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**REGIONAL MARINE POLLUTION EMERGENCY  
RESPONSE CENTRE FOR THE MEDITERRANEAN SEA (REMPEC)**

**CENTRE REGIONAL MEDITERRANEEN POUR L'INTERVENTION  
D'URGENCE CONTRE LA POLLUTION MARINE ACCIDENTELLE (REMPEC)**

**MEDITERRANEAN ACTION PLAN  
PLAN D'ACTION POUR LA MEDITERRANEE**



9<sup>th</sup> Meeting of the Focal Points of the Regional  
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**REMPEC'S ACTIVITIES IN THE FIELD OF ILLICIT DISCHARGES  
IN THE MEDITERRANEAN REGION AND STEPS FORWARD**

**Note by the Secretariat**

**Background**

1. Following the adoption in 2002 of the Protocol concerning Co-operation in Preventing Pollution from Ships and, in Cases of Emergency, Combating Pollution of the Mediterranean Sea ("Prevention and Emergency" Protocol), activities related to prevention of pollution from ships were included in the work programme of REMPEC. The Centre started its activities in the field of prevention by addressing two major and inter-related issues: provision of port reception facilities and operational pollution from ships.
2. With regard to prosecution of offenders, the Centre took the initiative by proposing a set of key issues to be addressed as a priority in the Mediterranean region (CleanMed proposal). These were the following: improving the relative legislative framework in the Mediterranean coastal States, reinforcing human resources for the prosecution of offenders, and developing aerial surveillance and monitoring of the Mediterranean Sea.
3. Anticipating the adoption of the Regional Strategy for Prevention of and Response to Marine Pollution from Ships (referred to as "the Strategy" hereunder), which was under development at that time, the proposed key issues were discussed and agreed upon during the Regional Workshop on Prevention and Control of Operational Pollution in the Mediterranean Region (Ancona, Italy, 3-5 November 2004).
4. The outcomes of the said Workshop were taken into account when finalising the Strategy, which was adopted in 2005 by the Contracting Parties to the Barcelona Convention (UNEP(DEC)/MED IG.16/3, Portoroz, Slovenia, 8-11 November 2005). The Strategy now includes two specific objectives directly related to illicit discharges from ships, one being Specific Objective 6 addressing the improvement of monitoring and surveillance of illicit discharges, and the second one being Specific Objective 7, addressing the improvement of the level of enforcement and the prosecution of discharge offenders.
5. The present document presents the actions in the field of illicit discharges from ships carried out so far by the Centre under these objectives of the Strategy and proposes steps forward. One will note that most of the tasks allocated to the Centre within the Strategy have been completed or are in the process of being completed. Further actions were also undertaken by the Centre to assist Mediterranean coastal States to implement the parts of Specific Objectives 6 and 7 which are under their responsibility.

## **Setting-up a sound basis for the development of surveillance and monitoring systems in the region**

6. Following the adoption of the 2002 "Prevention and Emergency" Protocol and anticipating the adoption of the Strategy, the Centre started to carry out several activities aimed at assisting the Contracting Parties in the development of surveillance and monitoring systems for combating illicit discharges from ships in the Mediterranean region.

- **Providing up-to-date knowledge on technical aspects of remote sensing**

7. In 2003, REMPEC facilitated the participation of representatives of the Contracting Parties to the Barcelona Convention in a European Workshop on Satellite Imagery (MEDIPOL 2003, Toulon, France, 1-4 October 2003) organised by the Centre of Documentation, Research and Experimentation on Accidental Water Pollution (CEDRE) with the financial support of the European Commission (EC), and specifically addressed to operational staff from authorities in charge of pollution control. Participants were given the opportunity to share their operational experience in the field of oil spill detection, to compare best practices when dealing with marine pollution offenders and to improve their knowledge on the new available tools for the detection of illicit discharges at sea such as satellite monitoring.

8. As a follow-up of this first activity, and in line the recommendations made by the Working Groups of the Regional Workshop on Prevention and Control of Operational Pollution in the Mediterranean Region (Ancona, Italy, 3-5 November 2004), the topic of remote sensing was selected as the subject to be addressed by the MEDEXPOL 2005 Regional Training Course (Cyprus, 17-20 October 2005).

