



# Turkish Court of Accounts

## “PREVENTING AND DEALING WITH POLLUTION FROM SHIPS AT SEA AND IN PORTS”



2002/1

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## **Table of Contents**

### **Abstract**

Facts and findings	5
Recommendations	13

### **Introduction**

Background	16
Scope of the audit and methodology	17

<b>National Policy and co-operation among the institutions</b>	20
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<b>Ship surveys and inspections</b>	25
-------------------------------------	----

<b>Waste reception facilities</b>	35
-----------------------------------	----

<b>Pollution monitoring and prosecution of polluters</b>	42
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<b>Contingency plans and counter-pollution activities</b>	51
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## **ABBREVIATIONS**

IMO	: International Maritime Organisation
MARPOL	: International Convention for Prevention of Pollution from Ships
OPRC	: International Convention on Oil Pollution Preparedness, Response and Cooperation
SOLAS	: International Convention for the Safety of Life at Sea
STCW	: International Convention on Standards of Training, Certification and Watchkeeping for Seafarers
COLREG	: Convention on the International Regulations for Preventing Collisions at Sea

## Abstract

1. Surrounded by seas on its three sides, Turkey has an 8.333 km long coastline, one of the longest in Europe. Its seas get more polluted each day as the traffic on them ever increases. Turkey has signed several international conventions concerning environmental protection of its seas and coastal waters.
2. Turkish Court of Accounts has investigated the activities of governmental agencies involved on the issue of preventing and dealing with pollution from ships at sea and in ports as to ascertain the degree of their commitment and success. To this end, the Court of Accounts has:
  - Investigated such governmental agencies as to ascertain how relevant their pollution prevention policies are; and the degree of their commitment to account for their actions.
  - Investigated as to ascertain how successfully ship survey and inspection activities are conducted as required by international conventions as well as national regulations.
  - Investigated to ascertain whether or not the waste reception facilities in ports are capable to handle their load.
  - Investigated to ascertain whether the measures taken to prevent pollution are effective.
  - Investigated to ascertain whether or not the activities in connection with polluter monitoring and sanctioning lead to desired results.

## Facts and findings

### 3. In connection with policy making and accountability:

The primary governmental agencies responsible for policymaking in connection with preventing and dealing with pollution from ships are the Ministry of Environment and the Undersecretariat of Maritime Affairs under Prime Ministry. Such public agencies as Coast Guard, metropolitan

municipalities, public administration authorities; and port administrations are other agencies responsible on this matter.

4. Ministry of Environment is responsible for developing and co-ordination of environmental policies; the Undersecretariat of Maritime Affairs is responsible to take required measures to prevent marine pollution and to set both the objectives and policies in connection with maritime affairs; the Coast Guard, public administration authorities and metropolitan municipalities are responsible for monitoring of polluters and to impose necessary sanctions on such party (s); The General Directorate of Ship Rescue Facilities and Coastal Safety is responsible for maintaining safe sea travel and undertaking necessary actions in case of an emergency and port managements are responsible for waste reception facilities.

5. Although the duties and responsibilities of these agencies have been set forth as stated above in paragraph 4, operation of port waste reception facilities has been left to various agencies and institutions. This duty has been left to either the public agency utilizing the port or to the private sector that has acquired the right to operate. In other words all ports are being operated either by TÜPRAŞ (Turkish Petroleum Refineries Inc.), ATAŞ Refinery, TCDD (Republic of Turkey Railways Agency), TDÇİ (Turkish Agency Supervising Iron and Steel Manufacturing Facilities) or by private sector through transfer of the operational rights.

6. There is a similar situation concerning the monitoring of polluters and the imposition of sanctions on those polluters. Metropolitan municipalities are responsible for implementation of specified sanctions against polluters, who cause pollution within the boundaries of a metropolitan municipality; for other areas outside the boundaries of metropolitan municipalities and port administrations this responsibility is left to Coast Guard. For areas outside the boundaries of metropolitan municipalities while remaining within the port administration, public administration authorities are in charge of applying sanctions against polluters.

7. The measures to develop a national policy to prevent and manage marine pollution from ships have not been sufficient. Existing policies do not include all basic elements of preventing and dealing with pollution from ships. The main reason leading to this situation is that there has not been a clear and functional definition of authority, duty and responsibility for governmental agencies and institutions. Ministry of Environment and the Undersecretariat of Maritime Affairs, responsible for policy development, has encountered various

kinds of problems in terms of authority and duty. Such an uncertainty has put obstacles before the development and implementation of national policies and regulations, which have been expected to be accomplished in compliance with international agreements and conventions. It is not certain which authority or institution is in charge of construction and operation of port waste reception facilities, which is one of the basic elements preventing and dealing with pollution from ships. Again, it is not certain which authority or institution is responsible for taking necessary actions for pollution removal. In addition, there are many numbers of agencies and institutions that are authorized to undertake pollution monitoring activities and apply sanctions against polluters.

**8.** There are many governmental agencies and public administration authorities, which take role and responsibility in preventing and dealing with pollution of seas and coastal waters by ships. To succeed on this issue very much depends on establishment of result-oriented reciprocal and accountable co-operation among the agencies and authorities. Since activities are not being carried out in co-operation based on reciprocal agreements driven by pre-defined objectives, aim and performance criteria and by clear-cut responsibilities as well as expectations it becomes impossible to assess whether or not objectives have been achieved, and if not to determine the reasons for such failures.

**9.** Along with lack of efficient co-operation among the bodies, taking roles and having responsibilities to achieve in pre-defined objectives, the main weaknesses in planning and implementation of actions are the lack of determination of such bodies to carry out their actions in accordance with pre-defined objectives, aims and performance criteria; lack of an established performance measurement regime and in connection with these lack of up-to-date, valid, sufficient and reliable data and information as to assure the correctness of the decisions taken.

**10.** The completed work in this area by the concerned bodies has not been enough to actualize satisfactory national policies and implement such policies to prevent and manage marine pollution. Several factors underlie this failure. First, the institutions have not been carrying out their activities in concert with their objectives and aims specified in their strategic plans. Second, their objectives and aims are not being turned into annual targets. Third, there are no sets of performance criteria to measure whether or not their targets have been achieved annually. They lack a proper administrative knowledge system capable of handling such performance measurement; and because

there is no performance monitoring, evaluation and reporting the efforts are not yet enough to ascertain the effectiveness of their operations.

**11. In connection with ship surveys and inspections:**

The institution, which is in charge of conducting surveys and certification of Turkish-flagged ships, is Prime Ministry the Undersecretariat of Maritime Affairs. Ship surveys are being conducted through ship survey committees at 7 regional directorates of the Undersecretariat and other classification agencies authorized by the said Undersecretariat. These surveys aim to maintain safety of life, commodity and environment at sea. In accordance with national regulations and international agreements and rules, these surveys are conducted to investigate board, machinery and equipment plus installations of the ships and finally to issue certificate for those ships that are considered in compliance with the requirements.

**12.** While surveys are mandatory and must be conducted periodically, inspections, on the other hand, are not as detailed as surveys and can be conducted on selected ship without prior notice. During inspections, it is checked whether or not the ship certificates are valid. Inspections in Turkey are generally a port state inspection on foreign ships. The Undersecretariat of Maritime Affairs is trying to carry out these inspection activities via total 13 Port State Inspectors. This figure has decreased to 8 during this report was being typed. Although the Undersecretariat of Maritime Affairs does not carry out its controlling duty on Turkish-flagged ships through deliberate selection and surprise inspections, since 2000, it has began to monitor and inspect such Turkish-flagged ships, which have been found to be non-complying with requirements by foreign port administrations. The Undersecretariat of Maritime Affairs does not allow such non-compliant Turkish-flagged ships to sail unless they completely fulfill the requirements.

**13.** The port state inspection on foreign ships is a control conducted on a foreign-flagged ship sailing in accordance with international rules and certified by another flagged State, at another flag State's port. Regarding port state inspection, Turkey is a Part to both Mediterranean and Black Sea Memorandums. In accordance with the requirements of these memorandums to which it is a Party, within a three-year period, Turkey in accordance with



the requirements under the memorandum, is required to inspect, monitor and keep track of, in a calendar year, equivalent of at least 15 percent of the vessels that visit its ports. During the course of preparations toward joining European Union, this figure is expected to include at least 25% of the vessels that visit its ports. In order for these port state inspections to be effective pre-defined objectives have to be achieved first and the selection of the ships to be controlled must be based **on risk assessment**. While conducting port state inspections, the Undersecretariat of Maritime Affairs does not have difficulties to access to data and information as it has had in surveying activities. It can access the information provided by other countries. Through their own expertise and capacity to evaluate such data and information, its controlling officers should be capable of selecting ships to be controlled.

**14.** The memorandums to which Turkey is a Party requires the selection of risky ships and completion of targeted number of controls by the port State. The Undersecretariat of Maritime Affairs has not set forth any targets and it could not assess whether it could meet the 15% target. Lack of up-to-date, valid, sufficient and reliable data and information production and access to such information are the main reasons leading to this situation.

**15.** According to the SSI (The State Statistics Institute) data, over 20 thousand ships visit Turkish ports annually. This figure also includes multiple calls by the same vessel within the same year. The Undersecretariat of Maritime Affairs has announced on its Country Report-2000 that the number of the vessels controlled was 391 while it underestimated the multiple calls by the same vessel and it did not set a targeted number of port state controls it was going to conduct and check how well it would fulfill the 15-percentage requirement under the Mediterranean Memorandum. As a result of the audit we have conducted on the files, we have found out that 409 vessels were controlled in Istanbul and Izmir ports in 2000.

**16.** The surveying activities by the Undersecretariat of Maritime Affairs are not being conducted in accordance with a plan. Yet, the success on this are depends very much on the fact that these activities be based on a plan. In order to plan these surveying and port state inspection activities, one would need up-to-date and reliable data pertaining to number, types, risks and required surveying capacities of Turkish-flagged ships to be controlled. It becomes harder to plan these activities when some parts of such data are unreliable or it is not possible to easily and quickly access them. The failure to execute these port state inspections in accordance with a plan arises

mostly because of the absence of target setting and determinism and to adopt a work style to measure whether or not the targets have been achieved.

