EP

United Nations Environment Programme

UNEP(DEPI)/MED WG.323/1
20 November 2007

ENGLISH

MEDITERRANEAN ACTION PLAN

Meeting of the Network on Compliance and Enforcement

Athens, 24-25 October 2007

REPORT OF THE MEETING OF THE NETWORK ON COMPLIANCE AND ENFORCEMENT OF REGULATIONS FOR THE CONTROL OF POLLUTION RESULTING FROM LAND-BASED ACTIVITIES

In cooperation with

WHO

UNEP
Athens, 2007

TABLE OF CONTENTS

Introduction

1. The countries of the Mediterranean signed and adopted the Convention for the Protection of the Mediterranean Sea against Pollution in February 1976. In order to broaden the concerned areas, in June 1995 the title of the Convention was amended to Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean. Of particular importance is the legal component, which comprises *inter alia* the amended Protocol for the Protection of the Mediterranean Sea against Pollution from Land-based Sources and Activities. The Mediterranean itself, where the sea provides the main recreational amenity both for local populations and the millions of tourists who visit the area annually, constitutes the receiving body of all the wastes that are generated in the coastal areas, is seriously threatened.

2. During the last decade, a number of assessments on the state of pollution of the Mediterranean Sea by specific substances have been prepared. On the basis of such assessment, measures have been taken by Mediterranean governments to reduce pollution by these substances within the framework of the Protocol for the Protection of the Mediterranean Sea against Pollution form Land-based Sources. Each assessment contains the appropriate human health risk component. Nevertheless, the sea continues to receive large amounts of pollutants in spite of the existing legislation. Based on the amended Protocol for the Prevention of Pollution from Land-based Sources and Activities within the framework of the MED POL Programme, and following the decision of the Contracting Parties taken at the Extraordinary Meeting held in Montpellier in 1996, there is a need to improve compliance and enforcement of legislation for pollution control resulting from land-based sources and activities, in order to protect human health and the environment.

3. Pursuant to Article 6 of the “LBS” Protocol, which foresees the setting up of pollution inspection systems and/or the strengthening of existing ones, a workshop of government designated experts on compliance and enforcement of legislation in force in the Mediterranean was held in Athens in March 1999, and recommended amongst others the setting up of an informal regional network on compliance and enforcement of environmental legal provisions. The Network held its first meeting in Sorrento in March 2001. A second meeting of the informal Network was convened in Athens from 3-5 December, 2003, one of its aims being to study the documents which had been prepared and the activities undertaken by way of follow-up to the recommendations from the Sorrento meeting. The meeting examined once again the Guidelines for environmental inspection systems, to discuss the details of their implementation, and subsequently to examine the four parts of the Reference Handbook, which went into the detail of the various organizational, management and technical aspects of the inspection systems. The third meeting of the Network that was decided to be called thereof “Network for Compliance and Inspection”, was held in Athens from 4-6 October 2005, with the view to discuss among other issues, minimum performance indicators related to environmental compliance and enforcement.

Participation:

4. The meeting was held at the premises of the Mediterranean Action Plan in Athens, from 24-25 October 2007 and was attended by representatives of the following countries from the Network: Croatia, Cyprus, Egypt, France, Israel, Italy, Lebanon, Monaco, Montenegro, Morocco, Slovenia, Syrian Arab Republic, Tunisia and Turkey. The MAP Coordinating Unit was represented by the Coordinator of MEDPOL, and by the WHO/MED POL Senior Scientist, who acted as secretariat to the meeting.

5. The full list of participants can be found as Annex I to this report.

Agenda item 1: Opening of the Meeting

6. Mr Francesco Saverio Cilivi, MED POL Coordinator, welcomed the participants and stressed the importance of compliance and enforcement in the Mediterranean and in particular the implementing tool, which is represented by the inspection systems. He also added that the issue of compliance and enforcement of legislation/regulations is becoming ever more central to MED POL and MAP activities in general. He also briefed the participants on the implementation of the Strategic Action Programme (SAP) to address pollution from land-based sources and activities. In addition, he pointed out that following the provisions of SAP, activities like the Baseline Budget, which are related to emissions from land-based sources and activities are of major importance to the Mediterranean countries. These form the basis to compare the actual reductions of all the measured or calculated emissions, when the National Action Plans will be implemented. He went on by stating that the aim of the meeting, organized under the technical responsibility of WHO/MED POL was to make further headway in the development of the Network which held its first informal meeting in Sorrento in March 2001, with the identification and further agreement on a set of indicators in the filed of environmental inspections.

Agenda item 2: Adoption of the Agenda

7. The meeting examined and approved the provisional agenda as proposed by the Secretariat, which is attached as Annex II to this report.

Agenda item 3: Scope and Purpose of the Meeting

8. Dr. George Kamizoulis, WHO/MED POL Senior Scientist, reminded that the Meeting was being convened in the framework of the MED POL Programme and particularly within the compliance and enforcement activities. The objectives of the meeting, which was a follow up to the Workshop held in 2005 in Athens, included the following:

- To test a proposed set of performance indicators for compliance and enforcement.
- To assess the conditions regarding compliance and enforcement within each Mediterranean country by applying provisional performance indicators.
- To agree on a minimum number of performance indicators to be used for reporting.
- To prepare a plan for the next biennium on the activities related to national enhancement of the inspection systems in relation to the GEF project.
- To make proposals for further action on activities related to systems of inspection.

Agenda item 4: Election of Officers and Organization of Work

9. The meeting elected the following Officers:

Chairperson:	Dr. Charalambos Hajipakkos (Cyprus)
Vice-Chairman:	Ms Reem Abed Rabboh (Syria)
	Mr Samir Kaabi (Tunisia)
	Mr Ahmet Rifat Ílhan (Turkey)
Rapporteur:	Mr Rani Amir (Israel)

10. As to how work would be organised, the Secretariat pointed out that the report of the meeting would not be adopted by the meeting at the close of its proceedings. It would be drafted by the Secretariat over the coming days and sent out to all the members of the Network for possible comment, or for them to make any corrections, which would then be included in the final version.

11. With regard to the organization of work, the Secretariat recalled that the Meeting would include brief presentations and discussion of country reports on compliance and enforcement, with emphasis being placed on the issue of the implementation of the proposed performance indicators. The meeting then proceeded to a discussion on environmental compliance and enforcement indicators as they are related to inspection systems, with a view to identify possible indicators

12. The representative of Egypt took the floor and raised the issue of closer collaboration among the Mediterranean countries when a specific case may arise, which is difficult to address, needs expertise, is very important and can contribute to significant reduction of pollution. To this end, he proposed the development of a new mobile unit with the task to provide immediate and technically sound assistance to countries in need. The Secretariat replied that a mobile unit would have cost a considerable amount of money and given the limited financial resources, this proposal does not seem to be affordable. However, it is customary to provide assistance upon request in cases of need, by mobilizing human resources from the network. As a matter of fact, Egypt provided this type of assistance to Syria, on the occasion of the formal launching of inspectorates in the Syrian Arab Republic.

Agenda item 5: Presentation of country reports on environmental inspectorates

13. Experts from the following countries presented reports on the implementation of performance indicators for environmental inspectorates: Croatia, Cyprus, Egypt, France, Israel, Italy, Lebanon, Monaco, Montenegro, Morocco, Slovenia, Syrian Arab Republic, Tunisia and Turkey. The presentations are attached as Annex III to this report. The country reports were prepared so as to provide information on performance indicators related to inspectorates and were presented following a definite structure. The countries were requested to supply a national report based on the below described provisional indicators. Before filling in the indicators, the document in Annex IV was considered for a close and detailed description of each of the components of the indicators. In case that for some parameters there were no data available, information was provided on how this problem could be resolved. For the indicators marked optional, information was supplied in case data existed. Taking into consideration that the application of these provisional indicators was to test them at the national level, information was also provided that would result in better reporting.

Indicators to be used for country report

Inspection implementation and sizing

$$I_1 = \frac{number\ of\ inspectors}{population\ of\ the\ country}$$

$$I_2 = \frac{number\ of\ training\ days\ per\ year}{number\ of\ inspectors}$$ **or**

$$I_{2bis} = number\ of\ training\ courses\ provided\ by\ compliance\ assistance\ institutions\ per\ year$$

$$I_{1bis} = \frac{number\ of\ inspectors}{number\ of\ industries\ and\ facilities\ requiring\ an\ environmental\ permit}$$

$$I_{1ter} = \frac{number\ of\ inspectors}{number\ of\ inspectors\ according\ to\ the\ human\ resource\ calculation\ scheme}$$

$$I_3 = \frac{operating\ inputs}{total\ wages}$$ ***(optional)***

$$I_4 = \frac{number\ of\ inspectors\ with\ a\ strategic\ action\ plan}{number\ of\ inspectors}$$

$$I_5 = \frac{number\ of\ inspectors\ with\ a\ yearly\ operational\ action\ plan}{number\ of\ inspectors}$$

Measuring inspection outputs

$$I_6 = \frac{number\ of\ facilities\ having\ an\ environmental\ permit}{number\ of\ facilities\ to\ comply\ with\ national\ standards}$$

$$I_7 = \frac{number\ of\ full\ time\ equivalent\ spent\ on\ control\ operation}{number\ of\ full\ time\ equivalent\ of\ the\ inspection\ body}$$ **(optional)**

$$I_8 = \frac{number\ of\ inspections\ conducted}{number\ of\ full\ time\ equivalent\ of\ the\ inspection\ body}$$ **(optional)**

$$I_9 = \frac{number\ of\ civil\ and\ criminal\ sanctions}{number\ of\ non\ -\ compliance\ report}$$

$$I_{10} = \frac{number\ of\ violations\ of\ a\ category\ of\ facilities}{number\ of\ facilities\ of\ this\ category}$$

$$I_{11} = \frac{amount\ of\ fines\ per\ year}{number\ of\ violations\ reports\ per\ year}$$

Special note on self-monitoring and environmental management systems

$$I_{12} = \frac{number\ of\ facilities\ with\ self\ monitoring\ or\ environmental\ management\ systems}{number\ of\ facilities}$$ **(optional)**

Calculation example (simplified system)

Calculation of number of inspectors				
Polluting level	**High**	**Medium**	**Low**	**Total**
Number of facilities	750	6,000	15,000	21,750
Frequency of "on site inspection"	2	0.5	0.2	
Frequency of "administrative inspection"	3	1	0.2	
Days per "on site inspection"	2	1	0.5	
Days per "administrative inspection"	1	0.5	0.2	
Total men*days	5250	6000	2100	13350
Effective days per inspectors				150
Number of inspectors required				89

Additional staff requirement		
Management	a ratio of one management level to 10 to 15 inspectors on average	9
Number of inspectors required		89
Administrative staff	On average 4 to 5 inspectors to one administrative support	18
Judicial support	On average one judicial person to 30 inspectors	4
Staff turn over	On average 10% turn over	9
Total		40

Total of inspectors and additional staff	**129**

Example from MAP Technical Reports Series no. 149

14. Following the presentation of the country reports, a general discussion followed on issues to be clarified and on additional information for particular issues of interest.

15. The representative of Israel included in his presentation a sample of indicators from the outcome category of actual environmental results. He called the meeting to adopt and test few simple indicators such as these in addition to the more straightforward input-output indicators.

Agenda item 6: Identification of problems related to the application of provisional performance indicators

16. The Chairman at the end of the presentations and in consultation with the Secretariat asked the meeting to provide their general impressions on the country presentations and in particular to discuss whether the indicators: (i) were enough, (ii) presented the real situation, (iii) were easy to be applied and (iv) were useful for illustrating gaps and eventual needs of inspectorates.

17. During the debate, several participants took the floor, among them Israel, Italy, Syria, Morocco, Egypt, Lebanon, France and Cyprus and they commented on a number of issues. It was felt among the participants that in the first place, the definitions on the issues dealt with, are necessary. For example, who is the inspector? Are all the people dealing with compliance and enforcement inspectors that contribute to the pollution reduction for the benefit of the environment and human health? And furthermore, what activities require a permit, or are all activities requiring a permit, those that fall under compliance and enforcement sectors?

18. The representative of Israel noticed that from the reports it resulted that there exist two different types of management in the countries. There are some countries that have a coastal zone inspectorate (among them Israel and France), while the majority of the inspectorates, refer to the entire country.

19. The representative of Italy suggested that only big industries that are regulated by the IPPC Directive of the E.C. (Integrated Pollution Prevention and Control), should be included in the data that will serve to produce indicators, while the representative of France referred also to domestic wastewater treatment plants as facilities which need to be inspected. It was agreed that every country should refer to the national legislation for the definition of the types of industry that will be subject to control and monitoring for compliance and enforcement. It was evident throughout the discussions that every country possesses its own system of inspections and would not have been easy to adjust it in order to use indicators as the representative of Cyprus noticed. In addition, the representative of Turkey expressed his opinion that all the countries should be free to report through indicators, according to the system prevailing in the country.

20. Following the debate on the issues related to the definitions, if was agreed that basic definitions should be adopted. As a matter of fact and in order to make it more comprehensible, all participants were in favor of using the same terms. It was made clear to all participants that the use of indicators for reporting on compliance and enforcement would not have been a means of comparison among the countries. It is meant to be a tool for identifying gaps and problems of the inspection system of every country vis-à-vis its own performance. It is to be highlighted that one of the most important aspects of using indicators, is to avoid duplication of work, if somehow countries use their own data base for reporting. In conclusion, it was decided that every country will report according to the system

in force, by noting on the indicator used that it is referred to the coastal zone only or to the whole country. Also, as a preamble to the indicators listed, there will be a brief notice on the conditions prevailing in the country regarding size and types of facilities and any other issue worth noting.

21. It was also decided that the term inspector shall be used to indicate the person who is entitled and authorized to perform inspections by national law, regardless of the nature of inspections either on desk on in the field.

22. The definition of the size of the facility would involve only the large facilities including industries, wastewater treatment plants, etc, and is to be adapted to the size that every country uses. Therefore each country should precise on the size of inspected facilities and should indicate it along with the indicator in order to provide information to which activities it refers to.

23. At the end, a major issue was raised by Israel. What do you define as compliance or non-compliance, since in several occasions even if compliance is not achieved, the inspected site cannot be determined as not incompliant. On this particular issue, the representative of Tunisia commented that whenever a facility is creating pollution, then it is not in compliance, but on the other hand, the representative of Italy pointed out that the non-compliance situation is when a case is directed to the court. In turn, the representative of France suggested that there should be a distinction between important and non-important violations.

24. An exchange of views followed and agreement was reached on the following conclusion. The non-compliance cases are those when a written document is issued. However, there should be a distinction, and the issuance of a written document is a minor case of non-compliance in contrast to a severe warning (courts, etc.), which represents a major non-compliance case.

Agenda item 7: Selection of a minimum set of performance indicators to be applied for future reporting

25. The exchange of views on the basic definitions for the data to be addressed by the indicators, facilitated the selection of a minimum set of performance indicators. The representative of Israel suggested a simple outcome indicator that should reflect the treatment of sewage in the countries. On this issue the representative of Italy presented two tables. The first table included the most important data and the second included the suggested indicators. The participants agreed on the two tables that are given below and they also suggested using four more optional indicators. The information basis for indicators to be collected every year is the following:

- Number of environmental inspectors ($\mathbf{N_{INSP}}$, full time eq.)
- Country population (**CP**)
- Number of facilities ($\mathbf{N_{FAC}}$, LBSP)
- Number of inspectors according to Human Resources Calculation Scheme (HRCS) ($\mathbf{N_{HRCS}}$)
- Number of training days ($\mathbf{N_{TD}}$, man-days)
- Number of inspected facilities ($\mathbf{N_{INF}}$)
- Number of not compliances ($\mathbf{N_{NC}}$) (it is referred to minor cases)
- Number of legal actions ($\mathbf{N_{LA}}$) (it is referred to major cases)
- Number of suspended permits ($\mathbf{N_{SP}}$)
- Number of inspectors with an operational plan ($\mathbf{N_{IOP}}$)
- Number of facilities with self monitoring or environmental management system ($\mathbf{N_{SM}}$)

26. The proposed indicators are the following:

$$I1 = \frac{\text{Number of environmental inspectors}}{\text{Country population}}$$

$$I2 = \frac{\text{Number of environmental inspectors}}{\text{Number of facilities}}$$

$$I3 = \frac{\text{Number of environmental inspectors}}{\text{Number of inspectors according to HRCS}}$$

$$I4 = \frac{\text{Number of training days}}{\text{Number of environmental inspectors}}$$

$$I5 = \frac{\text{Number of inspected facilities}}{\text{Number of facilities}}$$

$$I6 = \frac{\text{Number of not compliances}}{\text{Number of facilities}}$$

$$I7 = \frac{\text{Number of legal actions}}{\text{Number of not compliances}}$$

Optional indicators

$$I8 = \frac{\text{Number of suspended permits}}{\text{Number of legal actions}} \quad \text{(optional)}$$

$$I9 = \frac{\text{Number of inspectors with an operational plan}}{\text{Number of environmental inspectors}} \quad \text{(optional)}$$

$$I10 = \frac{\text{Number of facilities with self monitoring or environmental management system}}{\text{Number of facilities}}$$

(optional)

$$I11 = \frac{\text{Number of suspended permits}}{\text{Number of inspected facilities}} \quad \text{(optional)}$$

Agenda item 8: Discussion related to a plan for compliance and enforcement for strengthening the inspection systems

27. Dr. Kamizoulis presented the plan for compliance and enforcement for strengthening the inspection systems as it was principally approved by GEF for financing, and is waiting for the operation approval to be granted. The plan and the related activities are shown in Annex III. In addition, he mentioned that the countries will be consulted when the project will be operational, so as to start the activity with the countries requesting to do so. He also referred to the time schedule of the project, by announcing that each year two countries will benefit from the capacity building programme.

Agenda item 9: Discussion on issues and future activities of the MED network on compliance and enforcement - Conclusions and recommendations

28. Dr. Kamizoulis informed the meeting that within the framework of the Mediterranean Action Plan, a committee was formed with the objective to prepare the reporting system. This system includes a part which is referred to compliance towards the Barcelona Convention and its Protocols and a table exists that is dedicated to inspections (see Annex V). To reassure the participants, it was clarified that although the table may include some of the data that the countries will use from now on for their inspectorates, it is only for reporting needs towards MAP, therefore no duplication of efforts would have occurred.

29. The main conclusion of the meeting was the agreement on the indicators to be used, and the recommendations reached were as follows:

- to present to the next meeting of the Network on Compliance and Enforcement, the country's state of inspectorates, based on the agreed indicators, as they are referred in Agenda item 7. To facilitate the process, the 2008 data will be used for the indicators, to allow enough time for their completion.
- the indicators would be used according to the situation prevailing in the country, as regards land-based pollution to the Mediterranean and this should be highlighted in the data sheet. In addition, there will be an explanation for all the data used, so as to reflect exactly their nature and size.
- with reference to the above indicators, every country will prepare a brief report on problems or gaps encountered and measures to be taken on national level to improve the situation. This concise exercise will supply the evidence that the indicators are used only for reflecting the national situation regarding inspectorates and not for comparison among countries.
- to continue the capacity building programme and with the financial support of GEF to implement tailor made activities in the countries listed in Annex IV, during the next five years that the GEF project will be operational.
- to provide assistance upon request, to countries which are in need of specific support, based on the availability of funds. Efforts should be made to encourage contacts between countries and whenever possible provide direct assistance from one country to another with the support of the Secretariat.
- to work closer and strengthen collaboration and cooperation with relevant networks operating in the region, such as IMPEL and BERCEN and within this context to enhance collaboration with INECE.
- to hold the next meeting of the Mediterranean Network on Compliance and Enforcement in 2009.

Agenda item 10: Closure of the meeting

30. Following the customary exchange of courtesies, the Chairman declared the meeting closed at 14:30 hrs, on Thursday, 25 October 2007.

ANNEX I

LIST OF PARTICIPANTS

CROATIA
CROATIE

Ms Nevia Kruzic
Head of the Department for Sea and Soil Protection
Ministry of Environmental Protection,
Physical Planning and Construction
Uzarska 2/I
51000 Rijeka
Croatia
Tel: +385-51-213499
Fax: +385-51-214324
E-mail: nevia.kruzic@mzopu.hr

CYPRUS
CHYPRE

Dr. Charalambos Hajipakkos
Senior Environment Officer
Environment Service
Ministry of Agriculture, Natural Resources and Environment
1411 Nicosia
Cyprus
Tel: +357-22-303851
Fax: +357-22-774945
E-mail: chajipakkos@environment.moa.gov.cy

EGYPT
EGYPTE

Mr. Atef Yacoub
Senior Adviser for Minister of Environment Affairs
Inspection Department
Ministry of State for Environmental Affairs
Egyptian Environmental Affairs Agency
30 Misr Helwan El Zyrae Road
11728 Maadi, Cairo
Egypt
Tel: +20-2-25256447 ext. 7602
Fax: + 20-2-25265168
E-mail: atefyacoub@hotmail.com

FRANCE
FRANCE

M. Michel Ripoche
Adjoint au Chef du Bureau des Services Déconcentrés
et de la Police de l'Eau
Ministère de l'Ecologie, de l'Aménagement et du
Développement Durables
20, avenue de Ségur
75007 Paris
France
Tel: +33-1-42191262
Fax: +33-1-42191295
E-mail: michel.ripoche@ecologie.gouv.fr

ISRAEL
ISRAËL

Mr Rani Amir
Director
Marine and Coastal Environment Division
Ministry of Environmental Protection
Pal-Yam 15a
31007 Haifa
Israel
Tel: +972-4-8633500
Fax: +972-4-8633520
E-mail: rani@sviva.gov.il

ITALY
ITALIE

Ms Maria Dalla Costa
Head, International Relations Service
APAT - Agency for Environmental Protection
and Technical Services
Via Curtatone, 3
00185 Rome
Italy
Tel: +39-06-50074201
Fax: +39-06-50074276
E-mail: dallacosta@apat.it

Mr. Alfredo Pini
Head, Interdepartmental Service for Coordination and
Control of Inspection Activities
APAT - Agency for Environmental Protection
and Technical Services
Via Vitaliano Brancati, 48
00144 Rome
Italy
Tel: +39-06-50072474
Fax: +39-06-50072450
E-mail: alfredo.pini@apat.it

LEBANON
LIBAN

Ms Olfat Hamdan
Service of Protection of Urban Environment
Ministry of the Environment
Lazarieh Building- Beirut Central District
P.O. Box 11-2727
Beirut
Lebanon
Tel: +961-1-976555 (ext. 408)
Fax: +961-1-976 530
E-mail : o.hamdan@moe.gov.lb

MONACO
MONACO

M. Philippe Antognelli
Chef de section
Direction de l'Environnement de
l'Urbanisme et de la Construction
23 Avenue Albert II
MC 98000 Monaco

Tel: +377-98984680
Fax: +377-98988802
E-mail : pantognelli@gouv.mc

MONTENEGRO
MONTENEGRO

Mr Pavle Djuraskovic
Head of Department for Environmental Protection
Hydrometeorological Institute
Republieki hidrometeoroloski zavod
19 Cetvrte proleterske
Crna Gora
Podgorica 81000
Montenegro

Tel: +381- 81-247973
Fax: +381- 81-247974
E-mail: pavle.djuraskovic@meteo.cg.yu

MOROCCO
MAROC

Mme Salima Karrakchou
Cadre au Service Environnement et Santé
Direction de la Surveillance et de la Prévention des Risques
Secrétariat d'Etat auprès du Ministre de l'Energie et des Mines,
de l'Eau et de l'Environnement
2, Rue Oum Er Rabia
Agdal
Rabat
Morocco

Tel: +212-66-866192
Fax: +212-37-681641
E-mail : kasalima2@yahoo.fr
kasalima225@gmail.com

SLOVENIA
SLOVÉNIE

Mr Boris Žbona
Counsellor to the Head Inspector
Regional Unit Nova Gorica
Ministry for Environment, Physical Planning and Energy
Trg Edvarda Kardelja 1
Nova Gorica 5000
Slovenia

Tel: +386-5-3311877
Fax: +386-5-3311880
E-mail: boris.zbona@gov.si

SYRIA
SYRIE

Ms Reem Abed Rabboh
Director
Water Safety Directorate
Ministry of Local Administration and Environment
P.O . Box 3773
Mazraa - Al-Iman Mosque Sq.
Damascus
Syria
Tel: +963-11-4461076
Fax: +931-11-4461079
E-mail: env-water@mail.sy

TUNISIA
TUNISIE

Mr Samir Kaabi
Chef de Département contrôle et suivi de la pollution
Agence Nationale de Protection de l'Environnement (ANPE)
15 rue 7051 Cité ESSALEM
Centre Urbain Nord
2080 Ariana
Tunisie
Tel : +216-71-750822
Fax : +216-71-753991
E-mail: dt.ctl@anpe.nat.tn

TURKEY
TURQUIE

Mr Ahmet Rifat Ílhan
Expert of Environment and Forestry
T.R. Ministry of Environment and Forestry
General Directorate of Environmental Management
Department of Marine and Coast Management
Sogutozu Caddesi No: 14/E
Bestepe
Ankara
Turkey
Tel: +90-312-2076628
Fax: +90-312-2076695
E-mail: armidoarmido@yahoo.com

Mr Yakup Ayan
Assistant Expert
T.R. Ministry of Environment and Forestry
General Directorate of Environmental Management
Environmental Inspection Department
Sogutozu Caddesi No: 14/E
Bestepe
Ankara
Turkey
Tel: +90-312-2076697
Fax: +90-312-2873827
E-mail: yakupayan@yahoo.co.uk

UNITED NATIONS ENVIRONMENT PROGRAMME, MEDITERRANEAN ACTION PLAN
PROGRAMME DES NATIONS UNIES POUR L'ENVIRONNEMENT, PLAN D'ACTION POUR LA MÉDITERRANÉE

Mr Francesco Saverio Civili
MED POL Coordinator
United Nations Environment Programme
Coordinating Unit for the Mediterranean
Action Plan
48 Vas. Konstantinou Avenue
116 35 Athens
Greece

Tel: +30-210-7273106
Fax: +30-210-7253196/7
E-mail: fscivili@unepmap.gr

WORLD HEALTH ORGANIZATION
ORGANISATION MONDIALE DE LA SANTÉ

Dr. George Kamizoulis
Senior Scientist
WHO - MED POL
Coordinating Unit of the Mediterranean
Action Plan
48 Vas. Konstantinou Avenue
116 35 Athens
Greece

Tel: +30-210-7273105
Fax: +30-210-7253196/7
E-mail: whomed@hol.gr &
gkamiz@unepmap.gr

ANNEX II

PROGRAMME OF THE MEETING

Wednesday, 24 October 2007

09:00-09:30	Registration of participants
09:30-10:30	Opening of the workshop (Agenda items 1,2,3,4) Adoption of Agenda Scope and purpose Election of officers Organization of the meeting
10:30-11:00	Coffee break
11:00-13:00	Presentation of the country reports applying as appropriate provisional performance indicators on compliance and enforcement (Agenda item 5)
13:00-13:30	Discussion
13:30-15:00	Lunch
15:00-16:00	Presentation of the country reports applying as appropriate provisional performance indicators on compliance and enforcement (cont.)
16:00-16:30	Coffee break
16:30-17:30	Discussion

Thursday, 25 October 2007

09:30-10:30	Identification of problems related to the application of provisional performance indicators (Agenda item 6)
10:30-11:00	Coffee break
11:00-13:00	Selection of a minimum set of performance indicators to be applied for future reporting (Agenda item 7)
13:00-13:20	Discussion related to a plan for compliance and enforcement for strengthening the inspection systems (Agenda item 8)
13:20-14:20	Discussion on issues and future activities of the MED network on compliance and enforcement - Conclusions and Recommendations (Agenda item 9)
14:20-14:30	Closure of the meeting (Agenda item 10)

ANNEX III

COLLABORATION WITH GEF AND PROPOSED WORKPLAN

Sub-component 2.1: Facilitation of policy and legislation reforms for pollution control *2.1 b Permit, Inspections and Compliance Systems*

Background/Context/Rationale

The activities related to the preparation of the NAPs have shown a number of gaps in the Mediterranean. One of these gaps is strictly linked with the compliance and enforcement of control measures and, more precisely, the system, which will control measures for pollution reduction, and compliance, i.e. the inspectorates.

