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INTRODUCTION

Useless, obsolete, recovered ammunitions, explosives and war material of any sort have been dumped in oceans and seas for decades. Among the military ordnance dumped at sea, chemical weapons (CWs) and riot control agents represent a not negligible percentage, also in the Mediterranean Sea. The yearly rate of dumping is slowly diminishing also because of the entry into force of international conventions stimulating the adoption of other disposal practices. However, the actual amount of dumped war material, subject to the corrosive action of sea water which causes the release of chemical products, has to be considered as a relevant source of persistent pollutants in need of in-depth scientific investigations.

Taking into consideration the extension of the dumping sites, the wide dispersion of the dumped war material due to trawling fishery, their increasingly rusted conditions and a number of other factors, there is a need for data and information suitable to provide a sound scientific base to carefully evaluate costs and benefits deriving from possible clean up activities at sea.

In order to assess the relevance of this delayed in time source of pollutants, as well as the suitability of remediation actions, the Contracting Parties to the Barcelona Convention in their 13th meeting, held in November 2005 at Portoroz (SL), requested to the Coordination Unit of the Mediterranean Action Plan to undertake an assessment of the unexploded ammunitions and obsolete ordnance dumped in the Mediterranean Sea.

As part of a broader overview of the issue of military ordnance dumping activities carried out in the Mediterranean Sea, this assessment has been carried out initially proposing to representatives of Contracting Parties a questionnaire in order to gather information on available data and on existing mechanisms for recording encounters with dumped ammunitions. The second step has been an overview of nautical charts and pilot books where usually the main dumping sites and fire practicing areas are indicated.

The Dumping Protocols of the Barcelona Convention

The Protocol for the Prevention of Pollution of the Mediterranean Sea by Dumping from Ships and Aircraft, adopted in Barcelona, Spain, on the 16th of February 1976, in article 1 states its objective as “*to prevent and abate pollution of the Mediterranean Sea area caused by dumping from ships and aircraft*”. To this end, a list of materials and substances was indicated the dumping of which in the Mediterranean is forbidden. For another list of materials and substances, dumping in the Mediterranean was subject to the issuing of a special permit by the National authority. Article 7 of the Protocol requires that the Parties send a record of permits to the Coordination Unit of the Mediterranean Action Plan on a yearly basis. All Mediterranean states and the European Community are Party to the Protocol.

The Protocol was significantly amended in Barcelona in 1995, at the same time as the Barcelona Convention. The new Protocol is called Protocol for the Prevention and

Elimination of Pollution of the Mediterranean Sea by Dumping from Ships and Aircraft or Incineration at Sea. The approach of the amended protocol changes the focus of the regulation from a black list of material for which dumping is forbidden to a general prohibition of dumping in the Mediterranean except for a short list of matters, thereby following the same approach as the Protocol of 1996 to the London Dumping Convention. For the “permitted” waste, dumping is allowed only after having obtained a special permit. The special permit should be given after having taken into consideration the specific biological and natural condition of the dumping area. Article 7 of the original protocol has been omitted but article 14.2, stating that the meeting of the Parties shall study the records of the permits, has been maintained. The Parties shall, therefore, have to communicate to the Coordination Unit of the Mediterranean Action Plan their records if the matter is to be discussed at the meetings of the Parties.¹

The amended protocol has not yet entered into force. So far, eleven Mediterranean Countries and the European Community have ratified or accepted the amendments. These are Croatia, Cyprus, Egypt, France, Italy, Malta, Monaco, Morocco, Slovenia, Spain and Tunisia.

European Community initiative

The European Community has set up a Community framework for cooperation in the field of accidental or deliberate marine pollution (Decision No. 2850/2000/EC)². The decision states that accidental marine pollution risks include *‘those linked to the presence of dumped materials, such as munitions’* (Article 1, §1.2a). Furthermore, the framework states that *‘In accordance with the internal division of competences within Member States, they shall exchange information on dumped munitions with a view to facilitating risk identification and preparedness measures’* (Article 1, §1.2b).

The Decision lists the types of actions under the framework for cooperation and included under the ‘Support and Information Actions’ is: *‘Measures to encourage the exchange of information between the competent authorities on the risks linked to dumped munitions, on the areas concerned (including mapping) and on measures to be taken in response to an emergency.’* (Annex II, §C3).

