

6th Meeting of the Focal Points of the
Regional Marine Pollution Emergency
Response Centre for the Mediterranean
Sea (REMPEC)

REMPEC/WG.21/5
10 February 2003

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Malta, 12-15 February 2003

Agenda Item 5

MEDITERRANEAN TECHNICAL WORKING GROUP

Note by the Chairman

In accordance with the recommendation of the Eleventh Ordinary Meeting of the Contracting Parties to the Barcelona Convention (UNEP(OCA)MED IG.12/9), the Meeting of REMPEC's Focal Points held in Malta in October 2000 decided to establish the Mediterranean Technical Working Group (MTWG) with the following objective:

"... to facilitate the exchange of technical data and other scientific and technological information aimed at assessing the nature, exposure and risks from accidental marine pollution and promoting remedies for such pollution in the Mediterranean Sea area".

The Meeting also agreed that the lead country for the biennium 2000/2002 would be Italy and appointed Dr. Ezio Amato as Chairman of MTWG.

The items of work for the MTWG were established by the Meeting as follows:

- an inventory of oil traded in Mediterranean ports or terminals;
- an inventory of bulk chemicals traded in Mediterranean ports or terminals;
- an inventory of the national legislation for the implementation of MARPOL 73/78, specifically article 4 of the Convention on the prosecution of violations concerning illegal discharges.

Participants

During the biennium, REMPEC encouraged all Contracting Parties to the Barcelona Convention and appropriate International Organizations and entities to join the correspondence group. The following delegates were appointed in the MTWG:

- M. Pierre Bouchet, Direction des Ports Service de la Marine, Monaco;
- M. Mohamed Dahhou, Département de l'Environnement, Ministère de l'Habitat, Maroc;
- Mr. Guido Ferraro, European Commission, D. G. Environment, Civil protection Unit. Brussels, Belgium.

- Mr. Yechiel Ga'ash, Ministry of Environment, Marine and Coastal Environmental Division, Israel;
- M. Chaabane Khelifa, Direction Générale de l'Energie au Ministère de l'Industrie, Tunisie;
- Mr. Loizos G. Loizides, Ministry of Agriculture, Natural Resources and Environment, Department of Fisheries and Marine Research, Cyprus;
- Mr. Antony Mallia, Adviser in the Ministry for the Environment, Malta;
- M. Daniel Silvestre, Secrétariat Général de la Mer, Service du Premier Ministre, France.

Activities

During the biennium, the MTWG activities have been focused on the choice of suitable inquiry strategies and the collection of data.

With regard to the maritime transport of HNS in the Mediterranean Sea, the Italian Central Institute for Applied Marine Research (ICRAM) has carried out a pilot research aiming at providing the MTWG with an on-going experience and with suitable tools to pursue the assigned tasks (Annex I).

Among the activities carried out under this pilot research were: (i) the definition of the relevant data and (ii) the identification of sources in the Italian territory.

The experience gained looking into the Italian situation gave suggestions that were transmitted to the Group and to REMPEC by correspondence.

In order to facilitate the gathering of reliable data and taking into account the need for a common starting point, data related to year 1999 were looked for. Data collection forms were elaborated and provided, on request, to some MTWG's participants.

Delegates provided information concerning the established terms of reference.

Results

The results achieved so far could be summarized as follows:

- Monaco provided information that HNS are not being traded to or from its waters;
- the pilot research carried out in Italy provided the following remarks, results and suggestions:
 - to work out models for the analysis of the risks related with the trades of HNS in the Mediterranean ports, quantitative data are needed;
 - HNS in transit in ports of call before their final destinations have to be considered a source of risks for the area likewise the quantities traded in that ports;
 - for each national port, harbour and terminal, the variables to be collected from the available sources should be the quantities (expressed in tons) of crude oil, refined products and chemicals handled and transited in a three-months period;
 - considering their large number, attention has to be focused to the chemicals indicated by GESAMP hazard profile as susceptible of bioaccumulation and tainting (category A) and/or damage to living resources (category B) and/or reduction of amenities (category E);

- both for crude oil and refined products, the commercial denomination was considered precise enough for their univocal identification. On the contrary, due to the large use of synonymous, to identify chemicals the C.A.S. and/or the U.N. number is requested;
 - the lack of already established centralised data collection entities, the heterogeneity of the data recorded by various entitled authorities along with the variety of the products itself and the economical implications, particularly with regard to HNS other than crude oil, need great efforts and a careful approach in dealing with the matter;
 - thanks to the collaboration offered by the majority of the public and private entities contacted, two hundred records of crude oil quantities, two hundred seven of refined products and two hundred four of bulk chemicals traded during 1999 in the forty six inquired Italian ports, were collected;
 - organised in electronic sheets, these data were elaborated to produce, also, preliminary lists of HNS handled in Italian ports ranked by quantities and a list of the inquired Italian ports ranked by amount of HNS traded;
 - the merging of data about quantities of HNS traded, in and out each port of call, with their surrounding coastal area environmental and socio-economic features by means of a GIS, could provide strong indications about the needs for the prevention of accidental marine pollution and for the building-up of tools and strategies for rapid and efficient response.
- Delegates in the MTWG provided information about the national legislation for the implementation of article 4 of the Convention MARPOL 73/78 with regard to the prosecution of violations concerning illegal discharges, as follows:
 - in France, articles from L. 218-10 to L. 218-31 of the French *Code de l'Environnement* and the *Loi n° 83-583 du 5 juillet 1983* (amended by *Loi n° 90-444 du 31 mai 1990*), implement MARPOL 73/78 Convention, including sanctions against illicit discharges. These have been increased to a maximum fine of FF 4,000,000 (€ 600,000.00) and four years of imprisonment by *Loi n° 2001-380 du 3 mai 2001*;
 - in Italy, the Italian Parliament, through the adoption of two ratification laws concerning the 1973 Convention and its 1978 Protocol, *Legge 29 settembre 1980, n. 662 (Supplemento Ordinario alla Gazzetta Ufficiale n. 292 del 23 ottobre 1980)* and *Legge 4 giugno 1982, n. 438 (Supplemento Ordinario alla Gazzetta Ufficiale n. 193 del 15 luglio 1982)*, implement the International Convention MARPOL 73/78 in the Italian legal system. Italian National framework regulations concerning inspections, the detection of breaches, the administrative structure and the penalties regime in the field of maritime law are contained in the maritime code approved by *Regio Decreto 30 marzo 1942, n. 327 (Edizione Speciale della Gazzetta Ufficiale n. 93 del 18 aprile 1942)*. The prevention of pollution of the marine environment from ships and related penalties are regulated through a special law, *Legge 31 dicembre 1982, n. 979 (Supplemento Ordinario alla Gazzetta Ufficiale n. 16 del 18 gennaio 1983)*;
 - in Monaco, the *Code de la Mer (Annexe au journal de Monaco n° 7.335 du 24 avril 1998, livre 2, titre 2, chapitre 1, section 3)* includes provisions on breaches related to article 4 of MARPOL 73/78.