Taking into account all the above, a review was made, based on existing data and information, of the status of permit, inspection and compliance systems in all Mediterranean countries including policy and legislative gaps. The review identified the basic subjects needing a more in depth study.

The implementation of the LBS Protocol priority actions and in particular of the SAP MED, include, *inter alia*, the introduction of new environmental tools including appropriate implementation of regulatory, economic and voluntary instruments, but it focuses on the reduction of certain pollutants from industries and various facilities. Following this, and in line with the above-mentioned strategy and taking into consideration the outcome of the above-mentioned review, the need to implement capacity building activities so as to enhance the inspectorate system will also complement the activity. Therefore, the major objective is to enhance and update the inspectorates in the following countries: Albania, Bosnia and Herzegovina, Croatia, Lebanon, Morocco, Montenegro, Syria and Turkey.

All concerned countries for the control of facilities including also industrial, have regular or non-regular activities regarding inspections, which are usually based on complaints reported and on specific needs. In addition, there is a considerable number of inspectors who although they possess the scientific background, they are not trained to inspect several facilities and they operate based on personal judgments. If action is to be taken, this could include the training of the inspectors and the planning of inspection based on needs and in an organized manner. As a result, all the countries will operate following the regulatory cycle that is well established, widely accepted and followed by a considerable number of countries including those of the EU.

Description of activities

To strengthen the existing mechanism in the Mediterranean countries regarding environmental inspection activities, there is a need to tackle the issue in an integrated manner. The set of activities would include meetings among agencies responsible for permitting, inspecting and enforcement in order to set up the procedure, as it is indicated in the regulatory cycle, as well as a training workshop.

An initial meeting will consider the existing legislation and will possibly set the objectives and policy planning, along with the improvement of the system for permitting, compliance control and compliance promotion, which will result in the preparation of a plan of actions. During the meeting, the responsible authorities will consider the issue of reporting using also indicators and they will set up agreed indicators in the plan of action to be used for

reporting and feedback. Furthermore, a training workshop will be held in order to provide practical information on inspecting the most commonly polluting and industrial facilities of the country. It will also serve as guidance for the uniformity of the inspections. The training workshop will be held in the national language or in any other language proposed by the country and will be based on the training material already prepared for this specific purpose. It is expected that at least 30 inspectors will be trained to inspect several, yet common, industrial facilities.

The training workshop and the practical experience within one year time, will provide all the information for an assessment and feedback for: (a) the operation of the whole system, (b) the knowledge acquired and used by the inspectors and (c) an estimation if the targets set during the first meeting were met or not. All above will be discussed during a final meeting, and solutions will be proposed to all difficulties faced during the period under review and will be used for the formulation of amendments to the existing legislation.

<u>The expected results are:</u>

- Formulation of plans of action for permitting, compliance and control
- Experts in national centre capable to coordinate and implement national inspection systems
- Enhanced inspectorate systems
- Proposals for amending the legislation for compliance with LBS Protocol in relation to inspection

Budget for country expenses

2.1: Facilitation of policy and legislation reforms for pollution control
2.1 b Permit, Inspections and Compliance Systems

Activity:	**GEF**	**Co-finance**	**UNEP/MAP**
2.1.7 Meetings among agencies responsible for permit, inspection, compliance	3,500 (cash)	3,500 (kind)	-
2.1.8 Training workshop to provide practical guidance	15,000 (cash)	10,000 (kind)	5,000 (cash)
2.1.9 National final meeting for the assessment and feedback	3,500 (cash)	3,500 (kind)	-
TOTAL	22,000 (cash)	17,000 (kind)	5,000 (cash)

Explanatory notes:

GEF contribution in cash for activities 2.1.7 and 2.1.9 includes:
- Travel and hotel accommodation (for participants outside the conference venue)
- Food expenses covering the participants outside the conference venue
- Coffee breaks and incidentals

Co-financing by …… in kind for activities 2.1.7 and 2.1.9 includes:
- Meeting premises
- Secretarial assistance
- Support expenses, (i.e. telephone costs, mail, presentation equipment, photocopies, etc.)

GEF contribution in cash for activity 2.1.8 includes:
- Travel expenses for 30 participants outside the conference venue
- Accommodation and food expense for 30 participants
- Coffee breaks and refreshments
- Translation of the training material

Co-financing by ……. in kind for activity 2.1.8 includes:

- Provision of conference room facilities
- Preparation of training material
- Secretarial assistance
- Support expenses (i.e. telephone costs, mail, presentation equipment, photocopies, etc.)

UNEP/MAP contribution in cash for activity 2.1.8 includes:

- Travel expenses and lodging for lecturers
- Lecturers' fees

ANNEX IV

PRESENTATION OF COUNTRY REPORTS

ENVIRONMENTAL INSPECTORATE SYSTEM IN CROATIA

Compliance and enforcement of regulations for the control of pollution resulting from land-based activities

Ministry of Environmental Protection, Physical Planning and Construction

October 2007

Content:

Background

In late seventies Croatia was becoming increasingly aware of the environmental threats and the need for its more effective protection. Along with the protection of nature and cultural monuments, need for the protection of environment agaist human actions is gaining more and more attention.

Protection of the environment is surely one of the most demanding and complex human acitivities, reaching into the segments of economy and human society.

Therefore the effective institutional structuring of environmental protection system at the state administrative, regional and local levels including environmental compliance and enforcement mechanisms is extremely important.

As an independent country, Republic of Croatia is a Party to the Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean (OG International Treaties 12/93, 17/98) from 1993. Nevertheless as a republic in the former Republic of Yugoslavia, Croatia has participated in the activities and programmes conducted under the Barcelona Convention and its protocols since 1978.

Participation in the UNEP/MAP MED POL Programme and activities regarding implementation of the LBS Protocol has always been considered as a very important international activity aiming to, at first, establish appropriate monitoring of marine environment as well as to eliminate and/or reduce pollution of the sea from land-based sources and activities (according to the Protocol for the Protection of the Mediterranean Sea against Pollution From Land-Based Sources and Activities).

In spite of the existing international legal framework as well as national environmental legislation, the sea continues to receive large amounts of pollutants. Therefore, in order to protect human health and environment, compliance and enforcement of legislation for pollution control need to be improved.

Participation in the Joint WHO/UNEP Project within the MED POL Phase IV regarding the establishment of the Network on Compliance and Enforcement of environmental legislation can considerately contribute to the improvement of existing national environmental inspection system leading to the improvement in compliance and enforcement of environmental legislation.

1. Institutional framework of inspection system in Croatia dealing with the enforcement of environmental legisaltion

Efficiency of environmental protection in the Republic of Croatia is assured by the Croatian Parliament, Goverment as well as representative and executing bodies of the regional and local government.

Croatian Parliament is the highest legislative body in the Republic of Croatia. Committee for physical planning and environmental protection as a Parliament working body is responsible for monitoring of environmental policy impelementation as well as for discussing about proposals and incentives for elaboration of legal and other acts (strategies, programmes and reports on environmental protection).

Government of the Republic of Croatia proposes adoption of environmental protection legal/sublegal acts and strategies, implements laws and control the work of the state administration responsible for environmental protection.

State administrative bodies (includes ministries) and bodies of regional and local governement carry out implementation of environment protection activities and measures proscribed by the laws or incorporated in the strategic and programme´s documents.

Responsibilities for enforcement of environmental legislation on the national level are divided among different ministries and state administartion bodies. Besides MEPPPC, some other national governmental bodies perform administrative and other activities related to protection of environmental componenets such as:

- Ministry of Agriculture, Forestry and Water Management
- Ministry of Sea, Tourism, Transport and Development
- Ministry of Health and Social Care
- Ministry of Economy

But, responsibilities dealing with land based sources of pollution is shared among three ministries: Ministry of Agriculture, Forestry and Water Management, Ministry of Environmental Protection, Physical Planning and Construction and Ministry of Health and Social Care.

2. Implementation of legislation related to land based sources of pollution (LBS)

Responsibility for compliance and enforcement of environmental legisation dealing with the pollution of the sea from land based sources and activities lies among three ministries and county state administrative offices:

- Ministry of Agriculture, Forestry and Water Management (Division for water management-Department on state water inspection)
- Ministry of Environmental Protection, Physical Planning and Construction (Division on inspection-Department on environmental inspection)
- Ministry of Health and Social Care (Division on sanitary inspection-Department on sanitary inspection)
- state administrative offices in counties

Responsible ministries performs inspection control on the national level and second level of inspection control while the inspection services in the state administrative offices located in the counties conducts first level of inspection control.

Law on the System of the State Administration (OG 5/93, 92/96, 48/99, 15/00 and 59/01) establishes the state administrative offices on the county level for conducting activities of state administration in more administrative areas/fields (rationalisation of the administration). For performinig adminstrative and other duties related to environmental protection, nature protection, physical planning and construction, services as basic organised units within the State administrative offices are established (Decree on inner order of the state administrative offices OG 21/02).

Among other responsibilities, state administrative offices have service responsible for water inspection and sanitary inspection which means that water inspection and sanitary inspection are performing first level of inspection on the respective county level.

Coastal part of the Croatian territory is administratively divided into seven coastal counties. In implementation of environmental legislation related to LBS Protocol, inspection control in seven coastal counties refers to the Adriatic watershed area while other 14 counties (and the County of Zagreb) refers to the Black Sea watershed area.

3. Competencies and responsibilities of inspections concerned

Water inspection

Within the Ministry of Agriculture, Forestry and Water Manegement (MAFWM), Division for water management - Department on state water inspection is constituted as a part of the Ministry responsible for water inspection. The water inspection is established in 1985 and currently it performs duties and tasks laid down in the Law on Water (OG 107/95, 150/05) and the Law on Water Management Financing (OG 107/95) in 21 county and the Town of Zagreb.

According to the Water Act, water inspection is performing following duties:

- control of the state of water
- control of technical correctness and designated use of water buildings and facilities
- control of the use of water and water property in relation fo the Law, water-legal acts and concession contracts
- control of the state of water pollution, inplementation of water protection measures and application of conditions form water-legal acts
- preparation and implementation of flood defensive measures and all other protection measures for harmful effects of water

The National Water Inspection Department supervises the work of the county water inspectorates, determines guidelines of their acitivies and of the implementation of the Law on Waters and its by-laws, supplies instructions and undertakes various other measures to improve their work organisation.

County water inspectorates supervise the implementation of the provisions of this Law and other regulations based on it and on the dicisions made by County assemblies or the City of Zagreb Asembly, or the respective town and municipal councils, and the implementaion of measures for case-specific water managmement acitivities.

Water inspectors, pursuant to Article 45 of the Law on Water Management financing, perform control of testing the authenticy of data presented in the calculations for water fees, inclusive

of the water-use fees. Stronger efforts are needed in order to organise county water inspectorates in the necessary scope, and to instruct them of the proper and integrated implementation of the Law on water.

Environmental protection inspection

Environmental protection inspection control over implementation of the Environmental Law (OG 82/94, 128/99) and regulations passed under it, conditions and manner of operation by the controlled legal persons and environmental protection measures set by the Law

Environmental inspection is organised within the Ministry of Environmental Protection, Physical Planning and Construction (MEPPPC) in the form of Environmental Inspection Department in accordnce with the Government Ordinance on Interior Structure of the MEPPPC.

Environmental ispection duties include: inspection control over the implementation of environmental standards, monitoring procedrures, emissions and immissions measuring, supervising implementation of ratified international treaties in the firld of environmental protection, proposing environmental improvement measures.

While performing inspection control inspection controls in particular:

- application of quality standards for environmental elements
- application of technical environmental protection standards
- performance of environmental state monitoring
- performance of emissions ans imission measuring and keeping related records
- implementation of environmental protection measures determined by the Environmental Protection Programme, Intervention Plan, EIA
- implementation of the resotoration programme and monitoring of its results
- manner and conditions of work, technical equipment of legal persons registered of authorized for performing environmetal protection tasks
- manner of keepeing environmental records
- use of funds allocated for the implementation of environmental protection measures

Sanitary inspection

Implementation of the Law on sanitary inspection (OG 27/99, 82/07) includes: legally-administrative and expert work as well as inspection of sanitary control over implementation of all measures for the protection of the human population from infectious diseases which among others (protection from noise, control over the sources of ionizing and non-ionizing radioation..) includes:

- setting sanitary-technological and hygienic conditions for the projects and validating compliance of the project with the proscribed conditions
- participating in the technical inspection of the buildings in their compentencies
- control over the structures, wastewater treatment plants and facilities for the disposal of sludge for more then 50.000 population equivalent

- control over the construction of the part of the main pipelines and wastewater treatment plants for more then 50.000 population equivalent

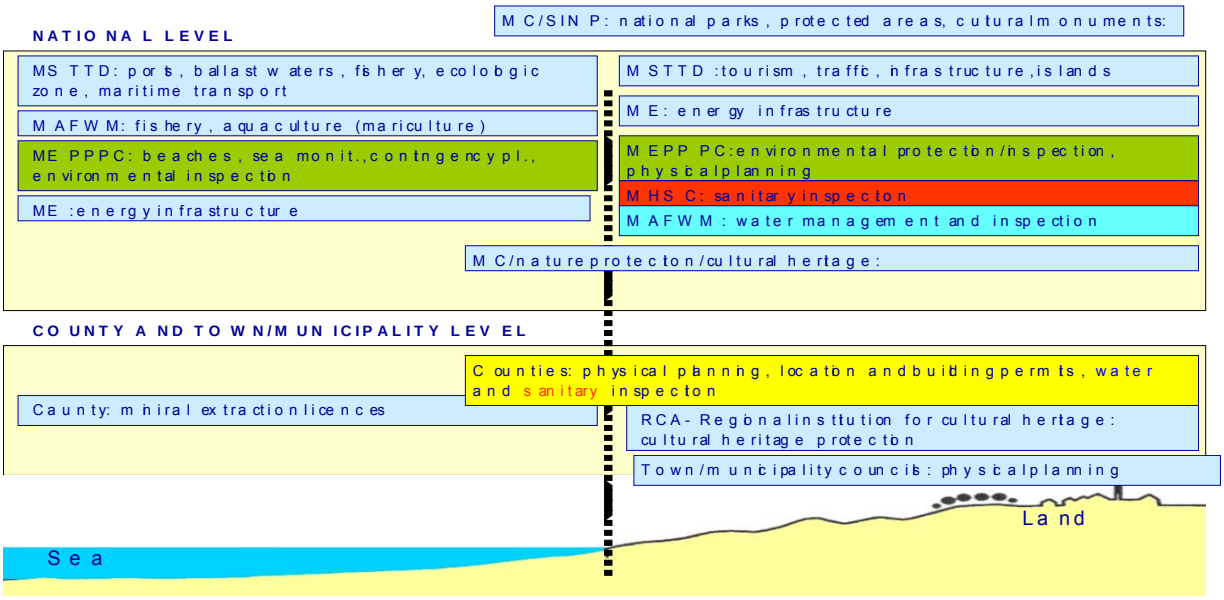
4. Issues related to the efficient and effective functioning of inspection dealing with the control of LBS sources of pollution

Generally, existing obstacles in implementing environmental legislation can be applied also here in implementing environmental legislation related to land based sources of pollution

Therefore, following issues related to efficient and effective functioning of responsibles inspections are:

- split in power and responsibilities regarding managment of land and sea (table 1)

Table 1.



- overlapping of the environmental legislation
- legal gaps
- insufficient coordination of activities among different inspections
- insufficient resources
  - human
  - financial

State and functioning of the inspection system (mechanism of control)

Government of the Republic of Croatia enacted 4 framework laws (law on Environmental Protection, Law on air protection, Law on waste, Law on environmental fond and energy efficiency) and related sublegal acts prescribing mechanisms for enforcement and environmental monitoring as well as 2 laws (Law on water and Law on financing of water management) and related sublegal acts dealing with water protection.

Environmental protection division (within the MEPPPC) as well as other inspection services are obliged to present yearly reports to the Government. Croatian Government in therefore

enabled to have an insight in the state and issues related to the enforcement of environmental legislation.

According to the conclusions of the yearly reports of the environmental protection inspection, there is deficiency in the number of environmental inspectors covering the whole area or the country.

In 2000 environmental inspection is established within the MEPPPC (until then was operating within the State Directorate for Environment and Nature Protection). Since then the number of environmental inspectors employed is growing . By the end of 2005 the number of environmental inspectors was 57 which in relation to the year of 2000 means increase of 108,8%.

Today environmental inspectors work in the framework of central service (MEPPPC – 14) and in 20 regional units of the MEPPPC (43). Improvement has been made regarding creating conditions for better technical equipment and permanent education specially by establishing a system for permanent education through PHARE Project „Adaptation of environmental protection inspection for the implementation of new national legislation".

But with altogether improvements, environmental inspection still urge for enlargement of the number of environmental inspectors. There is also a need to improve the level of cooperation and coordination among various inspection services in order to improve efficiency of control.

Additional obstacle in enforcement of legislation are legal gaps; for instance: environmental protection inspector brings decision on forbidding on performing of the activities only if legal or physical person do not proceed according to the decision after three prescribed penalty sanctions.

Since 2002, the number of inspection controls of the legal and physical persons regarding EIA decisions, have been constantly increasing (specially related to certain economic activities such as shipbuilding, fish-farming, sanitary landfills..)

Beside the important advisory/informative task and enforcement of legislation, environmental protection inspection has to devote considerable time to familiarising of controlled subjects with their legal obligations.

As mentioned previously, water inspection was established through the Law on water. According to the mentioned Law, water inspection bring approximately 1400 decisions proscribing measures from their competencies and approximately 220 claims for initiating processes in front of the Offence Courts.

Relatively moderate number of claims is the result of organising the water sector in the lasting several years, so most of the legal and physical persons implement legally proscribed obligations. Administrative measure is proscribed if the party in the process did not proceed according to the decision of the water inspection. Yearly, water inspection issue about 50 measures. Penalty sanctions (as in most of the inspections) are about the ten times average salary amount in Republic of Croatia. For repeated non implementation of the water inspection decision the amount of the penalty is doubled.

Proscribing penalty sanctions and/or temporarily withdrawal of water permit is performed by the Ministry of Agriculture, Forestry and Water Management on the proposal of the water inspector in the case of non implementation of the proscribed measures in the framework of mandated deadline. Approximately 20 penalty sanctions and/or decision on temporarily withdrawal of water permit are being proscribed yearly.

Although there is no one integrated system for prevention and control of environmental pollution that would monitor all impacts on environment and issue integrated permits for different activities (environmental permit envisaged by the new Law on Environmental

Protection) undoubtedly prevention and control activities are performed within competent administrative bodies.
By the existing Law on Environmental Protection, MEPPPC in cooperation with other state administrative bodies and institutions is obliged to establish environmental protection information system (EPIS). Complete and functioning EPIS is still not established but is in the process of establishment within the Environmental Protection Agency.

In spite of increased number of environmental legal provisions as a consequence of harmonisation of national legislation with *acquis communitaire*, the state of certain controlled subjects is improved (health institutions, pharmaceutical industry, cement industry).

According to the national Report the State of Environment in the Republic of Croatia (adopted by the Croatian Parliament 25 May 2007) implementation of the measures related to inspection control prescribed within National Environmental Strategy and the National Environmental Action Plan (OG 46/02) from 2002, is appraised as satisfying although optimal results for measures are not achieved. Reasons for that is, as mentioned before, deficiency in human and financial resources as well as weakness of the Croatian legal and judicial system.

5. Calculating UNEP/MAP MED POL provisional set of indicators

In the exercise of calculating the provisional set of indicators, information letters and Guidelines for development of indicators for compliance and enforcement of environmental legislation in the Mediterranean region were sent to the three responsible inspection services located in the Ministry of Agriculture, Forestry and Water management, Ministry of Environment Protection, Physical Planning and Construction and Ministry of Health and Social Care. After consultations with the head inspectors in the respective inspection departments, we have received calculated indicators and filled supporting tables (annexed to this report) from environmental inspection and water inspection, while the sanitary inspection did not respond to the request on participating in this exercise.

Issues encountered while calculating provisional set of indicators

- Geographical coverage (two watershed areas: the Adriatic Sea and the Black Sea while Croatia has an open entry only to the Adriatic Sea as a part of Mediterranean region covered by the Barcelona Convention)
- Overlapping of inspection responsibility (leads to multiplication of data; calculated indicators do not show the real state about the number of polluting facilities and the number of cases conducted according to a single polluter)
- There is still no joint environmental permit but permits according to the environmental component issued and controlled by different state institutions
- No standardised work procedures applicable for all inspections
- Inspection control is not coordinated
- Unavailability of data (some data are given on the basis of evaluation)
- Some data not collected

- There were no methodological sheets for indicators explaining indicators in detail including referent values of some of the calculated indicators

6. Current and proposed activities aiming to improve national environmental inspection system

National level

Perceiving the existing problems related to the environmental inspection system MEPPPC in cooperation with other responsible ministries lead the initiative of drawing up and signing of the *Agreement on cooperation of inspection services in the field of environmental protection.* The Agreement was signed by 6 ministries (Ministry of Environmental Protection, Physical Planning and Construction, Ministry of Culture, Ministry of Sea, Tourism, Transport and Development , Ministry of Agriculture, Forestry and Water management, Ministry of Health and Social Care, Ministry of Interior Affairs) and State inspectorate in July 2007.

In line with the Agreement and according to defined problems following activities should be implemented:

- Elaboration of a handbook for conducting coordinated inspection control according to the existing international recommendations in that field (*Recommendation of the European Parliament and of the Council of 4 April 2001 providing for the minimum criteria for environmental inspections in the Member States 2001/331/EC; other)*
- Development of standardised form for data collection in inspection control
- Development of communication network for information exchange and cooperation in preparation and conducting of inspection control
- Cooperation and implementation of all international projects and activities related and important to inspection services dealing with environmental protection
- Ministry of Environmental Protection, Physical Planning and Construction (MEPPPC) should represent institution responsible for preparation of yearly national report for the Government on the conducted inspection activities as well as for the communication with the media related to joint inspection activities

Proposal for activities on the international level

- Continue to follow and participate in the EU pre-accession programmes and activities on that subject
- In the framework of UNEP/MAP MED POL:
    - Elaboration and adaptation of a core set of indicators for compliance and enforcement of environmental legislation in the Mediterranean region
    - Development of methodological sheets for explanation and calculation of each core set indicator
    - Elaboration of additional set of indicators with the possibility of selection and adaptation to the country's needs

Annex 1

Environmental protection inspection – indicators

1. *Inspection implementation and sizing*

$$I1 = \frac{\text{number of inspectors}}{\text{population of the country}} = \frac{69}{4\,437\,460}$$

Current number of environmental inspectors on the national level is 69.

$$I2 = \frac{\text{number of training days per year}}{\text{number of inspectors}} = \frac{232}{69}$$

Given date refers to 2006

I2bis = number of training courses provided by compliance assistance institutions per year = 18

Given date refers to 2006

$$I1bis = \frac{\text{number of inspectors}}{\text{number of industries and facilities requiring an environmental permit}} = \frac{69}{150}$$

New Environmental Law and envisaged sublegal acts will define the way to determine existing and future IPPC facilities. Therefore the data on 150 facilities is preliminar.

$$I1ter = \frac{\text{number of inspectors}}{\text{number of inspectors according to the human resource calculation scheme}} = \frac{69}{95}$$

Human resources calculation scheme

Calculation of number of inspectors				
Polluting level	**High**	**Medium**	**Low**	**Total**
Number of facilities	250	9000	25 000	
Frequency of "on site inspection"	2	0,5	0,2	
Frequency of "administrative inspection"	3	1	0,2	
Days per "on site inspection"	2	1	0,5	
Days per "administrative inspection"	1	0,5	0,2	
Total men*days	1750	9000	3500	14 250
Effective days per inspectors				150
Number of inspectors required				95

Additional staff requirement		
Management		9
Number of inspectors required		95
Administrative staff		19
Judicial support		4
Staff turn over		10
Total		42

Total of inspectors and additional staff	137

Data in the table are estimated.

$$I3 = \frac{\text{operating inputs}}{\text{total wages}} \text{ (optional)} = \frac{844.687 \text{ EUR}}{1.144.414 \text{ EUR}} = 0.738$$

Data refers to the year 2007 and are aproximate.

$$I4 = \frac{\text{number of inspectors with a strategic action plan}}{\text{number of inspectors}} = \frac{69}{69}$$

$$I5 = \frac{\text{number of inspectors with a yearly operational action plan}}{\text{number of inspectors}} = \frac{69}{69}$$

2. Measuring inspection outputs

$$I6 = \frac{\text{number of facilities having an environmental permit}}{\text{number of facilities to comply with national standards}} = \frac{0}{150}$$

New Law on Environmental Protection, adopted by the Parliament but not yet in force, will regulate the issue of environmental permit. Therefore, the number of IPPC facilities is estimated.

$$I7 = \frac{\text{number of full time equivalent spent on control operation}}{\text{number of full time equivalent of the inspection body}} \text{ (optional)} = \frac{72\,864 \text{ days}}{121\,440 \text{ days}}$$

Number of days spent in preparation and control operations including also administrative work (writing official records and other acts) is estimated.

$$I8 = \frac{\text{number of inspections conducted}}{\text{number of full time equivalent of the inspection body}} \text{ (optional)} = \frac{5167}{121\,440 \text{ days}}$$

$$I9 = \frac{\text{number of civil and criminal sanctions}}{\text{number of non - compliance report}} = \frac{439}{1674}$$

According to the data from 2006, environmental inspection brought 39 Conclusions on penalty sanctions (administrative measures) because of identified violation of legislation.

At the same time Offence courts brought 400 Decisions with prescribed fines which in total gives 439 penalty sanctions.

Environmental inspection at the same time span brought 1674 Decisions on removing of determined faults in the work of the controled subjects.

.

$$I10 = \frac{\text{number of violations of a category of facilities}}{\text{number of facilities of this category}} = \frac{102}{500}$$

Data refers to the systematic control of dry cleaners conducted during 2005

$$I11 = \frac{\text{amount of fines per year}}{\text{number of violations reports per year}} = \frac{469.186 \text{ EUR}}{1674}$$

3. Special note on self-monitoring and environmental management systems

$$I12 = \frac{\text{number of facilities with self monitoring or environmental management systems}}{\text{number of facilities}} \text{ (optional)}=$$

There is no data because the new Law on Environmental Protection is not yet in force.