Whilst there is no legal obligation on EC Member States nor to non-EC Mediterranean States to provide information on the areas concerned, the provision of a Mediterranean framework for reporting encounters with dumped chemical weapons and ammunitions

¹ The reporting obligations of the European Community and its Member States under the Barcelona system, including the Dumping protocol, has been extensively described by a study requested by the EC Environmental Directorate-General to the European Environmental Agency, published in 2001 as Technical report n. 45, “Guidelines of the EC reporting obligations under the Barcelona Convention and its Protocols in force”, EEA, 2001.

² Decision No. 2850/2000/EC of the European Parliament and of the Council of 20 December 2000 setting up a Community framework for cooperation in the field of accidental or deliberate marine pollution. Official Journal L 332, 28/12/2000 P. 0001 – 0006.

would assist the States party cooperating to protect environment and human health from accidental and deliberate pollution from harmful substances including dumped ammunitions.

Adriatic-Ionian initiative

In April 2001, at the meeting of the Ministers of the Environment of the Adriatic and Ionian Sea held in Ancona, Italy, the Ministers acknowledged that the problems, which arise from the ordnance dumped in an ecologically sensitive heavily populated sea basin, are a major concern of all the coastal States. The Ministers welcomed the establishment of a scientific and technical sub-Regional forum to discuss the issue at international level. The Ministers further indicated their willingness to face the financial, scientific and technological challenges arising from the presence of such dumped ammunitions.

Need for Updating of information

Nautical charts and pilot books provide details about many dumping sites and fire practicing areas in the Mediterranean Sea but many sites remains uncharted and, for the most part, few data are made available on quantities and types of ordnance dumped on the Mediterranean seabed. This is partly due to the practice of "short dumping", whereby munitions were dumped outside of designated dumpsites and to a number of other reasons. Among these, changes in site conditions at ammunitions dumpsites have to be taken into account. Such changes can be brought about by natural processes or through human activities in the vicinity of dumpsites. For example, the hydrodynamic regime in the area may result in exposure of previously buried devices. If disturbed, positively buoyant devices, such as phosphorus canisters, may float to the surface and represent a real risk to the seafarers and to the general public should they be washed ashore. Without adequate records being maintained on encounters with dumped munitions and chemical weapons it is not possible to monitor the risk posed by such ammunitions and weapons to either humans or the marine environment.

Furthermore, it has to be noted that the reporting of dumping of obsolete ordnance is not mandatory under the London Convention nor it is specifically considered in the Dumping Protocol of the Barcelona Convention. Furthermore, it is often unknown by the authorities in charge with the reporting, since the dumping of ordnance is carried out by the national military authorities. The exchange of information between the military and civilian administrations, whether environmental or transport authorities, is not often either regular or normally envisioned, therefore no information can be easily gathered regarding the dumping of military ordnance in the Mediterranean Sea. Although it has to be acknowledged that it would be difficult to arrive at a comprehensive picture, gathering the available data and recording of accidental encounters, particularly where clusters occur, may lead to the identification of previously unknown, or unrecorded, areas. Encounters with ammunitions in areas not previously closed to fishing/anchorage or classified as 'high risk' may, possibly following confirmatory survey work, allow for the

boundaries of such areas to be extended. Once again such actions cannot be taken unless adequate information is recorded and reported.

Activities carried out to gather information

With the aim to achieve a better knowledge on localisation, type and extension of ordnance dumping areas in Mediterranean Sea, the following two activities have been carried.

- a) realisation of a questionnaire sent to representatives of Contracting Parties in order to gather information on available data and on existing mechanisms for recording encounters with dumped ammunitions;
- b) consultation of literature, nautical charts and sailor notices to gather relevant data on maps;

Only one Focal Point answered to the questionnaire reporting an area where, after the Second World War, unused ammunitions were dumped also through the scuttling of old ships (Annex I).

The consultation of pertinent literature, nautical charts and sailor notices allowed to point out several dumping areas marked as “explosives dumping ground” or “unexploded ordnance area”, as well as the so-called “firing practice and exercise area”. The nautical charts and sailor notices consulted have been produced by the British Admiralty, related to all Mediterranean basin, and by the Italian *Istituto Idrografico*, specifically related to the waters surrounding Italy.

