



**CONSULTATION VERSION**

# **APELL FOR PORT AREAS**

**APELL**  
AWARENESS AND  
PREPAREDNESS FOR  
EMERGENCIES AT  
LOCAL LEVEL

**A PROCESS FOR RESPONDING TO TECHNOLOGICAL ACCIDENTS**

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## **APELL FOR PORTS**

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## **APELL FOR PORTS**

### **EXECUTIVE SUMMARY**

Even if it is believed that all industrial accidents, in port areas and elsewhere, are in principle preventable, realism dictates that response plans should be prepared against the occurrence of such accidents. This Handbook sets out a procedure to enable decision-makers and technical personnel to improve community awareness of activities involving hazardous substances in port areas and to improve or create co-ordinated emergency response plans.

UNEP and IMO are aware that, in many countries as well as internationally, provisions are made for emergency planning for both natural and technological disasters. IMO has issued comprehensive guidance on contingency planning for maritime emergencies and emergencies in port areas, which has great relevance to shipping operations in ports. This Handbook is not intended to replace or interfere with any of these provisions or guidance documents but rather to increase generally the knowledge of such provisions and guidance and to provide a methodology to help those responsible to comply with them.

**Section 1** presents the objectives of the APELL process and some cases of accidents in or near port areas, which illustrate the need for integrated emergency planning for major accidents. It goes on to set out the special considerations which apply in port areas and the general principles for application of the APELL process in this context.

**Section 2** considers the APELL partners, at local, national and international level. The APELL process is addressed particularly to decision-makers and technical personnel at the local level. However there is a need to link local plans for port areas with any national plans and to pay particular attention to the requirement on national governments to implement national conventions, e.g. through the preparation of Shipboard Emergency Plans as called for under the OPRC Convention of IMO. National and international organizations also have a responsibility to disseminate information about APELL and to promote and support its implementation.

**Section 3** describes how to begin the APELL process. A 5-tiered structure is proposed for emergency planning for port areas: within the ship or facility, at port/maritime authority level, at city/provincial level, at national level and finally at the international level. The formation and role of the APELL Co-ordinating Group are also described.

**Section 4** outlines the Co-ordinating Group's ten-step approach to carrying out the APELL process. Each step is described and guidance is given on how to do the necessary work. Examples are given from experience of carrying out APELL-like activities. (NOTE: These examples are drawn mostly from fixed facilities. UNEP and IMO would welcome examples of experience with APELL application in ports for use in future editions of this guidance.)

**Section 5** goes into more detail about the need for and right of the local population to know about activities involving hazardous substances in the port area; and on what and how to communicate to build community awareness.

**Section 6** suggests a timetable for implementing the APELL process, which can be varied to suit local requirements.

**Annexes 7.1 - 7.10** give more information about particular aspects of emergency preparedness planning and of creating community awareness; together with a short annotated bibliography, which gives the most important references to assist those applying APELL in port areas.

## **APELL - AWARENESS AND PREPAREDNESS FOR EMERGENCIES AT LOCAL LEVEL**

### **APELL FOR PORT AREAS**

#### **FOREWORD**

Awareness and Preparedness for Emergencies at Local Level (APELL) is a process developed by the Industry and Environment Office of the United Nations Environment Programme (UNEP IE), in response to various industrial accidents in both developed and developing countries which have resulted in adverse impacts on the environment. The APELL programme has been undertaken in co-operation with governments and industry. Its main goal is to prevent, prepare for and respond to technological accidents and their impacts. This is achieved by assisting decision-makers and technical personnel to increase community awareness of hazardous installations and to prepare integrated response plans in case unexpected events at these installations should endanger life, property or the environment. A ten-step process for doing this is set out in the APELL Handbook, which was originally developed with land-based fixed installations in mind. This process involves a partnership between industry, government and the local community. APELL is now being implemented in nearly thirty countries around the world.

Many APELL users have asked for specific guidance on emergency preparedness planning in port areas. It has long been recognised that port areas represent a complex interface, between land and sea, between human activities and the natural environment and between different transport modes. Thus they have unique safety and environmental protection problems. They need well-integrated emergency plans for the following reasons:

- maritime transport gives rise by its nature to many potentially hazardous situations; including shipping accidents, such as collisions, groundings and sinkings, and accidents arising from the handling and storage of dangerous goods, including bulk chemicals and hydrocarbons
- port areas usually have a large number and range of potentially hazardous activities going on in close proximity to each other. A shipping accident can affect the land-based activities and the surrounding area and vice versa. An accident in a land-based facility such as a chemical terminal or storage depot can have effects well beyond the perimeter fence of the installation concerned.
- port areas are often in built-up areas and close to housing and other community facilities and sometimes adjacent to important fisheries, wildlife habitats and recreation areas. An accident in one part of the port area may well affect the surrounding community and environment, as well as other port facilities.

UNEP IE has joined with the International Maritime Organization (IMO) to adapt the APELL process to port areas. Much of the world's trade involves the movement of goods by sea and IMO's objectives include facilitating the adoption of the highest practicable standards in matters concerning safety, efficiency of navigation and prevention and control of marine pollution from ships, as well as the effects of shipping on the marine environment. It provides comprehensive technical information on contingency planning for maritime emergencies, including the recently updated and expanded documentation relating to oil pollution, prepared with oil industry organizations and other institutions. Consequently many of its conventions, agreements, regulations, manuals and other guidance documents have great relevance to shipping operations in port areas, including comprehensive technical information on contingency planning for emergencies.

IMO, the Organization for Economic Co-operation and Development (OECD) and UNEP have all been working already on various aspects of major accident prevention and preparedness in ports. The three organizations co-operated in sponsoring a Workshop on "Chemical Safety in Port Areas", which was organised by OECD on 18-21 October 1993 in Finland. The Workshop highlighted the difficulties of emergency planning and management due to the great variety of activities and interfaces in port areas. IMO and OECD are collaborating in the preparation of a document entitled "Guidance Concerning Chemical Safety in Port Areas".

IMO and UNEP have now co-operated in the preparation of "APELL for Port Areas". It is hoped that the combination of the two organizations' expertise and experience will create a tool, which national governments and their port authorities can use as a starting point in the process of organising for major accident prevention and preparedness.

"APELL for Port Areas" incorporates much of the original APELL Handbook and demonstrates that it can be applied in port areas. However it also provides further guidance in the references annex, which includes specific detailed technical guides ranging from the recommendations on the safe transport of dangerous cargoes in port areas to the preparation of oil pollution emergency plans for ships and oil handling facilities. This document attempts to assist decision-makers and technical personnel in improving community awareness of hazardous installations in port areas and in preparing integrated response plans should unexpected large port emergency events endanger life, property or the environment. IMO and UNEP IE hope that all those tackling the problems of emergency preparedness planning in port areas will find it helpful.

## TABLE OF CONTENTS

	Page No.
<b>ACKNOWLEDGEMENTS</b>	<b>i</b>
<b>EXECUTIVE SUMMARY</b>	<b>ii</b>
<b>FOREWORD</b>	<b>iii</b>
<b>TABLE OF CONTENTS</b>	<b>v</b>
<b>1. INTRODUCTION</b>	<b>1</b>
1.1 The Objectives of APELL	1
1.2 Some Cases of Accidents in and around Port Areas	1
1.2.1 Port of Bombay, 1944	1
1.2.2 Port of Brest, 1947	2
1.2.3 Port Kelang, 1980	2
1.2.4 Ship "Cason", Northwest coast of Spain, 1987	3
1.2.5 The "Exxon Valdez" Oil Spill	3
1.3 Definitions	5
1.4 Types of Port Management	5
1.5 APELL for Port Areas	6
1.5.1 Philosophy and General Approach	6
1.5.2 Why Port Areas are Different from Land-Based Fixed Installations	7
1.5.3 General Principles	7
1.5.4 The Application of APELL in Port Areas	7
<b>2. THE APELL PARTNERS</b>	<b>9</b>
2.1 At National Level	9
2.2 At Local Level	9
2.2.1 Local Authorities	9
2.2.2 Industry	10
2.2.3 Local Community and Interest Groups	11
2.3 Other APELL Partners	11
<b>3. STARTING APELL</b>	<b>12</b>
3.1 How will APELL Work?	12
3.2 How is the Co-ordinating Group formed?	16
<b>4. ACHIEVING PREPAREDNESS FOR EMERGENCIES IN PORT AREAS</b>	<b>18</b>
4.1 Identify the emergency response participants and establish their roles, resources and concerns	20
4.2 Evaluate the risks and hazards that may result in emergency situations in the community	20
4.3 Have participants review their own emergency plan for adequacy relative to a co-ordinated response	22
4.4 Identify the required response tasks not covered by existing plans	23
4.5 Match these tasks to the resources available from the identified participants	23

## **TABLE OF CONTENTS (contd.)**

### **Page No.**

4.6	Make the changes necessary to improve existing plans, integrate them into an overall community plan and gain agreement	24
4.7	Commit the integrated community plan to writing and obtain approvals from local governments	26
4.8	Educate participating groups about the integrated plan and ensure that all emergency responders are properly trained	26
4.9	Establish procedures for periodic testing, review and updating of the plan	27
4.10	Educate the general community about the integrated plan.	28
<b>5.</b>	<b>BUILDING COMMUNITY AWARENESS</b>	<b>29</b>
5.1	The need for and right of the local community to know about hazardous installations	29
5.2	What and how to communicate to build community awareness	30
<b>6.</b>	<b>ESTABLISHING A TIMETABLE TO IMPLEMENT THE APELL PROCESS</b>	<b>34</b>
<b>7.</b>	<b>ANNEXES</b>	
7.1	TYPICAL COMPONENTS OF A PORT AREA EMERGENCY RESPONSE PLAN	36
7.1A	EXAMPLE OF A MARINE POLLUTION INCIDENT ALERT AND REPORT	39
7.2	CRITERIA FOR ASSESSING LOCAL PREPAREDNESS	51
7.3	EMERGENCY RESPONSE PLANNING ELEMENTS	59
7.4	CHECKLIST FOR EVALUATION OF EMERGENCY RESPONSE PLAN	62
7.5	EMERGENCY RESPONSE PLAN EVALUATION MATRIX	63
7.6	APELL PROCESS STATUS REPORT	65
7.7	OFFICERS AND AGENCIES WITH EMERGENCY RESPONSIBILITIES	66
7.8	ISSUES TO BE ADDRESSED IN EMERGENCY PREPAREDNESS PLANNING	68
7.9	THE DO'S AND DON'T'S OF INFORMATION COMMUNICATION	72
7.10	ANNOTATED BIBLIOGRAPHY	76

## **1. INTRODUCTION**

### **1.1 The Objectives of APELL**

APELL's overall goals are to: prevent loss of life or damage to health and social well-being, avoid property damage and ensure environmental safety in the local community. Its specific objectives are to:

- provide information to the concerned members of the community on the hazards involved in industrial operations in the neighbourhood and the measures taken to reduce the resulting risks
- review, update or establish emergency response plans in the local area
- increase local industry involvement in community awareness and emergency response planning
- integrate industry emergency plans with local emergency response plans into one overall plan for the community to handle all types of emergencies
- involve members of the local community in the development, testing and implementation of the overall emergency response plan.

These objectives are just as applicable in the context of port areas as of the fixed facilities for which APELL was originally designed. However the following objective is added for APELL as applied to port areas:

- to define the roles of, and include in the APELL process, those sections of national governments concerned with maritime transport and appropriate foreign authorities and international organizations.

### **1.2 Some Cases of Accidents in and around Port Areas**

A brief description follows of some catastrophic accidents in or near port areas, to illustrate the need for integrated emergency planning to prevent and prepare for accidents in these areas.

#### **1.2.1 Port of Bombay, 1944**

The ship "Fort Stikene" loaded with 1,400 tons of explosives and other cargoes including cotton and several drums of oil separated by a sheet of tarpaulin, caught fire in the port of Bombay. The origin of the fire has never been properly assessed. It could perhaps have been caused by a dropped cigarette or possibly through spontaneous combustion due to the small separation between the cotton and the oil.

It appears that the danger was not well evaluated by the ship's crew or port authorities. The fire-fighting response operations were slow and poorly executed. Two huge explosions destroyed or damaged a total of 15 ships and 1,250 people were killed.

Lessons learned:

- \* The International Maritime Dangerous Goods Code (IMDG), which was first published in 1965, points out that cotton "is liable to spontaneous combustion, especially when contaminated with oil".

- \* The Emergency Procedures for Ships Carrying Dangerous Goods state that when substances, such as contaminated cotton catch fire, the correct action is "Batten down: use ship's fixed fire-fighting installations. Otherwise adopt action as "for deck" (which is to use water jets)"
- \* Today, the application of IMDG code for prevention and the implementation of pre-planned emergency response procedures could avoid or mitigate the effects of this kind of disaster.

### **1.2.2 Port of Brest, 1947**

The ship "Ocean Liberty" was loaded with ammonium nitrate when she caught fire in the harbour of Brest.

The Authorities, aware of the potentially catastrophic effects of such an incident, decided to move the ship from the port. The fire-fighting methods failed because steam was used. The firemen were not equipped with breathing apparatus. Attempts to remove the hatch covers and pump water into the ship were too late. The ship exploded, killing 21 people.

Lessons learned:

- \* IMO Emergency Procedures now advise that a fire involving ammonium nitrate "should be fought with large quantities of water and that steam or inert gas should not be used".
- \* The IMO Code of Safe Practise for Solid Bulk Cargoes includes important directions for the stowage and segregation of ammonium nitrate fertilizers.

### **1.2.3 Port Kelang, 1980**

Three people were killed and more than \$12 million worth of damage was caused by fire and a series of explosions in this Malaysian port.

The fire began in a warehouse. Although fire engines arrived within ten minutes of the alarm being given, the flames had taken such a firm grip on the building that the firemen were unable to control the blaze. Their efforts were hampered by the fact that cargo in the warehouse was piled right up to the roof. They could not, as a result, get to the root of the fire.

A series of explosions occurred about 1½ hours later. The third one of these was so great that burning debris led to fires starting elsewhere in the port. At the same time this blast knocked out most of the fire engines. It is believed that the explosion may have been caused by empty gas cylinders which were heated in the fire to such an extent that they finally blew up.

The fire raged for two days, destroyed four warehouses completely and severely damaged virtually every other building in the port.

**Lessons learned:**

- \* Port authorities need to regularly assess routine operations and practises to ensure proper procedures are followed.

**1.2.4 Ship "Cason", Northwest coast of Spain, 1987**

The ship "Cason" loaded with general cargo, including a significant quantity of dangerous goods suffered an accident with fire on board when navigating near the NW coast of Spain. The 31 member crew abandoned the ship and only 8 were rescued alive. Finally the ship ran aground very near to where two small towns and several villages were located on the coast.

The "Cason" case was not a "port emergency" in the strict sense but it is a good example of a sea/land interface pollution emergency aggravated with the extra problems of mass media, public opinion and "polluted information".

The recovery of dangerous goods was carried out with difficulty due to bad weather but fortunately there were no additional casualties.

The main problems during this emergency arose from the confused and alarmist "news" which appeared in the media. This was mainly due to the lack of cargo information during the first two days following the accident. In addition, uninformed declarations made by individuals and different authorities confused and frightened the population. The lack of an appropriate Contingency Plan with a well defined chain of command for emergency situations contributed to the confusion. This resulted in a massive evacuation of about 15.000 people living in the proximity of the accident.

There was a clear case of lack of awareness among local communities and their leaders of potential hazards, emergency response procedures and resources needed to confront the emergency.

**Lessons learned:**

- \* The need to have contingency plans for oil and chemical spills response.
- \* Importance of having a well defined chain of command for operations and co-ordination between concerned authorities.
- \* The need to have well organized information for the mass media.
- \* Importance of public awareness on possible hazards in the community.

**1.2.5 The "Exxon Valdez" Oil Spill**

On 24 March 1989, the oil tanker "EXXON VALDEZ" loaded with 177.000 tonnes of crude oil ran aground on Bligh Island Reef (Alaska). Eight of its eleven cargo tanks were damaged resulting in a spill of about 40.000 tonnes of oil which spread rapidly over the sea. It was observed the slick advanced 20 nautical miles in a single night. The spreading of the spill in 10 days affected 140 miles of shoreline. After 56 days it was reported to reach areas located at 470 miles from the accident.

The operations to contain and recover the floating oil were initiated immediately using and testing all kinds of different equipment and techniques, mainly booms, skimmers, dispersants, in-situ burning, shoreline clean-up and bioremediation.

Once again, the results and experience gained from the operations to contain and recover the spilled oil "have served mostly to reinforce the message that prevention is the only sure way to prevent massive damage from oil spills"

During the first day after the oil release, a dispersant "test" was carried out following the existing guidelines on the use of dispersants for this particular area of Alaska which take into account three different biologically sensitive zones. The dispersant application showed encouraging results during the first two days following the accident. Then a storm passed through the area. The rough water rapidly weathered the oil forming emulsions in patches of mousse. Thus this technique was no longer practical.

In-situ burning was another technique tested during first days of the spill. The floating oil was concentrated by means of fireproof booms. An estimated mass of about 60 tonnes of oil once ignited burnt for about seventy five minutes. It was reduced to a small tar-like waste and was easy to recover.

The in-situ burning test was regarded as very successful but people living on a nearby island expressed concerns about the effects of the smoke. A second burn permit was issued but only after the oil had weathered and formed a mousse emulsion. The ignition of the oil was not successful and finally this spill combating option was discontinued.

The use of biological agents and nutrients, defined as bioremediation techniques, were also applied on a large scale for shoreline treatment. This operation continued for long time from 1989 to 1992. About 110 miles of shoreline were treated. The method engendered controversy. However, it appears that the results obtained and the experience gained with this test will be a good source of information and technical knowledge for future developments in this field.

**Lesson learned:**

- \* A comprehensive analysis of this incident and lessons learned is available from the United States Coast Guard, (Federal On Scene Co-ordinator's Report, T/V Exxon Valdez Oil Spill, September 1993)
- \* The testing of procedures contained in contingency plans should not be left until a major accident occurs. These need to be tried and tested well before hand.
- \* The "EXXON VALDEZ" emergency has served also to confirm the need of having a coherent public affairs, protocol and media relations plan.
- \* The special characteristics of Alaskans, in particular some isolated communities with strong traditions which were affected by the oil spill, proved to be a challenging experience for the authorities dealing with the emergency. In some cases they found extremely emotional reactions and entrenched positions which had a significant bearing on the operations.

### 1.3 Definitions

**APELL** - Awareness and Preparedness for Emergencies at Local Level. A ten-step process instituted by the United Nations Environment Programme (UNEP) to help decision-makers and technical personnel improve or create community awareness of hazardous installations and integrated joint emergency plans.

**APELL Process Partners or Stakeholders** - representatives from various groups which have or should have a voice in the establishment of an emergency response plan. In the context of port areas, stakeholders are organizations or individuals affected by port activity or potentially affected by an accident.

**Berth** - any dock, pier, jetty, quay, wharf, marine terminal or similar structure (whether floating or not) at which a ship may tie up. It includes any plant or premises, other than a ship, used for purposes ancillary or incidental to the loading or unloading of dangerous cargoes.