Comments

The results achieved so far confirm the challenging nature of the first task assigned to the new established Technical Group but show, as well, the relevance of the pursued goals in the framework

of the cooperation among Mediterranean Countries in the field of the prevention and response to accidental marine pollution.

The joining of more delegates to the MTWG is considered essential for its life and the scheduling of *ad hoc* meetings is strongly recommended; the unavailability to all parties of internet facilities slows the on going activities while, to permit a more close and efficient cooperation, the opportunities to exchange experience and views have to be increased.

As far as the inventory of National legislation is concerned and considering that the implementation of article 4 of MARPOL 73/78 covers a wide range of issues, it could be beneficial for the prosecution of work to further detail the request of legal information to the Parties. To this end, a detailed format based on selected priorities could be approved by the MTWG and circulated to the Parties.

More in general, it would be beneficial for the MTWG's aims achievement in the next biennium to utilize the experience gained in order to address a common effort to feed, improve, update and exploit the growing-up database to build up a tool for a safer and cleaner Mediterranean Sea.



ANNEX 1

MEDITERRANEAN TECHNICAL WORKING
GROUP (MTWG)

Biennium 2000/2002



Report for Italy

E. Amato, T. Chieruzzi, P. Giordano

February, 2003

Sommario

Il *Mediterranean Technical Working Group* (MTWG) è stato istituito dai *Focal Point* del REMPEC (IMO/UNEP *Regional Marine Pollution Emergency Response Centre for the Mediterranean Sea*) riunitisi a Malta tra il 25 e il 28 ottobre 2000 secondo una specifica raccomandazione espressa dalle Parti Contraenti la Convenzione di Barcellona (XI riunione ordinaria). Scopo principale del MTWG è il facilitare lo scambio, tra i paesi mediterranei, di dati e informazioni tecnico-scientifiche che possano costituire una solida base su cui sviluppare strategie e mezzi atti a prevenire e fronteggiare gli inquinamenti marini accidentali. Per il biennio 2000 – 2002, compito del gruppo tecnico è stato l'acquisire dati e informazioni inerenti il traffico marittimo mediterraneo di prodotti petroliferi e chimici alla rinfusa e le norme delle legislazioni nazionali che attuano l'art. 4 della Convenzione MARPOL 73/78 con particolare riferimento al sanzionamento degli scarichi illeciti. La guida del MTWG è stata affidata all'Italia con la presidenza del Dr. Ezio Amato dell'Icram. Nel biennio di esistenza, il Gruppo ha indirizzato le proprie attività all'individuazione di strategie d'inchiesta adeguate e alla raccolta di dati.

Ad oggi, oltre all'Italia, otto *Focal Points* (Cipro, Francia, Israele, Malta, Marocco, Monaco, Tunisia) e la Commissione Europea hanno designato un referente quale membro del MTWG.

In relazione agli inventari di prodotti, l'ICRAM ha supportato la Divisione Prevenzione e lotta all'inquinamento marino del Ministero dell'ambiente e del territorio, *focal point* REMPEC, realizzando un'indagine pilota volta a fornire il MTWG di un'esperienza in corso che ha consentito di testare la praticabilità ed efficacia della metodologia e degli strumenti adottati per soddisfare il mandato ricevuto.

Le attività svolte hanno comportato ricerche e consultazioni per l'elaborazione di linee guida e di schede di acquisizione dati. Per la validazione di questi strumenti e della metodologia scelta si sono interpellate le fonti istituzionali e, sulla scorta dei riscontri ottenuti, si sono adeguati gli strumenti e la metodologia d'indagine.

Riscontrata l'indisponibilità di fonti che rilevassero e organizzassero dati, adeguati e omogenei, relativi all'insieme dei porti nazionali, in particolare per i chimici, sono stati identificati i principali porti di movimentazione delle merci d'interesse e quindi



interpellate le fonti in grado di fornire dati idonei a quantificare la movimentazione di HNS nell'anno 1999.

Le risposte ottenute hanno consentito di rilevare che i dati raccolti su quarantasei porti italiani non permettono di considerare alcune variabili ritenute d'interesse. Per la costituzione di una banca dati idonea all'analisi dei rischi connessi al traffico marittimo di HNS in Mediterraneo, le variabili da considerare sono le quantità di prodotti petroliferi e chimici, rilevate in entrata, in transito e in uscita dai singoli porti e terminali su base trimestrale. In questo modo, la somma delle quantità di ciascuna delle categorie indagate rilevate in entrata o uscita per i singoli porti, non è rappresentativa delle quantità di merci effettivamente imbarcate o sbarcate nei porti nazionali ma può essere superiore perché un singolo carico può essere computato più volte se transita per uno o più scali prima della sua destinazione finale. Questa metodologia di acquisizione di dati consente, invece, di indagare il rischio rappresentato per ciascun porto dai prodotti che vi si movimentano o vi transitano.