The main Ammunitions Dumping Sites selected in the Mediterranean Sea

The consultation of nautical charts and sailor notices allowed us to identify 29 ammunitions dumping areas as well as “firing practice and exercise areas”. Sailor notices allowed us to add several areas not marked on nautical charts. In fact, as confirmed by the Italian *Istituto Idrografico*, the indication of dumping areas on the official charts is usually deleted after some decades; thus it is only possible to trace the areas using sailor notices. In this way, dumping areas were identified for example in the Ligurian Sea, around Sardinia and off Venice, where a ship loaded with war surplus materials was scuttled.

The main dumping areas selected are reported in the table below whereas their distribution and extension are illustrated in maps reported in Annex II.

Table 1. The main sea dumping areas of ammunitions in the Mediterranean Sea

Location		Coordinates and dimensional data of area	Depth (meter)	Note	Source		
Northern Sea	Adriatic	Coordinates of centre: □ 44°53'.400N; □ 013°24'.900E Radius 4,35 nm	41	Circular area marked on nautical charts as "unexploded ordnance dumping area"	NAUTICAL 39/1991	CHART	n°
Northern Sea	Adriatic	Coordinates of centre: □ 45°06'.150N; □ 012°59'.100 Radius 0,4 nm	31	Circular area marked on nautical charts as "unexploded ordnance dumping area"	NAUTICAL 38/1992	CHART	n°
Northern Sea	Adriatic	Coordinates of vertexes: A □ 45°39'.190N; □ 013°44'.950 E B □ 45°39'.520N; □ 013°44'.950 E C □ 45°39'.520N; □ 013°44'.450 E D □ 45°39'.270N; □ 013°44'.450 E E □ 45°39'.190N; □ 013°44'.650 E	20	Polygon near Trieste marked on nautical charts as "unexploded ordnance dumping area"	NAUTICAL 239/1994	CHART	n°

Location	Coordinates and dimensional data of area	Depth (meter)	Note	Source
Southern Adriatic Sea	Coordinates of centre: □ 41°56'.350; □ 016°16'.600 E Radius 1,4 nm	50	Circular area in front of Gargano marked on nautical charts as “unexploded ordnance dumping area”	NAUTICAL CHART n° 32/2000
Central Adriatic Sea	Coordinates of centre: □ 42°08'.200N; □ 018°31'.100 E Radius 2,5 nm	200	Circular area marked on nautical charts as “unexploded ordnance dumping area”	NAUTICAL CHART n° 6011/1990
Sicilian Channel	Coordinates of centre: □ 36°07'.400N; □ 014°15'.430 E Radius 1,5 nm	200	Circular area north of Malta marked on nautical charts as “unexploded ordnance dumping area”	NAUTICAL CHART n° 917/1986
Central Adriatic Sea	Coordinates of centre: □ 42°08'.300N; □ 018°32'.400 E Radius 3 nm	230	Circular area marked on nautical charts as “unexploded ordnance dumping area”	NAUTICAL CHART n° 6012/1997
Southern Adriatic Sea	Coordinates of vertexes: A □ 41°30'.400N; □ 018°59'.830 E B □ 40°30'.400N; □ 018°59'.960 E C □ 40°14'.980N; □ 019°09'.970	From 0 to 500	Polygon in Albania marked on nautical charts as “mined field”	NAUTICAL CHART n° 6012/1997

Location		Coordinates and dimensional data of area	Depth (meter)	Note	Source		
		E D 40°15'.400N; □019°25'.780 E E 41°30'.700N; □019°31'180 E					
Southern Sea	Adriatic	Coordinates of centre: □ 41°33'.580N; □016°16'.500 E Radius 1,5 nm	300	Circular area in front of Bari marked on nautical charts as “unexploded ordnance dumping area”	NAUTICAL 31/1991	CHART	n°
Southern Sea	Adriatic	Coordinates of centre: □ 41°37'.000N; □015°54'.750 E Radius 0,5 nm	10	Circular area in front of Manfredonia marked on nautical charts as “unexploded ordnance dumping area”	NAUTICAL 199/1987	CHART	n°
Northern Sea	Tyrrhenian	Coordinates of centre: □ 42°54'.670N; □005°53'.670 E Radius 0,5 nm	200	Circular area in front of France marked on nautical charts as “unexploded ordnance dumping area”	NAUTICAL 908/2001	CHART	n°
Southern Sea	Adriatic	Coordinates of centre: □ 41°41'.400N; □017°47'.670 E Radius 5 nm	1.200	Circular area in the middle of Southern Adriatic Sea marked on nautical charts as “unexploded ordnance dumping area”	NAUTICAL 921/2001	CHART	n°
Southern Sea	Adriatic	Coordinates of centre: □ 42°00'.000N; □017°00'.000 E Radius 3 nm	550	Circular area in the middle of Southern Adriatic Sea marked on nautical charts as “unexploded ordnance dumping area”	NAUTICAL 921/2001	CHART	n°

