

Risk Communication: Practical guide

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The Risk Communication Inspiration Guide was created with the cooperation of medical environmental experts from the RA Subject Group and MGAG, the Flemish Environmental Assessment Agency and the Centre for Research on Environmental and Social Change (CRESC) of the University of Antwerp.

Disclaimer: this English version report has been translated from the original Dutch report using AI-based translation tools. As a result, certain linguistic nuances or phrasing may not be entirely accurate.

INTRODUCTION

"A document that you can use in practice, based on questions and tools. If necessary, you can refer back to the accompanying Risk Communication Inspiration Guide"

This practice guide is part of the Risk Communication Guideline. The **Risk Communication Inspiration Guide** forms the main document. The inspiration guide discusses some theoretical principles and provides practical tips and tools for setting up proactive and reactive communication about **health risks related to environmental factors**, which are identified through various channels and in which the authorities have an important role to assess the risks, and to communicate the assessment of the risks to citizens and/or target groups.

Under **Risk communication** in the inspiration guide *"A Interactive process exchange of information and opinions between individuals, groups and (government) institutions. It relates not only to the risks themselves, but also to the concerns, views and reactions associated with risks and the way in which risks are dealt with by those involved."* (Elsman-Domburg et al., 2006). An important characteristic of risk communication is that it is mainly about communicating **Opportunities and uncertainties** and that this should take into account possible **worry** of citizens.

The practice guide starts with a brief overview of **some principles** that you should know before you start risk communication. This is followed by **questions and tools** to tackle and shape risk communication in a practical way. These are partly taken from the inspiration guide and partly supplementary. For a more substantive explanation, please refer to the corresponding paragraph in the inspiration guide. For certain tools, we refer to another document/source/website. By clicking via "ctrl + click" on these boxes you go to the document/source/website or to the inspiration guide.

➤ Document/source/websit

➤ Inspiration



SOME PRINCIPLES IN ADVANCE

"What do you need to take into account before you start risk communication?"

There are a few principles that you should be aware of before you start risk communication, namely: **risk management**, **risk perception**, **characteristics of the risk communicator**, and **participation**.

RISK MANAGEMENT

Risk communication is part of a risk management process (Figure 1). Risk communication is most effective when it is integrated with risk assessment and risk management.

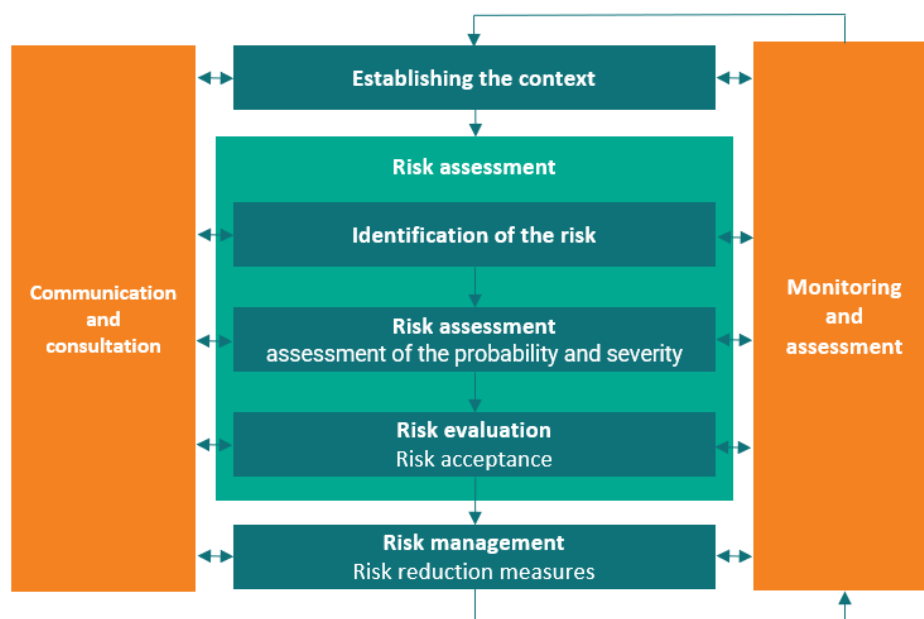


Figure 1: The risk management process.

