



Consejo
Colombiano de
Seguridad

TEMAS DE DOCENCIA
DIRECCION DE EDUCACION Y DESARROLLO

DED/1218690

CODIGO

S EMINARIO APELL

56/171

PROVISION OF INFORMATION TO THE PUBLIC

Prepared in conjunction with the Workshop
on the Provision of Information to the Public and on the Role
of Workers in Accident Prevention and Response

11th-14th September 1989

Hosted by Sweden

Sponsored by the OECD ad hoc Group of Experts
on Accidents Involving Hazardous Substances

REVISED DISCUSSION DOCUMENT

-
- * This document was prepared by a consultant to the OECD, Dr. John Kososki, to be used as a basis for discussion at the Workshop. It was subsequently revised to reflect comments made, and conclusions reached, at the Workshop. Similar documents are being prepared in conjunction with the related Workshops and these will be used in the preparation, in the future, of an OECD guidance document on prevention of, and response to, accidents involving hazardous substances. This document does not necessarily reflect the views of the OECD or its Member countries.



DED / 1218690

CODIGO

SEMINARIO APELL

07 / 171

PROVISION OF INFORMATION TO THE PUBLIC

INTRODUCTION

The OECD, through its Environment Committee, has undertaken a project to improve prevention of, and response to, accidents involving hazardous substances. This was in response to a call by Ministers and other high level officials at the OECD Conference on Accidents Involving Hazardous Substances held on February 1988. The body responsible for supervising the work on this project is the OECD ad hoc Group of Experts on Accidents Involving Hazardous Substances.

One aspect of this project is the development of guidance related to accident prevention and response. This will include principles concerning investments and aid programmes with respect to hazardous installations in non-OECD countries (the guidance will hereinafter be referred to as the "guidance document").

As part of the project, two OECD Council Acts have been adopted, which are binding on OECD Member countries. These are the "Decision-Recommendation concerning Provision of Information to the Public and Public Participation in Decision-Making Processes Related to the Prevention of, and Response to, Accidents Involving Hazardous Substances" [C(88)84(Final)]; and the "Decision on the Exchange of Information concerning Accidents Capable of Causing Transfrontier Damage" [C(88)84(Final)]. These two Council Acts, along with the conclusions of the OECD High Level Conference, are available in a Publication of the OECD entitled Accidents Involving Hazardous Substances, Environment Monograph No. 24. In addition, in 1989 Council adopted a "Recommendation on the Application of the Polluter-Pays Principle to Accidental Pollution".

The project also includes a number of activities regarding the exchange of information and experience and the analysis of specific issues of mutual concern. As part of this work, four OECD Workshops are being held related to the issue of accident prevention and response. These address: management's role in the prevention of industrial accidents; the role of public authorities with respect to prevention; the role of labour and provision of information to the public; and emergency preparedness and response. It was recognised that in light of the expertise of participants, these Workshops provide an opportunity not only for a direct exchange of information but also for obtaining input into the development of the guidance document. Thus, the drafting of the guidance document will take into account the conclusions of the Workshops.

This document was prepared in conjunction with the second Workshop and deals with provision of information to the public and, in particular, practical guidance for implementing the Council Decisions on this subject.



DED/1218690

CODIGO

SEMINARIO APELL

56/171

The preparation of guidance dealing with the provision of information to the public will be substantially circumscribed by the two existing Council Acts adopted in July 1988, which are attached as Annexes I and II. The first Decision establishes the general principle that members of the public have a right to, as well as a need for, information about neighbouring installations containing hazardous substances and should be allowed to make its views known by participating in public authority decision-making regarding such installations. The Act indicates that the potentially affected public should be supplied, without request, information on the general nature of the installation containing hazardous substances, the possible effects of an accident at such an installation, and the appropriate behaviour and safety measures in the event an accident should occur. Regarding the public's right to information, the Act indicates that additional information should be made accessible, upon request, to afford the inquiring individual fuller understanding of the nature of the risks* arising from hazardous substances at these installations and the ability to participate effectively in decision-making regarding such installations and in emergency planning.