**Industrial Facilities** - for purposes of this document, "industrial facilities" are those industrial installations outside the port area. They may well be stakeholders and need to become APELL process partners.

**Maritime Authority** - the authority responsible for ships, floating installations and all activities related to the sea.

**Master** - any person other than a pilot or a watchman, having charge of a ship.

**Port Area** - the land and sea area established by national legislation and policies as forming the port.

**Port Authority** - the authority (person or body) empowered to exercise effective control in a port area and responsible for port services and facilities. The extent of its responsibilities will vary according to the type of port management (see 1.4 below).

**Port Services and Facilities** - the installations, terminals, industries, shipyards, storage areas, equipment and other services operating within the port area.

**Regulatory Authority** - the national, regional, provincial or local authority empowered to make and enforce legal requirements in respect of a port area.

NOTE: In some countries a port will have two different responsible authorities, one dealing with land-based activities and commercial management and the other with ships and maritime services. For this reason this document will refer throughout to the Port/Maritime Authority.

### 1.4 Types of Port Management

The following is taken, with some adaptations, from the report of the IMO/OECD/UNEP Workshop on Chemical Safety in Ports, held in October 1993 in Naantali, Finland (see OECD Environment Monograph No. 93).

Ports vary greatly in size and in the facilities provided. Hence the size and type of port authority also varies greatly, from the small private company to the giant group. Generally, however, most port authorities comprise a single port embracing a complex of dock systems.

Port authorities can be classified into the following three categories. For this purpose, infrastructure may be defined as: port basins, quays, port land areas and possibly also information networks such as the use of telematic data communication. Superstructure is defined as: cranes, sheds, cargo handling equipment, etc.

- Service Ports

In a service port the port authority develops, provides, operates and maintains the infrastructure and superstructure and also employs the port labour. Singapore is a service port.

- Tool Port

In a tool port the port authority develops, provides, operates and maintains both the infrastructure and superstructure but the port labour is provided by private companies. Antwerp is a tool port.

- Landlord Port

In a landlord port the port authority develops, provides and maintains only the port infrastructure. The superstructure and labour are provided by private companies. Rotterdam is a landlord port.

The type of port management clearly affects the role of the port authority in safety and environmental matters. So far as implementing the APELL process is concerned, the emphasis is on partnership and co-operation by all the different authorities and institutions involved. The more of these there are, the more potential for complexity and the greater the potential number of APELL partners.

## **1.5 APELL for Port Areas**

### **1.5.1 Philosophy and General Approach**

The APELL co-operative approach is in line with that generally adopted in combating maritime accidents, in particular oil, gas and chemical releases. Regional and bilateral agreements on co-operation have been adopted all over the world. The most important global instrument in this field is the International Convention on Oil Pollution Preparedness, Response and Co-operation (OPRC) adopted in 1990, which establishes that contracting parties will co-operate for the purpose of responding to an oil spill. The OPRC Convention refers to oil pollution incidents involving ships, off-shore units, sea ports and oil handling facilities. It requires that oil pollution emergency plans be established for all such incidents. IMO is considering means to expand the scope of the OPRC Convention to apply to pollution incidents involving hazardous substances other than oil.

APELL proposes co-operation at the local level through the Co-ordinating Group formed by industry, government and the community. The local joint plans for port areas developed through the APELL process can be linked with state/provincial, national and international plans and agreements as necessary.

### **1.5.2 Why Port Areas are Different from Land-Based Fixed Installations**

Port areas are fixed installations. However creating integrated joint emergency plans in port areas is likely to be a complicated process, for the following reasons:

- the international nature of many port activities and the fact that ports are interfacial modes of transport, means that international standards, conventions and regulations must be fully recognised for the different modes of transport and applied.
- as a result of the complexity of port activities, there is a very large number of potential stakeholders, including shippers and ship-owners as well as those directly responsible for activities in the port area and other users and interest groups in the port area and its neighbourhood.
- the management structure of a port usually reflects the diversity and scale of its activities. This is often complex in a multi-purpose, commercially-oriented port, such that autonomous facilities may exist, e.g. petroleum and chemical terminals, each having their own management structure.

### **1.5.3 General Principles**

- the APELL process is flexible and can be applied in port areas, despite their widely different activities and management arrangements and despite the existence of autonomous port authorities in many places.
- the autonomous port authority will usually play the role undertaken by the local government authority in the APELL process as set out in the original APELL Handbook.
- the APELL process can be applied in port areas to identify, evaluate and plan for all hazardous activities, to integrate the individual plans for each facility into a Port Area Emergency Plan and to integrate this with emergency plans for other industrial facilities in the neighbourhood.
- other large industrial facilities in the neighbourhood should apply the APELL process to create their own emergency plans but will need to co-ordinate with the emergency planning process in the port area either directly or through the local government authority.

### **1.5.4 The Application of APELL in Port Areas**

The geographical area of application will extend to the limits of the port area as defined by national or local legislation. However there is a need to co-ordinate port emergency plans with those of local authorities and industrial installations in the immediate vicinity and with those of other adjacent port areas.

The scope of APELL's application to port activities will include:

- oil, chemical and liquefied gas tanker terminals including associated pipelines
- berths and storage areas in which dangerous goods are kept
- berths or special areas for loading/unloading explosives
- bunkering activities

- ship building, repair and dry docks
- industrial chemical installations (which can apply the original APELL Handbook as written)
- port access areas of marine congestion and anchorage
- unexpected entry of vessels carrying substances not normally handled
- marine incidents outside port area limits but requiring port facilities or assistance
- general cargo operations
- leisure facilities
- road, rail and air transport into port areas and the terminals within them.

The type of emergency covered can include other types of catastrophe, as well as the industrial accidents which are APELL's original and main concern. Stakeholders have to plan for natural disasters, including earthquakes, storms and floods. It should also be borne in mind that radioactive substances may be handled in port areas and the port emergency plans may accordingly need to cover the possibility of accidents involving radioactivity. Account must be taken of the guidance in this area supplied by the International Atomic Energy Agency (IAEA) and any consequent national legislation, regulations and plans.

The following sections give more detail about the APELL partners, starting APELL, achieving preparedness for emergencies in port areas through the ten-step APELL process and building community awareness.

## **2. THE APELL PARTNERS**

The APELL process partners are defined in the APELL Handbook (Page 15), from which much of what follows here is taken. However variations appropriate to port areas are also noted.

### **2.1 At National Level**

National authorities include ministers, departments, agencies, boards and others responsible for national planning, industry, the environment, public services and safety, etc. In many countries they have already taken or are taking action in the field of emergency preparedness. Since the initial response to an incident is normally provided locally, and as the nature of such response greatly affects the final outcome and magnitude of an incident, the APELL process addresses the local level. However the contribution of national governments to the APELL process is essential for its success.

For port areas the following authorities also need to be considered:

- government entities involved in maritime affairs, e.g. Ministry of Merchant Marine, Maritime Authority, Coast Guard, national weather service
- national port authority
- Foreign Ministry
- navy
- civil protection authority, national health and emergency services
- national press and radio/TV

In general the role of national governments is to establish a climate conducive to the implementation of the APELL process, confirm the necessary political will and provide the resources necessary for success. To this can be added the co-ordination of local, provincial or regional plans into a coherent national plan. In the context of maritime activities national governments are responsible for the implementation of international conventions, e.g., putting in place legislation calling for the preparation of Shipboard Oil Emergency Plans in accordance with the OPRC Convention, and they must inform Port/Maritime Authorities of the structure and content of these so that they can be taken into account in the preparation of emergency plans for the port area. Foreign Affairs Ministries may be involved in cases concerning ships from other countries.

### **2.2 At Local Level**

There are three very important partners who must be involved if APELL is to succeed. Obviously their exact positions or titles may vary from one locality to another but in general they are representatives of the following:

#### **2.2.1 Local Authorities**

Developing awareness of and preparedness for emergencies at local level is a basic duty of local authorities. These may include state, province, district, city or town officials, who are either elected, appointed or nominated to provide the public with the various forms of government or service, e.g. governors, mayors, city councillors, chiefs of police or fire department, the managers of first aid, health and social services, etc.

In port areas the Port/Maritime Authority will play the role usually associated with the local authority, c.f. section 1.5.3 above. However close co-operation with local authorities for adjacent areas will be highly important.

The following potential partners also need to be considered:

- navy, coast guard
- local civil protection authorities and health and emergency services

- local weather station
- any other local authorities having legal competencies on ports

The role of local authorities in the APELL process is essentially to:

- raise public awareness of and mobilise public support for the APELL process
- establish a climate for a co-operative programme to develop
- co-ordinate emergency service and public group participation
- train personnel in emergency response
- acquire and mobilize resources needed
- ultimately approve the emergency plan developed through the APELL process, implement it and communicate it to the public. NOTE: In the case of port areas, final approval of the plan may need to come from a national authority such as a National Maritime Authority.

### **2.2.2 Industry**

The principal participants critical to the success of APELL are the owners and/or plant managers of either state- or privately-owned industrial facilities where hazardous materials are used or manufactured. In addition, the involvement and active participation of the work force is important in all circumstances. The transport industry may also need to be included.

The industry partners in port areas will include those from port services and facilities, e.g. bunkering operators, terminal and other berth operators, shipowners and shipping agents, shipyard managers, linesmen and tug-boat operators, salvage and pollution response operators, port users' associations, P&I Club correspondents, pilots, the harbour-master/port captain or Vessel Traffic Services (where these exist), workers' organizations, etc. NOTE: They also include those who own, forward, consolidate and pack cargo. Industries which abstract sea-water may also be present in some port areas.

Co-ordination will also be required with the emergency plans of industrial facilities in the neighbourhood of the port but outside the port area.

The specific responsibilities of industry partners in port areas are to:

- take precautions against accidents and organise specific emergency preparedness measures "within the fence" of the facility
- contribute to outreach programmes in response to public demand for information, which will create a well-informed community capable of effective participation in emergency response programmes without harbouring unfounded fears of hazards
- establish good and close working relationships with the Port/Maritime Authority and, through this, with neighbouring local authorities, particularly emergency response agencies; also with neighbouring industrial facilities.

### **2.2.3 Local Community and Interest Groups**

These may include any of the ex-officio leaders of the community, such as religious leaders, leaders of community service groups (chambers of commerce and industry, etc.), environmental groups or associations, health and lay care groups, leaders in the educational and business communities, newspaper editors, other media people, members of NGOs, etc.

In port areas, the community representatives may include specific groups dealing with maritime safety, fisheries, wildlife habitats and marine pollution. Consideration should also be given to professional associations, such as shipmasters and marine engineers' associations, to tourist boards and to nautical colleges and maritime training centres.

Community leaders have the responsibility to:

- communicate with Port/Maritime Authorities on issues of importance to their constituencies
- communicate with their constituencies on plans and programmes developed to protect public health and the environment
- provide leadership to train the public on details of the plan
- help mobilize local support and participation in the APELL process.

### **2.3 Other APELL partners**

Several national, international, governmental and non-governmental organizations have an important role, both in disseminating information about APELL and in promoting and supporting its implementation, as well as in integrating it with their own activities and programmes. Most important among these are:

- international governmental organizations
- international and national industry trade associations
- international and national NGOs (consumers' associations, workers' organizations, etc.)

In the context of port areas, attention is drawn particularly to the following associations:

- International Maritime Organization (IMO)
- International Association of Ports and Harbours (IAPH)
- International Tanker Owners' Pollution Federation (ITOPF)
- International Cargo Handling Co-ordination Association (ICHCA)
- International Oil Pollution Compensation Fund (IOPC FUND)
- International Petroleum Industry Environmental Conservation Association (IPIECA)
- Oil Companies' International Marine Forum (OCIMF)
- International Chamber of Shipping (ICS)
- Society of International Gas Tanker and Terminal Operators (SIGTTO)
- European Harbour Masters Association (EHMA)
- Classification Societies
- Protection and Indemnity Clubs (P&I Clubs)
- Organizations established within the framework of regional agreements, e.g. the Barcelona Convention, etc.

For port areas, the possibility of an accident caused by or involving a foreign ship also implies the involvement of Flag State authorities or representatives (embassies, consulates), maritime intergovernmental organizations and insurers.

Section 3 describes how to start the APELL process.

## **3. STARTING APELL**

### **3.1 How will APELL Work?**

All industrial facilities have a responsibility to establish and implement a "facility emergency response plan". Its key foundation is a safety review of facility operations. This safety review, which is central to a company safety plan, examines in detail those items that affect safe operation of the facility. The safety review and the facility emergency response plan are just as essential to the various kinds of industrial installations in ports as to industrial facilities generally.

Typical components of a facility emergency response plan are listed in Annex 1. It is worth noting that several components of such a plan involve notification and communication, with both authorities and citizens of the local area surrounding the industrial facility.

In addition to the existence of facility emergency plans, there may also be national government emergency plans or programmes in place. The APELL process is designed to build a co-ordinated single plan that will operate effectively at the local level, where first response efforts are so critical, using all emergency plans that may already exist as a basis for this work. While national organizations and plans exist for emergency response, there is always the need for an effective support structure at local level. These local arrangements need to be harmonized with the national plan.

In the context of port areas, a tiered structure for emergency response as set out in Figure 1 is proposed. At Tier 1, the installation emergency response plan is applied for small incidents which can be managed within the installation's own resources. The plan should include provision for immediately advising the port authority, in case the need arises to go to the next level. At Tier 2, the port emergency response plan is applied to emergencies affecting or potentially affecting other areas of the port, large numbers of people and/or other hazardous installations.

In some cases, depending on the administrative organization within the country concerned, the port emergency plan will be divided into two sections corresponding to maritime and land-based activities; in this case attention must be paid to the need to co-ordinate these two. At Tier 3, city and provincial emergency response plans are established to confront large-scale emergencies affecting or potentially affecting large urban areas, large parts of the province or ecologically sensitive areas; emergencies which cannot be handled within the resources available at port/maritime authority level. At Tier 4, the national emergency response plan will cover emergencies which cannot be handled at local or provincial level or which affect installations or other services of national interest. Finally, at Tier 5, the national emergency response plan is augmented by resources mobilized as a result of an appeal to an international organization, a regional response centre or other foreign authority. NOTE: Plans at all levels must provide for linkages to plans at the levels immediately above and below. This is referred to as a graded response.

In order for local authorities and local leaders to play most effectively their roles with respect to awareness and preparedness for emergencies, there must be close and direct interaction with representatives of those industrial facilities to which the area plays host. *Indeed, local authorities and leaders and industrial representatives need to find the means to build a bridge between local government responsibilities and industry responsibilities.* In the context of port areas, the port/maritime authority needs close and direct interaction with owners and managers of the industrial installations within the port area, as well as co-ordination and co-operation with neighbouring local authorities and industrial facilities.

Annex 2 contains the criteria for assessing local preparedness. These criteria may be used for assessing the emergency plan as well as the emergency preparedness programme in general. It must be recognized, however, that very few regional or local governments will have the need and/or capability to address all these issues and meet all these criteria to the fullest extent. Resource limitations and the results of the hazards analysis will strongly influence the necessary degree of planning and preparedness. Those port areas that do not have adequate resources are encouraged to seek assistance and take advantage of all resources that are available.

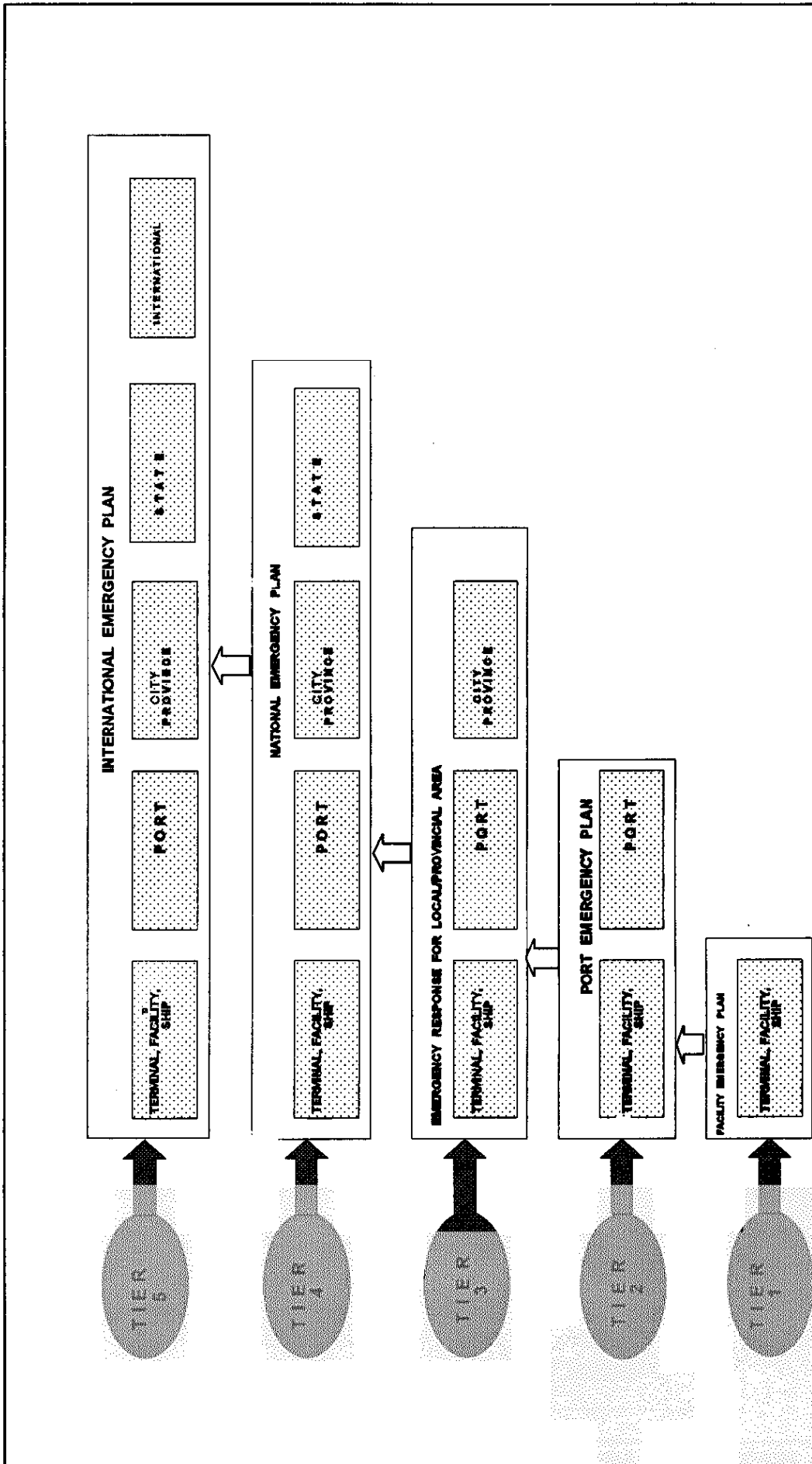


Fig. 1: TIERED RESPONSE FOR PORT EMERGENCIES.