- 17.** The sanctions to be applied in case of non-compliance with port state inspection requirements include such measures as recording of deficiencies; allowing sufficient time for vessel owner or operator to rectify or repair the deficiencies; and even detaining certain ships. Although it has been introduced by the memorandums to which Turkey is a Party, that all costs in connection with port state inspections shall be borne by the ship owners or operators if it has been established that certain requirements are not fulfilled, this is not yet implemented in Turkey, which is a great shortcoming. The Undersecretariat of Maritime Affairs conducted 251 port state inspections between January-June 2000. 46 of these 251 ships were found in compliance with the requirements and 205 of them were found having several defaults and 71 of them on the other hand were forbidden to sail due to severe failure. Russian Federation with 33 ships, Malta and Syria with 31, Cambodia with 23, Panama with 21 and Ukraine with 19 ships are among the frequently controlled flag States.
- 18.** The Undersecretariat of Maritime Affairs has appointed Türk Loydu Association and other 9 member agencies of International Classification Institutions as authorized certification institutions. The Undersecretariat of Maritime Affairs has not established a quality system to assure these authorized-classification institutions provide proper services. Granting these classification institutions with such authority but not monitoring their services constitutes a significant risk factor, which might negatively affect the services and might lead failure in accomplishing pre-defined targets.
- 19.** The Undersecretariat of Maritime Affairs does not have guidelines and manuals providing instructions to maintain quality in surveying and inspection activities. Lack of guidelines defining duty and responsibilities of the personnel in charge of survey and inspections and lack of checklists to be used by these personnel during survey and inspections constitute a great risk, which might compromise the quality of such survey and inspections. In addition, results of these surveys and inspections are not being systematically and frequently recorded and not being transferred into electronic environment which leads to a loss of significant benefit: these valuable data allow one to
- 20.** The most important factor affecting the quality of surveys and inspections is that whether the personnel in charge of conducting such activities are competent and knowledgeable enough. The Undersecretariat of Maritime

Affairs which had not been providing sufficient occupational training to its personnel has recently initiated certain efforts through European Community to this end. In addition, a lack of decent wages makes it harder to recruit qualified personnel for those positions.

**21. In connection with waste reception facilities:**

The primary cause of pollution of sea is the disposal at sea of waste from ships. Ships either discharge their waste at sea or after a prior treatment (burning, separation etc) destroy the remaining; or store wastes during sailing and then discharge them at waste reception facilities in ports. The best effective way to prevent pollution of seas caused by such disposal of waste from ships is the storage of these wastes during sailing and their discharge at waste reception facilities in ports.

**22.** According to MARPOL, ships are obliged to store the wastes prohibited to be dumped at sea as well as any residual of these wastes after treatment. To fulfill this requirement requires that ports be equipped with solid and liquid waste reception facilities to store such wastes of ships in a timely manner. Since the national policy regulating waste disposal in ports is not comprehensive enough to cover all aspects of the matter, the waste reception facilities in ports, operated by several agencies, institutions, and private companies, has not reached to a sufficient number. Many ports, especially the ones operated by private sector, in fact, do not have any waste disposal facility whatsoever.

**23.** The port administrations are obliged to build a waste disposal facility at their port as required by MARPOL. Existing solid waste reception facilities in our Country are designed to handle only bilge and ballast water from ships and the number of those facilities destroying or grinding solid wastes is very few. As a result of the on-site investigations we performed, we observed that most of these facilities were not in operation. Since no treatment process whatsoever was being applied, bilge water waste was left for settlement and then removed. It was also observed that because of this process, bilge water storage tanks capacity was not sufficient to handle their load, which occasionally leads to undesired incidents. This insufficient storage tank capacity left the ships, which had paid their disposal charges to the port administration, inevitably no choice but to dump at sea of their wastes.

**24. In connection with pollution prevention, monitoring and punishment conducts of polluters:**

Sufficient and applicable national contingency plan is essential to manage pollution. Annexed Emergency Action Protocols of the Convention for Prevention of Pollution at Mediterranean and Black Sea” to which Turkey is a Party, is not yet being implemented. Although Ministry of Environment has prepared a basic contingency plan, this does not necessarily mean that we have an adequate national contingency plan as required by international regulations.

**25.** Monitoring and punishing of conducts of polluters is very essential in managing pollution from ships. According to the national regulations, this duty belongs to metropolitan municipalities, public administration authorities and Coast Guard. As a result of the investigations of both central and local administrative bodies, it has been established that metropolitan municipalities and especially public administration authorities are not provided with enough means and qualified personnel to carry out their monitoring tasks. We also determined that the means available to Coast Guard for this purpose should be enhanced.

**26.** Although co-ordination and information flow among bodies responsible to conduct monitoring activities is essential for the success of managing pollution it has observed that the degree of such required co-ordination and information flow is very low. While the Ministry of Environment has the key role in establishing such co-ordination and information flow among these bodies, it has not seemed to be taking all necessary actions to reach that goal.

**27.** Existing punishment system has many shortcomings to assure an efficient combat against pollution. The primary concern in managing pollution is to promote and initiate necessary measures to prevent the occurrence of incidents causing pollution. The punishment system does not target prevention but rather focuses on post-statutory measures, which are to be applied upon occurrence of the incidents causing pollution. Since the fees are being applied pro-rata to gross weight of ship such crucial factors as nature,

extend of the pollution in question and whether or not the incident is intentional or the goodwill are not taken into account. These fees imposed against ships causing pollution are not fair and do not serve to assure the prevention of pollution.

**28.** While a clear cut duty and responsibility definition and division for those bodies authorized to conduct monitoring and punishment is very essential there are legal shortcomings to establish such definition and division. Although metropolitan municipality boundaries have been definitely set, this has not been the case with coastal lines and water limits. This, of course, creates various problems.

**29.** Monitoring agencies are supposed to carry out periodically effective aerial, nautical and land-based surveillance. Due to shortage of adequate number and size of crafts and the limited means, it was not possible to carry out such monitoring activities and hence prosecute the polluters. None of the agencies responsible for monitoring has an airborne craft to conduct such aerial surveillance to detect pollution, except the Coast Guard which had a limited number of airborne crafts. Excluding the Metropolitan Municipality of Istanbul, no municipality or public administration authority has enough means to conduct such monitoring activities.

## **Recommendations**

**1.** In order to ensure that the national policy meets the requirements for preventing and dealing with pollution, necessary policy making tools should be developed. These tools should cover all basic elements of pollution, and must be consistent with internationally accepted agreements and rules. The Ministry of Environment and the Undersecretariat of Maritime Affairs must evaluate the means available to them to decide whether or not they have been provided with sufficient policy making tools and must develop new initiatives.

**2.** There are a number of institutions all taking part in preventing and dealing with pollution. Reaching the objectives in this area requires development of close links and efficient collaboration among these bodies. It would not be possible to ensure success unless effective co-operation and co-ordination is developed among these bodies.

- 3.** To establish a result-oriented co-operation among these bodies, each of them should conduct their activities in accordance with the objectives and aims defined in connection with their pre-defined strategic plans. None of these bodies responsible in preventing and dealing with pollution from ships evaluates its performance as to ascertain whether or not their actions are being carried out in accordance with the objectives and aims defined in connection with their strategic plans. These bodies must first define their objectives, then must set their annual targets in connection with these objectives and aims, must prepare performance indication sets and finally must measure the degree of their success in realizing their targets.
- 4.** The Undersecretariat of Maritime Affairs should not only conduct surveying and port state inspection activities but also aim to conduct Flag State controlling activities. In order to be able to efficiently carry out these tasks the Undersecretariat of Maritime Affairs needs to be provided with sufficient means and tools and be allowed to recruit enough number of qualified personnel as well.
- 5.** The Undersecretariat of Maritime Affairs should consider electronic data and information storage and reproduction to attain efficient flag State inspection and surveys and also plan its surveying and inspection activities on the basis of reliable, up-to-date and valid data and information.
- 6.** The Undersecretariat of Maritime Affairs should set out its own targets in connection with port state inspection and should evaluate the degree of its success in realizing these targets.
- 7.** When a deficiency is observed during port state inspections, those provisions of the Mediterranean Memorandum regarding the payments of costs incurred during inspections should be put into effect.
- 8.** The Undersecretariat of Maritime Affairs should exercise a more stringent control over the classification agencies it authorizes.
- 9.** The Undersecretariat of Maritime Affairs should prepare and publish necessary handbooks, guidelines and checklists to ensure the quality of surveying and inspection activities.
- 10.** The Undersecretariat of Maritime Affairs should pay more attention to training of its personnel to enable them carry out their duties efficiently and effectively.
- 11.** It is not clear which authority is responsible for the construction of waste reception facilities as called by the international agreements. Therefore this deficiency in national regulations should be corrected as soon as possible.

- 12.** It should be emphasized that required waste reception facilities should be built as required by international agreements and rules and be operated in accordance with pre-defined port waste management plans.
- 13.** It is necessary to prepare an adequate and feasible national contingency plan which involves all the bodies responsible for preventing marine pollution. This plan should include a number of distinct scenarios and be supported by practical training. Based on this plan, each local unit, İstanbul foremost, should prepare and initiate their local scale contingency plans.
- 14.** The duties and responsibilities of the bodies in charge of conducting monitoring activities and penalizing polluters should be clearly re-defined. Any uncertainty in terms of definition of coastal lines and water limits of municipalities should be corrected.
- 15.** In order to prevent that the fines applied to the polluters are set null and void via a court rule; the samples obtained from disposed waste from ships should be analyzed via eligible laboratories. To enable this all organizations responsible for monitoring and punishment of marine polluters, Coast Guard foremost, should be provided with the opportunity to set up their own laboratories to analyze such samples.
- 16.** Such fines to be applied against polluters should be re-designed to consider fairness and prevention at the first sight and do not cause unnecessary delays in ships' voyage.
- 17.** It should be clearly defined which organization (s) will be responsible for the removal of spill and thus the deficiency of legal documents on this issue should be corrected. The organization responsible for removal and cleansing of pollution incidents should be provided with sufficient means, tools and equipment.

# SECTION 1

## Background

### Introduction

- 1.1.** Turkey is located in one of the important sea traffic areas of the World because of its geographical position. Its coasts experience a heavy traffic load. As the seas surrounding Turkey, namely Black Sea, Marmara Sea and Aegean Sea and Mediterranean are semi-closed waters, it takes a long time for these seas to refresh themselves and this contributes to sea pollution problems for Turkey.
- 1.2.** Discharge by ships of oily water such as ballast water as well as garbage and sewage causes considerable pollution at sea and in ports. The most important factor leading to sea pollution is the spills from accidents. Our seas are under the threat of accidental spills of oil, oil products and hazardous chemicals by ships in transit. The risk of such accidents is especially high in the Bosphorus and Çanakkale Straits, the only waterways between Black Sea and Mediterranean Sea.
- 1.3.** Traffic on Istanbul Strait is 4 times heavier than Panama Canal and 3 times heavier than Suez Canal. Legal statues as well as their physical circumstances threaten safe cruise of ships through Istanbul and Çanakkale Straits. Natural elements (the straits are very narrow and ships have to zigzag through them, there are some very shallow waters throughout the straits, currents may be very powerful and easily reverse themselves, severe weather conditions may occur etc) adversely affect safe cruise through these straits. Very heavy traffic is the other important factor threatening the safety of Istanbul Strait. Especially crude oil and petroleum products carrying vessels pose a high risk factor to environment.
- 1.4.** According to data from the Undersecretariat of Maritime Affairs, almost 1.350 waterborne crafts move on Istanbul Strait a day. This heavy ship traffic involves hazardous, toxic and noxious material (such as LNG, LPG, chemical and other environmentally hazardous materials) transportation. Each day, on average, 140 ships pass through the Strait; of these 15 are tankers each carrying on average 200 thousand tons of hazardous material. It is estimated that the probability of accident is one in 2.653 for each ship passing through



Istanbul Strait. In 1999, total 47.906 vessels had cruised through Istanbul Strait and 5.504 of these carried hazardous material. Total amount of hazardous materials transported through the Strait was 81.5 million tons that year. 2.678 of the ships that passed through the straits during that year were longer than 200 meters. In 2000, at least 6.000 of 48 thousands that pass carried hazardous materials and the total amount of petroleum and petroleum products carried was 91 Million tonnes.

