Foreword

An important element of the framework of controls for the major accident hazards of certain industrial activities established by Directive 82/501 EEC\(^1\) is the provision of information on safety measures and on the correct behaviour to adopt in the case of a major accident to persons (including the public) liable to be affected by such an accident.

This communication with the public was strengthened by Directive 88/610/EEC\(^2\) which, *inter alia*, added an Annex (Annex VII) to Directive 82/501/EEC setting out the items of information that should be communicated to the public.

Council Resolution of 16 October 1989 on guidelines to reduce technological and natural hazards\(^3\) called on the Commission to draft a practical guide to facilitate implementation of the new provisions introduced by Directive 88/610 EEC.

The Commission invited the Joint Research Centre to develop these guidelines. The results are set out in this publication. In carrying out this work Ispra reviewed relevant research on the topic. This revealed that the means of communicating with the public is strongly determined by local cultural mores. The guidelines thus concentrate on the content of the information that should be communicated, providing further and better particulars about the various elements contained in Annex VII of Directive 82/501/EEC.

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\(^1\) OJ No L 230, 5.8.1982, p. 1  
\(^2\) OJ No L 336, 7.12.1988, p. 14  
\(^3\) OJ No C 273, 26.10.1989, p. 1
Summary

These are general guidelines for the content of technical information to be provided to the public under the specifications of Annex VII, so that the Competent Authorities in the Member States can have a uniform standard for their presentations.

The relevant publications at the Community Documentation Centre on Industrial Risk (CDCIR, JRC-Ispra), with particular regard to materials produced within the Member States have been examined, and interviews conducted with those having personal experience in the planning and execution of information campaigns. These were compared to the standards enunciated in Annex VII.

An information strategy is proposed which consists of two tiers of information, the first technical (as specified in Annex VII) and the second pragmatic (what is actively communicated). This publication will concentrate on the first tier by providing guidelines which can be generally implemented. Therefore it will concentrate on the technical content of Annex VII to be communicated to the public in application of Article 8(1). For each of the items of Annex VII a standard set of headings for information is proposed.
Background


The public information requirements have been extended by the second amendment to the Directive (88/610/EEC, Official Journal of the European Communities L336, 7 December 1988). The amended version of the previous Article 8(1) states that

“Member States shall ensure that information on safety measures and on the correct behaviour to adopt in the case of an accident is supplied in an appropriate manner, and without their having to request it, to persons liable to be affected by a major accident originating in a notified industrial activity within the meaning of Article 5. The information should be repeated and updated at appropriate intervals. It shall also be made publicly available.

Such information shall contain that laid down in Annex VII”.

Annex VII to the amended Directive contains a detailed list of the items of information to be provided. The information required in the Annex is a necessary but not sufficient step in the active communication process implied in Article 8. If the information is to be used for the management of emergencies a necessary further step in the communication process is to synthesise the information and transform it into a limited set of operational instructions to be acted on in the case of such an event. These have to be phrased in a language easily understood and retained by the public. In this way two aspects of the communication process are accomplished: the first is the availability of all the relevant information; the second is the involvement of the public in the development of methods for coping with emergencies.

Despite the amendments, the content of the information to be conveyed is still a matter of discussion, at least with regard to some issues. Some points of Annex VII to directive 88/610/EEC refer to information which may not be fully available. For example, there may not yet be safety reports presented by the manufacturer and evaluated by the competent authorities. Or the information may be available, but is presented in very technical terms which are not easily communicated to the public. Or else (and this is the most problematic case) the information to be conveyed may be uncertain in itself, as in the case of the determination of the population at risk or of appropriate emergency behaviour.

Annex VII constitutes a fundamental set of pointers, but by itself it cannot resolve the uncertainty about the content of the information to be provided. Because the situation to be prepared for is itself so uncertain, it would be unwise to try to attempt a complete specification of it. The items listed in Annex VII are to be taken as “basic guidelines” for
communication whose full meaning is not completely determined. It could even be planned for regular updating as more knowledge is obtained through the process of practical application.