Source: Hortensius, D., & Mallens, E. (2010). ISO 31000: new reference framework for risk management'. KAM newsletter 2010-1.

As part of risk management, risk communication can aim to:

- ▼ Identify and align the **target group's** risk perception, information needs **and** search strategy
- ▼ Helping people better understand the risks they are exposed to and what measures are being taken (**informing**)
- ▼ reassuring **people** based on substantiated information
- ▼ **make better decisions** about health threats and about security (both private and public)
- ▼ encouraging **people** to reduce risks themselves and prevent risks: to encourage safe(r) behaviour by raising awareness and offering a perspective for action

RISK PERCEPTION

Risk **perception** is defined as "the subjective perception of risks by a data subject", which forms the basis for risk acceptance and risk behaviour. According to the model in Figure 2, citizens (unconsciously) analyse risks from three different contexts, namely: a risk-related, individual and societal context. In the assessment of the probability and seriousness of an event by citizens, a complex interaction takes place between intuition, emotions, knowledge, conviction, norms and values and culture. Risk perception may therefore differ between different individuals and communities and be subject to change.

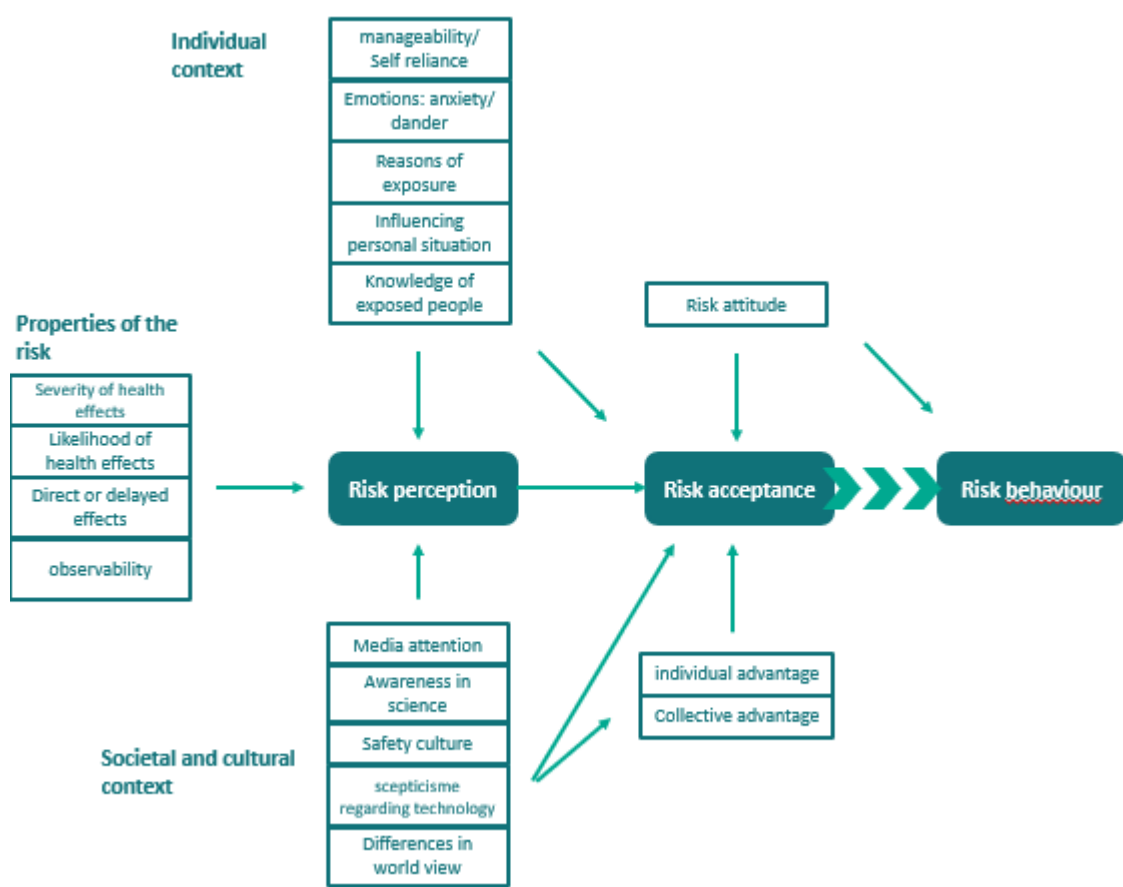


Figure 2: Subjective assessment of risks.

Source: Bouwdienst rijkwaterstraat, & Ministry of Transport, Public Works and Water Management. (2004). Guideline Risk Communication - How do you communicate about uncertainties?