L'indagine pilota ha permesso di rilevare che i dati disponibili non includono, nella generalità dei casi, dettagli sui carichi in transito, sulle modalità di trasporto (sfusi o in colli) e sulla classificazione secondo l'*IMO-International Maritime Dangerous Goods Code (IMDG Code)* dei chimici e sulla ripartizione temporale delle spedizioni; i carichi in transito sono da considerare una sorgente di rischio per il tratto di mare interessato dallo scalo al pari dei carichi movimentativi e la stagionalità appare rilevante in rapporto allo stabilirsi, nel bacino, di condizioni climatiche suscettibili d'influenzare sia il comportamento di un prodotto sversato sia la capacità di risposta.

I dati rilevati grazie alla collaborazione delle istituzioni pubbliche e private interpellate, hanno riguardato le quantità di grezzi, prodotti petroliferi e chimici rilevate in entrata e in uscita dai singoli porti, classificate secondo la loro denominazione commerciale e identificate, nel caso dei prodotti chimici, dal numero ONU o CAS.

È stato così possibile costituire le basi di una banca dati, organizzata mediante un *software* di ampia diffusione, contenente duecento record di quantità di grezzi, duecentosette di prodotti petroliferi e duecentoquattro di chimici che, nel 1999, sono state movimentate nei quarantasei porti e terminali italiani considerati. L'analisi preliminare dei dati consente di classificare, in ordine di rilevanza quantitativa, le aree costiere interessate dalla movimentazione di HNS e di stabilire una priorità



circa quali sostanze e prodotti rappresentino, in ragione delle quantità movimentate via mare, un potenziale fattore di rischio ambientale.

La possibilità di mettere in relazione, mediante un sistema G.I.S., questi dati con le caratteristiche ambientali e socio-economiche delle aree costiere interessate dalla presenza di porti o terminali dove sono movimentati HNS, potrà contribuire a stabilire una gerarchia sia tra gli HNS sui quali concentrare prioritariamente le attività volte alla prevenzione e allo sviluppo di capacità di risposta, sia tra le aree di movimentazione, in funzione del rischio ambientale.

L'esperienza acquisita consente di disporre di una base comune di conoscenze su cui sviluppare il programma di lavoro del MTWG per il prossimo biennio.



Introduction

In accordance with the recommendation of the Eleventh Ordinary Meeting of the Contracting Parties to the Barcelona Convention (UNEP(OCA)MED IG.12/9), the Meeting of REMPEC's Focal Points held in Malta in October 2000 decided to establish the Mediterranean Technical Working Group (MTWG) with the following objective:

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During the biennium, the MTWG activities have been focused on the choice of suitable inquiry strategies and the collection of data.

With regard to the inventories of oil and bulk chemicals traded in Mediterranean ports and terminals, the Central Institute for Applied Marine Research (ICRAM) has supported the Division IV "Prevention and fight against marine pollution" of the Italian Ministry of the environment, REMPEC's focal point, carrying out a pilot research aimed at providing the MTWG with an on-going experience and with suitable tools to pursue the assigned tasks.

Task specification

The first step of the exercise has been the definition of the relevant data and the identification of data sources in the Italian territory.

In order to facilitate the gathering of reliable data and taking into account the need for a common starting point, HNS traded during 1999 were looked for. Bearing in mind the objective of to provide the MTWG with a data base suitable to work out models for a risk analysis of the HNS maritime trade in the Mediterranean, for each national port, harbour and terminal, were considered data of interest the quantities (expressed in tons) of crude oil, refined products and chemicals handled and transited during one year. This choice was also based on the consideration¹ that the HNS in transit in ports of call before their final destinations have to be regarded as a source of risks for the area likewise the quantities traded in that ports.

In doing so, the sum of the incoming, outgoing and in transit quantities of each HNS, once gathered and organised, is not representative of the real quantities shipped in the Mediterranean Sea but could be higher. These data, instead, could be useful in a risk analysis aimed at the improvement of the prevention and response means in case of accidental pollution.

A three-months period subdivision of the quantities handled or transited in each port could, significantly, improve the tool taking also into account the seasonality, quite important in considering the Mediterranean climate.

Both for crude oil and refined products, the commercial denomination was considered precise enough for their univocal identification. On the contrary, due to the large use of synonyms, to identify chemicals the C.A.S. and/or the U.N. number is needed. Considering their large number, attention has to be focused to the chemicals indicated by GESAMP hazard profile as susceptible of bioaccumulation and tainting (category A) and/or damage to living resources (category B) and/or reduction of amenities (category E).

About the identification of the data providers, a preliminary inquiry showed,

¹ In accordance with the rules of the International Oil Pollution Compensation Fund that take into consideration the amount of oil shipped in national terminals to calculate, in proportion, the fees that each member has to pay to the Fund.



particularly about chemicals, the lack of already established centralised data collection entities as well as the heterogeneity of the data recorded by various entitled authorities.

The inquiry

Data collection forms were elaborated accordingly, and provided, on request, to some MTWG's participants. The entities and persons contacted in Italy are listed as follows:

- AIPAM - Associazione Ingegneri Periti di Avarie Marittime;
- Associazione Nazionale Chimici di Porto;
- ASSOCOSTIERI, Associazione Nazionale Depositi Costieri Olii Minerali;
- ASSOPORTI, Associazione Porti Italiani;
- Autorità Portuale di La Spezia, Ufficio marketing;
- Autorità Portuale di Palermo, Ufficio statistiche;
- Autorità Portuale di Savona-Vado, Struttura Studi e Statistiche;
- Autorità Portuale di Trieste, Ufficio statistiche;
- Capitaneria di Porto di Pescara;
- Comando Generale del Corpo delle Capitanerie di Porto:
 - 3° Reparto - Piani e Operazioni - Servizio Telerilevamento Ambientale Istituzionale, STAI - Servizio HAZMAT;
 - 6° Reparto - Sicurezza della Navigazione, sede di Genova, Ufficio tecnico della sicurezza della navigazione merci pericolose;
 - 7° Reparto - Servizio Informatico Tecnologie Avanzate - Sistema di rivelazione statistico COGESTAT;
 - Reparto Ambientale Marino presso il Ministero dell'ambiente e della tutela del territorio;
- CONFITARMA, Confederazione Italiana Armatori;
- ISTAT, Istituto Nazionale di Statistica, Servizio per la Navigazione Marittima;

