

# Caspian Environment Programme



## CEP-SAP Project

# National Report on the State of Marine Litter Problem in the Caspian Region

**Iran**

(Caspian Sea country)

**By Dr. Rahimipour**

(name of National Consultant)

This questionnaire should be filled in by the National Consultant  
and submitted to the Project Coordination Unit  
of the Caspian Environment Programme,  
<[hamid.ghaffarzadeh@undp.org](mailto:hamid.ghaffarzadeh@undp.org)>,  
by 15 August 2006

## **TERMS OF REFERENCE (TOR)**

### **Review Document on Marine Litter in the CEP Region**

#### **A. Background**

1. The Caspian Environment Programme (CEP) represents a partnership between the five littoral states, Azerbaijan, Islamic Republic of Iran, Kazakhstan, Russian Federation and Turkmenistan, and the International Partners, the EU, UNDP, UNEP, and the World Bank. The overall goal of the CEP is to promote the sustainable development and management of the Caspian environment in order to obtain the optimal long-term benefits for the human population of the region.

During the first phase of CEP, 1998-2002, the programme created a regional coordination mechanism to achieve sustainable development and management of the Caspian environment; completed a Transboundary Diagnostic Analysis (TDA) of priority environmental issues and formulated for regional and national endorsement, as the case may be, a Strategic Action Programme (SAP) and five National Caspian Action Plans (NCAPs), one for each country. The countries demonstrated their commitment to protecting and restoring the Caspian environment by signing the Framework Convention for the Protraction of the Maritime Environment of the Caspian Sea, the Tehran Convention, on November 4, 2003 in Tehran.

The present phase of CEP is witnessing the continued transition to enhanced regional ownership of the Programme with the international partners, including GEF and the EU, playing a supportive role. The present phase is also characterized by the enhanced focus on the implementation of the SAP and of the NCAPs developed earlier as well as by the satisfactory progress towards full ratification of the Tehran Convention and by the constructive regional dialogue on four associated protocols dealing with biodiversity protection, land based sources of pollution, EIA in transboundary context and emergency response to oil spills.

Of the issues that have received considerable attention during the two phases of the CEP the marine pollution and the unsustainable coastal development activities stand out. Both have been ranked as major environmental issues in the SAP and a fairly large number of remedial and preventives measures and policies have been designed and recommended to deal with these issues. What seem to have not been fully addressed is however the interaction between the two issues in general and the associated problem of marine litter in particular. While note has been made of the marine litter in the areas around major ports and in the densely populated Iranian coastline, as well as in connection with waste disposal from vessels, no systematic attempt has been made to conceptualize the issues and to develop a regional strategy to address it. The purpose of the MOU is to assist a regional consensus towards this end.

2. UNEP Regional Seas Programme (UNEP RSP) aims to address the accelerating degradation of the world's oceans and coastal areas by, inter alia, identifying and controlling the sources of pollution from land-based and other harmful human activities. One of the main objectives of the UNEP RSP is to provide 'regional institutional and legal platforms' for the implementation of global Multilateral Environmental Agreements (MEAs), programmes and initiatives. The Global Programme of Action (GPA) for the Protection of the Marine Environment from Land-based Activities (LBA) was established in 1995 to deal with this problem. Marine Litter is considered as one of the marine pollution source categories of the GPA. Within this context, UNEP/RSP is committed to supporting its regional partner organizations to survey and assess the sources, types and levels of contaminants in their marine environment, and to enable them to prepare priority action programmes and supporting measures to reduce pollution loads and mitigate potential risks to the marine and coastal environments.

Towards this end UNEP is assisting the Regional Seas and associated Seas including the Caspian Sea to develop a Regional Marine Litter strategy. UNEP Assistance includes Technical backstopping and duty for the recruitment of an international consultant to lead, supervise and integrate outputs for due National Consultant in each country, to produce the strategies. The present TOR defines the regional activities/outputs by the National Consultant.

## **B. Objective**

Based on the above, the objective of the TOR is:

***To provide inputs and carry out activities required for the development of the Marine Litter Strategy as per detailed bellow.***

## **C. Major Activities**

Activity **A**: Collecting and reviewing the data and information on marine litter in the marine and coastal environment;

Activity **B**: Collecting information and providing analysis on the existing pertinent institutional arrangements; legal and administrative instruments; relevant economic instruments; programmes and initiatives; and

Activity **C**: Identifying gaps and needs in coverage of marine litter management and preparing proposals for changes and recommendations.

The National Consultant work will be mostly based on a national standard questionnaire which will be developed by the Lead Consultant and will be shared with the nominee.

## **E. Timeline**

The consultancy will require some 30 works-days.

**Deadline:** August 15, 2006.

## DEFINITIONS

*Quotation from the 'Marine Litter, an analytical overview' (UNEP, 2005)*

MARINE LITTER IS ANY PERSISTENT, MANUFACTURED OR PROCESSED SOLID MATERIAL DISCARDED, DISPOSED OF OR ABANDONED IN THE MARINE AND COASTAL ENVIRONMENT.

MARINE LITTER CONSISTS OF ITEMS THAT HAVE BEEN MADE OR USED BY PEOPLE AND DELIBERATELY DISCARDED INTO THE SEA OR RIVERS OR ON BEACHES; BROUGHT INDIRECTLY TO THE SEA WITH RIVERS, SEWAGE, STORM WATER OR WINDS; ACCIDENTALLY LOST, INCLUDING MATERIAL LOST AT SEA IN BAD WEATHER (FISHING GEAR, CARGO); OR DELIBERATELY LEFT BY PEOPLE ON BEACHES AND SHORES.

## ABBREVIATIONS

*Any abbreviations used in the report should be included in this table*

NC	–	National Consultant
ML	–	Marine Litter
	–	
	–	
	–	

## SECTION 1. GENERAL INFORMATION

### 1.1. National Consultant on ML (please fill in your personal data)

Family name: <i>Rahimipour Anaraki</i> First name: <i>Hamid</i> Address: <i>No.9, Hafezi alley, Pakesten St. Beheshti Ave. Tehran Iran</i> Telephone number (with country code): <i>+ 98 21 88 521717 - Cell: +98 (0) 9121082765</i> Fax number (with country code) E-mail: <a href="mailto:hamid@sabzandish.com"><u>hamid@sabzandish.com</u></a> Host Institution Affiliation/position Your experience in ML problem: <i>1) Working on Environmental Impact Assessment of certain new ports (Assalooyeh coastal area) in Persian Gulf. 2) Working on Caspian Region Tourism Master Plan project which covers 3 provinces along Caspian coast</i>
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### 1.2. Geographical scope of ML problem