Figure 3 shows for some **characteristics of risks** that are relevant to environmental factors when people usually become worried or not. These factors offer starting points for risk communication in various ways.



Figure 3: Characteristics of risks that influence whether people become anxious or not.

Source: Elsmann-Domburg, M., van Brederode, N., van Greuningen-Willemsen, E., Hall, E., Jans, H., Leenders, H., & Woudenberg, F. (2006). GGD guideline – Risk communication.

If the perceived risk is smaller or greater than the objective risk, it may be desirable to:

- ▼ adjust perception through risk communication
- ▼ adjust the risk treatment or risk communication based on the perceived threat

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PROPERTIES OF THE RISK COMMUNICATOR

A number of characteristics of **representatives** of responsible authorities (such as MSF, Healthy Living and MMKs) and of the **person communicating** are important in risk communication. The main requirements are:

- ▼ Trust
- ▼ Honesty
- ▼ Transparency
- ▼ Integrity
- ▼ Influence (two-way traffic)
- ▼ Listening attitude
- ▼ Empathy (taking into account risk perception)

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PARTICIPATION

We define **participation** as the involvement of stakeholders and target groups external to one's own organisation in one's own policy or in the operation of the initiator. Participation can go further than the application of two-way traffic in risk communication, because a certain degree of consultation and authority can be added (see Figure 4).

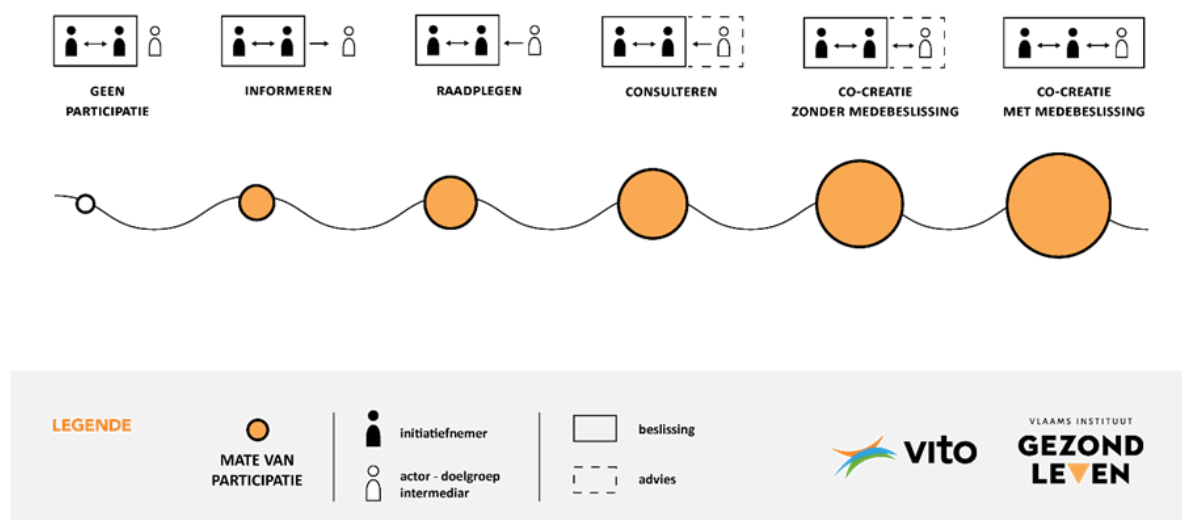


Figure 4: Visual representation of the participation cord.