4. Inspection organisation

Theme	Answer
department or region name	Environmental Protection Division
Inspection organisation	Environmental protection inspection operates in the Ministry of Environmental Protection, Physical Planning and Construction. Regional component of the inspection is contained in the fact that Environmental Protection Division has 20 regional unitslocated in the counties capitals and Town of Zagreb.
when was created the local inspection body	Autmn 1993
Will the organisation evolve during the next year ? (Yes/No)	Yes
Name of the person in charge	State secretary ; Josipa Blažević-Perušić Head Inspector; Jasna Paladin Popović
Title of the person in charge	
Phone	+385 1 3712714 +385 1 3712785
Fax	+385 1 3712713 +385 1 3712791
e-mail	josipa.blazevic-perusic@mzopu.hr jasna.paladin.popovic@mzopu.hr
Address	Vinogradska 25 10000 Zagreb
Date of nomination of the person in charge	2004. 2003.
Priorities definition	
Is there a strategic action plan ?(Yes/No)	Yes
Is ther a yearly operational action plan? (Yes/No)	Yes
Is there a control plan (Yes/no)	Yes
Legal Organisation	
Number of working meetings between the public prosecutor and the inspection body in 2007?	10
Do some people of the inspection body participate to the hearing of minor offence? (Yes/No)	Yes
Information systems organisation	
Has the inspection body an geographic information system?	In development
Has the inspection body an internet site ?	Yes
If so, address	www.mzopu.hr

5. Activity report

According to the existing regulations environmental protection inspection do not participate in issuing permits.

6.

General information	
Number of training days	232
Number if inspections conducted in 2006	5167
Amount of fines in 2005	410.902 EUR
Inspection activity	
Total number of authorisations given in 2005	0
Total number of authorisations examined in 2005	0
Urban and industrial treatment facilities	
Number of treatment facilities fulfilling their obligations	89
Treatment facilities with an environmental permit	0

Data on the number of wastewater treatment facilities refers to the Facilities controled in 2004.

7. Inspection plan

Name of the department	**Environmental Protection Division**
Region	
Had the inspection body a control plan in 2005? (yes /no)	**Yes**

Inspection plan	**non - scheduled inspections**	**Scheduled inspections**	**Number of noncompliance reports**	**Number of administrative or legal sanctions**	**Time(in men*days) spent on control operation**
Number of inspections of industrial facilities conducted	110	441	301	91	18 216 days
Other inspections	1127	2254	906	206	54 648 days

Data refers to the inspection control systematicaly undertaken for the following industries in 2005:
Energy facilities(HEP-group), Production and refinement of oil and gas, Ship-building industry, Production of metalloid raw material, Tobacco industry, Farmaceutical industry, Industry and facilities for treatment and shifting of metals, Graphyc industry, Industrial zone Žitnjak-Zagreb, Dry cleaners, Food industry.

Annex 2

Water inspection - indicators

1. *Inspection implementation and sizing*

$$I1 = \frac{\text{number of inspectors}}{\text{population of the country}} = \frac{45}{4\ 437\ 460}$$

data related to the Adriatic Sea watershed area $\frac{10}{1\ 500\ 000}$

$$I2 = \frac{\text{number of training days per year}}{\text{number of inspectors}} = \frac{4}{45}$$

data related to the Adriatic Sea watershed area $\frac{4}{10}$

I2bis = number of training courses provided by compliance assistance institutions per year =no data

$$I1bis = \frac{\text{number of inspectors}}{\text{number of industries and facilities requiring a water permit}} = \frac{45}{2500}$$

data related to the Adriatic Sea watershed area $\frac{10}{45}$

$$I1ter = \frac{\text{number of inspectors}}{\text{number of inspectors according to the human resource calculation scheme}} = \frac{45}{53}$$

data related to the Adriatic Sea watershed area $\frac{10}{14}$

Human resources calculation scheme

Calculation of number of inspectors				
Polluting level	**High**	**Medium**	**Low**	**Total**
Number of facilities	150 (50)	700 (250)	2000 (700)	2850 (1000)
Frequency of "on site inspection"	2 (2)	1 (1)	0,5 (0,5)	
Frequency of "administrative inspection"				
Days per "on site inspection"	2 (2)	1 (1)	0,5 (0,5)	
Days per "administrative inspection"				
Total men*days	600 (200)	700 (250)	500 (175)	1800 (625)
Effective days per inspectors				
Number of inspectors required				

Additional staff requirement		
Management		
Number of inspectors required	53 (14)	
Administrative staff		
Judicial support	24 (1)	
Staff turn over		
Total		

Total of inspectors and additional staff	**77 (15)**

$$I3 = \frac{\text{operating inputs}}{\text{total wages}} \text{ (optional) = data not provided}$$

.

$$I4 = \frac{\text{number of inspectors with a strategic action plan}}{\text{number of inspectors}} = \frac{45}{45}$$

$$\text{data related to the Adriatic Sea watershed area } \frac{10}{10}$$

$$I5 = \frac{\text{number of inspectors with a yearly operational action plan}}{\text{number of inspectors}} = \frac{45}{45}$$

$$\text{data related to the Adriatic Sea watershed area } \frac{10}{10}$$

2. Measuring inspection outputs

$$I6 = \frac{\text{number of facilities having a water permit}}{\text{number of facilities to comply with national standards}} = \frac{1000}{1500}$$

$$\text{data related to the Adriatic Sea watershed area } \frac{300}{500}$$

$$I7 = \frac{\text{number of full time equivalent spent on control operation}}{\text{number of full time equivalent of the inspection body}} \text{ (optional) - data not provided}$$

$$I8 = \frac{\text{number of inspections conducted}}{\text{number of full time equivalent of the inspection body}} \text{ (optional) - data not provided}$$

$$I9 = \frac{\text{number of civil and criminal sanctions}}{\text{number of non - compliance report}} = \frac{(app.300+app.50)}{app.250}$$

$$\text{data related to the Adriatic Sea watershed area } \frac{(app.100+app.10)}{app.\ 120}$$

$$I10 = \frac{\text{number of violations of a category of facilities}}{\text{number of facilities of this category}} = \frac{500}{300}$$

$$\text{data related to the Adriatic Sea watershed area } \frac{150}{100}$$

$$I11 = \frac{\text{amount of fines per year}}{\text{number of violations reports per year}} \text{ - no data}$$

3. Special note on self-monitoring and environmental management systems

$$I12 = \frac{\text{number of facilities with self monitoring or environmental management systems}}{\text{number of facilities}} \text{ (optional)=}$$

=data not provided

4. Inspection organisation

Theme	Answer
department or region name	Adriatic Sea and Black Sea watershed areas (21 county including Zagreb)
Inspection organisation	Ministry of Agriculture, Forestry and Water Management including 21 county offices (Adriatic Sea watershed area- Ministry of Agriculture, Forestry and Water management and 7 coastal counties)
when was created the local inspection body	1985
Will the organisation evolve during the next year ? (Yes/No)	Possibly
Name of the person in charge	Mr. Zeljko Makvic
Title of the person in charge	Head Inspector
Phone	+385 1 6307 341 +385 98 274 905
Fax	+385 1 6151 821
e-mail	mak@voda.hr
Address	Ulica grada Vukovara 220 10000 Zagreb
Date of nomination of the person in charge	
Priorities definition	
Is there a strategic action plan ?(Yes/No)	Yes
Is there a yearly operational action plan? (Yes/No)	Yes
Is there a control plan (Yes/no)	No data provided
Legal Organisation	
Number of working meetings between the public prosecutor and the inspection body in 2006?	30 meetings and 2000 testifying (5 meetings and 50 testifying)
Do some people of the inspection body participate to the hearing of minor offence? (Yes/No)	Yes
Information systems organisation	
Has the inspection body an geographic information system?	No
Has the inspection body an internet site ?	Included on the web of the Ministry
If so, address	www.mps.hr www.duv.hr

5. Activity report

No data provided

6.

General information	
Number of training days	2/year
Number if inspections conducted in 2006	
Amount of fines in 2005	
Inspection activity	
Total number of authorisations given in 2005	
Total number of authorisations examined in 2005	
Urban and industrial treatment facilities	
Number of treatment facilities fulfilling their obligations	
Treatment facilities with an environmental permit	

7. Inspection plan (no data provided)

Name of the department	**Department for water inspection**
Region	
Had the inspection body a control plan in 2005? (yes /no)	**Yes**

Inspection plan	**non - scheduled inspections**	**Scheduled inspections**	**Number of noncompliance reports**	**Number of administrative or legal sanctions**	**Time(in men*days) spent on control operation**
Number of inspections of industrial facilities conducted					
Other inspections					

Annex 3
Calculation of indicators – joint table

PROVISIONAL SET OF INDICATORS	INSPECTION		
Inspection implementation and sizing	Water	Environmental	Sanitary
I 1	45 / 4.437.460 = 0.0000101	69 / 4.437.460 = 0.0000155	data not provided
I 2	4 /45 = 0.089	232 / 69 = 3.362	data not provided
I 2 bis	data not provided	18	data not provided
I 1 bis	45 / 2500 = 0.018 (water permit instead of environmental permit)	69 / 150 = 0.46	data not provided
I 1 ter	45 / 53 = 0.849	69 / 95 = 0.726	data not provided
I 3	data not provided	844.687 EUR / 1.144.414 EUR = 0.738	data not provided
I 4	45 /45 = 1	69 / 69 = 1	data not provided
I 5	45 /45 = 1	69 / 69 = 1	data not provided
Measuring inspection outputs			data not provided
I 6	1.000 / 1.500 = 0.667 (water permit instead of environmental permit)	0 / 150	data not provided
I 7	data not provided	72.864 / 121.440 = 0.6	data not provided
I 8	data not provided	5.167 / 121.440 = 0.0425	data not provided
I 9	(cca. 300+cca.50) / cca.250 = 1.4	439 / 1674 = 0.262	data not provided
I 10	500 / 300 = 1.667	102 / 500 = 0.204	data not provided
I 11	no data	469.186 EUR / 1674 = 280,29	data not provided
Special note on self-monitoring and environmental management systems			data not provided
I 12	data not provided	no data	data not provided

ENVIRONMENTAL INSPECTORATE SYSTEM IN CYPRUS

Compliance and enforcement of regulations for the control of pollution resulting from land-based activities

CYPRUS

Indicator based country report

Inspection implementation and sizing

I1= number of inspectors/ population of the country= ***12/750000= 0.000016= 0,002%***

The Environment Service is the competent authority for implementing the relevant waste management and water pollution and control legislation.

I2= number of training days per year/ number of inspectors= ***0/12=ZERO***

Formal training has not been part, as yet, of the priorities of the service. The current obligations of Cyprus are to proceed the soonest with the licensing of the pollution sources. Recent employment of more personnel will assist to place in a more manner both training and inspections in general. The 12 Inspectors are dealing both with permitting and inspection.

$$I1bis = \frac{\text{number of inspectors}}{\text{number of industries and facilities requiring an environmental permit}} = 12/1200 = 0.01 = 1\%$$

$$I1ter = \frac{\text{number of inspectors}}{\text{number of inspectors according to the human resource calculation scheme}} = 12/50 = 0.24 = 24\%$$

[1]

$$I3 = \frac{\text{Operating Units}}{\text{Total Wages}}$$

$$I_4 = \frac{\text{number of inspectors with a strategic action plan}}{\text{number of inspectors}}$$

$$I5 = \frac{\text{number of inspectors with a yearly operational action plan}}{\text{number of inspectors}} = 0/12 = 0 = \text{ZERO}$$

Measuring inspection outputs

I6= number of facilities having an environmental permit **184/1800=0.1022**
number of facilities to comply with national standards

I_8 **=** *number of civil and criminal sanctions*=**24/36= 0.66**
number of non - compliance report

I10= number of violations of a category of facilities (industrial)= **24/1800= 0.013**
number of facilities of this category

I11=amount of fines per year number of = **23/36 = 0.638**
violations reports per year

Human resources calculation scheme

Calculation of number of inspectors				
Polluting level	**High**	**Medium**	**Low**	**Total**
Number of facilities	110	100	1690	1900
Frequency of "on site inspection"	3	2	1	
Frequency of "administrative inspection"	2	1	1	
Days per "on site inspection"	2	1	1	
Days per "administrative inspection"	1	0,5	0,5	
Total men*days	880	250	2535	3665
Effective days per inspectors				100
Number of inspectors required				37

Additional staff requirement		
Management	1 manager for 15 inspectors	3
Number of inspectors required		37
Administrative staff		Inspectors carry out their own administrative work.
Judicial support		Support given by Attorney General Office
Staff turn over	On average 10% turn over	3
Total		43

Inspection organisation

Theme	Answer
department or region name	Environment Service
Inspection organization	
when was created the local inspection body	2002
Will the organization evolve during the next year ? (Yes/No)	YES
Name of the person in charge	Charalambos Hadjipakkos
Title of the person in charge	Senior Environment Officer
phone	+357 22 303851
fax	+357 22 774945
e-mail	Chajipakkos@environment.moa.gov.cy
address	Environment Service, Ministry of Agriculture, Natural Resources and Environment, Nicosia, Cyprus
Date of nomination of the person in charge	January 2007
Priorities definition	
Is there a strategic action plan ?(Yes/No)	NO
Is there a yearly operational action plan? (Yes/No)	NO
Is there a control plan (Yes/no)	NO
Legal Organization	
Number of working meetings between the public prosecutor and the inspection body in 2006 ?	No public prosecutor is dedicated to the Environment Service. The prosecution is carried out trough the Attorney General Office of the Government.
Do some people of the inspection body participate to the hearing of minor offence? (Yes/No)	YES
Information systems organization	
Has the inspection body an geographic information system?	NO
Has the inspection body an internet site ?	YES
If so, address of the internet site	www.moa.gov.cy

Comments :

Activity Report

CYPRUS					
Category of project	Temporary authorizations	Authorizations (4 year Duration)	Declarations	Specific Prescriptions orders	Total
Agrochemicals					
Aquarium					
Asphalt					
concrete production					
Blinds manufacturer					
Brewery					
Brewery and Water bottling					
Bricks production					
Bronze products					
Building-chemical materials					
Car batteries manufacturers					
Car painting					
Car Wash					
Catalyst production					
Cement kilms					
Copper mining					
Cosmetics / Detergents					
Cow farms					
Dairy products-milk and/or cheese					
Bricks production					
Bronze products					
Building-chemical materials					
Car batteries manufacturers					
Car painting					
Car Wash					
Catalyst production					
Cement kilms					
Copper mining					
Cosmetics / Detergents					
Cows farms		7			7
Dairy products-milk and/or cheese					
Dairy products-Ice cream					
Disposal of pools backwash water					
Drinking Water treatment plant					
Drugs manufacturing					
Fats & oils production			1		1
Filters production					
Fishery					

Fluorescent lamps accessories					
Food industry-Fruit packaging					
Food industry-processing & packaging					
Food industry-biscuits, chocolates					
Food industry-biscuits, chocolates, cereals					
Food industry-Confectionery					
Food industry-fish processing					
Food industry-Frozen food					
Food industry-Fruit & vegetables processing & canning		4			4
Food industry-Potatoes peeling					
Food industry-sausages					
Foundry					
Furniture-metal					
Furniture-wooden					
Galvanised products					
Gold plating					
Goldsmith workshop					
Greenhouses					
Gypsum production					
Incinerator (Dead animals)					
Landfills					
Latex products					
Laundries		3			3
Metal Pipes, and other metal products					
Metal Plating (electrostatic paint and/or anodising)					
Metal products					
Metal Structures					
Mosaics & building stones					
Olive oil production					
Incinerator (Dead animals)					
Landfills					
Latex products					
Laundries					
Metal Pipes, and other metal products					
Metal Plating (electrostatic paint and/or anodising)					
Metal products					
Metal Structures					
Mosaics & building stones					
Olive oil production		18			18
Olive packaging					
Oxygen & acetylene production					

Paints / Varnishes					
Paper-boxes production					
Piggery		61			61
Piggery Waste Reservoirs-Central waste treatment plant					
Plastics					
Plywood Production					
Poultry farm-meat production		26			26
Poultry farm-Eggs production		1			1
Power Station		3			3
Printing (on paper)					
Printing (on textile)					
Quarry-Sand and / or aggregates production		6			6
Raining water disposal to the sea					
Rendering unit		3			3
Rendering Unit-Thermal treatment of Solid slaughtery waste					
Sea Aquaculture					
Sewage treatment plant		8			8
Sewage treatment & industrial effluents plant					
Sewage treatment plant-Army Campus		8			8
Sewage treatment plant-Hospital		1			1
Sewage treatment plant-Sludge disposal					
Slaughter house -animal		4			4
Meat processing					
Slaughterhouse -ostrich and pigs					
Slaughterhouse -poultry		16			16
Slaughterhouse-poultry-Waste treatment plant		1			1
Sludge disposal					
Soft drinks					
Soft-drinks / juices					
Sterilisation unit of clinical waste and Laundry (clothes from clinics)					
Sewage treatment plant-Supermarket					
Tannery		1			1
Tile factory					
Treatment Plant of Industrial Effluents					
Treatment plant-Animal waste and industrial effluents					
Used Oils Treatment					
Used Oils Treatment & Bilge Waters treatment					

Waste treatment plant-anaerobic					
Waste treatment Plant-Clinics Waste					
Waste water treated effluent management					
Water bottling					
Waterpark					
Winery		11			11
Winery / brewery					
Wood painting					
Wood Processing					
TOTAL		184			184

Important note: The facilities that are disposing all the quantity of their liquid wastes in a central treatment plant of industrial effluents are not provided with a permit, since they are not under the Control of Pollution of Water Law (2002-2007). These are around 100 facilities. They are mainly food and cosmetics/detergents industries.

General information	
Number of training days	0
Number of inspections conducted in 2006	281
Amount of fines in 2005	37
Inspection activity	
Total number of authorizations given in 2006	32
Total number of authorizations examined in 2006	52
Urban and industrial treatment facilities	
Number of treatment facilities fulfilling their obligations	6
Treatment facilities with an environmental permit	10

Inspection plan 2006

Name of the department	Environment Service
Region	Cyprus
Had the inspection body a control plan in 2006? (yes / no)	NO

Inspection plan	**non - scheduled inspections**	**scheduled inspections**	**Number of non-compliance reports**	**Number of administrative or legal sanctions**	**Time (in men*days) spent on control operation**
Number of inspections of industrial facilities conducted	41	240	36	24	61.47
Other inspections....					

The data used in producing the above report is a compilation of the reports the Inspectors are submitting after every inspection. Analytically the inspections carried out in 2006, appear on the next table.

Slaughterhouses	69
Piggeries	60
Poultry farms	36
Food Industries	29
Other Industries	29
Cattle farms	28
Domestic sewage treatment plants	12
Olive Oil mills	7
cement kilns	3
ceramic industry	3
Quarry/ mining activities	3
Hospitals	1
Metal coating	1
TOTAL	281

ENVIRONMENT SERVICE ORGANOGRAM

TYPES OF FACILITIES TO OBTAIN PERMITS

- FOOD INDUSTRIES (WINERIES,BREWERIES, DAIRY, SLAUGHTERHOUSES)
- FARMS (PIGGERIES, DAIRY, POULTRY)
- MUNICIPAL WASTEWATER TREATMENT PLANTS
- CERAMIC FACTORIES
- POWER STATIONS

PROGRESS IN PERMITTING

- NUMBER OF FACILITIES TO BE PERMITTED - 1800
- NUMBER OF PERMITS ISSUED - 184
- NUMBER OF INSPECTORS IN ENV. SERVICE - 12

INPECTIONS CARRIED OUT IN 2006

SLAUGHTERHOUSES	69
PIGGERIES	60
POULTRY FARMS	36
FOOD INDUSTRIES	29
OTHER INDUSTRIES	29
DAIRY FARMS	28
DOMESTIC WWTP	12
OILVE OIL MILLS	7
CEMENT KILNS	3
CERAMIC INDUSTRY	3
QUARRY/ MINES	3
HOSPITAL	1
METAL COATING	1

ENVIRONMENTAL INSPECTORATE SYSTEM IN EGYPT

Compliance and enforcement of regulations for the control of pollution resulting from land-based activities

EGYPT

1- Numbers of inspectors' ratio to number of inspectors who works in regional branches.

Branches	No. of inspectors in branches	No. of Environmental researcher	number of environment researcher ratio to the number of researchers for workers
Cairo	102	6	6%
Mansura	114	9	8%
Alexandria	91	10	11%
Tanta	124	16	13%
Assiut	64	15	23%
Suez	45	10	22%
Aswan	33	9	27%
Hurghada	31	3	10%

a) A - About training courses for inspectors works in regional branches that have been attempted during a year was 8 sessions and the number of training days was 37 days.

b) About the number of violated plants and its classification during the year 2006, and the first half of the year 2007, we have the honor to send to you the following statement:-

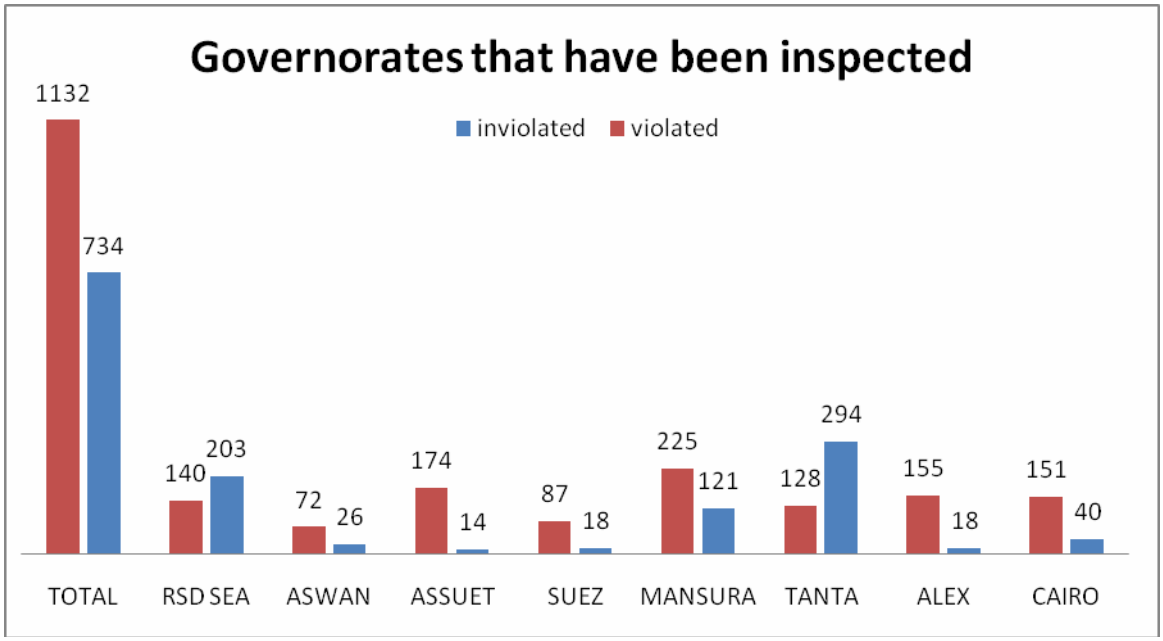
DURING THE YEAR 2006

1-Environmental inspection works in regional branches:

the inspection includes about 1866 industrial plants, these enterprises includes industrial, service and tourism in addition to workshops ,medium and small industries. the results of inspection have matched about734 organized by 39% and in contravention 1132

organized by 61% of the total installations that have been inspected .

TOTAL	RSD SEA	ASWAN	ASSUET	SUEZ	MANSURA	TANTA	ALEX	CAIRO	
734	203	26	14	18	121	294	18	40	inviolate
1132	140	72	174	87	225	128	155	151	violated
1866	343	98	188	105	346	422	173	191	TOTAL



Environmental pollution indicators based on the results of inspections of the plants in regional branches : -

1-Hazardous waste per match 94%
2-Percentage matching solid waste 93%
3-Intensity noise ratio matching 93%
4-Pollutants of work place matching rate of 90%
5-Liquied wastes matching ratio 89%
6-Gaseous emissions rate matching 85%
7-Safety equipments matching ratio 81%
8- Environmental records ratio matching 81%

- **Prosecution:**

a- About 1043 Cases records has been editor of environmental violation against violated plants had been taken for the necessary actions to be forwarded to the public prosecutor

Cairo,	Alexandria	Tanta	Mansoura	Assiut	Aswan	Red Sea	Suez	Total
102	171	233	208	169	127	33	0	1043

b- About5960 case is to be followed-up currently in courts for pervious periods of environmental violations, until judgment and signing sanction are tacking place.

Cairo	Alexandria	Tanta	Mansoura	Assiut	Aswan	Red Sea	Suez	Total
2520	122	506	1220	108	31	1453	0	5960

DURING THE FIRST HALF OF THE YEAR 2007

1-Environmental Inspection in regional branches :

A- The inspection was to include the installation of 550 industrial enterprises, tourism and service in addition to workshops , medium industries , small and proven results that it matches 158 with the ratio of 28.7%and about 366 inviolated plans with contravention by 71.3% of the total plants which have been inspected.

BRANCHES	TOTAL OF INTERPRICES (inspected)	TOTAL OF INTERPRICES (matched)	TOTAL OF INTERPRICES (non-matched)
Cairo	91	28	63
Mansura	99	56	43
Alexandria	80	13	67
Tanta	48	28	20
Assiut	78	1	77
Suez	36	1	35
Aswan	23	-	23
Hurghada	69	31	38
TOTAL	524	158	366

b) **Prosecution:**

A-About 368 Case records has been editor of environmental violation against violated plants had been taken for the necessary actions to be forwarded to the public prosecutor.

Cairo	Alexandria	Tanta	Mansoura	Assiut	Aswan	Hurgada	Total
8	120	39	120	58	16	-	368

c) About 2431 case is to be followed-up currently in courts for pervious periods of environmental violations, until judgment and signing sanction are tacking place .