- Ministero dell'ambiente e della tutela del territorio, Direzione per la difesa del mare;
- Ministero delle Infrastrutture e Trasporti, Dipartimento per la Navigazione e il Trasporto Marittimo e Aereo, Direzione Generale delle Infrastrutture per la Navigazione Marittima interna:
 - Autorità Portuale di Bari, Brindisi, Cagliari, Genova, Livorno, Messina, Napoli, Ravenna, Venezia;
 - Capitanerie di Porto di Augusta, Crotone, Porto Torres;
 - Ufficio Circondariale marittimo di Oristano e Gela;
 - Ufficio Locale Marittimo di Porto Scuso;
- Unione Petrolifera;
- ENI S.p.A. Refining and Marketing Division;
- API Anonima Petroli Italiana;
- ENEL Produzione;
- EXXONMOBIL Mediterranea and Raffineria di Roma – Fiumicino;
- ERG S.p.A.;
- KUWAIT PETROLEUM ITALIA;
- SARAS S.p.A.;
- S.I.O.T. S.p.A.;
- TOTALFINAELF ITALIA.

Thanks to the collaboration offered by the majority of the public and private entities consulted, two hundred records of crude oil quantities, two hundred seven of refined products and two hundred four of bulk chemicals traded during 1999 in the forty six inquired Italian ports, were collected.

Organised in electronic sheets, these data were elaborated to produce, also, preliminary lists of HNS handled in the inquired Italian ports ranked by quantities (Fig. 1 and Fig. 2) and a list of the ports ranked by amount of HNS traded (Fig. 3).