**1.5.** According to data from the Undersecretariat of Maritime Affairs, 350 sea accidents occurred on Istanbul Strait in last 10 years. 57% of these were as a result of crash and collision, 22% was due to grounding and finally 21% was due to other reasons. 30 of those accidents had severe results. The Straits are faced with a high risk of sea accidents that might cause severe environmental pollution.

**1.6.** Two important developments have recently drawn the World's attention to maritime safety of these straits. One of these recent developments is the subject of transportation of Caspian oil through the Turkish Straits and other is the ratification by Russia of the law permitting the import/export of nuclear waste. These developments have increased the concerns for safety of the Straits. It is estimated that the number of the vessels carrying hazardous materials through the Straits will rise from 5.000 to 8.000 especially when oil from Caspian Sea fields begin to be carried via tankers. In that case, Bosphorus, having a 30-km length with occasional 90-degree turns, would become even a more risky waterway in terms of vessel passage.

## **Scope of the audit and methodology**

**1.7.** In this study, the issue of preventing and dealing with pollution from ships at sea and in ports was researched. This subject matter was a result of a reciprocal understanding of 6 member state of European Supreme Audits Association (EUROSAI) with each member state conducting its audit in accordance with a set of mutually accepted criteria. These criteria have been set forth in accordance with the international agreements and conventions to which each of these 6 member states is a party. With this study, Turkey's performance in complying with the requirements of these international agreements and conventions was evaluated.

**1.8.** The subject matter of preventing and dealing with pollution from ships at sea and in ports is comprised of five sections. The first section deals with degree

of effectiveness of national policies and policy tools used in preventing and dealing with pollution from ships at sea and in ports. The second section is on sufficiency of ship surveys and inspections. The section three analyses whether the operation of waste reception facilities in ports leads to expected results and section four examines whether the polluters are being effectively monitored, prosecuted and punished. Finally section five is about how effective the national contingency plans are in preventing and dealing with marine pollution.

**1.9.** During this auditing, the activities of the Ministry of Environment, the Undersecretariat of Maritime Affairs, Republic of Turkey Railways Agency, Coast Guard, The General Directorate of Ship Rescue Facilities and Coastal Safety; and the maritime units of İstanbul and İzmir Metropolitan Municipalities have been audited. While Ministry of Tourism is responsible for the operation of marinas and Ministry of Agriculture is responsible for inspection of fishing vessels, their activities were not audited because their role in pollution at sea was relatively insignificant.

**1.10.** Although Republic of Turkey Railways Agency and the General Directorate of Ship Rescue Facilities and Coastal Safety are public economic enterprises and therefore their activities are not normally inspected by Turkish Court of Accounts, their activities concerning this study were audited. During audits top level administrative staff of these organizations was provided with the objectives and aims of this study and were asked for their volunteer assistance and support for the audit to be conducted. These officials usually expressed their acknowledgments regarding the objectives and aims of the audit and provided our team with full support and assistance during the course of audit. Indeed, during the auditing process all necessary documents constituting evidence for the presented data and information were available for our investigation and it was possible to interview any official at any rank. Since the degree of collaboration was that high there was no need for applying opinion polls to collect some valuable data.

**1.11.** In this study we audited these institutions in holistic approach by inspecting their central branches in Ankara, their regional or provincial departments as well as their local units in İstanbul and İzmir. İzmir and İstanbul are the two most important port cities of our country and therefore bear greater pollution from ships risks. The other reason for selecting İzmir and İstanbul as a study subject was that they both are a metropolitan city supervised by a metropolitan municipality.

**1.12.** The evidence for this audit was collected by utilizing various methods. Both national and international regulations and the documents published by relevant organizations were studied. The tools and equipment used in monitoring and removal of pollution were tested. Meetings with key personnel, surveyors, port inspectors, port administration staff; directors of classification and non-governmental environmental agencies and academic staff were arranged. Their response to contingencies and actual occurrences were observed. At the same time, such other methods as sample case and comparison were utilized.

**1.13.** Because of the methodology we applied in this study, we agreed with the institutions audited upon on both the auditing criteria and the key findings as well as our results. The report was prepared in accordance with both written and verbal opinions obtained from these institutions audited.

## **SECTION 2**

### **National Policy and co-operation among the organizations**

- This section examines:
- Whether our country has adopted a national policy, which is adequate and effective enough to serve for preventing and dealing with pollution at sea and in ports,
- Whether there exists among the concerned organizations a result-oriented co-operation based on accountability.

- 2.1.** By nature, the sea pollution from ships is an international problem. Therefore international conventions and agreements constitute a general framework for the policies to be developed and implemented by Turkey. MARPOL, “*Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter*” is at the core of such conventions to which Turkey is a party. This convention, prepared by the International Maritime Organization (IMO) has two main objectives; one is the prevention of intentional marine pollution by dumping of petroleum, toxic substances, wastes, waste and sewage water and garbage; and the second is the minimization of the adverse effects of spills resulting from ship accidents. To realize these objectives all the signatory states are required to take necessary technical and administrative measures concerning the management and operation of the vessels and construct necessary port and coastline facilities and build teams that are to be in charge of managing and operation of such facilities; and have their national regulations consistent with the requirements of this convention.
- 2.2.** Turkey has also become a signatory party to Memorandum for Mediterranean and Black Sea Port State Inspection to ensure marine safety and success in managing pollution from ships. Turkey by undersigning both Memorandum on Port State Inspection at Mediterranean Sea and the Memorandum on Port State Inspection at Black Sea, has agreed that it shall conduct inspection, in the first three years, on at least 15% of total vessels flying foreign flags and coming to its ports.
- 2.3.** Among other agreements to which Turkey is a party are Barcelona (1976) and Bucharest (1992) Conventions. These two agreements concern the international technical assistance and initiatives to be provided in managing pollution from ships at Mediterranean and Black Sea. Especially the “*Annex for the Governance of Response and Co-operation at Extraordinary Conditions arising from Pollution by Petroleum and Other Substances*”, enclosed with these agreements, prescribes the modifications to be made in national legislation by each signatory state and response and co-operation to be presented by these states in case of actual pollution at sea arising from a ship accident or an extraordinary situation.
- 2.4.** The last convention that Turkey signed is the “*International Convention on Oil Pollution Preparedness, Response and Cooperation*” (OPRC). This convention requires each signatory State take responsibility to act in co-operation with each other to minimize the adverse effects of the pollution arising from oil spills. According to this Convention, the signatory states

should prepare contingency plans to respond pollution from spills as required by IMO and ensure their implementations by the vessels, port administration and administration of petroleum facilities. The ratification of this convention has been completed and it is expected to take in effect soon.

**2.5.** The Ministry of Environment and the Undersecretariat of Maritime Affairs are the authorities responsible for preventing and dealing with pollution by ships of seas and coastal waters. Other institutions and organizations that are in charge of preventing and dealing with such pollution are the Coast Guard, metropolitan municipalities, public administration authorities and port administrations. The General Directorate of Ship Rescue Facilities and Coastal Safety does not have a direct role but rather carries out important functions in preventing and dealing with pollution from ships. Ministry of Environment is responsible for making and co-ordination of environmental policies; the Undersecretariat of Maritime Affairs is responsible to take required measures to prevent pollution and to set the both the objectives and policies in connection with maritime affairs; The Coast Guard, public administration authorities and metropolitan municipalities are responsible for monitoring of the polluters and to impose necessary sanctions on such party (s); The General Directorate of Ship Rescue Facilities and Coastal Safety is responsible for maintaining safe sea travel and undertaking necessary actions in case of an emergency and the operation of both the ports and waste reception facilities.

**2.6.** Although the duties and responsibilities of the afore-said agencies have been set forth as stated above in paragraph 2.5, operation of port waste reception facilities has been left to various agencies and institutions. This duty has been left to either the public agency utilizing the port or to the private sector that acquired the right to operate. In other words all ports are being operated either by TÜPRAŞ (Turkish Petroleum Refineries Inc.), ATAŞ Refinery, TCDD (Republic of Turkey Railways Agency), TDÇİ (Turkish Agency Supervising Iron and Steel Manufacturing Facilities) or by private sector through transfer of operational rights of these ports. The same situation holds also for monitoring of polluters and imposition of sanction on those polluters. Metropolitan municipalities are responsible for application of sanctions against polluters, who cause pollution within the boundaries of a metropolitan municipality. For other areas outside both the boundaries of metropolitan municipalities and port administrations this responsibility is left to Coast Guard. For areas outside the boundaries of metropolitan municipalities while

within the port administration, public administration authorities are in charge of applying sanctions against polluters.

**2.7.** When we examined the activities of those agencies responsible for policy making, namely the Ministry of Environment and the Undersecretariat of Maritime Affairs, we have observed that both agencies have been spending great efforts to have their activities complying with the requirements of the policies of which general frameworks had been drawn by the international agreements and memorandums to which Turkey is a signatory. These agencies have been diligently trying to implement such basic policy tools as conducting survey and port inspections; building and running waste reception facilities in ports; prosecution of those who have committed offences, such as illegally discharging waste in the sea; ensuring safe cruise of vessels; responding relatively more severe pollution incidents that might have greater adverse impacts on the marine life and the environment; and collecting and controlling oil and other hazardous substances. Despite all these efforts, these agencies have not been totally successful in developing and implementing clear and well-defined policies that would cover all aspects of preventing and dealing with sea pollution.

**2.8.** Lack of clear-cut definition of duty and responsibility leads authority clashes and duty conflicts which in the final stage negatively affects the policy making processes. This unfavorable situation restrains the efforts to attain competent national regulations and implementations as required by international conventions and agreements. Due to lack of a decent authority and responsibility definition it is still not certain which agency is mainly responsible for building and operation of waste reception facilities in ports, which are the key elements in preventing and dealing with sea pollution. Similarly, it has not been clearly defined which agency or organization will be responsible for cleaning up the actual spills at sea. In addition, there are many agencies that are authorized to monitor pollution and prosecute those who have illegally discharged waste in the sea. Lack of a clear-cut and definite duty, authority and responsibility definition in this matter has been obstructing successful operation by the concerned organizations.