Cairo	Alexandria	Tanta	Mansoura	Assiut	Aswan	Hurgada	Total
129	95	657	530	179	676	-	2431

2- Inspection indicators in the General department of Environmental inspection

GDEI

Environmental pollution indicators based on the results of inspections of the plants: -

1-Hazardous waste per match 90%

2-Percentage matching solid waste 89%

3-Intensity noise ratio matching 89%

4-Pollutants of work place matching rate of 86%

5-Liquied wastes matching ratio 85%

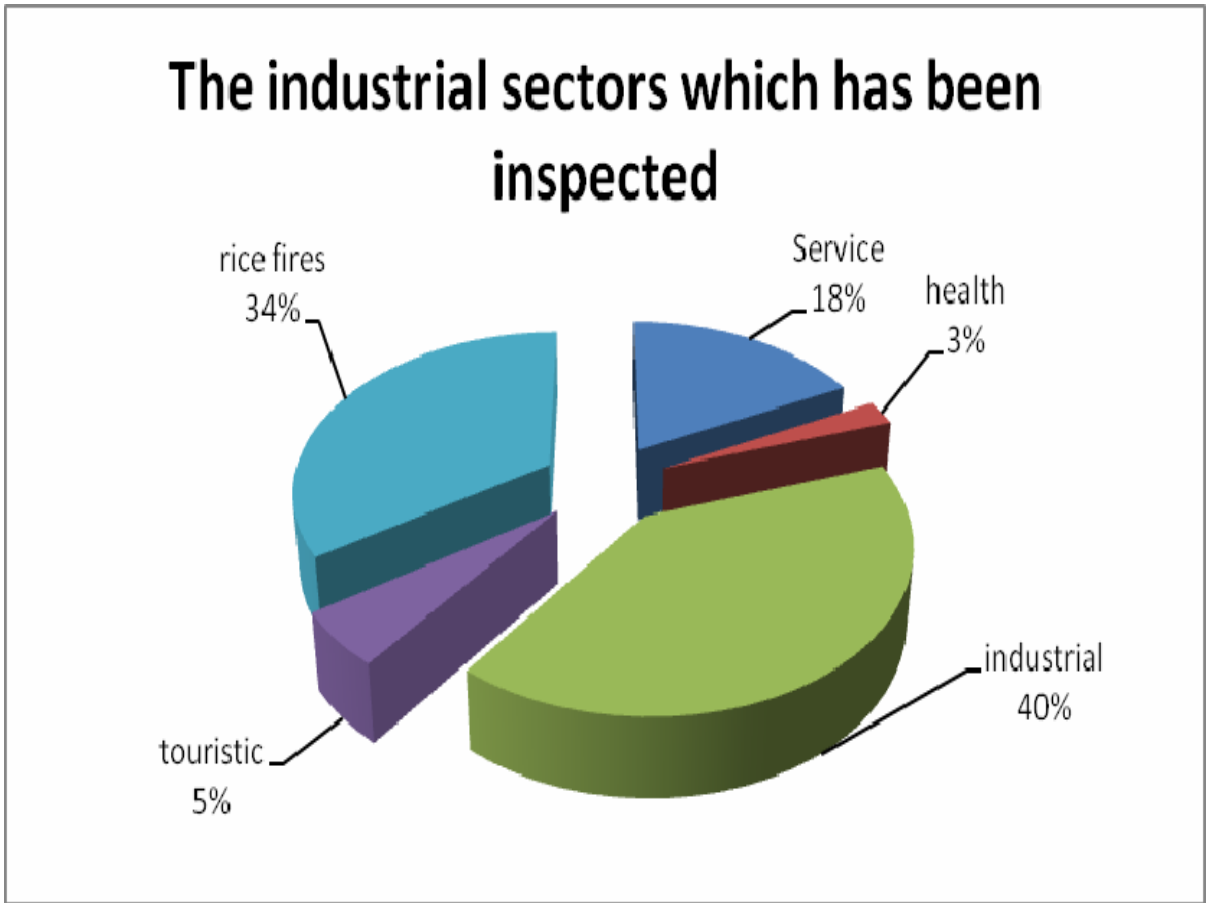
6-Gaseous emissions rate matching 81%

7-Safety equipments matching ratio 75%

8- Environmental records ratio matching 75%

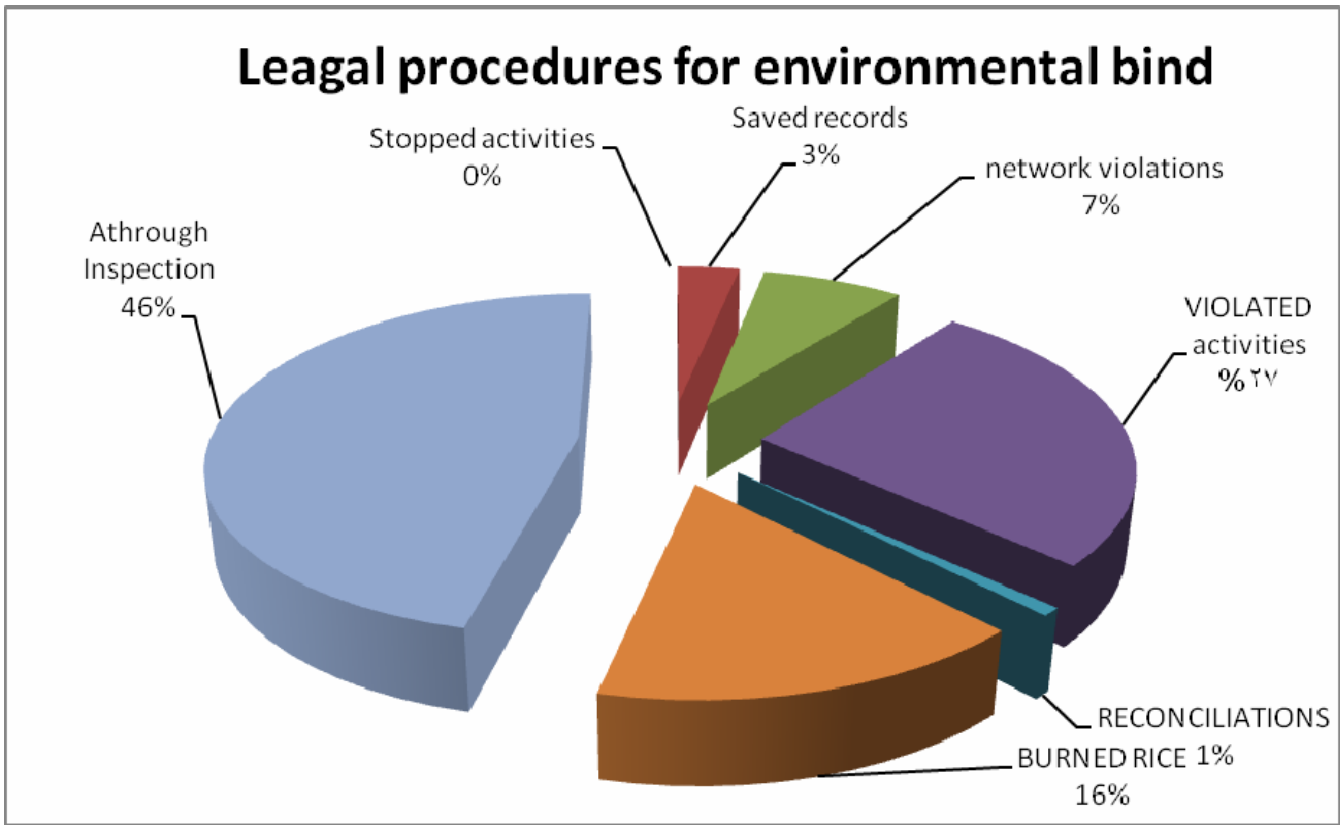
- **The industrial sectors which has been inspected during the year 2006**

sector	rice fires	touristic	industrial	health	Service	Total
The number	586	91	687	41	299	1704



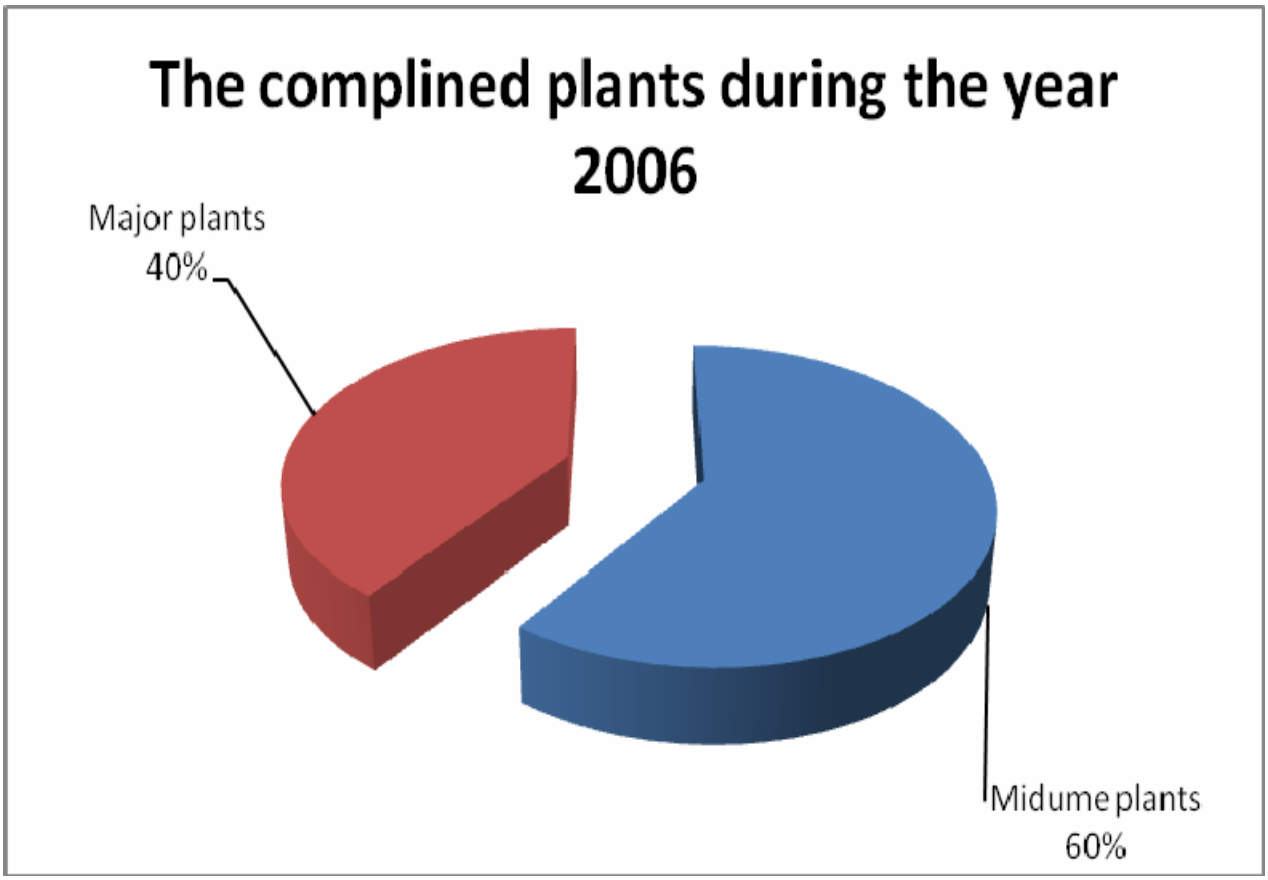
- **Legal procedures foe environmental bind**

TOTAL INSPECTONS	BURNED RICE	RECONCILIATIONS	VIOLETED	NETWORK VIOLETIONS	SAVED	STOPED ACTIVITIES
1704	586	28	972	268	118	0



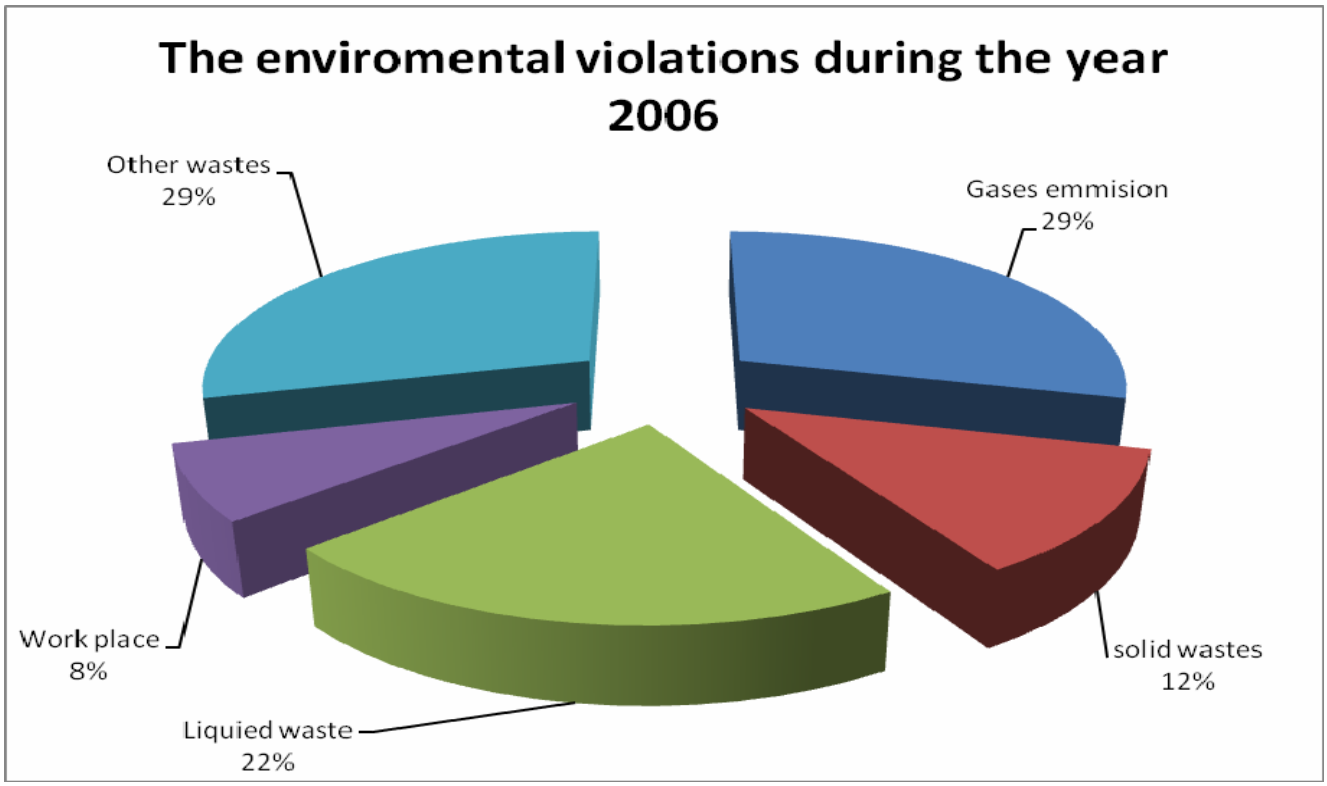
- **The complained plants during the year 2006**

TOTAL	Major plants	Medium plants
70	28	42



- **The environmental violations during the year 2006**

Other wastes	Work place	Liquid wastes	solid wastes	Gases emission
65%	17%	50%	28%	65%



ENVIRONMENTAL INSPECTORATE SYSTEM IN FRANCE

Compliance and enforcement of regulations for the control of pollution resulting from land-based activities

Direction
de l'Eau

Liberté • Égalité • Fraternité
RÉPUBLIQUE FRANÇAISE

Ministère de l'Ecologie
et du Développement Durable

ELABORATION D'INDICATEURS LIES AU SUIVI DU RESPECT DE LA CONFORMITE ET DE L'APPLICATION EFFECTIVE DES DISPOSITIONS ENVIRONNEMENTALES DANS LA REGION MEDITERRANEENNE.

Document de travail réalisé par la France en 2007 sur les propositions d'indicateurs

test effectué sur la base du compte rendu d'activité 2006 des services de police de l'eau

Octobre 2007

Dans le cadre de la réunion du Réseau sur le respect et l'application effective de la législation environnementale en Méditerranée, des 24 et 25 octobre 2007 à Athènes, qui s'est tenue à Athènes du 4 et 6 octobre 2005, des indicateurs d'activité et de performance liés au suivi du respect de la conformité et de l'application effective des dispositions environnementales dans la région méditerranéenne ont été établis.

Pour la France, ce travail regroupe deux champs d'activité : celui des installations classées pour la protection de l'environnement (ICPE) et celui des installations, ouvrages, travaux et activités (IOTA) soumis à la police de l'eau. Ces deux activités sont pilotées au niveau national par deux dispositifs différents. Aussi les remontées de données de base ne sont-elles toujours similaires ou ne recouvre pas toujours les mêmes informations. La présentation des indicateurs ci-après s'appuie sur des données issues du compte rendu d'activité 2006 de la police de l'eau et des milieux aquatiques. Certains indicateurs sont complétés des données concernant les ICPE dans la mesure de données cohérentes disponibles.

La mise en place et le dimensionnement de l'inspection

Indicateur de dimensionnement de l'inspection :

$$I_{(1)} = \frac{\text{nombre d'inspecteurs}}{\text{population du pays}}$$

Pour la France l'indicateur en police de l'eau est alors

$$I_{(1)} = \frac{\text{nombre d'inspecteurs}}{\text{population du pays}} = \frac{1625}{63000000} \text{ Soit 1 pour 38 700 habitants}$$

Pour les ICPE il s'établit à :

$$I_{(1)} = \frac{\text{nombre d'inspecteurs}}{\text{population du pays}} = \frac{1534}{63000000} \text{ Soit 1 pour 41 070 habitants}$$

Toutefois, il nous apparaît préférable de raisonner en équivalent temps plein (ETP) plutôt qu'en nombre afin d'éviter les distorsions des agents travaillant sur plusieurs missions.

L'indicateur deviendrait = $$I_{(1)} = \frac{\text{nombre total d'équivalents temps plein pour l'inspection}}{\text{population du pays}}$$

Pour la France l'indicateur en police de l'eau serait alors :

$$I_1 = \frac{973}{63000000} \text{ Soit 1 pour 64 700 habitants}$$

Pour les ICPE il s'établirait à :

$$I_1 = \frac{1207}{63000000} \text{ Soit 1 pour 52 195 habitants}$$

La comparaison de ces deux domaines et des 2 indicateurs permet d'illustrer l'intérêt qu'il peut y avoir à évaluer également l'activité sur la base des ETP.

Indicateur d'évaluation de l'importance de la formation

$$I_2 = \frac{\text{nombre de jours de formation par an}}{\text{nombre t'inspecteurs}}$$

Cible = >5 jours /inspecteur/an

Au niveau français les formations sont principalement assurées par l'organisme de formation du ministère de l'écologie pour les formations de prises de postes (3 fois 5 jours par an pour les nouveaux inspecteurs minimum). Par contre pour les formations de perfectionnement et les formations plus techniques, les organismes de formation continue des différents ministères auxquels sont rattachés les agents assurent une partie de la formation des inspecteurs. Pour l'année 2006, il n'a pas été possible de regrouper des données fiables sur cette partie de maintien et d'approfondissement de la compétence technique.

Indicateur

$$I(1bis)\,\text{par an} = \frac{\text{nombre total de temps plein pour l'inspection}}{\text{nombre d'installations nécessitant l'obtention d'un permis environnemental}}$$

Cet indicateur pose des difficultés dans la mesure où nous n'avons pas à ce jour de recensement au niveau national de l'ensemble des permis environnentaux délivrés, ni une évaluation de ceux devant être délivrés, autre que statistique. Toutefois une application web nationale vient d'être déployées fin 2006 pour l'appui à l'instruction des dossiers pour tous les services police de l'eau et devrait permettre d'évaluer de façon fiable les installations disposant d'un permis environnemental.

L'indicateur suivant porte sur un plan prévisionnel de **calcul des besoins en inspecteurs.**

$$I(1ter)\% = \frac{\text{nombre d'inspecteurs}}{\text{nombre d'inspecteurs théoriques selon le plan de calcul des ressources humaines}}$$

Indicateur non disponible car le nombre d'inspecteurs théoriques reste soumis à discussion par rapport à l'absence de connaissance du nombre total des installations.

Moyens de fonctionnement :

$$I(3) = \frac{\text{crédits de fonctionnement}}{\text{masse salariale}}$$

La France ne peut pas répondre simplement à cet indicateur. En effet, les crédits de fonctionnement qui sont affectés à la police de l'eau proviennent de plusieurs sources ministérielles (ministère de l'Equipement, ministère de l'agriculture…) et ne sont pas individualisés à ce jour. En revanche, les crédits de fonctionnement font l'objet d'un suivi, structure par structure. La mise en place de la LOLF permettra probablement d'évoluer sur ce point.

En France le plan d'action stratégique correspond à l'existence d'une politique départementale validée par le préfet dans le domaine de l'eau. Cette politique est déclinée sous forme d'un plan opérationnel mis en place par chaque Mission inter services de l'eau (MISE). Le plan est validé par le préfet. Il a pour objectif d'identifier les enjeux et les priorités d'actions en matière de politique de l'eau dans le département (circulaire DE/SDCRE/BASD n°16 du 26 novembre 2004).

$$I_{(4)}\% = \frac{\text{nombre d'inspecteurs ayant un plan d'action stratégique en vigueur}}{\text{nombre total d'inspecteurs}}$$

$$I_{(4)} = 76{,}81\% = \frac{1249}{1625} x100$$

Pour le plan d'action opérationnel

$$I_{(5)}\% = \frac{\text{nombre d'inspecteurs travaillant en application d'un plan d'action opérationnel}}{\text{nombre total d'inspecteurs}}$$

$$I_{(5)} = 97{,}85\% = \frac{1590}{1625} x100$$

Le fait que le nombre de plans d'action opérationnels soit plus élevé que le nombre de plans stratégiques peut paraître surprenant mais est facilement explicable. Il est

en effet plus facile de faire valider par le préfet des priorités annuelles concrètes dans un plan d'action opérationnel que de mettre en place un plan d'action stratégique pluriannuel qui nécessite une vision plus large et plus de concertation.

2 Mesure de l'activité de l'inspection

Indicateur des installations respectant la réglementation

$$I_{(6)}\% = \frac{\text{nombre d'installations ayant un permis respectant la réglementation environnementale}}{\text{nombre d'installations devant posséder un permis}}$$

Il est difficile d'appliquer cet indicateur à l'ensemble des installations concernées dans la mesure où celles qui n'ont pas de permis ne sont en général pas connues. Une des approches est de comptabiliser la part des installations qui ont fait l'objet d'une régularisation. Toutefois un tel indicateur, ne permet pas de définir un objectif à atteindre dans la mesure où le nombre d'installations sans permis en sont pas connues.

Par contre pour un type d'installations ciblé, pour lequel un recensement fiable a pu être fait, cet indicateur devient alors est particulièrement parlant et permet de se donner des objectifs précis. Ainsi pour les installations de traitement des eaux résiduaires urbaines soumises à autorisation (installation de plus de 10.000 equivalent-habitants), l'indicateur 2006 est :

$$I_{(6)} = 72\% = \frac{855}{1187} x100$$

Indicateur de temps passé aux contrôles

$$I_{(7)}\% = \frac{\text{nombre d'équivalents temps plein passés en opérations de contrôle}}{\text{nombre d'équivalents temps plein du corps d'inspection}}$$

$$I_{(7)} = \frac{134}{973} = 13{,}77\%$$

L'objectif 2006 était d'au moins 10% avec un objectif pour l'année 2007 déjà annoncé aux services de 20%.

Indicateur des suites données aux contrôles

$$I_{(9)}\% = \frac{\text{nombre de suites administratives ou judiciaires}}{\text{nombre de contrôles non conformes}}$$

Pour la France cet indicateur est pour 2006 :

$$I_{(9)} = 85,5\% = \frac{4535}{5631} x100$$

Indicateur des infractions par catégorie d'installation

Cet indicateur présente de réelles difficultés pour être correctement renseigné. En effet le nombre d'infractions est accessible mais pas la consolidation au niveau national du nombre total des installations dans chaque catégorie.

$$I_{(10)} = \frac{\text{nombre d'infractions par catégorie d'installations}}{\text{nombre total des installations de cette catégorie}}$$

Par ailleurs la totalité des ouvrages d'une même catégorie ne font pas l'objet d'un contrôle in situ chaque année. Par contre il est possible d'évaluer pour une même catégorie le nombre d'infractions constatées par rapport au nombre de contrôle faits sur des ouvrages de cette catégorie. Ainsi pour les contrôles réalisés sur installations de traitement des eaux résiduaires urbaines, l'indicateur s'établit à

$$I_{step(10)} = 22,9\% = \frac{997}{4335} x100$$

Ou encore sur des points de prélèvements en rivière :

$$I_{step(10)} = 15,5\% = \frac{212}{1367} x100$$

Indicateur du montant des pénalités par infraction

Pour cet indicateur, s'il est possible de renseigner le nombre d'infractions relevées par an, en revanche le montant des pénalités n'est pas consolidé dans le domaine de l'environnement au niveau national.

$$I_{(11)} = \frac{\text{montant des pénalités par an}}{\text{nombre total d'infractions relevées par an}}$$

3 L'auto surveillance et les systèmes de gestion environnementales

Les installations de traitement des eaux résiduaires urbaines sont concernées par cet indicateur. Celles concernées par une autorisation sont les dispositifs d'une capacité supérieure à 10.000 équivalent-habitants (EH), soit 1187 dispositifs. Celles dont la capacité est comprise entre 2.000 équivalent-habitant et 10.000 équivalent-habitant font l'objet d'une déclaration, soit 2499 dispositifs. Pour des capacités inférieures, soit 5982 dispositifs, il n'y a

pas de données fiables actuellement en matière d'autosurveillance, mais ceci se développe progressivement.

Dispositifs de plus de 10.000 EH

$$I_{(12)}\% = \frac{1112}{1187} x100 = 93{,}6\%$$

Dispositifs de 2.000 à 10.000 EH

$$I_{(12)}\% = \frac{1791}{2499} x100 = 71{,}6\%$$

Pour l'ensemble des dispositifs de plus de 2.000 EH

$$I_{(12)}\% = \frac{2903}{3686} x100 = 78{,}7\%$$

Les obligations d'auto-surveillance varient selon la taille du dispositif. A titre indicatif, les fréquences d'analyse varie de 1 suivi par an pour les dispositifs de 500 EH à 1000 EH, 1 à 2 par mois pour les dispositifs de 10.000 à 30.000 EH jusqu'à 1 par jour pour les dispositifs de plus de 300.000 EH.

La transmission régulière des résultats aux services de contrôle permet, outre une vérification du fonctionnement correct, mais également d'organiser les visites de terrain en cas de fonctionnement non conforme.

ENVIRONMENTAL INSPECTORATE SYSTEM IN ISRAEL

Compliance and enforcement of regulations for the control of pollution resulting from land-based activities

STATE OF ISRAEL
MINISTRY OF ENVIRONMENTAL PROTECTION
Marine and Coastal Environment Division

מדינת ישראל
המשרד להגנת הסביבה

Pal Yam st. 15a, P.O.Box 811, Haifa 31007 Tel: (972)-4-8633500 Fax: (972)-4-8633520
e-mail: rikis@sviva.gov.il

October 4, 2007

Performance Indicators Primary Dataset for Inspectorate Systems - Israel

Meeting of the Network on Compliance and Enforcement, Athens, 24-25 October 2007

Following the last meeting of the Informal Network for Compliance and Enforcement in the framework of WHO\MEDPOL, held in Athens in 2005, and following the guidelines document supplied to the countries, a provisional dataset of such performance indicators for the assessment of compliance and enforcement status of the marine environment in Israel is presented herewith.

Naturally this is merely a primary set that has to be further elaborated and tested, or on the other hand, be discarded of as a result of non-usefulness to the national authorities or if found not coherent with other countries data.

The Definitions of indicator categories described here, into which the indicators are divided, are taken from document "Development of indicators for compliance and enforcement of environmental legislation in the Mediterranean region":

- **Input indicators -** allow for assessment of the affected resources;
- **Output indicators -** allow the inspection-related activities to be measured;
- **Intermediate performance indicators -** measures changes in the behavior of inspected entities;
- **Outcome performance indicators** - measures the ultimate actual impact in the environment;

General data for Israel
Population (x1000): 2002-6,631; 2003-6,748; 2004-6,869; 2005-6,990; 2006-7,116
GDP (2006): 170 Billion USD; Industrial GDP: 56 Billion USD.

INPUT Indicators

Inspection tools implementation and sizing

Following are indicators related to the MCED activities within the MoEP, for the reference year 2006, unless indicated otherwise.

I1 *= number of MCED inspection professionals/ population of the country*
= 20/7,116,000
= 0.0028insp/1000inhab
= 2.8 inspectors per 1 Million people.