(a) maritime and coastal areas under the jurisdiction of your country in the Caspian region:

Maritime area, km <sup>2</sup>	
internal waters	<i>A common agreement on The legal status of the Caspian Sea has not been reached among the littoral states, therefore the internal water can not be defined according to the same way as it has been defined for open seas</i>
territorial sea	<i>A common agreement on The legal status of the Caspian Sea has not been reached among the littoral states, therefore the territorial sea can not be defined according to the same way as it has been defined for open seas</i>
exclusive economic zone	<i>Not applicable to the Caspian Sea. Needs to be considered in regional legal agreement</i>
Depth range, from X to Y m	
internal waters	<i>Not applicable to the Caspian Sea, an excusive legal status needs to be agreed on this issue too. The southern part of the Caspian Sea, or the Iranian side is the deepest part with maximum depth of 1025 meters.</i>

territorial sea	<i>Not applicable to the Caspian Sea, an exclusive legal status needs to be agreed on this issue too</i>
exclusive economic zone	<i>Not applicable to the Caspian Sea, an exclusive legal status needs to be agreed on this issue too</i>
<b>Coastal area</b>	
coastline in total, km	<i>The coastline length varies in time with Caspian water level fluctuation. At present, the coastline length on the basis of recent Land Sat Images which has been superimposed with 1/100,000 scale map is calculated 847 Km. (Please see table.1 for detail)</i>
seashore area in total, km <sup>2</sup>	<i>The seashore land area topography considerably varies from west to east; therefore there is no well defined boundary for seashore area. The area up to elevation of zero is 8,544, up to 20 meter 11,625, up to 100m 17,645 and up to 200m is 21257 km<sup>2</sup>. if the area up to 20 meter elevation (above sea level) can be considered as near seashore area, then the shoreline area will be about 11500 Km<sup>2</sup></i>

*(b) please attach a layout/map of the maritime and seashore areas under the jurisdiction of your country.*

*The Iranian Caspian seashore covers three provinces including Gilan, Mazandaran and Golestan from west to east respectively. The associated plain areas are varied in different part of shoreline as shown in Fig.1 and can be divided in five different regions (A,B,C,D and E) in terms of backland topography. Table 1.provides the detail coastline lengths in each 3 provinces and 5 above mentioned coastal regions.*

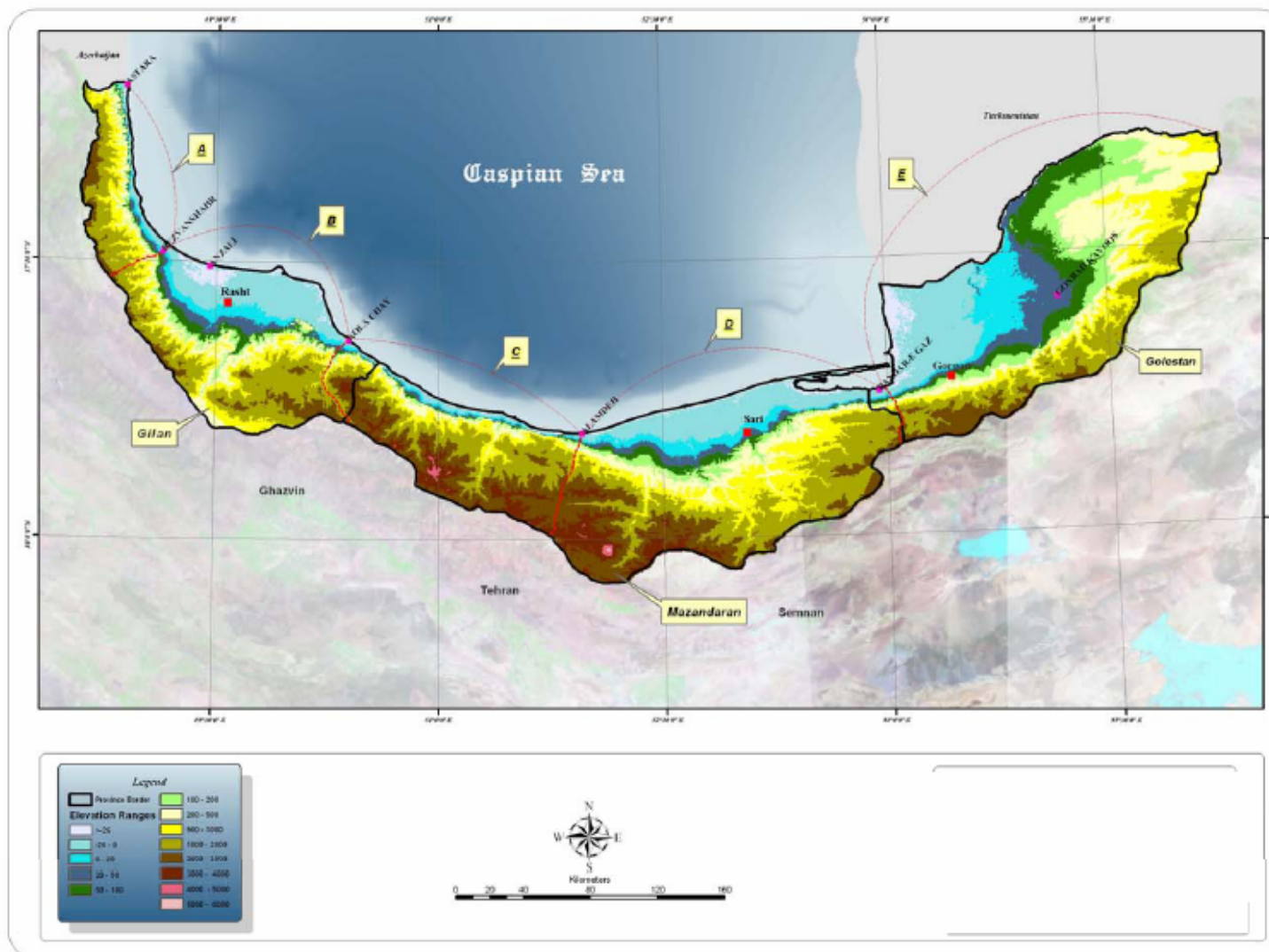


Fig. 1 Iranian Caspian coastal land area and the marine environment adjacent to the coast (elevation and plain distribution have indicated in the map with different color too)

(c) please provide brief description of the maritime areas and coasts in view of their potential accessibility for ML monitoring and cleanup operations; please evaluate the extent of coastline (km) and seashore area (km<sup>2</sup>) in places which are difficult of access; please indicate these places on the map (see 1.2,b).

