

Risk Communication in Accidental Marine Pollution

GOOD PRACTICE GUIDE
for an effective communication strategy



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Foreword

Accidental marine pollution may have a major impact on the health of the marine environment, and may be portrayed in a sensational way by the media. Severe accidental pollution is usually associated with oil tanker damage and the media may report the event in a scare-mongering way, using terms such as 'Major Environmental Disaster'. Although statistics indicate that the number of spills and amounts of oil involved have declined since the mid 1980s, one accident can create considerable media interest and great public controversy.

The wide coverage of these accidents by the media usually reflects the society's fear of catastrophic degradation of the marine environment. This fear is a reality that policy and decision makers must consider when developing response and regulatory strategies. The effort to inform the public becomes at least as important as the technical work itself. Mass media play a crucial role in the creation of public opinion. Therefore, the analysis of how the media fulfil their function as knowledge mediators is essential in order to develop better environmental management at all levels.

AMPERA gives much emphasis to the fact that sound scientific principles contribute to prevention mechanisms and response actions. The consortium also has a strong commitment to translate the RTD activities of this area into the science-public interface, enhancing public awareness and understanding the role of science in combating accidental marine pollution.

The present brochure is intended to be a Good Practice Guide for an efficient communication aimed at the political, technical and scientific authorities involved in AMP accidents. After some background information on communication during AMP events, a list of recommendations is given.

The content is based on the contributions made at the workshop "The role of media in AMP issues" held in Santiago de Compostela (Galicia, Spain), in November 2006. The participants are sincerely acknowledged and will find many of their ideas within these pages, which I hope will stimulate further thinking and improve the communication strategy during these accidental events.

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AMPERA Co-ordinator

AMPERA PROJECT

AMPERA (European Concerted Action to foster prevention and best response to Accidental Marine Pollution), an ERA-NET project with a total funding of 1.57 million euros for the years 2005-2009, endeavors to create a platform where governmental policy developers and scientists from European coastal countries can meet to discuss all aspects of AMP and to implement EU-wide measures as required. By moving towards the co-ordination and eventual integration, of national and regional AMP research programmes, the project will maximise the EU's research output and make important contributions to the protection of Europe's coastal ecosystems and economies. The AMPERA consortium is composed of a total of 10 partner organisations from 8 European countries.

Introduction

Background

Risk is subjective and difficult to quantify. Each time a major Accidental Marine Pollution (AMP) event occurs, the mass media extensively report the environmental damage, predicting the potentially worst outcome, supported by dramatic photos and supporting graphics. However, the scientists later conclude it wasn't as catastrophic as feared.

This has inevitable consequences on the credibility of the public authorities, the media and scientists concerned. What is behind this phenomenon? What can be done to minimize its consequences? As part of the EU funded ERA-NET, AMPERA, one of the tasks was to consider how best to prepare an effective communication strategy that could help public authorities face the situation.

This guide is especially intended for those technical and public organizations in charge of accidental marine pollution response and mitigation. Nowadays, in the so-called "society of information," these organizations cannot forget the importance of prevention and mitigation of marine pollution accidents, while also planning to effectively inform the public about their actions.

To fulfil this objective there is a need to understand the social perception of risk but also the dynamics of mass media; to analyse current practices in accidental marine pollution risk communication; to examine the role of the scientific community as one source of information in these critical events; to build communication channels between experts, institutions and the media.

The present document is designed to be a Good Practice Guide about strategies and recommendations for an efficient risk communication for political,

technical and scientific authorities in charge of accidental marine pollution issues, during an AMP crisis but also to provide advice between inter-crisis periods. These two stages require different approaches to providing information, targets and procedures. This is a key distinction within this guide.

What we have learned from past AMP events

Many shipping accidents have occurred around the world resulting in pollution of marine and coastal ecosystems, impact to coastal socio-economic activities, and posing a risk to human health. Minor accidents will occur on a daily basis but usually have very limited environmental consequences. Severe accidental pollution is usually related to oil tanker major damage and to a lesser extent due to cleaning out of tanks. Shipping can also impact on the marine environment as a result of other accidental or intentional inputs of harmful substances and/or organisms. These include the introduction of non-indigenous 'alien' species in ballast water and from hull fouling, or the loss of a vessel and/or cargo. In recent years, cargo lost from ships, as in the recent accidents of the container ship *MSC Napoli* (2007) and *Tricolor* (2002), has included toxic and hazardous substances (e.g. phosphorus ore, pesticides, mineral oils, corrosive materials, etc.).