Source: Colles, A., Mollen, L., & Vandierendonck, S. (2019). *Inspiration guide for participation in environmental health focus areas*.

There are several **reasons** why you might want to work in a participatory way in risk communication, namely:

- ▼ **Promoting** transparency
- ▼ Increasing **attention** for an important theme
- ▼ help to **clarify and delineate a problem**
- ▼ **Increasing knowledge**
- ▼ **uncover the perceptions and concerns** of the target group
- ▼ Identify, accept, discuss and resolve **differences and disagreements**
- ▼ **Creating support** for risk management
- ▼ Assessing the clarity and impact of **communication materials**

➤ Inspiration guide for participation in environmental health focus areas

➤ Inspiration guide

PRACTICAL PREPARATION OF RISK COMMUNICATION

"Questions and tools to tackle and shape risk communication in a practical way"

Through a **communication strategy**, it is possible to structure your communication and take a practical approach. You don't have to draw up a communication strategy for every advice/communication. However, it can be useful to know the steps and keep them in mind when proceeding to (risk) communication.



Drawing up a communication strategy always takes place in several steps. In the inspiration guide, we have defined it as follows:



Figure 5: Steps for creating a communication strategy.

➤ Inspiration Guide Chapter

STEP 1A – TARGET GROUP

"Different target groups require a different approach"

Your objective (step 1b) and message (step 2) may look different for different target groups. Therefore, perform an **audience analysis** :

Questions about background, knowledge and attitude	Answer
What kind of people are you dealing with?	
▼ Gender	
▼ Age/Stage of Life	
▼ Family composition (are there children, of what age)	
▼ Education	
▼ Nationality (what language is spoken)	
▼ Cultural background	
▼ Socioeconomic status	
▼ Duration of residence	
Which people live at the location and/or are still involved in the peripheral area?	
Are there special target groups (sensitive groups)?	
Are those involved already aware of the problem?	
Has there already been attention for the problem in the press/media?	
What sources of information does the target group consult?	
What is the current knowledge and what information need is there?	
Have you already received questions or complaints?	
Do you have insight into the health literacy of your target group?	

Based on: Elsmann-Domburg, M., van Brederode, N., van Greuningen-Willemsen, E., Hall, E., Jans, H., Leenders, H., & Woudenberg, F. (2006). GGD guideline - Risk communication.

➤ Engaging and persuasive communication in health promotion

➤ Inspiration guide

In addition, carry out an analysis of the **risk perception** of the target group. By answering the questions in the table below, you can estimate whether the risk experienced is smaller or greater than the actual risk. If a risk is overestimated, the negative perception created by another characteristic (e.g. a lot of media attention) can be compensated by exerting a positive influence on a specific characteristic (e.g. feeling of controllability). However, sometimes a single factor (e.g. involuntariness) will dominate the risk perception.