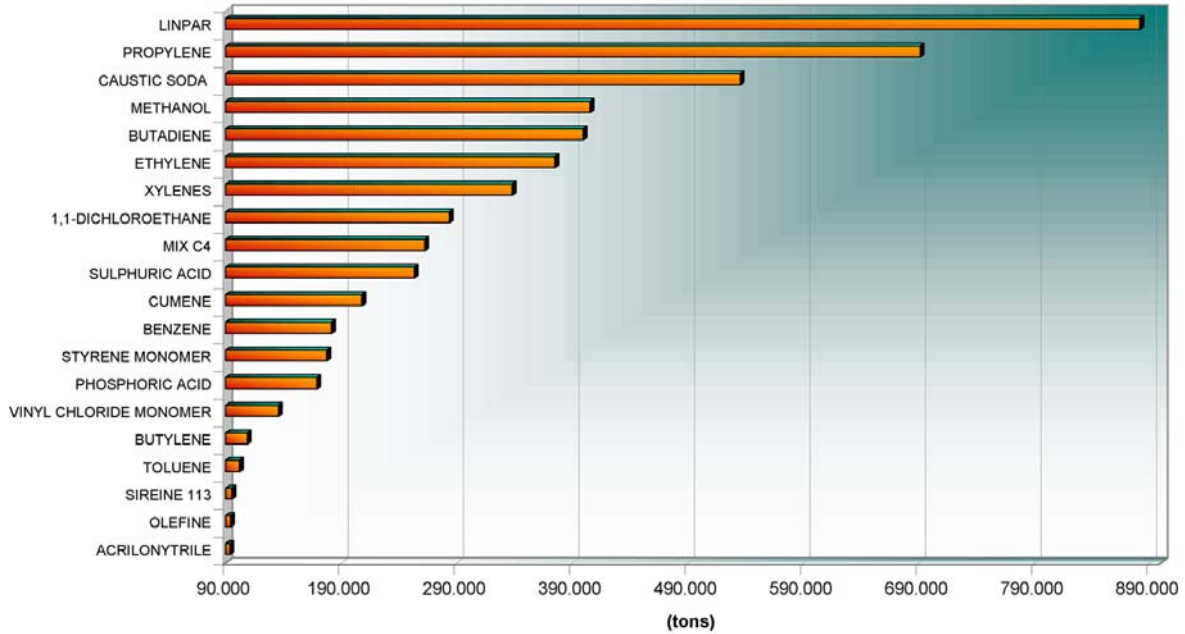


Fig.1: Chemical products traded (> 90,000 tons) in 11 Italian ports during 1999

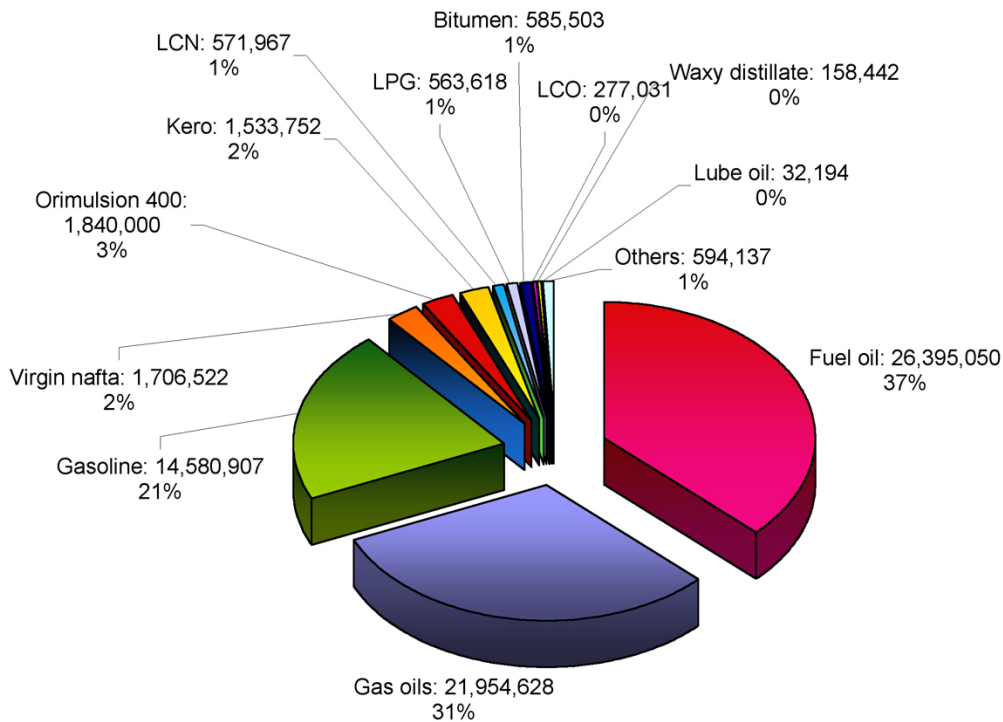


Fig. 2: Refined products (tons) traded in 46 Italian ports in 1999

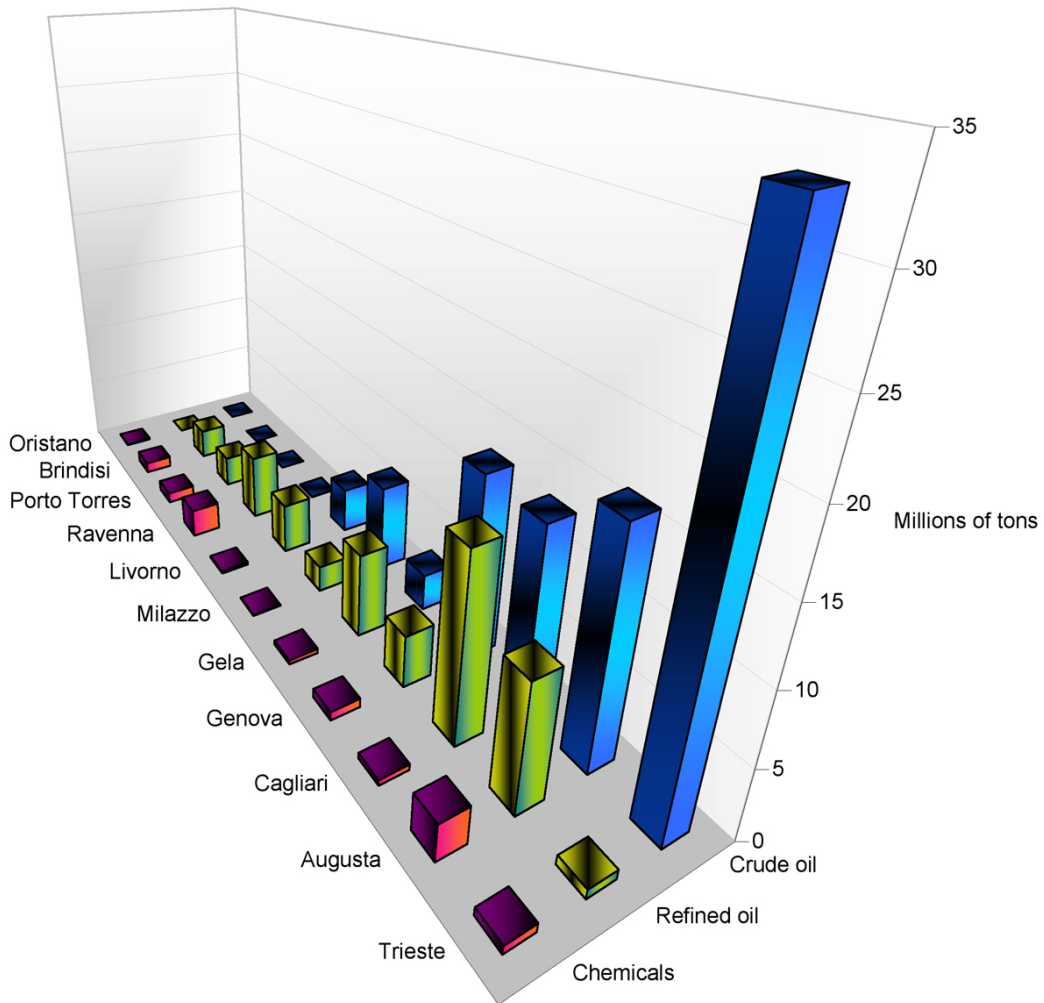


Fig. 3: HNS traded in 11 Italian ports in 1999

About crude oil, the quantities shipped in Italian ports are in the following table:

Port	Tons	Port	Tons
Trieste	32,973,193	Priolo/Augusta	4,785,146
Augusta	16,374,253	Livorno	3,492,547
Genova	13,316,069	Fiumicino	3,417,984
Cagliari/Sarroch	13,066,971	Falconara	3,224,858
Savona-Vado	6,638,714	Taranto	2,748,089
Milazzo	6,518,096	Gela	2,700,693
Venezia	5,078,364	Ravenna	62,250



About the chemical products, the data retrieved from the ports of Augusta, Cagliari and Trieste include considerable amounts of products grouped in an “others” category that has not been possible to split in details. The sum of the different products listed as “chemicals” show that Augusta and Ravenna account for more than the 50% of the total amount of chemicals traded in the inquired ports (Fig. 4).