Although in the case of oil tankers a significant decrease in the number and total volume of accidental oil spills has been observed since the mid 80s, the *Erika* (1999) and *Prestige* (2002) accidents have been reminders that accidental marine pollution is a permanent threat. Moreover, the *Prestige* showed that oil spills do not respect national borders and can affect several countries at once when they occur far out at sea.

All accidents generally trigger a review of procedures, techniques, materials and products used to prevent and mitigate marine pollution, which leads to advances in know-how and available means for response. In this sense, AMP events can be considered as an opportunity to raise public awareness and understanding, but an efficient communication strategy has to be developed and improved by the authorities concerned.

A maritime accident is a matter of risk communication due to the potential exposure to adverse effects of pollution. The principles and techniques involved in risk communication should be taken into account. General understanding and acceptance of oil spill response measures are critical to the success of a response effort. Incomplete or inaccurate public information can limit the range of options available to responders¹.

In the past, response authorities have displayed abundant communication mistakes in the message, the addressees and the means of disseminating information (Box 1). Furthermore, political bias in the information displayed has led to public mistrust and controversy about the objectivity of institutional information.

Box 1. Communication mistakes during the Prestige oil spill.

1. **Unidirectional communication** (lack of interaction with audience).
2. **Contradictory messages** between different governmental spokespersons.
3. **Unclear messages:** ambiguous and confusing terminology.
4. **Absence of an independent expert voice** to justify the governmental actions.
5. **No self-criticism** in the message, minimizing the crisis and consequences.
6. **No channels of direct communication** with those affected in local area suffering from the accident.
7. **Lack of online information** and **tailored to needs of media**.
8. Crisis without a **controlled end** by the response authorities (no quick economical and environmental impact assessments).



¹ NRT (U.S. National Response Team), 1997. Risk Communication for Oil Spill and Response. NRT Science and Technology Committee.

The perception of risk

Risk is defined as a situation that could become dangerous or have an undesirable outcome. Any action will have an element of risk which needs subjectivity. In the case of nuclear energy, for example, while some people may consider it to be a clean and safe energy source, and a good alternative to more polluting ones and to the crisis of burning fossil fuels, it can also be considered as a potential danger to people and the

environment. The same information provokes different reactions.

There are many factors that influence the social perception of risk (see Box 2). Accidental Marine Pollution events are generally perceived as catastrophic, involving a high media impact, and combined with a low perception of personal control of risk.

Box 2. Risk Perception Factors².

Factors that increase risk perception

- Catastrophic potential
- Cause/effect time interval
- Human/technology attribution of errors
- Media impact

Factors that decrease risk perception

- Event familiarity
- Causal mechanism understanding
- Perception of personal control of risk
- Institution trust

In fact, catastrophic events such as hurricanes, alarming news and risk management related news, are the environmental scientific news that people tend to remember the most³. According to a survey undertaken in 2005⁴, the four main concerns of the European citizens regarding the environment are: water pollution, man-made disasters (including oil spills), climate change, and air pollution. In the same survey the issues about which the general public feels a lack of information were also asked to respondents.

These include the health impacts of chemicals (41%) and the use of genetically modified organisms (40%), while man made disasters ranked lower (24%). Accordingly, it seems that general public feels relatively well informed about oil spills, and at the same time these are considered one of the top environmental concerns, maybe due to the media coverage of catastrophic events.

² Adapted from Plasencia, A. and Villalbí, J.R., 2000. Salud Pública y Medios de Comunicación. In Informe Quiral 2000, edited by V. Semir and G. Revuelta de la Poza, 23-32. Fundación Provada Vila Casas, Rubes Editorial S.L.

³ U.S. NSF (National Science Foundation), 2001. Science and Media Reports. Chapter 7: Science & Engineering Indicators.

⁴ Special EUROBAROMETER 217 "Attitudes of European citizens towards the environment."

Accidental Marine Pollution Stakeholders

Different actors have different needs

Different stakeholders are involved in AMP risk communication. Each stakeholder group has specific characteristics and needs in terms of information

when an AMP event occurs. It is important to identify these information requirements in order to design an adequate communication strategy.