The APELL process recognises this need for a bridge. Figure 2 shows schematically how port industry representatives and port/maritime authorities can interact to form a partnership which will provide the needed bridge, or "Co-ordinating Group" to ensure close and constant interaction between port installations and port authorities and between the port area and the local community. Figure 3 indicates how the bridge can operate in the implementation of the APELL process in port areas.

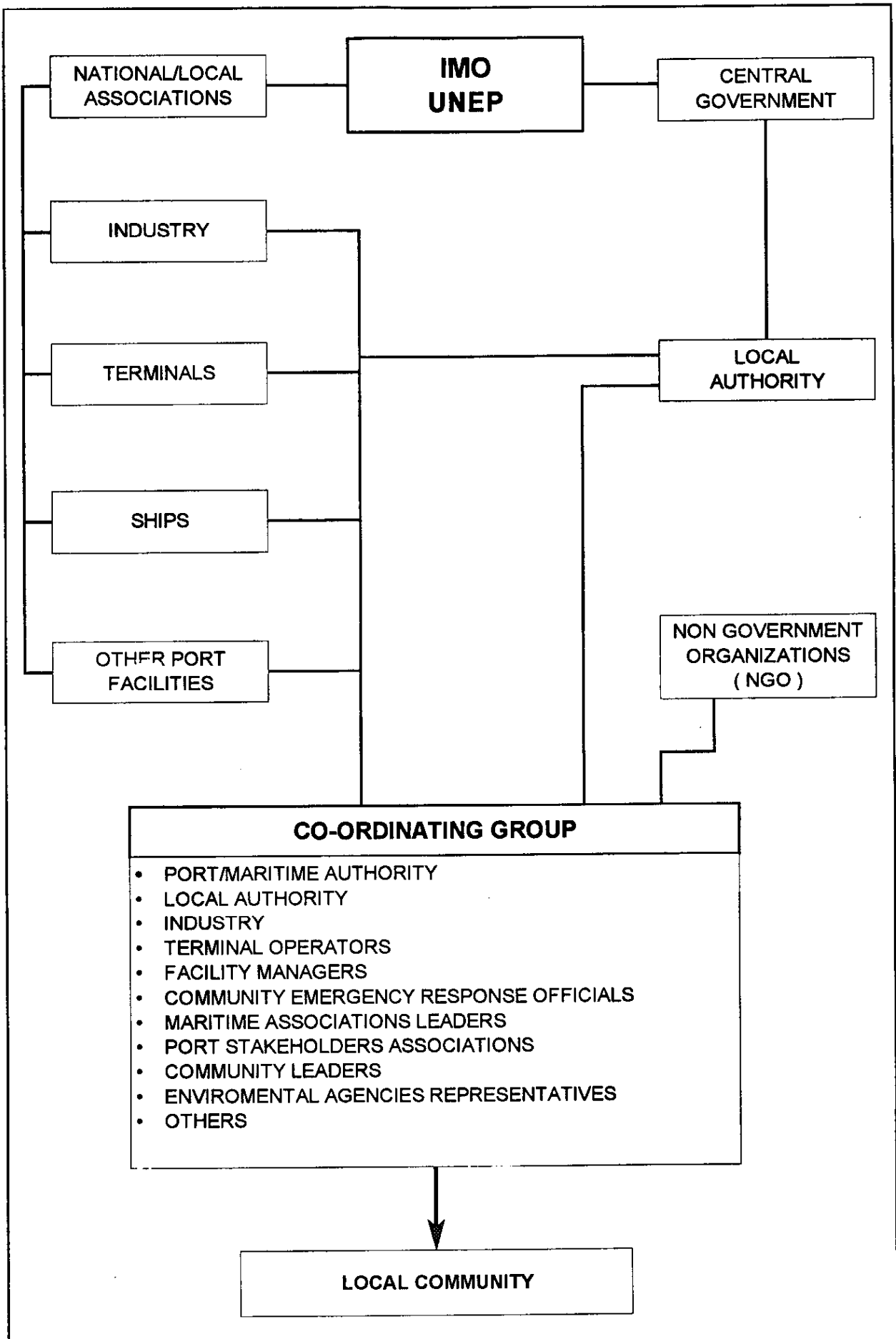


Fig. 2: APELL INFORMATION AND ORGANIZATION FLOW CHART

## RESPONSIBILITY BRIDGE

### PORT/INDUSTRY RESPONSIBILITIES

- 1.- Ensure safe work practices.
- 2.- Ensure personal safety of employees and visitors
- 3.- Establish safety programmes.
- 4.- Protect lives and property on-site
- 5.- Co-ordinate all plant personnel during an emergency
- 6.- Develop plans and procedures to respond to emergencies.
- 7.- Provide security, safety equipment, training, and information on chemical hazards

### CO-ORDINATING GROUP BRIDGING ACTIONS

- \* Open lines of communications
- \* Information sharing
- \* Co-ordinate emergency plans and procedures
- \* Interact with other emergency response agencies
- \* Joint education and training
- \* Common problem solving group
- \* Mutual aid assistance.

### PORT / LOCAL GOVERNMENT RESPONSIBILITY

- 1.- Provide a safe community
- 2.- Ensure the safety and well-being of all residents and transients within community
- 3.- Establish public safety programmes
- 4.- Protect lives, as well as private and public property
- 5.- Co-ordinate Port/community emergency response forces during an emergency
- 6.- Develop plans and procedures to respond to emergencies
- 7.- Conduct training, drills, and exercises with other response agencies within the community, area, or state.
- 8.- Maintain communication channels with national governments.

### 3.3.- COMPOSITION OF CO-ORDINATING GROUP.

*The Co-ordinating Group is clearly the mainspring of the APELL process.* Members of the Co-ordinating Group must be able to command the respect of their various constituencies and be willing to act co-operatively in the interest of local well-being, safety and property. The Leader of the Co-ordinating Group ideally should be able to ensure motivation and co-operation of all segments of local society, regardless of cultural, educational, economic and other dissimilarities among those segments.

In sum, the Co-ordinating Group's role arises because industrial installations are primarily responsible for protective action "inside the fence", while the port/maritime authority is responsible for the safety of the port area generally and local authorities outside the port area are responsible for the safety of the general public in the neighbourhood of the port area. *The role of the Co-ordinating Group is to provide the bridge between port installations, the port/maritime authority and local government, with the co-operation of community leaders (see Figure 3) and to develop a unified and co-ordinated approach to emergency response planning and communications within the community.* It should be made clear at the outset that the Co-ordinating Group does not itself have a direct operational role during an emergency. Its role is to prepare the various parties concerned, so that they are ready and know their tasks should an accident occur.

### **3.2 How is the Co-ordinating Group formed?**

The Co-ordinating Group should include members from each of the three main partners at local level (see section 2 above). The Co-ordinating Group becomes the critical management team to develop the APELL process locally and it is therefore important to bear in mind that all affected parties have a legitimate interest in the choices among planning alternatives. *Strong efforts should therefore be made to ensure that all groups with an interest in the planning process are included.* Annexes 2 and 7 contain lists of people or organizations who should participate if the Co-ordinating Group is to function effectively.

The APELL process may be initiated by any member of the three main partnership groupings. However in port areas it is desirable that the port/maritime authority should either initiate the process itself or at least demonstrate active participation and commitment from the earliest stages of the process.

The following are of key importance in forming the Co-ordinating Group:

- the members must have the ability, commitment, authority and resources to perform their tasks
- they must have or be able to obtain quickly a wide range of expertise related to the port area and the surrounding locality, especially the industrial installations and facilities and transport systems and the mechanics of responding to emergencies
- they must set and agree upon objectives for a specific programme of awareness and preparedness for emergencies in the port area and its neighbourhood
- they must work co-operatively with one another to achieve these goals and objectives
- they must agree to continue to work together after the plan has been formulated, to ensure that there is no loss of local preparedness in response to changes in the port area or its neighbourhood, e.g. the creation of new facilities handling hazardous substances.

*Once the members of the Co-ordinating Group have been identified and have agreed to serve, a Leader needs to be selected and procedures for developing and managing the process of planning for awareness and preparedness for emergencies at local level must be established.* Five points are crucial in selecting a person to whom leadership of the Co-ordinating Group can be entrusted:

- the degree of respect in which the person is held by the other members
- availability of time and resources
- experience in managing group work relationships

- management and communication skills
- existing responsibilities, if any, relating to accident prevention and emergency planning and response.

*The leadership of the Co-ordinating Group has the primary responsibility to oversee the Group's efforts throughout the entire APELL process.* The Group may find that a co-leadership of one installation manager and a representative of the port/maritime authority is a useful way to proceed but the leadership is in any case for the Group to decide. Both personal and institutional considerations should be weighed in selecting a team leader. For example, a particular organization may appear to have all the right resources for tackling hazardous substances accidents. However if the person in charge of that organization does not interact well with other local officials and managers, then it might be best to look for another leader.

*The leadership of the Co-ordinating Group needs to work with Group members to establish clear objectives and deadlines for the various phases of work.* Progress towards these objectives and deadlines should be frequently monitored (see Annex 6).

The approval of planning assignments and the establishment of a monitoring system are the central responsibilities of the Co-ordinating Group. In order to achieve ongoing co-operation in implementing the plan, it is recommended that the Co-ordinating Group operate on a consensus basis, reaching general agreement by all members of the team. Achieving consensus takes more time than majority voting but ensures that all the parties represented have an opportunity to express their views and that the decisions reached represent and balance competing interests. If it is determined that a consensus method is inappropriate or impossible (e.g. because of the multi-jurisdictional nature of the Group), then the Co-ordinating Group should decide formally how issues are to be resolved. The Group approach also requires the merging of inputs from different individuals, each with a different style and different priorities. The Co-ordinating Group leadership must ensure that the final plan is consistent in substance and tone.

Because planning efforts work best when people understand the ground rules and know when and how they will be able to participate, the procedures to be used for approving and monitoring assignments should be carefully thought out at the start of the APELL process. These monitoring and approval procedures can be adjusted at any time to accommodate variations in local interests and concerns.

Section 4 sets out the ten-step APELL process for achieving awareness and preparedness for emergencies at local level.

#### **4. ACHIEVING PREPAREDNESS FOR EMERGENCIES IN PORT AREAS**

This section outlines the Co-ordinating Group's step-wise approach to carrying out the APELL process. This is intended to be flexible so as to accommodate different situations encountered in various countries. This section therefore outlines steps or objectives to be achieved rather than specific procedures to be followed. Material on procedures which may be used and references which may be useful will be found in the Annexes.

Based on experience a ten-step approach to implementing the APELL process can be set out which leads to a useful and effective integrated community emergency response plan. Significant effort will be required to achieve each step. The ten steps are listed below and are also presented as a flow chart (see Figure 4):

- Identify the emergency response participants and establish their roles, resources and concerns
- Evaluate the risks and hazards which may result in emergency situations in the community
- Have participants review their own emergency plan for adequacy relative to a co-ordinated response
- Identify the required response tasks which are not covered by existing plans
- Match these tasks to the resources available from the identified participants
- Make changes necessary to improve existing plans, integrate them into an overall community plan and gain agreement
- Commit the integrated community plan to writing and obtain approvals from local governments
- Educate participating groups about the integrated plan and ensure that all emergency responders are trained
- Establish procedures for periodic testing, review and updating of the plan
- Educate the general community about the integrated plan.

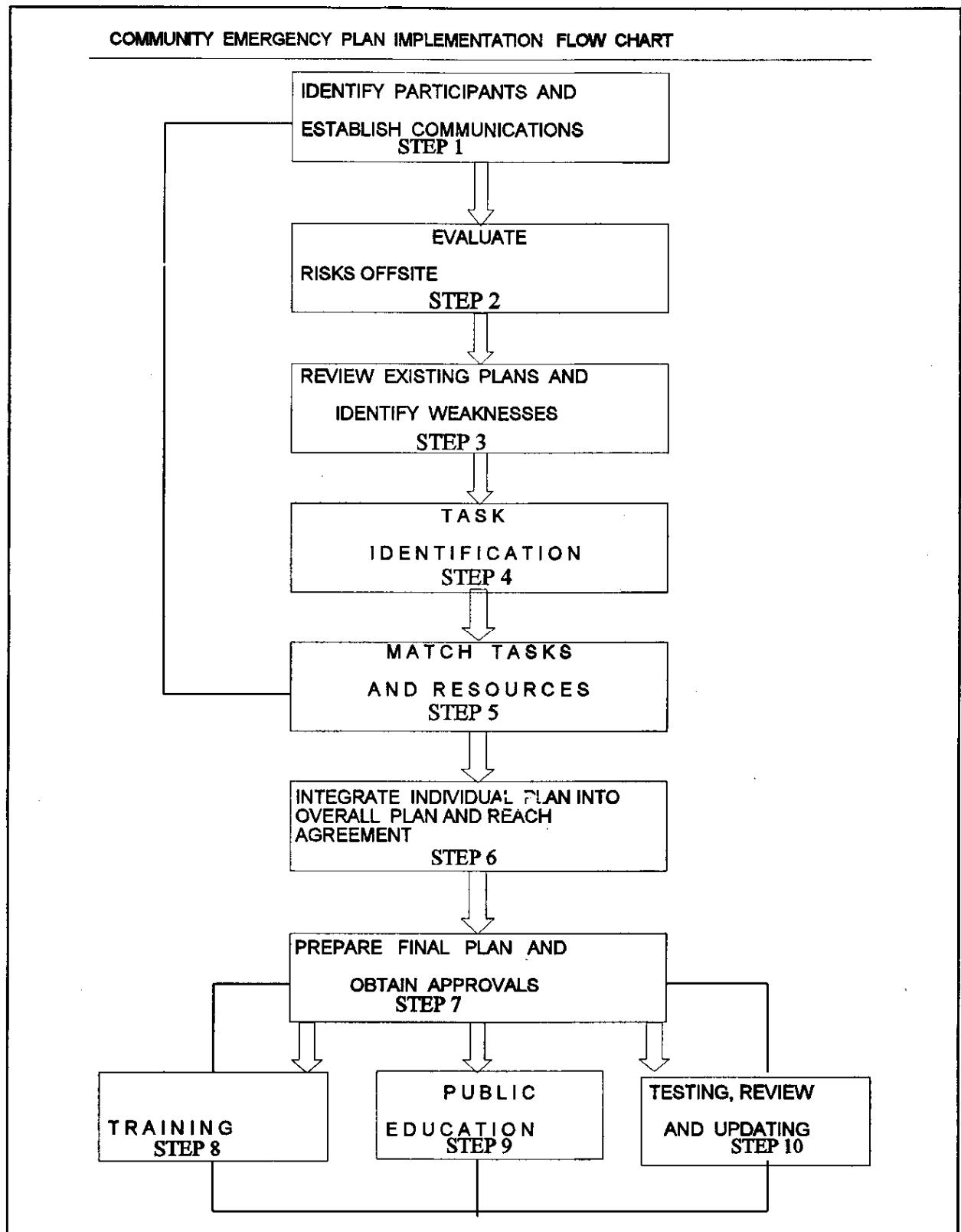


Fig. 4

Each of these ten steps is elaborated in the following pages of this section. Each is described in a three-part format. The first part describes the step; the second provides a checklist useful for completing it; and the third presents the results of some experience in completing it. Where appropriate, reference is made to other tools available to assist in completing the step.

**NOTE: The cases quoted are taken mainly from the original APELL Handbook and therefore refer mainly to industrial facilities rather than to ports. UNEP and IMO would welcome more information about experience of carrying out accident preparedness planning in port areas for inclusion in future editions of this document.**

#### **4.1 Step 1 - Identify emergency response participants and establish their roles, resources and concerns**

There is a wide range of potential participants in emergency response in general and in ports in particular. It is important to identify them early, so that their resources can be factored into the planning and their concerns can be addressed. Some may have existing emergency plans which should be obtained.

##### **Carry out these suggested actions to complete Step 1:**

- using the knowledge of the Co-ordinating Group, compile a list of potential participants in emergency response activities. Annex 7 identifies possible participants, with particular reference to port areas.
- obtain copies of existing emergency plans and review these for additional participants
- prepare a brief written description of all participants, their expected roles and the resources they have available (personnel, equipment, facilities, special knowledge, etc.).
- go on to Step 2.

##### **Results of experience:**

Co-ordinating Groups comprised of a broad range of officials are in the best position to understand the resources available in the local area. Some communities may have to reach beyond the usual emergency responders and use volunteer groups where large numbers are needed, e.g. in co-ordinating evacuation. Industry Mutual Aid Groups (MAGs) may also expand the base of participants, by permitting their committed rescue service personnel to assist in hazardous substances response and plant personnel to assist in emergencies "outside the fence".

#### **4.2 Step 2 - Evaluate the risks and hazards which may result in emergency situations in the community**

Possible events should be identified and their probability of occurrence and consequences must be addressed to set priorities for planning.

##### **Carry out these suggested actions to complete Step 2:**

- using the concerns of the Co-ordinating Group, compile a list of potential hazards which may result in emergency situations in the community. Consider the following:
  - chemical plants
  - nuclear facilities
  - industrial facilities, including pipelines
  - natural disasters
  - transport activities - road, rail and aircraft accidents may affect the port area
  - leakage of dangerous substances - oil and chemical spills (onboard ships)
  - toxic or flammable gas releases

- explosions inside or outside the port area
- fire on board
- fire in port installations and around the perimeter of the port area
- ships grounding and sinking
- ship collisions with other ships or with fixed installations
- define the magnitude of the risk and the potential severity of the impact by evaluating:
  - size of potential zone of impact
  - number of people at risk
  - type of risk (toxic, chronic, injury)
  - long-term impacts
  - impacts on sensitive environmental areas
- for determining probability of occurrence, decide if a qualitative approach is sufficient or whether a quantitative risk assessment would be useful. Points to consider include:
  - probability of individual events
  - probability of simultaneous events (e.g. natural disaster resulting in release of hazardous substances)
  - complications from unique environmental considerations, e.g. severe terrain, location in flood plain, valley wind conditions
- prepare a list of scenarios that could reasonably be expected to occur. Refer to these throughout the planning process.
- go on to Step 3.

### **Results of experience:**

One community used a questionnaire, developed by industry and sent out by the fire department, to establish contact with local industries, develop pre-planning information and assess the nature and location of fixed facility risks.

Transport departments, railways, airport authorities and local police and fire departments can help establish the nature, quantity and mode of transported substances.

In one city this type of study identified one specific highway interchange that had a high frequency of tank truck rollovers. As a result improved warning signs were organised.

In one country risk evaluation led to the development of specific product references, training and the formation of a chemical hazards information team from a broad base within the community.

One community spent little time on evaluating risk, deciding to focus its energies on better organization for response on the assumption that there was a wide range of hazardous substances present in the area.

#### **4.3 Step 3 - Have participants review their own emergency plan for adequacy relative to a co-ordinated response**

Emergency plans exist in various forms for many areas. Participants in the planning process should review any existing plans for adequacy and how the plan contributes to a co-ordinated response. Interrelationships, responsibilities and communications are important issues for discussion at this point.

Plans requiring review are regional and local emergency management plans, police and fire plans, county and city plans, industrial plans, hospital plans and others (e.g. educating citizens how to respond to warning signals such as sirens).