In a previous study by B. Wynne sponsored by DGXI on the implementation of Article 8(1) of the Directive an analytical distinction is proposed among types of information to the public related to risks of industrial activities. The first two are preventive (i.e. provided before the hypothetical accident), and the last one refers to the aftermath of an accident. The different types of information are defined by Wynne as follows:

- **pre-pre information**: concerning measures to prevent accidents.
- **pre-post information**: concerning the behaviour to adopt after an accident has happened.
- **post-post information**: provided after the occurrence of an accident.

These definitions are based on the relationship between the message and the event, in relation to the time of emission and to its contents about the event. If this system is used, the last sort of information could be further analysed by content, as,

- information concerning the accident (i.e. what has happened), and
- information concerning the emergency behaviour (i.e. what to do).

Article 8, being preventive legislation, clearly relates to pre-pre and pre-post information. In this sense it refers to hypothetical (although possible) events and has the specific aim of limiting their negative consequences on the population and the environment, should they actually happen. Therefore, communication should be based on a precautionary principle including a wide variety of credible accident scenarios and appropriate measures.

Several surveys have attempted to assess the effectiveness of the information by gauging its retention by the public. Their results indicate a low rate of retention, and hence a reduced effectiveness of the information campaigns. However, the effectiveness of pre-post information can be properly evaluated only after it has been used in a real emergency situation.
A Two-tier Information Strategy

On the basis of the previous analysis, it is possible to suggest a two-tier strategy of information to the public.

- **Technical**, consists of guidelines for the full technical content as specified in Annex VII; it can be of a general character and standardised in all Member States.

- **Pragmatic**, consists of a set of recommendations, relating to the actual communication to the public in relation to specific sites; it is contextual, and must be appropriate to the local circumstances.

The need to process the information required by Annex VII for the purpose of communication with the public is illustrated by the following example. Item e of the Annex establishes the communication of “the common names or ... the generic names or the general danger classification of the substances and preparations involved on the site which could give rise to a major accident, with and indication of their principal dangerous characteristics”. This information is useful to those with responsibilities in the management of emergencies, and those of the public who wish to have a complete knowledge of the situation. It also helps to build a relationship of trust among all those concerned. But in some cases, for example when sites are composed of multiple-type installations, point e by itself would have the complexity and size of a technical book.

Technical guidelines and pragmatic recommendations might sometimes be in conflict. What is general advice from a technical perspective might not be feasible in practice. For example, part of standard information regarding a hypothetical accident is the instruction to stay indoors. Although this is simple in its message and in its desired behaviour, for its effectiveness it actually presupposes several quite specialised physical and cultural conditions, such as;

- presence of a command centre and media to deliver messages (alarm systems, battery-operated radios, etc);
- existence of facilities for temporary accommodation of the population at risk including non-residents;
- adequacy of such facilities as safe shelter during the emergency;
- capability of all relevant buildings to be made sufficiently protected against the penetration of toxic gases;
- pre-designated responsible persons for implementing the immediate safety measures;
- knowledge about the readiness of the population at risk to stay indoors for an unspecified period of time.

In the absence of such conditions, a simple instruction derived from the technical guidelines may well prove impossible to enforce, or be counterproductive. Such a situation is frequently found in developing countries, but it might also be relevant within the Community, particularly in deprived or marginal areas, and also in those with special...
climatic features. Thus the task of providing appropriate information must sometimes take account of the broader societal context. From this example we can see that the distinction between technical and pragmatic information is not one of complexity; even a simple instruction to stay indoors, widely diffused in easy-to-read media, is “technical” if it is derived from standard analyses without close regard to specific local conditions. The second tier, of pragmatic information, requires a higher level of detailed local knowledge and two-way communication as well.

Pragmatic recommendations are thus liable to be affected by local conditions and the socio-cultural context. They will also reflect the administrative structures of the Member States, which assign management responsibilities (of the communication and of the emergency) to different bodies or individuals. They should also offer guidance on communication, including appropriate sources (those with credibility), media (e.g., radio), channels (informal or institutional), audiences and types of message. Where a local population has extensive experience of a particular sort of natural hazard (as earthquakes or floods), its survival skills and helping networks should be respected and utilised.

