REGIONAL ALERT/COMMUNICATION EXERCISE "MEDIPOLEX 04"

7-8 December 2004

REPORT

INTRODUCTION

1. Emergency Protocol to the Barcelona Convention stipulates that Mediterranean coastal Sates, Parties to the Protocol, should maintain a communication system for transmission of reports on accidents and other urgent information concerning pollution of the Mediterranean Sea. Annex I to the Protocol outlines the contents of pollution reports that should be exchanged by the Parties or between the Parties and the Regional Centre.

2. Contracting Parties committed themselves to inform each other, either directly or through the Regional Centre on:

   - all accidents causing or likely to cause pollution of the sea by oil and other harmful substances;

   - the presence, characteristics and extent of spillage's of oil or other harmful substances at sea which are likely to present a serious and imminent threat to the marine environment or to the coasts or related interests of one or more of the Parties;

   - their assessments and any pollution response actions, taken or planned;

   - the evolution of the situation.

   In addition, each Party that needs assistance in dealing with marine pollution emergencies may request such assistance from other Parties either directly or through the Centre.

3. In order to facilitate rapid transmission of pollution reports and requests for assistance standard pollution reporting formats have been developed and used in different parts of the world.

4. POLREP pollution reporting system, recommended by the International Maritime Organization with a view to harmonizing reporting of pollution accidents, has been recommended for use in the Mediterranean by the Contracting Parties to the Emergency Protocol to the Barcelona Convention. The use of POLREP system was recommended by the Eleventh Ordinary Meeting of the Contracting Parties to the Barcelona Convention, held in Malta, 27-30 October 1999 .

5. Function (C)(5) of REMPEC ,as adopted by the Twelfth Ordinary Meeting of the Contracting Parties to the Barcelona Convention, Monaco, 17 November 2001 , UNEP(DEC)/MED IG.13/8, Annex IV, Appendix 1) requires that the Centre develops and maintains a regional Communications/Information System appropriate to the needs of States being served by the Centre.

6. In order to ensure that the regional communication system functions properly the Centre regularly tests communications with the Parties, as well as alerting and pollution reporting procedures adopted within the Mediterranean region.

7. In conformity with the above summarized obligations and principles, REMPEC organized a communication and alert exercise between 7 and 8 of December 2004.

OBJECTIVES

8. Objectives of the exercise, which was given the name "MEDIPOLEX 04", were as follows:

   a) to test the functioning of communication systems and the regional mechanism for mutual assistance between Contracting Parties to the Emergency Protocol to the Barcelona Convention and between REMPEC and national authorities responsible for accidental marine pollution response ;

   b) to test communications between REMPEC and AMC's (MPRESS),concerning transmission of meteorological and oceanographic data, as well as weather forecasts;

   c) to practice the use of POLREP, for exchanging information when pollution of the sea has occurred or when a threat of such pollution is present;

   d) to test the effectiveness of the regional mechanism for the alerting of experts participating in the Mediterranean Assistance Unit (MAU) in relation to HNS pollution;

   e) to obtain (if possible) computer-generated forecasts of movement of drifting packages on the sea surface ;

9. "MEDIPOLEX 04" was designed to involve competent national authorities of all Contracting Parties to the Emergency Protocol, as well as, the meteorological services within the Mediterranean region that are included in the WMO-MPERSS network.

10. MPERSS (Marine Pollution Emergency Response Support System) was set up by the World Meteorological Organization (WHO) with a view to providing in a globally co-ordinated way, the meteorological and related oceanographic support required for marine pollution emergency operations on the high seas .

11. In order to ensure global coverage of the system, the world oceans have been divided in 15 marine pollution incident areas (MPI areas). Certain meteorological services accepted responsibilities to ensure that regional meteorological information is issued to support pollution response operations in each designated MPI area. The Mediterranean region has been designated as MPI area III, and MPERSS services in the area are provided by Meteo France and Hellenic National Meteorological Service, for the western and eastern sections of the Mediterranean respectively.