9. The programme of the Training Course encompassed the most important issues related to remote sensing from aircraft and satellite platforms, with a particular emphasis on the situation in the Mediterranean. In particular, the following topics were presented:

- possibilities offered by remote sensing techniques to detect operational and accidental oil pollution ;
- legal aspects and evidence;
- benefits of using monitoring tools and aerial surveillance;
- added-value of satellite monitoring;
- ongoing projects in the Mediterranean in the field of remote sensing and new initiatives aimed at reducing pollution from ships in the region.

10. A great interest was shown in the subject of remote sensing in the field of oil spill control and several participants, mainly senior Government officials whose responsibilities included prevention of, preparedness for and response to pollution from ships, requested REMPEC to endeavour to organise, in the future, training activities dedicated to the same or similar subject.

- **Pilot projects on satellite monitoring of sea based oil pollution: testing the service**

11. In 2003, concurrently with its efforts to strengthen the capabilities of the Mediterranean coastal States, REMPEC started to actively participate in a number of EC funded projects (VASCO - Value Added provision for Slicks and hazardous Cargoes Operational detection and CLEOPATRA - Chemical Effluent & Oil Pollution Alert and TRACKing), focusing on oil spill monitoring by remote sensing satellites wherein the role of the Centre was to act as an end-user of the service. Although the satellite monitoring service delivered under these pilot projects was not operational at that time, the experience gained by the Centre in its role of an end-user paved the way for the implementation of further activities in the field.

12. As a step forward, and with a view to creating the basis for setting up an operational service in the region aimed at both detecting oil pollution and monitoring the main shipping routes, the Centre launched, in 2005, the AESOP (Aerial & Satellite surveillance of Operational Pollution) pilot project, which was carried out in 2005 and 2006 in the Adriatic Sea in collaboration with the EC-Joint

Research Centre (EC-JRC Ispra) and the ex-INFO/RAC (providers of satellite images), Italy (validation on site), and Slovenia (provider of Automatic Information System (AIS) images).

13. The AESOP Project had the following key objectives: first to assess the actual reliability of the system, which was proved to be positive, by comparing and cross validating the observations made by satellite with those made by specially equipped aircrafts, and second to test the capacity of the system to make available a Near Real Time (NRT) service, aimed at mobilizing aerial means, by alerting the aircrafts for validation, as soon as potential oil slicks were detected by satellite. The main limit of this phase of the project was the unavailability of the aircraft at some points of the validation phase, and boats were then used to patrol the area.

14. However, the results of the AESOP pilot project proved to be encouraging and highlighted the need to continue the exercise of fine-tuning the operational procedure leading to the prosecution of offenders. In particular, the use of aerial surveillance and of satellite images, integrated with oceanographic data, AIS images of traffic and mathematical models able to backtrack the spills, led to the achievement of promising results and, in some cases, to the identification of the possible polluter, indicating that there was room for future developments in the field.

- **Establishing national monitoring and surveillance systems**

15. Under Specific Objective 6 (a) of the Strategy, the Contracting Parties agreed to establish, by 2010, systems and procedures for national monitoring and surveillance including, where practicable, aerial surveillance in the waters under their jurisdiction and to report the results to the Meetings of REMPEC Focal Points.

16. Following a request by the Cypriot authorities to REMPEC in order to support a feasibility study concerning the establishment of aerial surveillance for the marine area of Cyprus, the Centre prepared the terms of reference and contracted the French Customs to perform the study, taking into account their significant experience in the field. The study was financed by the Mediterranean Trust Fund (MTF) whereas the expertise was offered in kind by the French customs.

17. The study, which covered various technical topics in relation to reconnaissance flights, such as the required means, equipment, and training of personnel as well as cost estimates related to the maintenance of the service, provided the relevant authorities with all the necessary elements for assisting them in establishing a national surveillance system.

18. As a follow-up of the work carried out in Cyprus, REMPEC included in its work programme for 2010-2011 an activity, on first-come, first-served basis, consisting of providing expert advice for feasibility studies on aerial surveillance to combat oil pollution at sea.

### **Moving towards real-time surveillance and monitoring operations at sub-regional level**

19. Specific Objective 6 of the Strategy address the improvement of monitoring and surveillance of illicit discharges. In this respect, during the last biennium, the Centre coordinated the implementation of a sub-regional pilot project in three Maghreb countries (MARCOAST) with a view to operate the satellite monitoring service. The Centre intends to further build on the experience gained in that area by organising an aerial surveillance operational exercise involving also northern neighbouring countries.