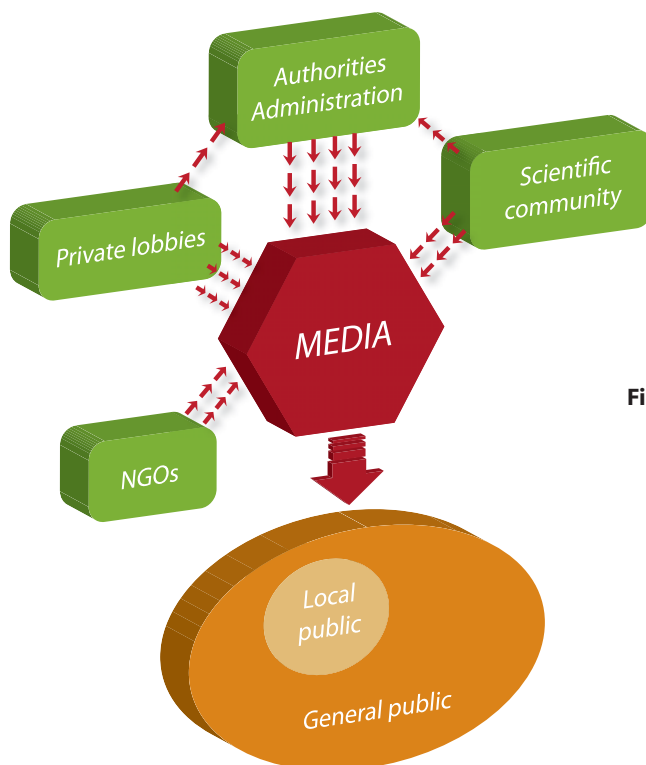


Figure 1. The different stakeholders involved in AMP risk communication and their relationships.

Authorities / policy administration

This group mainly includes politicians, public administrations and agencies (local, regional, national, European...). In AMP events, the confluence of different administrations, sometimes with overlapping competences, can lead to diverse interpretations and view points, which is not necessarily positive or enlightened for a good communication strategy. The role and discourse of the different spokespersons have to be clearly defined.

Institutional communication has to be understood as a service, and not as a routine, where public interest has to prevail over political arrangements.

In the communication office of some national or local

governments, their information strategy is usually reactive and protective, when it should be more proactive. Only the positive points are put forward, while the negative ones remain unclear. Information and propaganda can be intertwined, and this may have inevitable consequences on credibility.

The fear of bringing out alarming news, and the fear of their consequences, at the political level, may lead to a tendency of a minimization of the problems. This strategy can lead to opposite effects from those expected, when evidence shows that the situation is indeed more serious than what the authorities claim. A consequence of democratic processes may provide other sectors a platform to give their views that can

Accident Stakeholders

have a tendency to maximize the consequences of a problem, particularly affected groups or politicians interested in discrediting the authorities in charge.

Scientific community

The scientific community has an obligation to transfer and disseminate knowledge to society, often involving a peer-review process.

Scientists evaluate their work through a system that should guarantee its objectivity. However, this system might not perform well enough to provide what is usually asked from them during an emergency, i.e. facts about consequences based on their extensive knowledge, with the aim of providing immediate solutions. This approach may hinder them from using the scientific methods they know: i.e. observation-hypothesis-reconsideration of the hypothesis.

The presence of scientists in the media is however necessary from the beginning of a crisis to justify to the public, with a scientific base, the possible actions to be taken and their consequences.

Nevertheless the scientific community may lack sufficient authority for their recommendations to be taken into account, especially if there are socio-economic implications.

On a day to day basis, the mainstream media usually have little contacts with the scientific community and may not consider scientists as a potential source of information when a crisis occurs.

Mass media

Media have become a decisive element in modern societies. Nowadays, the news media have a considerable

responsibility in relaying scientific information to the public and the policy making community, since they constitute a prime source of information⁵. In the case of AMP issues, media coverage can create controversies, debates and priorities in the public generally faster than the government's agenda in response to an accident. Therefore, response authorities should know how the media work and resource their needs.

The newsworthiness of particular oil spills is affected by a number of factors including their proximity to home, socio-economic factors, and the symbolic and visual dramatization of the incident⁶, therefore not all oil spills will gain the same attention from the media.

Media are attracted by breaking news. Competition in the media is hard and nobody wants to stay behind the scene in telling the audience what has already been presented as a catastrophe.

It can also be noticed that over recent decades the speed of communication networks has intensified and the emergence of 24/7 news coverage has had a significant impact upon the mediation of disasters⁷. In oil spills like the *Prestige*, the important clue is the immediate coverage. Everybody covers the drama, but few pay attention to the long process that restores the truth.