#### **Carry out these suggested actions to complete Step 3:**

- contact the potential participants identified in Step 1 and have them review their own plans. Annex 3 can be provided to help them review their plans in relation to a co-ordinated response effort. In the context of port areas, there is a need for port facilities to review their own plans and establish how well they are co-ordinated with the general emergency plan for the port.
- evaluate the results of the independent reviews to determine the overall strengths and weaknesses of the current state of co-ordinated emergency response. A summary evaluation matrix as shown in Annex 5 may be helpful. This will provide an overall sense of the areas where additional work is required to develop an integrated plan.
- if the plan review reveals the need for additional participants, revise the list generated at Step 1.

In many local areas in certain countries, basic core elements such as an organised fire brigade, medical response teams, structure for co-ordinated response to any emergency, etc., do not exist. In these instances industry and local authorities/leaders will need to build these basic core elements as a crucial foundation step in the APELL process.

#### **Results of experience:**

One group added hazardous substances response to an existing and workable natural disaster plan for traffic control, evacuation and shelter. In some countries, governments require communities around nuclear power plants to have detailed community emergency response plans. In such cases, if there is a nuclear facility nearby, integration of hazardous substances into the existing community plan should reduce the overall planning workload.

One Co-ordinating Group based its efforts on the foundation provided by an industrial MAG which shared equipment and resources.

One city's thirteen hospitals already had a mass casualty plan. However industrial medical resources (doctors, protocols, antidotes) were not included until community-wide hazardous substances planning was done.

In one state in the U.S.A., four separate groups were charged with hazardous substances emergency responsibilities. State law had to be changed to clarify roles. In this case a consulting team from three of the groups was established as a compromise, with the fourth group agreeing that its role was subordinate to that of the consulting team.

#### 4.4 Step 4 - Identify the required response tasks which are not covered by existing plans

The review in Step 3 should determine if all reasonable risks have been addressed. If not, then additional tasks necessary to complete the plan need to be identified. This step requires a thorough definition of what must be done, with broad-based input.

**Carry out these suggested actions to complete Step 4:**

- in the context of an integrated response, identify tasks which are not being covered by any group
- using the results of Step 3, prepare a list for each participant of missing elements or required tasks not covered, using Annex 3 as a guideline
- determine if the missing elements are important to the function of the participant (e.g. the fire brigade may not have proper equipment to fight certain chemical fires)
- go to Step 5.

#### **Results of experience:**

The most common response tasks/equipment not covered in existing plans include:

- overall command authority
- communications equipment which can reach all participants
- specialised hazard monitoring and associated training
- alerting the public and co-ordinating evacuation.
- most ports who already have a plan consider the 3 "Cs" to be the basis for a successful Port Marine Emergency Plan. The 3 "Cs" stand for Command, Control and Communications. Failure in any one of the three will create a problem if the plan has to be used for real.
- within the plan it should describe the command area, and the command structure both in terms of the ashore and afloat situations, if in fact it happens to be a dual emergency.
- when dealing with specific elements of an emergency, the plan should clearly identify the role of the participants in terms of control, for example in specialised fields such as fire-fighting, damage control and the protection of the local population and environment.

#### 4.5 Step 5 - Match these tasks to the resources available from the identified participants

Each defined task should be assigned to the participant who can best address that aspect. Assignments should be made based on authority, jurisdiction, expertise or resources.

The possible need for a *graded response* in an emergency has to be identified. Any port emergency plan should contain a list of key participants who are likely to be key players in any type of emergency. However, there may well be occasions when a small emergency occurs which does not require the entire emergency response team to attend in view of the circumstances of the emergency. If a small emergency develops into a larger more serious emergency, the plan should provide the ability to increase or decrease those key players within a graded response alert as and when decided by the Crisis Management Team at the Port Emergency Response Centre.

**Carry out these suggested actions to complete Step 5:**

- evaluate each of the unassigned tasks from Step 4 separately, by reviewing the list of participants from Step 1 to determine the best resource likely to be available to complete the task
- discuss the task with the identified participant to determine willingness to undertake it, availability of resources and the existence or otherwise of institutional road-blocks preventing use of resources
- work out the details of integrating completion of that task by that participant in the context of the community plan
- during review meetings, assess the benefits and problems resulting from assigning that task to that participant
- determine if any new problems, unassigned tasks or resource constraints will result from that assignment. If so, include these in the resolution process for new assignments
- monitor each task separately to ensure timely completion
- go to Step 6.

**Results of experience:**

One planning group recognised that police resources were scarce and used volunteer fire-fighters for traffic and access control.

Another group established a multi-agency "command post" to resolve questions of "Who's in charge?".

Industry has often been called upon to provide equipment and training for hazardous air monitoring. Specialised fire-fighting equipment may also be necessary.

Communication resource problems may require sharing of radio networks and equipment. To avoid overburdening the communication network in a port during an emergency, provisions should be made when developing a plan to have the ability to increase the availability of telephone lines to the emergency control centre. Other lines of communication such as VHF R/T, specified VHF channels should be agreed and laid down for specific uses for specialised services afloat such as life saving, fire-fighting, oil pollution, etc.

In one community, communication to the media was recognised as a means to reach large numbers of people quickly and procedures were established to use tone activated monitors on an emergency frequency to alert and update radio and TV stations directly. These monitors were being purchased by the individual stations at no cost to the community.

Similarly "beepers" might be provided to nearby neighbours of a facility handling large quantities of hazardous substances.

**4.6 Step 6 - Make changes necessary to improve existing plans, integrate them into an overall community plan and gain agreement**

Completion of Steps 4 and 5 should eliminate the resource-related problems. Integrating all plans into the port/community plan will reveal problems with overlapping responsibilities and complicated interfaces.

**Carry out these suggested actions to complete Step 6:**

- prepare a draft of the integrated port/community plan using a format acceptable to the lead government agencies
- explore the existence of local or national legislation containing rules for the preparation and approval of port emergency plans at the local or national level
- consult the international conventions, agreements and recommendations concerning emergency planning for port areas and check if they are applicable
- review the plan in relation to local, national and international legislation etc., as well as against the planning elements in Annex 3, to ensure completeness
- conduct a table-top role playing exercise to test the plan - i.e. key participants should sit round a table and describe how they would respond and interact for various emergency scenarios
- identify any weaknesses in the plan. If necessary, repeat Steps 4 and 5 to resolve these problems
- ensure that the integrated port/community plan is consistent with any regional disaster preparedness plan for ports and with local industrial facility plans
- revise the draft plan as often as necessary until all deficiencies are eliminated and members of the Co-ordinating Group agree on the approach
- go on to Step 7.

**Results of experience:**

Key concepts at this stage are "keep it simple" and "compromise".

Successful plans have been brief, supplemented with appendices where detailed information is necessary.

Successful plans have generally included the following, based on community need:

- telephone and contact roster
- action guide/checklist
- resource/capabilities list with agreement to share
- action checklist for field use.

Comprehensive response plans are often burdensome due to their depth of detail and lack of flexibility. One such plan developed for a nuclear power station consisted five 3-ring binders with unwieldy detail. However another nuclear power station plan was distilled into a few pages for general training and execution.

One community which was having difficulty reaching agreement assembled its chief public and private officials to develop a strategy rather than resolve conflict. The result was to assemble a high-level planning team (Deputy Chiefs, Assistant Plant Managers, etc.) and assign them *full-time* to the task. The team met at a training academy conference room and developed an acceptable plan in five 9-hour days. This was an extreme measure which worked.

#### **4.7 Step 7 - Commit the integrated community plan to writing and obtain approvals from local governments**

Once agreement on the integrated plan has been reached, the final plan should be documented either by revising an existing community plan or preparing one where none exists. Approvals from local governments and, where appropriate, national authorities must then be obtained.

##### **Carry out these suggested actions to complete Step 7:**

- using a small group to prepare, commit the plan to its final written form
- begin arrangements for written agreements among participants where necessary (mutual aid, notification formats, use of media notification outlets, specialised response personnel and equipment)
- prepare a standard presentation to be made to officials whose approval is needed to implement the plan
- make presentations, hold meetings and review sessions and obtain signature approvals of officials in all appropriate jurisdictions
- go to Step 8.

##### **Results of experience:**

The key organisers for obtaining approvals will vary from country to country and from port area to port area. In our study cases they have included

- a fire chief
- a regional official
- an industrial facility manager.

A high-level champion of the plan will expedite official approvals.

Written agreements are often necessary when private companies are expected to provide emergency assistance such as technical expertise or specialised equipment.

#### **4.8 Step 8 - Educate participating groups about the integrated plan and ensure that all emergency responders are trained**

Community involvement is important throughout the planning process. However by the time the Co-ordinating Group arrives at this step, it should have a definite plan for presentations. These should stress the importance of training for emergency responders.

##### **Carry out these suggested actions to complete Step 8:**

- compile a list of participating agencies or groups who will need to know more about the integrated plan
- make presentations to these agencies and groups to explain the plan, their roles and the type of training they should institute and/or receive
- identify who must be trained and prepare a training schedule
- develop and carry out training sessions where necessary. In cases where port/maritime/local authorities are not equipped to train key people, industry installations may need to devise and implement these sessions
- complete field drills for hands-on training in monitoring, use of communications, traffic control, etc.
- complete comprehensive table-top exercises to train leaders in co-ordination and communications among participants
- go to Step 9.

### **Results of experience:**

One regional planning team arranged a half-day seminar to educate and train mayors, commissioners and department heads on their roles, including media relations. Principal spokespersons for industry and all key response agencies were assigned and trained.

One planning group in the U.S.A. used training in the plan as an opportunity to "cross-train" agencies; so that, for example, the environmental resources department was trained by firefighters in the use of protective clothing and breathing apparatus, while the firefighters were trained by the environmental and industry experts on airborne contaminant monitoring strategies and practices on containment and diversion diking. An extra benefit was a shared awareness of the value of both functions.

One community established "speaking teams" of public and private officials, who visited public group meetings, schools, the Chamber of Commerce and others to discuss progress.

### **4.9 Step 9 - Establish procedures for periodic testing, review and updating of the plan**

Emergency responders should test their plans on a regular basis. Initial testing should be done internally before "going public" with the programme. Test drills should be designed to uncover deficiencies in co-ordination among groups and in training. Any deficiencies should then be corrected in the plan and the training programme.

#### **Carry out these suggested actions to complete Step 9:**

- designate a committee to prepare a test drill scenario. Members should not be part of the emergency response group.
- prepare a written scenario which identifies the objectives of the drill, components of the plan to be tested, expected participants, sequence of events and simulated hazard levels.
- designate a group of non-participating observers to evaluate the test drill using prepared evaluation checklists.
- using appropriate local officials, media and other outlets, alert the public and all participants that a test of the plan is scheduled. It is crucial that the public does not confuse the test with the "real thing". Panic could ensue and develop into a real emergency with tragic consequences.
- conduct the test using the prepared scenario.
- immediately after the test, hold evaluation sessions to consider the results of the checklists.
- assign appropriate partners to correct deficiencies
- revise the integrated plan to take account of changes to correct deficiencies.
- prepare a procedure for a formal, annual review of the plan to ensure that it is kept current.
- go to Step 10.

### **Results of experience:**

Nothing can replace a full-scale emergency response drill as a means of identifying further areas for improvement. Planning the drill well in advance, preparing a drill scenario and the evaluation process are all critical to the success of the test. For additional guidance in this area refer to some of the material referenced in Annex 10.

Several communities have used elected public officials, who were involved in the planning, to serve as spokespersons. They are generally skilled at dealing with the media and they represent the public interest. It also establishes them as part of the response effort. However, in order to ensure that key points are reinforced, spokespersons should be provided with a "Key Talking Points" outline, stressing the co-operation of all involved and the drill's purpose of identifying further areas of improvement.

Interagency co-operation has been a key focus in many drills. For example one fire engine is designated to provide decontamination services to paramedics and ambulance crews; or industry physicians provide support at designated emergency rooms. Industrial response teams can provide support to public agencies, e.g. in simulations of spill control activities and of community alert/evacuation/return, etc.

#### **4.10 Step 10 - Educate the general community about the integrated plan.**

Opportunities for community involvement and public education should be pursued at all the previous steps in the planning process. A critical element in effective community emergency response is educating the public about what to do during an emergency, where to turn for additional information and how and when to evacuate if necessary.

#### **Carry out these suggested actions to complete Step 10:**

- prepare a standard emergency response brochure for distribution to all residents in the potentially affected area.
- distribute the brochure by the most appropriate means (mail, door-to-door delivery, etc.).
- prepare a standard media kit which identifies port/maritime authority, local governments and industrial information contacts, provides background on the port area activities and the integrated plan and explains where to get information in an emergency.
- conduct a media briefing session to present the kit and explain what help is needed from the media during an emergency.
- implement other elements of a public education programme as described in the section below on "Building Community Awareness". Possibilities include:
  - a speaker's bureau for local civic groups, school assemblies, etc.
  - a hazardous substances advisory committee
  - media coverage of drills, training activities, presentations to local officials, etc.
  - port tours
  - special symposia on chemicals, their benefits and risks.
- periodically review and strive to improve the state of public education and community awareness programmes.

#### **Results of experience:**

In a co-operative environment, one company embraced the media as partners in emergency response planning, resulting in higher quality communications during emergencies and improved coverage at other times. This may not be possible in all localities.

Several communities have used fire service and industrial personnel to give instruction at a course on "Media Safety at the Emergency Scene", to enhance the safety of media representatives, inform them about operational procedures and establish working relationships. This type of course must have the support of assignment editors and be repeated frequently, as reporter turnover can be high.

Port and plant newspaper articles and other types of communication are important to ensure that port services and facilities and industrial employees are aware of and support accident preparedness efforts.

### **5. BUILDING COMMUNITY AWARENESS**

#### **5.1 The need for and the right of the local community to know about hazardous installations**

Citizens in local communities have expressed concern that potentially hazardous substances which could affect their health and environmental safety may be produced or used in their community. These citizens want to know if these substances are present; their concern is often termed the "right to know".

In addition they need to be informed about potential hazards of installations in order to understand why an emergency plan has been established, how it works and what actions they are expected to take in case of emergency.

Such principles are embodied in many regulations or recommendations such as the "Guidelines for World Industry" set forth by the International Chamber of Commerce (ICC). In particular these state that:

- industry has its particular environmental responsibilities in terms of such factors as plant location and design, process selection and product design, environmental pollution, harmful radiation, vibration and noise controls, waste disposal, occupational health and safety aspects and long-range planning.
- the wide range and complexity of problems raised by environmental protection measures calls for close and meaningful contact between industry and government - locally, nationally and internationally - in the search for the most appropriate solutions. This consultation should include review of the legislative and regulatory frameworks and their content.
- industry has a responsibility to provide public authorities with available relevant information about emissions, effluents, wastes and other environmental nuisances, including potential adverse health and environmental impacts.
- when siting and designing its installations, industry should be prepared to provide information on steps it is taking to protect the local environment and meet safety requirements. In any public debate on issues such as siting, industry should be given an adequate opportunity to state its case. The aim must be to reach solutions mutually acceptable to industry, the relevant authorities and the community.
- industry and public authorities should jointly work out contingency plans to deal with pollution emergencies and accidents. In this regard industry should inform the relevant authorities about the known and significant hazards of its operations, so as to enable them to act quickly and properly.
- industry should provide input to balanced and informed public discussion of environmental problems and should support efforts to place in proper perspective the comparative significance of industrial and non-industrial sources of pollution.
- when developing and implementing environmental protection programmes, industry should take into account the opinions of the general public, scientific bodies and other concerned organizations and, where appropriate, take the lead in raising the level of awareness and understanding of these programmes.

It can certainly be said that these seven principles apply just as much to port installations and to all those concerned with shipping in ports, in respect of the requirement for them to co-operate with the port/maritime authority and other local authorities, as to the industrial facilities for which they were first set out. The special hazards associated with port areas have been set out earlier in the Foreword and Introduction to this document and will not be repeated here in detail. However it is perhaps worth drawing attention specially to the handling in bulk by many ports of sizeable quantities of hydrocarbons, chemicals and liquefied petroleum gas; which, in case of accidents, could result in very large emergency situations, including spills at sea and the release of gas clouds which could severely affect both the population and ecologically sensitive areas. This alone would justify the right of the local community to be informed of the risks and of the plans for dealing with emergencies.

Industry in general supports the ICC Guidelines. Industry leaders agree that, for facilities which produce, use, store and transport hazardous substances, managers have a responsibility to provide information on these substances which responds to the needs and requests of emergency responders, health personnel and the general public. Industry may have special commercial information, such as process information or formula compositions, which may be a trade secret and which must be respected and protected. But this protection should not prevent the disclosure of information relevant to public health and safety.

For many potentially hazardous substances there exist various sources of information, such as companies' Material Safety Data Sheets (MSDSs), the Environmental and Health Criteria Documents or Safety Guides of the International Programme on Chemical Safety (IPCS) or the Data Profiles of UNEP's International Register of Potentially Toxic Chemicals (UNEP/IRPTC). These describe the substance, its hazards and how to deal with these hazards in case of need. They are practical and consistent means for Co-ordinating Groups throughout the world to obtain data concerning specific potentially hazardous substances in their local areas. For substances not covered by such sources, industry can usually supply equivalent information if necessary.

With regard to port areas, the Recommendations prepared by the UN Expert Committee on the Transport of Dangerous Goods (the "Orange Book") and the International Maritime Dangerous Goods Code (IMDG) provide essential information under the following hazard classification:

- Class 1: Explosives
- Class 2: Gases, compressed, liquefied or dissolved under pressure
- Class 3: Flammable liquids
- Class 4: Flammable solids or substances
- Class 5: Oxidizing substances and organic peroxides
- Class 6: Toxic and infectious substances
- Class 7: Radioactive materials
- Class 8: Corrosives
- Class 9: Miscellaneous dangerous products and substances which are not covered by other classes.

Other sources of information concerning hazardous substances in port areas are included in Annex 10.

## **5.2 What and how to communicate to build community awareness**

Dealing with the local community is the very real form of environmental stewardship. The community in which a port is operating is as much a part of the environment as the air and water. Community relations is an important management function that can contribute greatly to both short-term and long-term success of port operations. Establishment of good relations with key members of the community is vital in preparing for possible emergencies but its value goes far beyond that. Good community relations can also be invaluable in maintaining the public's support for the port and its facilities.

A fenced-in industrial plant or port area can look mysterious and threatening to a community. However, if local people become familiar with those who run the port area and its facilities and come to perceive them as normal, caring human beings, then much of their fear can be dissipated. It is easier to accept people in an open relationship, working side by side on a regular basis to resolve local issues. Much of the mystery disappears when people know what goes on in the port area and that it has a good safety plan and safety record.

No one can describe the activities necessary for a local awareness programme that will fit every port area in every country. What is practical and effective will depend on the local situation. The following list of ideas and suggestions may apply to any situation. Some of the ideas have been used by industry managers, local authorities or community leaders for a long time; others are new. It is important, however, that every port installation, port/maritime authority or community leader give consideration to the community and maintain the relationships which provide continued two-way communication.