I1bis *=number of total inspection professionals/ population of the country*
= 184[1]/7,116,000
= 0.026insp/1000inhab
=25.8 inspectors per 1 Million people

[1] 130 professionals in the MoEP districts+34 "green police" enforcement personnel+20 Marine and Coastal Environment Division

STATE OF ISRAEL
MINISTRY OF ENVIRONMENTAL PROTECTION
Marine and Coastal Environment Division

מדינת ישראל
המשרד להגנת הסביבה

Pal Yam st. 15a, P.O.Box 811, Haifa 31007 Tel: (972)-4-8633500 Fax: (972)-4-8633520
e-mail: rikis@sviva.gov.il

October 4, 2007

I1ter *=number of inspectors*/number of total workers in the MoEP*
= 184/457 = 40%

I2 *= number of training days per year/number of MCED inspection professionals*
=195/20
= 9.79 days annually/MCED inspector

I3 *=number of facilities requiring a marine discharge permit/ number of MCED inspection professionals*
= 150/20
=7.5 marine permit/ MCED inspector

I3bis *= number of facilities requiring an environmental permit/ number of total inspection professionals*
=15,155/184
=82 permits/1 inspector

I4 *= number of inspection professionals /number of professionals according to the human resource calculation*
= 184/113
= 1.63

Budgetary tools implementation

I5 *= operations budget for marine pollution prevention / total budget for marine pollution prevention*

Year	Total Budget Marine pollution Prevention Fund (Euro)	Operations budget for Marine Pollution Prevention (Euro)	*I5*
2005	*1,384,000*	*495,636*	*35.8%*
2006	*1,274,909*	*467,818*	*36.7%*

I5bis *= operations budget of MoEP/total budget of the MoEP*
= 30,103,000/111,720,000
=26.9%

STATE OF ISRAEL
MINISTRY OF ENVIRONMENTAL PROTECTION
Marine and Coastal Environment Division

מדינת ישראל
המשרד להגנת הסביבה

Pal Yam st. 15a, P.O.Box 811, Haifa 31007 Tel: (972)-4-8633500 Fax: (972)-4-8633520
e-mail: rikis@sviva.gov.il

October 4, 2007

I6 = MoEP budget/total government budget

Year	Total Government Budget (10^6*Euro)[2]	MoEP budget (10^6*Euro)	*I6*
2002	*38,628*	*49*	*0.13%*
2003	*38,570*	*42*	*0.11%*
2004	*38,476*	*34.4*	*0.09%*
2005	*39,242*	*37*	*0.09%*
2006	*39,682*	*40.7*	*0.1%*

I7 =sampling budget for marine discharges/ operation budget for marine pollution prevention
=85,575 /1,274,909
=6.7%

[2] Calculated for all years, by the exchange rate of 5.5 ISH= 1 Euro

STATE OF ISRAEL
MINISTRY OF ENVIRONMENTAL PROTECTION
Marine and Coastal Environment Division
Pal Yam st. 15a, P.O.Box 811, Haifa 31007 Tel: (972)-4-8633500 Fax: (972)-4-8633520
e-mail: rikis@sviva.gov.il

מדינת ישראל
המשרד להגנת הסביבה

October 4, 2007

OUTPUT Indicators

Measuring inspection outputs and other

I8 *=number of criminal convictions/number of cases that went to legal prosecution as regards marine pollution offenses*
=

Year	Cases in court	Convictions	*I8*
2002	*18*	*16*	*88%*
2003	*9*	*7*	*78%*
2004	*20*	*19*	*95%*
2005	*18*	*16*	*89%*
2006	*9*	*7*	*78%*

I8bis *= number of criminal convictions/number of total cases that went to legal prosecution*
=

Year	Cases in court	convictions	*I8bis*
2003	*153*	*126*	*82%*
2004	*156*	*135*	*86%*
2005	*142*	*120*	*85%*
2006	*122*	*109*	*89%*

I9 *= annual amount of citations according to "cleanliness maintenance law"*
=

Year	Amount of citations (I9)
2004	*27,294*
2005	*23,830*
2006	*23,821*

I10 *= amount of fines per year[3] (Eu/year)*

Year	/10 (Euros)
2004	*373,454*
2005	*391,636*
2006	*374,909*

NA = number of facilities to comply with national standards/ number of facilities having an environmental permit
it is ambiguous definition as the term "comply" is problematic to decide upon. Also it takes a thorough analysis as to the standards the facility is measured in reference.

[3] As regards MCED operations only, which are marine pollution felonies, per se. Fines received in the Marine Pollution Prevention Fund (1983).

STATE OF ISRAEL
MINISTRY OF ENVIRONMENTAL PROTECTION
Marine and Coastal Environment Division
Pal Yam st. 15a, P.O.Box 811, Haifa 31007 Tel: (972)-4-8633500 Fax: (972)-4-8633520
e-mail: rikis@sviva.gov.il

מדינת ישראל
המשרד להגנת הסביבה

October 4, 2007

INTERMEDIATE Indicators

Measuring compliance and inspection intermediate outcomes

I11 = direct marine discharge annual load for parameter chosen[4]/baseline load for 1998 =

Load released from direct-discharge permissible facilities	*Quantities Tons/year 1998*	*Quantities Tons/year 2004*	**I11**
Heavy metals and their compounds	*209*	*69*	*67%*
Biocides and their derivatives	*250*	*105*	*42%*
Crude oils and hydrocarbons of petroleum origin	*1,320*	*864*	*65%*
Total N	*4,500*	*1,237*	*27%*
Total P	*5,269*	*1,665*	*32%*
Non-toxic substances that have an adverse effect on the oxygen balance (BOD)	*30,881*	*32,200*	*104%*

I11bis = direct river discharge annual load for parameter chosen[5]/baseline load for 1994 =

direct river discharge annual load	*Quantities Tons/year 1994*	*Quantities Tons/year 2005*	**I11bis**
Total N	*9,056*	*5,281*	*58%*
Total P	*6,531*	*935*	*14%*
Total Organic Carbon (TOC)	*22,904*	*5,634*	*25%*

I11ter = total load discharged to marine environment from all sources for parameter chosen/baseline budget load for 2003[6]

[4]Parameters for 2006 are undergoing final analysis
[5] For P total, N total and TOC
[6] This should be one of the most important performance measurements of the NAP. However, it takes a huge amount of workload to accurately calculate these figures, each year.

STATE OF ISRAEL
MINISTRY OF ENVIRONMENTAL PROTECTION
Marine and Coastal Environment Division
Pal Yam st. 15a, P.O.Box 811, Haifa 31007 Tel: (972)-4-8633500 Fax: (972)-4-8633520
e-mail: rikis@sviva.gov.il

מדינת ישראל
המשרד להגנת הסביבה

October 4, 2007

I12 = number of sewage spill events that pollute the marine environment annually/coastline length =

Year	number of sewage spill events		I12
2004	*14*	*195 Km*	*0.15*
			0.07
2005	*13*		*0.02*
2006	*3*		

I13 = annual reused treated sanitary sewage/ total annual urban sanitary sewage production
I13bis =annual treated sanitary sewage/ total annual urban sanitary sewage production =

Year	Raw sanitary urban sewage production (Mm^3/year)	Treated sewage, secondary (Mm^3/year)	Reused treated sewage (Mm^3/year)	*I13*	*I13bis*
1999	*414*	*380*	*278*	*67%*	*92%*
2002	*434*	*399*	*298*	*69%*	*92%*
2005	*450*	*431*	*403*	*89%*	*96%*

I14 = *number of facilities which discharge to marine environment that apply BAT/ number of facilities with marine discharge permit*[7]

Special note on self-monitoring and environmental management systems

I15 = number of facilities with online monitoring systems/number of facilities with marine discharge permit
= 15/150
=10%

I16 = number of facilities who have ISO14001/EMAS / number of facilities requiring an environmental permit[8]

[7] Important indicator. However extremely hard to establish. Needs further elaboration.
[8] Needs further inquiries.

STATE OF ISRAEL
MINISTRY OF ENVIRONMENTAL PROTECTION
Marine and Coastal Environment Division
Pal Yam st. 15a, P.O.Box 811, Haifa 31007 Tel: (972)-4-8633500 Fax: (972)-4-8633520
e-mail: rikis@sviva.gov.il

מדינת ישראל
המשרד להגנת הסביבה

October 4, 2007

OUTCOME Indicators

Measuring the compliance ultimate outcome results as they appear in the marine environment itself

I17 = concentration of parameter X in seawater for selected point[9]/ambient seawater values
=for Hg:

Point of sampling	Concentration in water column (mg/l))	Ambient water standard (mg/l))	I17
8	ND	0.0004	0
			0
9	ND		
27	ND		0

=for Cd:

Point of sampling	Concentration in water column (mg/l)	Ambient water standard (mg/l)	I17
8	ND	0.002	0
			350
9	0.7		
27	3		1500

I17bis = concentration of parameter X in sediment for selected point / ERL of NOAA standards
= for Hg:

Point of sampling	Concentration in sediment (microg/g)	Sediment standard ERL (microg/g)	I17bis
8	0.33	0.15	2.2
9	0.26		1.73
27	0.14		0.93

= for Cd:

Point of sampling	Concentration in sediment (microg/g)	Sediment standard ERL (microg/g)	I17bis
8	0.05	1.2	0.04
9	0.04		0.03
27	0.1		0.08

[9] Based on the 2005 report of the national monitoring program. Comparison done relatively to the ambient water standards recommendations by the MCED from 2001. All sampling points are located in Haifa bay.

STATE OF ISRAEL
MINISTRY OF ENVIRONMENTAL PROTECTION
Marine and Coastal Environment Division

מדינת ישראל
המשרד להגנת הסביבה

Pal Yam st. 15a, P.O.Box 811, Haifa 31007 Tel: (972)-4-8633500 Fax: (972)-4-8633520
e-mail: rikis@sviva.gov.il

October 4, 2007

Measuring compliance and outcome results of the litter problem in the coastal environment

I18 =(CCI of 2005-average annual clean coast index)[10] / CCI of June 2005
=6.88-4.66/6.88
= 32% improvement rate

I18bis =number of local authorities found "clean" or above, for 70% of the time, annually /number of local authorities that participate in the Clean Coast program[11]
=11/21
= 52%

[10] 1287 "clean coast indexes" were carried out and published biweekly in 66 coastal stretches, representing the country's undeclared beaches. The average index was 4.66 ("clean") in comparison to 6.88 in 2005 ("moderate").

[11] For June 2005, the beginning of the program the indicator was 28%.

ENVIRONMENTAL INSPECTORATE SYSTEM IN ITALY

Compliance and enforcement of regulations for the control of pollution resulting from land-based activities

ITALY

COUNTRY REPORT ON COMPLIANCE AND ENFORCEMENT

Prepared by
Italian Agency for Environmental Protection
and for Technical Services
(APAT)

Meeting of the Network on Compliance and Enforcement
(WHO/UNEP Joint Project, MED POL Phase IV)
Athens, Greece 24-25 October 2007

A. GENERAL INFORMATION

Environmental control and inspections are necessary to prevent or reduce pollution, with the aim to protect natural resources and improve the quality of ecosystems. Environmental control is performed by monitoring chemical, physical or biological parameters as well as monitoring emissions from stationary and mobile sources, with appropriate frequency.

In Italy monitoring and environmental control are guaranteed by a wide number of institutional bodies.
First of all it is worthwhile to mention the Ministry of the Environment and the regional, provincial and local Authorities since they are responsible for authorization procedures (Competent Authorities) and they can also order for monitoring and controlling activities and for inspections performed by their own personnel or, usually, performed by environmental inspectorate departments within the Environmental Protection Agencies network (APAT at national level, ARPA at regional level and APPA at the level of the Autonomous Provinces). The bulk of control activities, in Italy, is covered by environmental agencies.
Other organizations can perform control activities in the environment field. The police enforcement bodies, for example, such as the Forest Police, the Environmental Protection Division – CCTA of the Military Police, the Municipal Police Corps, the Marine Patrol and Harbour Police Groups, the Finance Guard. Land management and planning authorities can have also a role, such as the Water Basin Management Bodies, as well as - marginally - health authorities.

APAT is the government agency in charge of coordination of environmental controlling activities performed by the regional and local agencies by:

- coordinating the activities;

- harmonizing the analytical methods adopted by the laboratories of the environmental protection agencies network involved in the environmental monitoring and control activities;
- identifying and selecting the suitable tools and instruments for environmental monitoring and control purposes;
- improving the quality of the environmental analytical data, to ensure its comparability at national level.

Within this framework, in March 2006 the environmental protection agencies network implemented the Recommendation 2001/331/EC by approving a draft Regulation laying down the criteria for planning and conducing environmental controls. One of the crucial phase of the controlling activities, the strategic planning phase, is not in charge of the environmental agencies, as we'll see in the following.

B. INSPECTION PROCEDURES AND AUTHORITIES

1. Planning of inspections

In most cases, concerning regional environment agencies, the strategic and programmatic plans related to inspections are issued by the Regions, through Regional Council deliberations or through the deliberations of Regional Committees. The monitoring and control plan will differentiate among different controlling authorities and will include ordinary activities. Environmental control can also be the result of extraordinary actions, that will be managed on a case by case approach. The strategic regional planning will consider, of course, the availability of resources also for extraordinary activities.

Within the framework of the aforementioned planning, the ARPA Executive Boards set up the operating strategies for the related period of time. The planning instrument from the Regions does not necessarily contain list of sites and activities

to control, but rather criteria for controlling actions and reporting to the competent authorities. The regional environment protection agency (ARPA, as already said) draws up an annual operating plan.

Enforcement police bodies (as seen above), as well as the relevant competent authorities themself, perform inspection activities within their jurisdiction, according to their autonomous planning.

2. Italian guidelines for inspectors

Besides the planning function by the Competent Authorities and the use of harmonized and homogeneous standards (issued by APAT), the single inspector has to comply to general criteria during his activity. Inspectors criteria, summarized in the following paragraph, are issued by the Italian Government for several purposes, not only environment, the last revision dated July 2002. They are, at the same time, intended to guarantee both the inspector and the inspected subject.
The criteria are as follows.

- Impartiality and autonomy of judgement
- Education and competence, knowledge of pertinent laws and activities inspected
- Rigorous discretion, being rigorous but open and available
- Relevant, significant and objective elements to be considered
- Reducing disturbance to inspected activity
- Reports based on probative elements
- Each part of inspection to be demonstrable
- Results available for the inspected activity

3. Types and frequency of inspections

As already said, ordinary inspections are mostly carried out by ARPA or APPA and only a limited amount of activities are undertaken by the competent authorities (usually the inspection bodies are at province level). Objectives of routine inspections are:

- the improvement of environmental performance of controlled installations through the assessment of the environmental impacts and the operational aspects of the installation;
- the verification of compliance according to the permits given and according to national laws;
- checking the premises, the relevant equipment and the adequacy of the environmental management at the site;
- monitoring achievement of environmental quality standards;
- consideration and verification of any self monitoring carried out by or on behalf of operators of controlled installations;
- checking the relevant records kept by the operators of controlled installations

The inspections are mainly on site inspections; off site activities includes all measuring phases: transporting and preserving the samples, preparation, pre-analytical treatment, and instrumental analysis. The off site work generally requires intense and complex laboratory activities, with a growing number of chemical and physical tests and an increasingly broader use of new instruments and techniques. Many agencies labs have ISO 17025 accredited laboratories.

Non routine inspections are mostly carried out following a request:

a) of the Judiciary Authority (Public Prosecutor);
b) of the Ministry for the Environment;
c) other competent authorities.

Extraordinary inspections can be also the result of citizens complaints, often in the circumstance of a potential dangerous situation or where occurrences of non - compliance are detected.

The “inspection system” in Italy is very complex so it is possible that a single installation is controlled, for environmental purposes, by more than one authority.

Meeting of the Network on Compliance and Enforcement
(WHO/UNEP Joint Project, MED POL Phase IV)
Athens, Greece 24-25 October 2007

Italy - Indicator based country report

Inspection implementation and sizing

$$I_1 = \frac{10.233}{59.100.000}$$

Note to I_1
10.233 is the sum of all technical personnel who can perform inspection activities within the Environmental Protection Agencies network (APAT, ARPA) and within the National Forestry Corp (CFS), plus the total number of the inspectors within the Carabineer Corp for Environmental Protection (CCTA).

$$I_2 = \frac{120}{1.764}$$

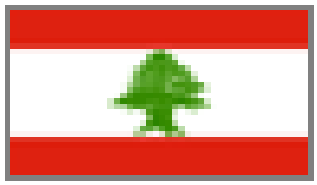
Note to I_2
120 is the number of training day for inspectors, per year, carried out by the Environmental Protection Agencies network (APAT, ARPA), estimated as 20% of the total amount of training days for agencies personnel. 1764 is the number of the technical personnel eligible for inspection activities within the agencies.

$$I_{1bis} = \frac{10.233}{600.000}$$

Note to I_{1bis}
600.000 is the rough number of industrial units operating in Italy, within the NACE categories C, D and E and they can be considered to have an environmental permit or the obligation to comply to environmental standards.

ENVIRONMENTAL INSPECTORATE SYSTEM IN LEBANON

Compliance and enforcement of regulations for the control of pollution resulting from land-based activities



REPUBLIC OF LEBANON

Compliance and Enforcement Country Report

Prepared by
Ministry of Environment
Service of protection of Urban Environment
Olfat Hamdan

Submitted on

October, 2007

TABLE OF CONTENTS

1. Introduction

The general Public awareness of environmental concerns and demands for the protection of the environment led to the issuing of national laws and the conclusion of international treaties and conventions in order to avoid all kinds of environmental deterioration and pollution as well as providing a framework for a healthy and stable environmental life.

The continuous monitoring and assurance to respect the environmental conditions carried out by the concerned parties are the ideal framework for avoiding all kinds of damages that may affect the environment.

The Environment Protection Law 444/2002 embedded the principle of environmental monitoring. It stipulated that, in the frame of protecting the environment and managing natural resources, each natural and legal, public or private person shall respect the principle of pollution monitoring. This principle aims at avoiding and controlling pollution in all environmental media from water, air, soil, vegetation and wastes in a way that pollution treatment in an environmental media does not lead to the transmission of the pollution to another environment media or to affect it[1].

2. General information

2.1. Environmental Inspections in Lebanon

The law determining the organizational structure and functions of the Lebanese Ministry of Environment[2] distributed the responsibilities among different services as follows:

- The service of the protection of urban environment: supervising the implementation of environmental guidelines necessary for permitting the establishment and operation of classified institutions, supervising the implementation of technical guidelines concerning the treatment of non hazardous wastes whether solid or liquid, domestic or industrial[3].
- The service of conservation of natural capital: supervising the implementation of the environmental guidelines/requirements related to the activities and the projects involved in the extraction and use of natural resources[4].
- The service of the protection from technological impacts and natural disasters: monitoring chemical safety, including hazardous substances (including industrial and medical wastes), air pollutants, evaluating environmental impacts and reviewing initial environmental examinations[5].

In addition, the law of protecting the environment[6] set the principle of investigation or inspection. It pointed out that when the operation of a classified plant is a source of

[1] Environment protection law 444/2002- article 4
[2] Law №690/2005- The determination of the functions and the organization of the Ministry of Environment
[3] Paragraph (3), article (6) of the law 690/2005
[4] Paragraph (4), article (6) of the law 690/2005
[5] Paragraph (5), article (6) of law 690/2005
[6] Environment protection law 444/2002

damage to any environmental media, the local authority should inform the Ministry of Environment in order to conduct the required investigation. It also, awarded the Ministry of Environment through its investigators the right to monitor compliance with environmental guidelines and standards. Furthermore, sanctions are imposed on those who try to object to analyzing, inspecting and controlling measures stipulated in this law and\or its applied texts.

Following the laws and regulations in force, the Ministry of Environment investigates according to the following:

Field inspections take place:

- When the different facilities request an authorization for establishment or operation.
- When these facilities cause environmental damage and the Ministry of Environment is informed about this damage (complaint);
- In the stage when damage is caused to the environmental media from multiple sources and the Ministry of Environment is being informed about this damage;
- When waste treatment plants request authorization to treat their hazardous and harmful wastes;
- During the operation of municipal solid waste treatment facilities and cement plants.

Desktop inspections take place for:

- Evaluating environmental impact assessment (EIA), initial environmental examination and environmental audit reports for the establishment and operation of several projects/facilities;
- Review of laboratory analysis results carried out by the administration of the cement and phosphate fertilizer plants

3. Inspection implementation and sizing

3.1 Number of inspectors

The current number of environmental inspectors at the Ministry of Environment is around 20 distributed as follows:

3.1.1 The service of conservation of natural capital:

- Agronomist (number: 1)
- Sylvan engineer (number: 3)
- Geologist (number: 1)
- Civil engineer (number: 1)
- Biologist (number: 1)
- Environmental expert (number: 1)

3.1.2 Service of Protection of the Urban Environment :

- A petroleum sciences expert (number: 1)
- Civil engineer (number: 2)
- Industrial engineer (number: 1)
- A natural resources and land management expert (number: 1)
- An environmental expert (number: 2)

3.1.3 Service of Prevention from Technological Effects and Natural Disasters:

- A chemist (number: 1)
- An environmental expert (number: 3)
- Agricultural economist (number:1)

These 20 inspectors are responsible to do both field and desktop inspections, taking into consideration that facilities under inspection are distributed all around Lebanon and therefore, these 20 inspectors cover around 4.0 million inhabitants (SOER, 2001):

$$I1 = \frac{\#inspectors}{population} = \frac{20}{4{,}000{,}000} = 0.5x10 - 5$$

The environmental investigators participate, each in his domain, in the different national and international training sessions and workshops. However, there isn't any periodic organized training program. Therefore, there is a need for capacity building in the following domains to ensure improvement of inspectors' technical competence:

- Training sessions concerning monitoring methods and mechanisms (inspection, self-monitoring, organized monitoring);
- Training sessions regarding the environmental management systems and their certification procedures and tools (e.g. ISO 14000);
- Training sessions concerning sampling and measurement.

In 1999, there were 22,026 classified establishments in Lebanon (MoI,2000), where an unknown percentage of these facilities are actually licensed. Until May 2000, classified establishments in Lebanon were subdivided into three classes (Decree 4917, 24/4/1994). Classified establishments include both industrial and non- industrial establishments. This classification system was not explicitly based on the degree of threat to human health and the environment. The decree relied on criteria related to the size of the establishment, the number of employees, available machinery and horsepower, etc. Therefore, the classification of classified establishments under decree 4917/1994 has little environmental relevance.

Decree 5243/2001 amended this classification by introducing five industrial classes (Class I to V). This decree targets industrial establishments only and therefore does not replace decree 4917/94. This new classification system relied on several environmental criteria (e.g impact on water, air and soil, environmental risk, odour, and noise) to define the degree of environmental threat.

All these existing establishments (industrial and non-industrial) should apply for a permit, either through the Ministry of Industry or through the Governorates. These concerned parties refer the applications for establishment and/or operation to the Ministry of

Environment whose inspectors conduct a focused inspection on site, in order to check the suitability of these plants within their surroundings and the extent to which they are implementing the required environmental guidelines. The same applies for the permitting of new facilities and all classes of industrial and non-industrial establishments.

According to the Ministry of Industry statistics, a total of 2,006 industrial establishments gained permits between 2002 and 2006, where these facilities were distributed according to the following:

- 36 facilities in 2002
- 442 facilities in 2003
- 775 facilities in 2004
- 428 facilities in 2005
- 326 facilities in 2006

These industrial establishments were classified according to the following:

- High risk facilities: 271 facilities
- Medium risk facilities: 861 facilities
- Low risk facilities: 874 facilities

One of the several challenges that the Ministry of Environment is facing is the shortage in human resources, thus the number of inspections depend mainly on the number of inspectors and on the severity and intensity of the cases in question.

Additional recruitment efforts should be conducted on a regular basis to ensure that there are enough inspectors and experts to cover the total needs of the Ministry. Moreover, environmental departments should be distributed in the different Lebanese regions to ensure better compliance with environmental regulations and standards. This issue was raised in the draft law determining the organizational structure and functions of the MoE which still needs the ratification of the parliament.

3.2 Inspection organization

MoE developed in 2001 a workable strategy to reshape the permitting and auditing system of industries. In view of several constraints (e.g limited human resources, ill defined industrial zones, and absence of control and monitoring mechanisms), the MoE opted for limiting its scope during the first years of the program. The MoE strategy to improve the environmental performance of industrial and classified establishments includes a Permitting System for new facilities and a Compliance Action Plan for existing facilities.

3.2.1 Permitting System

MoE's Permitting System for new facilities involves the preparation of environmental guidelines for several industrial and classified establishments, a revision of national standards for environmental quality and a monitoring plan.

- Environmental Guidelines
  The MoE developed general environmental guidelines for selected types of establishments. The guidelines provide both generic and detailed environmental specifications and should be followed in the design phase for new classified establishments.

- National Standards for Environmental Quality
  The MoE developed national standards for environmental quality. These standards are in the form of upper limit concentrations values (e.g., ppm, mg/m3) for stack emissions (General Emissions Standards, Specific regulations for single branches) and wastewater discharges (Wastewater discharged into the sea, Wastewater discharged into the surface water, Wastewater discharged into sewage system) from both existing and new facilities.

- Monitoring Plan
  The Ministry has developed a tailored PC program (UP-GRADING) through which it can monitor and follow-up reports related to classified industrial establishments. The program consists of a GIS system that allows the ministry to pinpoint on the map the establishments that are or are not in compliance. In addition, the program will be used in the arbitrary selection of the institutions suggested to be visited and inspected in order to determine their compliance.
  Different information related to the industrial establishments will be registered according to their establishment/ operation registered applications or according to the complaints filed in the Ministry of Environment concerning these industrial plants.
  Operating the software did not start yet mainly due to shortage in manpower.

3.2.2 Compliance Action Strategy

The Ministry of environment developed in 2001 a compliance strategy for Lebanon based on the following:

Applying a sector-by-sector compliance strategy, based on the implementation of the proposed six steps listed below:

1. Identifying sector / Identifying compliance measures;
2. Selecting representative facilities;
3. Conducting environmental audit(s);
4. Assessing the environmental situation in the sector;
5. Identifying the necessary grace period;
6. Applying the necessary compliance measures identified in step 1.

This strategy is able to specify the length of the grace period according to the sectors' environmental situation, needs and available resources.

To reach the desired objectives within the assigned grace period, a series of measures should be applied on a short term, medium term and long-term basis. These measures constitute the suggested compliance action plan. It is according to the carrot and stick

strategy that the measures are divided below into three general categories: Carrots (Incentives)/Stick (Enforcement)/Other.

Carrots:

- Direct financial incentives
- Indirect financial incentives
- Non-financial incentives

Stick:

- Monitoring measures
- Public's involvement
- Enforcement measures
- Legislations
- Capital Markets

Other:

- Awareness
- Financial Resources
- Transparency
- Capacity Building
- Infrastructure
- Information
- Cleaner Production, NCPC Response
- On-site support
- Human resources
- Participation
- Research & Dev.

This strategy was tested only in 2 sectors (Pulp and paper sector and Olive Oil sector). Choice of these sectors was made relative to the following criteria:

- Environmental pollution load generated by sector.
- Economic importance of the sector.

The application of the Compliance action strategy is hindered by many obstacles:

- Shortage of Financial Resources
- Shortage of Human Resources
- Limited monitoring & enforcement measures
- Incomplete infrastructure
- Limited awareness & Political support.

The figures below represent the possible actions to be implemented in view of limiting the impact of potential obstacles:

Shortage of Financial Resources:

- Implement compliance action plans in a limited number of sectors according to available funds.
- Conduct steps to secure additional financing.
- Provide financial incentives.

Shortage of Human Resources:

- Conduct awareness for concerned facilities only.
- Conduct audits in a small number of facilities.
- Conduct monitoring at a limited level.
- Encourage self monitoring practices.