All coastal plain areas are well developed and more than 90 percent of populations in three provinces are living up to 200m elevation. Therefore all shoreline area and the plain are well accessible for monitoring. Highest accessibility belonging to zone A,B,C and D and the lowest accessibility associated with zone D where the flat and low land area are subjected to inundation and associated with rather low accessibility. The following table presents the length of shoreline in each of 3 provinces, 5 coastal regions in terms of backland morphology/topography and the length of Miankaleh peninsula as well. (Miankaleh Peninsula located at the most eastern part of the coastal area. In a conclusion, total length of Iranian coastline is 847km including Miankaleh Peninsula

<b>Provinces/ Coastal Region</b>	<b>Shoreline Km</b>
<i>Gilan Province</i>	<b>272</b>
<i>Mazandaran Province</i>	<b>340</b>
<i>Golestan Province</i>	<b>93</b>
<b>Total</b>	<b>705</b>
<i>Miankaleh Peninsula (Mazandaran Province)</i>	<b>142</b>
<i>Grand Total</i>	<b>847</b>
<i>Region A (western coast with narrow plain area)</i>	<b>109</b>
<i>Region B (western coast with wider Plain area)</i>	<b>139</b>
<i>Region C ( middle coast with narrow plain area)</i>	<b>164</b>
<i>Region D (mid-eastern coast with wider plain area)</i>	<b>212</b>
<i>Region E (eastern coast with wider plain area)</i>	<b>81</b>
<b>Total</b>	<b>705</b>

Table.1 detail Iranian Caspian shoreline length



### 1.3. National bibliography on ML in the Caspian region

Please provide references on scientific papers, reports, web sites, other publications concerned with marine litter / debris / garbage (1996–2006). Do not list references on other types of marine pollution and other environmental problems. Translation of titles into English is necessary.

Since there is no direct references, these are the most related documents

1. *Solid wastes of Gilan,* ( 1993), University of Tehran, School of Environmental Engineering (hard copy)
2. *State of Gilan Province Environment (1994), solid waste of Gilan cities page 371-410.* Gilan Provincial Head office of Department of the Environment. (hard cop)
3. *Golestan Agriculture Development Plan (Vol. 9: Environment, page 92-97 ), 2000, Ministry of agriculture, Boom Abad Consulting Engineers (hard copy)*
4. *Mazandaran Agriculture Development Plan (Vol. 9: Environment, page 82-90 ), 2000, Ministry of agriculture, Boom Abad Consulting Engineers (hard copy)*
5. <http://www.mbgil.com/index.html>
6. [http://www.jaheshkimia.com/EN/Project\\_1.asp](http://www.jaheshkimia.com/EN/Project_1.asp)

## SECTION 2. LEGAL AND ADMINISTRATIVE INSTRUMENTS

### 2.1. Legal instruments

(a) *international environmental legislation*  
 (conventions, multi- and bilateral agreements relevant to the mitigation of ML problem;  
 print dates when these instruments have been entered into force in your country)

Title of convention or agreement	dd.mm.yy
International Convention for the Prevention of Pollution from Ships (MARPOL 73/78): <i>(Annexes of 3 and 4 are excluded in ratification)</i>	16.01.2002
Annex V to MARPOL 1973/78 (optional annex covering garbage)	16.01.2002
Convention for the Prevention of Marine Pollution by Dumping of Wastes and Other Matter	23, 09, 1996
Convention on the Transboundary Movements of Hazardous Wastes and Their Disposal (Basel Convention)	04, 10, 1992
United Nations Convention on Biological Diversity (CBD)	11, 06 , 1996
<i>Cartagena Protocol on Biosafety to the CBD</i>	31, 08 , 2003
Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention)	
<i>Convention on Wetlands of International Importance Especially as Water fowl Habitat (Ramsar Convention)</i>	15, 06 , 1985
Convention on Migratory Species (CMS, Bonn Convention)	
<i>Please add additional lines for listing more items</i>	

(b) *national environmental legislation*  
 (please specify laws, decrees, other legal acts related to regulating ML affairs in your country; print dates when these instruments have been entered into force)

Title of national legal act	dd.mm.yy
<i>Law of Waste Management</i>	10,05,2004
<i>Article 5 of Municipalities Law</i>	08,08,1973

### 2.2. Administrative instruments

(a) central government documents dealing with ML  
(statements, resolutions, ministerial regulations, national standards, guidelines, etc.)

Title of document	dd.mm.yy
<i>National regulation on Waste Management Enforcement (Ministerial regulation)</i>	27, 07, 2005

(b) instruments of subordinate (province, district, municipal, harbour, etc.) level  
(list those documents only which have particular sense for regulation of ML problem)

Title of document	dd.mm.yy
<i>Establishment of Gilan Province Solid Waste Recycle Organization</i>	2004
<i>Establishment of Mazandaran Province Solid Waste Recycle Organization</i>	2004
<i>Establishment of Golestan Solid Waste Recycle Organization</i>	2004

### 2.3. Presence of ML items in national legal and administrative instruments regulating human activities beyond environmental sphere

(please print YES or NO in appropriate cells of the table)

Presence of ML items in the instruments concerning:	
Public health	No
Coastal and urban development	Yes
Marine and river traffic	Yes
Fishery and aquaculture	No
Tourism and recreation	No
Offshore gas and oil exploitation	Yes
Agriculture and farming	No
Various branches of industry	Yes
Protection of state boundaries	No
Military activities	No
Other activities (please specify)	

Please enclose relevant references as an annex to this report.

## SECTION 3. EXISTING INSTITUTIONAL ARRANGEMENTS

*Please add to tables 3.1 – 3.5 as many lines as you need*

### 3.1. Governmental structures involved in the management of ML affairs

*(ministry, departments, inspectorates/inspections, etc.)*

*There is no Governmental Structures existing specifically for managing of Marine Litter in Caspian Sea area. But there are many coastal cities and villages which are directly and independently involved in domestic solid waste management (about 7 millions population are living in plain and coastal area which more than 70 percent of them can be considered as urban population as well as more than 10 millions domestic tourists entering yearly into Caspian Sea area too). Due to unique physiographic condition of Caspian coastal plain/area, solid wastes may reach to the Caspian Sea from remote cities/residential area by rivers and flooding. Therefore many of municipalities are indirectly involved in solid waste management, which are indirectly involved to marine litter affairs. But recently 3 independent organizations named "Provincial Solid Waste Recycling Organization) established for managing of solid waste particularly at disposal phase from land based sources. These organizations are becoming very active and effective using environmentally sound management of solid wastes in Caspian Sea Area (region wide for all types of solid wastes).Solid wastes from the major ports (Anzali, Nowshahr and Amirabad from west to east respectively) finally will be transported to the urban disposal site by Iranian Ports and Shipping organization. The only swap oil terminal (Neka) also disposing the solid waste in coordination with local municipalities disposal sites. The following are needed information in regards to the above mentioned organizations.*