Location		Coordinates and dimensional data of area	Depth (meter)	Note	Source
Southern Sea	Adriatic	Coordinates of centre: □ 41°55'.800N; □ 017°25'.500 E Radius 9 nm	1.020	Circular area in the middle of Southern Adriatic Sea marked on nautical charts as "unexploded ordnance dumping area"	NAUTICAL CHART n° 921/2001
Southern Sea	Adriatic	Coordinates of centre: □ 41°18'.170N; □ 018°28'.170 E Radius 5 nm	1.000	Circular area in the middle of Southern Adriatic sea marked on nautical charts as "unexploded ordnance dumping area"	NAUTICAL CHART n° 921/2001
Southern Sea	Adriatic	Coordinates of vertexes: A □ 41°28'.000N; □ 018°19'.00 E B □ 41°28'.000N; □ 018°31'.000 E C □ 41°45'.000N; □ 018°20'.000 E D □ 41°45'.000N; □ 018°51'.000 E E	1.100	Rectangular area in the middle of Southern Adriatic Sea marked on nautical charts as "unexploded ordnance dumping area"	NAUTICAL CHART n° 921/2001
Southern Sea	Adriatic	Coordinates of centre: □ 39°49'.000; □ 019°00'.000 E Radius 1 nm	-	Circular area in the middle of Southern Adriatic Sea marked on nautical charts as "unexploded ordnance dumping area"	NAUTICAL CHART n° 920/2000
Southern Sea	Adriatic	Coordinates of centre: □ 40°41'.000N; □ 018°29'.500 E	-	Circular area in the middle of Southern Adriatic Sea marked on nautical charts as "unexploded ordnance dumping area"	NAUTICAL CHART n° 920/2000

Location		Coordinates and dimensional data of area	Depth (meter)	Note	Source		
		Radius 0,5 nm					
Southern Sea	Adriatic	Coordinates of centre: □ 40°49'.000N; □ 018°51'.670 E Radius 4,6 nm	-	Circular area in the middle of Southern Adriatic Sea marked on nautical charts as "unexploded ordnance dumping area"	NAUTICAL 920/2000	CHART	n°
Central Adriatic Sea		Coordinates of centre: f 43°08'.330N; 1015°26'.000 E Radius 2,5 nm	-	Circular area in the middle of Central Adriatic Sea marked on nautical charts as "unexploded ordnance dumping area"	NAUTICAL 922/2005	CHART	n°
Central Adriatic Sea		Coordinates of centre: □ 43°58'.850N; □ 014°46'.610 E Radius 1 nm	-	Circular area in the middle of Central Adriatic Sea marked on nautical charts as "unexploded ordnance dumping area"	NAUTICAL 923/2004	CHART	n°
Northern Sea	Adriatic	Coordinates of centre: □ 44°25'.240N; □ 014°21'.800 E Radius 4 nm	-	Circular area marked on nautical charts as "unexploded ordnance dumping area"	NAUTICAL 923/2004	CHART	n°
Northern Sea	Adriatic	Coordinates of centre: □ 44°51'.400N; □ 013°44'.670 E Radius 2 nm	40	Circular area marked on nautical charts as "unexploded ordnance dumping area"	NAUTICAL 924/2004	CHART	n°
Northern Sea	Adriatic	Coordinates of centre: □ 44°20'.000N; □ 014°21'.670 E	50	Circular area marked on nautical charts as "unexploded ordnance dumping area"	NAUTICAL 924/2004	CHART	n°