- **Providing an operational satellite monitoring service to the Maghreb countries**

20. Under Specific Objective 6 (d) of the Strategy, REMPEC is requested to establish Memoranda of Understanding with agencies or competent bodies whereby REMPEC will act as the focal point between these agencies and bodies and coastal States on possible occurrences of marine pollution identified by satellite.

21. In July 2007, REMPEC launched the European Space Agency (ESA) funded project MARCOAST for Algeria, Morocco and Tunisia, which was carried out between September 2007 and January 2009 with the aim of providing an operational satellite monitoring service to the Southern Mediterranean countries. The main duty of the Centre was to ensure a proper coordination between the countries and the service provider in order to facilitate the smooth running of the activities.

22. The choice of bringing these three countries into the project was made taking into account, *inter alia*, the opportunity to foster and develop through this initiative a pre-existing framework for co-operation established by the sub-regional agreement on co-operation with dealing with pollution which was signed by Algeria, Morocco and Tunisia in June 2005.

23. A total of 80 satellite images were analysed for oil spill detection and delivered to each country in Near Real Time (30-60 min from satellite image acquisition). Each country was receiving images specifically related to its own territorial waters, and in some particular cases (e.g. whenever an oil spill was detected close to the border of two different areas of jurisdiction), the relevant information was shared among neighbouring countries, paving the way for the establishment of sub-regional monitoring systems.

24. Furthermore, the relevant authorities were tasked, subject to availability of means, to promptly react to the pollution alert by verifying on site the oil spills detected by satellite. To facilitate this verification part of the exercise, REMPEC requested the support of the Mediterranean Operational Oceanography Network (MOON) in order to provide the users of the service with meteoceanographic forecasting data of the affected area and with oil spill drifting predictions.

25. The project clearly demonstrated the operational capability of the satellite monitoring service, confirming the significant steps forward which have been made in the field. Furthermore, it provided a clear indication of the sea areas more likely to be affected by oil pollution. However, further investigation is needed to confirm the preliminary results achieved within the project and thus identify the main hot spots for illicit discharges in the Southern area of the Mediterranean Sea.

- **Improving operational co-operation in combating illicit discharges in the Western part of the Mediterranean region**

26. Under Specific Objective 6 (b) of the Strategy, the Contracting Parties agreed to endeavour to establish, by 2010, sub-regional systems, including procedures to over-fly the waters under the jurisdiction of a neighbouring State if the Parties so agree, for surveillance of environmentally sensitive and/or high risk zones of the Mediterranean Sea.

27. In consideration of the experience gained through the MARCOAST project and of the activities being implemented in the field within other regional seas, e.g. SuperCEPCO operations (Coordinated Extended Pollution Control Operations) carried out in the North Sea in 2007 and 2008, REMPEC started to investigate possible ways forward aimed at fostering the capacity in the region to respond to operational pollution from ships.

28. The SuperCEPCO operations were carried out with the aim of improving co-operation at sub-regional level in monitoring the main shipping lanes of the North Sea, which are well known for dense traffic and thus are at high risk of illicit discharges. Both aerial surveillance and satellite monitoring, integrated with AIS data, were performed over a defined area for a period of up to ten days with the following objectives:

- to perform a continuous monitoring of ship source marine pollution;
- to validate satellite detections and develop guidelines for satellite surveillance;
- to identify polluters and develop rapid, effective follow-up procedures.

29. Having recognized the same need for improving operational co-operation in combating illicit discharges in the Mediterranean region, REMPEC launched the idea of carrying out an operation similar to the SuperCEPCO operations in the basin in September/October 2009. The operation would be aimed not only at ensuring an extended aerial coverage but also at exchanging information on the pollution detected among the different countries, facilitating the process for a successful prosecution of illicit discharges offenders in the region.

30. For practical reasons, also in view of the size of the Mediterranean Sea, it was decided to limit the coordinated surveillance operation to the Western part of the basin. The choice was made taking into account the sub-regional agreements on co-operation with dealing with pollution which already exist in this area (RAMOGE, Lion Plan, and the Sub-Regional Agreement signed between Algeria, Morocco and Tunisia) as well as the availability of dedicated means and trained staff which would facilitate the smooth running of the activities.