The second Council Decision establishes the principle of information exchange between common border countries having a hazardous installation situation that could cause transfrontier damage if an accident were to occur. This Decision indicates that there should exist bilateral information exchange between public officials of the countries regarding the hazard, the affected population, emergency preparedness, and response. Officials in the "exposed country" should provide to all potentially affected persons within its jurisdiction such information as received from a country concerning an extant or planned facility containing hazardous substances according to the Guiding Principles to the first Decision.

These two Decisions provided the foundation upon which this paper was developed. As such, they were taken as requirements to built upon to facilitate discussions at the Stockholm Workshop concerning their practical implementation in Member countries. It is to this end that the following discussion document is oriented.

Thus, remaining sections of this paper deal with how public officials can fulfill their obligation to ensure that the potentially affected public receive proper communications so that they are adequately informed, involved, alerted, and protected from the risks and effects of accidents involving hazardous substances.

For this document, "risk" is defined as the likelihood of a specified undesired event occurring within a specified period and/or under specified circumstances. This definition embodies considerations for the underlying hazard(s), the probabilities of abnormal occurrences regarding such hazards, and the unfavourable consequences of such occurrences.



D.E.D. / 1418090

CODIGO

SEMINARIO APELL

29 / 171

Although the Council Acts do not make these distinctions, the public's need for information can be considered in four major and distinct stages. First, there is the pre-installation stage, in which the concerns are focused on facility acceptance, location (or siting), use of safe technologies and logistic routes and means. Second, there is the pre-accident stage (that is, assuming the presence of an installation containing hazardous substances), for which the major information concern is oriented towards proper community awareness, preparedness, and response in case of an accident. The third stage occurs at the point of an accident at which time there are two major parts of public communication; first, the rapid and accurate alerting of the threatened community and second, the provision of response information to those potentially affected. The fourth stage occurs following an accident when communication requirements deal with information regarding the recovery and treatment in the community for both intermediate and long-term effects.

The format of this document was designed to parallel and track the Workshop agenda. This approach was chosen in order to facilitate Workshop discussions even though it means that the text does not follow the sequential order of the four stages indicated above. The document at this point is reflective of the Workshop discussion and conclusions as agreed by the participants.

Section B of this document sets out some general considerations; Section C treats the Reactions of the Public to Information about Accidents; Section D deals with Alert and Information to the Public After an Accident; and Section E concludes with Information Concerning Hazardous Installations Prior to an Accident. The four stages previously identified are discussed as follows: Stages One and Two in Section E; and Stages Three and Four in Section D.

GENERAL CONSIDERATIONS

Effective communication is the key to public understanding of the potential adverse affects of possible major accidents at planned or existing installations containing hazardous substances and to ensuring appropriate action by the potentially affected public should an accident occur. Information concerning the risk relating to such installations must be shared openly and actively and to be effective should be correct, clear, credible, comprehensive, and consistent. Failure to communicate in this fashion will inevitably lead to damaging rumours and the emergence of self-appointed "experts" to provide input and comments to the media.

To ensure effective communication, a strategy for an installation or group of installations must be developed to define for all four stages of the communication process the objectives of providing information, what information is to be provided to whom, and how to provide information effectively. The parties who are involved in the development of the communication strategy, in the drafting of the messages, and in the provision of the information should not be limited



D.E.D. / 1218090

CODIGO

SEMINARIO APELL

60 / 171

to "planners"; but should include government officials at different levels, industry (managers, workers and their representatives), media, politicians, health officials, public interest groups, emergency response teams and other experts as well as members of the general public. The strategy must specifically address the particular characteristics of the installations, the potential accidental releases and the communities concerned. Flexibility must be built into the strategy, particularly with respect to providing information at the time of an accident, in order to deal with unexpected occurrences and lack of complete information.

There are seven major steps normally followed in the development of an effective risk communication strategy and programme, namely:

- Assessment of the potential risk situation;
- Identification of target populations;
- Assignment of the communication roles and responsibilities;
- Identification of the media of communication;
- Development of the communication messages;
- Implementation of the communication process; and
- Testing, feedback, and process modification.