12. One of the Contracting Parties (Cyprus) was given the task to act as the leading country and played the role of the “nearest costal State” (Article 8 of MARPOL 73/78) , threatened by a marine pollution accident involving hazardous and noxious substances (HNS).

SCENARIO

13. In order to make the exercise as realistic as possible REMPEC prepared a scenario describing an accident involving loss overboard of HNS cargo in packaged form in international waters south-west of Cyprus , that could potentially have affected the interests of the nearest coastal State.

14. The scenario of MEDIPOLEX 04 was developed by REMPEC bearing in mind the objectives of MEDIPOLEX 2004 as well as statistical meteorological data related to prevailing weather during December in Cyprus. Based on the latter information, the chosen position of the accident was SW of Cyprus, 25 nm off Cape Drepanum.

15. In fact, the scenario involved the loss of HNS deck cargo from a multi-purpose cargo ship when the latter encountered severe wind gale forces and high seas en route from Livorno, Italy to Beirut, Lebanon. The accident occurred in position lat 34° 36'N, long 031° 57.5'E and caused three containers with steel drums containing liquid toluene (UN 1294,IMO Class 3.2-flammable liquid) to be lost at sea .

16. Details of the accident were planned to be transmitted by Cyprus , using POLREP reporting system, to the competent national authorities of all Contracting Parties to the Emergency Protocol, and to the two relevant meteorological services designated as Area Meteorological Co-ordinators (AMC) within the MPERSS in the Mediterranean.

17. A complete set of POLREP messages, in English and French, together with all necessary supplementary information (scenario, part of B.A. Nautical Chart No.2074 indicating the position of the accident, general particulars of the ship, vessel's cargo stowage plan), in a CD-ROM , was prepared by REMPEC and sent to the competent Cypriot authorities.

18. Cdr.Elias Sampatakakis was the REMPEC's nominated officer , who dealt with the exercise.

19. At the national level, initial POLREPs were addressed to the "24h national centre" of all Contacting Parties. In case of countries that have not yet designated such centres/contact points initial POLREPs were sent to their respective REMPEC OPRC Focal Points.

20. REMPEC was informed that direct communication by Fax does not exist between Cyprus and Turkey . In order to overcome this, and to ensure that all countries participate in the exercise the competent Cypriot authorities requested REMPEC to forward the initial alert message to the competent Turkish authorities and REMPEC kindly requested the Turkish authorities to send their replies via REMPEC.

21. The list of competent national authorities and MPERSS AMCs to which the initial messages were sent is given in **ANNEX 1**.

22. A copy of the initial POLREP message (CYP/TBN/BAHAMAS/1) transmitted to the participants in the exercise is given in **ANNEX 2**.

23. This message was prepared in a single report format , where single figures from the first part (POLWARN) were combined with the appropriate figures from the other two parts (POLINF and POLFAC) of the POLREP system. This was done in order to reduce the total number of POLREP messages that were to be sent during the exercise .

24. All Contracting Parties were requested to acknowledge receipt of POLREP and to provide, if possible, a surveillance aircraft equipped with remote sensing equipment (IR , UV, SLAR) over a period of 2-3 days to help Cyprus in searching and detecting/locating on the sea surface drifting packages containing HNS .

.

25. MPERSS AMCs were requested to transmit indicated meteorological ,oceanographic data and drift surface forecasts for the area SW of Cyprus to the competent Cypriot authorities and to REMPEC.

26. AMCs were also requested to provide, if available, a model generated forecasts of movement and fate of drifting packages over a period of 24 and 48 hours .

27. All messages sent by Cypriot authorities were prepared in English and in French.

28. MEDIPOLEX 04 was scheduled for Tuesday and Wednesday 7 and 8 December 2004 respectively. In order to ensure that the conditions correspond as much as possible to a real emergency, **neither national authorities nor the participating meteorological services were informed in advance of the actual dates of the exercise .** However, a brief Circular Letter No.18/04(English/French) was sent by REMPEC to the competent national authorities of all Contacting Parties, informing them about the main objectives of MEDIPOLEX 04 and about the period during which the exercise was going to be organized (week 50,starting 6 December 2004).