**2.9.** There are number of organizations having responsibility and taking a role in the efforts to ensure success of preventing and dealing with pollution from ships. Unfortunately, they have not been able to establish among themselves a result-oriented co-operation based on accountability principle. This negatively affects the invention and implementation of policies for preventing

and dealing with pollution. Establishment of a strong co-operation and coordination, based on accountability principle in accepting reciprocal expectations and undertakings, among these organizations is the best way to succeed in pre-defined objectives and targets.

**2.10.** These organizations have failed to achieve a results-oriented collaboration primarily because they have not operated within the framework of their strategic plans, and that they have not implemented a sound performance measurement system to evaluate their progress in actualizing their plans. These organizations have not yet set out their objectives and targets and performance criteria in connection with their strategic plans. They have not developed data on the indicators of performance and they have not self-evaluated their progress. They not have allocated funds according to the results of such performance evaluation. They have not been required to submit reports to the Parliament or to public to explain how well they use their funds and powers. For these reasons, they were unable to establish the required degree of collaboration on these grounds.

**2.11.** The Ministry of Environment and the Undersecretariat of Maritime Affairs, which are responsible for policy making and invention of policy tools, have prepared some draft laws consistent with international conventions and norms in order to close the gap between national laws and international law. Once the “Draft Law Governing the Principles of Preventing of Sea Pollution and Response to Emergency Situation” by the Ministry of Environment and the “Draft Law Governing the Principles of Response to Fires at Sea and Coastal Facilities; on Establishment of Sea Fire Fighting Agency” by the Undersecretariat of Maritime Affairs are enacted a more favorable environment to deal with pollution at sea would be attained. Regulation shortcomings in national laws concerning preventing and dealing with pollution at sea restrain the success of the activities that are already being carried out. In addition, not having ratified the amendments of MARPOL and Barcelona Convention on Managing Pollution at Mediterranean Sea also negatively affects these activities.



## SECTION 3

### Ship surveys and inspections:

This section examines whether surveys and inspections by the Undersecretariat of Maritime Affairs have met the desired objectives and results.

**3.1** The authority responsible for inspecting and certifying vessels registered with Turkish flag is the Undersecretariat of Maritime Affairs. Vessel inspections are being carried out through 66 surveyors employed by Surveying Committees located each 7 Regional Directorate of the Undersecretariat and via other authorized classification agencies. Port Administrations on the other hand is authorized to survey only small vessels. In 1998, the Undersecretariat of Maritime Affairs had authorized Turkish Lloyd Association and other nine International Classification Agencies Association- member classification agencies to issue vessel certificates. These classification agencies provide periodical maintenance and repair services and conduct their activities in accordance with the technical requirements of international surveyor groups like Lloyd.

**3.2.** *Survey, is a set of activities to examine the construction and/or equipment or operation on board a ship to certify that the ship complies with the national and international regulations concerning the safety and environment. As of 2000, there are total 880 vessels over 300 gross tons in Turkish commercial fleet. The vessels and yachts less than 300 gross tons are also subject to the survey regime. International conventions and IMO's norms define the types of certificates that each vessel in a certain class (for example, passenger ships, container ships, roll-on/roll-off ferries, general purpose cargo ships, gas carriers, Speed boats, bulk commodity carrying ships, chemical substance carrying tankers, oil tankers) should obtain. There are different types of certificates such as Certificate for International Oil Pollution Prevention, International Prevention of Pollution at Sea by Dumping of Waste Water; International Prevention of Garbage Pollution as well as International Loadline Certificate, Certificate of Fitness for Carriage of Dangerous Chemicals in Bulk, Safe Manning Certificate, Safe Construction Certificate, and Equipment*

Safety Certificate. There are almost 40 certificates and documents that each vessel owner or operator should obtain. Each certificate to be issued by related authorities has a different validity period. Certificates must be renewed periodically once they are no longer valid.



**International conventions and norms set forth by IMO define the types of the certificates that each vessel operator or owner should obtain. The vessel owners or operators are provided with such certificates once their compliance with the requirements is established.**

**3.3** Ship surveyors employed at Regional Directorates periodically survey ships. This survey includes examination of construction and/or equipment or operation on board ship and validity of the certificates to ensure that the requirements of the relevant regulations are complied with in all respects thus the safety of life, commodity and environment are maintained as required by the international conventions and regulations. Ship surveyors issue a “*Document of Compliance*” for the ships that possess valid certificates. Whereas the ship surveyors in ports check those documents and issue a “*Permit to Operate*”. These surveys are conducted upon ship owners or operators’ request. These surveys involve all aspects of operation; they include examination of construction, safety and operation equipment; liquid and solid waste storage units; fire prevention and fire fighting equipment; training of the crew; plans and instructions; and other conditions pertaining to health, life and environment.

**3.4.** The certification is a very complicated task, which requires that it should be carried out by qualified personnel, who are well trained and have sufficient knowledge about all aspects of a ship, which is a complex system of

intervening elements, and requirements of surveying as specified by international conventions and regulations. It is very important that the personnel in charge of certification are competent and qualified. IMO has set out the minimum qualification criteria and requirements for the personnel to be in charge of surveying any type of commercial vessels, except small fishing ships. On the other hand, the norms and criteria governing the qualifications of the surveyors recruited at the Undersecretariat of Maritime Affairs had not been specified until 2000. With a legal arrangement made in March 2000 the eligibility criteria and qualifications for the personnel to be recruited as ship surveyor have been defined. According to these criteria and norms, the person to be recruited as ship surveyor should be a graduate of a college department specializing on naval/ocean/ship engineering or mechanical engineering departments of four-year universities. They are also required to have at least 5 years of public service experience of which 2 years should have been completed within the agency. Proficiency in technical English is an asset. With this legal arrangement, the quality and competency of the personnel to be in charge of ship surveys is ensured.

**3.5.** Newly recruited ship surveyors are supervised by an expert surveyor at the early years of service. This continues until the date the junior surveyor is eligible to conduct the survey on his own. This means that the experience of an expert ship surveyor is always utilized in training new surveyors. In fact this is necessary because only by means of integrating the theoretical aspects of the surveying task with its practice a technically complex task such as ship survey can be carried out in a successful manner. Besides, marine sector is a very dynamic sector with forever changing rules and regulations. The scope of the ship surveys have been expanding and getting even more complex with the introduction of new technologies and changing international regulations. While providing the ship surveyors with competent and sufficient training is very important, it has been ascertained that there have been not sufficient training programs initiated for the surveyors in the last three years. On the other hand, the specifications to be complied by a vessel as required by IMO depend on its type and usage, the areas where the ship will sail through and these criteria changes in time. For example, recently accepted ISM coding requires that the ship surveyors should gain new knowledge and skills to inspect the operational and administrative systems of a vessel. However since there is no such surveying personnel, who have acquired the new information and skills as required by ISM Safe Operation System, available at

the Undersecretariat of Maritime Affairs, the Undersecretariat of Maritime Affairs had to authorize other certification agencies to issue the ISM certificates.

**3.6.** While undertaking surveying activities, the ship surveyors have not had access to a quality assurance system and the guidelines, manuals and checklist that are a part of such a system. Although ship surveyors prepare engine and on board reports at the end of their surveying performed without such guidelines, manuals and checklists, none of these reports would eliminate the need for such guidelines, manuals and checklists. For this reason, one could not be certain that whether these surveys have been as comprehensive as required by the national and international rules.

**3.7.** The standards governing the authorization of classification agencies have been specified by an IMO General Assembly Resolution and the Protocol thereof. The norms of the control to be applied on these agencies as to ascertain how well they do their jobs have been also defined with these documents. The Undersecretariat of Maritime Affairs has authorized its İstanbul Regional Directorate to undertake such controlling on the authorized classification agencies before it has established a quality assurance mechanism that include the norms and procedures of this controlling on the activities of the agencies to ascertain their competency and efficiency. When no guidance and norms exist it becomes impossible for the classification agencies to determine how to conduct their activities and fulfill their requirements. This would of course make the tutelage control non-effective. Lack of an effective control over these classification agencies constitutes a great risk factor.

**3.8.** It is very essential to record systematically the data obtained through ship surveys on an electronic environment and use such data in preventing of pollution from ships. The survey data should be recorded in accordance with a certain set of standards and available to both flag state-controlling officer surveying Turkey-registered vessels and to the Turkish authorities undertaking port state controls on the vessels registered to other states. Although these survey data are being systematically collected in accordance with the pre-defined standards, because they are not being recorded on an electronic environment it becomes difficult to access. Therefore survey data can not be used as a feedback resource, which is essential to improve the quality of surveys and inspections.

**3.9.** Surveys undertaken by the Undersecretariat of Maritime Affairs are not being carried out in a planned fashion. In order to be able to achieve desired results, these surveys should be conducted in accordance with a pre-defined plan. Such planning necessitates that the information and data pertaining to the number, type, inclined risk and the capacity of the vessels in national fleet should be up-to-date and reliable and be stored on computer environment. Because many of these vessels travel between different ports that may fall under different regional surveying directorates, they may undergo multiple surveys. Each regional directorate keeps files in connection with the vessels registered with the directorate. Many of the Turkey-registered vessels are registered with İstanbul Directorate. The information and survey results collected by İstanbul Directorate is not available to other surveyors at different Regional Directorates, such as İzmir. Therefore it is necessary to build a centralized database which each surveyor from different Regional Directorates can access.

**3.10.** To attain success in the activities pertaining to preventing and dealing with pollution, developments taken place in the maritime sector should be dynamically monitored and necessary modifications required by these developments should be realized without delay. This of course, requires that all organizations involved in preventing and dealing with pollution from ships at sea and in ports work together in accordance with predetermined vision, mission, objectives and targets.

**3.11.** To exercise sufficient control and take necessary measures to prevent that neither surveys nor the certificates issued thereafter are being abused is one of the most effective methods to prevent marine pollution by ships. The form of the certificate should be such that it can not be illegally reproduced since the certificate is the essence of proving that that particular vessel has complied with the safety and other requirements. The Undersecretariat of Maritime Affairs has not yet initiated a monitoring system to prevent survey and certificate abuse. Yet it has been decided that each certificate to be issued as from July 2001 will be affixed with a serial and registration number and a hologram seal to prevent illegal reproduction. In addition, new initiatives are under way to ensure that all surveying activities are scheduled to harmonize the validities of certificates.

**3.12** *Inspection is a process to ascertain whether the certificates held by the vessel owners or operators are still valid.* Whereas surveys are periodic and mandatory, inspections are selective and targeted. Inspections on the other

hand are not as complex and comprehensive as are the surveys. The scope and depth of an inspection are mainly determined by the inspectors. Targeted inspections are to be carried out on vessels that present the greatest risk to safety. This targeting stage takes into consideration what percentage of vessels should be inspected.