Limited monitoring & enforcement measures, incomplete infrastructure:

- Limit the possible interventions to a restricted number of facilities.
- Initiate the necessary steps to finance and develop the adequate infrastructure.

Limited awareness & Political support:

- Conduct awareness seminars for concerned sectors only.
- A small scale strategy does not require strong political support.
- Ensure full transparency and avoid hindering the application of the strategy by involving a large number of industrialists.

4. Measuring Inspection Outputs

4.1 Measuring the remaining tasks of the inspection system

Different Lebanese legislative texts and mechanisms related to the management of different sectors and environmental media lack any kind of inspection programs. In fact, inspection till now has been limited to one of the below mentioned cases in paragraph 4.2.

The strengthening of Inspection, Compliance and Enforcement System will not be possible unless the following measures are implemented:

- Presence of supportive legislative texts.
- Good and effective application of permitting and Compliance strategy mentioned above.

4.2 Number of inspections

The type of inspection conducted differs between thematic inspection and spot-checks. The statistical data of the service of protection of the urban environment for the year 2006, show that thematic inspections were done on 393 establishments and spot-checks were conducted on 99 complaint cases.
Noting that the 6 inspectors at the service of protection of the urban environment work around 9900 hours per year, and that the thematic and spot-check inspections including preparations and reporting takes 9 working hours. In this context, the indicators for measuring inspectors' outputs are calculated as follows:

$$I7 = \frac{4428}{9900} = 0.447 \text{ and } \quad I8 = \frac{492}{9900} = 0.0497$$

4.3 Measuring control consequences

The Lebanese regulations focused on the polluter-pays-principle: this principle obliges the polluters to bear the charges of the corrective measures and the combating or reducing the pollution[7].

[7] Environment protection law 444/2002, article (4)

In general, the Lebanese regulations focus on organizing the ways of imposing the compensation payment or abiding the person causing the pollution by repairing the damage. In fact, the people responsible of any environmental violation that causes damage to people or the environment will assume the responsibility of his act[8].

In addition, the people responsible for any kind of damage that may affect the environment due to works implemented without an authorization or contrary to the in force legal and regular sentences should implement all the mitigation measures that lead to the elimination of the damage caused on their own expenses. They shall also, be responsible for compensating all expenses tolerated by the competent authorities in order to eliminate all damages that may affect the environment. The law also, stipulates that along with the implementation of written warnings filed through administrative channels, the competent administrations and authorities (Concerned Ministries, Penal Court, Civil Courts, Council of States) can take all or some of the following administrative measures:

Concerned Ministry:

- Imposing fines;
- Imposing rehabilitation works on the polluter's expenses;
- Imposing special conditions or measures;
- Closing the establishment and/or cancelling the its license.

Penal court:

- Arresting the polluter;
- Imprisoning the polluter;
- Compensations for affected party;
- Imposing fines;
- Termination of activity / withdrawal of license;

Civil Courts:

- Compensations for affected party;

Council of State:

- Compensations for affected party;
- Annulment of a decree or decision.

No data is available on numbers and types of measures implemented by the different institutions. In this regard, building a network of data between these institutions will help and support the Monitoring and Enforcement System.

5. Self - Monitoring and Environmental management Systems

5.1 Self Monitoring

Three cement plants and one phosphate fertilizer plant conduct monthly laboratory analysis to monitor their stacks emissions. The inspectors review these analyses, and based on the inspection, the ministry informs these plants through the governor about the required procedures and mitigation measures needed for their compliance.

[8] Environment protection law 444/2002, article (51)

5.2 Environmental Management System

As mentioned in the section 4.2.2 above, some projects (such as environmental polluting plants, solid wastes and wastewater treatment plants…) are subject to environmental assessment studies (EIA) or initial environmental examination (IEE) or environmental audit (EA), where the MoE reviews the environmental management plan and monitoring plan included in these studies in order to ensure the environmental commitment.
No data is available now at the Ministry of Environment about the projects that were licensed by the relevant authorities. Also, the owners of these projects do not provide the ministry with periodic reports showing their compliance with the environmental and monitoring plans.
The strengthening of self – monitoring and Environmental management systems could be applicable through the implementation of the following actions:

- Building a network of data between relevant authorities.
- Additional recruitment efforts should be conducted on a regular basis to ensure that there are enough inspectors and experts to cover the total needs of the Ministry of environment.
- Capacity-building activities should involve mainly both the concerned industrialists and owners of the projects.
- Better enforcement of the available legislations and penalties.

6. Measuring inspection outcomes and environmental regulation

In 2001, MoE conducted an assessment of the state of the environment based on available data. The state of the environment report (SOER) was based on a forward approach describing the current situation of each sector, the available information and indicators related to it, the environmental impacts of the sector, the institutions in charge of it and current policies and plans to improve the sector. It was not based on quantitative and qualitative data taken during field investigations.
Until date, the SOER was not updated and MoE is facing challenges to monitor environmental media due to absence of human and financial resources, tools, equipment and technical expertise for sampling and measurement.
There are some shy attempts for monitoring environmental media, for example, a group of municipalities in North Lebanon monitor periodically air quality based on specific parameters and report the results to MoE.
Moreover, in 2001, the Lebanese Environment & Development Observatory for the general public (LEDO) was created. LEDO set several indicators for monitoring environmental performance; however, these indicators were not updated on a regular basis due to the lack of human resources.

ENVIRONMENTAL INSPECTORATE SYSTEM IN MONTENEGRO

Compliance and enforcement of regulations for the control of pollution resulting from land-based activities

UNEPMAP/WHO

REPORT FOR MONTENEGRO

Meeting of the Network on Compliance and Enforcement

Pavle Djuraskovic

24-25 October
Athens, Greece

- **Competence**

-*Environmental Inspection* (Ministry of Tourism and Environmental Protection) has competence in sectors: air, ground, solid waste, ionic radiation, noise;

-*Waterpower inspection* (Ministry of Waterpower Engineering, Forestry and Agriculture) has competence in: surface waters, waste waters, springs, sanitary zones of springs;

-*Sanitary inspections* (Ministry of Health) has competence in plumbing water (quality);

-*Communal inspection* (local authority) has competence for water and sewage network infrastructure.

- **National report of Environmental Inspection for 2006.**

Area: Air, Waste

- Legal framework:

- Law about inspection supervision (Off. pap.RM 39/03)
- Law about environment (Off.pap.RM 12/96) and other.
- IPPS, SEA, EA (in near future)

Area: Ionic radiation

- - Legal framework:
- Law about protection from ionic radiation (Off.pap.SRY 46/98),
- Law about bases of environment protection (Off.pap. SRY 24/98),
- International agreement and conventions (Vienna Convention, Basel Convention, Montreal Protocol, CITES Convention and other)

- **National report of Environmental Inspection for 2006.**

- *Realization*:

- 279 inspections (smaller irregualirity – verbal irregularities, preventions and advices for waste delay),
- 115 solutions for conductivity of measures and actions in aim of elimination of irregularities in measurement emission, delay of industrial waste, deviation of production among regulations, procurement of ecological permits for object,
- 37 violation charges for non fullfiling of Solutions for inadequate delay of industrial and waste, lack of ecological concordance, causing of environment pollution, actions into protected natural areas,
- 1 criminal dennunciation because of bigger environmental pollution,
- 12 Solutions of prohibition the actions to the elimination of irregularities,
- 2 objects closed on force by sealing,
- 16 informations to other inspections about undertaken measures from their competence.

- **National report of Environmental Inspection for 2006.**

-Realization:

- 15.305 controls on merchandise radioactivity by importing,
- 123 controls of permittions for import, export and transit of waste on boundary transitions, issued by the Ministry of Tourism and Environmental Protection,
- 36 controls of permissions for import, export and transit of merchandise which content substances which damage ozone layer, issued by the Ministry of Tourism and Environmental Protection,
- 20 controls of permissions for traffic of sources of ionic radiation on boundary transitions sites.

- **National report of Environmental Inspection for 2006.**

Main problems of Environmental Inspection

- Insufficient number of inspectors (2 active persons),
- Insufficient technical support (equipment for sampling, transportation, electronic devices),
- Inadequate legal framework (impecise)
- Inadequate (bad) public awareness (background) about inspections
- Inadequate surrounding for inspections (regulations, objects),
- Inadequate organization of activities,
- Insufficient training and education.

Consequences

- Inadequate (insufficient) fulfilling of legal regulations,
- Inadequate fulflling of brought decissions (bad feed back information),
- Compromise between regulations and possible objects (transition problems),
- Inadequate efficiency of inspection activity.

- **National report of Environmental Inspection for 2006.**

Superseding of problems

- It is expecting the constitution of the Agency for Environment, by what are predicted better conditions for prescribed work on all levels: solution of position of inspection service on state and public level, independence of inspection, work organization, expert and personnel training and regular work on progress, division and complementary of competences, efficient work. In course is and production of new Law about Environment, like legal base for constitution of Agency.
- It is expected bringing and effectiveness of new iregulations, in accordance with EU legislatives, by which will be made adequate legal frame for precise, clear and transparent work of inspections.

- *Report of Waterpower Inspection according with UNEPMAP\ WHO proposed methodologies*

Inspection implementation and sizing

I1 = Number of inspectors\ population of the country = 5/ 620 140

- I2 = number of training days per year z number of inspectors = 2/5 = 0,4
- I2bis = number of training courses provided by compliance assistance institutions per year = 1 (UNEPMAP\WHO) and more (REC)
- I5 = number of inspectors with a yearly operational plan \ number of inspectors = = 5/5 = 1

Measuring inspection outputs

- I6 – Comment „Environment permissions are not yet in force, just Environment concordance. Environment permissions will enter in force by 2008 Waterpower inspection gives permissions and concordances“
- I9 = number of civil and criminal sanctions \ number of non-compliance report = 17/42 = 0.4
- I1o - Comment „Objects are not devided by chategories“

Meeting of the Network on Compliance and Enforcement

Calculation of number of inspectors				
Polluting level	High	Medium	Low	Total
Number of facilities	5	>1500	>2700	4205
Frequency of „on site inspection“	2	0.5	0.2	
Frequency of „administration inspection“	3	1	0.2	
Days per „on site inspection“	2	1	0.5	
Days per „administration inspection“	1	0.5	0.2	
Total man days	35	1500	98	633
Effective days per inspectors				213
Number of inspectors required				9

Additional staff requirement				
Management				1
Number of inspectors required				9
Administrative staff				2
Judicial support				0,4
Staff turn over				1
Total				13,4

Meeting of the Network on Compliance and Enforcement

Inspection organisation

Priorities definition	
Is there a strategic action plan? (yes/no)	No
Is there a yearly operational action plan? (yes/no)	Yes
Is there a control plan? (yes/no)	Yes
Legal organisation	
Number of working meetings between the public prosecutor and the Inspection Body in 2006.	3
Do some people of the Inspection Body participate to the hearing of minor offence? (Yes/No)	Yes
Information Systems organisation	
Has the Inspection Body an GIS? (Yes/No)	No
Has the Inspection Body an Internet Site? (Yes/No)	Yes
If so, address of the internet site	abralic“cg.yu

Comment: *Doesn’t exist any local or regional inspection body, but only the state. The data in table are regarding to the state body.*

Meeting of the Network on Compliance and Enforcement

Activity report

Comment: *Objects don’t by categories, because doesn’t exist adequate data.*

Meeting of the Network on Compliance and Enforcement

General information	
Number of training days	2
Number of inspections conducted in 2006.	800
Amount of fines in 2005.	No data
Inspection activity	
Total number of authorisations given in 2006.	No data
Total number of authorisations examined in 2006.	No data
Urban and industrial treatment facilities	
Number of treatment facilities fulfilling their obligations	1
Treatment facilities with an environmental permit	Environmental permits are not in force

Meeting of the Network on Compliance and Enforcement

Inspection plan

Name of the department					
Region					
Had the inspection body a control plan in 2006. (Yes/No)					
Inspection plan	Non-scheduled inspections	scheduled inspections	Number of non-compliance reports	Number of administrative or legal sanctions	Time (in man'days) spent on control operation
Name of inspections of all facilities conducted	400	400	100	58	
Other inspections					
.....					

Meeting of the Network on Compliance and Enforcement

Thanks for your attention

ENVIRONMENTAL INSPECTORATE SYSTEM IN MOROCCO

Compliance and enforcement of regulations for the control of pollution resulting from land-based activities

ROYAUME DU MAROC
Ministère de l'Aménagement du Territoire,
de l'Eau et de l'Environnement
****
Secrétariat Général
Direction de la Surveillance
et de la Prévention des Risques
7130

المملكة المغربية
وزارة إعداد التراب الوطني و الماء و البيئة

*****
الكتابة العامة
مديرية الرصد و الوقاية من المخاطر

Le Système d'Inspection, de Contrôle et de Surveillance de l'Environnement au Maroc

Octobre 2007

Sommaire

Introduction

A l'instar de beaucoup d'autres pays en développement, le Maroc est fortement confronté, malgré les efforts déployés ces deux dernières décennies, à de grands défis pour la conciliation entre les exigences du développement économique et les nécessités de protection de l'environnement (rationalisation et gestion des ressources naturelles, lutte conte la désertification, gestion des déchets,….etc)

Pour pallier à ces contraintes, plusieurs programmes et stratégies ont été lancés pour contribuer à l'amélioration du cadre de vie des populations, à la réduction de la pression sur les ressources, et à la protection de l'environnement, en vue d'aboutir au développement économique et social recherché.

Parmi les initiatives entreprises dans ce sens, on peut citer :

- La promulgation des lois environnementales ;
- La mise en place d'instruments incitatifs et financiers pour la promotion des technologies propres (FODEP, subvention de projets d'ONGs)
- Le développement de programmes thématiques sur l'assainissement liquide, les déchets ménagers et assimilés, les produits chimiques, les déchets dangereux, etc)
- Le renforcement des capacités techniques du département chargé de l'environnement dans le domaine de l'audit, la surveillance et le contrôle.

Ces initiatives qui sont inscrites dans un contexte d'évolution institutionnelle et juridique favorable, sont à même de répondre aux défis de la dégradation de l'environnement auxquels fait face notre pays.

Par ailleurs, cette évolution dans la politique environnementale nationale a nécessité la mise en place de dispositions fonctionnelles et organisationnelles dont une plate forme de système d'inspection, de contrôle et de surveillance de l'environnement (SICSE) pour l'application des normes et règlements environnementaux.

Ce système demeure cependant insuffisamment adapté aux exigences modernes de protection de l'environnement et reste en deçà des exigences d'efficacité des SICSE universels.

Dans ce rapport de synthèse, nous présenterons un diagnostic du système actuel d'inspection et de contrôle environnemental et les efforts entrepris par notre pays pour son amélioration.

I - Cadre réglementaire et institutionnel régissant le système d'inspection et de contrôle environnemental au Maroc.

1- Le cadre réglementaire

Au Maroc, la mission du contrôle environnemental au sens strict du terme a été définie au niveau du décret n°2-99-922 du 13 janvier 2000 relatif aux attributions et à l'organisation du Département de l'Environnement.

Ce texte prévoit que ledit département est chargé de veiller au respect de la loi par le renforcement du cadre institutionnel et juridique relatif à la protection de l'environnement et la mise en place d'instruments appropriés de surveillance et de contrôle.

Cette mission se trouve renforcée et spécifiée au niveau des lois environnementales promulguées recemment. Il s'agit de :

- La loi 11-03 relative à la protection et la mise en valeur de l'environnement et qui a pour objet principal de fixer les règles et principes directeurs de la politique nationale en matière de protection et de mise en valeur de l'environnement.

- La loi 12-03 sur les études d'impact sur l'environnement et qui prévoit un système de contrôle préalable basé sur la subordination de tous les projets soumis à la procédure d'Acceptabilité Environnementale qui est délivrée par l'autorité gouvernementale chargée de l'environnement, conformément à l'avis du Comité national ou des Comités régionaux des EIEs

- La loi 13-03 sur la lutte contre la pollution atmosphérique et qui concerne la pollution de l'air par toutes les sources fixes ou mobiles. La loi, une fois supplémentée par des textes d'application, renforcera le système de contrôle environnemental.

- La loi 28-00 relative à la gestion des déchets et à leur élimination prévoit des dispositions de contrôle, de définition des infractions et des sanctions qui sont rapportées à la gestion des déchets (collecte, transport, élimination…).

- La loi 08-01 relative à l'exploitation des carrières (un secteur dont l'exploitation détériore l'environnement d'une manière irréversible). Le contrôle de l'exploitation des carrières et la constatation des infractions sont assurées par les officiers de police judiciaire.

L'arsenal juridique comporte également d'autres lois parmi lesquelles on peut citer :

- La loi 10-95 sur l'eau qui consacre des principes généraux importants (pollueur- payeur et préleveur- payeur) et prévoit la mise en place d'un système intégré pour la gestion des ressources en eau notamment par la mise en place des agences de bassins qui ont pour missions d'exercer les prérogatives de planification, d'autorisation, de perception des redevances d'utilisation et des redevances de pollution et de contrôle dans le domaine de l'eau.
- Le dahir de 1914 portant réglementation des établissements insalubres, incommodes ou dangereux. Ce dahir mentionne que les établissements présentant des causes d'insalubrité, d'incommodité ou de danger sont soumis au contrôle et à la surveillance de l'autorité administrative. Pour les installations de première classe, elles sont assujetties à l'étude d'impact. Il est à signaler que la refonte du régime des établissements classés est en cours de réalisation à travers les trois projets de textes suivants : projet de loi sur les établissements classés, projet de décret pour son application et projet de décret instituant une commission nationale des installations classées.

2 - Le cadre institutionnel

Les institutions concernées par le système d'inspection et de contrôle de l'environnement sont distinguées selon deux niveaux de représentation :

- le niveau fonctionnel qui décrit l'ensemble des administrations concernées par le SICSE.
- Le niveau opérationnel qui englobe les différents corps en charge du contrôle et de l'inspection environnementale.

A- Les administrations

* **Le Ministère de l'Aménagement du Territoire, de l'Eau et de l'Environnement** est chargé de mettre en place les instruments appropriés de surveillance et de contrôle de l'état de l'environnement, d'établir les normes et règlements, de veiller à l'application de la législation en matière d'environnement et de procéder aux contrôles et inspections nécessaires.

* **Le Secrétariat d'Etat chargé de l'Eau** en matière de contrôle de la qualité et de la quantité de l'eau.

* **Le Ministère de l'Agriculture et du Développement Rural et des Pêches Maritimes** qui se charge du domaine forestier, la conservation des parcs nationaux, la réglementation de la pêche dans les eaux intérieurs, la restauration des sols, la lutte contre la désertification et la police sanitaire vétérinaire.

* **Le Haut commissariat aux Eaux et Forets** gère le patrimoine national en eau et en forêts.

* **Le Ministère de la Santé** se charge à travers les bureaux municipaux d'hygiène, de la préservation des points d'eau et de l'éducation sanitaire.

* **Le Ministère de l'Equipement et du Transport** est le gestionnaire des établissements classés. Il intervient en coordination avec le Ministère de l'Aménagement du Territoire, de l'Eau et de l'Environnement (MATEE) dans le système de contrôle des rejets gazeux.

* **Le Ministère de l'Energie et des Mines** assure le contrôle minier et énergétique.

* **Le Ministère de l'Industrie et du Commerce** assure le contrôle des produits industriels, la gestion des systèmes d'accréditation et de certification, ainsi que la gestion du système de la propriété industrielle.

B. Les Principaux organes responsables de l'inspection et du contrôle environnemental au Maroc

* Le corps des inspecteurs de l'Environnement du MATEE

Le MATEE a développé une démarche cohérente pour revaloriser la fonction de contrôle qui s'est appuyée sur l'assermentation de 5 agents relevant de ce département. Cette démarche a été initiée sur la base de l'analyse des requêtes adressées à l'administration (215 requêtes en 2004 et 196 en 2005) et le nombre d'infraction à l'encontre de l'environnement observé par la Gendarmerie Royale (2500 procès verbaux / an).

Cette nouvelle police de l'environnement est en stade de formation. Son travail se limite pour le moment à collecter et rassembler les informations relatives au contrôle environnemental.

*** La brigade d'environnement de la Gendarmerie Royale**

Elle est chargée de la prévention, la préservation et la lutte contre les pollutions et nuisances de toutes sortes qui affectent l'équilibre écologique. Elle a établi en 2004, environ 4000 procès verbaux dont :

- 63% concernent les rejets immondices.
- 19% manque d'hygiène
- 16% excavation des plages par extraction illégale du sable
- 5%pollution de l'eau
- 2% pollution de l'air (source MATEE / DRC)

Seul 10% de ces Procès verbaux sont traités par la justice.

*** La police des établissements classés**

Cette inspection est exercée par des agents désignés par le ministre de l'Equipement et par des officiers de la police judiciaire qui surveillent l'application des règlements sur les établissements classés. Quant au contrôle de l'hygiène et de la sécurité des employés est effectué par les inspecteurs de travail.

*** Les agents habilités dans le cadre de la lutte contre les rayonnements ionisants**

Le contrôle des rayonnements ionisants est confié au Centre National de Radioprotection qui est chargé sous l'autorité du Ministère de la Santé, d'établir et de maintenir à jour un registre des autorisations et un registre des déclarations.

*** la police de protection des ressources en eau**

La police de l'eau est chargée de constater les infractions aux dispositions de la loi sur l'eau. Ces agents relèvent des agences de bassin hydraulique. En cas d'infraction, ils rédigent des procès-verbaux qui sont transmis dans un délai de dix jours, aux juridictions compétentes.

*** Les commissions d'inspection de la santé et les déchets hospitaliers**

Ces commissions sont chargées du contrôle en matière d'hygiène et de propreté au niveau des établissements de soin.

*** Les agents habilités dans le cadre de l'exploitation des carrières**

La constatation des infractions au niveau de ces exploitations est assurée par les officiers de police judiciaire.

*** Les corps de police des eaux et forêts**
Le secteur forestier dispose de différents corps de police (agents forestiers, police de la chasse, police de la pêche) qui disposent de moyens de dissuasion importants et assez efficace

II - Fonctionnement et organisation du Système d'Inspection, de Contrôle et de Surveillance de l'Environnement au Maroc (SICSE).

1 – Les organes techniques de mise en œuvre du SICSE

L'inventaire des différents laboratoires opérationnels dans les différents domaines de l'environnement a permis de distinguer trois types de laboratoires :

*** Le Laboratoire National de l'Environnement (LNE)** dont la mission couvre l'ensemble des facettes de la surveillance et du contrôle environnemental.

*** Les laboratoires sectoriels dont la mission est en relation avec le domaine d'activité et les milieux spécifiques :**
- Institut national d'hygiène et les laboratoires régionaux du Ministère de la Santé.
- Laboratoire central de l'Office National de l'Eau Potable.
- Laboratoires des Agences de Bassin
- Etc

*** Les laboratoires privés et assimilés :**
- les laboratoires prestataires de service.
- Laboratoires propres des industries qui couvrent les besoins des procédés industriels et d'autocontrôle des opérateurs industriels.
- Laboratoires universitaires non encore suffisamment exploités malgré une large répartition géographique.

Cette panoplie de laboratoires publics et privés peut couvrir toutes les facettes en matière de surveillance, de contrôle et d'inspection environnemental, et il est proposé que le LNE joue un rôle central dans ce dispositif tout en s'appuyant sur la contribution des autres laboratoires.

2 – Les moyens humains de l'inspection

En concomitance avec le développement du cadre réglementaire, le système d'inspection actuel est en cours de renforcement, notamment à travers l'organisation de prog.rammes de formation diversifiés auxquels participent plusieurs acteurs concernés. Nous pouvons citer ci-dessous, les formations diplômantes suivantes :

Année	Formation	Effectif
2003	Formation des inspecteurs de l'environnement (assermentés)	5
2004	Formation sur les risques industriels	20
2006	Formation sur la sécurité environnementale	40
2007	Formation des inspecteurs de l'environnement	30

Source : PGPE / MATEE

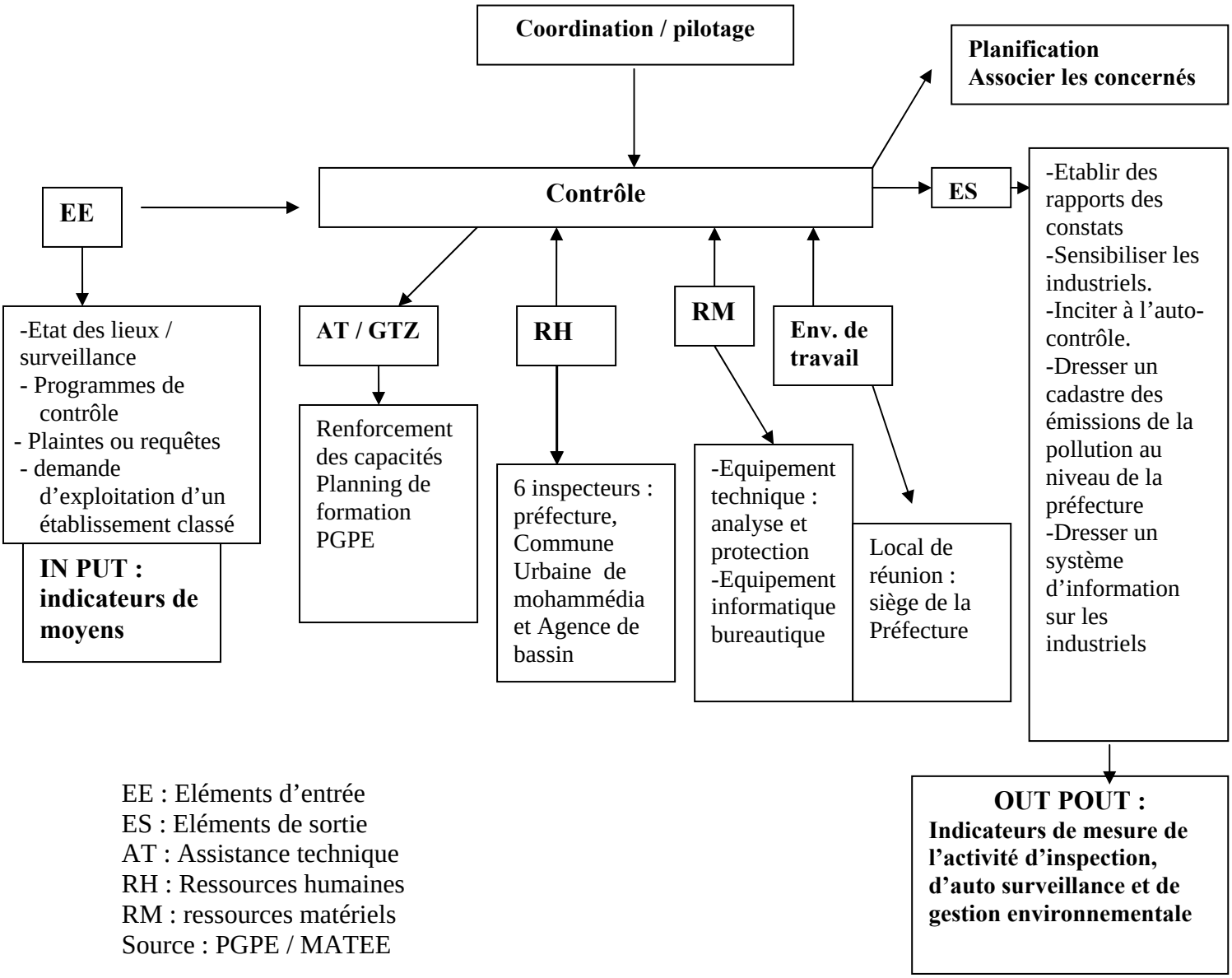
III- Etude pilote : Conception d'un système de contrôle des émissions industrielles au niveau de la ville de Mohammédia.