THE EXERCISE

29. MEDIPOLEX 2004 exercise started as planned at 09.00 local time in Cyprus (UTC+2) on Tuesday, 7 December 2004. All messages from Cyprus were sent by fax.

30. **TABLE 1** shows times, as recorded by the Cypriot fax machine, when the initial POLREP messages (CYP/TBN BAHAMAS/1 ,see ANNEX 1) were transmitted to the various addressees. All times are local times in Cyprus (UTC+2).

TABLE 1: Times of sending (by the Cypriot authorities) the initial POLREP message

No.	COUNTRY or MPERSS AMC	TIME
1.	TUNISIA	09.09
2	MOROCCO	09.11
3	SYRIA	09.14
4	ALGERIA	09.16
5.	REMPEC	09.21
6.	TURKEY (through REMPEC)	09.21(received by Turkey at 09.31)
7.	SLOVENIA	09.24
8.	MALTA	09.25
9.	LIBYAN AJ	09.28
10	LEBANON	09.33
11.	ITALY	09.36
12.	ISRAEL	09.38
13	EGYPT	09.41
14	METEO FRANCE **(AMC)**	09.43
15	SPAIN	09.45
16	FRANCE	09.48
17	MONACO	09.49
18	EUROPEAN COMMISSION (for EU)	09.53
19	GREECE	09.54
20	REMPEC	09.56
21	ALBANIA	10.02
22	BOSNIA & HERZEGOVINA	10.04
23	HELLENIC NATIONAL METEOROLOGICAL SERVICE **(AMC)**	10.12
24	SERBIA AND MONTENEGRO	10.15
25.	CROATIA	13.48*

The initial message was sent on **Wednesday, 8 December 2004 (c.f par.31)**.

31. Only one message could not be transmitted after numerous attempts . This was addressed to Croatia, since the Fax number that had been officially communicated to REMPEC by the competent Croatian authorities was incorrect. After REMPEC confirmed the correct Fax number by communicating with them by phone, the Cypriot authorities were in the position to transmit the first POLREP message to the correct Fax number of the "24h national centre" for Croatia.

32. On receiving the first message, REMPEC alerted and put on stand an expert for toluene from a chemical company, member of the Italian Federation of Chemical Industry (FEDERCHIMICA) , with whom REMPEC has signed a Memorandum of Understanding (MoU) for participation in the Mediterranean Assistance Unit(MAU) in cases of accidents involving HNS.

33. Also a senior expert that participates in MAU from ICRAM ,an Italian research institute specialized in environmental aspects of spill response and post-incident response activities was also alerted by REMPEC

34. The Cypriot authorities received a total of 19 (nineteen) replies from 13 (thirteen) different interlocutors. **TABLE 2** indicates origin, time and type of reply to the initial POLREP message.

TABLE 2: Replies to the initial POLREP message (received by Cypriot authorities)

No.	COUNTRY or MPERSS AMC	TIME	TYPE
1.	*SLOVENIA*	09.36	Acknowledgement
2	*ITALY*	09.47	Acknowledgement, Offer of assistance
3.	*REMPEC*	09.55	Acknowledgement-Alerting of MAU
4.	EUROPEAN COMMISSION (for EU)	10.02	Acknowledgement
5.	*EGYPT*	11.09	Acknowledgement
6.	*GREECE*	11.28	Acknowledgement, Offer of assistance
7.	*HELLENIC NATIONAL METEO. SERVICE* ***(AMC)***	11.59	Sea and Weather forecasts
8.	*METEO FRANCE* ***(AMC)***	11.59	Package drift surface forecasts
9.	*SERBIA AND MONTENEGRO*	12.11	Acknowledgement
10.	*SYRIA*	15.48	Acknowledgement
11.	*SPAIN*	18.27	Acknowledgement
12	*ISRAEL*	12.52*	Acknowledgement, Offer of assistance
13.	*CROATIA*	16.29*	Acknowledgement

* These replies were received on **Wednesday, 8 December 2004**.