31. All the countries approached by the Centre (Algeria, Morocco, Tunisia, France, Italy, Monaco and Spain) replied positively to this initiative confirming their willingness to participate to the operation. France, Italy, Spain and Morocco ensured the availability of surveillance means (one aircraft per country) whereas the European Maritime Safety Agency (EMSA) agreed to support the operation by providing satellite images related to the survey area throughout the operation.

### **Establishing an appropriate legal framework**

- **Assessing the situation with respect to MARPOL Annex I implementation**

32. Under Specific Objective 7 (a) of the Strategy, the Contracting Parties agreed that by 2010 at the latest, all Mediterranean States ensure the existence of a national legal framework (regulations) as a basis for prosecuting discharge offenders for infringements of the MARPOL Convention or of any national legal framework implementing the Convention.

33. In order to support the Contracting Parties to implement Specific Objective 7 (a), REMPEC, between 2007 and 2008, carried out an assessment of the legislative framework and enforcement capabilities of Mediterranean countries which are not subject to the EU legislation, to fulfil their obligations under MARPOL Annex I as flag States, port States and coastal States. The assessment included conditions of delivery of certificates, reporting procedures for violations of MARPOL and national legal framework as a basis for prosecuting offenders of MARPOL Annex I provisions on discharges at sea.

34. Field missions were conducted in Mediterranean countries which are not EU members States namely, Algeria, Egypt, Israel, Jordan, Lebanon, Morocco, Syria, Tunisia, Turkey (financed by the European Union (EU) financed MEDA project entitled “Euromed Co-operation on Maritime Safety and Prevention of Pollution From Ships – SAFEMED”), Albania, Croatia and Montenegro (financed by the REMPEC MTF budget). Unfortunately it was not possible to arrange a visit to Bosnia & Herzegovina.

35. As for the legal framework, it was concluded that the national legal systems do not provide a solid legal basis for MARPOL Annex I implementation and enforcement. Although all countries covered acceded to the MARPOL Convention together with its Annexes I and II, in most cases, no specific national laws and regulations for the effective implementation of the technical and operational requirements of the Convention and its two Annexes have been adopted. In several cases, rules and regulations regarding survey and certification and port State control inspections related to MARPOL requirements have still to be issued.

36. Regarding enforcement and sanctions to the violations of MARPOL Annex I requirements, in most cases, the countries have adopted legislation (criminal law) on the protection of the environment which includes, in general terms, the protection of the marine environment and /or specific provisions in a maritime law referring to marine pollution offences. Very often the marine pollution is described in general terms addressing all together dumping, accidental pollution and intentional pollution with no distinction; the wording used is not always appropriate and there are a number of inconsistencies. Although those laws or provisions can be used and are used against pollution offenders, there is no adequate penal regime for sanctioning violations under MARPOL.

37. There are also differences amongst the countries regarding the level and types of penalties imposed and regarding the prosecution procedures. Quite often, the environmental laws have been prepared by personnel who do not have a full knowledge of the MARPOL Convention, which could explain the inconsistencies and the use of inappropriate wording. Regarding “non conventional ships” (below 400 GT/150 GT: *small boats, fishing vessels, pleasure crafts*), which generate an important source of pollution in the region, although some countries are currently working on the matter or are considering it, few of these have established a regulatory framework addressing pleasure craft-generated pollution.

38. A very important common characteristic of the countries covered by the assessment is that the central maritime administrations do not have enough personnel for discharging all their national and international responsibilities, in particular, their regulatory functions (preparing law for implementation, issuing and up-dating as often as necessary technical rules and regulations). Such a situation explains largely the weaknesses of the legal systems mentioned above.

39. The organization of the maritime administrations for the execution (at the local level) of the responsibilities of flag State and port State are generally satisfactory. However in many countries the arrangements and the relations with the recognized organizations as well as their auditing and monitoring should be revisited with the view to enhance the flag State performance in particular regarding MARPOL compliance. However, the participation in an MoU on port State control contributed significantly to enhance the performance of the countries in port State control inspection of foreign ships.