*Installation managers, port/maritime authorities or community leaders who participate wholeheartedly in establishing and implementing APELL should consider the following points in building community awareness. NOTE: In many port situations, it will be appropriate for the port/maritime authority to take the initiative in establishing good community relations; however it should be borne in*

*mind that this work can and should be shared with other stakeholders in the port area.*

- **define the local community concerned:**

- geographical or administrative boundaries
- governing bodies affecting the operations
- influential organizations (civic, religious, educational, etc.)
- major media (newspapers, radio/TV stations, local speakers, town meetings, etc.)
- concerns of local residents

- **inventory existing local community contacts:**

- clubs and associations (including Chambers of Commerce)
- elected officials
- prominent civic leaders
- local fire officials
- school administration
- industry contacts

- **contact other industrial facilities to co-ordinate community affairs activities:**

- establish preliminary contact with other port users and operators
- consult state, regional or local associations
- form a local coalition for external outreach
- assign responsibilities among participants
- get each port user and operator to handle a portion of the outreach efforts
- form a network with other port users and operators.

- **plan an initial meeting of the APELL Co-ordinating Group:**

- consider including a representative from the local news media management in the Co-ordinating Group
- assign responsibilities among port facility representatives for contacting local community leaders as potential participants
- plan the meeting - prepare and distribute a draft agenda
- assign a port facility co-chair responsibility for the initial meeting

- **develop fact sheets or kits on each port facility operation:**

- size of facility (employees/square metres, etc.)
- products (keyed to consumer end-uses and exports)
- general description of operations (including risks and steps taken to minimise them)
- safety record
- environmental protection programmes and clean-up efforts
- hazard information (converted into layman's terms)
- on-site emergency plan
- information on worker safety training programmes
- specific contributions to the local community
- funds spent locally on supplies, materials and services
- funds granted to public services (e.g. housing, health services, schools, etc.)
- photos/films of plant presented in an easily understandable way
- organise the fact sheet and other resources into a media/visitor file.

- **develop fact sheets on community preparedness:**

- population within defined community boundary
- special population groups (schools, nursing homes, etc.
- community emergency response capabilities
- community emergency response plans
- emergency response equipment available
- health facilities.
- **assign responsibilities for communication tasks:**
  - consider outside assistance
  - select someone as spokesperson who is generally available to and known by the public, including during emergencies
  - consider and develop communications skills
  - involve locally prominent and active employees.
- **look for communications opportunities:**
  - identify and seek appropriate audiences within the local area
  - participate in all Co-ordinating Group communications efforts.
- **select methods of communication appropriate for local circumstances, e.g.:**
  - fact sheets or brochures
  - slide/speech presentations
  - small group meetings (elected officials, local regulators, etc.
  - direct mail (correspondence with local authorities and leaders)
  - business and professional associations' publicity efforts on industry and professional activities in the area, region and beyond
  - community newsletters and oral communications
  - publications and meetings for current or retired employees
  - news releases
  - port tours
  - community "open houses"
  - advertising
  - educational activities (visiting schools, providing seasonal employment for pupils, etc.)
- **get outside help**

Various organizations can provide services that will ease the burden on authorities and installations.
- **organizations that can help include:**
  - the authority's or installation's public relations or community affairs departments, where these exist
  - local or national industry associations
  - other similar local industrial plants or installations
  - Chambers of Commerce
  - public relations consulting firms
  - other consulting firms
  - community and religious leaders
- **services these organizations can provide:**
  - developing fact sheets

- developing a community relations plan
  - providing communications support (speechwriting, news releases, etc.)
  - converting technical hazard information into general communications for external audiences
  - developing a media kit on the integrated port emergency response plan
  - management training for authorities/leaders in dealing with the public and the media
  - preparations for staging tours and "open houses".
- **port/maritime authorities and port installations also have special communications responsibilities towards their employees:**
- explain to each employee about the APELL process and the installation's role in it
  - emphasize the importance management places on attaining and maintaining local awareness and emergency preparedness
  - reinforce the importance of the APELL process with articles in in-house newsletters, messages on bulletin boards, in-house awards, etc.

Similarly local authorities outside the port area should also explain to their own employees the APELL process and the roles of emergency services, etc.

## **6. ESTABLISHING A TIMETABLE TO IMPLEMENT THE APELL PROCESS**

Interest and co-operation on the part of the port/maritime authority, port installation managers and local officials are required before the APELL process can really begin. The preliminary steps leading to the formation of the Co-ordinating Group will take more or less time according to local circumstances. But establishment of a sequence of events and a timetable for accomplishing these is important. The timing itself will vary from port area to port area and is not so important but the practice of establishing practical target dates is very important for achievement of the goal.

Here is an example of an event schedule of the major steps in implementing the APELL process.

APELL for Port Areas distributed to port/maritime authority, installation managers and other local authorities.

- |           |   |
|-----------|---|
| Month 1   | Someone, most probably the port/maritime authority, takes the initiative to start the APELL process. Special efforts are made to notify important individuals or officials who may not wish to participate personally in APELL process development but who should know what is going on.  |
| Month 2   | Key people from the port/maritime authority, port installations, other local authorities and the community agree to take part in the APELL process. They meet informally to identify mutual concerns, to get to know and understand each other's preoccupations and to identify needs. The general approach to developing the integrated plan is agreed by consensus.   |
| Month 3   | <p>The key people form the Co-ordinating Group by:</p> <ul style="list-style-type: none"><li>- electing a leader(s)</li><li>- inviting others to join the Co-ordinating Group</li><li>- identifying agendas</li><li>- organising and assigning work.</li></ul>  |
| Month 4/5 | <p>Establish sub-committees to conduct preliminary activities:</p> <ul style="list-style-type: none"><li>- identify, collect and review existing plans (from the port/maritime authority, port installations and the surrounding local authority areas)</li><li>- identify, collect and review existing response procedures (for the port area and installations and the surrounding community)</li><li>- assess existing response capabilities (equipment, trained personnel)</li><li>- conduct a hazard analysis to identify hazards in and around the port area</li><li>- begin to prepare a community outreach plan</li><li>- assess the potential risk of natural disasters and transport accidents and include these in the planning process if necessary</li></ul> |
| Month 6   | Reports from all subcommittees, decisions on which hazards to investigate further for planning purposes.  |

Month 7	More detailed risk analysis completed for higher priority hazards: <ul style="list-style-type: none"><li>- identify vulnerable zone and population at risk</li><li>- estimate probability of an event occurring</li><li>- estimate seriousness of potential consequences to people and the environment generally.</li></ul>
Months 8-10	Begin planning: <ul style="list-style-type: none"><li>- identify what equipment is needed for response</li><li>- identify what training is needed for responders</li><li>- identify evacuation routes and shelters</li><li>- develop public warning systems</li></ul>
Months 10-12	Write a draft plan.
Months 13-16	Develop methods (table-top and full field) to test the draft plan and conduct exercises.
Months 17-18	Revise the draft plan to reflect the results of the exercises.
Months 19-20	Complete the plan and commit it to writing.
Months 21-22	Secure approval of the plan by all appropriate port and other local authorities.
Month 23	Prepare and conduct a comprehensive test drill of the integrated plan.
Month 24	Develop the means to communicate with the public about the plan.
ANNUALLY:	Review, test, update.
ONGOING:	<ul style="list-style-type: none"><li>- revise and develop responders' standard operating procedures to coincide with the provisions of the plan.</li><li>- secure the necessary equipment</li><li>- provide appropriate training for responders</li><li>- continue dialogue with local citizens to ensure they are informed. It will be necessary to set up an appropriate monitoring procedure for following up the process of implementation and identifying bottlenecks and delays as they arise. Annex 6 gives a schematic version of a possible APELL process status report.</li></ul>

## **APELL FOR PORT AREAS**

### **7.1 ANNEX 1**

#### **TYPICAL COMPONENTS OF A PORT AREA EMERGENCY RESPONSE PLAN**

##### **Port Emergency Organizational Needs**

- designated person in charge/alternates
- linkages and co-ordination between port and maritime authorities, if different
- location of Port Emergency Response Centre
- proper communications with the Marine Rescue Co-ordination Centre
- list of functions of each key individual
- list of telephone numbers (office and home) for key people / alternates.

##### **Port Risk Evaluation**

- quantity of hazardous substances
- location of hazardous substances - NOTE: oil, gas, chemical and other specialised terminals and dangerous goods area
- properties of each hazardous substance (MSDS sheets and IMDG code)
- location of isolation valves
- special firefighting procedures, if any
- special handling requirements.

##### **Area Risk Evaluation**

- evaluate existing procedures and modify or establish new ones as required
- establish procedures for notification of spills in port waters
- establish procedures for notification of emergencies with or on board ships
- interrelationship of port facilities with hazardous industrial facilities in the neighbourhood
- nearby population and residential centres
- contacts (names, telephone numbers) at other industrial facilities
- existing procedures for notification of hazardous substances releases at other local industrial facilities.

##### **Notification Procedures and Communication Systems**

- central reporting office (Marine Rescue Co-ordination Centre, Vessel Traffic Services, Harbourmaster's Office, Port Emergency Response Centre)
- alarm systems
- names and telephone numbers (with alternates)
  - plant managements
  - local officials and response agencies
  - neighbouring industrial facilities
  - nearby residents - ensure criteria developed for public contact
- communication equipment (radios, hotlines, etc.)
- designated person for media contacts
- procedure for notifying families of injured employees

### **Emergency Equipment and Facilities**

- specialized craft: salvage and towing vessels; rescue boats; anti-pollution boats
- small craft launching and mooring facilities
- helicopters - availability, landing sites and refueling capability
- equipment for combating pollution, e.g. booms, skimmers, transfer pumps, vacuum trucks, absorbents, dispersants, etc.
- fire-fighting equipment
- local or regional weather forecasting office
- emergency medical supplies
- toxic gas detectors
- wind direction/speed indicators
- self-contained breathing apparatus
- protective clothing
- other on-site equipment to be specified according to local conditions
- containment capabilities and waste disposal arrangements

### **Procedure for Returning to Normal Operations**

- initiation by Overall On-Site Commander
- designated Emergency Centre to inform all notifiable contacts within the port area to stand down
- lines of communication with notifiable contacts outside the port area.

### **Training and Drills**

- should focus on the following specific topics:
  - possible scenarios for accidents involving hazardous substances, including combating of oil, gas and chemical releases
  - passenger and crew evacuation from ships involved in or adjacent to an accident or incident
  - other accidents on board ship
  - evacuation of personnel from port area and surrounding areas
- knowledge of chemicals (properties, toxicity, etc.)
- procedures for reporting emergencies
- knowledge of alarm systems
- location and use of firefighting equipment
- location and use of protective equipment (respirators, air cylinders, protective clothing, etc.)
- decontamination procedures for protective clothing and equipment
- evacuation procedures
- frequent, documented, simulated emergencies

### **Regular Tests of Emergency Organization / Procedures**

- simulated emergencies
- alarm systems (tests should be frequent and documented)
- frequent tests of firefighting and other response equipment
- test communication systems
- evacuation practice
- ongoing emergency preparedness committee

### **Plan Updates**

- annual or more frequently if needed

- reflect results of drills and tests

### **Emergency Response Procedures**

- activation of the plan
- definition of command authority
- communications
- transfer from one planning level to another
- co-ordinated application of land and maritime equipment and other resources
- evacuation or safe haven
- medical (including handling of multiple injuries and possible chemical contamination)
- special procedures for toxic gas releases (chlorine, etc.)
- individual facility emergency procedures
- natural disaster procedures (floods, earthquakes, hurricanes)
- utility failure procedures
- bomb threat procedures
- deactivation of the plan

### **Detailed Operating Manuals (for each port facility or operating unit)**

- ship emergency plan, if applicable
- start-up / shut-down emergency procedures
- analysis of potential incidents
- emergency response and action to be taken for each incident.

## **APELL FOR PORT AREAS**

### **7.1 ANNEX 1A**

#### **EXAMPLE OF A MARINE POLLUTION INCIDENT ALERT AND REPORT**

The following example taken from the Port Emergency Plan of Trois Rivières, Canada illustrates how one port has developed guidance material for inclusion in its port area marine emergency plan. The acronyms CG and DoE respectively refer to Coast Guard and the Department of the Environment. In sections 1.1 to 1.5 where Annex is mentioned, it refers to separate annexes that exist for the Trois Rivières Plan. The only annex included in this example is the one for the Marine Pollution Report.

#### **1. MARINE POLLUTION**

##### **1.1 THE ALERT**

A witness or the ship's crew alerts:

Regional Traffic Control Centre (Coast Guard)	
Public Safety Authorities in local community	
Port Authority	
Ship's agent	Annex

The Coast Guard alerts the following organizations:

Port Administrator on duty	Annex
CG, Operations Centre	
CG, Maritime Emergencies	Annex
CG, Safety of Shipping	Annex
CG, Public Affairs	
Department of the Environment	

The Port Authority alerts:

Port Director	Annex
Harbour Master	Annex
Technical Services Administrator	Annex
Finance and Personnel Administrator	Annex
Projects and Development Administrator	Annex
Situation Centre of National Ports Administration	Annex
Operator of the terminal involved	Annex
Ship's Agent	Annex
Local Tugs	Annex
Pilotage Service	Annex
Local Town	Annex
Appointed response organization	Annex
Media	Annex

## 1.2 IMMEDIATE ACTIONS & RESPONSIBILITIES

Action	Responsibility
Determine the source of the spill and stop it	Port
Evaluate the extent of the spill (Annex)	DoE & Port
Set up the Mobile Command Post and call together all response operators (Annex)	DoE & Port
Determine the wind direction	DoE & Port
Protect response operators from harmful products (Annex)	All
Protect sensitive areas	Response operators & CG
Inform adjacent ships and their agents (Annex)	Port
Establish emergency communications (Annex)	All
Activate the Port Emergency Control Centre (Annex)	Port
Keep a diary of events (Annex)	Port & CG
Complete a pollution report (Annex)	Port & DoE
Complete a situation report (Annex)	Port & DoE

## 1.3 HEALTH AND WELFARE MEASURES

Evaluate the toxicity of the pollutant (Annex)	DoE
Evaluate risk to population and fauna	DoE
Set up an emergency reception centre (Annex)	Port
Notify appropriate hospital(s)	

## 1.4 PUBLIC INFORMATION

Set up a Press Office (Annex)	Port
Prepare Press Conferences	Port & CG
Write Press Releases	Port & CG
Inform the media and local authorities	Port
Photograph or film the events	Port & Press

## 1.5 FINAL MEASURES

Recover spilt product	Response operator & CG
Evaluate contaminated areas	DoE
Evaluate cause of the spill	DoE & CG & Port
Restore site	Response operator
Remove toxic matter	Response operator
Transport and eliminate residues	Specialist company
Dispose of wastes	Port & others
Recover emergency equipment	Port & others
Re-establish access by sea	Port & CG
Question witnesses, completion of enquiry	DoE & CG
Complete maritime accident report (Annex)	Port
Complete situation report (Annex)	Port & CG
Hold a meeting of all response parties	Port

## 1.6 STANDARD OPERATING PROCEDURE

The Port Administrator on duty :

- evaluates the situation
- determines the extent of the damage
- informs the Director
- alerts the Coast Guard , Dept of the Environment etc.
- keeps a diary of facts
- alerts resource organizations
- determines the command organization
- prepares a situation report
- coordinates logistics
- monitors the operations
- holds a meeting with the Regional Environmental Emergency Team (REET) and Dept. of Transport, Marine Group
- prepares situation reports

## 1.7 CRITERIA FOR CALLING AN ALERT

The administrator on duty must call an alert following any marine pollution incident which:

- poses a threat to public health
- affects the marine biological environment
- involves a ship moored at a quay or on a mooring within the limits of the port
- is caused by equipment in the port
- involves journalists from the press, radio or local, regional or national television
- requires emergency action or response plans at a regional, national or international level
- requires cleaning-up works to be carried out by the polluter
- may have political repercussions
- meets the criteria of levels 1, 2 or 3 in the attached table 2 and
- is such that response level is insufficient to cope with the potential impact or the seriousness of the spill.

TABLE: CRITERIA FOR EVALUATION OF THE SERIOUSNESS OF THE SPILL

Criteria	Level 0	Level 1	Level 2	Level 3
Impact on environment	none to minor	minor to moderate	moderate	major
chemical properties	flammable pH 6-7 inert	flashpoint 23°C pH 4-6 or 8-10	flashpoint 18°C pH 2-4 or 10-12	flashpoint 18°C explosives spontaneous combustion
Amount spilt 7-9 bbls/ton	LESS than 1 ton	1 to 10 tons	10 to 1,000 tons	1,000 to 10,000 tons
Resources required	minimum	on-site evaluation sampling cleaning	on-site personnel monitoring & local contractors	24 hours monitoring specialized resources
Media	none	local press	press, radio local TV	all national media
Political Interest	Local Municipal	Municipal Provincial	Provincial & Federal	Federal International

TABLE 1

## 1.8 PROCEDURE FOR REPORTING MARINE POLLUTION INCIDENTS

When he has been alerted to a marine pollution incident, the Administrator on duty must first make a complete on-site evaluation. He will make an incident report as soon as possible following the attached guide and completing the pollution report in the attached annex.

- date, time and place of the incident and prevailing weather conditions
- name of ship, official number, call sign, flag state, port of registry, tonnage, length, type of construction, draught; or, if no ship is implicated, the source of the pollution and its cause
- approximate quantity of pollutant spilt and its composition
- damage to the ship and condition of its pumping system
- name and address of the owner, agent, insurer (P & I Insurance Club) and salvor (salvage association)
- intentions of the owner
- managing bodies and resources required
- equipment required and any requests for additional equipment
- site of the nearest Coast Guard depot
- name of the appointed responder
- all means of assistance required from the CG, such as a Response Order.
- impact on the environment and any danger to the population (water supply)
- classification of the spill according to the criteria in table 1.
- presence of media and political interest
- local efforts and level of involvement of the CG in the local waters.

Port Authority

Port Administrator on Duty

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Period (1200) \_\_\_\_\_ to (1200) \_\_\_\_\_

Name: \_\_\_\_\_

Telephone Numbers

1. Pager \_\_\_\_\_
2. Home \_\_\_\_\_
3. Cellular phone \_\_\_\_\_
4. Offices \_\_\_\_\_

Instructions:

Give details of calling order

---

---

Office hours: 8.00 a.m. to 4 p.m. from Monday to Friday  
except on holidays

Distribution:

Port Director  
Local community Public Safety Authorities  
Coast Guard, maritime emergencies  
Ports Police

**RESPONSE ORDER**

**TO:**

**FROM:** Commissioner, Coast Guard

**DESCRIPTION OF INCIDENT**

Pursuant to sections XXX and XXX of the [enabling legislation], I, the undersigned, for and on behalf of the Minister of Transport, direct you to take or cause to be taken such measures as you deem necessary to prevent, repair, remedy or minimize pollution damage from the above mentioned ship, including measures in anticipation of a discharge of a pollutant from the said ship.

Without restricting the generality of the foregoing such measures include the removal or destruction of the said ship and its contents, as necessary, and the sale or other disposition of the said ship and its contents.

To that end you may:

engage or cause to be engaged one or more contractors;

lease, hire secure or cause to be leased, hired or secured, any personnel, equipment or property of the Department of Transport or of any other person or party;

obtain any professional, technical or other advice and assistance as may be necessary.