35. All replies received by the competent Cypriot authorities were sent by fax. .However, only 50% of the Contacting Parties acknowledged receipt of the initial POLREP message ,which means that eleven (11) Contracting Parties did not participate in the regional exercise.

36. The time that elapsed between the sending of the initial POLREP and the receipt by Cyprus of the first reply from the respective Contracting Party or MPERSS AMC are presented in **TABLE 3**.

TABLE 3: Interval between sending initial POLREPs and receiving replies

COUNTRY or MPERSS AMC	**DELAY**
ALBANIA	No reply
ALGERIA	No reply
BOSNIA & HERZEGOVINA	No reply
CROATIA	26 hour 41minutes
EGYPT	1 hours 28 minutes
EUROPEAN COMMISSION (for EU)	09 minutes
FRANCE	No reply
GREECE	1 hour 34 minutes
ISRAEL	27 hours 14 minutes
ITALY	11 minutes
LEBANON	No reply
LIBYAN AJ	No reply
MALTA	No reply
MONACO	No reply
MOROCCO	No reply
SERBIA AND MONTENEGRO	01 hour 56 minutes
SLOVENIA	02 minutes
SPAIN	08 hours 42 minutes
SYRIA	06 hours 34 minutes
TUNISIA	No reply
TURKEY	No reply
*METEO FRANCE (**AMC**)*	02 hours 16 minutes
*HELLENIC NATIONAL METEOROLOGICAL SERVICE(**AMC**)*	01 hour 47 minutes

37. After receiving replies from the Contracting Parties the competent Cypriot authorities sent second series of messages (REMPEC/ TBN BAHAMAS/2). These were sent to acknowledge receipt of the reply and to inform those Parties who offered their assistance if there was a need for it or not. These messages were addressed to Egypt, EC , Greece , Italy and Israel where appropriate. The messages that were actually sent by the competent Cypriot authorities to national correspondents included, where necessary, additional information for the Parties who requested it.

38. 2 (two) Contacting Parties, Italy and Greece, responded promptly and provided an aircraft equipped with remote sensing equipment (IR , UV, SLAR) over the requested period for surveillance, while a third one (Israel) indicated the availability of an aircraft for optical surveillance only. However, the latter Contracting Party replied only on Wednesday 8 December 2004.

39. REMPEC was requested by the competent Cypriot authorities and subsequently prepared and provided to them a complete technical report related to information on the physical and chemical properties of toluene as well as the environmental fate in case of a spillage of the product .A Safety Data Sheet (SDS) for toluene was also provided for their perusal. A copy of the technical report for toluene prepared by REMPEC is given in **ANNEX 3.**

40. No request was made by the competent Cypriot authorities to REMPEC to activate the Mediterranean Assistance Unit (MAU) .

41. The Hellenic National meteorological Service (**AMC** for Eastern Mediterranean) provided sea and weather forecasts, while Meteo France (**AMC** for Western Mediterranean) provided package drift surface forecasts to the competent Cypriot authorities.

42. REMPEC received computer-generated package drift surface forecasts provided by Meteo France .

43. The exercise was terminated at 14.00 LT(UTC+2) on 8 December 2004. The “end of exercise” message , indicating the termination of the regional exercise, was transmitted by the competent Cypriot authorities to all Contracting Parties , MPERSS AMCs and REMPEC between 14.43 and 15.20 . A copy of the "end exercise" message is attached in **ANNEX 4**.

COMMENTS

44. Out of total 24 addressees (21 Contracting Parties , 2 MPERSS AMCs and REMPEC) planned to be involved in the MEDIPOLEX 04 exercise, the Cypriot authorities succeeded in transmitting various messages to 23 correspondents (20 Contracting Parties , 2 MPERSS AMCs and REMPEC). The only one interlocutor that could not be reached was Croatia.