Organization	Person responsible for ML management ( or related to ML management)	Contact information (address, tel., e-mail)
<i>Gilan Province Recycling Organization</i>	<i>Mr. Zalfi</i>	<i>Tell: +98 + 1312252406 and 7 <a href="http://www.mbgil.com/index.html">http://www.mbgil.com/index.html</a> Address: sazmane Bazyaft, Rasht.Ir.Iran</i>
<i>Mazandaran Province Recycling Organization</i>	<i>Mr. Hosseini</i>	<i>Tell: +98 + 1512252985  Address: sazmane Bazyaft, Sari.Iran</i>
<i>Golestan Province Recycling Organization</i>	<i>Mr. Salaki</i>	<i>Tell: 01712265450 Address: sazmane Bazyaft, Gorgan .Ir.Iran</i>
<i>Coastal Municipalities</i>	-----	<i>There are many coastal cities independently involved in solid waste collection and disposal , but no direct link with ML</i>

### 3.2. Institutions involved in ML research and monitoring

*There is no such institution specifically for Marine Litter, but the above mentioned governmental structures are involved in research and Monitoring of solid wastes particularly urban wastes*

Organization	Contact person	Address, tel., e-mail

### 3.3. Organizations/enterprises involved in ML cleanup and disposal/utilization

*There is no such structure in Caspian Area.*

Organization	Contact person	Address, tel., e-mail

### 3.4. Non-governmental organizations involved in ML activities (*not in specific*)

Organization	Contact person	Address, tel., e-mail
<i>Jebhe Sabz e Iran (Iran's Green Front)</i>	<i>Managing Director of Green Front of IRAN Dr. Abolfazl Vatanparast E-mail: director@greenfront.org</i>	<i>www. Greenfront. Org  P.O. Box : 14565-314 Tehran-IRAN  +98-21-8754266 +98-21-8741587 +98-21-8741586</i>
<i>South Caspian Environmental Services</i>	<i>Managing Director: Abdolhamid Amirebrahimi southcaspian@gmail.com</i>	<i>P.O.Box: + 98 192 46815-459 Tonekabon-Iran.  Tell : + 98 – 192- 4287777 +98 -192- 4288855</i>
<i>Gilan Women Society Responding to Environmental Pollution</i>	<i>Director: Mahvash Ghorban nejad</i>	<i>Tell : + 98 – 131- 2246611 Fax: +98 - 131- 7729921</i>

**3.5. Experts on ML** (other than mentioned in 3.1 – 3.4, if any)

Name of expert	Field of expertise	Address, tel., e-mail
<i>Fereidoon Vafai</i>	<i>Environmental Engineering</i>	<i>Cell: +98 (0) 9123724925 frfai@knto.ac.ir</i>
<i>Mehrdad Nazariha</i>	<i>Environmental Engineering</i>	<i>Cell: +98 (0) 9122143820</i>

DRAFT

## SECTION 4. STRATEGIES, PROGRAMMES AND INITIATIVES

### 4.1. Strategies concerning the solution of ML problem in the Caspian region

#### 4.1.1. Is there any specific document in your country arranging national strategy? on ML in the Caspian region?

Please print "YES" or "NO" NO

If "YES" is printed, please provide reference to this document (title, date of adoption, by whom it was adopted, etc.):

#### 4.1.2. Are there specific national or ministerial action/ management plans aimed to solve/ mitigate Caspian ML problem in your country?

Please print "YES" or "NO" NO\*

If "YES" is printed, please specify correct reference(s):

\* There is no direct action plan aimed to solve the ML problem in Caspian region, but there are plan/plans to manage the solid waste from coastal urban area which indirectly linked to ML

#### 4.1.3. Could you please formulate national strategic approach? to ML problem in the Caspian region? (maximum, 200 words, if possible)

A- - it is estimated that about 5000 tones/day urban solid waste currently produced in Caspian narrow plain which part of it directly reaches to the sea and due to high surface runoff and low water table existing in the region, most of pollution associated with solid waste finally will be introduced to the Caspian marine environment

B - Due to water level fluctuation and destruction of coastal houses and villas a great amount of abandoned construction material are inundated or left on the beaches

C - The current ports activities showing over than 10 million tones of loading and unloading of goods/oil within a year which about 40 percent of it belonging to oil terminal activities. With a rough estimation, production of waste will be about 100 tones per year. This amount will be growing up with rapid growth of trade among north and south part of the Caspian. The current waste reception facilities and waste disposal system are poor

D- Over than 10,000,000 Tourists visiting the Caspian coasts in each year producing solid waste mainly contributing to marine environment

With current situation the following strategic actions can be suggested:

1- Establishment of a regional coordinating body/unit (RCU) for managing of marine litter in the Caspian Sea. The body will consist of one provincial coordinating body/unit in each of 3 provinces (total of 3 provincial coordinating bodies" PCU"). The members of provincial unit will be selected by a well defined mechanism and will not be more than 3-4 from the existing solid waste management divisions in the region. The final coordinating unit structure can be decided according to recommendations of a regional workshop on ML issue which will be held with participation of all stakeholders. The provincial governor will be a better authority for holding of such workshop.

2- The regional coordinating unit (RCU) will be responsible for development of policy for minimizing of marine litter and control, development and adoption of needed laws and regulation, priority setting, regulating of activities by using of existing structures in the region, development of mechanism for financing of ML management activities, Monitoring and evaluation, public awareness and participation, training and conducting of clean up activities.

3- At the present situation, non of existing waste collection and disposal bodies are responsible for management and clean up of abandon construction material along the coast. This task will be particularly the responsibility of RCU.

4) A great part of ML transported by rivers, RCU responsibility should not be limited to coastal and near shore activities; it should consider the entire near related watershed and set out the area with high priority which must be dealt with immediate action.

5) Sea and seashore based litter management contributing from shipping, oil tankers, ports activities, fisheries and aquaculture must be the direct responsibility of RCU. In this connection, coordination of Ports and Shipping organization, Oil company, Fisheries organization regarding thier activities dealing with ML will be another responsibility of RCU. Part of financial support could be provided by these organizations

6) Growing tourism activities will be another issue in connection to ML. The marine litter in Caspian region is and will be one of the major barriers for tourism development in the region. Close cooperation/coordination between Cultural Heritage and Tourism Organization and related private sectors will be one of the major elements in safeguarding of coastal and marine environment.