The present publication will concentrate on the first tier by providing guidelines which can be generally implemented. Therefore it will be focused on the technical content of Annex VII to be communicated to the public in application of Article 8(1).
Annex VII and the “Information to the Public” materials

Materials relating to communication with the public available at the CDCIR have been examined with the purpose of finding examples of “good practice” in the provision of information, along with examples of information campaigns in different Member States. Such materials include a variety of brochures and leaflets, workshop and case-study reports, and handbooks prepared by authorities, industry and independent institutions. In addition, further materials have been obtained from interviews with those having personal experience in the planning and execution of information campaigns.

The Materials

There are many guidance notes from authorities, international bodies and industry which can be used to determine “who” should communicate “what”, “to whom” and “how”. These refer to the interpretation of several aspects of the Seveso Directive and its requirements and to “good practice” in the communication of risk. They provide different criteria for establishing the relevant information required (e.g. effects of major accidents and safety zone) or illustrate in detail different aspects of the communication process in the context of the Seveso Directive (e.g. transmitters, receivers and content of the message).

A number of remarks can be made about the material produced for distribution to the public in relation to the guidelines enunciated in Annex VII.

There is a great variety of channels and means which are combined to convey information of diverse sorts. They include the distribution of materials door to door or by mail, the training of qualified informers (e.g. teachers), the preparation of glossy brochures, newspaper special sections or video recordings, public meetings, and the organization of open days, in which the installations can be visited. Some information that is not broadly diffused in these ways can be found in material of more restricted circulation, such as booklets for selected audiences (e.g., students and teachers). These are usually not site-specific.

The information provided to the public may relate to a single establishment, a number of establishments of the same concern, or a group of companies located in the same area. Small but significant details may be lacking; often the name of the company is provided but not the site address (item a of Annex VII); and in many cases it is not clear who is providing the information (item b).

Reference to the Seveso regulation is almost everywhere present, either with a specific mention of the European Community Directive or relevant national legislation, or else in general terms of industrial risk management regulation (item c). Usually this information is given together with that concerning safety measures and on-site emergency plans (item i). The explanation of the activity undertaken is often given only as simple names, for example, petrochemical, gas, refinery or storage (item d). The full requirement of item e is
hardly ever met. When they are mentioned, the substances are grouped by chemical or risk features.

A common feature of the material for large scale distribution is the absence of information about possible environmental effects, although this type of information is explicitly required under item f. As to possible effects on the population (also a requirement of item f) the information, when provided, refers to the immediate consequences ignoring the possibility of fatalities or of long term effects.

The instructions to be followed by the population at risk in the case of an accident (items g and h) are similar in most of the literature, and presented in a brief and generalised style. The usual instruction is to stay indoors, not using the telephone or igniting any flames; and to await further instructions (in general to be transmitted by radio). Such messages presuppose a certain type of accident, typically involving a toxic release, ignoring other scenarios that might call for an immediate evacuation. Moreover, the possibility of a catastrophic accident is never mentioned.

Reference to off-site emergency plans (item j) and to where further relevant information can be obtained (item k) is usually absent, or at best implicit.

**Observations**

A close collaboration between authorities and industry is widely seen as necessary for the success of the communication campaign. This requirement is general to all Member States despite the differences in the attribution of competence in the task of information to the public. A common complaint of industry is that there are a number of authorities whose responsibilities sometimes overlap; this makes collaboration much more difficult and time-consuming.

Although it is not required by the Directive, information might be provided about incidents in the site which could be detected by the community outside the establishment. This will help to foster trust and enhance the effectiveness in communication.

There is still great uncertainty in the interpretation of the items of Annex VII, and disparity in the fulfilment of the requirement for public information. Nevertheless, the delays in implementation are more often the result of genuine perplexity about the “what”, “how” and “to whom” to communicate, than of reluctance to communicate. There is a widespread agreement on the general benefits of a policy of communication with the public, not only in terms of trust and credibility but also in cost-effectiveness of industrial operations and institutional processes.