45. 11 (eleven) Contracting Parties (50% of those to whom the initial POLREP was sent) and both MPERSS AMCs replied to Cyprus as requested, while the remaining 11 (eleven) countries did not respond. The reasons why these countries did not actively participate in the exercise were not known.

46. The considerably high percentage of the Contracting Parties that took an active part in the exercise indicates that the communication system, established in the Mediterranean for use in case of marine pollution emergencies (for reporting accidents, requesting assistance, providing meteorological support to spill response operations at high seas), can be considered as functional and efficient. However, the number of Contracting Parties that did not actively participate in the regional exercise strongly indicates that the POLREP alert/communication system should be tested regularly.

47. It needs to be emphasized that all messages were sent to the Contracting Parties using only fax numbers that have been provided to REMPEC as an up-date of Section 1 of Part B of the Regional Information System. No attempts were made to use other contact numbers (telephone or fax) to verify whether the initial messages were received or to urge national authorities to reply.

48. In addition, this was the **second regional alert exercise held without sending previous notice** to inform the Contracting Parties that the exercise would be organized.

49. Improvement in the quality and reliability of the public communications network in the Mediterranean was evident, and the leading country in the exercise (Cyprus) had no problems in establishing connection with any of the interlocutors except one (c.f. paragraph 31).

50. Testing the use of POLREP reporting format was not the primary goal of the exercise, however replies received by the competent Cypriot authorities indicate that the original message, formulated in accordance with POLREP rules, was clearly understood by all those concerned.

51. The national authorities who replied to the initial message acknowledged the receipt of it as requested. Moreover, several participating countries also indicated that they were considering the possibility to offer he requested assistance if the need be.

52. Only one reply received by Cyprus (from the Operational OPRC Focal Point of **Greece**) started with the standard introductory part of the POLREP message (address, date/time group, identification, serial number), while other correspondents formulated their replies not using the recommended format. With a view to keeping the accurate record of message traffic in case of a real pollution accident, it would be very useful if all exchanged messages were properly identified.

53. Specific objectives of MEDIPOLEX 04 were related to testing the communications with AMCs included in the MPERSS in the Mediterranean region (MPI area III), and verifying the type of assistance that could be obtained from them including computer –generated drifting models forecasts.

54. The outcome of the exercise confirmed that both meteorological services, acting as AMCs in the Mediterranean i.e. Meteo France and Hellenic National Meteorological Service respectively, were able to promptly provide requested meteorological information and weather forecasts. In addition, Meteo France was also able to provide forecasts of movement of drifting packages , generated by their computer model.

55. The mechanism for activation of MAU was also successfully tested. These positive results proved to be very encouraging and could significantly contribute to strengthening further the regional preparedness and response system.

RECOMMENDATIONS

56. With a view to further increasing the reliability of the **regional Communications/Information System**, it is recommended that the competent national authorities of the Contracting Parties:

- **revise the list of addresses and contact (fax) numbers** for use when reporting marine pollution accidents (cf. list given in **ANNEX 1**), and to inform REMPEC of any changes that occurred or that might improve the functioning of the system;

- always **acknowledge receipt** of any **message related to accidents** in the region, regardless of whether the accident may or may not affect their territorial waters, coasts or other interests;

- always **acknowledge receipt** of any **message related to** alert or communication **exercises** organized in the region, either by REMPEC or by another Party that was given the task to act as leading country;

- always use standard **POLREP style** for messages when replying , in particular as regards the introductory part of the message that should contain address, date/time group, identification and serial number. Detailed **instructions** concerning the formulation of messages according to POLREP pollution reporting system are included in Section 1, Part B of the Regional Information System **(RIS/B/1)**, which has been distributed by REMPEC to the competent national authorities of the Contracting Parties. This document may be downloaded from REMPEC's website www.rempec.org (page "RIS, Part B - Directories and Inventories, Section 1 - Directory of competent national authorities in charge of accidental marine pollution preparedness, response and mutual assistance and other relevant information").