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Risk perception factors	Risk perception low	Unknown	Risk perception high
Threat Type			
What is the origin/source of the contamination/problem?	Of course		Artificial, chemical
What is the severity of the problem or effect?	Not serious or frightening		Nasty, terrifying, life-threatening
Are there special risk groups (children, pregnant women) involved?	No		Yes
How many victims are involved?	Not much, gradually		A lot at once
What is the scope of the problem?	Small scale, regional, temporary		Large scale, rural, long-term, multiple generations
How long has the problem been known?	For a long time		Recently
How much knowledge is available?	A lot of knowledge, well researched		Little knowledge, uncertainty, contradictions
Are there similar cases?	Yes		No
Is it a complicated problem?	No		Yes
Observability			
Is the problem visible?	Yes		No
How did the problem become known?	Through government information or participation		Through an incident, through the media
Is there a lot of (alarming) media attention?	No		Yes
Is the problem in the immediate vicinity?	No		Yes
When will effects occur?	Delayed, in the longer term		Immediately, in the short term
Control			
Is one dealing with the problem of one's own free will?	Yes		No
How likely is it that there will be consequences?	Rare, small chance, avoidable		Probably, inescapable
Can those involved do something themselves to reduce the risk?	No		Yes
Is there relevant legislation regarding environmental quality or enforcement?	No		Yes
Are the effects reversible?	Yes		No
Stakeholders			
Does the problem affect people themselves or immediate family members or involved?	No		Yes
What is the attitude of those involved towards the responsible authorities?	Trust		Distrust
What impression does the responsible authority make?	Open, approachable, transparent, honest, objective, consistent, fair, of good will		Opaque, subjective, contradictory, indecent, inconsistent, malicious
Consequences			
Does the situation provide benefits for the person concerned?	Yes		Little or none
Who benefits from the situation?	Individuals themselves or society		Only the responsible authorities or perpetrators
What interests are represented?	Those of those involved		That of responsible bodies
Are the consequences (positive and negative, in terms of place and time) fairly distributed?	Yes		No

Based on: Eisman-Domburg, M., van Brederode, N., van Greuningen-Willemsen, E., Hall, E., Jans, H., Leenders, H., & Woudenbera, F. (2006). GGD guideline - Risk communication.

The guideline 'Engaging and persuasive communication in health promotion' takes a closer look at **target group segmentation**, in which the target group is split into smaller and more homogeneous groups of people who display similar interests, needs, values or characteristics.

➤ **Engaging and persuasive communication in health promotion**

If you want to do research to gain more insight into the target group, we refer you to the 'First aid for measuring

➤ **First aid for measuring**

instruments' of the Flemish Institute for Healthy Living.

STEP 1B - COMMUNICATION OBJECTIVES

"What do you want to achieve with your communication process or material?"

- ▼ Formulate communication objectives clearly, concretely and clearly
- ▼ Indicate concretely how the objectives can be achieved
- ▼ If possible, set the objective **SMART** (**S**pecific, **M**easurable, **A**chievable, **R**ealistic and **T**ime-bound)

Communication objective	How to realize?	SORROW?
Connecting with risk perception, information needs and search strategy of the target group		
Inform about risks and measures to achieve better understanding		
Reassure based on substantiated information		
Encouraging safe behaviour through awareness and offering an action perspective		
Decision-making on risk management and support safety		
Other, namely		
.....		

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Examples:

- ▲ 'At the end of the information campaign, a larger proportion of target group X indicates that they feel sufficiently informed'
- ▲ 'After receiving the information about problem X, 80% of the questioners indicate that they feel less worried'.
- ▲ 'In 2024, X% of residents in district Y will be actively involved in solving problem Z'

STEP 1C - ORGANISATION OF COMMUNICATION

"Who communicates what and when?"

A good **organisation** of risk communication is important for cooperation, task demarcation, time planning and financing of the communication. For example, it is best to make good agreements about the division of tasks and spokesperson and to respect internal agreements and communication guidelines of the authorities involved. The division of tasks will often be related to the expertise of the parties involved, the target group (step 1a) and the communication objectives (step 1b) and can therefore differ per case or project.

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STEP 2 - MESSAGE

"What are you going to say? What substantive aspects does your message contain?"

A **message** must be clear, contain sufficient information, be written/spoken in simple language and match the target group and risk perception. The tone of a message is also important. The following ingredients can be present in your message:

Question	Answer
What is going on, where , when and for what reason?	
What is the extent of the problem or location?	
What are the (possible) health consequences ?	
What measures have been/are being taken by the government ?	
What measures can those involved take?	
When will further information follow (including about knowledge that is currently lacking)?	