**3.13.** Generally, the inspections carried out in Turkey are port state controls exercised over foreign vessels. **A port state control** is a type of control exercised by another flag state on the foreign vessels, which is certified with its country of origin, visiting its ports. **A flag state control** is a type of control exercised by a flag state over the national vessels visiting its ports. The Undersecretariat of Maritime Affairs is trying to carry out these inspection activities via total 13 Port State Inspecting Officers. This figure has decreased to 8 during this report was being typed. Although the Undersecretariat of Maritime Affairs does not carry out its controlling duty on Turkish-flagged ships through deliberate selection and surprise inspections, since 2000 it has began to monitor and control such Turkish-flagged ships, which have been found to be non-complying with requirements by foreign port administrations. The Undersecretariat of Maritime Affairs does not allow such non-compliant Turkish-flagged ships to sail unless they completely fulfill the requirements.

**3.14.** Within this context, Turkey has become a signatory party to Mediterranean and Black Sea Memorandum. These memorandums requires Turkey to start within three years, to inspect, monitor and keep track of, in a calendar year, equivalent of at least 15 percent of the vessels that visit its ports. Such conventions and protocols, as SOLAS, MARPOL, STCW, and COLREG are all related with these memorandum. The Undersecretariat of Maritime Affairs had begun implementing required inspections under the Mediterranean Memorandum of 1999 in 1999. Turkey has also become a party to Black Sea Memorandum, which stipulates similar requirements. It has not yet put into effect the Black Sea Memorandum signed in April 2000.

**3.15.** Two basic pre-requisites for the success of these inspections are that the targeting of vessels to be inspected should be based on risk and priority assessment and that the targeted percentage should be pre-defined prior to the inspections. Under Mediterranean Sea Memorandum, in determining the priority for the inspection of the ships the following factors must have priority in targeting: ships visiting a port of a State after an absence of 12 months or more; ships visiting a port of State for the first time; ships which have been permitted by the Authority to leave a port of its State on the condition that

deficiency to be rectified at the next port; ships for which certain deficiencies have been recorded by the port authorities; ships with invalid certificates; ships carrying hazardous or other substances that might cause pollution, which have not furnished relevant authorities with the required information; ships which have been suspended or withdrawn from their class. These principles set forth by the Mediterranean Memorandum are the same principles stipulated in other regional port state control agreements (Paris Memorandum, Tokyo Memorandum; Black Sea Memorandum, etc.). Success of these principles very much relies on establishment of a strong information system. The Undersecretariat of Maritime Affairs has recently started building a Database Network within the Department of Maritime Safety. This information network will provide central, regional and port authorities with a continuous communication that enable them to access necessary data on time. This information system will also allow the use of previous inspection data for targeting and determination of priorities for vessel inspections. Since the data obtained through these inspections are not being systematically compiled and recorded these data can not yet be used as effectively as in preventing marine pollution. When this information system starts, it will be possible to compile and record systematically the inspection data.

**3.16.** The Port State Control Officers recruited at Regional Directorates target the vessels subject to Port State control. Information faxed daily by each port is used in determining the targeted vessels. Port Authorities and Port Operators notify the Regional Directorates of the vessels that they suspect having various deficiencies or presenting greater risk because of the substances they carry. During interviews with Port State control officers we have been told that they gave priority in targeting to those such as oil, chemical and wheat tankers; gas carriers and other vessels carrying hazardous or noxious substances.

**3.17.** During port State controlling activities, the Undersecretariat of Maritime Affairs, unlike surveying activities, does not have difficulties in accessing data and information concerning vessels. Port State Control Authorities are allowed to access the data and information compiled and recorded provided by other port States. The controlling officers review these data and information in the light of their experiences and knowledge and target the vessels to be inspected. Targeting very much depends on the age, type, flag and prior crimes of the vessels in question.

**3.18.** The conventions to which Turkey is a Party requires that for port state control there has to be a targeted number of inspections determined and priorities in targeting of vessels should be specified. The Undersecretariat of Maritime has not set forth its target. Neither has it been reviewing whether the number of the inspection it had conducted complied with the minimum 15-percentage requirement. This is mainly because of the fact that the up-to-data, reliable and valid data and information are not available for a review of its performances. Since the information system project to be built by the Undersecretariat of Maritime as stated above in paragraph 3.15 has not yet started operation, the review of the port state controlling activities would not be complete and healthy. Nonetheless, the port state control authorities in other countries prepare annual reports in connection with their port state controlling activities. For example Britain has announced that it had targeted to inspect 25% of the vessels, in 1999, that visit its ports and it inspected 1767 of 7000 foreign vessels that visited its ports. Australia for example had targeted to inspect at least 50% of the foreign vessels that visit its port and inspected 2753 foreign vessels that visited its period during that year. United States of America, on the other hand, has announced that it had targeted to inspect almost all of 7000 foreign vessels that visit its port a year and it inspected each foreign vessel at each entry and thus actualized 11.540 port State controls. According to the data obtained from the Undersecretariat of Maritime Affairs and SSI (State's Statistic Institute) over 20.000 vessels visit Turkey's port a year. This figure also includes multiple calls by the same vessels. The Undersecretariat of Maritime Affairs has announced on its Country Report-2000 that the number of the vessels controlled was 391 whilst it underestimated the multiple calls by the same vessel and it did not set a targeted number of port state controls it was going to conduct and check how well it would fulfill the 15-percentage requirement under the Mediterranean Memorandum. As a result of the audit we have conducted on the files we have found out that 409 vessels were controlled in Istanbul and Izmir ports in 2000. This indicates how urgent the need for a strong centralized database system the Undersecretariat plans to build.

**3.19.** The measures to be taken in case of deficiencies found during port state controls include recording of such deficiencies, allowing a certain period of time to the vessel owner and operators to rectify or repair such deficiencies. These measures are being exercised in accordance with the terms specified by the aforementioned memorandums. The Undersecretariat of Maritime

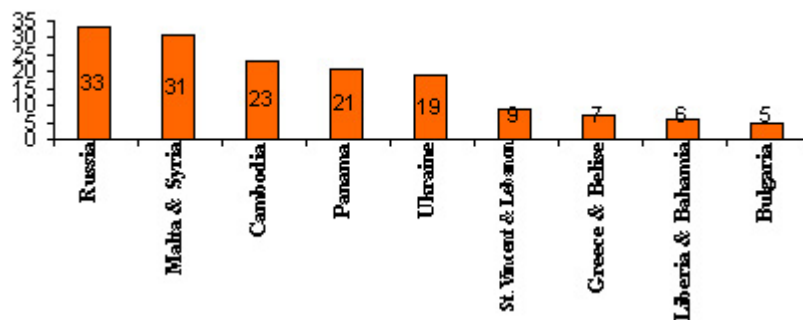


Affairs requires new legal means to effectively implement such measures during flag state controls. The flag state controls could be made more effective by granting the Undersecretariat of Maritime Affairs with the right to suspend the certificates held by the vessel owner or operator; to detain ships to proceed from the port and to prohibit ships to operate.

**3.20.** According to the provisions of Paris Memorandum, the Port State Authorities do not hold liable the vessel owner or operators for the costs incurred as a result of port state control when they do not find any deficiency in connection with that particular vessel controlled. But in case they find any deficiency all costs pertaining to the second control will be charged to that particular vessel's owner or operator. The charge to be borne is generally around US Dollars 1000. Although Article 3.14 of the Mediterranean Memorandum stipulates the costs in connection with the port state controls, Turkey does not impose any charge against the vessels visiting their ports.

**3.21.** During January-July 2000 251 foreign vessels registered to 41 different flag States have been controlled. 46 of these vessels being controlled have been found complying with the requirements, 205 of them with several deficiencies and 71 of them on the other hand have been detained due to profound deficiencies. The Table 1 suggests that Russian Federation with 33 vessels was the flag state whose vessels were controlled the most. Malta with 31 vessels and Syria, Cambodia with 23 vessels, Panama with 21 vessels and Ukraine with 19 vessels come after Russian Federation. These flag states whose vessels are being frequently controlled are the ones that are being occasionally inspected by other port state controlling authorities. This presents that the port state controls that have been newly put into effect in Turkey have been exercised over the correctly targeted vessels.

**Table 1: Distribution of Flag States over which the Port State Controls were exercised during January-July 2000 Period**



The Undersecretariat of Maritime Affairs, like in surveys, does not publish any guidelines, manuals or checklists designated to ensure the quality of controls. Another important factor affecting the quality of controls is that the personnel in charge of conducting these port state controls are not well qualified and well skilled. Since these controlling officers are getting less pay it becomes difficult to employ qualified and skilful persons for these posts. The Undersecretariat of Maritime Affairs has been trying to conduct these port state controls with limited number of personnel. Also, there is the lack of means and tools available to these controllers to conduct their controlling duty effectively. In an unfavorable environment like this plus a lack of sufficient training available to the controlling personnel it would not be too far to say that the quality of the port state controls is faced with various risks.

## SECTION 4

### Waste Reception Facilities

This section evaluates how well waste reception facilities in ports meet the requirements in preventing marine pollution from ships and how well the authorities responsible for operating these facilities do their job.

**4.1.** Throughout the 8.333km coastline of Turkey there are 255 different kinds of shore facilities including ports, harbors, marinas, fishing ship shelters and berthing. 20 of these facilities are the important service ports. 7 ports among these facilities are being operated by general Directorate of Turkish Railways; 17 port and berths by TDİ, 2 ports by TÜPRAŞ, 20 ports and berths by the authorities that own them, 50 port and berths by municipalities and provincial special administrations, 53 ports and berths by private sector companies, 13 marinas by the Ministry of Tourism and various municipalities, and finally 128 fishing ship shelter by co-operatives, municipalities and provincial special administrations.

**4.2.** **MARPOL** requires each signatory state build waste reception facilities in their port to handle solid and liquid from ships. Under MARPOL dumping of oil, oil mixture, garbage and wastewater from ships at sea have been prohibited. Those substances prohibited to be discharged from ships into the sea should be stored in the waste tanks deployed at ships to be disposed later of in waste reception facilities in ports. Under MARPOL the substances causing pollution at sea are divided into five categories: petroleum, substances extracted from petroleum, toxic liquids, packed hazardous substances, wastewater and garbage. MARPOL also specify the types of the waste reception facilities required to be built in ports. These are as follows: Petroleum waste reception facilities, toxic substance reception facilities, waste treatment facilities, solid waste grinding and destroying facilities, laboratories and measurement equipment, loading and unloading installations, and other installations for pump and equipment connections.

**Bilge Water:** Means any residual water used for cleaning and other sludge from machinery and pumps stored in vessels. Bilge water is stored bilge water

tanks situated underneath the vessels. Bilge water is an important pollutant source for it posses high amount of oil or other hazardous substances.

**Ballast water:** is the water pumped from sea to balance the ship. Ballast water is discharged from ships into the sea prior to approaching to the port. Especially ballast water in oil tankers pollutes sea more than any other wastes from ships.

**4.3.** Many of the pollution incidents at sea are due to dumping of bilge water, ballast water, garbage and other wastewater from ships at sea. Therefore, MARPOL requires the vessels storing those hazardous wastes in a properly manner it on the other hand requires the port administrations building waste reception facilities to handle such bilge, ballast water, waste water and garbage on time.