7) Public awareness and participation will be the one of the most effective tool in minimizing and controlling of ML in Caspian region. These activities must cover the high decision maker in the region, public in general, training in the school and children, and tourists by means of various means and public media.

8) conducting of shore clean up and monitoring campaign in cooperation with active local NGOs covered with public media. This type of action will be the starting point to raise up of the awareness among all stakeholders



## 4.2. Programmes aimed to address/reduce ML pollution in the Caspian region

### 4.2.1. Participation of your country in the international and Caspian regional programmes (1997–2006) which are/ were fully or partly concerned in ML problem

Programme name	Terms of realization	Implementing agency	Sponsoring agency
<i>CEP/WB Matched Small Grant Projects</i>	<i>Solid Waste Separation Management in Coastal City of Ramsar</i>	<i>Ramsar Municipality</i>	<i>WB/ and Ramsar Municipality</i>

### 4.2.2. National and/ or ministerial programmes (1997–2006) which are/ were fully or partly concerned in ML problem in the Caspian region

Programme name	Terms of realization	Implementing agency	Sponsoring agency
<i>Development of Integrated Coastal Zone Management for the Iranian Coastal Area</i>	<i>Integrated Coastal Zone Management Of Caspian Coastal Area</i>	<i>Ports and Shipping Organization of Iran</i>	<i>Management and Planning organization of Iran</i>

### 4.2.3. Implemented and ongoing activities related to ML problem

Please specify projects, actions, scientific meetings, public campaigns, other activities and initiatives realized within above programmes (4.2.1, 4.2.2) and beyond them in 1997–2006

Project name	Terms of realization	Executing organization	Sponsor
<i>Construction of Rasht Composting Plant (2002)</i>	<i>With capacity of 500 tons /day to cover the Rasht city as well as the 10 nearby cities</i>	<i>Gilan Solid Waste Recycling Organization</i>	<i>Municipalities of the related and concerned cities as the partner of the company</i>
<i>Expansion of the existing Rasht Composting plant (250 tons /day)</i>	<i>Under Construction</i>	<i>Gilan Solid Waste Recycling Organization</i>	<i>Municipalities of the related and concerned cities as partner of the company</i>

<i>Rasht Fine Composting plant (70 ton/day )</i>	<i>Under Construction</i>	<i>Gilan Solid Waste Recycling Organization</i>	<i>Municipalities of the related and concerned cities as the partner of the company</i>
<i>Azadshahr Composting plant (500 ton/day</i>	<i>Under Design</i>	<i>Golestan Solid Waste Recycling Organization</i>	<i>Municipalities of the related and concerned cities as partner of the company</i>
<i>Gorgan Composting Plant</i>	<i>Under Construction</i>	<i>Golestan Solid Waste Recycling Organization</i>	<i>Municipalities of the related and concerned cities as partner of the company</i>
<i>Construction of Rasht Solid waste leachate treatment plant</i>	<i>Completed</i>	<i>Gilan Solid Waste Recycling Organization</i>	<i>Municipalities of the related and concern cities as partner of the company</i>
<i>Construction of Anzali City Composting Plant</i>	<i>Under construction</i>	<i>Gilan Solid Waste Recycling Organization</i>	<i>Municipalities of the related and concerned cities as partner of the company</i>
<i>Construction of Gilan eastern Composting plant site</i>	<i>Under designing and Commissioning</i>	<i>Gilan Solid Waste Recycling Organization</i>	<i>Municipalities of the related and concerned cities as partner of the company</i>
<i>Allocation of 3 million us dollars for management of Solid waste in 3 provinces</i>	<i>To speed up the proper disposal of solid waste in 3 Caspian Provinces</i>	<i>Municipalities</i>	<i>Ministry of interior</i>
<i>Projects concerning proper disposal of solid waste in various cities/centers in 3 provinces of Caspian region</i>	<i>Are in different stages from designing to commissioning</i>	<i>Municipalities and provincial Recycling Companies</i>	<i>Municipalities and provincial Recycling Companies</i>
<i>Various meeting held by local NGOs regarding the problem of coastal problem in general but focusing on recreational use of the sea</i>	<i>As the news in newspaper</i>	<i>Various NGOs</i>	<i>Various NGOs</i>

*Please add as many lines as you need.*

#### 4.2.4. Outputs of ML-related projects and other activities/ initiatives implemented in your country in 1997–2006

Please print YES or NO in appropriate cells of the table; if your answer is YES, please provide references (including web addresses) and comments; besides, if possible, attach factual annexes to this report

Achieved results	YES/NO	References and comments
Legal and administrative instruments aimed to manage ML problem are improved	YES	<i>National regulation on Waste Management Enforcement (Ministerial regulations) 27, 07, 2005</i>
Waste management policy is amended	NO	
Sustainable integrated management of ML is secured	NO	
Methodology to monitor ML pollution is developed (or acquired), including methods which are serviceable to assess:	NO	
ML quantities	NO	
ML composition	NO	
ML distribution patterns	NO	
ML sources	NO	
ML trends	NO	
ML impact on the:	NO	
environment	NO	
biodiversity	NO	
public health	NO	
economics	NO	
Monitoring of ML and its effects is organized and maintained	NO	
Assessment of ML pollution is completed	NO	

Achieved results	YES/NO	References and comments
Proposals to prevent and reduce ML and its adverse effects are prepared	NO	
Campaigns and/ or permanent services for ML collecting are developed	NO	
New technologies/ devices for ML collecting and processing are elaborated or purchased	NO	
Port reception facilities and services for garbage collection from vessels are developed and/ or improved	YES	<i>Under preparation by Ports and shipping organization</i>
Major stakeholders are involved in anti-ML partnership/cooperation, including:		
shipping industry	YES	<i>There are 3 major ports in Caspian Sea and one oil terminals trying to improve their performance</i>
tourism industry	NO	
manufacturers of plastics	No	
fisheries	No	
waste managers/services	YES	<i>Action made for recycling of solid wastes and improving rapidly</i>
municipalities, local communities and authorities	YES	<i>In general dealing with collection and disposal of solid wastes</i>
NGOs and general public	YES	<i>Conducting of public demonstration for coastal pollution</i>
Training for officers occupied with ML management is organized	NO	
Professional sectorial guidelines for ML management are developed for:	NO	