When formulating the message, keep the following in mind:

- ▲ Keep it **simple** and **concise** (up to 3 key messages in short sentences)
- ▲ Base content on **evidence** and make it **consistent**
- ▲ Only provide **facts** that have been verified and clarified
- ▲ Use clear **non-technical language** without jargon and acronyms
- ▲ Give people something to do to **protect** their health (make sure they **can take** concrete action themselves)
- ▲ Acknowledge **uncertainties** and **mistakes**
- ▲ **Don't reassure too much** and **don't minimize risks**
- ▲ Explain how the problem **affects people's lives**
- ▲ Make extensive use of **analogies** and **human stories**
- ▲ Draw a **conclusion**

➤ Inspiration guide

If your objective is specifically to **engage and convince with your message**, you can consult the checklist 'Persuasive communication'.

➤ Checklist for persuasive

STEP 3 - COMMUNICATION TOOLS

"Which means are most effective for achieving your goal?"

- ▼ Choose from the means of **communication**. The (risk) communication intersection can help you with this.

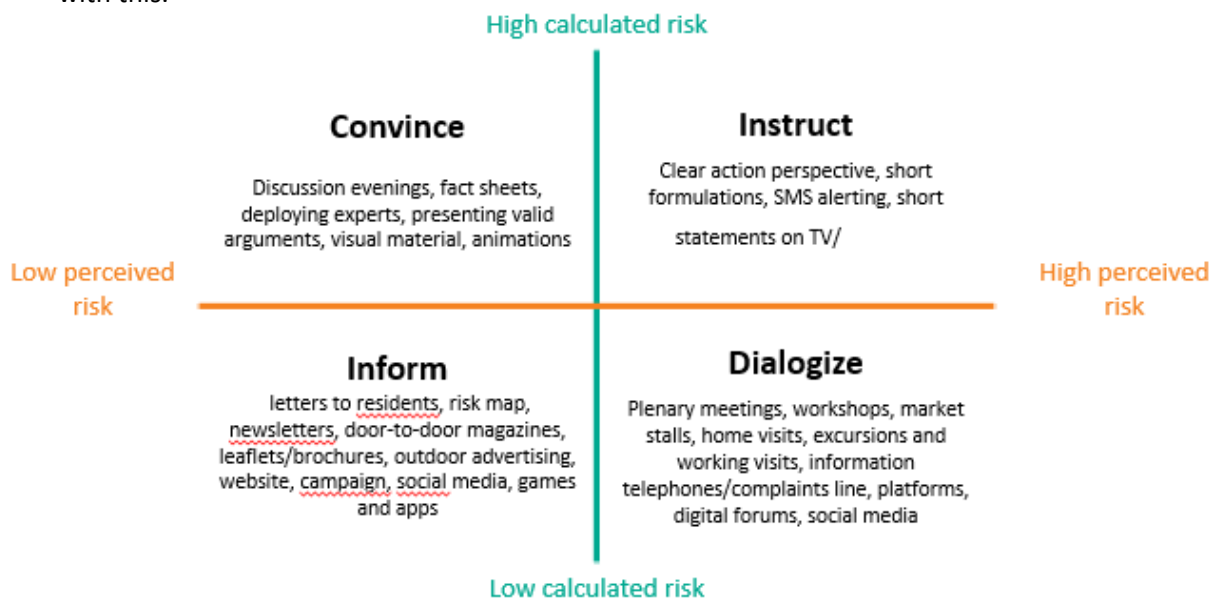


Figure 6: (Risk) communication intersection: means of communication and channels based on polite and calculated risk and communication strategy.

Based on: Elsmann-Domburg, M., van Brederode, N., van Greuningen-Willemsen, E., Hall, E., Jans, H., Leenders, H., & Woudenberg, F. (2006). GGD guideline - Risk communication.