**Preparedness**

One feature of the widely diffused instructions calls for special comment. In all cases of information for the general public, people were instructed to perform various tasks outside their normal routine. These might involve sealing doors and windows immediately on hearing the warning, keeping a radio tuned on, and remaining indoors for an indefinite time. But in no case in the material studied was the general population instructed to make preparations for such an emergency. Unless people took a special initiative in advance, they
would find themselves unable to comply with instructions, through lack of (e.g.) sealing tape or fresh batteries for a radio. Similarly, there was no mention of the usefulness of knowing in advance how to turn off (e.g.) electricity or gas or water at their entrance points to dwellings. The practical effectiveness of instructions for emergency behaviour would be seriously impaired in the absence of such preparedness.

It is unsafe to assume that most people would infer on reading such instructions that they should (e.g.) immediately buy sealing tape and then keep it in a convenient place. The dangers from such lack of provision are not merely those of people being unnecessarily exposed to the possible negative consequences of an accident. In addition, there is the possibility of widespread personal distress, and consequent inappropriate social behaviour, when people discover at the beginning of the emergency that they are not equipped to take the actions that are necessary for their safety.

Similarly, the instructions are all based on the implicit assumption that both the population and the emergency personnel will be able to act according to plan. However, there is a rich literature in the study of disasters which shows that this is frequently not the case. Therefore, instructions should also take into account the known likely ways in which people and organizations behave in such conditions. In particular, information seeking is a very strong tendency, and information overload a very real possibility. It should be part of every emergency plan to cater for drastically increased demands for information by the population and organizations.
Guidelines for communication

Annex VII: General Guidelines

In the previous review of the available material we have remarked on the uncertainty regarding several aspects of the requirements for technical information as specified in Annex VII. These include, for example, the determination of the radius of the safety zone, the level of detail in the enumeration of the hazardous substances, and the specification of the potential effects on the population and the environment. This technical uncertainty is compounded by the variability among the legislative frameworks in Member States in relation to planning and to Civil Protection policies and administrative structures. Such uncertainty and variability are an integral part of the communication process concerning major accident hazards, and cannot be ignored or dismissed.

The acknowledgement of uncertainty by experts should not be seen as a weakness or as a lack of professional knowledge or skill but as a responsible approach to risk management, including evaluation, prevention and response. Indeed, it provides an opportunity for the development of the relationships and networks necessary for effective communication.

The presence of uncertainty or variability should not be an obstacle to the provision of information to the public.

The provision of information is already covered by regulations in some Member States. These may determine “who should inform” and also “who should be informed”. This will be a technical question, depending on (e.g.) distance of residence from the hazard site. In addition, the interpretation of requirements for technical information may be determined by national or regional bodies.

Technical information should therefore include the regulations and the bodies determining its interpretation, and also the criteria and methods that are used.

There may be a number of persons or groups with a legitimate interest in the issue at hand because of their institutional role, their professional activity, or because they live in the affected area or they belong to a special interest group. Any of such “stakeholders”, on the basis of their particular knowledge, can start the process of communication by suggesting a certain interpretation of the contents of Annex VII. Such an interpretation of the technical information requirements is not a scientific “fact”, but it must relate genuinely to the hazard situation if it is to be taken seriously. It may be the subject of disagreement and even conflict when other stakeholders present alternative explanations.

Such debates over interpretations are a normal part of the regulatory process, and the content of the information as communicated will be determined by how they are resolved.

A very likely situation in practice is one where industry, authorities and concerned citizen groups initially present different criteria for the determination of the public information zone. These criteria may refer to the hypothesised accident (the most likely or the most catastrophic), to geographical and social features (natural boundaries, typology of
dwellings, community structure, cultural links), to economic considerations (possible
devaluation of property in the safety zone) or environmental concerns (specially vulnerable
areas). A proper resolution of a negotiation is one where consensus is reached by means of
a process in which all the relevant stakeholders are involved. They should make explicit the
criteria on which their interpretation are based, and agree on the need of mutual
recognition, on a common goal and on the negotiation procedures.

Negotiations among stakeholders should achieve a consensual interpretation of the
technical information.