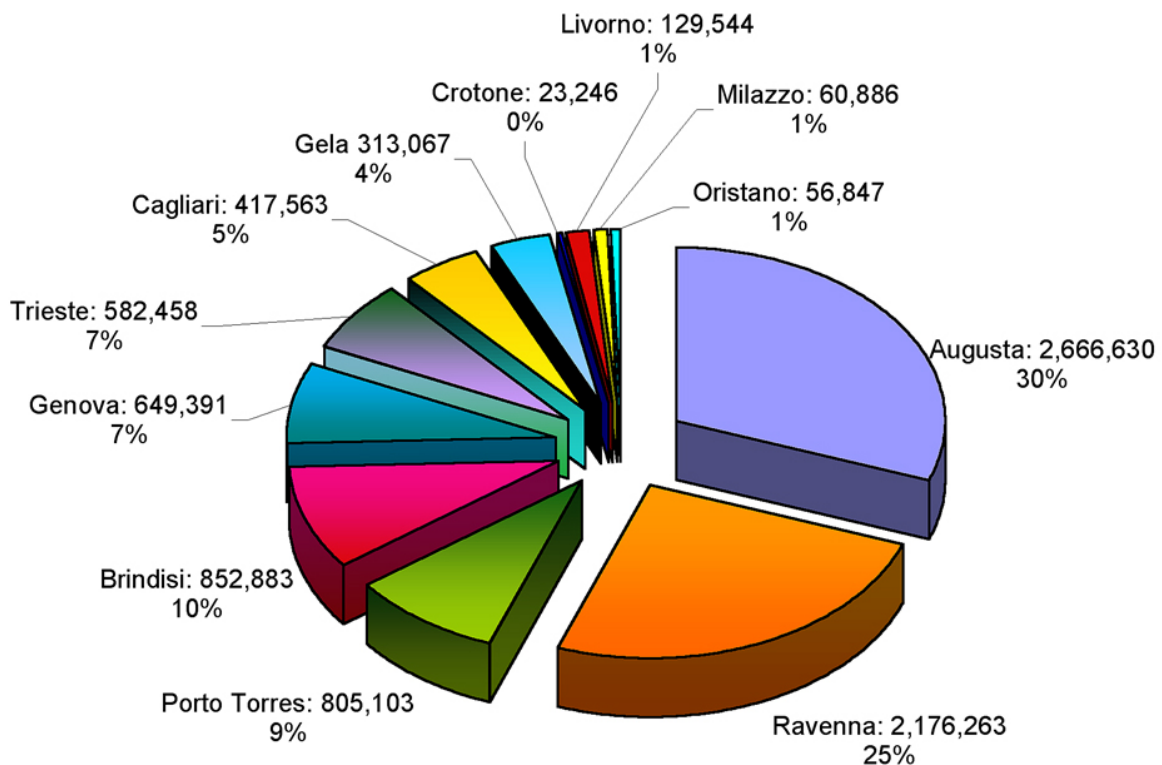


Fig. 4: Quantities (t) of chemical products handled in 12 Italian ports in 1999

Among the chemical products, LINPAR[®], a commercial denomination for different linear paraffines, seems to be the most traded one in Italy, almost entirely in Ravenna (Fig. 5).

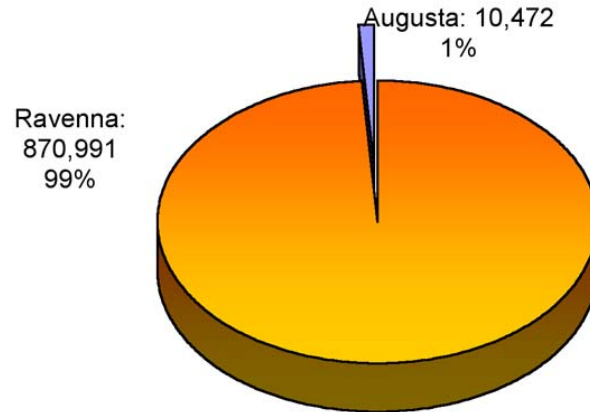


Fig. 5: LINPAR® traded in Italian ports in 1999

In Figures 6, 7, 8 and 9, the distribution in the inquired Italian ports for Propylene, Caustic Soda, Methanol and Sulphuric Acid is shown.