- ▼ In practice, you will usually opt for a **mix of communication tools**.
- ▼ Think about the chosen means: are they the **most effective** for achieving the objectives? Do they take into account the factors surrounding risk perception?
- ▼ If you want to reach multiple target groups, you can create an **overview** of the most suitable communication tools for each target group, e.g. via a target group/resources matrix:

Target audience	Residents' evening	Newsletter	Personal visit	Press release	Flyer	Website	Door-to-door magazine	Discussie-platform	(mini-) symposium	
Internal stakeholders (colleagues, municipal administration, etc.)										
Residents (on location, tenants/owners, with/without children, ...)										
Civil society groups (nature and environmental organisations, etc.)										
Intermediary groups (general practitioners, district councils, ...)										
Knowledge institutions (VITO, RIVM, etc.)										
Entrepreneurs										
Project developers/brokers										
Recreation (sports and leisure activities, ...)										
Press (newspapers, radio, TV, ...)										
Other (schools, hospitals, ...)										

Source: Elsmann-Domburg, M., van Brederode, N., van Greuningen-Willemsen, E., Hall, E., Jans, H., Leenders, H., & Woudenberg, F. (2006). GGD guideline - Risk communication.

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STEP 4 – DRAFTING AND EVALUATING COMMUNICATION MATERIALS

"Developing (and reviewing) the communication materials (regardless of the format or distribution channel)"

To prepare/evaluate communication materials, we use the **CDC Clear Communication Index**, a tool that identifies key communication characteristics to promote the clarity and comprehensibility of messages/materials. The index assesses communication materials on the basis of **seven different elements** (A-G in tables below). They apply both to large-scale, well-prepared high-risk communications and to high-risk communications of a more limited scope (e.g. e-mail correspondence or telephone calls with individual citizens).

➤ CDC Clear Communication Index

➤ Inspiration guide

These seven elements are assessed on the basis of a number of questions. For short and verbal communication materials, a number of questions may be less important or not applicable. These are indicated by *. Think of Facebook messages, Twitter messages, scripts for podcasts, infographics, responses from call centers, ...

A. Key message (inspiration guide §4.6.1)		
Ask	Score = 1	Score = 0
1. Did you clearly state one key message somewhere? <i>If no: questions 2 to 4 also no</i>	Yes	No
2. Is your core message at the top/at the beginning?	Yes	No
3. Is the core message emphasized with visual accents? * <i>Through font, colour, shape, lines, arrows, headings, ...</i>	Yes	No
4. Is the core message supported by images? * <i>If image does not have a label/caption, the answer is no</i>	Yes	No
5. Does the material contain one or more calls to action and action perspectives for the target group?	Yes	No
B. Language use (inspiration guide §4.6.2)		
Ask	Score = 1	Score = 0
6. Do you actively write or speak? <i>Do you use the active form in both the core message and the action perspective? (use colloquialism)</i> <i>If you answered no to questions 1 or 5, the answer is no</i>	Yes	No
7. Do you avoid professional jargon and use simple language? <i>Do you use words that your target audience understands/uses? Do you explain abbreviations?</i>	Yes	No
C. Information design (inspiration guide §4.6.3)		
Ask	Score = 1	Score = 0
8. Do you use bullet points or numbered lists? *	Yes	No
9. Are you using enough blank lines/paragraphs and headings? * <i>If your paragraph contains more than one idea or the headings do not match the paragraph, the answer is no</i>	Yes	No
10. Does the most important information come first? <i>Is the most important information your target audience needs summarized in the first paragraph or paragraph?</i>	Yes	No
D. Scientific insights (inspiration guide §4.6.4)		
Ask	Score = 1	Score = 0
11. Will you explain the state of affairs in terms of research? <i>Does the material explain what is known and what is not (what the uncertainties are)?</i>	Yes	No
Score A t/m D = __/11		
<i>Elements A to D are the core elements, they apply to all materials. The elements (E, F, G) that follow do not necessarily apply to all materials. In risk communication, almost all elements will always be present. On page 14, the total score across all elements (A to G) is calculated and evaluated.</i>		

Uncertainties about risks

It is always a consideration to what extent you should communicate uncertainties. It is true that it is always better to acknowledge uncertainties than to claim that you know more than is the case. In this case, you can cite what is being done to reduce the uncertainties.