57. In order to make available to the Contracting Parties various services (including forecasts of movement of drifting packages) provided by one MPERSS Area Meteorological Co-ordinator in the Mediterranean region and to facilitate access to reliable meteorological and oceanographic information, the co-operation between REMPEC and the WHO on one hand, and with individual AMCs on the other should be intensified.

58. Existing alert/communication capabilities of the Contracting Parties for use in case of emergencies should be tested regularly.

ANNEX 1

LIST OF COMPETENT NATIONAL AUTHORITIES AND AMCs

ALBANIA	FPO	+355 (4) 220 479
ALGERIA	FPO	+213 (21) 432 857
BOSNIA & HERZEGOVINA	FPO	+387 (33) 20 79 49
CROATIA	NRC	+385 (51) 212 660 (1)
EGYPT	FPO	+20 (2) 525 64 83
EC (for EU)	FPO	+32 (2) 299 03 14
FRANCE	FPO	+33 (1) 536 34 178
GREECE	FPO	+30 (210) 42 20 440
ISRAEL	FPO	+972 (4) 863 35 20
ITALY	FPO	+39 (06) 57 22 34 70
LEBANON	FPO	+961 (4) 52 50 80
LIBYAN AJ	FPO	+218 (21) 361 28 36
MALTA	FPO	+356 (21) 250 673
MONACO	FPO	+377 (-) 93 50 82 45
MOROCCO	FPO	+212 (22) 27 33 40
SERBIA AND MONTENEGRO	FPO	+385 (85) 313 274
SLOVENIA	FPO	+386 (5) 66 22 647
SPAIN	FPO	+34 (91) 597 92 35
SYRIA	NRC	+963 (41) 47 58 05
TUNISIA	FPO	+216 (71) 84 80 69
TURKEY (through REMPEC)	FPO	+90 (312) 231 33 06
REMPEC		+356 21 33 99 51
METEO FRANCE **(AMC)**	-	+33 (5) 61 07 84 84
HELLENIC NATIONAL METEOROLOGICAL SERVICE **(AMC)**	-	+30 (210) 96 289 52

(1) this number was erroneously provided by the competent Croatian authorities instead of the correct number +385 (51) 211 660

FPO National OPRC Operational Focal Point
NRC National Centre or contact point (operational 24 hours/a day) responsible for receiving reports on marine pollution accidents.

ANNEX 2
INITIAL MESSAGE (CYP/TBN BAHAMAS/1) - *ENGLISH*

TELEFAX TRANSMISSION

TO:	**24h National Centre /Contact Point or if it not available, to the respective REMPEC OPRC Focal Point of the English speaking Contracting Parties :** **ALB, BIH, HRV, EU, EGY, GRC, ISR, ITA, LBN, LBY, MLT, SMN, SLO, ESP, SYR, TUR**	**DATE:** **REF:**
FAX NO:		**PAGES:** 2 (two)
FROM:	**Mr. Gabriel GABRIELIDES** Director Department of Fisheries Nicosia, CYPRUS	**CLEAREDBY/ APPROUVE PAR:**
SUBJECT:	**MEDIPOLEX 04 - Regional exercise**	

EXERCISE **EXERCISE** **EXERCISE**

From: **CYP**

To: **(Respective Contracting Party)**

070900LT (UTC +2) Decembre

EXERCISE
POLREP BARCELONA CONVENTION
CYP/TBN BAHAMAS /1

1 062330 LT (UTC +2) December
2 Lat: 34°36' N; long: 031°57,5' E
3 Cargo lost overboard
41 Three containers with 80 steel drums containing 200 l of liquid toluene each.
42 Toluene: UN 1294, IMO Class 3.2 - flammable liquid , flash point 7 ^{o} C (closed- cup), packing group II: substance presenting medium danger, “NON-MARINE POLLUTANT”.
43 TBN BAHAMAS, Bahamas flag, built 1987, 13607 GRT, call sign XYZ329, was carrying 930 20-foot general-purpose dry freight containers (LXWXH-