Location	Coordinates and dimensional data of area	Depth (meter)	Note	Source
	Radius 4 nm			
Northern Adriatic Sea	Coordinates: □ 45°17'.250N; □ 012°35'.050E	14,5	Ship loaded with conventional weapons located near Venice lagoon	MEDITERRANEAN PILOT BOOK VOL. 1C 1982
Northern Adriatic Sea	Coordinates: □ 45°26'.680N; □ 012°34'.940E Radius 0,5 nm	30	Circular area near Trieste. Presence on the seafloor of conventional weapons	MEDITERRANEAN PILOT BOOK VOL. 1C 1982
Southern Adriatic Sea	Coordinates of vertexes: A □ 41°22'.510N; □ 016°14'.270 E B □ 41°21'.060N; □ 016°15'.600 E C □ 41°20'.610N; □ 016°15'.290 E D □ 41°22'.040N; □ 016°13'.430 E	10	Rectangular area between Ofanto river and Barletta. Presence on the seafloor of conventional weapons	MEDITERRANEAN PILOT BOOK VOL. 1C 1982
Northern Tyrrhenian Sea	Coordinates: □ 44°02'.570N; □ 009°41'.810E Radius 1 nm	-	Circular area near locality <i>Cinque Terre</i> (Liguria). Presence on the seafloor of conventional weapons	MEDITERRANEAN PILOT BOOK VOL. 1C 1982

Location	Coordinates and dimensional data of area	Depth (meter)	Note	Source
Central Adriatic Sea	Coordinates of vertexes: A <input type="checkbox"/> 42°13'.670N; <input type="checkbox"/> 015°44'.510 E B <input type="checkbox"/> 42°13'.670N; <input type="checkbox"/> 015°45'.200 E C <input type="checkbox"/> 42°13'.270N; <input type="checkbox"/> 015°45'.200 E D <input type="checkbox"/> 42°13'.270N; <input type="checkbox"/> 015°44'.510 E	0-50	Rectangular area around Pianosa island where ICRAM underwater operators have observed several conventional aerial bombs	ICRAM
Northern Tyrrhenian Sea	Coordinates: <input type="checkbox"/> 44°00'.010N; <input type="checkbox"/> 009°42'.130E Radius 0,8 nm	100	Circular area near locality <i>Cinque Terre</i> (Liguria). Presence on the seafloor of conventional weapons	MEDITERRANEAN PILOT BOOK VOL. 1C 1982
Central Tyrrhenian Sea	Coordinates of vertexes: A <input type="checkbox"/> 38°53'.450N; <input type="checkbox"/> 008°37'.340 EB <input type="checkbox"/> 38°51'.550N; <input type="checkbox"/> 008°37'.340 E C <input type="checkbox"/> 38°51'.550N; <input type="checkbox"/> 008°39'.980 E D <input type="checkbox"/> 38°53'.600N; <input type="checkbox"/> 008°39'.980 E	0-10	Teulada Cape (South Sardinia). Presence on the shoreline of unexploded ordnance	MEDITERRANEAN PILOT BOOK VOL. 1A 1982

CONCLUSIONS

The methodology applied to identify the main reported ammunitions dumping sites in the Mediterranean Sea seems to have been fruitful. Nevertheless, the identified areas do not represent the real number of dumping sites of ammunitions and war surplus. In fact, the more detailed study carried out on the waters surrounding the Italian coasts, also consulting both English and Italian charts and sailor notices, shows as further details on number and distribution of sea dumping areas and concerning the typology of ordnance dumped at sea might be obtained through interviews with local fisheries stakeholders, the consultation of national military and civilian archives and the study of nautical documents produced by different national dedicated institutions.

All these sources have been utilised for instance during the R.E.D. C.O.D. (Research on Environmental Damage caused by Chemical Ordnance Dumped at sea) project co-financed by the European Commission, DG Environment, to ICRAM (*Istituto Centrale per la Ricerca scientifica e tecnologica Applicata al Mare*), CoNISMa (*Consorzio Nazionale Interuniversitario per le Scienze del Mare*), CETLI (*Centro Tecnico Logistico Interforze NBC*) and IBIM-CNR (*Istituto di Biomedicina e di Immunologia Molecolare "Alberto Monroy" of Consiglio Nazionale delle Ricerche*).

Interviews with fishermen have represented a very important source of information considering that for six decades fishermen have been victims of numerous incidents due to the accidental recovery of conventional and chemical weapons in their trawling nets. The several interviews carried out in the Apulian fisheries highlighted both the greater than known extension of the dumping areas in the Southern Adriatic Sea and the existence of other dumping sites not officially recorded. Both military and civilian archives have represented other important sources of information and in particular the Italian *Guardia Costiera* archives. In Annex III the Southern Adriatic Dumping Areas selected during the RED COD project are reported. The comparison between the maps produced with the present research highlight the great number of areas in the Southern Adriatic Sea selected through the fishermen interviews and the archives consultation.