---

Commissioner, Coast Guard

---

Date

## MARINE POLLUTION REPORT

No. \_\_\_\_\_

### 1. SERIOUSNESS OF INCIDENT

Minimal \_\_\_\_\_ Moderate \_\_\_\_\_ Major \_\_\_\_\_

Immediate danger \_\_\_\_\_

### 2. INITIAL INFORMATION

Name of ship	_____
Date and time	_____
Location / Berth	_____
Type of pollutant	_____
Colour of pollutant	_____
Source of pollutant	_____
Dimensions of slick	_____
Movement of slick	_____
Name of carrier	_____
Name of product	_____
Pressure	_____
Flow	_____
Quantity spilt	_____

### 3. DIAGRAM OF POLLUTED AREA

Attach a chart or sketch

#### 4. WITNESS

Name \_\_\_\_\_  
 Title \_\_\_\_\_  
 Address \_\_\_\_\_  
 Telephone \_\_\_\_\_  
 Evidence \_\_\_\_\_

#### 5. WEATHER & SEA CONDITIONS

Wind direction \_\_\_\_\_  
 Current direction \_\_\_\_\_  
 Air temperature \_\_\_\_\_  
 Wave height \_\_\_\_\_

#### 6. DETAILS OF SPILL

Time loading commenced \_\_\_\_\_ hour  
 Time spill commenced \_\_\_\_\_ hour  
 Time spill stopped \_\_\_\_\_ hour  
 Quantity spilt \_\_\_\_\_ liters, tonnes, cubic meters, gallons or barrels  
 Person in charge \_\_\_\_\_  
 Title \_\_\_\_\_  
 Were the drains blocked? \_\_\_\_\_  
 Ship/shore communications \_\_\_\_\_  
 Was pipework not in use shut off? \_\_\_\_\_  
 Oil level in bilge \_\_\_\_\_ metres or feet  
 When was bilge last pumped out? (see ship's Oil Record Book) \_\_\_\_\_  
 Did the ship's agent call out a clean-up contractor? \_\_\_\_\_  
 Which one? \_\_\_\_\_  
 At what time was the counter-pollution equipment deployed? \_\_\_\_\_ hour  
 At what time was a boom deployed and the pollution contained? \_\_\_\_\_ hour

7. SHIP'S DETAILS

Ship	_____	
Port of Registry	_____	
Call Sign	_____	
Official Number	_____	
Classification Society	_____	
Length	_____	
Beam	_____	
Draughtforward	_____	metres / feet
Draught aft	_____	metres / feet
Gross tonnage	_____	GRT (Gross Registered Tonnage)
Net tonnage	_____	NRT (Net Registered Tonnage)
Deadweight tonnage	_____	DWT
Date and time of arrival	_____	
Date and time of departure	_____	
Certificate of Inspection	_____	
Name of owner	_____	
Address	_____	
	_____	
Telephone and Fax	_____	
Agency	_____	
Address	_____	
	_____	
Telephone and Fax	_____	
Name of agent	_____	
Protection & Indemnity Association (P & I Club)	_____	
Local representative	_____	
	_____	
Address	_____	
	_____	
Telephone and Fax	_____	

8. RESPONSIBLE PARTIES

Captain	_____
Address	_____
	_____
Telephone	_____

9. PORT AUTHORITY

Representative \_\_\_\_\_  
Time of arrival on site \_\_\_\_\_ hour  
Photographs taken by \_\_\_\_\_

10. COAST GUARD

Surveyor \_\_\_\_\_  
Address \_\_\_\_\_  
Telephone \_\_\_\_\_  
Time of arrival on site \_\_\_\_\_ hour  
Number of samples taken \_\_\_\_\_

11. CLEAN-UP CONTRACTOR

Name \_\_\_\_\_  
Local foreman \_\_\_\_\_  
Time boom deployed \_\_\_\_\_ hour

12. DEPARTMENT OF THE ENVIRONMENT

Name \_\_\_\_\_  
Time of arrival \_\_\_\_\_ hour  
Number of samples taken \_\_\_\_\_

13. REPORT BY SHIP'S CAPTAIN

"The Captain must make a report" Art.102

\_\_\_\_\_  
\_\_\_\_\_

14. DESCRIPTION OF DAMAGE IN THE PORT

\_\_\_\_\_  
\_\_\_\_\_

15. DESCRIPTION OF DAMAGE TO THE ENVIRONMENT

\_\_\_\_\_  
\_\_\_\_\_

16. ANALYSIS OF PRINCIPAL FACTORS

\_\_\_\_\_  
\_\_\_\_\_

17. **CAUSES**

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18. **RECOMMENDATIONS**

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19. **PROSECUTION**

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## **APELL FOR PORT AREAS**

### **7.2 ANNEX 2**

#### **CRITERIA FOR ASSESSING LOCAL PREPAREDNESS**

##### **INTRODUCTION**

The criteria in this appendix represent a basis for assessing a regional or local hazardous substances emergency response preparedness programme. These criteria reflect the basic elements judged to be important for a successful programme and are applicable to port areas. The guidance on hazardous substances emergencies arising from shipping activities is referenced in Annex 10.

The criteria are separated into four categories, all of which are closely interrelated. These categories are hazards analysis, organizational structure, communications and resources.

##### **THE CRITERIA**

###### ***Hazards Analysis***

"Hazards Analysis" includes the procedures for determining the susceptibility or vulnerability of a geographical area to a hazardous substances release, for identifying potential sources of a hazardous substances release from fixed facilities that manufacture, process, or otherwise use, store, or dispose of substances that are generally considered hazardous in an unprotected environment. This also includes an analysis of the potential or probable hazard of transporting hazardous substances through a particular area.

A hazards analysis is generally considered to consist of identification of potential hazards, determination of the vulnerability of an area as a result of the existing hazards, and an assessment of the risk of a hazardous substances release or spill.

The following criteria may assist in assessing a hazards analysis:

- Has a hazards analysis been completed for the area? If one exists, when was it last updated?
- Does the hazards analysis include hazards arising from ship operations? Does it make use of ship inspection reports? Does it cover safety of navigation for ships entering and manoeuvring within the port area?
- Does the hazards analysis include the location, quantity, and types of hazardous substances that are manufactured, processed, used, disposed, or stored within the port area?
- Does it include the routes by which the hazardous substances are transported within the vicinity of the port?
- Have areas of public health concern been identified?
- Have sensitive environmental areas been identified?
- Have historical data on spill incidents been collected and evaluated?
- Have the levels of vulnerability and probable locations of hazardous substances incidents been identified?
- Are environmentally sensitive areas and population centres considered in analyzing the hazards of the transportation routes and fixed facilities?

### ***Organizational Structure***

"Organization" refers to the organizational structure in place for responding to emergencies. This structure will, of course, vary considerably from locality to locality.

There are two basic types of organizations involved in emergency response operations. The first is involved in the planning and policy decision process. The second is the operational response group that functions within the precepts set forth in the local plan. Realizing that situations vary from locality to locality and that emergency planning for the regional and local level may involve the preparation of multiple situation plans or development of a single comprehensive plan, the criteria should be broadly based and designed to detect a potential flaw that would then precipitate a more detailed review.

- ☐ Are the following organizations included in the overall hazardous substances emergency preparedness activities?
  - Port/Maritime Authority, Marine Emergency Response
  - Port stakeholders, e.g. Port Installation Managers Organizations
  - Health organizations (including mental health organizations)
  - Public safety: fire; police; health and safety (including occupational safety and health); and other responders
  - Government authorities involved in maritime and port affairs, Navy, Coastguard
  - Transportation
  - Emergency management/response planning
  - Environmental organizations
  - Natural resources agencies (including trustee agencies)
  - Environmental agencies with responsibilities for: fire; health; water quality; air quality; and consumer safety
  - Education system (in general): public education; and public information
  - Private sector interface: trade organizations; and industry officials
  - Labour organizations
  - Press, radio and television
- ☐ Have each organization's authorities, responsibilities, and capabilities been determined for pre-response (planning and prevention), response (implementing the plan during an incident), and post-response (clean-up and restoration) activities?
- ☐ Has one organization been given the command and control responsibility for these three phases of emergency response?
- ☐ Has a "chain of command" been established for response control through all levels of operation?
- ☐ Are the roles, relationships, and co-ordination procedures between government and non-government (private entities) delineated? Are they understood by all affected parties? How are they instituted (written, verbal)?
- ☐ Are clear inter-relationships, and co-ordination procedures between government and non-government (private entities) delineated? Are they understood by all affected parties? How are they instituted (written, verbal)?
- ☐ Are the agencies or departments that provide technical guidance during a response the same

agencies or departments that provide technical guidance in non-emergency situations? In other words, does the organizational structure vary with the type of situation to be addressed?

- ☐ Does the organizational structure provide a mechanism to meet regularly for planning and co-ordination?
- ☐ Does the organizational structure provide a mechanism for regular testing of the response organization?
- ☐ Has a simulation exercise been conducted within the last year to test the organizational structure?
- ☐ Does the organizational structure provide a mechanism to review the activities conducted during a response or exercise to correct shortfalls?
- ☐ Have any limitations within the organizational structure been identified?
- ☐ Have trained and equipped incident commanders been identified?
- ☐ Has the authority for site decisions been vested in the incident commanders?
- ☐ Have the funding sources for a response been identified?
- ☐ How quickly can the response system be activated?

### ***Communication***

"Communication" means any form or forms of exchanging information or ideas for emergency response with other entities, either internal or external to the existing organizational structure.

#### **Co-ordination:**

- ☐ Have procedures been established for co-ordination of information during a response?
- ☐ Has one organization been designated to co-ordinate communications activities?
- ☐ Have radio frequencies been established to facilitate co-ordination between different organizations?

#### **Information Exchange:**

- ☐ Does a formal system exist for information sharing among agencies, organizations, and the private sector?
- ☐ Has a system been established to ensure that "lessons learned" are passed to the applicable organizations?

**Information Dissemination:**

- ☐ Has a system been identified to carry out public information/community relations activities?
- ☐ Has one organization or individual been designated to co-ordinate with or speak to the media concerning the release?
- ☐ Does a communications system/method exist to disseminate information to responders, affected public, etc.?
- ☐ Is this system available 24-hours per day?
- ☐ Have alternative systems/methods of communications been identified for use if the primary method fails?
- ☐ Does a mechanism exist to keep telephone rosters up-to-date?
- ☐ Are communications networks tested on a regular basis?

**Information Sources and Data Base Sharing:**

- ☐ Is a system available to provide responders with rapid information on the hazards of substances involved in an incident?
- ☐ Is this information available on a 24-hour basis? Is it available in computer software?
- ☐ Is a system in place to update the available information sources?

**Notification Procedures:**

- ☐ Have specific procedures for notification of a hazardous substances incident been developed? (NOTE: For maritime transport there are standard procedures for notification and reporting, e.g., MARPOL Pollution Report (POLREP))
- ☐ Are multiple notifications required by overlapping requirements (e.g., regional, country, local) does each have specific notification requirements?
- ☐ Does the initial notification system have a standardized list of information that is collected for each incident?
- ☐ Does a network exist for notifying and activating necessary response personnel?
- ☐ Has a central local or phone number been established for initial notification of an incident?
- ☐ Is the central location or phone number accessible on a 24-hour basis?

- ☐ Does the central location phone system have the ability to expand to a multiple line system during an emergency?

**Clearing-house Functions:**

- ☐ Has a central clearing-house for hazardous substances information been established with access by the public and private sector?

**Resources**

"Resources" mean the personnel, training, equipment, facilities, and other sources available for use in responding to hazardous substances emergencies. To the extent that the hazards analysis has identified the appropriate level of preparedness for the area, these criteria may be used in evaluating available resources of the jurisdiction undergoing review.

**Personnel:**

- ☐ Have the numbers of trained personnel available for hazardous substances been determined?
- ☐ Has the location of trained personnel available for hazardous substances been determined? Are these personnel located in areas identified in the hazards analysis as:
  - heavily populated;
  - high hazard areas - i.e., numbers of chemical (or other hazardous substances) production facilities in well-defined areas;
  - hazardous substances storage, disposal, and/or treatment facilities; and
  - transit routes?
- ☐ Are sufficient personnel available to maintain a given level of response capability identified as being required for the area?
- ☐ Has the availability of special technical expertise (Ships Masters, marine engineers, port operations staff, marine biologists, chemists, industrial hygienists, toxicologists, occupational health physicians, etc.) necessary for response been identified?
- ☐ Have limitations on the use of above personnel resources been identified?
- ☐ Do mutual aid agreements exist to facilitate support between organizations?

**Training:**

- ☐ Have the training needs for the regional/local area been identified?
- ☐ Are centralized response training facilities available?
- ☐ Is specialized training available covering topics such as:
  - organizational structures for response actions (i.e., authorities and co-ordination);
  - response actions
  - equipment selection, use, and maintenance; and
  - safety and first aid?
- ☐ Does the organizational structure provide training and cross training for or between organizations in the response mechanism?
- ☐ Does an organized training programme for all involved response personnel exist? Has one group been designated to co-ordinate this training?
- ☐ Have training standards or criteria been established for a given level of response capability? Is any certification provided upon completion of the training?
- ☐ Has the level of training available been matched to the responsibilities or capabilities of the personnel being trained?
- ☐ Does a system exist for evaluating the effectiveness of training?
- ☐ Does the training programme provide for "refresher courses" or some other method to ensure that personnel remain up-to-date in their level of expertise?
- ☐ Have resources and organizations available to provide training been identified?
- ☐ Have standardized curricula been established to facilitate consistent training?

**Equipment (Port and Maritime):**

- ☐ Have response equipment requirements been identified for a given level of response capability?
- ☐ Are the following types of equipment available?
  - personal protective equipment including compressed air tanks and refill capability
  - first aid and other medical emergency equipment
  - emergency vehicles available for hazardous substances response
  - sampling equipment (air, water, soil, etc.) and other monitoring devices (e.g., explosivity meters, oxygen meters)
  - analytical equipment or facilities available for sample analyses
  - fire-fighting equipment/other equipment and material (bulldozers, boats, helicopters, vacuum trucks, tank trucks, chemical retardants, foam)

- ☐ Are sufficient quantities of each type of equipment available on a sustained basis?
- ☐ Is all available equipment capable of operating in the local environmental conditions?
- ☐ Are up-to-date equipment lists maintained? Are they computerized?
- ☐ Are equipment lists available to all responders?
- ☐ Are these lists broken down into the various types of equipment (e.g., protective clothing, monitoring instruments, medical supplies, transportation equipment)?
- ☐ Is there a mechanism to ensure that the lists are kept up-to-date?
- ☐ Have procedures necessary to obtain equipment on a 24-hour basis been identified?
- ☐ Does a programme exist to carry out required maintenance of equipment?
- ☐ Are there maintenance and repair records for each piece of equipment?
- ☐ Have mutual aid agreements been established for the use of specialized response equipment?
- ☐ Is sufficient communications equipment available for notifying personnel or to transmit information?  
Is the equipment of various participating responders compatible?
- ☐ Is transportation equipment available for moving equipment rapidly to the scene of an incident, and its state of readiness assured?

**Facilities:**

- ☐ Have facilities capable of performing rapid chemical analyses been identified?
- ☐ Do adequate facilities exist for storage and cleaning/reconditioning of response equipment?
- ☐ Have locations or facilities been identified for the storage, treatment, recycling, and disposal of wastes resulting from a release?
- ☐ Do adequate facilities exist for carrying out training programmes?
- ☐ Do facilities exist that are capable of providing medical treatment to persons injured by hazardous substances exposure?
- ☐ Have facilities and procedures been identified for housing persons requiring evacuation or temporary relocation as a result of an incident?

- ☐ Have facilities been identified that are suitable for command centres?
- ☐ Are adequate facilities available to house and feed response personnel?

## **APELL FOR PORT AREAS**

### **7.3 ANNEX 3**

#### **EMERGENCY RESPONSE PLANNING ELEMENTS**

These planning elements can be used for various purposes:

- Each participant can review his or her existing plan to determine where work is needed relative to a co-ordinated response.
- The Co-ordinating Group can use this list to review any existing community plan for improvements or as a framework to develop a new integrated community plan where one does not exist.
- In areas where core elements do not exist or are minimal, the Co-ordinating Group can use this list in order to set priorities for developing core elements as a basic foundation for the APELL Process.

Review each item and evaluate its status in accordance with the key provided below.

#### **Organizational Responsibilities**

- Identify key participants and describe the role of each
- Identify by title the person in charge of emergency response
- Define relationships among key participants including who takes the lead for which actions
- Describe organizations outside the community that could be called upon for additional assistance
- Define the authority/responsibility interfaces between government, port authorities and other stakeholders
- Define the responsibilities of the Port and Maritime Authorities, where these are separate entities

#### **Risk Evaluation**

- Conduct risk evaluation for hazardous chemicals including petroleum products, natural disaster potential, unusual conditions in the port such as shoaling and presence of rocks, exceptionally strong currents, and other modes of transportation hazards in the port vicinity including rail, air, and highway
- Identify the types and locations of hazards the community can face
- Identify zones of impact and number of people at risk
- Classify severity of impact in accordance with the level of emergency response that will be needed

#### **Notification Procedures and Communication Systems**

- Identify and include in the plan existing procedures to report a maritime emergency
- Identify 24-hour notification means to first responder, e.g., telephone or in absence of reliable telephone system some other means such as beeper/radio
- Identify 24-hour notification means to officials who can provide direction and control to the response effort and who can authorize evacuation
- Describe communications systems and redundancy

- Describe the mutually agreed format and content for initial notification messages (to eliminate misunderstandings)
- Describe means for emergency responders to call for additional assistance
- Describe the means for notifying the public and identify, by title, the person responsible for notifying the public
- Describe the standard, pre-planned message formats and signals available for notifying the public
- Describe how the Co-ordinating Group will ensure that the public understands and responds to these signals.

### **Emergency Equipment and Facilities**

- Identify command posts for response group
- Describe facilities available including office space, communications, emergency supplies
- List the emergency equipment available in the Port/Maritime Authority and at the industrial facilities, police, fire, public works, health and disaster preparedness departments
- Describe the interface with medical facilities including current disaster plans, first aid stations, hospitals, clinics, ambulance services
- Describe hazardous substance monitoring equipment available
- List protective equipment (respirators, protective clothing, etc.) available
- List the written agreements that exist for mutual aid, specialized assistance, etc.

### **Assessment Capabilities**

- Identify who is responsible for determining potential or actual extent of hazard for each type of emergency (natural, chemical, etc.)
- Describe the procedures to be used to assess the extent of hazard
- Describe the capabilities of participants on assessment teams
- Describe the monitoring equipment available to assess the hazard
- Identify experienced personal resources that may be called upon to augment local area resources

### **Protective Action Procedures**

- Identify by title the person who can authorize evacuation or sheltering
- Describe the procedure to be used to determine if protective actions are required
- Identify the group(s) responsible for conducting evacuation including notification, transport, traffic control, access control and verification of evacuation
- Describe the arrangements for special facilities (i.e., schools, nursing homes, handicapped, etc.)
- Describe the arrangements in place for reception centres/shelters for evacuees
- Describe the method for determining when protective actions are no longer needed

### **Public Education and Information**

- Identify by title the principal spokesperson for each key group who will communicate with the media and the public during an emergency
- Describe the method for disseminating information to the media and public during an emergency including points of contact and briefing locations
- Describe the public education and community awareness programme to be conducted periodically in order to ensure that the public fully understands how to respond to an emergency situation.