The first step, assessment of the situation and its potential risk, is absolutely necessary before any of the other steps can be treated (as they are all dependent upon such assessment). The delineation of the targeted population in small, isolated areas may be straightforward, but in highly urbanised or transient population areas such delineations are not obvious and represent unique problems. The ascribing of roles and responsibilities to public and private officials and other key community leaders in designing the communication process is in turn highly dependent upon the first two steps. The many forms and forums of connecting the communicator and the audience concerning the given risk situation need complete examination in order that the proper (and best) media for communication can be identified. Similarly, the development and then the delivery of the communication messages via the selected media regarding the hazardous situation emanate from each prior step. Testing and feedback is vitally important and needs frequent reflection for the modification and "tuning" of communication to ensure that it is indeed received as intended.

The temporal nature of off-site warehousing installations that provide for the storage of hazardous substances create a difficult and challenging situation relative to the development of communication channels, processes, messages, and involvement with the public. The difficulty arises from the transitory nature of what is contained, how much is stored, who is responsible for informing whom and so forth. It is a premise of the following discussions that communication with



D.E.D / 1216690

CODIGO

SEMINARIO APELL

61/171

the public relative to potential hazardous substance accidents at installations allows for a "two-way" flow of information and therefore, implies that the public will be involved at all four stages in a participatory sense as well as a receiving sense. The communicator's goal, therefore, is not simply to alert and reassure citizens or to help them understand certain rote procedures during an emergency, but to produce an informed public that can participate collaboratively in long-term planning and decision-making, as well as react intelligently and appropriately in the event of an accident. In order to accomplish this goal, the communications must be bi-directional and must be dynamic.

There are other benefits that accrue when the communication process is developed this way. First, the communicators receive the prerequisite feedback as to whether the approaches employed in the dissemination of information regarding risks is, in fact, working. Second, public and company officials will, necessarily, be directed to a more careful introspection of solutions on these matters, which will help refine their approaches in the management of risk. Third, the stature of public and company officials can be easily elevated in the eyes of the engaged public.

Successful communication with the public is based on a multi-source input, is directed at multi-faceted populations and uses a multi-media approach for dissemination of information.

REACTIONS OF THE PUBLIC TO INFORMATION ABOUT ACCIDENTS

In order to properly design and develop a process and programme of risk communication, an understanding of how the public reacts to such information is very important. Such understanding ensures that the communication messages to the targeted audience(s) are digested, understood, retained, and properly acted upon, in particular, to elicit the appropriate actions during a period of emergency. The messages should be clear, vivid, and provide appropriate and comprehensive information without being overwhelming. Special care should be taken not to underestimate the ability of the public to deal with information nor to talk down to the public as generally the public can be expected to follow clear and sensible instructions. The messages should also instill confidence in the leadership of the responsible officials. Additionally, efforts should be made to ensure the target audience do in fact respond appropriately to the messages developed.

Assessment of the public's reaction to information concerning accidents at installations containing hazardous substances is part of the testing and feedback stage of the communication process. This assessment can be done through empirical studies, whereby researchers survey message recipients to see whether the information is having the desired effect (e.g., with respect to pre-accident information, do the recipients understand the nature of the risks, do they remember what to do in the event of an accident, and do they intend to do that or are they likely to take another action?). Such assessments should be made for the various target groups (e.g., the general public, children, teachers, hospital administrators).



D.E.D /
1-18690

CODIGO

SEMINARIO APELL

0-171

Another way to assess potential public reaction to information regarding risk is through the use of general psychological analysis. Such a psychological approach might include the following considerations:

- The risk identified needs to be truly and properly portrayed, for otherwise an "understatement" of the hazard could lead to a casual, unconcerned orientation (resulting in unnecessary adverse consequences) and an "overstatement" could lead to unwarranted concern and fear and even an inappropriate rejection of facility due to public pressure;
- The population potentially affected needs to be carefully delineated (covering those particularly susceptible and sensitive) and the message needs to be targeted so that all those potentially affected have adequate, appropriate information including children, young adults (with children), the aged, the infirmed, and so forth. Variations by culture need to be anticipated in the human reactions to risk communication. Such differences affect the information that should be transmitted, for example, between countries sharing a common border, which may experience a transfrontier accident.
- The message needs to be complete and considered to be reliable, so that it is fully understood and acted upon. In developing the message, it is critical to recognise how the information will be perceived taking into account the needs and stress associated with an emergency situation. For example, an evacuation order may require that parents leave an area without first getting their children from school. Since this is contrary to normal human tendencies, the pre-accident information must convince parents that their children will be well taken care of and that going to the schools will be counter-productive. Empirical results (complementing this psychological consideration) have shown that female parents react differently than male parents in this regard.
- The communication roles and responsibilities are best assigned to the persons who enjoy respect, instill confidence, have the prerequisite knowledge and skill, and are widely available in the community. Due to the technical nature of the topic concerned, certain pre-identified communicators need to be specifically trained to understand how to develop information on risks for the target audiences and to deliver information effectively, particularly in an emergency. Community and company leaders that live near the installations may be more credible than those that, while more knowledgeable, live outside of the "risk zone". Workers at the installation should be given an important role in communication with the general public as they have hands-on knowledge about the installation and the process and therefore can help in communication planning and serve as credible sources of information. They have a strong incentive to ensure the