40. Regarding the coastal State responsibilities, in most cases, the legal systems and the institutional arrangements do not establish clearly the duties and responsibilities of the various ministries and administrations which could, and should, be involved in issues related to illegal discharges at sea. The responsibilities are not always placed with the administration(s) which have the capabilities to undertake related duties. In some cases, the Ministry of Environment has the responsibility of the control of the pollution at sea when it does not have the means and capabilities to actually undertake such control. In most cases, there are no co-ordination arrangements amongst Ministries or administrations with the view to utilize the existing national capabilities. Laws or decrees rarely designate or empower enforcement agents with respect to illegal discharges.

41. Finally, the assessment highlighted that Ministries of Justice, magistrates and prosecutors are not sufficiently involved in sanctioning illegal discharges related matters. Only in a few instances cases have been processed before courts. Moreover, prosecutors and magistrates are not familiar with the MARPOL Convention provisions particularly those dealing with ships' discharges requirements.

42. Recommendations for capacity building were also included on the basis of the results of the assessment carried out. As for developing and strengthening the legal and institutional frameworks, expertise is required to assist the countries in drafting laws and regulations addressing:

- technical issues (transposing the technical requirements into the legal system);
- offences and administrative and criminal sanctions (criminal law); and
- organizational structures and institutional arrangements.

43. As for developing and maintaining implementation and enforcement capabilities, training and raising awareness activities (on discharges monitoring, detection, evidence gathering, investigation and reporting) are required, targeting:

- legal staff of legal services of central administrations;
- surveyors, inspectors, port State control inspectors; and
- magistrates and prosecutors.

44. These recommendations were taken into account by the Centre when preparing its work programme for 2010-2011: as a follow-up to the assessment of national legislation and organizational structures in Mediterranean coastal States, REMPEC included in its work programme for 2010-2011 an activity, upon request and on first-come, first-served basis, related to provision of legal assistance on transposition into national legislation of MARPOL Annex I provisions, including the development or the revision of national legislation as a basis for prosecuting offenders of MARPOL Annex I requirements with respect to illicit discharges from ships.

- **Enhancing the knowledge of legal personnel, prosecutors and magistrates**

45. Under Specific Objective 7 (e) of the Strategy, REMPEC is requested to disseminate information on the implementation and enforcement of legislation to all staff dealing with these issues as well as to legal experts, prosecutors and magistrates, with the final objective of improving the handling and processing of cases of illegal discharges before the courts. To this end, in 2007, the Centre organised a Regional Seminar (MEDEXPOL 2007) dealing specifically with the legal issues relating to illegal discharges from ships.

46. In view of the specific nature of the Seminar and its aims, it was important to ensure that the participants designated by the Contracting Parties came from their respective judicial authorities and/or their national authorities in charge of the implementation/enforcement of legislation relating to illegal discharges from ships. Hence, and in accordance with Specific Objective 7 of the Strategy referred to above, REMPEC invited the Prevention Focal Points of the Contracting Parties to the

Barcelona Convention to identify two participants, at least one of which should have had such profile. Legal experts, prosecutors and magistrates were particularly encouraged to attend the Seminar.

47. For the purpose of dealing comprehensively with the various aspects of the issue of operational pollution from ships in the Mediterranean, the programme of the Seminar was divided into specific sessions, which addressed the following issues:

**47.1 International legal framework related to the issue of illicit discharges from ships,** starting with the identification of the problem and the investigation of the technical reasons why a ship produces « operational » waste in its routine operations. The international regulations that apply to such operational discharges, i.e. the relevant provisions of the MARPOL Convention on the prevention of pollution from ships, and in particular its Annex I dealing with Oil, were presented in detail, with particular reference to the specific situation in the Mediterranean, which was designated as a special area by the said MARPOL Annex I, with respect to discharges of oil. The first session also addressed the type of shipping activities in the Mediterranean region, and the extent of operational pollution in this area.

**47.2 Need for a proper implementation of the MARPOL Convention.** A proper legal implementation requires transposition into national legislation, defining provisions related to the definition of the violation and establishing appropriate sanctions. The respective duties and rights of the Port State, the Coastal State and the Flag State within the framework of the United Nations Convention on the Law of the Sea (UNCLOS) were recalled. An overview of the assessment carried out by the Centre regarding MARPOL Annex I in the region was introduced, together with Mediterranean EU States obligations under the European Union Directive EC 2005/35 on ship-source pollution and introduction of penalties.