The same process applies to the general requirement of Article 8(1) about the repetition and
updating at “appropriate intervals” of the “information on safety measures and on the
correct behaviour to adopt in the case of an accident”. The determination of the
“appropriate intervals” is a pragmatic process and cannot be established uniformly by
means of general criteria.

Contextual circumstances are the basis for establishing the frequency of the update
and repetition of the information.

This analysis of the communication requisites and the general guidelines resulting from it
are within the spirit of the recommendations of the amended version of Article 8(1). The
requirement to provide information “without their having to request it” is a clear statement
of a “right to know”. These general guidelines indicate ways in which this right can be
exercised effectively, concerning the alternative interpretations which are likely to arise in
practice.

The amended version of Article 8(1), with the eleven items of Annex VII, constitute a
“right to know” charter in connection with major hazards. Its text should therefore be
fully and actively communicated through the media to all the population.

Recalling the previously defined two-tier strategy,

Technical information (i.e. as specified in Annex VII), should be made freely available
to the public. Its presence and location should be widely advertised.

Pragmatic information (i.e. what is actively communicated) should be based on the
technical information, taking into account local circumstances and effective
communication principles.
Annex VII: Detailed Guidelines

In this section each item of Annex VII will be considered in order to provide guidelines for technical information to be made available to the

The guidelines for communication will provide headings for fuller specification of the information to be provided. These are based on a synthesis of the best practice exemplified in the materials in the collection of the CDCIR, JRC-Ispra, and also supplemented by interviews.

Items of information to be communicated to the public in application of Article 8(1).

(a) Name of company and address of site.
(b) Identification, by position held, of the person giving the information.
(c) Confirmation that the site is subject to the regulations and/or administrative provisions implementing the Directive and that the notification referred to in Article 5 or at least the declaration provided for in Article 9(3) has been submitted to the competent authorities.
(d) An explanation in simple terms of the activity undertaken on the site.
(e) The common names or, in the case of storage covered by Part II of Annex II, the generic names or the general danger classification of the substances and preparations involved on site which could give rise to a major accident, with an indication of their principal dangerous characteristics.
(i) General information relating to the nature of the major-accident hazards, including their potential effects on the population and the environment.
(g) Adequate information on how the population concerned will be warned and kept informed in the event of an accident.
(h) Adequate information of the actions the population concerned should take, and on the behaviour they should adopt, in the event of an accident.
(i) Confirmation that the company is required to make adequate arrangements on site, including liaison with the emergency services, to deal with accidents and to minimise their effects.
(j) A reference to off-site emergency plan drawn up to cope with any off-site effects from an accident. This should include advice to cooperate with any instructions or requests from the emergency services at the time of an accident.
(k) Details of where further relevant information can be obtained, subject to the requirements of confidentiality laid down in national legislation.
**Item a** Name of company and address of site.

• The name and the address of the establishment.
• The name and address by which the establishment is commonly known locally, if different from the above.
• The name and registered address of parent companies, national or multinational.

**Item b** Identification, by position held, of the person giving the information.

• The name(s) and institutional position of the person(s) giving the technical information
• If the national or regional legislation determines who has to give the information, this should be specified.

**Item c** Confirmation that the site is subject to the regulations and/or administrative provisions implementing the Directive and that the notification referred to in Article 5 or at least the declaration provided for in Article 9(3) has been submitted to the competent authorities.

• Acknowledgement that the establishment is subject to the EEC Directive 82/501 and Amendments 87/216 and 88/610, and that the manufacturer has conformed to their requirements about notification or declaration to the competent authority.
• The relevant national and/or regional legislation implementing the Directives should be mentioned, and the competent authority(ies) identified.
• Listing of the bodies, regional, national and Community, to which accident reports must be made.
• Listing of the bodies, regional, national and Community, from which accident reports can be obtained.