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E. Action perspective and behavioural recommendations (inspiration guide §4.6.5)

Ask	Score = 1	Score = 0
12. Are you asking your reader to do something? Does the material contain one or more behavioural recommendations for the audience? <i>If no: STOP, do not score element E and continue with element F (question 15)</i>	Yes	No = N/A
13. Do you explain why it is important that people do this? <i>In words, not just in numbers</i>	Yes	No
14. Does the behavioural recommendation include specific instructions on how to carry out the behaviour? * <i>Possibly step-by-step</i>	Yes	No
Score E = __/3		

Drafting health-promoting messages

The document "Engaging and persuasive communication in health promotion" by the Flemish Institute for Healthy Living can help you apply persuasive communication techniques.

➤ Engaging and persuasive communication in health promotion

F. Figures (inspiration guide §4.6.6)		
Ask	Score = 1	Score = 0
15. Do you use numbers that the reader uses and understands? <i>If you do not use numbers, element F does not apply and you do not have to score it, go to question 18</i>	Yes	No
16. Explain what these numbers mean? * <i>Give context to your numbers</i>	Yes	No
17. Does your reader still have to make a calculation themselves?	No	Yes
Score F = __/3		

G. Risks (inspiration guide §4.6.7)		
Ask	Score = 1	Score = 0
18. Do you explain the nature of the risk (e.g. individual versus population, short versus long term, ..)? <i>If you don't give an explanation, the answer is no</i>	Yes	No
19. If you use relative numbers, do you also explain what this means? <i>It is best to use a combination of numbers, words and images to explain risks</i>	Yes	No
20. Do you explain the benefits of the action you are asking for (part E)? <i>Does the material address both the risks and benefits of the recommended behavior? (this is related to the risk perception)</i>	Yes	No
Score G = __/3		

Comparing risks

When comparing risks, it is important that you have the risk perception of your target group in mind. For example, it is best not to compare involuntarily undergone risks with voluntarily undergone risks, not to compare risks of activities with a benefit with risks of activities without a benefit, ...

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THE TOTAL SCORE CALCULATION

- ▼ **Part 1:** the total number of points earned by the material (the counters)
 $A + t/m + D + E + F + G = XX$
- ▼ **Part 2:** the total number of points the material can earn (the denominators)
 $A + t/m + D + E + F + G = YY$
 - The maximum possible number of points for **online messages, texts of two paragraphs or less, scripts for audio recordings and prepared answers** = 11, 12 or 13 depending on the number of items included in part D
 - Maximum possible points for **infographics** = 10, 11, or 12, depending on the number of items scored in Part D
 - Maximum possible points for **messages of 1-3 sentences** = 8
- ▼ **Part 3:** dividing the total numerator by the total denominator and multiplying by 100 to **obtain the** total score
 $XX/YY \cdot 100 = ___$
- ▼ **Part 4 Interpretation** of the score
 - **If the total score equals 90 or higher**
Excellent! You have tackled most of the items making materials easy to understand and use.
 - **If the total score is equal to 89 or lower**
Note the items that scored 0 points. Use the descriptions and examples in the inspiration guide and practical guide to improve the material. You can use the Index as many times as you need to revise the material to get a score of 90 or higher.

STEP 5 – EVALUATION

"The evaluation of the effects of communication is also important: has the goal been achieved?"

Document the lessons learned as inspiration for the next case and for others. You can evaluate whether your communication objective has been achieved in several ways, namely:

- ▼ Questioning the **person involved/target group**
- ▼ research into **reach, reception and appreciation** of the message and/or means of communication
- ▼ Investigation of the effects on the set **goals** (step 1c)
- ▼ evaluating **communication materials** (see also step 4)

➤ RE-AIM Checklist

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