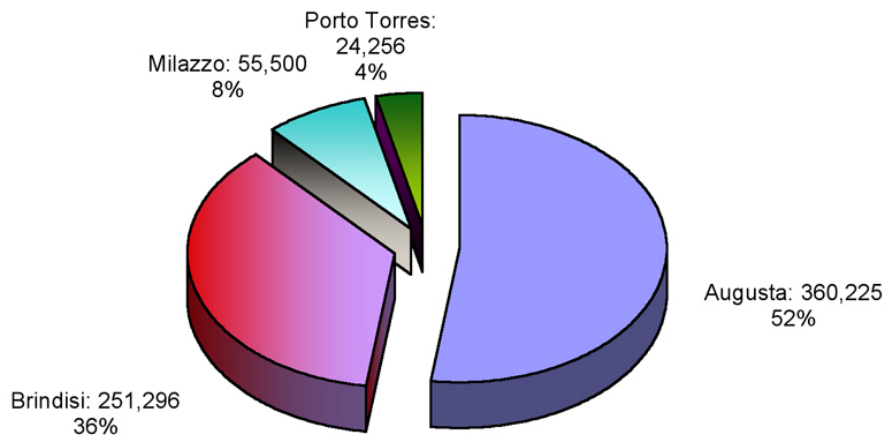


Fig. 6: Propylene traded in Italian ports in 1999

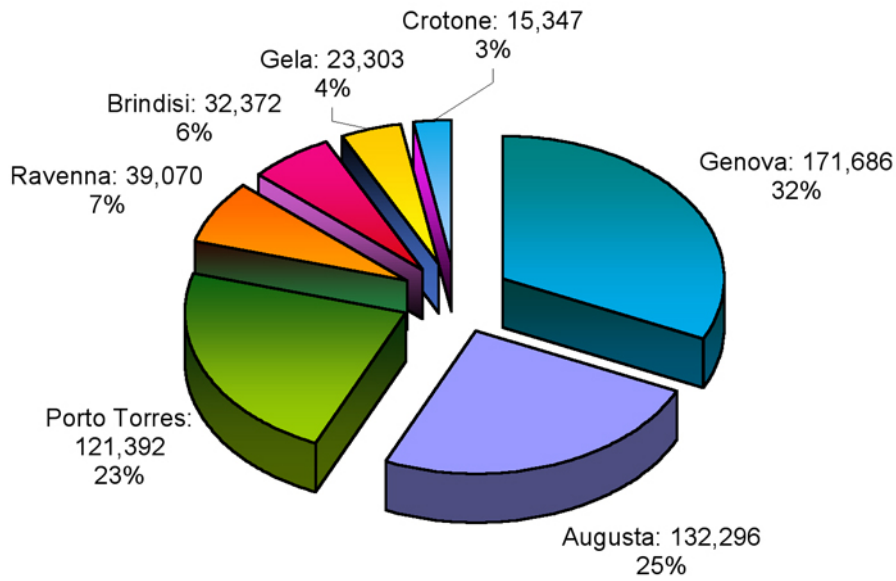


Fig. 7: Caustic Soda traded in Italian ports in 1999

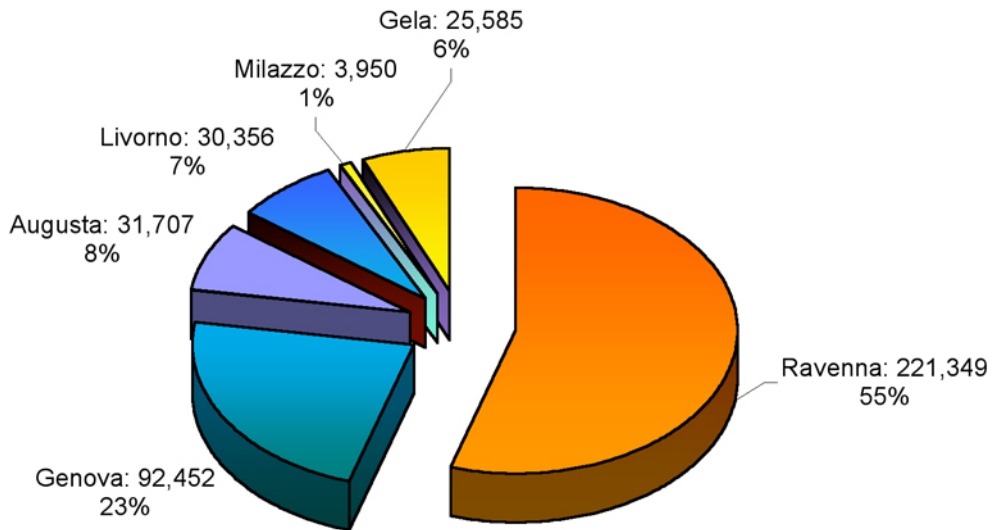


Fig. 8: Methanol traded in Italian ports in 1999

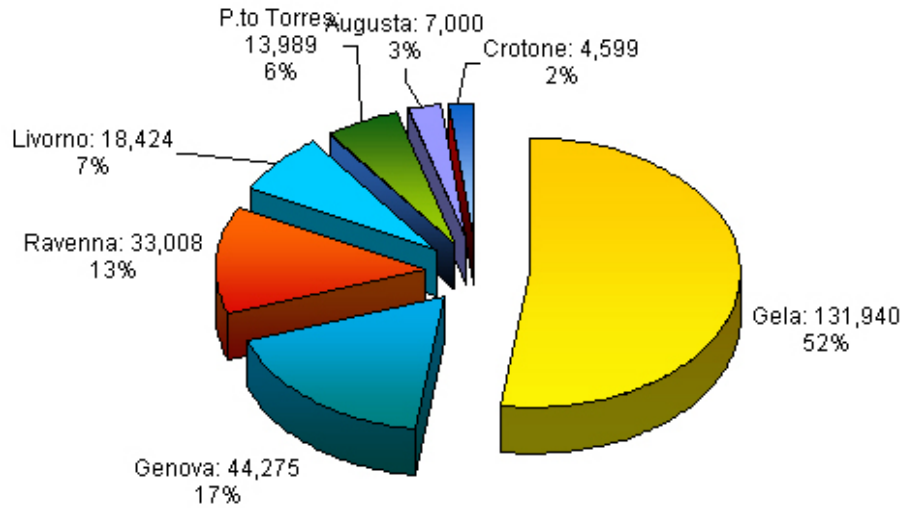


Fig. 9: Sulphuric Acid traded in Italian ports in 1999

About the refined petroleum hydrocarbons, the inquiry has covered almost completely the Italian trade showing Cagliari and Augusta as the most concerned ports (Fig. 10).

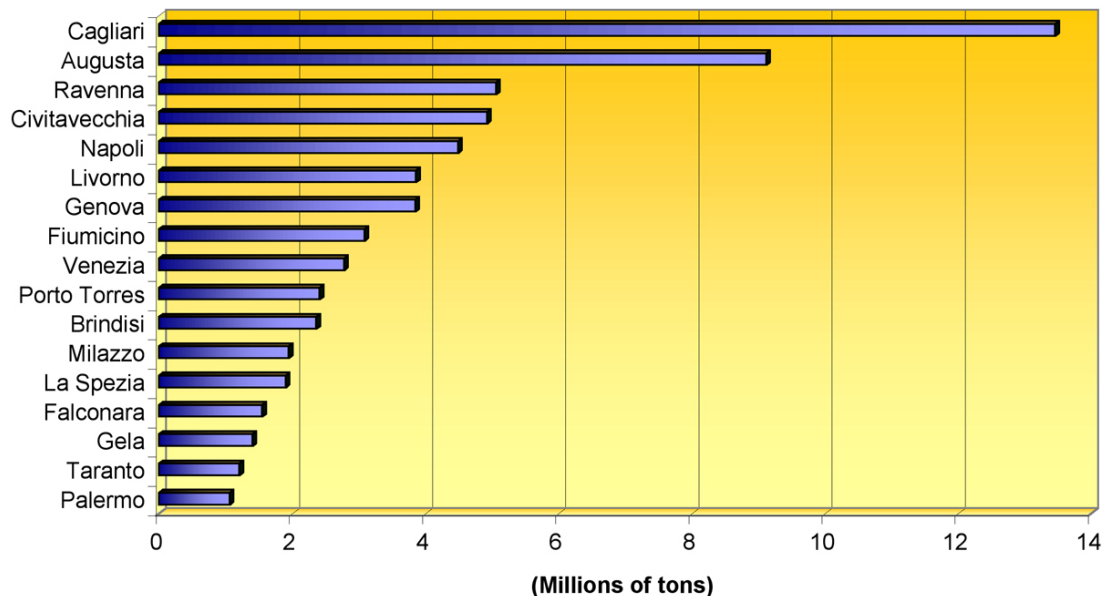


Fig 10: Quantities of oil products (> 1 million tons) traded in Italian ports in 1999



Among these products, Ravenna, Augusta and Civitavecchia account for more than the 50% of the sum of the different qualities of Fuel Oil traded in Italy (Fig. 11) while Cagliari seems to be the most important trading port for Gas oils (Fig. 12).