6mX2.4mX2.4m each) on her voyage from Livorno, Italy to Beirut , Lebanon, when she encountered severe wind gale forces and high seas. While the ship was 25 nm

SW off Cape Drepanum, Cyprus , heavy seas caused some ten containers from her deck cargo to fall overboard. Ship is proceeding to Beirut port speed 12 knots

44 050; 3.60m/sec

49 Master of MV TBN BAHAMAS

50 Notice to marines- Navigational hazard

Warning to fishermen

Aerial surveillance for visually detecting and localizing drifting containers on the sea surface

Buoying of undamaged containers drifting on the sea surface

52 ALB, DZA, BIH, HRV, EU, EGY, FRA, GRC, ISR, ITA, LBN, LBY, MLT, MCO, MAR, SMN, SLO, ESP, SYR, TUN, TUR , and REMPEC

81 Contracting Parties are requested to provide one surveillance aircraft equipped with remote sensing equipment (IR, UV, SLAR) over a period of 2-3 days for searching and detecting/locating drifting packages containing HNS on the sea surface

82 Contracting Parties are requested to provide approximate cost per day of assistance offered

83 Following agreement regarding assistance , the aircraft will be granted permission to land and park at Paphos airport and to fly in Cyprus air space

84 Paphos airport , please indicate ETA.

99 Acknowledge by return Fax at No. **+357 (22) 78 12 26**

Thanking you in advance for your co-operation.

Yours sincerely,

Mr. Gabriel GABRIELIDES
Director

EXERCISE **EXERCISE** **EXERCISE**

ANNEX 3

REMPEC's Technical Report

1. Physical and chemical properties of toluene

Toluene is a colourless aromatic hydrocarbon, flammable liquid (Explosion Limits: LEL-1.7%-UEL; 7%) , which has a pleasant irritating odour . It is insoluble and non-reactive with sea water; however it can react vigorously with oxidizing materials. It also reacts violently with nitric and sulphuric acids, nitrogen tetroxide and silver perchlorite. It has a static electricity potential. Toluene has got a FP of 6^{o}C, which means that sufficient concentrations of vapours heavier than air(relative density of vapours : 4.1), capable to cause explosion can reasonably be expected under ambient conditions (air temperature above FP). The self-ignition temperature of the product is 535 ^{o}C , however in case of a spillage of the product at sea , it is important to be aware of the hazards and handle any undamaged packages containing toluene with utmost care , since sparks, static electricity ,hot surfaces as well as an exposed flame can lead to ignition/explosion.

Under ambient temperature, its potential to produce gaseous products should be taken into consideration, once part of the spilled product at sea will eventually rise into the atmosphere and the rest will remain on the water surface (Physico-chemical group of Behaviour for spilled chemical in the sea water : FE).

The substance may be absorbed into the body by inhalation, and may rapidly develop pulmonary edema, ingestion, causing irritability and central nervous system depression (neurotoxic) or through the skin by contact(eyes-irritation ,ears-ototoxic) . Toluene is classified as "Category C" according to the MARPOL 73/78 classification, i.e. if spilled at sea; it would be slightly toxic to aquatic life, having a 96hr-LC50 between 10 – 100 mg/l. However, it is not a substance considered to be bioaccumulative to marine organisms, while there is no evidence to suggest that it will taint marine organisms, as well. Toluene is therefore being classified as "NON-MARINE POLLUTANT".

Toluene is being carried by sea in packaged form in IMO type 2 containers (e.g tight-head steel drums, tank containers) on open deck only.

2. Air and sea observation

Surveillance flights can detect/localize drifting packages on the sea surface including iridescences caused by spilled toluene on the sea surface, by using UV, IR and SLAR remote sensing equipment.

It is highly possible that some packages containing toluene can be damaged or leaking due to action by waves/currents or due to sea water impact shock as a result of their coming into contact with the water surface.