Achieved results	YES/NO	References and comments
tourism	NO	
boating	NO	
shipping lines	NO	
fisheries	NO	
coastal construction		
Awareness and educational tools (brochures, posters, TV-clips, etc.) dedicated to ML problems are produced		
'Responsible citizenship' guidelines for different sectors and target audiences are developed, in particular, for		
children and students	NO	
tourists	NO	
municipal authorities and local communities	NO	
shipping companies	NO	
ship and smaller vessels crews	NO	
commercial and recreation fishing vessels	NO	
other identified target groups	NO	
Mass media awareness-raising campaign fighting against ML is initiated		
Growth of public awareness/ participation in cleanup activities became sound	YES	
Other substantial results ( <i>please specify; add more lines, if necessary</i> )		

## SECTION 5. MARINE LITTER RESEARCH AND MONITORING IN THE MARINE AND COASTAL ENVIRONMENT

### 5.1. Research (monitoring) assessment of ML and its effects in your country

**5.1.1. Have any research (monitoring) assessment of the state of the marine and coastal environment concerning ML been made in your country in 1997–2006? NO**

*Please print YES or NO*

*If YES, please list references and/or give web addresses if available online:*

**5.1.2. Have any other studies on the effects of ML (ecological effects, public health effects, economic consequences, etc.) been made in your country in 1997–2006? NO**

*Please print YES or NO*

*If YES, please list references and/or give web addresses if available online:*

*If you printed NO in 5.1.1 and 5.1.2., please go directly to Section 6.  
If you printed YES, please continue your work within Section 5.*

### 5.2. ML parameters and effects which were studied in 1997–2006

*Please print YES or NO and provide references, if available*

ML characteristics	YES/NO	Reference
Quantity/ density		
Composition		
Distribution patterns		
Sources		
Trends (spatial/ temporal dynamics)		
Impact on the:		
environment		
biodiversity		
public health		
economics		
Other ( <i>please specify</i> )		

### 5.3. Efforts applied to collect ML data in 2005 and 2006

#### 5.3.1. In the marine environment

	2005	2006
Time allocated for ML research (number of days)		
Geographical scope (area investigated, $km^2$ )		
Number of people involved in ML research/ monitoring		

#### 5.3.2. In the coastal environment

	2005	2006
Time allocated for ML research (number of days)		
Geographical scope:		
length of the coastline investigated, $km$		
area of the seashore investigated, $km^2$		
Number of people involved in ML research/ monitoring		

### 5.4. Available ML data (1997–2006)

Please print YES or NO in appropriate cells of the table

ML characteristics	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
<b>Maritime area</b>										
Quantity/ density										
Composition										
Distribution patterns										
Sources										
Trends (spatial/ temporal dynamics)										
Impact on the:										
environment										
biodiversity										
public health										
economics										
<b>Coastal environment</b>										
Quantity/ density										
Composition										
Distribution patterns										
Sources										
Trends (spatial/ temporal dynamics)										
Impact on the:										
environment										
biodiversity										

ML characteristics	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
public health										
economics										

Please provide references and information on where the ML data are accumulated:

### 5.5. Do ML databases exist in your country? **NO**

Please print YES or NO

If YES, please provide contact information: \_\_\_\_\_

### 5.6. Estimated levels and effects of ML pollution in the Caspian region

Please compile brief review (summary) of available data characterizing intensity, extensiveness, composition, seasonal and yearly dynamics, and adverse effects of ML pollution in your country during last 10 years (1997–2006), with general emphasis on the most recent results. Arrange your description and conclusions in order of subject headings given in table 5.4.

No data available in this regard. But according to the population distribution, data and information on domestic solid waste, visual appearance, public media news and personal experience only qualitative assessment/estimate can be developed.

- 1) *intensity: intensity is high where the cities and residential area are located right after the coastline like the coastal area located in region C*
- 2) *Composition: mainly is plastic and plastic containers, abandon construction material*
- 3) *Distribution:*
  - *Highest: zone C*
  - *High: western part of zone B and eastern part of zone C*
  - *Mid: eastern part of zone A and western part of zone D*
  - *Low: zone E*
- 4) *Sources: mainly from coastal residential area, riverine transport (all kind of waste and forest debris), coastal inundated houses and villas, and ports activities*
- 5) *Trends: increasing by time and extending to west and eastern part of the Caspian due to increasing of coastal population and increasing of accessibility to the coast*

*Impacts: there are cumulative adverse impacts originating from various sources including; introduction of untreated swage, urban runoff, high magnitude of agricultural run off, industrial effluent and litter. Therefore there is no sufficient data and information in order to differentiate the litter impact in terms of environment, biodiversity, public health and economics. It seems that untreated sewage and river pollution have much greater impact rather than litter in the Iranian coastal and marine environment. The litter adverse impact mainly will be on coastal tourism sector, aesthetic issue which in turn has adverse impact on income of local people*



## SECTION 6. EXPERT EVALUATION OF THE PRESENT STATUS OF MARINE LITTER PROBLEM IN THE CASPIAN REGION

*(please make your own appraisal of the situation in your country)*

### 6.1. Is marine litter/ marine debris in the marine and coastal environment perceived as a priority issue in your country? YES

*Please print YES or NO*

*Comments:*

1- Caspian Coastal Area is a well known destination for domestic tourists. Tourism organization is very sensitive to this issue, but responsible authorities do not pay sufficient attention to this issue

2- Due to lack of strategic plan and proper management policy, most of coastal residential area release the waste near to the coast as dumping area

3- some of solid waste dumping area inundated by sea due to sea level rise in recent year

4- Many of cities located in back land area dumping the solid wastes in steep forest land which will be reached by flooding into river and eventually to the sea

5- In fact, solid waste management in Caspian Area (3 provinces) is the most problematic environmental issue and all people and authorities are well aware of it. But only in recent years few steps have been taken to deal with this major problem. In another word, marine litter issue mainly links with overall solution of solid waste management in narrow coastal plain of Caspian area.

6. Demonstration of certain cities people (like Babol) for poor management of solid wastes is a remarkable example of such problem in the region. Many articles in news paper also showing the severity of the problem in the region.