Dans le cadre du renforcement de la surveillance au niveau local, une étude pilote a été faite pour proposer un système de surveillance et de contrôle exemplaire qui pourrait être pris en considération par les autres villes industrielles du pays.

Cette étude est le fruit d'un partenariat entre la Préfecture de Mohammédia et l'Inspection Régionale de L'Aménagement du Territoire et de l'Environnement du Grand Casablanca.

Six agents locaux ont été désignés pour intervenir dans le processus de surveillance et un schéma de fonctionnement et d'organisation du contrôle a été élaboré comme suit :

Schéma de fonctionnement et d'organisation du contrôle



EE : Eléments d'entrée
ES : Eléments de sortie
AT : Assistance technique
RH : Ressources humaines
RM : ressources matériels
Source : PGPE / MATEE

Le schéma ci-dessus démontre le processus de contrôle qui débute par des éléments d'entrée tels que l'état des lieux, les programmes de contrôle…etc.
La surveillance de ces éléments nécessite la mise en place d'indicateurs de dimensionnement de l'inspection.

Les éléments d'entrée ou in put génèrent des éléments de sortie on out put (rapports de constats, actions de sensibilisation des industriels, incitation de l'industrie pour l'auto-contrôle..etc). La surveillance de ces éléments nécessite la

mise en place d'indicateurs de mesure de l'activité de l'inspection et d'indicateurs d'auto-surveillance et de gestion environnementale.

Cependant, ce schéma de fonctionnement et d'organisation de contrôle n'a pas pu être appliqué à cause des difficultés rencontrées pour la réalisation de la surveillance au niveau des unités industrielles. En effet, certaines unités ont refusé l'assistance du personnel chargé de l'inspection car il n'avait pas de forme juridique et opérationnelle suffisamment reconnue.

IV- Elaboration d'une Stratégie nationale d'inspection, de contrôle et de surveillance de l'environnement

Suite à l'expérience de Mohammedia peu réussite et à la faible maturité du SICES actuel, le MATEE a lancé avec l'appui de la coopération allemande (PGPE/GTZ), une étude relative à l'élaboration d'une stratégie nationale pour la mise en place d'un SICES.

Dans ce cadre, une analyse a été faite avec les standards internationaux pour dimensionner le corps des inspecteurs (nombres et qualifications de ses membres), et les référentiels suivants ont été pris en compte :

Paramètres	Standard international (EPA)
Capacité de l'inspecteur	160 jours
Capacité : inspection d'installation / inspecteur	50 à 100 / an
Capacité : supervision secondaire / inspecteur	300 à 500 / an
Rédacteurs de permis	3 à 4 / inspecteur
Taux de non conformité	40% 1ère visite 10% 2ème visite
Poursuite ou pénalité	1 à 2% des visites 1 juriste / 25 dossiers / an 1 juriste pour appui 30 employés
Personnel administratif	1 manager+secrétaire pour 10 – 15 inspecteurs
Coordination avec les autres instances gouvernementales	Possibilités de détachement d'effectifs ; un seul chargé de la coordination (Direction ou délégataire)

Source : PGPE / MATEE

Une évaluation a été également réalisée sur le potentiel nécessaire en matière d'inspection et de contrôle. Ce potentiel a été approché sur la base des standards internationaux suivants:

Type de personnel	Qualifications requises	Etat actuel
Inspecteurs supérieurs Enquêtes non-conformité visites détaillées de sites	Universitaires 5 ans d'expérience minimum	5 inspecteurs au niveau du MATEE
Inspecteurs subalternes Enquêtes non-conformité visites détaillées de sites de moindre importance	Universitaire 2 ans d'expérience minimum	Une cinquantaine
Inspecteurs auxiliaires : phase de formation et insertion sur 2 ans	Universitaire nouveau recruté	-
Personnel administratif : contrôle administratif et demande des autorisations. Contrôle des conditions de surveillance sur formulaire (à remplir) selon un protocole défini	Bac ou technicien avec expérience	-
Personnel chargé de l'inspection visuelle	Expérience dans l'assistance aux inspections	-

Source : PGPE / MATEE

L'étude comporte également une évaluation du SICSE actuel qui fait ressortir les points forts et les points faibles du système. Le tableau ci-dessous résume les opportunités et les contraintes du SICSE :

Points forts	Points faibles
Sur le plan politique : Engagement du gouvernement Adhésion aux accords internationaux	 - Disparités dans les missions des intervenants dans ce domaine - Moyens techniques et financiers insuffisantes
Sur le plan réglementaire : Forte avancée à travers la promulgation des lois environnementales	- Couverture insuffisante des besoins sur le plan réglementaire. - Contraintes d'application des lois environnementales.
Sur le plan économique : Engagement concret de certains secteurs d'activités économiques	- La pression démographique et industrielle dans certaines régions du pays (El jadida – kénitra) provoque une forte dégradation des ressources naturelles.
Sur le plan technique : Forte avancée dans le domaine de la surveillance et de contrôle	- Un dispositif de surveillance en deçà des aspirations du système
Sur le plan social : Prise de conscience de la population sur les retombées de la pollution de l'environnement	- Nombre d'associations oeuvrant dans le domaine de l'environnement insuffisant. - Moyens de diffusion de l'information insuffisantes.

Actuellement, la dernière phase de l'étude est en cours de réalisation. Elle consiste à développer une stratégie nationale pour la mise place d'un SICES opérationnel et efficace, ainsi que des indicateurs de suivi et d'évaluation du système (indicateurs de performance, d'efficacité et d'impact sur l'environnement).

Dans ce cadre, une large consultation des acteurs et parties prenantes a été faite, et a abouti à un consensus national sur les éléments prioritaires de la stratégie qui est articulée autour des axes suivants :

- Conception du système.
- Présentation des attributions du corps des inspecteurs de l'environnement
- Définition des mesures d'urgence réglementaires et des outils de veille réglementaire.
- Mesures concernant les aspects techniques de gestion
- Renforcement des capacités
- Moyens et mécanismes de financement.

Bibliographie

- Système d'inspection, de contrôle et de surveillance de l'environnement au Maroc Expériences internationales et implications pour le Maroc, MATEE /PGPE, juin 2007.

- Etude sur le système d'inspection, de contrôle et de surveillance de l'environnement au Maroc, MATEE/PGPE, avril 2007.

- Evaluation des systèmes d'inspection, de contrôle et de surveillance de l'environnement dans la région du Maghreb, MATEE/GTZ, octobre 2006.

- Compte rendu de l'atelier de restitution des résultats de l'étude sur le système de contrôle de l'état de l'environnement à Mohammédia, MATEE/PGPE, 2003.

ENVIRONMENTAL INSPECTORATE SYSTEM IN SLOVENIA

Compliance and enforcement of regulations for the control of pollution resulting from land-based activities

REPUBLIC OF SLOVENIJA
MINISTRY FOR ENVIRONMENT AND PHYSICAL PLANNING
Inspectorate of Republic of Slovenia for Environment and Physical Planning
REGIONAL UNITE NOVA GORICA
Trg E.Kardelja 1, 5000 Nova Gorica, Slovenija
Phone : oo386 5 33 11 870, Telefax: 00386 5 33 11 880

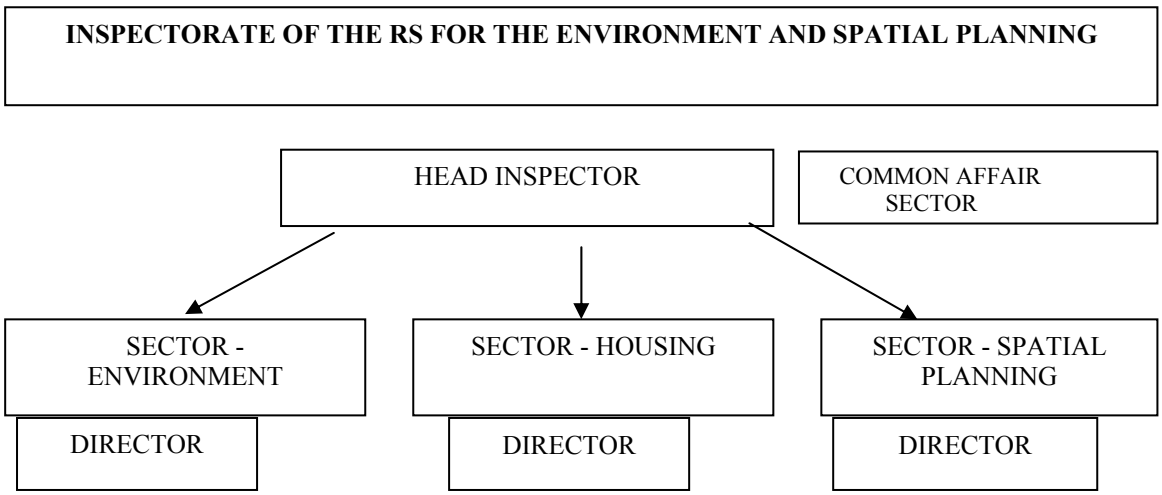
INDICATOR BASED COUNTRY REPORT

SLOVENIA

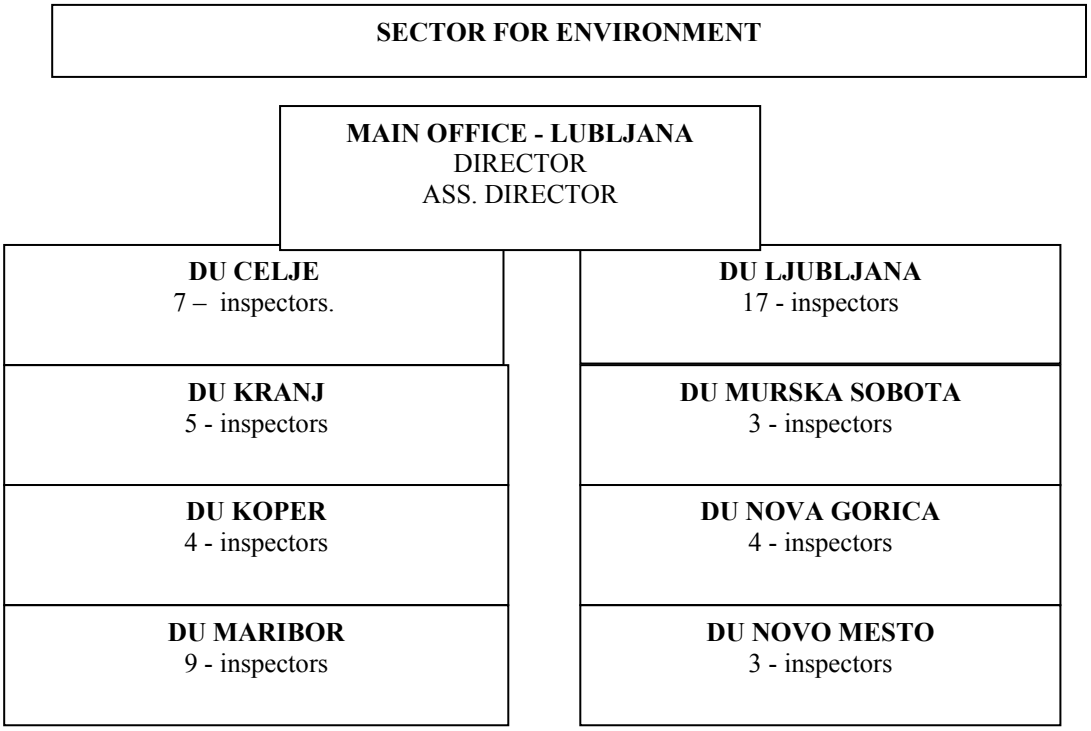
Nova Gorica,11.10.2007

BORIS ŽBONA
Inspector for Environment
Cousilier
Cheef of the Regional Unit
Nova Gorica

STRUCTURE OF IRSEP



DISSLOCATED UNITS



ANNUAL INSPECTIO PLAN 2006

Inspectorate is working according to the Annual Plan. Dislocated Units prepare their own annual plans and detailed plans for every inspector .

Total number of Environmental inspectors at the moment is 54.
Direct inspection is performed by 52 inspectors on 9 different areas / fields.They are located in 8 Dislocated Units and are covering whole territory of Republic of Slovenia..

AREA	FILD OF INSPECTION	INSPECTIONS
A:	AIR QUALITY	220
B:	WASTW MANEGEMENT	3045
C1:	WATER PROTECTION	1400
C2:	WATER MANEGEMENT	600
D:	NATURE PROTECTION	215
E:	CHEMICALS AND GENETICALLY MODIFIED ORGANISMS	50
F:	INDUSTRIAL POLUTON CONTROL	860
G:	NOISE	670
H:	ELECTROMAGNETIC RADIATION	40
	TOTAL	7100

AREA	DU CE	DU KP	DU KR	DU LJ	DU MB	DU MS	DU NG	DU NM	TOTAL
A	20	18	20	80	45	18	14	5	220
B	300	244	200	1060	589	235	247	170	3045
C1	190	105	100	456	253	101	95	100	1400
C2	130	40	35	174	95	38	38	50	600
D	20	13	30	60	30	12	40	10	215
E	5	4	0	15	9	4	13	0	50
F	170	60	70	261	144	58	42	55	860
G	70	52	65	228	126	50	29	50	670
H	5	4	0	16	9	4	2	0	40
TOTAL	910	540	520	2350	1300	520	520	440	7100

DISLOCATED UNIT NOVA GORICA

Plan is prepared for 3 inspectors, who are involved only in inspections and for 1 inspector who is in the same time allso leader of the dislocated unit. That means, that we have only 3.6 inspectors available .

AREA		Kompara	Radovanović	Vodopivec	Žbona	INSPECTIONS
A	AIR QUALITY	0	0	9	5	14
B	WASTE MANEGEMENT	102	35	65	45	247
C1	WATER PROTECTION	25	21	29	20	95
C2	WATER MANEGEMENT	5	33	0	0	38
D	NATURE PROTECTION	0	40	0	0	40
E	CHEMICALS AND GMO	8	0	5	0	13
F	INDUSTRIAL POLUTION CONTROL	0	0	30	12	42
G	NOISE	5	14	7	3	29
H	ELECTROMAGNETIC RADIATION	0	2	0	0	2
160		**145**	**145**	**145**	**85**	**520**

Inspectors are specialised for diferent fields of activities and they do inspections mostly on those fields.

ACTIVITY	Erika Kompara	Marko Radovanović	Helena Vodopivec	Boris Žbona
FOOD PROCESING INDUSTRY	+			
WATER TREATMENT PLANTS	+			
WASTE MANEGEMENT - COLLECTING, PROCESSIG, ,RECICLING, ELIMINATION	+			
GSO	+			
AGRICULTURE & FARMING		+		
TURISM		+		
WATER PROTECTION		+		
NATURE PROTECTION		+		
ELECTRO MAGNETIC RADIATION		+		
NOISE		+		
METALLURGY			+	
HEALT ORGANISATIONS			+	
TRADE ORGANISATIONS			+	
CHEMICAL INDUSTRY, PHOTO LABS CHEMICAL CLEANING, PLASTIC INDUSTRY			+	
TEXTILE AND FOOTWEAR INDUSTRY			+	
ENERGETICS – HEAT PRODUCTION			+	
PRINTING & GRAPHIC INDUSTRY			+	
BRICK WORKS, CEMENT & LIME PRODUCTION				+
CHERAMICS & CONCRETE PRODUCTION				+
PETROL STORAGES & PUMPS				+
WOOD INDUSTRY & MANUFACTURING				+
TRANSPORTS & AUTO REPAIRS				+

INSPECTION IMPLEMENTATION AND SIZING

I1	=	*number of inspectors*	*54*	*0,000027*
		population of the country	*2.000.000*	

I2	=	*number of training days per year*	*30*	*0,556*
		number of inspectors	*54*	

Or

I2bis	=	*number of training courses provided by compliance assistance institutions per year* *10*

I1bis	=	*number of inspectors*	*54*	*0,018*
		number of industries and facilities requiring an environmental permit	*2971*	

I1ter	=	*number of inspectors*	*54*	*0,519*
		number of inspectors according to the human resource calculation scheme	*104*	

I3	=	*operating inputs* *total wages*	**(optional)**

I4	=	*number of inspectors with a strategic action plan*	*52*	*0,963*
		number of inspectors	*54*	

I5	=	*number of inspectors with a yearly operational action plan*	*52*	*0,963*
		number of inspectors	*54*	

MEASURING INSPECTION OUTPUTS

I6	=	*number of facilities having an environmental permit*	*17*	*0,080*
		number of facilities to comply with national standards	*213*	

I7	=	*number of full time equivalent spent on control operation*	*55212*	*0,511*
		number of full time equivalent of the inspection body	*108160*	

I8	=	*number of inspections conducted*	*9202*	*0,085*
		number of full time equivalent of the inspection body	*108160*	

I9	=	*number of civil and criminal sanctions*	*380*	*0,146*
		number of non - compliance report	*2609*	

I10	=	*number of violations of a category of facilities*	*2609*	*0,417*
		number of facilities of this category	*6255*	

I11	=	*amount of fines per year*	*102.902 EUR*	*287 EUR*
		number of violations reports per year	*389*	

FINES:

Issued by inspectors	179	orders to pay on site
61.842 Eur		
	190	written orders for minor offence
41.058 Eur		
Proposals to judge	6	prosecution proposals
Proposal to the public prosecutor	: 5	proposals for chriminal charges

TOTAL	**380**	**10**

SPECIAL NOTE ON SELF-MONITORING AND ENVIRONMENTAL MANAGEMENT SYSTEMS

I12	=	*number of facilities with self monitoring or environmental management systems*	*2971*	1,000
		number of facilities	*2971*	

BIG FACILITIES :	170	IPPC
	35	SAVESO II
	23	IPPC + SAVESO II
	639	other
	867	
MEDIUM FACILITIES :	2104	
TOTAL	**2917**	

All big instalations are obliged to perform self monitoring by accredited institutions (national or private)

Measures could be periodical (mostly once per year) or continuous.

Reports should be sent to Agency of Republic of Slovenija for Environment, Ljubljana (ARSO) in 30 days. .

HUMAN RESOURCES CALCULATION SCHEME

Calculation of number of inspectors				
Polluting level	**High**	**Medium**	**Low**	**Total**
Number of facilities	867	2.104	95.437	98.408
Frequency of "on site inspection"	1	0.5	0.2	
Frequency of "administrative inspection"	2	1	0.2	
Days per "on site inspection"	2	1	0.5	
Days per "administrative inspection"	1	0.5	0.2	
Total men*days	3468	2104	15.270	20.842
Effective days per inspectors				200
Number of inspectors required				104

Additional staff requirement		
Management	1 manager / 15 inspectors	7
Number of inspectors required		104
Administrative staff	1 administrator / 5 inspectors	21
Judicial support	1 judician / 30 inspectors	4
Staff turn over	10 % turn over	10
Total		

Total of inspectors and additional staff	**146**

Present situation : 1 director
1 assistant director
52 inspectors
1 judician
7 administrators
Total : 62 inspectors and additional staff

Comments :

We can easily notice big discrepancy between calculated number for human resources and present
situation in our Inspectorate
Reasons for such situatio are : - lack of finances
- restrective inployment polisy
- pretentiousness of the

INSPECTION ORGANISATION

Theme	Answer
department or region name	
Inspection organisation	Dislocated Unit Nova Gorica
when was created the local inspection body	1995
Will the organisation evolve during the next year ? (Yes/No)	No
Name of the person in charge	Boris Žbona
Title of the person in charge	Inspector for Environment - Councillor
phone	+386 5 33 11 880
fax	+386 5 33 11 870
e-mail	boris.zbona@gov.si
address	Trg Edvarda Kardelja 1, 5000 Nova Gorica
Date of nomination of the person in charge	
Priorities definition	
Is there a strategic action plan ?(Yes/No)	Yes
Is ther a yearly operational action plan? (Yes/No)	Yes
Is there a control plan (Yes/no)	
Legal Organisation	
Number of working meetings between the public prosecutor and the inspection body in 200X ?	3
Do some people of the inspection body participate to the hearing of minor offence? (Yes/No)	Yes
Information systems organisation	
Has the inspection body an geographic information system?	Yes
Has the inspection body an internet site ?	Yes
If so, address of the internet site	http://www.iop.gov.si

Comments :

Inspectorate of Republic of Slovenia was established at the end of 1994 and began with its activities in January 1995. The Head office is located in our capital Ljubljana, Dunajska 47. Other 8 Dislocated units are allocated in bigger towns all over the country.
Unfortunately there are only a few town municipalities, which have organised Local inspections bodys. For this reason our inspectors have to react also in these cases (violations of environment of minor range).

ACTIVITY REPORT

Region										
Category of proje	Temporary authorizations		Authorizations			Declarations			Specific prescriptions orders	Total
	Granted	Refused	Granted	Regularizations	Refused	Granted	Regularizations	Refused	Granted	
describe here each category o projects that require an environmental permit										
Total										

General information	
Number of training days	645
Number if inspections conducted in 2006	9202
Amount of fines in 2006	102902 Eur
Inspection activity	
Total number of authorisations given in 2006	ARSO
Total number of authorisations examined in 2006	
Urban and industrial treatment facilities	**216 +732 = 948**
Number of treatment facilities fulfilling their obligations	881
Treatment facilities with an environmental permit	**80+128 = 208**

Inspection plan

Name of the department	**NOVA**				
Region	**GORICA**				
Had the inspection body a					
control plan in 2006 (yes /	**Yes**				
no)					
Inspection plan	**non - scheduled inspections**	**Scheduled inspections**	**Number of Noncompliance reports**	**Number of administrative or legal sanctions**	**Time (in men*days) spent on control operation**
Number of inspections of		576	205	205+11	3840 hours
industrial facilities conducted		331	105	105+10	2688 hours
Other inspections….		245	100	100+1	1152 hours
….					

DISLOCATED UNIT NOVA GORICA 2006				50 weeks		
		FIELDS OF SURVEY	priorities	regulation	provision	m.offence
A	**1**	Survey on petrol stations and werhauses	II	0	0	0
A	**2**	Survey on quality of liquid fuels	II	0	0	0
A	**3**	VOC	I	11	2	0
A	**4**	Other	III	0	0	0
A		**AIR QUALITY**		11	2	0
B	**1**	Waste oils	II	13	1	0
B	**2**	PCB/PCT	II	2	2	0
B	**3**	Batteries and accumulator waste management	II	12	0	0
B	**4**	Waste from TO2 production	I	0	0	0
B	**5**	Packaging and packaging waste management	I	24	5	0
B	**6**	Land fields	I	8	5	0
B	**7**	Waste combustion plants and devices	I	0	1	0
B	**8**	Survey on handling and removig of asbest	I	11	3	2
B	**9**	Waste management	I	20	8	2
B	**10**	Rubber wastes and tires	I	2	0	0
B	**11**	Transboundary waste shipment	I	0	0	0
B	**12**	Electrical and electronic equipments waste management	I	0	0	0
B	**13**	Construction and demolition waste	I	18	6	1
B	**14**	Nitrates directive	II	7	1	0
B	**15**	Domestic organis wastes	II	2	1	0
B	**16**	Waste table oils and fats	II	1	0	0
B	**17**	Biodegradable wastes	I	0	0	0
B	**18**	Waste from health service	I	0	0	0
B	**19**	End-of life vehicles wastes	I	7	2	0
B	**20**	Others	III	126	42	1
B		**TOTAL WASTE MANEGEMENT**		253	77	6
C1		**Water quality and emission of substances in the water**				
C1	**1**	Technological waste waters	I	46	14	1
C1	**2**	Organic polluted water (treatement plants…)	I	16	10	0
C1	**3**	Pollution of underground water (conveying waste water, use of fitofarmaceutic means, storage of risk liquids)	I	45	31	0
C1	**4**	Pollution underground waters of Ljubljana field	I	0	0	0
C1	**5**	Other	III	13	5	0
C2		**Water maintenance and husbandry**				
C2	**1**	Surveyy of dams and other water buildings	I	3	0	0
C2	**2**	Survey of waters and coasts, banks and shores	I	68	31	4
C2	**3**	Use of water -large consumers	I	4	0	0
C2	**4**	Other	III	6	1	0
C		**TOTAL WATERS**		201	92	5

D1		**Biodiversity**				
D1	**1**	Protected animals and plants	I	1	0	0
D1	**2**	Ecosystems (habitates)	I	2	1	0
D1	**3**	Mashrooms	II	1	0	0
D1	**4**	Keeping in detention	I	2	1	0
D2		**Preservation of natural beauties**				
D2	**1**	Protected regions (Natura 2000…)	I	8	4	0
D2	**2**	Unprotected regions	II	1	0	0
D2	**3**	Minerals and fossils	II	0	0	0
D2	**4**	Caves	I	0	0	0
D3		**Driving in natural environment**				
D3	**1**	Drivig with motor vehicles	II	3	0	0
D4	**1**	Other	III	1	1	0
D		**TOTAL NATURE PROTECTION**		19	7	0
E	**1**	Survey on treatment with substances which thin the Ozone shield	I	10	4	0
E	**2**	GMO	II	0	0	0
E		**TOTAL CHEMICALS NAD GMO**		10	4	0
F	**1**	Survey obligees who need environmentprotection permission	I	8	0	0
F	**2**	Emissions of greenhouse gases	II	0	0	0
F	**3**	SAVESO II Plants	I	0	1	0
F	**4**	Emissions to the air from other sources	II	22	5	0
F	**5**	Emissions from combustion plants	II	10	4	0
F	**6**	Other	III	3	1	0
F		**TOTAL INDUSTRIAL POLUTION AND RISKS**		43	11	0
G	**1**	Noise from industry and other plants which need a Environmental permit	I	14	4	0
G	**2**	Traffic and railway traffic noise	II	4	3	0
G	**3**	Other	III	19	3	0
G		**TOTAL NOISE**		37	10	0
H	**1**	Electromagnetic radiation	II	0	1	0
H	**2**	Other	III	2	1	0
H		**TOTAL ELECTROMAGNETIC RADIATION**		2	2	0
		TOTAL		576	205	11

REPUBLIC OF SLOVENIA

MINISTRY FOR ENVIRONMENT AND PHYSICAL PLANNING

INSPECTORATE FOR ENVIRONMENT AND PHYSICAL PLANNING

DU NOVA GORICA – INSPECTION FOR ENVIRONMENT

Statistics 2006 REGIONAL UNIT NOVA GORICA

inspector	**On-site visit**		**provision**					**minor offence**			**proposal**	**reports**	**customers**	**absence**			
	regular	complaint	order written	order verbal	warning	decree	cession	way order	written order	Indictment proposal	Criminal charges	and writings	number	holiday	illness	meeting	education seminar
KOMPARA Erika	89	0	10	0	32	7	8	2	3	0	0	91	88	33	8	4	11
RADOVANOVIČ Marko	113	0	2	0	46	6	5	0	4	0	0	88	90	24	0	11	10
VODOPIVEC Helena	103	0	8	0	35	29	1	1	1	0	0	81	129	29	0	2	17
ŽBONA Boris	61	0	0	2	32	8	0	0	0	0	0	88	125	30	2	40	23
SKUPAJ	366	0	20		145	50	14	3	8	0	0	348	432	116	10	57	61

ENVIRONMENTAL INSPECTORATE SYSTEM IN SYRIA

Compliance and enforcement of regulations for the control of pollution resulting from land-based activities

Syrian Arab Republic
Ministry of Local Administration and Environment
General Commission for Environmental Affairs

Meeting of the Network on Compliance and Enforcement of Regulations for the Control of Pollution Resulting from Land-Based activities

Organized by
WHO / UNEP-MAP

Report on Environmental Inspection Indicators in Syria

Prepared by:

Reem ABED RABBOH
Environmental Engineer, MSc
Director of Water Safety
MAP N.F.P

Greece 24-25/ 10 / 2007

Introduction

Syria is consider amongst countries that its inspection system are not yet mature, and the inspection bodies are also still quite immature and are only just beginning to be in a position to fully exercise a controlling role due to the tasks that appointed in Environmental Law.