However, local (close to the event) and national media usually have different approaches to the crisis. In the case of an oil spill, for example, local news media tend to focus upon the consequences for the local economy, while national and foreign news tend to frame the news in terms of ecological impact and political controversy over who is to blame⁸.

⁵ Nelkin, D. 1995. *Selling science: How the press covers science and technology*. New York: W.H. Freeman.

⁶ Anderson, A., 2002. The media politics of oil spills. *Spill Science and Technology Bulletin* 7 (5): 7–16.

⁷ Anderson, A., 2006. Media and risk. In *Beyond the risk society: Critical reflections on risk and human security*, edited by S. Walklate and G. Mythen, 114–131. Open University/McGraw Hill.

⁸ Anderson, A. and Marhadour, A., 2007. Slick PR?: The Media Politics of the *Prestige* oil spill. *Science Communication*, Vol. 29, No. 1, 96–115.

Box 3. Media prime needs in an AMP event⁹.

TV	First line responders in action for the evening news
Radio	Live interviews for the morning news
Daily newspapers	Situation summaries with diagrams for next day issue
Weekly information magazines	Weekly information magazines: illustrated stories for next week issue
All	Controversies and debates

NGOs

Non-governmental organizations (NGOs), as well as other international institutions, have objectives defined by their members. Their level of organisations can vary, and their funds usually come from different sources, such as private donors, international organisations, other NGOs, etc.

These organisations should be taken into account for the elaboration of emergency plans in case of an oil spill, following the example of the local environmental groups created in the UK.

During AMP events, NGOs have shown a considerable potential to mobilize volunteers and media. These organizations are usually more trusted by the general public than government or private sectors, and media find the nature of their message to be newsworthy.

Private lobbies

Lobbies are defined here as the persons leading different sectors, who, through various strategies, try to influence those that hold the executive or legislative authority, with the aim of favouring their own interest or that of their representatives. They usually do not

participate directly in the communication processes, but try to gain the complicity of one political group which can accept or defend their ideas. In the case of an AMP event, lobbies can include the ship owners, the fishing industry, the fishermen community, etc.

General/local public

Evidence suggests that publics tend to be most concerned about individualized risks, which are perceived as having concrete, direct impacts, rather than more distant, abstract threats¹⁰. In this sense, the particularities of the local public (which suffers directly from the consequences of the accident) and those of the general public are very distinct. Local inhabitants will be especially concerned about the impact on their economies, like the impact on fisheries or tourism, while general public is usually more concerned about the environmental impact of oil or chemical spills.

Accordingly, the message and information provided by authorities will need to be tailored to the different groups. Additionally, European citizens believe that the most qualified persons to explain the impacts of scientific and technological developments

⁹ Source: CEDRE.

¹⁰ Macnaghten, P., 2006. Environment and risk. In *Beyond the risk society: Critical reflections on risk and human security*, edited by G. Mythen and S. Walklate, 132-146. Open University/McGraw Hill.

are scientists and journalists, while industry and government rank very low¹¹. Politicians and the private sector have therefore a great effort to make if they want their message to be heard and trusted.

Authorities should accept and involve the public as a legitimate partner. A basic principle of risk communication is that people and communities have a right to participate in decisions that affect their lives, property, and the quality of the environment. It is also important to listen to the public's specific concerns, without making assumptions about what people know, think, or want done about a particular spill, as people perceive risks differently.

Building communication channels

The media and experts should play a key role in the whole communication process but their motivations can diverge. Experts (technicians and scientists) usually take more time and precaution, while journalists need to provide a fast and appropriate story line to make the headlines. The relationship between technical and scientific organizations and the media has to be close and established well in advance. Also the current limitations on the current relationships between different stakeholders need to be taken into account. It should be realized that different sectors of people are largely unaware of one another e.g.:

- Scientists, of the basic operational practices of marine industries e.g. ship's cargos and offshore installations.
- Shipping experts, of the marine environment as a dynamic ecosystem and the related scientific issues.

- Political leaders, of both the operational requirements and the real environmental issues, all of whom need of technical advice.

There is a permanent need for well-trained technical advisory teams within the response organizations, who can combine both types of experience and knowledge and translate them in a suitable way for the benefit of all stakeholders.

Regarding the media, normally they should play the role of an intermediary between the scientific institutions and the public. However this situation can create dependency, in the way that information is published according to the journalists' criteria, which are not necessarily the same as those of the scientists. One way of controlling the messages for the public is to establish direct communication channels, e.g. an Emergency Briefing Centre focusing on local coastal areas which are the most affected by accidental marine pollution.