### **Post-emergency Procedures**

- Identify by title the person responsible for determining that the emergency is over and for authorizing re-entry
- Describe methods to ensure that unauthorized entry will not occur
- Describe the method to be used to declare that the emergency is over
- Describe procedures to be used to return to normal including responsibility for clean-up
- Describe methods to continue monitoring an affected area
- Describe the method for investigating and documenting the emergency and evaluating the response

### **Training and Drills**

- Identify the key participants who must be trained, who will train them and how and who will ensure that key participants can respond properly in an emergency
- Identify by title the person in each group responsible for such training
- Describe annual training programmes
- Describe the drill schedule including aspects requiring periodic drills
- Describe the training available to first responders in the use of protective equipment
- Describe how the plan is tested periodically
- Describe frequency and extent of communications tests
- Describe frequency and extent of public notification tests, and evaluation of its effectiveness
- Describe the frequency and extent of training and update briefings on hazardous substances for first responders

### **Programme Maintenance**

- Identify by title the person responsible within each group for maintaining an updated plan
- Describe the method for an annual review and revision of the plan
- Describe the method for incorporating lessons learned from drills and tests into the plan.

## **APELL FOR PORT AREAS**

### **7.4 ANNEX 4**

#### **CHECKLIST FOR EVALUATION OF EMERGENCY RESPONSE PLAN**

The emergency plan must stand alone as a means to assess preparedness at the local level. The following questions are directed more towards evaluating the plan than towards determining the preparedness level of the entity which developed it. It is not sufficient to ask if there is a plan. It must be determined whether the plan which exists adequately addresses the needs of the community or entity for which the plan was developed.

- Have the levels of vulnerability and probable locations of hazardous substances incidents been identified?
- Have areas of public health concern been identified?
- Have sensitive environmental areas been identified?
- Does the plan include information on the chemical and physical properties of the hazardous substances identified in the area, plus appropriate safety and response information and hazard mitigation techniques? (NOTE: it is not necessary to include all this information in the plan; however the plan should indicate where such information is available)
- Have all appropriate groups and organizations been involved in the process of developing and reviewing the plan?
- Have all the appropriate groups and organizations approved the plan?
- Has the organizational structure and notification list defined in the plan been reviewed within the last six months?
- Has one group been identified in the plan as having command and control responsibility for the pre-response, response and post-response phases?
- Does the organizational structure outlined in the plan provide a mechanism to review the activities conducted during a response or exercise to correct shortfalls?
- Does the plan include a communications system to disseminate information to responders, affected public, etc.?
- Has a system been identified in the plan to carry out public information / community relations activities?
- Has a central location or phone number been included in the plan for initial notification of an incident?
- Have trained and equipped incident commanders been identified in the plan?

# **APELL FOR PORT AREAS**

## **7.5 ANNEX 5**

### **EMERGENCY RESPONSE PLAN EVALUATION MATRIX <sup>1</sup>**

	Government				Port						Other			
Plans Evaluated														
Planning Elements														
Organizational Responsibilities														
Risk Evaluation														
Notification Procedures and Communications Systems														
Core Elements in Place and Emergency Equipment and Facilities Readiness														
Assessment Capabilities														
Protective Action Procedures														
Public Education and Information														
Post-Emergency Procedures														
Training and Drills														
Programme Maintenance														

#### **KEY:**

- A - Acceptable
- B - Minimal work needed
- C - Substantial work needed
- N - Not applicable

<sup>1</sup> Annexes 7.1 and 7.6 present detailed information for evaluating each of the listed planning elements. Annexes 7.1 and 7.1A contain summaries of port emergency plans.

**EXAMPLE**

	Government				Port							Other					
Plans Evaluated	State A	Regional/provincial authority A	Local authority A	Local authority B	Port authority A	Port authority B	Port installation A	Port installation B				Red Cross	Hospital A	Hospital B	Ambulance Company	Industrial facility A	Industrial facility B
Planning Elements																	
Organizational Responsibilities	A				B	B	C	B				A	A	B	A	A	
Risk Evaluation	A				C	B	C	C				N	N	N	N	A	A
Notification Procedures and Communications Systems	A				B	B	B	C				B	B	B	A	B	B
Core Elements in Place and Emergency Equipment and Facilities Readiness	A				C	B	C	B				A	A	A	A	A	B
Assessment Capabilities	B				C	C	C	C				N	N	N	N	B	B
Protective Action Procedures	C				C	B	C	C				C	B	B	B	B	B
Public Education and Information	C				C	C	C	C				B	C	B	B	C	C
Post-Emergency Procedures	C				C	C	C	C				B	C	B	A	B	B
Training and Drills	B				B	C	C	B				B	B	B	A	B	B
Programme Maintenance	B				B	C	C	B				B	B	B	A	B	B

## APELL FOR PORT AREAS

### 7.6 ANNEX 6

#### APELL PROCESS STATUS REPORT - PORT AUTHORITIES

##### APELL PROCESS STATUS REPORT

<p>Port:.....</p> <p>Port installations included:.....</p> <p>Location(s) .....</p> <p>Recall of the APELL Implementation</p> <ul style="list-style-type: none"> <li>• Port authorities review of handbook.</li> <li>• Initiation of discussions with stakeholders.</li> <li>• The Co-ordinating Group completes draft of the integrated plan.</li> </ul> <p>Comments:</p>	<p>Status</p> <p><input type="checkbox"/> Have received the APELL Process Handbook (Date) .....</p> <p><input type="checkbox"/> Have completed my review on (date) .....</p> <p><input type="checkbox"/> Have initiated discussions on the APELL Process with stakeholders (give the list)</p> <p><input type="checkbox"/> A draft of the integrated community response plan was completed (date)</p> <p><input type="checkbox"/> The final integrated community response plan was completed on (date) and approved by government on (date)</p> <p><input type="checkbox"/> A comprehensive test of the integrated community emergency plan was successfully completed on (date) .....</p> <p>Participants included (check all that apply):</p> <p><input type="checkbox"/> Port installations</p> <p><input type="checkbox"/> Town/City</p> <p><input type="checkbox"/> Region/province</p> <p><input type="checkbox"/> Country</p> <p><input type="checkbox"/> Neighbouring industrial facilities</p> <p><input type="checkbox"/> Emergency response services</p> <p><input type="checkbox"/> Other .....</p> <p><input type="checkbox"/> Formal annual review of the integrated community emergency response plan was completed on (date) .....</p>
--	--

Date:.....

Signature of Co-ordinating Group Leader or Representative

The plan revisions were completed on .....

NOTE: Submit a copy of this report to the Co-ordinating Committee when each of the milestones has been completed.

## **APELL FOR PORT AREAS**

### **7.7 ANNEX 7**

#### **OFFICERS AND AGENCIES WITH EMERGENCY RESPONSIBILITIES**

- **Law enforcement**
  - Provincial/state representative
  - Navy representative
  - Army representative
  - Police chief
  - Port/maritime authority
  - Regulatory authority
- **Fire protection**
  - Port fire service (if any)
  - Local fire chief
  - Volunteer fire service chief
  - Provincial/state fire department
- **Communications**
  - Port Emergency Response Centre
  - Marine Rescue Co-ordinating Centre
  - Harbourmaster's office and/or Vessel Traffic Services
  - Civil defence
  - Navy
  - Army
  - Local and provincial police
  - Weather bureau
  - Media
- **Public works and utilities**
  - City and provincial engineers
  - Public works directorate
  - Public and private utilities
- **Health and medical services**
  - Port medical services
  - City and provincial health officers
  - Hospital managers
  - Community health service managers
  - Ambulance services
- **Welfare services**
  - City, provincial and state welfare facilities

- **Public information**
  - Mayor/City manager
  - Provincial executive
  - Public relations officers in various concerned organizations, particularly the port/maritime authority
  - Media
- **Hazardous substances assessment**
  - Port/maritime authority
  - Navy
  - Civil defence
  - Fire department
  - Environmental protection agency
  - Ministry of public works
  - Industry
  - Universities, research centres, etc.
- **Others**
  - Damage assessment officials
  - Transportation services
  - Legal services
  - Personnel and financial services.

## **APELL FOR PORT AREAS**

### **7.8 ANNEX 8**

#### **ISSUES TO BE ADDRESSED IN EMERGENCY PREPAREDNESS PLANNING**

As outlined in Section 3, the starting point for the APELL process is the formation of a Co-ordinating Group and the development of its organised structure. The Co-ordinating Group will include representatives of all parties which can address significant issues in emergency preparedness for the port area and its surrounding localities.

These issues will vary widely from port to port and from country to country; depending on the nature of the hazards, the response resources available locally both within and outside the port area, governmental requirements, training needs, etc.

Among the first steps in the planning process are the gathering of information and assessment of the current situation. Therefore one of the first tasks facing the Co-ordinating Group is the collection of basic data. This can be done by personal contacts by Co-ordinating Group members or by surveys sent to managers of port/maritime authorities, port installations, neighbouring industrial facilities and neighbouring local authorities. The aim of such contacts is to:

- **Identify local agencies making up the port area's potential local awareness and preparedness network**
  - Harbourmaster / port captain
  - Other local organizations or their representatives with an interest in port activities, e.g. P&I Clubs, classification societies, underwriters, Customs and Excise, stevedore agencies, tug firms, pilotage services, ship's agents
  - Port and local authority fire departments
  - Port and local police forces
  - Coast guard
  - Navy
  - Marine salvage organizations
  - Pollution fighting organizations
  - Environmental agencies
  - Port health service, if any, and local hospitals and health and ambulance services
  - Emergency management or civil defence agency
  - Public works and/or transport department
  - Red Cross/Crescent
  - Other local community resources, e.g. public housing authorities, schools, public utilities, media, religious organizations, non-governmental organizations (NGOs)
  - Weather forecasting services.
- **Identify the facilities that may give rise to hazards with potential for an emergency situation**
  - Oil, gas, chemical and other specialised terminals
  - Storage of other dangerous goods
  - Tanker ships handling oil, gas, liquefied gas and chemicals
  - Ships handling other dangerous goods
  - Nuclear-powered ships
  - Other local industrial facilities
  - Small processing facilities which may store or use hazardous substances
  - Hospitals (as users of radioactive and other hazardous substances)

- Transport and storage facilities.

Planning for emergency preparedness at the community level should however consider all hazards that may have significant consequences for the community. For example chlorine stored and used at the local drinking-water processing plant would produce an emergency if chlorine leakage occurred. Natural hazards such as flooding, earthquakes, heavy storms and hurricanes, may also be relevant to the port area and its surrounding community. Emergency planning to respond to natural disasters should be co-ordinated with the planning for emergencies arising from man-made operations.

- **Establish the current status of port and community emergency planning and co-ordination for hazardous substances emergency preparedness and identify potential overlaps in planning**
  - Is there already a port and/or local community planning and co-ordination body, e.g. task force, advisory board, interagency committee? If so, what is its defined structure and authority?
  - Has the port and/or community performed any assessments of existing prevention and response capabilities within its own emergency response network?
  - Does the port and/or community maintain an up-to-date technical reference library of response procedures for hazardous substances?
  - Have there been any training seminars, simulations or mock incidents performed by the port and/or the community in conjunction with local industrial facilities or other organizations? If so, how frequently are they conducted? When was this last done? Do they usually have simulated casualties?
- **Identify the specific port, marine and community points of contact and their responsibilities in an emergency**
  - List each agency involved, the area of responsibility (e.g. port emergency response, marine rescue co-ordination, marine pollution control, evacuation, emergency shelter, medical and health care, food distribution, control access to accident site, public and media liaison, liaison with regional-level responders, locating and manning the command centre and/or emergency operating centre); the name of the contact; official position; 24-hour telephone number; and the chain of command
  - Is there any specific chemical or toxicological expertise available in the community, in industry, in colleges and universities or on a consultancy basis?
- **list the kinds of equipment and materials which are available at the port and local level to respond to emergencies**
  - Equipment owned or co-ordinated by the port and maritime authorities, e.g. salvage vessels, rescue boats, anti-pollution boats, pollution combating and firefighting equipment and products, tugs, helicopters, planes
  - Equipment belonging to terminals, refineries and other port facilities and organizations
  - Equipment belonging to other organizations

How can these equipment, material and personnel be made available to trained users at the scene of an incident?

- **list the kinds of specialized services which are available to the port and local level to respond to particular aspects of large or complex emergencies**

- Emergency response services for ships are available from certain classification societies. These services include technical information on floatability, damage stability, damage longitudinal strength, grounding and oil outflow. This technical support is available 24-hours each day, year-round, on a worldwide service basis, in the event of a casualty such as a collision, grounding, fire, explosion, contact or heavy weather damage. Teams of experienced specialists including surveyors, structural engineers and nautical advisers using the latest in communications and computer technology assess the emergency situation and propose remedial actions, which can be simulated, to provide appropriate technical advice to those in charge of the emergency, enabling them to make better informed decisions.
- Technical assistance and advice can be facilitated by international organizations such as IMO's Oil Pollution Co-ordination Centre or regional response centres which exist in many areas throughout the world.

- **Identify organizational structure for handling emergencies**

The Co-ordinating Group should determine what plans already exist, if any, and ensure that these plans are co-ordinated to facilitate effectiveness and avoid gaps in the organised response to any emergency. The chain of command is particularly important once an emergency develops. There can be only one person in charge. Any disagreements or disputes on this must be resolved in the planning process before an emergency occurs; this is particularly important in cases where responsibility is divided between a port authority and a maritime authority. Tests and drills will help to identify any problems with the chain of command and to establish the best ways of working together. It is very important to assess and test graded responses for various types of emergency situations.

- **Check if the port area and the community have specialised emergency response teams to respond to accidents involving hazardous substances**

- Are there marine emergency response teams with special expertise in combating oil and chemical spills at sea?
- Are there specialised response contractors and salvage operators?
- Have the local emergency services (fire, police, health) had any training in dealing with hazardous substances? If so, do they have and use any specialised equipment?
- Are local hospitals able to decontaminate and treat numerous victims exposed to hazardous substances quickly and effectively?
- Are there specialised industry response teams, government response teams or other response teams available close to the port area and/or the local community? What is the average time for them to arrive on the scene?
- Has the port and/or the local community sought any help from local industrial facilities to help respond to emergencies? In many areas core elements (fire brigade, organized medical response team, indeed any organized group able to respond to emergencies) do not exist. In such cases local industry may be able to help supply the resources to ensure that emergency response is effective.

- **Define the community emergency transport network**
  - Are evacuation routes established inside the port area?
  - does the local community have specific evacuation routes designated? What are they? Is the general public aware of them?
  - Are there specific access routes designated for emergency services personnel to reach facilities or incident sites? (NOTE: in a real incident wind direction might make certain routes unsafe).
  - assess ways that existing public transportation resources could be utilized.
- **Establish the community procedures for protecting citizens during emergencies**
  - Establish procedures for ship crews, port area personnel, visitors and the general public (e.g. asking them to remain indoors, close windows, respond to sirens in a specific fashion, etc.)
- **Set up a mechanism that enables responders to exchange information or ideas with other entities during an emergency**
  - Possibly through a Crisis Management Team
  - Possibly through the Port Emergency Response Centre or the Marine Rescue Co-ordination Centre.

Once these questions have been examined, port/maritime and local authorities should have some qualitative view of the basic ability of the port area and surrounding community to deal with an emergency involving hazardous substances. But no further resources should be expended until a hazard analysis has been performed for the local area. "Hazard" in this context means any situation which has the potential for causing injury to life and health or damage to property and/or the environment.

*The above considerations cover some of the major issues which should be resolved within or by the Co-ordinating Group using the APELL process. Other points for consideration may be found in other Annexes.*

## APELL FOR PORT AREAS

### 7.9 ANNEX 9

#### THE DO's AND DON'T's OF INFORMATION COMMUNICATION

*Media relations efforts, like local community co-operation programmes, cannot be started after trouble has arisen. When there is a spill, or someone has been hurt, it is much too late to begin developing close relationships with local media people. They have a job to do and will not wait while you explain that "excellent programmes are in place".*

*All parties to the APELL process have a duty to keep the public informed on progress. All parties must ensure that the public does not receive conflicting or misleading messages, as contradictory or confusing information can undermine the entire co-operative effort.*

Therefore all communication on the APELL process must be carried out in a spirit of co-operation and trust between port/maritime authorities, port installations, industrial facilities, local authorities and the local media. In certain areas of the world "the media" are radio, television, newspapers and specialist reporting. In other areas "the media" may take the form of verbal reports to people in a neighbourhood, loudspeaker trucks, or even messages from teachers to school pupils, who in turn can make their parents aware of the contents of the message.

It is important to prepare APELL process information for dissemination at *all* levels of the educational system, from primary schools to universities. Teachers should be viewed as a key resource in the APELL process.

It may also be important to prepare APELL process information for dissemination through religious leaders and through their places of worship.

*Developing good working relationships with the media has a positive effect on the implementation of the APELL process. It is not something which can be achieved overnight but, rather, requires time and effort by managers in port/maritime authorities, port installations, local authorities and industrial facilities, by community leaders and by the Co-ordinating Group as a whole.*

Selection of a spokesperson is very important for all participants in the APELL process. He or she must understand each component of the APELL process and the needs of the various media and must be articulate and able to put complex material into more understandable terms. Above all the spokesperson must have the confidence of all participants in the Co-ordinating Group, so that he or she can speak for the whole Group without the need to confirm every word. In countries having several national languages it may be necessary to have two or more spokespersons.

Good media relations pay the same dividends that well-nurtured community relations can bring. If Co-ordinating Group members have established themselves as open and responsive and have tried to bring "good news" to the media, they will stand a much better chance of receiving good treatment if and when things go wrong. If members of the media know who the members of the Co-ordinating Group are, and how to reach them or their spokespeople, and if they have received credible, useful information in the past, then each party involved in an incident will be more likely to get its side of an emergency story through to the public by means of the media.

*Some port/maritime authorities, being large and important organizations, will have public relations departments, with professionals to handle press and media relations. The following may nonetheless serve as a useful checklist, for those handling media relations in authorities without PR*

*departments and even for the professionals:*

- **Preparation**

- Decide who will serve locally as spokesperson for each participant in the Co-ordinating Group. This person should serve in the same role in all contacts with the press, so as to be a familiar voice in any emergency situation.
- Determine which media really count in your locality. Take an inventory.
- Find out if possible which reporters are most likely to be interested in stories concerning your activities, e.g. the port, the APELL process in general, etc.
- Assemble the basic facts about your activities in language that "outsiders" can understand. Include photos and, where useful and possible, video and film material.

