis was conducted for each term based on the most frequently chosen definitions. Furthermore, all comments were taken into account to refine the analysis and reflect the participants' views. Eventually, a generic definition was proposed for each term as a synthesis of the participants' contributions and preferences. Through the course of the analysis, some terms were considered necessary for better understanding of the concept system. Five such terms were added. It is hoped that these definitions for all these terms will be accepted and used. If necessary, they can be modified to further elucidate the concept as related to a particular field or situation. Using this method, areas of convergence and divergence can be readily identified. It was further recognized that analyzing the definitions in their semantic constituents would aid in producing appropriate translations into a variety of languages. (Such translation work is not currently within the scope of this joint project).

13. Models have been developed for each of the terms based on the results of the initial survey. The Terminology Planning Workgroup met in October 1998 to review the critical analysis and the resulting concept definitions. Comments have been incorporated into this analysis.

Output

14. It should be noted that the concepts described by the terms must not be viewed in isolation from one another. The generic terms identified have a variety of uses and applications in a number of disciplines. Thus, to be most clear and transparent, the concepts developed for each term should also be viewed in the context of their use with and relationship to the other terms. The final output of this effort will be an annotated glossary of terms reflecting the situation that emerges from the responses to the survey. However, it must be stressed that the resulting glossary will remain dynamic. It must be viewed an agreement of the use of hazard/risk assessment terms *as they are used by hazard/risk assessors* in the chemicals area. It should not be implied that the definitions provided are the correct definition to be used in all cases by all disciplines. The purpose is to be transparent about how they are used by risk assessors in the most basic sense, and then with this understanding, can be modified or enhanced as appropriate. Thus, it is hoped that these definitions be adopted as commonly used "root definitions" which can be built upon to suit the needs of specific disciplines.

ELEMENTS OF TERMINOLOGY

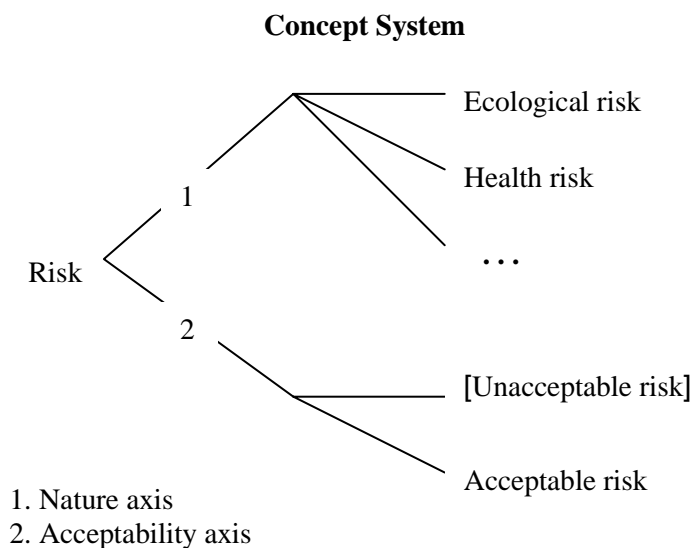
15. The set of generic terms under review clearly displays two kinds of terms. Alongside with the expected terms referring to objects of the real world (e.g. threshold, toxicity), the list contains an unusually high number of terms referring to actions. The first group is therefore data-oriented and the second on the other hand is more process- or action-oriented.

Data-oriented Terms

16. Terms such as *guidance value* or *reference dose* have been marked as important concepts in the terminology under review; they represent entities that derive from superordinate concepts, either in a generic or in a partitive relation, or are associated with other concepts in a circumstantial rather than essential fashion. The term *acceptable risk* is one of two theoretical kinds of *risk* along an imaginary acceptability axis. In a set comprising all *risks*, there is a subset of *acceptable risks*, as opposed to another set, unmentioned, of *unacceptable risks*. Taking another axis, say, the nature of the risk, a number of risks

of a different nature may be thought of. In the list of generic terms, only one kind is mentioned explicitly as *ecological risk*; another kind, however, exists implicitly from the definitions and the related comments, as *health risk*. The concept system around *risk* may therefore be represented as shown in Figure 1.

17. The advantage of such a representation is that it visualizes the relations between terms and points at apparent logical inconsistencies, which have to be further addressed in the course of the detailed analysis.



18. From the survey list, it appears that some terms are more prone to enter into multiple relations than others. We shall consider them in groups according to their natural affinity. There is, for instance, one cluster around *risk*, another somewhat smaller one around *hazard*. They both present complex and variable semantic features with stronger binding combinatorial capabilities, resulting in part from their popularity in many language areas, including the general language. Others, which are more specific to particular subject fields, have a more restricted connectivity. These include guidance value, margin of exposure, safety factor, threshold, etc.

Action-oriented Terms

19. Action-oriented terms are used in combinations with other single-word terms, except for *assessment* which also appears individually. For the purpose of the present analysis, we shall call base any term that is used as the anchor for a number of combinations, and collocate the variable part in a set of collocations. The list of collocates to be found in various combinations with a number of bases is as follows:

ACTION COLLOCATES

Collocate	=	related action
<i>Analysis</i>	=	Analyse
<i>Assessment</i>	=	Assess
<i>Characterization</i>	=	Characterize
<i>Communication</i>	=	Communicate
<i>Estimation</i>	=	Estimate
<i>Evaluation</i>	=	Evaluate
<i>Identification</i>	=	Identify
<i>Management</i>	=	Manage
<i>Monitoring</i>	=	Monitor

20. All the verbs used to generate the collocations are normally used transitively. The bases in the combinations represent therefore objects to which the actions expressed by the collocates apply: *risk assessment* means that the act of assessing applies to a risk, and *hazard evaluation* means that the action is to evaluate a hazard. This is essentially different from other combinations which do not involve action collocates, such as *safety factor*, etc.

21. The action collocates enter in combinations with a number of different bases. *Risk* is the most proliferous one, as it combines with every one of the collocates. We therefore have *risk analysis*, *risk assessment*, *risk communication*, *risk estimation*, *risk evaluation*, *risk identification*, *risk management*, *risk monitoring*. There are only four combinations based on *hazard*: *hazard assessment*, *hazard characterization*, *hazard evaluation* and *hazard identification*.

22. If such combination phrases are considered to be the mere sum of their individual components, they will show weaker bonds than other multiword terms in the lexicon like *heart failure*, or *central nervous system*. If evidence shows that the definitions for *risk assessment* are semantically richer than the sum of the semantic features of both *risk* and *assessment* together, it is justified to clarify the meaning of *assessment* in order to understand the functioning of the word in combination. It also follows logically, that other collocates used with the same base need to be defined as well. This has been suggested by respondents, in reaction to the observation that such collocates as *characterization*, *evaluation*, *identification*, etc. have not been initially included in the list of generic terms. The semantic analysis of *assessment* will be carried out on direct evidence from the survey. The other collocates will be analysed based on elements extracted from the collocations in which they occur as well as from general language dictionary sources.