When various administrations / institutions are involved in an AMP event, the possibility of providing one single spokesperson has to be considered. In some cases this could facilitate the emergence of a clear and single message, which could increase credibility and the public's support towards the authorities. In other cases, a different strategy may be appropriate with clear identification of the expertise and roles of the different persons, requiring several spokespersons.

The most important issue is to make sure that these strategies and roles are discussed and approved before the crisis occurs, i.e. during the inter-crisis periods.

¹¹ Special EUROBAROMETER 224 "Europeans, science and technology."

Good practice in Accidental Marine Pollution

The goal of risk communication is an informed public that is involved, interested, reasonable, thoughtful, solution-oriented, and collaborative. Risk communication should not be used to diffuse public concerns or as a substitute for action. Although there are no easy prescriptions for successful risk communication in accidental marine pollution, general agreement can be found on the recommendations included below. Many of them may seem obvious, but they are often not followed in practice.

Communication during CRISIS events

A crisis can be defined as a time of extreme difficulty or danger. Usually there is a triggering factor to transform a normal situation into a crisis, although a crisis can also be considered as a mismatch between perceived risk and real risk. Therefore, if the media presents a situation in an alarmist way, a minimal risk can be perceived by the public as one of high risk, and this can lead to a communication crisis.

All crises are different, but they usually follow a common pattern:

- A triggering factor (real or apparent).
- Acceleration of the process: necessity of providing information about what happened, why and what is being done.

- Maximum pressure: time of controversy, crisis used as political weapon towards the adversaries, time to search for the responsibilities, to ask for solutions. The media coverage is hasty and often not very rigorous.
- Stabilization and decline: information becomes “routine”; the journalists know their sources and use them more rationally.
- The end: each crisis needs a special event to mark its end (the resignation of political leader, or any other symbolic action that proves the return to normality, etc.).
- Post-crisis and reconstruction: after the crisis, most of the communication effort should be focused on trying to restore the credibility of the stakeholders that have been considered responsible.

Recommendations for effective communication during a crisis will include:

First reaction when risk becomes real

Right after the accident it is important to be the first one to provide information in a clear way, regularly, and to explain the decisions taken, via specialized spokespersons. It is important to work with local



Risk Communication

government officials and to explain how the effects of the spill (e.g., odours, contamination and environmental impact) will be monitored to ensure public and worker safety as well as environmental protection. It should

also be explained that the effects of the response also will be carefully monitored, and that this will be carried out thoroughly and as quickly as possible.

HOW TO INFORM DURING A CRISIS

- Inform about what to do (clear messages).
- Control the message.
- Recognise the uncertainty.
- Use intelligible vocabulary.
- Personalize the information.
- Use analogies and visual aids.

During crisis management: explain control measures

Individualized information plays an important role when the target audience is heterogeneous as in the case of AMP issues. Information for fishermen, for example, should be tailored to their needs, and therefore different from the one provided to the general public. It must be pointed out that a specific response measure will be conducted only if greater health and environmental protection cannot be achieved by other spill response methods. Other recommendations are the following:

- Meet the needs of media. As indicated before, the media are prime transmitters of information on risks; they play a critical role in setting agendas and in determining outcomes. Be open and accessible to reporters. Respect their deadlines. Provide permanent, honest, clear and tailored information to the needs of each type of media (e.g., graphics and other visual aids for television).
- Coordinate with local, area, and other relevant officials in dealing with the media (develop a joint press release and/or conference) to minimize receipt by the media of different, possibly conflicting messages. Recognize that the media also tend to cover the politics behind the decisions (e.g., who authorized the response, why that response was selected).
- Release information to the public and press as quickly as possible without compromising accuracy or coordination with other parties. Provide clear, reliable information to back up the spill response decision; use previously prepared information, but tailor it to the spill event in question.
- Help the media see that the response action selected was the best option at hand; demonstrate that there was not an ulterior motive (e.g., cheaper costs).

INFORMATION TO BE PROVIDED DURING A CRISIS

- A real time information network (not just press releases, but illustrative, clear, downloadable material).
- Periodical summaries. Why that situation now? How does it compare with past experience?
- Explanation of the technological challenges.
- Supporting background information on accidental marine pollution, tailored for different users.