D.E.D / 1218690

CODIGO

SEMINARIO APELL

63/171

continuing safe operation of the facility and have a vested interest in protecting themselves and their families. Mass media figures, familiar retail trade owners and employees, clergy and neighbourhood leaders are all also ideally suited for assuming a role in the risk communication process.

- Implementation of an effective communication programme requires co-ordinated involvement of a number of relevant parties, such as local response officials, corporate spokespeople, worker representatives, elected officials, community representatives, public authorities at all levels, health officials, technical experts and the media. The duties of these parties should be established in the communication strategy and need to be carefully orchestrated to ensure consistent and comprehensive communication. Effective internal communication within the facility and among the communicators needs to be practiced as it is a prerequisite for effective communication with the public.

These assessments, both statistical and psychological, should be used when designing and implementing communication systems. The final communication system adopted should be continuously reviewed and refined as more is understood about human reactions to such information.

The approaches used for risk communication in developed countries cannot be transferred wholesale to developing countries. To ensure the equivalent quality of the communication (i.e., that information is accurate, comprehensive and understood) differences in social and family structures, religious influences, resources limitations and available technologies must be taken into account.

ALERT AND INFORMATION TO THE PUBLIC AFTER AN ACCIDENT

The communications at and following an accident should be the direct implementation of those planned and practiced responses dealt with during the pre-accident stage (See Section E). The effectiveness of information provided prior to an accident will determine the extent to which the affected population understands the warnings and directions given immediately following an accident and responds appropriately. Since warning and response communication needs to be started immediately following an accident, all necessary resources must be available and systems tested in advance so the potentially affected public is able to recognise the warning signals and information provided. This information should be communicated continuously throughout the emergency, and efforts should be made to check the understanding of messages as they become available. To maintain credibility, the designated spokesperson should admit when information is not available, avoid making promises that cannot be fulfilled, be the first to give bad news and ensure that actions taken are consistent with the messages provided. Credibility can be lost within 24 hours of an accident if information is not forthcoming or is inaccurate and is very difficult to restore, especially when lost during an emergency.



D.E.D. / 1218690

CODIGO

SEMINARIO APELL

64 / 171

The information provided at the time of, and immediately following, an accident must necessarily be adapted and targeted to the situation encountered, requiring rapid decision making and precise implementation. If they have not been planned and practiced, the communications are necessarily reactive and most probably inadequate, possibly resulting in the unnecessary loss of property, health, and/or life. Even under the most carefully planned and implemented scenarios, such loss may still occur, but the potential reduction and possible elimination of serious loss argues forcefully for the pre-planning of communications for those eventualities.

In order to aid communications, the media (representing the prime conduit of information following an accident) should have been involved in the communication process (prior to the accident) and provided with relevant background and information by operators and response officials on emergency preparedness and response. They should also be afforded easy access to those officials with relevant information following an accident.

At the Time of an Accident

There are many variables that may interact at the time of an accident for which there will be a need to adapt the communication message(s) and mean(s). Consequently, the communication programme needs to be very flexible, while allowing for rapid deployment. As an example, the amount of a hazardous release may require different responses and therefore different communications. If the release occurs during the day versus at night, during a work day versus a non-work day, with school in session versus not in session, etc. will require carefully considered but different communication responses for alerting and informing the public. In addition to time-of-day and type-of-day variables, wind directions and speed (for air release accidents) have critical impact on the area most likely affected and best routes for evacuation. Accidents that occur due to or correlated with natural disasters (i.e., flood, utility interruptions, etc.) could have a compound affect in potential risk and also be disruptive to normal communication processes and planned responses.