The characteristic aromatic odour of spilled styrene can be detected in air in low concentrations, since the odour threshold of toluene is extremely low (0.17 ppm).

3. Protection of human life

This aspect should be dealt with on two fronts: the first deals with precautions to take for the consumption of tainted seafood, the second dealt with the protective measures to be taken by response personnel in the event of spilled toluene from damaged/leaking packages.

Regarding the first, it is assumed that the safety of consumers can be assured since toluene is not considered to cause tainting to seafood destined for human consumption.

Regarding the second, warnings can be issued by the competent Cypriot authorities to fishermen to avoid coming in contact with packages containing toluene and instructions for necessary safety precautions to be observed by responders working at sea and those living along the coast in the event that damaged/leaking packages eventually be washed ashore

4. Environmental fate of drifting packages containing toluene

It is estimated that a loaded IMO type 2 20-foot general freight container with 78-82 steel drums of toluene will float on the sea surface.

Packages (steel drums) containing 200 l of toluene, which are assumed to be 92-95% full, due to the density of the product, are considered to be PF (packages that float on the sea surface) (ref. Is made to Figure 6-31 of the HELCOM Manual on Co-operation in Response to Marine Pollution, Volume 2).

However, in case the packages containing toluene will be punctured ,damaged or leaking due to action by waves/currents or to sea water impact shock as a result of their coming into contact with the water surface, it is expected to be dispersed naturally and partially evaporate due to prevailing winds /currents.

Localised pollution with no risk of adverse harm to the marine environment is expected in parts of coastline, where packages would be eventually be washed ashore.

Any coastal booms deployed to stop spreading of toluene from damaged /leaking drums containing toluene that eventually be washed ashore, should be of a material compatible with toluene.

Due to the persistent and irritant characteristics of the product, it is highly objectionable (reference is made to GESAMP E-value Hazard Profile / rating -XXX) .As a consequence, contaminated beaches in case that damaged or leaking packages containing toluene be washed ashore, are liable to be closed temporarily.

Imposition of a ban-on-fishing zone is not necessary, taking into consideration that toluene is neither bioaccumulative to marine environment nor will it taint marine organisms. This decision should be reviewed in light of any developments regarding number and concentration of any packages containing toluene that eventually be washed ashore.

Environmental aspects of envisaged response operations at sea and onshore can be considered by the competent Cypriot authorities in consultation with ICRAM (Insituto Centrale per la riserrca Scientifica e Technologica Applicata al Mare) , an Italian research institute specialized in environmental aspects of spill response and post-incident response activities with whom a Memorandum of Understanding concerning the participation in the Mediterranean Assistance Unit (MAU) of expert personnel from ICRAM has been agreed with REMPEC. Experts from ICRAM will be put on stand-by alert by REMPEC if so requested by the Cypriot authorities.

ANNEX 4

" END EXERCISE " MESSAGE - *ENGLISH*

TELEFAX TRANSMISSION

TO/A:	**24h National Centre /Contact Point or if it not available, to the respective REMPEC OPRC Focal Point of the English speaking Contracting Parties :** **ALB, BIH, HRV, EU, EGY, GRC, ISR, ITA, LBN, LBY, MLT, SMN, SLO, ESP, SYR, TUR**	**DATE:** **REF:**
FAX NO:		**PAGES:** 1 (one)
FROM/DE:	**Mr. Gabriel GABRIELIDES** Director Department of Fisheries Nicosia, CYPRUS	**CLEAREDBY/ APPROUVE PAR:**
SUBJECT:	**MEDIPOLEX 04 - Regional exercise**	

END EXERCISE **END EXERCISE** **END EXERCISE**

From: **CYP**

To: (**Respective Contracting Party)**

081400LT (UTC +2) December

EXERCISE
POLREP BARCELONA CONVENTION
CYP/TBN BAHAMAS /4

MEDIPOLEX 04 terminated at 14.00 LT.

We thank you for your co-operation.

Mr. Gabriel GABRIELIDES
Director.