Putting an end to the crisis

A crucial moment in a crisis is probably to put an end to it, considering that a crisis without a clear conclusion can last forever. In the case of an AMP event, the preparation of final reports on

the environmental impact of the accident and its socio-economic consequences is essential. This will often be months or even years after the event.

INFORMATION TO BE PROVIDED AT THE END OF A CRISIS

- What has been the response effort and response performance?
- Appropriate personnel should write the real story of the response.
- Establish the archive of the incident. This should include:
 - Description of operations and results.
 - Documentation of rehabilitation works.
 - Making “how clean is clean” clear.
 - Telling the fate of the pollutant.
 - Publishing the final environmental impact report.

Communication during INTER-CRISIS periods

It is often said that the most important moment of a crisis is when it has not yet occurred. This is a time to give an incentive to public debates and discuss the most controversial subjects. It is also the moment to raise public awareness on the environmental risks that

may be faced through education and debate.

During inter-crisis periods therefore the mistakes and the good points of the communication provided in previous accidents should also be examined, as well as the environmental and social impacts of these

accidents. A new communication strategy needs to be established and/or refined, including the following three basic elements:

- Identification of the risks and possible scenarios, representation of the potential effects: direct, legal and media-related.
- Methods and responsibilities: response mechanisms, design of template materials, approval of the decision-making flow chart and designation of spokespersons.
- Training of the spokespersons and of key personnel¹²: training, simulation, revision and updating of the methodology and of the contacts' list.

Those organizations in charge of the prevention and mitigation of accidents can also use the opportunity of these inter-crisis periods to establish effective

communication channels with the media, through meetings or other activities which can help establish mutual knowledge and confidence as for example:

- Creating an event that can interest the media (e.g. exhibition, issue of a book or report, etc).
- Preparing a press dossier available for the media with information on all the points to be brought to the attention of the public, including text and illustrations.

The information services and tools should also be refined, in order to be prepared to communicate during the next accidental event:

- Gather information on new/improved machines, products, techniques.
- Improve information networks.
- Improve visual output.

INFORMATION TO BE PROVIDED DURING INTER-CRISIS PERIODS

- Provide information about the components of the contingency plan:
 - Response strategy and decision making process. Fully accessible on an information site of the administration in charge.
 - The expected contributors and the applicable rules. Roles of scientists, fishermen, volunteers, foreign partners.
 - Compensation system in force. A response hotline/website under the authority in charge.

¹² Leonard, D.R.P., Morris, C.C. and Wakerley, M.J., 2005. How the monitoring programme for Chernobyl radionuclides has helped planning for a future emergency, 473-477. SRP Int'l Symp. Cardiff.

Final recommendations

The main recommendation for an effective communication strategy is to properly resource the issues that a major accidental marine pollution event will generate, i.e. anticipate, not improvise. This means that the future pollution events must be anticipated, based on the experience of the past, and taking into account the fact that in a crisis situation, communication has to be fast and clear.

A good communication strategy will:

1. Promote studies in the medium and long term to analyse the environmental, economic and social impact of AMP events.
2. Create communication channels with journalists, inviting them to participate in various awareness events and some technical meetings.
3. Organise direct communication events for the general public or other specific sectors during the inter-crisis periods: conferences, exhibitions, training courses, etc.
4. Write and circulate guidelines for the attention of the politicians explaining how to react in the case of such an event, how to communicate and how the competences between the different institutions are shared.
5. Identify the different stakeholders of an AMP event and provide opportunities for them to get to know each other, ideally during intercrisis periods. All of them, including the general public and the various NGOs, have to be considered during the preparation for the emergency and mitigation plans of an accident.
6. Prepare special reports, by communication experts, for the media during and after the pollution accident. Messages should be clear and visual, using comparisons with previous accidents, accessible 24/7, and adapted to the various media formats: newspapers, radio, television, and internet.
7. Provide messages recognizing the uncertainty (i.e. that not all the information is available), and ideally agreed by all the competent organizations dealing with the crisis. Avoid the transmission of contradictory, ambiguous messages, minimizing the consequences of an AMP event. Previous mistakes have to be recognized to establish credibility.
8. Require the scientific community to prepare strategies to establish their authority and requirements. This should help politicians and their policy makers follow scientists' recommendations, and to make sure that journalists consider scientists as an objective and rigorous source of information.

The background image shows a wide, sandy beach with dunes in the foreground. Several pieces of heavy machinery, including a large yellow tractor and a smaller red tractor, are parked on the sand. The ocean is visible in the distance with white-capped waves breaking. The sky is overcast.

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