- **Getting acquainted**

- If practical, get to know the local and regional editors or reporters who may be assigned to cover your activities
- Read the local papers and watch other local media coverage to understand what tends to be emphasized. Do they like "people" stories or events?
- It is especially important to involve local leaders in the "getting acquainted" process. School officials, teachers, religious and neighbourhood leaders etc. should be brought into the APELL process. Port/maritime authority and installation managers should make special efforts to reach out to these leaders.

- **Cultivating and maintaining good relations**

- See that the local media are getting material relevant to port area operations (developments, personnel changes, etc.)
- Develop personal relationships with key media people (editors, publishers, etc.) through civic and other activities
- Seek opportunities to bring media people into the port area for "good news". Tours can be useful. Use press conferences for important announcements.

- **Development of a plan before trouble comes**

- Plan to use the same media spokesperson who has built relationships with the press. Don't change when trouble arises!
- Equip your spokesperson with basic information concerning port operations involving hazardous substances, in a form which can be handed out. This should include available Material Safety Data Sheets (MSDSs) when appropriate
- Plan for your spokesperson to receive current and accurate information about the emergency as it progresses
- Select a location to serve as a press centre in the case of a major emergency. Consider safety and access to telephones and other services. The location selected should be away from the local emergency operations headquarters
- Port authority and port installation managers should decide in advance a general policy on press and camera access to their areas.

- **Follow up the plan when trouble comes**

- The spokesperson should be included in the first call-out of emergency personnel and should be fully briefed on the situation
- Log all enquiries as they come in and make notes on the questions and your answers
- Be sure to get the names and affiliations of media callers so that follow-up calls can be

made

- Understand and be prepared for the fact that the local media may get word of a problem as soon as you do. They may be calling for information within minutes of the start of the emergency.
- Be as open and forthcoming as possible with the press and try to co-operate with their deadline constraints.

**Some useful generalities**

- Determine the time for the public announcement of the APELL process
- Encourage the Co-ordinating Group, through their spokespeople, to initiate contacts with the media
- Be responsive to unsolicited media interest
- Invite media coverage of drills
- Involve one or more media representatives on the Co-ordinating Group
- Look at the possibility of using public announcements (radio and TV)
- Place articles in existing community newsletters
- Discuss the possibility of advertising the integrated plan
- Involve appropriate public participants in the planning process (e.g. immediate neighbours of the port area)

**Furthermore, take the following into consideration**

- Do not expect reporters to be trained in the intricacies of port operations. Keep all explanations factual and in simple, non-technical terms. Analogies are useful.
- Never speculate, even when asked by a reporter what might have occurred to cause an incident. Don't try and answer any hypothetical question
- Don't be afraid to answer a reporter "we don't know" - there may not be an answer. If an answer can be provided later, be sure to get back to the reporter concerned
- Situations involving dead and injured people are especially sensitive. It is very important that names not be released before relatives have definitely been notified. Media people are accustomed to this policy and will almost always respect it
- In case of injury, don't try and comment on the degree of seriousness - leave that to the medical people
- Reporters do not really expect you to tell them everything that is known but sometimes they will push you in the hope of getting further details. Be open and co-operative but remember that it is not necessary to go beyond a factual outline
- Above all, treat reporters with courtesy and respect. There may be times when this feels difficult but you have nothing to gain by appearing "hard". They are simply doing their job, just as you are doing yours.

In addition, it is usual for large port authorities to provide annual statistics and other publications concerning information on the services provided, which are disseminated to interested people and organizations for information and publicity. It would be possible to take advantage of this publication service to issue in addition a summarised information document on the APELL process for distribution also to the nearby community. This could include information on:

- the APELL process and its application in ports
- general port activities
- oil, chemical and other specialised terminals
- other port installations, particularly those manufacturing, using or storing hazardous substances
- other significant uses of the port area - recreation, wildlife reserves, etc.
- maritime traffic statistics

- estimation of dangerous goods received and stored in the port area, including those in transit on board ship
- accidents and their impact on people and the environment
- results of hazard analyses, with emphasis on potential impacts on people, the environment and property
- existing emergency plans and their integration into other local, regional/provincial or national plans, including telephone numbers for urgent information on accidents
- trained personnel, equipment and facilities to implement the emergency plan in the case of an accident.

## **APELL FOR PORT AREAS**

### **7.10 ANNEX 10**

#### **ANNOTATED BIBLIOGRAPHY**

##### **BASIC DOCUMENTS RELATING TO THE SHIP PORT INTERFACE:**

###### **Code of Practise on Safety and Health in Dock Work**

International Labour Office - ILO, Geneva, 1992, 221p. English, French, Spanish.

Provides guidance for all bodies and persons concerned with safety and health in dock work.

###### **Guide to Safety and Health in Dock Work**

ILO, Geneva, 1988, 287 p. English

Provides practical guidance for managers and the dockers themselves as well as for public authorities.

###### **Manual on Oil Pollution**

This manual addresses oil pollution problems rather than safety measures. It is a particularly useful guide for governments and for those persons directly associated with the sea transportation and transfer of oil. The manual is divided in five sections with the new section V on "Administrative Aspects of Oil Pollution Response" having been approved by the Marine Environment Protection Committee during its 36th session in November 1994.

Section I - Prevention (IMO-557) (out of print)

Section II - Contingency Planning. IMO, London 1988 (revision to be published in 1995), 48p. English IMO-560E, French IMO-561F and Spanish IMO-562S.

Provides information to governments on ways of establishing response organizations and preparing contingency plans both at the national level and for ports.

Section III - Salvage. IMO, London 1983, 45p. English IMO-566E, French IMO-567F and Spanish IMO-568S.

Provides guidance on effectively mitigating the effects of oil pollution casualties, concentrating particularly on the salvage of vessels and cargoes.

Section IV - Combating Oil Spills. IMO, London 1988, 218p. English IMO-569E, French IMO-570F and Spanish IMO-571S.

This section provides an overview of practical response measures which are available to deal with oil spills.

Section V - Administrative Aspects of Oil Pollution Response. (to be published in 1995 by IMO).

Provides information on the role and functions of entities which could be involved in an oil pollution emergency and the compensation schemes for oil pollution damage.

### **Manual on Chemical Pollution**

Section 1 - Problem assessment and Response Arrangements, IMO London, 1987, 88p. English IMO-630E, French IMO-631F and Spanish IMO-632S.

This manual provides guidance on ways of assessing hazards associated with chemical spillage and describes the possible ways for response.

### **Emergency Planning for Industry, CSA Standard CAN/CSA-Z711-M91**

Canadian Standards Association, Rexdale, Canada, 1991, 58p. English and French.

The Standard provides a basis for developing comprehensive emergency plans for industry and addresses the main elements which should be considered in an emergency plan:

- Ensure the safety of workers, responders, and the public.
- Reduce the potential for the destruction of property or for further losses of products.
- Reduce the magnitude of environmental and other impacts.
- Assist response personnel to determine and perform proper remedial actions quickly.
- Reduce recovery times and costs.
- Inspire confidence in response personnel, industry, and the public.

### **IMO/OECD "Chemical Safety in Port Areas" (Monograph No. 93)**

Organization for Economic Co-operation and Development, Paris, France, 1995, 87p. English.

Supplement to the OECD "Guiding Principles for Chemical Accident Prevention, Preparedness and Response" which provide general guidance relative to chemical accidents, with focus on fixed installations such as manufacturing facilities and warehouses. The IMO/OECD document expands on such Guiding Principles to address additional concerns in port areas.

### **The Work of the Harbourmaster and Related Port Management Functions**

The Nautical Institute, London, 1988, 304p. English.

An international guide on harbourmasters functions based primarily upon British experiences and covers harbour administration, operations, safety, port services and port development.

### **Comprehensive Manual on Port Reception Facilities**

IMO, London, 1995. 376p. English.

This manual provides guidance on the provision of reception facilities for ship generated wastes of residues and mixtures containing oil or noxious liquids or garbage.

## **DOCUMENTS RELATING TO STEP 1 - DEFINITION OF STAKEHOLDERS AND THEIR RESPONSIBILITIES**

### **Guidance on the Preparation of Emergency Plans**

International Cargo Handling Co-ordination Association, ICHCA Safety Pamphlet N° 6. London 1994, 23p. English.

The purpose of this document is to inform and advise those involved in the cargo handling field of the various practical issues and needs concerning relevant health and safety matters. The aim is to encourage the growing interest in port safety, the reduction in accidents in port work and the protection of port workers health.

### **Convention on Facilitation of International Maritime Traffic (FAL) 1965**

IMO London, 1994, 162p. Arabic IMO-359A, Chinese IMO-358C, English IMO-350E, French IMO-351F, Russian IMO-352R and Spanish IMO-353S.

The purpose of this convention is to facilitate maritime transport by simplifying and minimizing the formalities, documentary requirements and procedures associated with the arrival, stay and departure of ships engaged in international voyages.

## **DOCUMENTS RELATING TO STEP 2 - HAZARD IDENTIFICATION AND RISK ASSESSMENT**

### **International Convention for the Prevention of Pollution from Ships (MARPOL 73/78)**

IMO, London, consolidated edition 1991, 485p. Arabic IMO-518A, Chinese IMO-519C, English IMO-520E, French IMO-521F, Russian IMO-523R and Spanish IMO-522S.

The publication contains the text of the Convention, the Protocol of 1978 and five annexes establishing the rules for the prevention of pollution from ships by oil, by noxious liquid substances transported in bulk, by harmful substances transported in packaged form, by sewage and by garbage.

### **Code of Safe Practice for Solid Bulk Cargoes (BC Code)**

IMO London, 1994, 198p. English IMO-260E, French IMO-211F and Spanish IMO-212S.

This code is recommended to Administrations, shipowners, shippers and masters as a guide on the standards to be applied in the safe stowage and shipment of solid bulk cargoes (excluding grain).

### **IMO/ILO Guidelines for Packing Cargo in Freight Containers or Vehicles**

IMO, London, 1990, 26p. English IMO-284E, French IMO-285F and Spanish IMO-212S.

This document forms part of the Supplement to the IMDG Code but it is also available as a separate publication.

**Storage of Hazardous Substances: A Technical Guide for Safe Warehousing of Hazardous Substances: Technical Report Series, No. 3**

United Nations Environment Programme Industry and Environment UNEP IE, Paris, France, 1990, 80p. English, French, Russian

Designed to be used worldwide and to meet requirements of developing as well as developed countries, this guide is an aid to safe storage and warehousing of hazardous chemicals.

**Emergency Response Planning and Preparedness for Transport Accidents Involving Radioactive Material**

International Atomic Energy Agency, IAEA Safety Series No. 87, Vienna, 1990. English, French, Spanish Russian.

Describes the packaging and shipping requirements for transporting radioactive materials.

**Regulations for the Safe Transport of Radioactive Material, 1985**

International Atomic Energy Agency, IAEA Safety Series No. 6, Vienna, 1990. English, French, Spanish Russian.

Describes the elements of emergency planning and detailed operating procedures for responding to transport accidents involving radioactive materials.

**Dangerous Goods in Ports - Recommendations for Port Designers and Port Operators**

Permanent International Association of Navigation Congresses - PIANC Brussels, 1985. 46p. English.

Provides guidance concerning preventative measures for the hazard evaluation, safe transport, handling and storing of dangerous goods.

**Health Aspects of Chemical Accidents (UNEP IE Technical Report No. 19 and OECD Environment Monograph No. 81)**

OECD, Paris, France, 1994. 147p. English (French due shortly at the time of going to press)

This technical guide is based on collaborative work by four sponsoring international organizations, International Programme on Chemical Safety (IPCS), Organization for Economic Co-operation and Development (OECD), UN Environment Programme (UNEP) and World Health Organization European Centre for Environment and Health (WHO-ECEH). It contains guidance on chemical accident awareness, preparedness and response for health professionals and emergency responders, in the following forms: general guidance for health service managers; detailed practical guides on information and communications, organization and planning, response to chemical accidents by health professionals and training and education; a checklist for action; and a bibliography.

**Hazard Identification and Evaluation in a Local Community, (Technical Report No. 12)**

United Nations Environmental Programme Industry and Environment  
UNEP IE, Paris, France, 1992. 82p. English, French, Spanish

This is an English version of a handbook originally issued by the Swedish National Rescue Services Board. The handbook deals with hazard identification, evaluation, and the ranking of risk objectives in relation to potential technical and industrial accidents in a local community. It provides a method for carrying out this work.

**Guidance on the Preparation of Emergency Plans**

ICHCA Safety Pamphlet. No.6, London, 1994. 23p. English.  
(Described in Step 1)

**Circular 675 of the Maritime Safety Committee (MSC), on Recommendations on the Safe Transport of Dangerous Cargoes and Related Activities in Port Areas**

IMO, London, 1995. 110p. English.

These recommendations concern the transport of dangerous goods and related activities in ports and are provided for port authorities, shipowners, ship and berth operators, relevant cargo interests and emergency services.

**DOCUMENTS RELATING TO STEP 3 - HELP FOR PARTICULAR STAKEHOLDERS; E.G., INDUSTRY, LOCAL GOVERNMENT, RESCUE SERVICES, HEALTH SERVICES, IN REVIEWING THEIR OWN PLANS**

**International Convention on Oil Pollution Preparedness, Response and Co-operation (OPRC) 1990**

IMO, London 1991. 39p. Arabic (IMO-554A), Chinese (IMO-555C), English (IMO-550E), French (IMO-551F), Russian (IMO-552R) and Spanish (IMO-553S).

Provides the framework for international co-operation and effective preparation for combating major oil pollution incidents involving ships, offshore units, sea ports and oil handling facilities, taking into account the experience gained within existing regional arrangements dealing with these matters.

**International Convention for Safe Containers (CSC), 1972**

IMO. London, 1992. 43p. Arabic (IMO-283A), Chinese (IMO-278C), English (IMO-282E), French (IMO-279F), Russian (IMO-280R) and Spanish (IMO-281S).

This Convention is aimed to maintain a high level of safety in the transport and handling of containers and to facilitate its international transport by providing uniform international safety regulations.

**International Maritime Dangerous Goods Code (IMDG), including Amendment 27-94**

IMO, London, 1994 and its supplement (IMO-214E), 3000p. English (IMO-200E), French (IMO-206F), Spanish (IMO-207S).

This document provides an uniform international code for the carriage of dangerous goods by sea covering, *inter alia*, matters as classification, description, labelling, list of dangerous goods, packing, container stowage and segregation of incompatible substances.

**Emergency Procedures for Ships Carrying Dangerous Goods (EmS)**

IMO, London, 1994. 156p. English (IMO-254E), French (IMO-255F), Spanish (IMO-256S).

The Group Emergency Schedules (EmS) include procedures to be followed in case of incidents involving dangerous hazardous and harmful substances, materials or articles.

**Guidelines on the Provision of Adequate Reception Facilities in Ports**

Developed for the purpose of providing a means of determining the adequacy of reception facilities in ports and terminals to meet the needs of ships using them.

Part I - Oily Wastes. IMO, London, 1976. 16p. English (IMO-580E) and French (IMO-581F).

Part II - Residues and Mixtures Containing Noxious Liquid Substances. IMO, London, 1986. 21p. English (IMO-582E) and French (IMO-583F).

**Circular 451 of the Maritime Safety Committee (MSC), on Firefighting**

IMO. London. 1986.

Guidance concerning the location of fire control plans for assistance of shoreside fire-fighting personnel

**Guidance on the Preparation of Emergency Plans**

ICHCA Safety Pamphlet, No.6. London, 1994. 23p. English.  
(Described in Step 1)

**DOCUMENTS RELATING TO STEP 4 - HOW TO IMPROVE WEAKNESSES**

**IMO Resolution A.158 (E.S.IV), on Port Advisory Services**

IMO, London, 1968.

Recommendation to Governments to consider the creation of Port Advisory Services in particular in oil terminals and ports handling dangerous goods.

**IMO Resolution A.578 (14), on Vessel Traffic Services (VTS)**

IMO, London, 1985.

Guidelines for Vessel Traffic Services containing operational proceedings and planning for the VTS.

**IMO Resolution A.625 (15), Arrangements for the Entry and Clearance of Marine Pollution Response Resources during Emergency Situations**

IMO, London, 1987.

Introducing amendments to the Facilitation Convention establishing that authorities shall facilitate the arrival and departure of ships engaged in emergency situations work.

**IMO Resolution A.680 (17), on Ship Safety and Pollution Prevention**

IMO, London, 1991.

Guidelines on management for the safe operation of ships and for pollution prevention.

**IMO Resolution A.713 (17), Safety of Ships Carrying Solid Bulk Cargoes**

IMO, London, 1971.

Request to take measures to improve the safety of ships carrying solid bulk cargoes.

**DOCUMENTS RELATING TO STEP 5 - ADVICE ON HOW TO CO-OPERATE IN THE CREATION OF INTEGRATED PLANS BY POOLING RESOURCES**

Refer to the "Basic Documents", some of which address this step.

**DOCUMENTS RELATING TO STEP 6 - HOW TO PRODUCE INTEGRATED PLANS AND GAIN STAKEHOLDER AGREEMENT**

Refer to the "Basic Documents", some of which address this step.

**DOCUMENTS RELATING TO STEP 7 - HOW TO WRITE COMMUNITY EMERGENCY PLANS**

Refer to the "Basic Documents", some of which address this step.

**DOCUMENTS RELATING TO STEP 8 - EDUCATION AND TRAINING FOR PARTICIPATING GROUPS AND EMERGENCY RESPONDERS, INCLUDING EXERCISE PLANNING AND EVALUATION**

**International Convention for the Safety of Life at Sea (SOLAS), 1974**

IMO, London, consolidated edition, 1992. 552p. Arabic (IMO-114A), Chinese (IMO-115C), English (IMO-110E), French (IMO-111F), Russian (IMO-112R) and Spanish (IMO-113S).

SOLAS is the most important convention dealing with maritime safety and contains specific regulations for all aspects aimed to improve the safety on board ships.

**Circular 559 of the Maritime Safety Committee (MSC), on reporting of dangerous goods and marine pollutants incidents**

IMO, London, 1991.

Guidelines to ensure reporting, to the Organization, of incidents involving dangerous goods and marine pollutants in packaged form on board ship and in port areas.

**Circular 586 of the Maritime Safety Committee (MSC), on Vessel Traffic Services (VTS)**

IMO, London, 1992.

Contains information on the World Guide for Vessel Traffic Services.

**DOCUMENTS RELATING TO STEP 9 - HELP WITH TESTING, REVIEWING AND UPDATING PLANS**

**APELL Annotated Bibliography (Technical Report No. 21)**

United Nations Environment Programme Industry and Environment  
UNEP IE, Paris, France, 1994. 117 p. English, French.

This bibliography provides APELL users with guidance on publications which might be helpful to them and to indicate the most useful references. These references address the various aspects of increasing community awareness of hazardous installations and preparing co-ordinated response plans involving industry, government, and the local community in case unexpected events at these installations should endanger life, property or the environment.

**DOCUMENTS RELATING TO STEP 10 - COMMUNICATING WITH AND EDUCATING THE WIDER COMMUNITY**

**Standard Marine Navigational Vocabulary**

IMO London, 1985. 51p. English (IMO-985E), French (IMO-986F) and Spanish (IMO-988S).

This publication has been designed to standardize the language used in communications for navigation at sea, in port approaches, in waterways and in harbours.