**4.4.** Pursuant to article 8 and 11 of the Turkish Environmental Law it is port administrations, port operating governmental or private organizations duty to build and operate necessary waste reception and treatment facilities in ports that are required for preventing and dealing pollution from ships at and in ports. Under current legislation, private companies, local administration and public economic enterprises are allowed to operate the ports in Turkey. The primary ports and the operators thereof are listed in Table 2. It becomes harder to ensure the operation of these waste reception and treatment facilities in ports are in compliance with the requirements of international legal instruments because of the great number of bodies involved in port administration. Furthermore, there is not one single authority directly responsible for monitoring and inspecting of the construction and operation of these facilities. This lessens the effectiveness of waste reception which is considered to be one of the important factors of preventing pollution. Lack of a single authority directly responsible for monitoring and inspecting of these facilities also constrains enactment of necessary codes and norms. The “Draft Decree on Collection of Wastes from Ships and other Waterborne Crafts” is one of the important developments pertaining to legal arrangements in connection with this issue.

**Table 2: Important Turkish Ports and the Operators thereof**

<b>The Operator</b>	<b>The Port</b>
Turkish Rail Ways	İstanbul (Haydarpaşa) Port İzmit (Derince) Port Samsun Port Bandırma Port Mersin Port İzmir Port İskenderun Port
TÜRRRAŞ	İzmit Port Aliağa Port
SEKA	Mersin Port
ATAŞ	Mersin Port
DÇİ	KDZ Ereğli Port
İZEYDAŞ	İzmit Port
TTK	KDZ Ereğli Port
PETKİM	Nemrut Port
TDİ	İstanbul Port Trabzon Port

**4.5.** The waste reception facilities in ports vary in capacity and type. Many of these waste reception facilities are designated for bilge and ballast water handling. At these facilities, where no treatment whatsoever is carried out, bilge and ballast water are disposed of in tanks situated on port area and then substances such as oil or oily mixtures are being segregated from water after a settlement process. This segregated oil is sold to private sector companies; water on the other hand is re-discharged into the sea. At the waste reception facilities, where the wastes are being treated, bilge water disposed of in the facility is being treated and then the treated oil is sold to private sector companies. The clean water obtained from treatment is then discharged into sea. Table 3 shows the types, number of the waste reception facilities in ports and the operators thereof.

**Table 3: Waste Reception Facilities**

Type of the Waste Reception Facility	Quantity	The Operator
Bilge and ballast water treatment facility	6	TDİ (1), TÜPRAŞ (2), BOTAŞ (1), ATAŞ (1), İZEYDAŞ (1)
Bilge water treatment facility	9	TCDD (7), ALTAŞ A.Ş. (1), TDİ (1)
Bilge water tank	3	DÇİ (1), BORUSAN (1), SEKA (1)
National waste treatment facility	2	PETKİM (1), GEMPORT (1)
Chemical waste reception facility	1	PETKİM (1)
Solid waste destroying facility	2	PETKİM (1), TÜPRAŞ (1)

**4.6.** The primary ports in Turkey are being operated by TCDD and TDİ. During 1985 and 1986 period solid and liquid waste reception and treatment facilities financed via World Bank Loans were built in these ports.



**The waste treatment facilities deployed in TCDD and TDİ ports are not in operating state due to various reasons**

The legal statues of TCDD and TDİ allow this organization to build and operate such facilities in ports. As a result of the audits conducted in İstanbul, İzmir Ports and Haydarpaşa and Alsancak Ports, which are the greatest Turkish ports operated by TCDD, profound deficiencies have been identified in connection with waste reception requirements. Like in other ports operated by TCDD, Haydarpaşa and Alsancak Ports have waste treatment facilities built in 1986. Due to such factors as high treatment costs and old technology utilized in the facilities, required waste treatment activities have not been carried out. The tanks deployed in these facilities are being used for liquid waste storage. Bilge water discharged from ships is disposed of in these tanks and after the completion of a settlement procedure the segregated oil is sold to private sector companies. In case when the tanks are full no liquid waste from ships can be disposed of in the facility. It is striking how low the amount of liquid waste stored in these tanks was for the facility was not being used for treatment purpose. For example in 1999, only 10 of 1976 vessels visited Haydarpaşa Port had discharged of liquid waste (equivalent to 142 m<sup>3</sup>) in the facility. For 2000 only 6 of 2000 vessels (equivalent to 166 m<sup>3</sup>) and for the first quarter of 2001 only 3 of 403 (equivalent to 14 m<sup>3</sup>) vessels discharged of bilge water in the said facility.



**The bilge water collected from vessels is stored in the tanks shown in above photograph and segregated via settlement procedure (Haydarpaşa Port).**

**4.7.** TCDD charges all vessels, except the ones that have proved that their solid waste and bilge water treatment systems are properly operating, for solid and liquid waste reception services regardless whether or not they have demanded for such services. The tariff for these services also specifies the requirements that vessels should comply with when they dispose of their wastes in waste reception facilities. For example, solid wastes have to be stored in sealed barrels, nylon or other types of sealed bags or containers. During the audit it has been ascertained that during waste reception in ports these requirements have not been complied. The required practice for handling solid wastes from ship is that solid wastes from ships have to be collected and transferred via garbage truck to be disposed at municipal waste disposal landfill. Yet again, we have ascertained that such requirement has not been properly fulfilled either. During site inspections, we have observed that Haydarpaşa Port has presented an unfavorable environment in terms of solid waste handling and storage. There were garbage piles all around the waste disposal area in port since there were no sufficient trucks to transfer these solid wastes to municipal waste disposal landfill and the port authorities did not call on the related municipal department for such transfer. These garbage piles kept in waste disposal area in ports constitute a great risk to the environment and human health.



**A view from solid waste disposal area from Haydarpaşa Port**

**4.8.** The port Administrations are required to build solid and liquid waste reception facilities as stipulated by MARPOL. Especially the number solid waste



grinding and destroying facilities very low. Another important issue related with the waste reception and treatment is the requirement that each port administration has to build and operate waste reception and treatment facility that has enough capacity to cope with the amount of waste that that particular port has to bear. As a result of the audit we conducted in ports we have ascertained that waste treatment facilities in TCDD's ports have not been in working conditions due to various reasons. Since no treatment whatsoever has been realized in these ports bilge water from ships have been stored in tanks and then segregated. Because bilge water has been left for settlement in these tanks in time tanks' capacities became insufficient and thus no further bilge water disposal from ships could be accepted. Whilst the vessels visiting those ports were required to pay waste disposal service charges since they were not able to do so they had to discharge of the bilge water into sea.

## SECTION 5

### Pollution Monitoring and Prosecution of Polluters

This section evaluates how well pollution monitoring and prosecution of polluters have been actualized.

**5.1.** MARPOL has defined the scope of the procedures to be exercised by the signatory States in connection with the prosecution of polluters. The related provision of the convention reads as follows: “any act contrary to this convention will be prohibited and in case such an action occurs contrary to the convention there will be legal provisions in national law punishing the act. The Administration upon the notice of occurrence of the act contrary to this convention and at the time when it establishes certain evidences are present to prove the occurrence of the act contrary to this convention do exist will, as soon as possible, starts with prosecution of the people that have committed the act contrary to this convention. The acts contrary to the provisions of this convention shall be prohibited in accordance with each signatory State’s jurisprudence and those measures, to be taken against polluters will be as severe as to discourage those who may attempt to commit in such kind of acts, regardless of where ever it is they have been committed, contrary to this convention”.

**5.2.** In our national legislation, the basic norms in connection with pollution from ships at sea have been set forth by the “*Decree on Identification of the Liability of the Vessels and Waterborne Crafts in connection with the Sea Pollution; Governing the Procedures pertaining to Prosecution of Polluters; and on the Documents to be used as Receipt Bill*” which is enacted on the basis of the Turkish Environmental Law, 2872. Pursuant to the provisions of current national legislation, direct or indirect discharging of ballast and bilge water and dumping of any kind of waste and residues from ships and waterborne crafts into the sea within the terrestrial waters, free zones and exclusive economic regions of Turkey, inland waters, straits, harbors, natural and artificial lakes, rivers, canals and the shores thereof have been

prohibited. Categories of the fees to be imposed against the people that have committed actions contrary to this prohibition and the amounts to be applied in connection with these categories in 2002 are shown in Table 4.

**Table 4: Amounts of Fees for the year, 2002, as stipulated by Communiqué of the Ministry of Environment, No.2001/23**

A- Against the vessels discharging dirty ballast water into the sea:

- up to 1000 (including) gross tonnage, TL 35.7 Billions;
- between 1000 and 5000 (including) gross tonnage, TL 71.4 Billions;
- Over 5000 gross tonnage, TL.357.7 Billions; shall be charged.

B- In case when any kind of waterborne craft, including tankers, dumps of any kind of solid waste or residue and discharge of bilge water into the sea; and in case when any kind of waterborne crafts, excluding tankers, discharges of ballast waters into the sea:

- For the waterborne crafts between 18 (including) and 1000 (including) gross tonnage, TL.35.7 Billions
- For the waterborne crafts over 1000 gross tonnage, TL.71.4 Billions, shall be charged.

C- In case when pollution at sea or discharging of bilge water into the sea from the vessels below 18 (excluding) gross tons and other waterborne crafts that are not considered as vessel, TL.2.1 Billions shall be charged against the owners or operators of these crafts provided however that pollution due to exhaust from the boats with engine that uses gas and oil mixture as fuel and the ones with two-cycle stern drive engine.

**5.3.** Based on the above table, it seems that our national legislation provides sufficient measures in monetary terms to prevent pollution from ships at sea it nevertheless has many shortcomings. The basic measure used in determining the fees is the gross tonnage of the vessels. On the other hand the fine to be imposed in connection with the pollution with greater negative effect arising from a vessel with smaller gross tonnage is less compared to the pollution with relatively less negative effect arising from a vessel with greater gross tonnage. For example in case when a small ship below 18 gross tonnage discharges chemical substance into the sea thus causes severe environmental pollution will be charged of TL. 2.1 Billions whereas a relatively bigger ship over 1000 gross tonnage dumps garbage into the sea

will have to pay TL.71.4 Billions. With the current structure, our punishment system based solely on the gross tonnage of the vessels has many shortcomings and does not take such primary pollution factors as the size, extension, removal cost into account. Our punishment system does not intend to make correlation with the cause of the pollution and the goodwill or intention of the polluters. It treated an accidental pollution and an intentional one as the same. Punishing the polluters by roughest treatment has become a universal practice. Nonetheless, the general agreement upon punishment fit the crime is that the punishment should be pro-rate to the size of the pollution and should be in such an amount that covers all the costs in connection of removal of the pollution.

**5.4.** The current legislation in connection with the pollution mostly includes pro-measures, which are to be imposed against polluters after the pollution. Therefore it does not put more emphasis on preventive measures. However sufficient preventive measures have to be taken prior the pollution. Such precautions as to prevent potential pollution during loading and unloading of petroleum and substances extracted from petroleum from a tanker or at a facility and such standard equipment to be used for managing spills (such as floating barriers, oil collecting equipment, chemical oil dispersants, etc) have to be available at required places prior to an pollution.