### 6.2. Can you suggest methodology (or some methods) of ML research/monitoring implemented in your country for more extensive use in the Caspian region in whole? NO

*Please print YES or NO .....*

*Comments:*

*There is no methodology for research or monitoring of ML existed in Iran*

### 6.3. Can you suggest other achievements of your country in the addressing, management and reducing of ML problem for more extensive use in the Caspian region in whole? NO

*Please print YES or NO .....*

Comments:

--

**6.4. How do you assess levels of ML pollution in the Caspian region in 2006?**

*Please print YES in appropriate cells*

	Low	Moderate	Sustainable	High	Very high
in the marine environment			YES		
in the coastal environment				YES	

**6.5. How do you assess general trend of ML pollution during last decade?**

*Please print YES in appropriate cells*

	Decrease	Growth	No significant variation	No comment
in the marine environment		YES		
in the coastal environment		YES		

**6.6. Five primary sources of ML and five all-important hot spots**

*Please specify in descending order (first – the most important source and hot spot)*

<p>Sources:</p> <ol style="list-style-type: none"> <li>1) near coast urban/residential area,</li> <li>2) onshore exposed or inundated construction material due to sea level rise,</li> <li>3) Dumping site in high slop land and transported to the sea "Riverine Source".</li> <li>4) Tourism activities and</li> <li>5) debris transported from forest by river system.</li> </ol> <p>Hot spots:</p> <ol style="list-style-type: none"> <li>1) Ramsar to Chalous city ),</li> <li>2) Nowshahr to Noor, city</li> <li>3) Port /city of Anzali,</li> <li>4) Mahmood Abaad city and</li> <li>5) Chamkhaleh</li> </ol>
---

**6.7. Five principle items (constituents) composing ML**

*Please specify in descending order (first – the most important item or group of items)*

<ol style="list-style-type: none"> <li>1) plastic/ plastic containers,</li> <li>2) various types of drinking bottles</li> <li>3) Abandoned construction material including metallic and non metallic material,</li> <li>4) woods,</li> <li>5) paper and food stuff</li> </ol>
---

## 6.8. Identification of priorities in coverage of ML problem

Please print YES in appropriate cells

Actions	Priority		
	Primary	Secondary	Next to 0
Improvement of legal and administrative instruments		YES	
Correction of waste management policy	YES		
Development of sustainable ML management	YES		
Development of ML monitoring methodology	YES		
Organising and maintaining ML monitoring facilities	YES		
National assessment of ML pollution	YES		
Preparation of proposals to prevent and reduce ML	YES		
Development of campaigns/services for ML collecting	YES		
Elaboration of ML collecting technologies/devices		YES	
Elaboration of ML processing technologies/devices		YES	
Development of port reception facilities for garbage	YES		
Involvement of stakeholders in anti-ML partnership	YES		
Training of officers involved in ML management	YES		
Preparation of professional sectorial guidelines	YES		
Preparation of awareness and educational tools	YES		
Preparation of 'responsible citizenship' guidelines	YES		
Initiation of awareness-raising campaign in media	YES		
Promotion of public participation in cleanup activities	YES		
Other actions ( <i>please specify</i> )			

## 6.9. Proposals/ recommendations for changes

Please make your suggestions taking into consideration above list of priorities (6.8). For each initiative please specify:

*Title of proposal*

*Aim (objectives)*

*Suggested activities*

*Potential implementing organization(s)*

*Preliminarily estimated cost (Euro)*

*Possible source of funding*

A) *Title of proposal: Improvement of legal and administrative instruments*

*Aim (objectives): To address ML in waste management policy directly*

*Suggested activities:*

1. *Holding of workshop with participation of all stakeholders*
2. *preparing of an addendum to the existing regulations on solid waste management with particular emphasis on Marine litter issues*

3. *Preparing of a plan for establishment of a regional (coastal wide in 3 provinces) coordinating body using existing solid waste structure to deal with marine litter issues*

*Potential implementing organization(s): Department of the environment (DOE) +any international/regional agencies*

*Preliminarily estimated cost (Euro): 30,000*

*Possible source of funding: DOE+ Tourism Organizations + Municipalities+ ports and shipping organization*

---

*B) Title of proposal: Correction of waste management policy*

*Aim (objectives): Development coastal wide (regional) waste management policy*

*Suggested activities:*

- 1) Holding of workshop with participation of all stakeholders (combined with the proposal as mentioned in above A)*
- 2) preparing of recommendations for new policy (Combined with A)*

*Potential implementing organization(s) Department of the environment (DOE)*

*Preliminarily estimated cost (Euro); Combined with A*

*Possible source of funding: Combined with A*

---

*C) Title of proposal: Development of sustainable ML management*

*Aim (objectives: establishment of an institutional structure and its link with solid waste management bodies, preparation of action plan and develop proper financial mechanism to insure ML reduction and elimination that contribute to the Caspian Sea*

*Suggested activities:*

- 1) Holding of workshop/meeting with participation of key implementing bodies*
- 2) Adoption of action plan and financial mechanism*

*Potential implementing organization(s): Municipalities (Ministry of interior and provincial governor)*

*Preliminarily estimated cost (Euro):40,000*

*Possible source of funding: Municipalities +existing recycling organizations +Ports and shipping Organization+ Tourism organization +NGOs*

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*D) Title of proposal: Development of ML monitoring methodology*

*Aim (objectives): Preparation of a rational ML monitoring methodology in Caspian Coastal Area and Marine Environment*

*Suggested activities:*

- 1) Holding of a technical meeting workshop to discuss and adopt a guideline including, parameters ,measurement/observations, frequencies, documentation and reporting, data exchange and integration considering the specific condition of the area*
- 2) Discussion on possible implementing structure for monitoring including, governmental organization, NGOs, and research institutions*
- 3) Sustainable Financial issues arrangement*

*Potential implementing organization(s): Department of the Environment, Ports and shipping organizations, Municipalities, NGOs*

*Preliminarily estimated cost (Euro): 50,000*

*Possible source of funding: Department of the Environment, Ports and shipping organizations, Municipalities and tourism organization*

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E) Title of proposal: Organising and maintaining ML monitoring facilities  
Aim (objectives): To ensure that sufficient and proper facilities are available for ML monitoring

Suggested activities: Combined with D

Potential implementing organization(s): As per D

Preliminarily estimated cost (Euro): Combined with D

Possible source of funding: As per D

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F) Title of proposal: National assessment of ML pollution

Aim (objectives): Assess the present contribution of ML in polluting of the coastal and marine environment

Suggested activities:

- 1) Recruiting of a national consultant to conduct the assessment under supervision of an international consultant
- 2) Holding of a technical workshop/meeting to discuss on the findings and the methodology was applied
- 3) Preparing of final assessment and recommendation for next steps

Potential implementing organization(s): Regional coordinating body/Ministry of interior

Preliminarily estimated cost (Euro): 60.000

Possible source of funding: Ministry of interior and international agencies

---

G) Title of proposal: Preparation of proposals to prevent and reduce ML

Aim (objectives): Find out the ways and practical mechanism to reduce or prevent ML

Suggested activities:

- 1) Holding a technical meeting/workshop to discuss on the ways and practical mechanism to prevent and reduce ML
- 2) Preparation of thematic proposals for implementation
- 3) Financial issues

Potential implementing organization(s): Department of the Environment, Ports and shipping organizations, Municipalities and tourism organization