**47.3 Evidence gathering in case of violation:** the participants were familiarised with the generally-accepted means of proof and with the important contribution of new technologies such as satellite imagery or images made available from the operation of information systems, in particular the Automatic Identification Systems (AIS) for ships. The use of such techniques helps to detect illegal discharges and identify the vessel which committed the offense. Various means of proof, namely oil sampling and analysis, airborne remote sensing systems, the use of satellite images, and AIS, were presented and their evidential value discussed.

**47.4 Prosecution of offenders:** the objective was to present to the participants examples of national judiciary organization and of judicial procedure in case of illicit discharges at sea. The United States system, built on close co-operation between the US Coast Guard and the US Department of Justice, and the French system which created specialized courts for such offences, were discussed. It was then explained how US and French judges (prosecutor's department and seat) deal, in practice, with the cases that are referred to them, especially with respect to the admissibility of the evidence submitted and the conviction handed down. The session offered the opportunity to highlight two different approaches, one based on the work of inspectors in the context of the port State control, the other on the principle of *flagrante-delicto*.

**47.5 Regional co-operation:** regional co-operation is a fundamental issue, especially in terms of surveillance of sea areas and investigation. Some regional seas (for example, the North Sea in the context of the Bonn Agreement) benefit from a well advanced policy of co-operation on surveillance and on judiciary matters, assisted in that by the North Sea Network of Prosecutors. This co-operation is tested during large-scale surveillance operations. It was noted that no such co-operation exists in the Mediterranean region. In addition, while the Mediterranean EU member States may benefit from the services of the European system of satellite surveillance of the seas (CleanSeaNet), this is not the case for the coastal Mediterranean States who are not members of the EU. REMPEC also presented the pilot projects in which the Centre took part with a view to testing the possibilities offered by satellite images.

48. At the end of the Seminar, several participants called upon REMPEC to organise more training activities on the same topic, an initiative which would contribute greatly to ensuring a better and more systematic prevention of pollution from ships in the Mediterranean.

- **Judicial co-operation and possible common procedures**

49. With respect to judicial co-operation, one of the achievements of the 2007 REMPEC Regional Seminar (MEDEXPOL 2007) was the recognition by the participants of the benefit of establishing a Mediterranean network of magistrates, with the aim of facilitating exchange of information and case law experience. REMPEC offered its assistance in the realization of this objective, within the framework of dissemination and exchange of information referred to in Article 7 of the "Prevention and Emergency" Protocol.

50. The proposed judicial co-operation is in line with Specific Objective 7 (d) of the Strategy, under which the Contracting Parties agreed, "with due regard to their national legal provisions, by 2011, to share collected data, and facilitate acceptance of the evidence gathered by other States, to ensure the successful prosecution of discharge offenders". Nevertheless, following a request by the Centre, to date, only Greece, Monaco and Turkey nominated a focal point for exchanging information related to prosecution of offenders related to illicit discharges at sea.

51. In order to strengthen the process of making available a common forum where information could be exchanged, REMPEC is submitting for the consideration of the present Meeting of Focal Points a proposal aimed at creating Internet accessible pages, which could be hosted by the new Website of the Centre, and which would allow this functionality.

52. Moreover, to further support the implementation of Specific Objective 7 (b) of the Strategy, whereby the Contracting Parties agreed "to endeavour to adopt common rules and harmonize sanctions by 2015 with a view to ensuring even-handed treatment of discharge offenders throughout the Mediterranean region", REMPEC included in its work programme for 2010-2011 an activity related to the organization of a sub-regional workshop to discuss possible common procedures aimed at facilitating the prosecution of offenders. This activity will be a follow-up of the coordinated surveillance operation which is planned to be carried out at the end of September / beginning of October 2009.

**The Meeting of Focal Points is invited to:**

- **take note of** the information provided in the present document, particularly with regard to the activities proposed by the Centre for the next biennium in the field of illicit discharges at sea; and
- **consider** the proposal of REMPEC regarding an internet accessible forum where contact points designated by the Mediterranean coastal States could exchange information on legislation, case law and any other relevant information on violations and prosecution of offenders to MARPOL Annex I requirements'.