**Item d** An explanation in simple terms of the activity undertaken on the site.

• A description of the activities undertaken, including processes, storage and internal transportation. “Simple” should not be understood as contrary to “technical”, but rather as avoiding useless complication. It is not enough to provide simple names of the activity (e.g. petrochemical, refinery, etc.).
• A sketch diagram of the site, describing the principal activities, could also be useful.
**Item e** The common names or, in the case of storage covered by Part II of Annex II, the generic names or the general danger classification of the substances and preparations involved on site which could give rise to a major accident, with an indication of their principal dangerous characteristics.

- The common names of all the substances and preparations which could give rise to a major accident, either (1) alone or (2) interacting with other substances and preparations, or (3) originating in activities undertaken in the site.
- The principal dangerous characteristics of the substances and preparations listed.
- In the case of storage covered by part II of Annex, the substances and preparations involved could be described as: very toxic, toxic, oxidising or explosive, highly flammable and extremely flammable.
- The second “or” should be interpreted inclusively for the purpose of technical information. Therefore both generic names and danger classification should be made available.
- In every case, sources for names, classifications and dangerous characteristics should be cited.

**Item f** General information relating to the nature of the major accident hazards, including their potential effects on the population and the environment.

- Information about the major accident hazards of the activities undertaken in the establishment.
- Potential effects to the population. All the potential effects should be described to facilitate the preparation and operation of the emergency services. It is not enough to inform about the most likely accident.
- Potential effects on the environment. All the potential effects should be described to facilitate the preparation and operation of the emergency services. It is not enough to inform about the most likely accident.
- In connection with both population and environment, the sources and methods for estimating potential effects should be specified.

**Item g** Adequate information on how the population concerned will be warned and kept informed in the event of an accident.

- Who is responsible or entitled to activate the warning and to communicate further instructions.
- What means are available in terms of warning systems, sirens and other devices, radio and telephone and other media, as police loudspeakers. This information should be specific, including types of sirens and signal, reserved radio frequencies and special telephone numbers.
• What testing procedures and drills are envisaged to ensure proper performance and training of the relevant personnel in information provision.

• What testing procedures and drills are envisaged to train the public in the recognition of the signals and the understanding of the messages.

• What channels and means have been established to identify and to respond to the possible communication needs of the population, and avoiding overloading of networks.

Item h Adequate information of the actions the population concerned should take and on the behaviour they should adopt, in the event of an accident.

Although this information should be kept as simple as possible to be understood and retained, it should be based on the consideration of several accident scenarios, not only the most probable one.

(For each scenario, all the likely and desired behaviours should be identified, the necessary state of preparedness of the population should be identified and information needs should be identified, so that preparations can be made).

Item i Confirmation that the company is required to make adequate arrangements on site, including liaison with the emergency services, to deal with accidents and to minimise their effects.

• This confirmation should be supported by a person identified by position in the company.

• The position of the person responsible for on-site arrangements should be given.

• The position of the person responsible for liaison with the emergency services should be given.

• The relevant emergency services with whom liaison has been established should be identified.

• Although not explicitly required, it would be helpful to provide a sketch of the arrangements on site, to deal with accidents and minimise their effects.

Item j A reference to off-site emergency plan drawn up to cope with any off-site effects from an accident. This should include advice to cooperate with any instructions or requests from the emergency services at the time of an accident.

• The position of the person(s) responsible for off-site emergency plan should be given.

• The position of the person(s) responsible for liaison with the emergency services should be given.

• The relevant emergency services with whom liaison has been established should be identified.
• Although not explicitly required, the reference could usefully provide a description of the arrangements to deal with accidents and minimise their off-site effects, as well as on how the different bodies involved in the emergency keep each other informed.

**Item k** Details of where further relevant information can be obtained, subject to the requirements of confidentiality laid down in national legislation.

• The location of the further relevant information, who is entitled to obtain it, and at what cost, should be specified.

• “Further relevant information” refers to information that has not already been specified as required under Annex VII.
Bibliography

A regular Bulletin is published by the CDCIR-JRC, Ispra, providing information on documents available there. The following list of materials is not to be considered exhaustive. It concentrates on certain illustrative items, such as handbooks, reports and guidance notes. It also lists some important works in the field of disaster management, accident case-studies and reports on EEC policy on major accident hazards.


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