**5.5.** With its current formulation, our punishment system does not consider whether or the polluter has had good faith. The polluters who has notified the relative authorities of the pollution incident and assisted them during pollution removal activities is treated as equal as the ones that has intentionally cause the pollution and held liable to pay the same amounts as does the unfaithful polluter.

**5.6.** Pursuant to the "*Decree on Identification of the Liability of the Vessels and Waterborne Crafts in connection with the Sea Pollution; Governing the Procedures pertaining to Prosecution of Polluters; and on the Documents to be used as Receipt Bill*" the commission established in accordance with the said Decree has to meet and discuss the matters pertaining to the fees to be imposed on the polluters in each calendar year in January and July. This commission is composed of the representatives of the Ministry of Internal Affairs, Finance and Environment and representatives of the Coast Guard. Whilst such a commission like this is supposed to platform where the prevailing problems can be discussed and co-ordination among the bodies involved in the task can be established, as a result of the audit it has been

ascertained that this commission has not been functioning at all. However the Ministry of Environment is responsible for the implementation of this Decree. This means that with a non-functioning commission the problems pertaining to imposition of fees and collection of the amount in connection with these fees would prevail.

**5.7.** Pursuant to the Environmental Law, should the act causing the pollution be repeated the punishment available for this act would be imposed as double. This is, of course, possible only if a strong communication network and information flow existed among municipal authorities, Coast Guard and public administration authorities, which altogether are authorized to implement such punishments. Having completed the audit we have ascertained that there was no such information among these bodies. For example since the other two authorities were not furnished with the data available at the metropolitan municipality in connection with a particular ship that had polluted the İzmit Harbour double-punishment rule under the Environmental Law could not be imposed on the same ship when it re-committed the same act causing pollution in another location. Therefore, there are some problems existed that makes monitoring and identification of the multiplicity of the crimes committed by the same vessel in a different location under the supervision of different authorities. Whilst the Ministry of Environment could co-ordinate with other authorized bodies in connection with this matter it, however, does not provide the related authorities with sufficient information and data.

**5.8.** Whilst the authorized bodies responsible for imposition of the fees in connection with pollution are the local administrative authorities as stipulated by the Environmental Law, regarding the punishment of the act causing pollution from ships at sea metropolitan municipalities and Coast Guard have also been empowered to exercise such duty. The fees in connection with pollution at coastlines, on straits, in ports and harbors; and rivers and lakes within the limits of metropolitan municipalities the authority responsible for the imposition of such fees on the polluters is the metropolitan municipality administration. The duty of imposition of the fees in connection with the pollution at the sea, which is outside the limits of a metropolitan municipality, rests with the Coast Guard. For other areas at the sea, lakes and rivers that are outside the limits of a metropolitan municipality but within the water limits of a port highest public administration authority along with the Coast Guard is responsible for imposition of the fees. Whilst the existing legislative instrument speaks of the concept of “metropolitan municipality limits” there is no an

implicit and enforcing regulation that identifies the limits of a metropolitan municipality. Although boundaries of all metropolitan municipalities were clearly defined legal instruments have not yet defined the water limits of them. Thus, the resultant situation is that each metropolitan municipality tries to define its own water limits by using different criteria than uses another municipality. This conflict has been trying to be resolved by a protocol signed between the metropolitan municipalities and the Coast Guard. Only Antalya, İzmir and Samsun Metropolitan Municipalities that are adjacent to the sea have signed the water limit drawing protocol with the Command. It is an important deficiency that other metropolitan municipalities adjacent to the sea have not yet defined their water limits yet. This situation could lead to problems in the implementation of legal measures to be taken against polluters. By defining norms and procedures in connection with these matters in a legal platform could resolve conflicts and eliminate different and arbitrary practices and also lead these metropolitan municipal administrations to coordinate with each other.

**5.9.** Some metropolitan municipal authorities had to transfer their authorities related with coastal areas and the sea to the Coast Guard due to lack of sufficient means and personnel to undertake the requirements under such authorities. For example, Samsun Metropolitan Municipality, which is one of the metropolitan municipalities adjacent to the sea, had transferred all associated rights and authorities in connection with monitoring and prosecution of the polluters to the Coast Guard via a protocol. Sufficient means and personnel are the preliminaries for an effective monitoring and prosecution of the polluters. Nevertheless most of the metropolitan municipalities have not been provided with such means. Therefore transferring of responsibilities and the authorities to another body capable of meeting the requirements of these responsibilities and authorities can be justified in this sense. The Coast Guard, which obviously has better means available to it and works on the basis of 24 hours, would carry out its responsibilities better if it is furnished with more equipment, tools and personnel.

**5.10.** It is very important to start with the prosecution of the polluters' right after noticing the occurrence of a pollution incident since only that way the punishment fit the crime can be exercised on time. Shortcomings of our punishment systems or the malpractices in the implementation negatively affect both marine commerce and tourism sector and also cause unduly delay

a ship, which make the vessel owner or the operator suffer more than punishment aims. Pursuant Article 7 of MARPOL, a flag State causing unduly detaining or delay a ship shall be held liable to reimburse the costs that the vessels has to bear during that unnecessary detaining or delay period. As a result of the audit we have conducted on the related organizations we have ascertained that Istanbul Metropolitan Municipality has been conducting its actions in connection with monitoring and prosecution of the polluters without causing unduly detaining or delay a ship. All necessary procedures such as recording the conduct causing the pollution, testing of the samples, approval of the fees by respective authorities, issuing detention of a ship, lifting of the detention upon full payment of fee, can be completed within the same day unless the vessel owner or operator committed the conduct wishes to do the contrary. Unlike Istanbul Metropolitan Municipality, in İzmir the fees to be imposed are being approved by the Municipal instead of the General Secretary of the Major. Since the Council meets two days a week this cause delays in detention and lifting of the detention process. Whilst the polluter fully pays the fine on the same day it has to wait until the Committee meets and lifts the detention. Regarding the Coast Guard, since the number of laboratories available to it to conduct standard test on the samples taken from the spill is very few and the provision for the costs of these laboratory tests is very limited the Command becomes unable to fulfill its requirements in connection with prosecution of the polluters on time.

**5.11.** The Coast Guard needs sufficient waterborne and airborne crafts as well as enough number of trained personnel to monitor and detect pollution. Bearing in mind its other principal functions and 8.333km-long coastline it is apparent that means, equipment and personnel available to the Coast Guard is far from being sufficient. The Coast Guard had started taking necessary steps to rectify such deficiencies. It prepared a draft law on personnel recruitment. It has been also trying to actualize an automatic identification system project which will enable it to automatically monitor the vessels sailing through Turkey's terrestrial waters; to have a reliable information flow established among these vessels; to collect detailed information about commercial ships; and to increase efficiency in search and rescue activities. In addition, it has been trying to purchase nine helicopters to be used in aerial surveillance.

**5.12** The water limits of Istanbul Metropolitan Municipality, comprising of the straits and islands, is called the Istanbul side of the Marmara Sea and this area has the heaviest ship traffic throughout the country. In addition to its heavy traffic

and busy ports the area also includes Tuzla Docks. Therefore monitoring becomes even more important. A technical capacity evaluation in connection with the means available to the authorities involved in monitoring duty has ascertained that the waterborne crafts used in surveillance were small slow ships in limited number compared to the width of the responsibility area and that in case of failure of surveillance crafts required surveillance can not be undertaken on time. This unfavorable environment inevitably causes authorities no being able to detect the polluters on time. Besides the Metropolitan Municipal Authority does not have any airborne craft to carry out aerial surveillance. İstanbul Metropolitan Municipality had to open a service procurement tender to recruit expert personnel. Nine English speaking overseas seafarers and other crew as well as municipal police officers are currently recruited at the Municipality. These personnel are responsible for collecting samples from spills, taking photographs of the incidents and preparing minutes regarding the pollution incidents. At İzmir Municipality, the vessels are inspected by a team of harbor control officers at the Department of Environmental Safety and Public Health Services supervised by the Public Health Department. This harbor control team is composed of three officers of whom the chief of team is a biologist and other 2 officers are marine ecologists. There are only one waterborne craft and four officers to carry out monitoring duty. While the related authority at İstanbul Metropolitan Municipality carries a 24/7 monitoring duty on the other hand in İzmir this monitoring task is not carried out on weekends and after official hours.

**5.13.** Both the Coast Guard and the highest public administration authority are authorized to exercise the punishments against polluters at sea within the areas in port water limits and other areas outside the metropolitan municipality boundaries. Based on the interviews with the authorities at the Deputy Provincial Governorship and Port Administrations in Alağa and Kuşadası, two counties adjacent to the sea, we have ascertained that there was no waterborne craft available to them to be used in pollution monitoring. Whilst upon receipt of notice of the incident they would go the scene where the spill occur and collect samples from the spill and take photographs they are not able to conduct necessary surveillance to monitor and detect pollution from ships due to lack of airborne craft. As a result they sometimes have to call on the Coast Guard to conduct such monitoring duty. Especially Alağa, where a ship demolition facility, industrial facilities, state ports and privately operated ports are situated, is a fragile area that has to be frequently



monitored. Thus, it is apparent that the monitoring duty to be carried out within the limits of this region has to be very effective. Nonetheless, the Deputy Provincial Governorship does not have any means to accomplish this task. The Coast Guard tries to undertake such monitoring duty on behalf of the Governorship along with its other duties.

**5.14.** The authorities involved in monitoring and detection duties are required to conduct surveillance via waterborne, airborne and other crafts. Yet due to lack of necessary surveillance means it becomes impossible to monitor and prosecute those, who have committed conducts contrary to pollution prevention regulations. Except the Coast Guard no other authority has an airborne craft to carry out aerial surveillance. It is, therefore, important that the Coast Guard is furnished with new nine helicopters that it has planned to purchase as soon as possible. Other than İstanbul Metropolitan Municipality no other municipalities or public administration authority has sufficient means to effectively conduct the monitoring duty.

**5.15.** The high number of authorities involved in monitoring and prosecution of the polluters, emphasizes the importance of information flow among these authorities. Only by means of a sound information flow among these authorities, prospective polluters and actual polluters can be effectively identified. Along with information flow among national authorities, an information flow established with international bodies has become more important. As a result of the audit it has been recognized that there were severe deficiencies concerning with information flow both among national and with international bodies. None of the Metropolitan Municipal Authorities (in İstanbul and İzmir) that we audited was able to provide other municipal and public authorities with relative incident and ship data and information. Also no other authorities provided the said metropolitan municipal authorities with the information pertaining to prospective polluters and actual polluters.