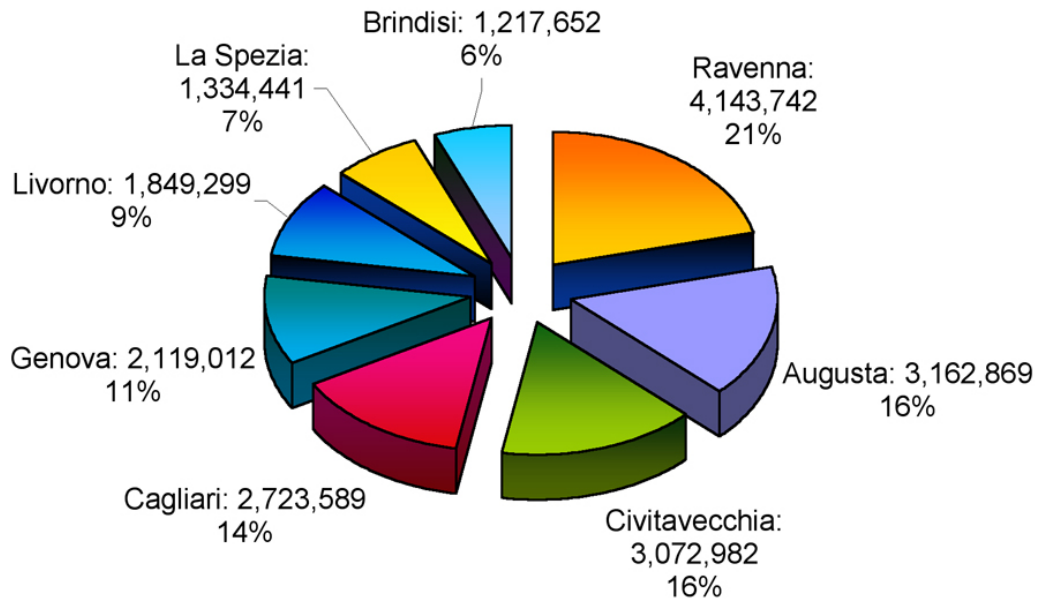


Fig. 11: Fuel Oils traded (>1 million of tons) in Italian ports in 1999

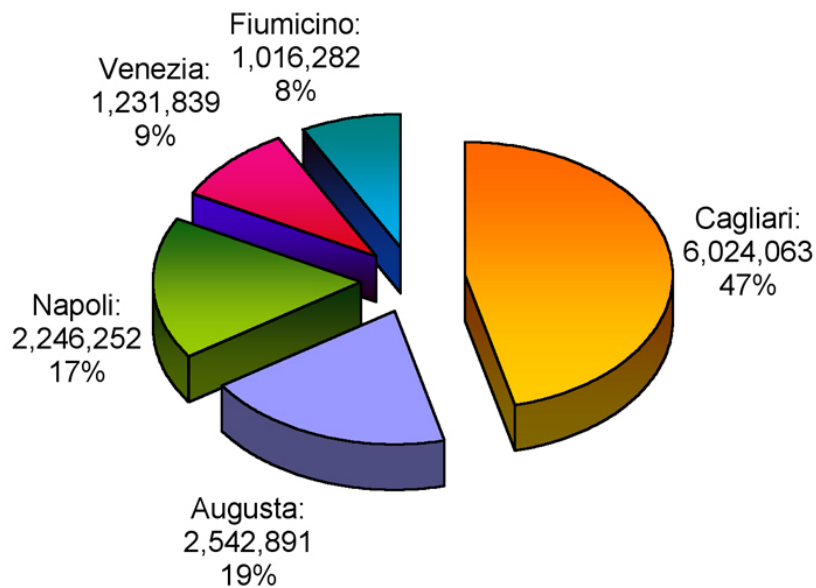


Fig. 12: Gas oil traded (>1 million of tons) in Italian ports in 1999



Comments

The results achieved so far confirm the challenging nature of the first task assigned to the new established Technical Group but show, as well, the relevance of the pursued goals in the framework of the cooperation among Mediterranean Countries in the field of the prevention and response to accidental marine pollution.

The merging of data about quantities of HNS traded in and out each port of call, with their surrounding coastal area environmental and socio-economic features by means of a GIS, could provide strong indications about the needs for the prevention of accidental marine pollution and for the building-up of tools and strategies for rapid and efficient response.

It could be beneficial for the MTWG's aims achievement in the next biennium to utilize the experience gained in order to address a common effort to feed, improve, update and exploit the growing-up database to build up a tool for a safer and cleaner Mediterranean Sea.

Acknowledgements

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Ing. Riccardo Cosulich e Dr.ssa Gaia Allodi, AIPAM;

Ing. Franco Del Manso, Unione Petrolifera;

Dr. Giuseppe Giordano e Ing. Pietro Rossi, ENI;

CV (CP) M. Mancini, Servizio HAZMAT, Comando Generale delle Capitanerie di Porto;

Dr. Massimo Provinciali, Ministero delle Infrastrutture e dei Trasporti, Direzione Generale delle infrastrutture per la Navigazione Marittima interna;

Dr.ssa Giulietta Rak e Dr.ssa Antonella Ausili, Icram.