Due to the government recognition of environmental issues, the Law for "**Environmental Protection** "had issued as Law No/50/ for the year 2002.

This law is considering as complemented for other laws. It is the mold or container that could involve, interact and integrate with other legal instruments concerning environmental protection.

Although the Law had issued on the year 2002, in which the start of the environmental inspection was elemental and random attempts, but driven back by the desire to enhance the environmental status.

Serious steps to set an inspection system was created when we faced the reality that the task of inspectors was not an easy one, and the magnitude of the inspection actions, as well as environmental controlling process will burden the inspection body according to the huge controlling actions and the number of facilities to be controlled.

Adding to the necessity to build the technical and administrative capacity of indicators, and to set a legal system for the accreditation of inspectors officially.

In the framework of developing the list of inspectors, a committee from the General Commission for Environmental Affairs was established in the year 2004 consist of General Director as a head, and directors as members, to select the appropriate, qualified persons who meet the conditions specified by the Minister, may be sought to give help in the entry of sites defined by GCEA by virtue of task order issued by the minister authorizing them of the inspection right and request the support of police, upon need, to testify the violations related to the law, criteria, specifications, terms and other environmental regulations , Their reports have the capacity of minutes organized by the justice authorities after being attested by the minister

In order to put the law No/50/ into effect, the first warning message had been disseminated in the year 2004 into the crafts of industrial, commercial, services, development, agricultural projects at the national

level, to adapt their situation with environmental provisions during one year from the date of warning.

The installations and activities had been given one year to adapt their situations with the provisions of the law.

Since the Higher Council for Environmental Protection has the authority to extend this period for two additional years as a maximum for any of the installations and activities for justifying reasons, The installations and activities had been given another one year for justifying reasons

An order from Minister of Local Administration and Environment to all Governors had disseminated in the year 2006 to make a comprehensive survey for all industrial activities, and warn them to have formal license from MLAE, in order to set up a database, and to classify all dominated industries, to kick-off with a real inspection at the next stage.

The last extend was issued also on 2006 for those industries who made a positive initiatives and good steps to enhance the situation of the outputs of their industry, that the deadline will be at 24/10/2007 then the inspection process will start for the implementation of the Law.

The inspection process has recently started seriously, but randomly rather than depending on a systematic approach, due to urgent situation of some cases, so, the microfiche of reports is still in its preliminary steps, there is no real statistics till now reflecting the number of inspections conducted and number of enforcement actions issued, but we will try to evaluate some indicators approximately depending on our accumulated experience, using our judgment to assess the compliance situation.

In case of the absence of some data that could be useful to calculate the indicator, we will have some virtual data, which seems to be very near from the reality depending on our sense, experience, and judgment.

A format for inspection report has been prepared; it will be adopted soon.

Indicators for Assessing Inspection and Environmental Situation

1- Inspection Implementation and Sizing:

1.1. Number of Inspectors:

The absolute number of inspectors is not meaningful, but through the next simple indicator we could refer to the volume of inspection body comparing with the optimal size in regard to the population of the country , in order to have an impression about the rate of coverage area by inspectors, taking into account that the target of approximately one inspector per 50 000 inhabitants would seem to enable the inspection system to fulfill its mission.

$$I_1 = \frac{number\ of\ inspectors}{population\ of\ the\ country} = \frac{206}{19000000} = \frac{1}{92000} \leq \frac{1}{50000}$$

The matter that give an impression that the number of inspectors is not enough in regard to the population of the country.

Then, an inspection structure requires a high level of technical competence, thus, an adequate training system could be measured as follows:

$$I_2 = \frac{number\ of\ training\ days\ per\ year}{number\ of\ inspectors} = \frac{15}{206} = \frac{1}{14} \leq 5\ days/inspector/year$$

Taking into consideration that the target of approximately 5 days/inspector/year would seem to guarantee the technical competence of inspectors.

Since our country does not yet possess the internal competencies, we could refer that we have approximately one training course per year provided by compliance assistance institution

$$I_{2bis} = number\ of\ training\ courses\ provided\ by\ compliance\ assistance\ institutions\ per = 1$$

It is essential that inspectors should have a clear idea of their field of investigation. We therefore had calculated all installations that required an environmental permit.

$$I_{1bis} = \frac{number\ of\ inspectors}{number\ of\ industries\ and\ facilities\ requiring\ an\ environmental\ permit} = \frac{206}{60000} = \frac{1}{290}$$

Another indicator could be used to reflect how much we are close to optimal number of inspectors according to the human resources calculation, which is:

$$I_{1ter} = \frac{number\ of\ inspectors}{number\ of\ inspectors\ according\ to\ the\ human\ resource\ calculation\ scheme} = \frac{206}{380} = 55\% \leq 100\%$$

1.2. *Inspection Organization:*

Inspection will never manage to fully control all of the facilities falling under its field of competence. It is thus essential to develop a real action strategy at the wide level of the country. Which ultimately leads to the development of a feasible annual inspection plan that takes into account the available human resources and budget,

We have tried to calculate the need of inspectors due to the amount of facilities requiring an environmental permit, as following:

1- after surveying the industrial facilities that need environmental permit, it was **60000** installations, classified into (High– medium- law) due to the level of pollution.

2- we supposed that the frequency of inspections should be 2 years, then the number of facilities to be controlled per year will be:

(60000/2=30000 per year)

3- we supposed that The moderate time required for each installations is estimated by **3** days, it means that we need **90 000** working day per year.

4- if we suppose that one inspector could work 300 days per year , it means he could cover 100 installation per year, then we could calculate the required number of inspectors as following:

90 000 (working days) ÷ 300 working days per inspector per year= 300 inspectors .

The indicator which reflecting number of required inspectors due to national strategy to the real number of inspector, will be:

$$I_4 = \frac{number\ of\ inspectors\ with\ a\ strategic\ action\ plan}{number\ of\ inspectors} = \frac{300}{206} = 145\% \geq 100\%$$

While, some other calculation for the required inspectors of a yearly operational action plan, which ultimately leads to the development of feasible annual inspection plan that takes into account the available human and financial resources. The next indicator is referring to the number of inspectors due to operational action plan:

$$I_5 = \frac{number\ of\ inspectors\ with\ a\ yearly\ operational\ action\ plan}{number\ of\ inspectors} = \frac{250}{206} = 120\% \geq 100\%$$

2- Measuring Inspection Outputs:

It is necessary to measure the outputs of the inspection, through the next indicators:

2.1. Measuring the remaining tasks of the inspection system

This indicator measures the magnitude of the regulatory work that remains to be carried out within the framework of regularizing operations

$$I_6 = \frac{number\ of\ \ facilities\ having\ an\ environmental\ \ permit}{number\ of\ \ facilities\ to\ comply\ with\ national\ \ s\tan dard} = \frac{36000}{48000} = 75\% \le 100\%$$

From the conclusion of the preliminary survey, it was clear that there are approximately about 48000 of total 60 000 facilities which had to comply with national standard.

36000 installations of the total 48000 had already had an environmental permits, it means that there are about another 12000 installations, which need to have environmental permits.

Taking into consideration that giving environmental permission does not mean that the installation is already comply with the rules of the Law and the national standards, but it could have an extend time to adapt its situation according to the provisions of the law.

2.2. The number of Inspections

In fact, there are two main types of organizations:

- Either the inspection body is entirely devoted to control mission, in this case the target should be about 80%
- Or, the inspection body is assigned two missions: on the one hand, the issuing and the delivery of environmental permits, in accordance with existing legislation, and, on the other, control. In this case, the target should reach at least 20%.

In our country, we do not have a specific inspection body, but the General Commission for Environmental Affairs and its Directorates at local level, all of them include in their structure a number of inspectors from various specialists and background.

$$I_7 = \frac{number\ of\ \ full\ time\ equivalent\ spent\ on\ control\ operation}{number\ of\ \ full\ time\ equivalent\ of\ \ the\ inspection\ body} = \frac{576}{2400} = 24\%$$

Another indicator, which is relevant at the launching of the inspection to ensure the effective implementation of control operations, will be the next indicator:

$$I_8 = \frac{number\ of\ \ inspections\ conducted}{number\ of\ \ full\ time\ equivalent\ of\ \ the\ inspection\ body} = \frac{300}{300}$$

Taking into account that the number of inspections conducted this year 2007 after the deadline of the permission time was about 300 inspections.

2.3. *Measuring Control Consequences*

A non-compliance report that is not followed by administrative or legal sanctions is worse than no report at all, it is thus necessary to determine sanctions at the very start of inspection implementation.
That what had happened in dealing with some installations which were behind a critical environmental situation, where 30 cases of 300 of non-compliance report as total at the national level were submitted to the court to implement sanctions (all of them faced the temporary closing of their installations)

$$I_9 = \frac{number\ of\ \ civil\ and\ cri\min al\ \ sanctions}{number\ of\ \ non-compliance\ report} = \frac{30}{300} = 10\%$$

3- Self-Monitoring and Environmental Management System:

There is no precise number of the installations, which have self-monitoring or environmental management system, but we tried to estimate a number of 120 installations approximately that belongs to the above-mentioned sort of facilities.

$$I_{12} = \frac{number\ of\ \ facilities\ with\ self\ \ monitoring\ or\ environmental\ management\ systems}{number\ of\ \ facilities} = \frac{120}{60000} = 0.2\%$$

4- Measuring Inspection Outcomes and Environmental Regulation:

4.1. Measuring Drinking Water Catchments Protection and Compliance with Requirements for the Collection and Treatment of Urban and Industrial Effluents:

The point here is to measure the effective enforcement of certain regulations that impose input or outcome constraints. In this case, the

share of facilities fulfilling their obligations is simply compared to the total number of facilities:

$$I_{14} = \frac{number\ of\ facilities\ fulfilling\ their\ obligation\ s}{number\ of\ facilities} = \frac{5000}{48000} \approx 10\ \%$$

Taking into account that about 5000 installations were fulfilling their obligations according to the very preliminary survey, which conducted on 2006.

While the next indicator is simply performed, because it is obligatory for any drinking water facility to comply with standards, otherwise water resource could be closed. Then the indicator will be:

$$I_{15} = \frac{number\ of\ drinking\ water\ catchment\ fulfilling\ their\ obligations}{number\ of\ drinking\ water\ catchment} = 100\%$$

In conclusion, the developing of meaningful and dedicated system of indicators is a gradual process, any country will confront with specific difficulties to which it must therefore adapt its approach.
Each stage, once implemented, must represent progress over previous conditions and pave the way for the next stage.

ENVIRONMENTAL INSPECTORATE SYSTEM IN TUNISIA

Compliance and enforcement of regulations for the control of pollution resulting from land-based activities

Rapport National
sur le bilan d'inspection environnementale en Tunisie

Préparé par :Samir KAABI
Expert Contrôleur
à l'Agence Nationale de Protection de l'Environnement
Tunisie

Octobre 2007

La Tunisie a connu, au cours des derrières années,un important développement économiques qui a profité à plusieurs secteurs vitaux essentiellement implantés sur le littoral et autour des grandes agglomérations urbaines.Ce développement économique n'a cependant pas toujours pris en compte la dimension environnementale. Il a généré des rejets polluants sous forme de déchets liquides, solides et gazeux qui ont altéré les ressources naturelles et nui à la qualité de la vie.

Face a cette situation, le besoin d'intégrer la dimension environnementale, en tant qu'élément essentiel dans les options et les orientations du développement, s'est fait sentir de manière urgente contribuant par la même à l'élaboration, au plan national, d'une stratégie de l'environnement à travers l'instauration de mécanisme et d'institutions chargées des questions de l'environnement.

Le contrôle des activités

Conformément au décret 2273-1990 du 25 décembre 1990, portant statut des experts contrôleurs de l'Agence Nationale de la Protection de l'Environnement, ces derniers sont chargés de procéder régulièrement à des opérations de contrôle de toutes les sources de pollution et de suivre l'état de l'environnement sur l'ensemble du territoire tunisien.

Le contrôle systématique

Le contrôle systématique consiste à effectuer un inventaire exhaustif de l'ensemble des activités industrielles, artisanales et de services existant dans une zone industrielle ou territoriale. Il vise essentiellement à :

- Diagnostiquer l'état de l'environnement et déterminer les sources de pollution dans chaque entreprise.
- Evaluer les méthodes suivies pour réduire la pollution et pour la rentabilité des unités de traitement des déchets.
- Assurer le suivi des accords conclus avec l'agence et le suivi des études d'impact sur l'environnement.
- Actualiser les données disponibles auprès de l'agence.
- Prélever des échantillons, suivre les résultats d'analyse et constater les infractions contre l'environnement.
- Centraliser les données relatives à l'environnements dans chaque zone d'intervention.

Le contrôle sectoriel

L'ANPE mène régulièrement des campagnes de contrôle dans certains secteurs vitaux visant essentiellement à établir des relevés concernant la situation de l'environnement dans un

secteur déterminé afin d'identifier les causes de la pollution et d'en évaluer l'importance parmis ces secteurs : l'industrie de transformations et l'industrie extractrice .

Le contrôle instantané

Le contrôle instantané vise à traiter les plaintes parvenues à l'Agence des différentes entreprises et associations non gouvernementales ainsi que des citoyens,d'intervenir d'urgence lors de la survenance d'un accident de pollution et d'enquêter sur les conditions propres à chaque accident en vue de déterminer la responsabilité de chacun et de participer à l'élaboration des programmes d'intervention, de superviser les opérations visant à limiter l'effet de la pollution et de suivre l'état de l'environnement.

Les sources de pollution

Les sources de pollution sont nombreuses et variées à l'image de la diversité des activités, des matières utilisées et des procédés de fabrication. Il s'agit principalement de déchets liquides et solides, d'émissions gazeuses et de nuisance sonore.

La pollution industrielle sous toutes ses formes constitue une menace directe pour l'environnement et la qualité de la vie. L'agence Nationale de Protection de l'Environnement accorde une grande importance au contrôle de cette pollution en vue d'inciter les industriels à s'équiper en unités de traitement, à les encourager à adopter les procédés de production et les techniques propres et à recycler les déchets liquides et solides.

Tableau 1 : Calcul des indicateurs du système d'inspection pour l'année 2006

		Calcul	Résultat	Cible	Comparaison	Recommandations	Remarque
I_1	nombre d'inspecteurs / population du pays	19 / 9910872	0,000001917 soit un inspecteur par 526.316 habitants	2 inspecteurs pour 50000 habitants	Plus que dix fois inférieure à la cible	augmenter le nombre d'inspecteurs, pour augmenter I1, On peut aller jusqu'à 200 experts contrôleurs	Ce nombre va augmenter prochainement
I_{1bis}	nombre d'inspecteurs / nombre d'installations nécessitant l'obtention d'un permis environnemental	19/9500	0,002				Le dispositif législatif tunisien parle d'étude d'impacts sur l'environnement et non d'autorisation
I_{1ter}	nombre d'inspecteurs / nombre d'inspecteurs théoriques selon le plan de calcul des ressources humaines			100%		Classification des unités industrielles en trois classes selon le niveau de pollution pour estimer le nombre théorique des inspecteurs	
I_2	nombre de jours de formation par an / nombre d'inspecteurs	38	2	5	inférieur à la cible	augmenter cet indicateur	
I_{2bis}	nombre de sessions de formation par les institutions internationales par an	0	0				

I_3	crédit de fonctionnement / masse salariale						Les moyens de fonctionnement (coûts des analyses des échantillons) représentent 12 % de la masse salariale des inspecteurs
I_4	Nombre d'inspecteurs ayant un plan d'action stratégique en vigueur / nombre total d'inspecteurs	19/19	1	100%	parfait		Tous les inspecteurs ont un plan de travail élaboré à direction centrale sur la base de l'historique des différentes unités (PV, contrat programme,,,)
I_5	Nombre d'inspecteurs travaillant en application d'un plan d'action opérationnel / nombre total d'inspecteurs	19/19	1	100%			
I_6	nombre d'installations ayants un permis respectant la réglementation environnementale / nombre d'installations devant en posséder un	8990/9500	0,94				On se réfère au nombre d'avis favorables concernant les études d'impact sur l'environnement
I_7	nombre d'équivalents temps plein passés en opération de contrôle / nombre d'équivalents temps plein du corps d'inspection	143/200		71 %: Le corps d'inspection est consacré aux missions de contrôle			Sur 365 jours (1 an), il y' 104 jours de repos hebdomadaire, 30 jours de congé annuel, 15 jours de jours fériés, 16 jours de congés d'indisposition : le nombre d'équivalent temps plein est donc égal à 200 jours.

I_8	nombre d'inspections totales annuelles / nombre d'équivalents temps plein du corps d'inspection	6963/3800	1,83	Pour 2006, l'objectif était d'inspecter 7986 (I8= 2,1)	L'objectif était atteint à 87 %		
I_9	nombre de suites (administratives ou judiciaires) / nombre de contrôles non-conformes	425/425	1	100%			
I_{10}	nombre d'infractions par catégories d'installations / nombre total des installations de cette catégories	Voir tableau 2 (ci-dessous)					
I_{11}	montant des pénalités par an / nombre d'inspections relevées par an	146570/6963	21				
I_{12}	I12 = nombre d'installations en autosurveillance ou SGE / nombre d'installations	46/5401	0,0085 soit 0,85 %	100% pour les grandes sociétés	Bien que le nombre est e nombre d'unités industrielles certifiées est en augmentation vu la nécessité impliquée par le marché extérieur,,,		On a considéré le nombre d'établissements inscrits sur le site de l'Agence de Promotion de l'Industrie
I_{13}	% de la réduction pour chaque paramètre défini	L'objectif visé par l'inspection environnementale est de réduire de 100 % tout dépassement suite aux analyses des échantillons d'eau usée prélevés (conformité)					

I_{14}	nombre de stations d'épuration en conformité par rapport à leur arrêté d'autorisation / nombre de stations	86/95	0,90	100%	90 % des stations d'épuration sont conformes aux normes de rejet	intervenir en amant (inspection des rejets industriels) pour réduire les charges massiques et volumiques de pollution arrivant aux STEP	le dépassement des Normes de rejet pour 9 STEP n'est pas permanent; il est du au dépassement de la capacité d'épuration (en volume et en masse), il est aussi influencé par les éventuels dépassements des normes de rejet par les unités industrielles branchées au réseau public d'assainissement
	investissements réalisés depuis l'année 2000 / investissement à réaliser pour mettre toutes les installations en conformité depuis 2000	15500/318250	0,049		4,9 %	Le montant de l'investissement à réaliser est celui qui a été estimé par le plan d'action national élaboré en 2005 dans le cadre du PAS	

Tableau 2: calcul de I_{10} (2006)

I10 =nombre d'infractions par catégories d'installations / nombre total des installations de cette catégories

Catégorie d'activité	Nombre d'unités (site API)	Nombre d'infractions	I_{10}
Industries Agro Alimentaires	1594	161	0,101
Industries Chimiques	351	30	0,085
Industries Métalliques Mécaniques et Electriques	1086	9	0,0080
Industries de Matériaux de Construction de Céramique et de Verre	718	55	0,077
Industries de Textiles Habillement et cuir	1529	29	0,0189
Divers (industries divers + autres diverses activités polluantes)	2708	141	0,052
Total	7986	425	0,056546

ENVIRONMENTAL INSPECTORATE SYSTEM IN TURKEY

Compliance and enforcement of regulations for the control of pollution resulting from land-based activities

INDICATOR BASED COUNTRY REPORT OF TURKEY FOR COMPLIANCE AND ENFORCEMENT OF ENVIRONMENTAL LEGISLATION

1. Scope and Purpose

This study is basically targeted to serve reaching the main target of improving compliance and enforcement of legislation for pollution control resulting from land-based sources and activities, in order to protect human health and the environment, following the decision of the Contracting Parties taken at the Extraordinary Meeting held in Montpellier in 1996, based on the Protocol for the Protection of the Mediterranean Sea Against Pollution from Land-Based Sources and Activities (LBS Protocol) adopted in 1980 and amended in 1996 within the framework of the Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean (Barcelona Convention) adopted in 1976 and amended in 1995 and Mediterranean Pollution Monitoring (MED POL) Programme established in 1975 under the United Nations Environment Programme (UNEP)/Mediterranean Action Plan (MAP).

To this target, the application and testing of performance tools such as a minimum set of indicators to assess the conditions regarding the situation on compliance and enforcement of regulations for national enhancement of the inspection system in Turkey is the main aim here.

Therefore, this report aims to provide tools for developing and implementing output and outcome indicators for monitoring the national inspection system in Turkey by using indicators that are relevant and easy to implement without prescribing the state, structure or objectives of national inspections which had been submitted to the Meeting of the Network on Compliance and Enforcement of Environmental Legislation in 2005 within the Barcelona Convention, LBS Protocol and MED POL Programme framework under UNEP/MAP.

Although, this paper can only be a starting point to serve these target and objectives amongst the various stages of the environmental regulatory cycle-regulation, inspection and enforcement-, nevertheless, the intention is to establish a basis on which to assess the effectiveness of national inspections for ensuring compliance and enforcement of the national environmental legislation in Turkey which is a party to the Convention and It’s Protocols.

2. Human Resources Calculation Scheme

Human Resources Calculation Scheme			
Calculation of Number of Inspectors			
Polluting Level	**High**	**Medium-Low**	**Total**
Number of Facilities	3500 IPPC	271.490 SMEs	274.990
Frequency of "On Site Inspection"	2	0.35	
Frequency of "Administrative Inspection"	3	0.60	
Days per "On Site Inspection"	2	0.75	
Days per "Administrative Inspection"	1	0.35	
Total men x days	24.500	128.279	152.779
Effective Days per Inspectors	150	150	150
Number of Inspectors Required	**163**	**855**	**1018**

Additional Staff Requirement		
Management	1 management level / 10-15 inspectors	68
Number of Inspectors Required		1018
Administrative Staff	On average 4-5 inspectors to 1 administrative support	203
Judicial Support	On average 1 judicial person to 30 inspectors	34
Staff Turn Over	On average to 10% turn over	102
Total		407

Total of Inspectors and Additional Staff	**1425**

3. Inspection Organisation

Theme	Answer
Department or Region Name	
Inspection Organisation	
When was created the local inspection body?	Local environmental inspection bodies in 81 Provincial Directorates of MoEF have been completed in 2000.
Will the organisation evolve during the next year? (Yes/No)	Yes (There is a continuous development)
Name of the Person in Charge	There are local environmental inspection bodies in 81 Provincial
Title of the Person in Charge	
Phone	

Fax	Directorates of MoEF
E-Mail	
Address	
Date of Nomination of the Person in Charge	
Priorities Definition	
Is there a strategic action plan? (Yes/No)	Yes but only for training
Is there a yearly operational action plan? (Yes/No)	Yes but in MoEF and 5 Provincial Directorates of MoEF trained so far
Is there a control plan? (Yes/No)	Yes in Provincial Directorates of MoEF
Legal Organisation	
Number of working meetings between the public prosecutor and the inspection body in 200X?	Not applicable
Do some people of the inspection body participate to the hearing of minor offence? (Yes/No)	No
Information Systems Organisation	
Has the inspection body a geographic information system?	No
Has the inspection body an internet site?	No but it will have in 2007
If so, address of the internet site	

Comments:

1. Training Organisation:
- 5 Provincial Directorates of MoEF which are Adana, Ankara, Bursa, Izmir and Tekirdag in 2006
- 10 Provincial Directorates of MoEF in 2007
- 15 Provincial Directorates of MoEF in 2008
- 51 Provincial Directorates of MoEF in 2009

2. Inspection Inventory:

Only inspections with sanctions are submitted to MoEF by Its Provincial Directorates.

4. Activity Report

Region										
Category of Project	**Temporary Authorizations**		**Authorizations**			**Declarations**			**Specific Prescri-ptions Order**	**Total**
	Granted	**Refused**	**Granted**	**Regulari-zations**	**Refused**	**Granted**	**Regulari-zations**	**Refused**	**Granted**	
Describe here each category of projects that require an environmental permit										
Wastewater Treatment Plant Projects			492							**492**
Submarine Outfall Projects			92							**92**
Waste Reception Plant Projects			77						21	**98**
Fish Farm Projects			65		32			161		**258**
Manila Waste Separation Recovery Plant Projects	129		153							**282**
Solid Waste Regular Dumping Projects			57							**57**
Waste Accumulator Recovery Plant Projects			11							**11**
Waste Herbal Oil Recovery Plant Projects	16									**16**
Waste Oil Recovery Projects			16							**16**
Hazardous Waste Recovery Projects	66		21							**87**
Total	**211**		**984**		**32**			**161**	**21**	**1409**

General Information	
Number of Training Days	22
Number of Inspections Conducted in 2006	1085 inspections with sanctions given by MoEF and It's Provincial Directorates (Approximately 5000 in total)
Amount of Fines in 2006	15.134.196 YTL=9.062.393 Euro/1085 ins.
Inspection Activity	
Total Number of Authorisations Given in 2006	
Total Number of Authorisations Examined in 2006	
Urban and Industrial Treatment Facilities	
Number of Treatment Facilities Fulfilling Their Obligations	492 wastewater treatment plants in total of which 140 authorised by MoEF and 352 authorised by It's Provincial Directorates
Treatment Facilities With an Environmental Permit	

5. Inspection Plan

Name of the Department	
Region	
Had the Inspection Body a Control Plan in 200X? (Yes/No)	Yes in Provincial Directorates of MoEF

Inspection Plan	**Non-Scheduled Inspections**	**Scheduled Inspections**	**Number of Non-Compliance Reports**	**Number of Administrative or Legal Sanctions**	**Time (in menXdays) Spent on Control Operation**
Number of Inspections of Industrial Facilities Conducted	5425 in 2006	25 in 2006	1110 in 2006	1085 in 2006	No Information

6. Discussions and Conclusion

By keeping in mind that developing a meaningful and dedicated system of indicators is necessarily a gradual process, difficulties confronted to adapt this approach in Turkey will be:

- Lack of an integrated one window approach in permitting and inspection systems
- Lack of a strategic action plan and regular records in permitting and inspection systems
- Lack of an independent inspection institution

To overcome these difficulties it is suggested to:

- Adapt an integrated one window approach to permitting and inspection systems
- Prepare a strategic action plan and regular records in permitting and inspection systems
- Establish an independent inspection institution

As a result, this study needs to be followed by a pilot project on the implementation of indicators with capacity building of inspectors and inspectorates to maximise their usefulness.

ANNEX V

Enforcement measures

Enforcement measures relating to non-compliance with:	Number of inspections	Number of non-compliance cases	Number of fines issued and total amount	Number of suspensions of permits	Number of other enforcement measures	Number of clean measures implemented	Remarks / Comments
National legislation and regulations implementing the Protocol							
Specific conditions attached to permits							
Provisions regarding dumping in contravention to the Protocol							