**5.16.** National legislation has several shortcomings in terms of information flow in connection with prospective polluters and actual polluters among related authorities. Under the related Decree governing the issue, the fee bills issued against the polluters have to include such information as the cause of pollution, place and date of the incident, amount of the fee imposed and the authority issued the bill. Besides the Annex of this Decree also include a sample “control form”, which has to be filled upon the incident, comprising of the polluter’s information. Again this Decree also requires the issuance officer to submit the copy of each fee bill issued against the polluters to the

Ministry of Environment. In addition, the committee established on the basis of this Decree has to meet twice a year and review these fee bills that are issued by related authorities in a calendar year. On the other hand this Decree has also required the highest public administration authorities in a given place to submit their reports concerning with the activities in connection with monitoring and prosecution of the polluters to the Environment in every month. As the above paragraph suggests the information flow process required to be established between related authorities and the Ministry of Environment has not be fully implemented and has not been functioning as to ensure the effectiveness of the preventing and monitoring of pollution. In fact, it is very important to maintain the continuity of information flow among all the related authorized bodies. Also, in order for the information flow to be effective all required data and information should be available to the authorized bodies on time. In this respect, our national legislation and administrative practices have various shortcomings as to achieve these objectives.

## Section 6

### Contingency Plans and Counter-pollution activities

This section examines whether national contingency plans required to be prepared to deal with prospective pollution incident have been sufficient enough to cope with such incidents, and how well the activities carried out by the authorities involved in removal of spills have been successful.

- 6.1.** Regarding managing pollution, some of the international legal instruments, to which Turkey is a Party, require each signatory State to take necessary steps in connection with preparation of national contingency plans. Pursuant to the provisions of Barcelona Convention for the Prevention of Pollution at Mediterranean Sea to which Turkey became a Party in 1980 and the Annex “Protocol on the Response and Co-operation in Extra Ordinary Situations in connection with the Pollution at the Mediterranean Sea by Oil or Other Harmful Substances” thereof, Contracting Parties shall individually and collectively promote the effective respond to all sources of pollution of the marine environment, and pledge themselves especially to take all practicable steps to make their national contingency plans and means ready to undertake such response. These means to be used counter-pollution activities especially include dispersants, dispersant ships, aircraft and personnel. Like Barcelona Convention, Bucharest Convention requires the each signatory State to prepare its national contingency plans and put in place equipment for combating pollution incidents that may occur at the Black Sea by oil or other harmful substances. The “1990 International Convention on Oil Pollution Preparedness, Response and Co-operation” to which Turkey is a Party, obliges each signatory State to maintain a national contingency plan, which is to be prepared in accordance with the requirements set forth by the International Maritime Organisation (IMO), involving all public and private authorities co-operation in connection with preparedness and response to pollution incidents.

**6.2.** Preparation of a national contingency plan for preparedness and response to pollution incidents, which draws the framework of the relations among all public and private stakeholders in connection with the matter, is very important for an effective response to the incident causing pollution. Under our national legislation, the authority, which is obliged to take all necessary steps, develop required contingency plans, and co-ordinate the conducts among all stakeholders in connection with prevention of pollution, is the Ministry of Environment. The Ministry of Environment has issued guidance in 1996 setting out the general criteria in connection with preparation of Regional and Local Sea Contingency Plans. According to the Ministry of Environment, the aim of the national contingency plan is “to define the responsibilities, authorities and the procedures in responding and managing any prospective pollution incidents, which might negatively affect the marine life and constitute harm to ecologic system within the limits of our terrestrial waters, at the Marmara Sea and Straits and within and adjacent to exclusive economic zones; that may be as a result of a ship wreck or any intentional discharges of wastes by these ships or commodity transportation or aroused from mining or oil exploration activities”. The Ministry of Environment has ordered all governorships of the provinces adjacent to the sea to prepare regional and local contingency plans, which should meet the general criteria as set by the said guidance.

**6.3.** The contingency plans developed in accordance with the general framework set up by the Ministry of Environment, do not meet the requirements that a national contingency plan is obliged to as required by the international legal instruments to which Turkey is a Party.

**6.4.** National Contingency plan has to take common lessons from both national and international experiences into account. Also this plan should be frequently reviewed and revised by the related authorities to reflect the changes in time. A successful implementation of the national contingency plan depends on setting up the annual targets and drawing up action plans. This contingency plan must include different contingency scenarios associated with each different cause of pollution and must be periodically tested to ascertain its applicability. All national and local contingency plans have to be developed in terms of the size, extend and kind of the contingencies. While local resources might be sufficient to respond a relatively small sized pollution for a larger incident on the other hand these resources might fall short to respond and deal with such incident. Such a case may necessitate calling on all national

public and private even international resources to help the authorities deal with the incident. Therefore these contingency plans have to be developed as to cover all alternatives in managing incidents. Applicability of national contingency plans depends very much on the sufficiency of the means and tools available to the authorities involved in implementation of such plans. All the means and tools available to these authorities should be in good quality and sufficiently put in place. Besides, the personnel responsible for using this equipment should be qualified and provided with enough training and information. The Ministry of Environment has drawn up a draft law aiming to ensure effective implementation of these contingency plans. With this draft law it has exclusively identified responsibilities and duties of the bodies to be in charge of developing and implementing these contingency plans and specified the provisions to be allocated for funding these activities. Once this draft law is enacted, this will be a big step forward concerning the prevention of pollution at sea.

**6.5.** Success of counter-pollution activities depends on many factors. The most important of all is that the authorities involved in these activities have to be provided with sufficient counter-pollution equipment and personnel to respond the pollution incident on time. These authorities also have to have various equipment and tools, including the barriers especially, to limit the spread of the spill prior to the cleaning up. As a result of the audit we have conducted we ascertained that related public authorities involved have not had enough means and tools to respond and deal with pollution at sea.

**6.6.** Neither Municipality Act No.1580 nor Statutory Decree on Administration of a Metropolitan Municipality No.3030 has drawn a clear line in connection with the responsibilities of the municipalities in responding to the pollution incidents at sea. Istanbul Metropolitan Municipality, on the other hand, conducts counter-pollution activities in case when pollution from ships or any other sources at sea occurs. The Municipal Authority has 2000 meters barriers to prevent oil or any other harmful substance spill from spreading on a large scale, and 2 skimmers to collect the spill and 1 multi-purpose solid and liquid waste collecting ship as well as 2 solid and liquid waste collecting ships. Considering how wide the area that the municipality is responsible to tackle with is and the traffic and hence accident risk factors it becomes more apparent that the means and resources available to the Municipal Authority are so limited in number and scope to effectively and efficiently respond a larger scale pollution at sea. Regarding İzmir Metropolitan Municipal

Authority, it has no barrier, clean up equipment or other means whatsoever available to be used in counter-pollution activities, except one small solid waste collecting ship with limited capacity.

**6.7.** The Coast Guard has no responsibility in connection with responding to and cleaning up the pollution at sea. Therefore, it has no barriers or skimmers or any other tools and equipment available to be used to respond and clean up a spill. Whilst when it detects pollution it has the right to exercise administrative measures over the polluters it is not able to respond to the pollution incident as to clean up or conduct counter-pollution activities. In fact, timely response is an important factor in counter-pollution activities. In case when the response to the spill occurs in delay the spill could spread wider with the help of the current or the wind which in the final analysis constrains the counter-pollution activities. Through necessary amendments in the legal instruments and thus putting the Coast Guard in charge of conducting such counter-pollution activities and providing it with necessary means and equipment, such as oil skimmers, will enable the counter-pollution activities to be carried out more effectively and efficiently.

**6.8.** Whilst General Directorate of Coastal Safety and Ship Rescue has no responsibility for responding to counter-pollution activities since it deals with ship rescuing activities it has various equipment and crafts that can be used in counter-pollution activities. The General Directorate takes responsibility and via utilizing the skimmers and sea sluggers tries to prevent the spill from spreading, to limit the spill in a certain area, segregating the pollutants from water and remove them from accident scene. Yet it has limited equipment and resources to effectively carry out such activities. Also it has no means available to it in case it has to respond any pollution incident occurred outside Istanbul. It is especially important that an authority responsible for rescuing the ships have necessary equipment and means to respond a pollution incident aroused from a shipwreck. It has been ascertained that both national and local resources and means have not been sufficient to respond to and clean up pollution incidents. To ensure the effectiveness of the counter-pollution activities, in addition to public funds and other means available to the authorities involved in these activities there is an urgent need for initiating private means and organizations, which are to be supervised with related authorities and in charge of conducting counter-pollution activities in accordance with and within the scope of pre-determined standards and responsibilities.



**Kurtarma-1 Ship, used in ship rescuing activities by the General Directorate of Coastal Safety and Ship Rescue in case of a shipwreck.**

**6.9.** It is convenient to mention an incident occurred in Istanbul as an example to show how severe the impact of pollution could be; how hard to tackle with such a pollution incident was, and how expensive counter-pollution activities could be. On 29<sup>th</sup> December of 1999, the Volgoneft-248 tanker, a tanker flying with Russian flag that was carrying 4000 tons fuel oil, split half due to structural failure aroused from heavy wind and the broken how sunk down. The oil from split part had begun to leak into the sea and this continued during the summer of 2000. The oil spilled into the sea in the first place had been 1300 tonnes, affecting 5 kilometers long shoreline. The buildings, streets, fishing ship shelters, beaches and shoreline facilities were severely affected by the spilled fuel oil. Its impact on the marine life was unable to be rectified. As a result of the incident many of the marine species are know to have died. Environmental non-governmental organizations estimate that it would take nearly 40 years for the marine system to recover from the impacts of this incident. Upon the decision by the Istanbul Governorship the counter-pollution activities have been carried out under the supervision of Istanbul Provincial Environment Department. To this end a commission was established to monitor and evaluate these activities. The Ministry of Environment had been responsible for the co-ordination of clean up activities and the respective insurance company carried out the required

cleaning up and other counter-pollution activities in connection with the incident and in accordance with the directives of the said commission. The areas where the spill had been identified were cleaned up via skimmers and as a precaution barriers were circulated the area for further expansion. In addition, to prevent oil from re-spreading a 1km-long barriers were put along the shoreline. The cleaning up activities was not only limited with the surface of the sea and shoreline but also included underwater. As a result of the inspection conducted after the incident 700 tons of fuel oil discovered covering 17.000m<sup>2</sup> of area underneath the sea. Whilst the continuous cleaning up activities for several months due to heavy winter and strong current the fuel oil settled on the ground of the sea has been still polluting the shoreline. Although it has been for 2 years since the incident happened the cleaning up of the pollution has not been yet completed. The cost of counter-pollution activities until the present time has been almost US Dollars 10 Millions. Since the said vessel was insured the vessel's insurance company reimbursed these costs. In case a pollution incident by a vessel without holding an insurance policy the associated costs have to be borne by the Turkish Government. In order not to face with such a situation it is very important to take all measures prior to the incidents. Yet arbitrary and temporary measures are still being in effect concerning with the incident similar like the one mentioned above. However, in order to be able to effectively respond and deal with pollution incidents it is crucial to have and implement a comprehensive contingency plan in case when an incident like the one mentioned above occurs.