Annex I
QUESTIONNAIRE

Need for Updating of information

Nautical charts and pilot books provide details about many dumping sites and fire practicing areas in the Mediterranean Sea but many sites remains uncharted and, for the most part, few data are made available on quantities and types of ordnance dumped on the Mediterranean seabed. This is partly due to the practice of “short dumping”, whereby munitions were dumped outside of designated dumpsites and to a number of other reasons. Among these, changes in site conditions at ammunitions dumpsites have to be taken into account. Such changes can be brought about by natural processes or through human activities in the vicinity of dumpsites. For example, the hydrodynamic regime in the area may result in exposure of previously buried devices. If disturbed, positively buoyant devices may float to the surface and represent a real risk to the seafarers and to the general public should they be washed ashore. Without adequate records being maintained on encounters with dumped munitions it is not possible to monitor the risk posed by such ammunitions to either humans or the marine environment.

Encounters with ammunitions in areas not previously closed to fishing/anchorage or classified as ‘high risk’ may, possibly following confirmatory survey work, allow for the boundaries of such areas to be extended. Once again such actions cannot be taken unless adequate information is recorded and reported.

The Dumping Protocols of the Barcelona Convention

The Protocol for the Prevention of Pollution of the Mediterranean Sea by Dumping from Ships and Aircraft, adopted in Barcelona, Spain, on the 16th of February 1976, in article 1 states its objective as “*to prevent and abate pollution of the Mediterranean Sea area caused by dumping from ships and aircraft*”. To this end, a list of materials and substances was indicated the dumping of which in the Mediterranean is forbidden. For another list of materials and substances, dumping in the Mediterranean was subject to the issuing of a special permit by the National authority. Article 7 of the Protocol requires that the Parties send a record of permits to the Coordination Unit of the Mediterranean Action Plan on a yearly basis. All Mediterranean states and the European Community are Party to the Protocol.

The Protocol was significantly amended in Barcelona in 1995, at the same time as the Barcelona Convention. The new Protocol is called Protocol for the Prevention and Elimination of Pollution of the Mediterranean Sea by Dumping from Ships and Aircraft or Incineration at Sea. The approach of the amended protocol changes the focus of the regulation from a black list of material for which dumping is forbidden to a general prohibition of dumping in the Mediterranean except for a short list of matters, thereby following the same approach as the Protocol of 1996 to the London Dumping Convention. For the “permitted” waste, dumping is allowed only after having obtained a special permit. The special permit should be given after having taken into consideration the specific biological and natural condition of the dumping area. Article 7 of the original protocol has been omitted but article

14.2, stating that the meeting of the Parties shall study the records of the permits, has been maintained. The Parties shall, therefore, have to communicate to the Coordination Unit of the Mediterranean Action Plan their records if the matter is to be discussed at the meetings of the Parties.³

The amended protocol has not yet entered into force. So far, eleven Mediterranean Countries and the European Community have ratified or accepted the amendments. These are Croatia, Cyprus, Egypt, France, Italy, Malta, Monaco, Morocco, Slovenia, Spain and Tunisia.

European Community initiative

The European Community has set up a Community framework for cooperation in the field of accidental or deliberate marine pollution (Decision No. 2850/2000/EC)⁴. The decision states that accidental marine pollution risks include *'those linked to the presence of dumped materials, such as munitions'* (Article 1, §1.2a). Furthermore, the framework states that *'In accordance with the internal division of competences within Member States, they shall exchange information on dumped munitions with a view to facilitating risk identification and preparedness measures'* (Article 1, §1.2b).

The Decision lists the types of actions under the framework for cooperation and included under the 'Support and Information Actions' is: *'Measures to encourage the exchange of information between the competent authorities on the risks linked to dumped munitions, on the areas concerned (including mapping) and on measures to be taken in response to an emergency.'* (Annex II, §C3).

Whilst there is no legal obligation on EC Member States nor to non-EC Mediterranean States to provide information on the areas concerned, the provision of a Mediterranean framework for reporting encounters with dumped chemical weapons and ammunitions would assist the States party cooperating to protect environment and human health from accidental and deliberate pollution from harmful substances including dumped ammunitions.