The fundamental problem of this stage relates to the identification of which of the many communication approaches that could successfully work should be employed in a given situation. To be effective, this decision should be clearly delineated and practiced prior to an accident. Consequently, one of the challenges in the design of a communication strategy for the accident stage has to do with the amount and degree of variability that is built into the delivery process. Clearly, the ability by which the public can and will properly react to such variability in receiving and comprehending information needs to be fed into the design process itself. To minimise confusion during an emergency, the mechanism for obtaining and delivering information should be as clear as possible and use, to the extent practical, known and existing channels. New and emerging technologies can help in dealing with this need for variability (e.g., decision support systems,



DED / 1218090

CODIGO

SEMINARIO APELL

65 / 171

advanced signalling and warning systems, activated routing directions and pre-planned public messages embedded in traffic systems) as well as in some of the more standard approaches (radio broadcast, reserved frequencies and telephone number for information, deployment and distribution of specially protected emergency management personnel).

Communication planners need to consider the type of signalling mechanisms to use, for example, whether to use a single warning/ signalling mechanism to alert the public to an accident or a multi-tone, multi-sound mechanism that provides for inclusion of desired response actions and other information. At a minimum, the pre-established evacuation routes to be used following an accident need to be announced through the preferred communication channels and traffic officials need to be dispersed for routing purposes.

Following an Accident

The communication requirements during the stage following the accident are possibly less critically time dependent (although, there are some situations dealing with highly contaminated food and water that could potentially linger and pose a continuing threat or that necessitate quick emergency treatment relative to an exposure) and, therefore, take on a different nature from those at the accident stage.

Generally, the information needs following an accident involve two major areas. First, the potential long-term chronic health or mental effects (dealing with the various aspects of human, environment and economic suffering) resulting from a very serious accident. In this regard, the following information should be developed for the press to allow the mass media and the community full knowledge of the event:

- What occurred (the name of the chemical released, the amount released, the time and duration of the release, how the material was released);
- Possible chronic or acute health effects and advice about medical attention;
- Emergency shelter and treatment center locations;
- The status of the event (e.g., if evacuation occurred, is it safe to return, any continuing problems, etc.);
- What the public should do to take protective action and avoid further exposure; and
- Where and who to call for additional information.

Specific care should be given to also providing information related to the psychological, social and economic impacts and legal implications of the accident on victims, their families and the community.



D.E.D / 1218690

CODIGO

SEMINARIO APELL

06/171

The information should come from a reliable and credible public spokesperson, who has been designated ahead of time and who has a designated backup in case of unavailability at the time of the accident. This spokesperson should be available to the press and should provide updated information regularly on what the public should do.

Second, the information may need to deal with the potential loss of trust relative to the accident-causing facility and to the responses of both private and public officials having responsibility for accident prevention and/or notification and containment. In order to minimise such potential loss of trust following an accident, explanatory press releases and official letters/write-ups should be available, with follow-up community discussions about:

- What went wrong and how to prevent a recurrence;
- Who was responsible;
- What should have happened;
- What new and different measures will be taken in the future in terms of prevention, preparedness, and response; and
- How risk communications will be changed and improved.

If loss of trust does occur, special long-term and expensive efforts may be necessary before pre-accident trust can be re-established.

Experience with an accident and its associated communications should be studied so as to take full advantage of the experience in modifying and developing other communication programmes in other communities similarly at risk. Multi-national companies and international organisations are useful vehicles for extending these experiences across country borders.

INFORMATION CONCERNING HAZARDOUS INSTALLATIONS PRIOR TO AN ACCIDENT

The pre-site and pre-accident stages are covered in this section. Although these stages are distinctly separate, they are similar in that communication approaches and messages deal with possibilities, risk potentials, and eventualities and with proper response plans, preparations, roles, and responsibilities. The derived solutions to each of the seven communication steps with regard to the pre-site stage may be decidedly different from those of the pre-accident stage. It is apparent that the potentially affected population is different for these two stages and so are the motives and actions of the public and private officials. Consequently, so must the communication roles, media, messages and implementation be necessarily different as well as the use and emphasis placed on audience feedback and participation. Transfrontier border situations between countries cause event greater differences among these seven steps, all of which need special consideration.