Preliminarily estimated cost (Euro): 20,000

Possible source of funding: Ports and shipping organizations, Municipalities and tourism organization

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H) Title of proposal: Development of campaigns/services for ML collection

Aim (objectives): introducing the ML problem issues to the public and decision maker, as well as conducting of limited monitoring programme and on job training to interested bodies or individuals

Suggested activities:

- 1) Assigning of 3 NGO to take the responsibility of the task in 3 provinces
- 2) Conducting of campaigns/services for ML collection in 3 pilot area
- 3) Involving mass media in the activities

Potential implementing organization(s): Department of the Environment

Preliminarily estimated cost (Euro): 60,000

Possible source of funding: Department of the Environment, International agencies, Tourism organization and Tourism private sector

---

I): Title of proposal: Elaboration of ML collecting technologies/devices

*Aim (objectives): To introduce/familiarize the related ML authorities, scientific institutions/individuals, industries, planning authorities, NGOs to available technology for collection of ML and global experience in this regards*

*Suggested activities:*

- 1) Holding of a workshop by Inviting of experienced and well informed experts/consultants as resource persons and effective participation of the most related national bodies as mentioned in above*
- 2) Establish an exhibition along with workshop introducing the technology*

*Potential implementing organization(s): Ministry of interior, ministry of mine and industry and DOE*

*Preliminarily estimated cost (Euro):100,000*

*Possible source of funding: Ministry of interior, Ministry of industry, Private industrial sectors and international agency*

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*J) Title of proposal: Elaboration of ML processing technologies/devices*

*Aim (objectives): As per I*

*Suggested activities: Combined with I*

*Potential implementing organization(s): As per I*

*Preliminarily estimated cost (Euro): Combined with I*

*Possible source of funding: As per I*

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*K) Title of proposal: Development of port reception facilities for garbage*

*Aim (objectives): Sound environmental management of garbage produced in Iranian Caspian Ports*

*Suggested activities:*

- 1) Select and assign a prominent consultant company to develop a plan for ports reception facilities*
- 2) Holding of the first workshop (inception meeting) to discuss / verify the overall plan and related issues particularly the financial and coordinating issues with major stakeholders such as ports an shipping organization, oil company, Fisheries, municipalities, recycling companies and regional coordinating body/unit*
- 3) Holding of the second workshops to finalize the plan and be approved by relevant authorities*

*Potential implementing organization(s): ports and shipping organization and oil company*

*Preliminarily estimated cost (Euro): 120,000*

*Possible source of funding: ports and shipping organization and oil company*

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*L) Title of proposal: Involvement of stakeholders in anti-ML partnership*

*Aim (objectives): National/ Provincial high rank decision maker awareness and ensure the support of major stakeholder for anti ML partnership*

*Suggested activities :*

- 1) Holding of a workshop (inception meeting) at provincial level with participation of all stakeholders transferring the message that the ML management must be as an important element of overall waste management in Caspian coastal area (this will be starting point foe ML management)*

- 2) *Development a preliminary ML management proposal to be followed and finalized by the proposal titled in C)*

*Potential implementing organization(s): Municipalities + Department of the Environment*

*Preliminarily estimated cost (Euro): 30,000*

*Possible source of funding: International Agencies*

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*M) Title of proposal: Training of officers involved in ML management*

*Aim (objectives): Training and improve the knowledge of the officials who are currently involved in solid waste on specific aspects of Marine Litter management*

*Suggested activities:*

- 1) Holding of an initial training workshop to train the specific aspects of Marine Litter management with participation of related solid waste management in Caspian Provinces. The venue will be located in one of provinces.*
- 2) Holding of the second workshop to assess the performances of officers, any needed modification in ML management in practice*

*Potential implementing organization(s): Municipalities, Solid waste Recycling companies, Ports and Shipping Organization, National Oil Company*

*Preliminarily estimated cost: (Euro: 30,000)*

*Possible source of funding: Municipalities, Ports and shipping Organizations and National oil Company*

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*N) Title of proposal: Preparation of professional sectorial guidelines*

*Aim (objectives: To ensure that the activities of various sectors in connection to ML are in full compatibility with key organizations involved in overall management of ML*

*Suggested activities:*

- 1) Conducting of a rapid assessment to find out the major sectors must be considered in terms of ML generation or management on the bases of findings which was obtained in various workshops held in the region.*
- 2) Recruit consultant for preparation of the guidelines*
- 3) Holding a workshop to finalize the guidelines with participation of relevant sectors*

*Potential implementing organization(s): Municipalities, Ministry of industry, Ministry of Health, National Oil Company, Ports and Shipping Organization, DOE and NGOs*

*Preliminarily estimated cost: (Euro: 100,000)*

*Possible source of funding: international Organizations, Municipalities, Ministry of industry, Ministry of Health, National Oil Company, Ports and Shipping Organization and DOE*

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*o) Title of proposal: Preparation of awareness and educational tools*

*Aim (objectives: Improve the knowledge over the problems of ML issue and management needs among all stakeholders, concern group and public*

*Suggested activities: Combined with proposal of N in above*

*Potential implementing organization(s): Combined with proposal of N in above*

*Preliminarily estimated cost (Euro): Combined with proposal of N in above*

*Possible source of funding: Combined with proposal of N in above*

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*P) Title of proposal: Preparation of 'responsible citizenship' guidelines*

*Aim (objectives): Effectively to involve the public in day to day practice in ML management as an important part of ML management*

*Suggested activities: Combined with proposal of N in above*

*Potential implementing organization(s): Combined with proposal of N in above*

*Preliminarily estimated cost (Euro): Combined with proposal of N in above*

*Possible source of funding: Combined with proposal of N in above*

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*Q) Title of proposal: Initiation of awareness-raising campaign in media*

*Aim (objectives): To extend awareness among public*

*Suggested activities: to be combined with proposal H in above*

*Potential implementing organization(s): to be combined with proposal H in above*

*Preliminarily estimated cost (Euro): to be combined with proposal H in above*

*Possible source of funding: to be combined with proposal H in above*

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*R) Title of proposal: Promotion of public participation in cleanup activities*

*Aim (objectives): to ensure effective management of ML*

*Suggested activities: to be combined with proposal H in above*

*Potential implementing organization(s): to be combined with proposal H in above*

*Preliminarily estimated cost (Euro): to be combined with proposal H in above*

*Possible source of funding: to be combined with proposal H in above*

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## **SECTION 7. ANNEXES**

*Please attach to this report any materials (scanned copies of documents, publications, etc.) which can show positive experience of your country in the solution of ML problem.*