Adriatic-Ionian initiative

In April 2001, at the meeting of the Ministers of the Environment of the Adriatic and Ionian Sea held in Ancona, Italy, the Ministers acknowledged that the problems, which arise from the ordnance dumped in an ecologically sensitive heavy populated sea basin, are a major

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⁴ Decision No. 2850/2000/EC of the European Parliament and of the Council of 20 December 2000 setting up a Community framework for cooperation in the field of accidental or deliberate marine pollution. Official Journal L 332, 28/12/2000 P. 0001 – 0006.

concern of all the coastal States. The Ministers welcomed the establishment of a scientific and technical sub-Regional forum to discuss the issue at international level. The Ministers further indicated their willingness to face the financial, scientific and technological challenges arising from the presence of such dumped ammunitions.

**SECTION I
 GENERAL AND LEGAL ASPECTS**

Please, check applicable boxes and comment as necessary. Attach additional sheets if needed

State Party	
Date	
Person the Coordination Unit of the MAP may contact to discuss this questionnaire	Name: _____ Position: _____ Telephone: _____ Fax: _____ Email: _____
National Regulatory System	1. Under your State's legal system, are there in place regulations dealing with the dumping at sea of unexploded ammunitions? <input type="checkbox"/> Yes <input type="checkbox"/> No If yes, please specify the regulation and the authority to which to apply and to which would be responsible to report: _____ _____ _____ _____ _____ _____ In case, is the regulation applicable extraterritorially? <input type="checkbox"/> Yes <input type="checkbox"/> No

SECTION I
GENERAL AND LEGAL ASPECTS

Please, check applicable boxes and comment as necessary. Attach additional sheets if needed

Permit requirements	<p>2. If a regulatory system exists, does it requires, prior to the issue of the permit:</p> <ul style="list-style-type: none"><input type="checkbox"/> Identification of types and quantity of the ammunitions to be dumped<input type="checkbox"/> Proposed location of the dumping site and its characterisation<input type="checkbox"/> Date in which the activity is to take place and its duration<input type="checkbox"/> Specification of methodologies and modalities for the dumping activity<input type="checkbox"/> Evaluations of the ecological, economical and environmental impact of dumping in the proposed area<input type="checkbox"/> Monitoring plan<input type="checkbox"/> Other information: <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <p>3. If a regulatory system exists, does it require exhaustive reports in support of the above information?</p> <ul style="list-style-type: none"><input type="checkbox"/> Yes<input type="checkbox"/> No <hr/> <hr/> <hr/> <hr/>
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	<p>—</p> <p>4. Are there technical/scientific bodies supporting your Administration in dealing specifically with this dumping-related issues?</p> <p><input type="checkbox"/> Yes</p> <p><input type="checkbox"/> No</p> <p>—</p> <p>—</p> <p>—</p> <p>—</p> <p>—</p>
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SECTION II
PRACTICAL ASPECTS

Please, check applicable boxes and comment as necessary. Attach additional sheets if needed

Reporting, recording and assessment of encounters with marine dumped unexploded ammunitions	<p>8. Is there currently a system in place whereby fishermen and other users of the sea and its coastline may/must report encounters with ammunitions dumped at sea?</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>If yes, please specify the regulation and the authority to which to report:</p> <hr/> <hr/> <hr/> <hr/> <p>9. In case a reporting procedure is in place, through what means is it communicated to fishermen and other members of the public (e.g. fishermen's organisations, trade papers, etc.)?</p> <hr/> <hr/> <hr/> <hr/> <p>10. Once an encounter has been reported is there a formal procedure for the recording and assessment of such incidents?</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>11. If yes, what national authority is responsible for recording and assessing encounters with marine dumped ammunitions?</p> <hr/> <hr/> <hr/>
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12. Outline the reporting and assessment procedure/system: information recorded (e.g. location, description of item, nature of encounter - entanglement in nets, stranding - etc.), follow-up procedures (e.g. site visit if the incident relates to a beached object), action taken (e.g. destroyed, released). If possible, please provide an example of a logged encounter:

13. Please provide a summary, if available, of all incidents recorded over the last 10 years – include information on number, type and location of the incidents:

14. Is there currently a monitoring/surveillance programme in place for ammunition dumpsites?

Yes

No

15. If yes, please name the authority responsible for monitoring/surveillance:

	<hr/> <hr/> <hr/> <p data-bbox="389 465 1350 533">16. Outline the details of the monitoring/surveillance programme, e.g. frequency of monitoring, parameters examined, etc:</p> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>
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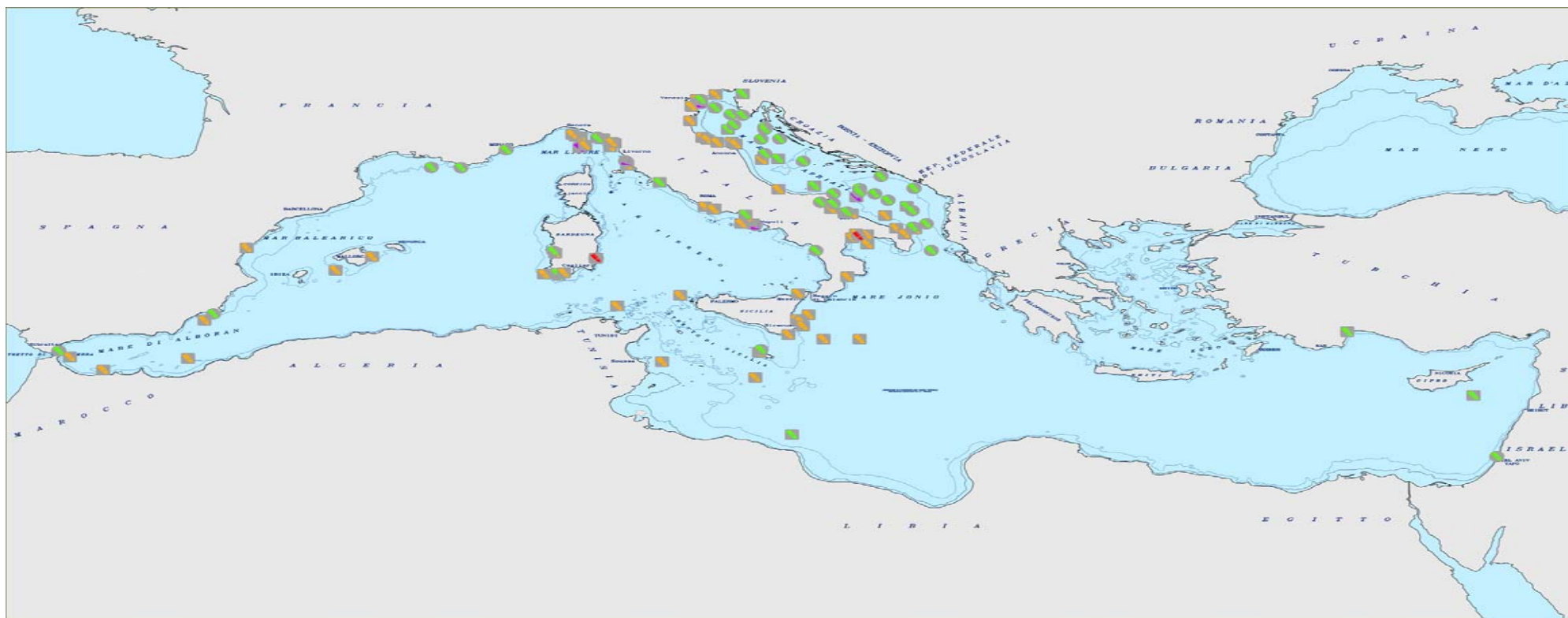
SECTION II
PRACTICAL ASPECTS

Please, check applicable boxes and comment as necessary. Attach additional sheets if needed

<p>Permits issued</p>	<p>17. In the period 1995-2006, how many dumping permits has your Government issued in relation to:</p> <p><input type="checkbox"/> War surplus and ordnance: <input type="checkbox"/></p> <p>_____</p>
<p>Permits issued spec.</p>	<p>For each of the above and for each permit issued, please specify:</p> <p>18. Description of the area in which the dumping took place:</p> <ul style="list-style-type: none"> • Geographical position • (Latitude and longitude of relevant points, width of the area, etc.): <p>_____</p> <p>_____</p> <p>_____</p> <ul style="list-style-type: none"> • Depth of water (m): _____ • Distance from nearest land (Nautical Miles): _____ • Relevant hydrographical, biological and meteorological characteristics of the site, including the sea bottom: <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p>

ANNEX II

MEDITERRANEAN SEA MAP REPORTING THE MAIN OFFICIALLY RECORDED AMMUNITIONS DUMPING SITES



AMMUNITIONS DUMPING SITES INTO THE MEDITERRANEAN SEA

Locations are reported according with data gathered from pilot books and nautical charts

Map produced by the MEDU Secretariat in May 2007

DRAFT by E. Amato, L. Alcaro, P. Giordano and S. Agnesi

